



CHALMERS



DEVELOPMENT OF HIKING FOOTWEAR FOR WOMEN

Bachelor Thesis in Design and Product Development Engineering

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Institutionen för Industri- och materialvetenskap

Avdelningen för Design & Human factors

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Development of hiking footwear for woman

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The front cover features an illustration of the final concept, 2025.

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Preface

This report is the result of the bachelor's thesis "*Development of hiking footwear for woman*", carried out by Clara Rönnäng within the Bachelor of Science in Engineering program Design and Product Development (180 ECTS credits) at Chalmers University of Technology. The thesis corresponds to 15 ECTS credits and was conducted during the spring semester of 2025.

I would like to express my sincere thanks to the company Dolomite for giving me the opportunity to carry out this project and especially thanks to Enrico Pizzolato at Dolomite, for valuable guidance and support throughout the process.

I would also like to express my gratitude to my supervisor at Chalmers, Olof Wranne, who has been of great help from beginning to end and has guided me through the entire process.

Special thanks also to Vilda Forsén for valuable insights.

Finally, I would like to thank Naturkompaniet for welcoming me on study visits and providing me the opportunity to conduct important observations and interviews that helped move the project forward.

Gothenburg, 26 maj 2025

A handwritten signature in black ink, reading "Clara Rönnäng". The signature is written in a cursive style with a long, sweeping tail on the letter "g".

Clara Rönnäng

Abstract

This thesis was conducted in collaboration with the Italian brand Dolomite and focuses on the development of a hiking shoe specifically tailored for young scandinavian women. The project adopts a user-centered design approach, with both functional and aesthetic needs at its core. The objective was to create user requirements and a concept for a hiking boot designed to appeal to the female target group.

The project began with extensive research, including interviews, surveys and observational studies with women from the intended user group. Insights gained from this research were used to develop a representative persona, which served as the foundation for idea generation and concept development. A series of concept proposals were formulated based on the collected data and systematically evaluated using a Pugh matrix. User interviews and group discussions provided additional qualitative insights into preferences regarding fit, lightness and visual style.

The final concept is a hiking shoe that combines functionality, comfort and scandinavian minimalism. Its design is carefully adapted to the anatomical needs of the target group and their aesthetic preferences, strengthening Dolomite's product portfolio towards a growing market segment.

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1. Introduction

The project is conducted at Chalmers University of Technology as a thesis within the department of Industrial and Materials Science, as part of the Design Engineering program. The aim is to develop a concept for a hiking boot designed to appeal to the female target group.

The thesis is carried out in collaboration with Dolomite, an Italian brand specializing in high quality footwear and apparel for mountain and outdoor activities.

1.1 Background

Dolomite is an outdoor brand founded in the late 1800s, headquartered in Montebelluna, the hearth of the Sport System district, close to the Dolomites, Italy. Known for its high quality footwear and apparel designed for mountain and outdoor activities, the company has built a strong reputation for craftsmanship and innovation. While Dolomite has long been a trusted name in sport industry, the brand now faces the challenge of better adapting its products to the female target group, especially the hiking boots.

Most outdoor brands today offer a dedicated women's line. However, the aesthetic differences between male and female hiking footwear are often minimal, meaning that relatively few models on the market are explicitly designed to attract female consumers. As the industry evolves, many brands are advancing their designs to better appeal to female buyers. Dolomite has observed stronger sales in their men's collections and now aims to enhance the women's designs to better align with the preferences and expectations of female users.

Preferences in design and aesthetics can be highly individual. Therefore, to develop hiking footwear that truly resonate with female hikers, it is essential to understand their specific wants and needs. The typical Dolomite customer is an intermediate to advanced hiker. Female buyers of Dolomite footwear tend to be informed consumers with a strong awareness of the technical characteristics and performance of their footwear. To strengthen its position in the market and meet the growing demand for products specifically designed for women, Dolomite seeks to deepen its understanding of the target group's needs. This thesis aims to explore the key design factors that make a hiking boot both attractive and functional for female hikers.

Through this project, Dolomite aims to ensure that its products not only meet technical and ergonomic standards but also enhance the overall user experience for female hikers, ultimately strengthening the brand's competitiveness in a rapidly growing market.

1.2 Purpose

The purpose of this thesis work is to investigate the requirements female buyers have for high quality hiking footwear and to determine what appeals to the target audience in terms of design and aesthetics. The objective is to propose a conceptual design suggestion, based on identified requirements.

1.3 Limitations

- The project will be concluded at a conceptual level.
- The scope of the work is limited to the female target audience, retailers or other stakeholders will not be taken into consideration.
- The study aims to identify aesthetic and design factors that influence how attractive the footwear is perceived by female consumers. Functional aspects such as material choices and technical performance will only be addressed insofar as they impact the visual design.
- The design language of Dolomite must be reflected in the proposed concept.
- Primary data will be collected through interviews and surveys directed at the specified target group, as well as an analysis of existing products and market trends within the outdoor segment.
- This project has no financial constraints that will be considered during the concept development.

1.4 Research questions

- How should Dolomite design woman hiking footwear to better meet the requirements from the target group?
- What is the difference between male and female hiking footwear?
- What expression do women want the footwear to have?
- How should Dolomite develop their footwear to meet these requirements?
- How does the product line of other brands of woman hiking footwear look?

2. Theoretical Framework

This chapter presents relevant information to the project, aiming to provide an understanding of the key aspects. Focus is on the structural design of hiking boots, Dolomites technical solution to woman fit, different types of hiking, the materials typically used in the manufacturing of hiking boots for durability and performance and brand identity.

2.1 Construction

The basic anatomy of a hiking boot with its various parts and components will be discussed in this chapter. The construction of a hiking boot varies widely depending on the brand, the terrain it is designed for. Despite these variations, most boots share a similar fundamental structure.

A hiking boot consists of several key components (Figure 1) The main structural elements include the upper, the sole and its internal layers (Camotrek, 2020).

The upper encloses the foot and extends to the ankle, offering support and protection. It could be made from materials such as leather or synthetic fabrics, for a lighter alternative. The upper is designed to be flexible and conform to the foot for a secure fit (Camotrek, 2020). The sole is composed of multiple layers. The outsole, made of rubber, provides traction with a lug pattern optimized for grip on various terrains. The midsole, positioned between the outsole and insole, is responsible for shock absorption and comfort (Alamo Shoes, 2023). The insole, directly under the footbed, offers additional support and cushioning.

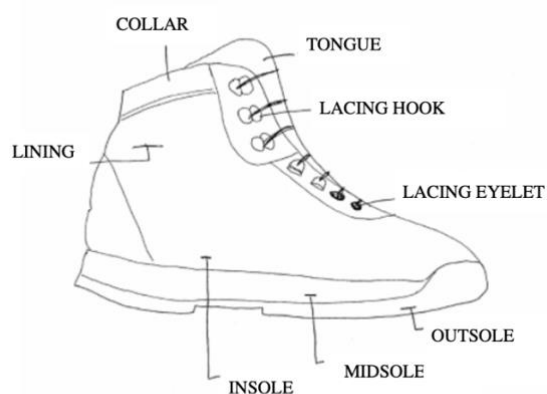


Figure 1, Illustration of the basic components of a hiking boot

2.1.1 Upper part

The upper part of a shoe refers to all components situated above the sole, encompassing the structure that encases the foot and secures it in place. This section plays a crucial role in ensuring stability and comfort (Camotrek, 2020). The upper extends from the foot to the ankle, offering necessary support against external elements. Modern hiking boots incorporate a range of materials, such as leather, synthetic textiles or hybrid constructions. Materials used for uppers must be adaptable to conform to the foot's contours. Full-grain leather is particularly valued for its robustness and resistance to moisture, while synthetic alternatives provide advantages in terms of reduced weight and faster drying capabilities (Camotrek, 2020).

2.1.2 Lining

The inside surfaces of a shoe's upper part is commonly covered with specialized materials designed to enhance insulation and keep the foot dry. One of the primary roles of this inner layer is to act as a barrier between the foot and the shoe, reducing friction and improving wearability. High-quality lining materials are breathable and able to effectively manage moisture.

A well-designed lining ensures that the foot remains warm and dry by regulating the internal humidity levels of the shoe. Modern footwear often incorporates microfiber linings that effectively removes moisture, providing insulation by keeping feet warm in cooler conditions. Dolomite frequently integrates GORE-TEX membranes in its lining construction, often in combination with materials like mesh or full-grain leather to optimize both breathability and durability (Dolomite, 2023a).

2.1.3 Sole

The sole is the lower part of the shoe, consisting of several layers with different properties.

Footbed

The footbed is a removable component that sits directly under the foot (E. Pizzolato, personal communication, 3 April, 2025), provides cushioning and support. It can be made of materials such as foam, cork or gel and is often customizable for added comfort, such as extra arch support or padding. Footbeds can be replaced based on personal preference or the condition of the foot (Naturkompaniet, personal communication, 10 April, 2025)

Insole

The insole is the component inside the shoe, directly under the footbed, that supports the foot and enhances overall comfort. It serves as a cushioning layer, helping to distribute pressure evenly and providing additional support.

Insoles are typically crafted from materials such as fiberboard, stretch nylon, synthetic foam or leather bonded to a foam core. High-quality insoles are designed to be lightweight, resilient and capable of wicking away moisture while also preventing bacterial growth.

Midsole

The midsole is the structural layer positioned between the outsole and the insole of a shoe, playing a vital role in shock absorption, stability and comfort. It is typically made from ethylene-vinyl acetate (EVA) or polyurethane (PU), each offering distinct benefits. EVA is lightweight and provides excellent cushioning but tends to compress over time, reducing its long-term support. PU, on the other hand, is denser and more durable, offering sustained resilience and stability, though it initially feels firmer (Camotrek, 2020).

The Outsole

The outsole is the bottom layer of a shoe that comes into direct contact with the ground, playing a crucial role in traction, durability and stability. It is typically made from rubber or a rubber composite, with different formulations tailored to specific activities and terrains. The lug pattern on the outsole determines grip, with deeper, multidirectional lugs enhancing traction on uneven or slippery surfaces. The longevity of an outsole depends on factors such as material composition, tread depth and terrain exposure. Harder rubbers are generally more durable and perform well in wet or rugged environments, while softer rubbers offer better grip but wear down more quickly on abrasive surfaces (Vibram, n.d.).

Dolomite has incorporated Vibram soles for an extensive period. Vibram is globally recognized as a leading innovator in the design and production of high-performance rubber outsoles, catering to both athletic and everyday footwear.

As early as 1954, an Italian mountaineering team successfully climbed K2, while wearing Dolomite boots equipped with Vibram Carrarmato soles. This expedition marked a pivotal moment in footwear specialization, as different boot models were employed for various stages of the climb, including trekking, approach marches, high-altitude and extreme-altitude conditions (Dolomite, n.d.).

2.1.4 Other components of hiking boots

Technical specifications can vary significantly between different hiking shoes, depending on their intended use and the brand. However, common components found in most footwear include the fastening system, the tongue and in many cases, toe protection.

2.1.4.1. Fastening systems

A well-designed and durable fastening system is crucial for hiking footwear, contributing to comfort, safety and stability. If a boot cannot be properly adjusted and securely tightened around the foot, it may result in injuries such as blisters or ankle sprains. Currently, the most common method for fastening hiking boots is traditional lacing. Higher-cut hiking boots typically incorporate metal eyelets and hooks, (Figure 1), to secure the laces around the ankle, allowing for a customizable fit that adapts to the wearer's foot shape.

Modern alternatives include lock lace fastening systems, which generally consist of a cord, a cord clip and a cord lock. This system enables quick, one-pull tightening and effortless removal. Brands such as Dolomite and Salomon have integrated this fastening technology into their footwear (Camotrek, 2020)

Another advanced option is a high-tech fastening mechanism like the BOA Fit System. This innovative lacing solution comprises three key elements: a micro-adjustable dial, lightweight but highly durable laces and low-friction lace guides. Designed for rapid adjustment, the BOA system ensures a secure and customized fit in various conditions while eliminating the need for traditional laces (BOA Technology, n.d.).

2.1.4.2 Toe Protection

The toe cap is a reinforced component located at the front of a hiking boot, (Figure 2), designed to shield the toes from impact with rocks, roots and other obstacles. A well-constructed hiking boot incorporates a durable toe cap to minimize the risk of foot injuries (Alamo Shoes, 2023).



Figure 2, Toe Protection on Dolomite 54 High Fg Evo GTX

2.1.4.3 The Tongue

The tongue is positioned beneath the laces and serves as a protective barrier for the foot. A gusseted tongue, which is securely attached to the sides of the boot, helps prevent dirt, small stones and other debris from entering (Alamo Shoes, 2023).

Dolomite uses a system called the "Dolomite Wrapping System" (Figure 3), which features an elastic construction that integrates the tongue and power to create a tight fit around the instep and ankle. This design enhances the wearer's overall experience by offering comfort, improved functional performance and greater precision in movement throughout the activity (Dolomite, 2023a).



Figure 3, Dolomite Wrapping System. Note. From Dolomite Workbook Fall Winter 2024/25.

Reproduced with permission from Dolomite.

2.2 Material

Contemporary hiking shoes are constructed using a variety of materials, each offering distinct properties and technical functions. The following section outlines the most relevant materials in this project.

2.2.1 GORE-TEX

GORE-TEX products are designed to provide long-lasting waterproof protection combined with excellent breathability. At the heart of every GORE-TEX product is the advanced GORE-TEX membrane, a thin layer of expanded polytetrafluoroethylene (ePTFE) that contains over 1.4 billion microscopic pores per square centimeter. It is these pores that give the material its unique ability to block water from entering while allowing sweat to escape in the form of water vapor. In outdoor clothing, “breathability” often causes confusion, it does not mean that air is allowed to pass through, but rather refers to the fabric’s ability to release moisture generated by the body (Gore-Tex Professional, n.d.). Thanks to strict standards, GORE-TEX fabrics maintain their breathability even during intense physical activity, helping to keep the skin dry and comfortable. In footwear, the GORE-TEX laminate is built into the shoe as an inner lining, offering protection in all weather conditions without compromising comfort. Shoes with GORE-TEX technology are easily recognizable by the GORE-TEX label on the outside.

2.2.2 Leather

Leather is a versatile material extracted from animal skin and undergoes a series of processes, including tanning and treatment, to transform the raw skin into a durable and functional product. The material is well known for its unique properties that combine strength, flexibility and longevity. The primary structural element in leather that contributes to its properties is collagen, a type of protein found in both human and animal skin. Collagen fibers are incredibly strong yet retain flexibility, making leather an ideal material for a variety of products, from shoes to furniture (Harris & Veldmeijer, 2014).

One of the advantages of leather is its durability. Leather is known for withstanding heavy use and with proper care it can last for many years, sometimes even decades. Unlike synthetic materials, which can deteriorate over time, a common view is that leather becomes more attractive with age and often develops a patina that enhances its appearance. Leather's natural properties make it resistant to wear, stretching and tearing, making it outperform many textile alternatives, especially in outdoor or high-performance applications.

In addition to its strength, leather has the ability to breathe, meaning it allows moisture and air to pass through. This property helps regulate temperature and humidity, ensuring that leather products remain dry and comfortable during use. Leather's breathability also prevents odor buildup, a common problem with synthetic materials, helping to keep items fresh over time. This natural ventilation ensures that leather goods remain comfortable, even in challenging conditions (Harris & Veldmeijer, 2014). Another significant benefit of leather is its inherent flexibility. Over time, leather conforms to the shape of the body or the specific use for which it is intended, providing a personalized fit. This adaptability is particularly evident in shoes, which become softer and more comfortable as they are worn. Leather's natural flexibility allows it to be used in a variety of applications, from soft, fabric-like garments to rigid, protective items such as saddles or armor. Unlike many synthetic materials, which can stiffen or deteriorate with prolonged use, leather tends to improve in comfort and fit as it ages (Harris & Veldmeijer, 2014). Leather is often associated with a luxurious, timeless aesthetic that can elevate the look of any product. The unique nature of each piece of leather, whether it's the grain, color or texture, adds character to the products and ensures that no two leather items are exactly alike. Leather is often considered a more sustainable alternative to synthetic materials, especially since it is a by-product of the meat industry. Although the environmental impact of leather production is significant, particularly in terms of water use and tanning chemicals, it is still considered by many to be a more resource-efficient alternative to fully synthetic materials, which rely on petroleum-based products. In addition, leather breaks down more easily in nature than many synthetic materials, which can take hundreds of years to decompose.

2.2.3 Suede

Suede is a distinct type of leather that differs from traditional leather in both appearance and texture. Suede is made from the softer, inner part of animal skin, usually from cattle or lamb, and is processed by sanding the surface to create a velvety, matte finish (Harris & Veldmeijer, 2014). Due to its porous and softer nature, suede requires more careful maintenance to protect it from dirt and moisture, as it is more vulnerable to damage than more durable leather types. Although flexible and comfortable, suede is generally less resilient than full-grain leather or other more treated leathers.

2.2.4 Rubber

Rubber is a versatile and durable material known for its polymeric, macromolecular structure. This structure, made up of long chains of repeating molecular units, provides rubber with its unique properties, including elasticity and flexibility, which are essential for many applications, including hiking boots. The macromolecular nature of rubber allows it to stretch and return to its original shape, making it highly resilient and able to withstand significant mechanical stress without losing its structural integrity (Ikeda, Kato, Kohjiya, & Nakajima, 2018). These qualities contribute to rubber's widespread use in outdoor and athletic footwear, where high levels of durability and comfort are essential.

There are both synthetic and natural types of rubber, each with distinct properties and applications. Modern hiking footwear primarily utilizes synthetic rubber compounds rather than natural rubber, due to their enhanced durability, weather resistance and customizable performance properties. Brands like Vibram, widely used by Dolomite, develop their own synthetic rubber compound.

In addition to its flexibility, rubber is known for its excellent abrasion resistance, making it particularly well-suited for hiking boots (Ikeda, Kato, Kohjiya, & Nakajima, 2018). The material can endure the rough conditions commonly encountered in outdoor environments, such as rocky, uneven terrain, without wearing down quickly.

Another key characteristic of rubber is its moisture and air permeability, which helps keep feet dry and comfortable during long hikes. Furthermore, rubber's shock-absorbing properties contribute to overall foot comfort, cushioning the feet from the impact of walking on hard or uneven ground.

2.3 Woman Fit

Proper shoe fit is widely acknowledged to be achieved by aligning the shoe's shape with the anatomical structure of the foot. Recognizing the differences in foot morphology between genders is therefore crucial in designing footwear that ensures both comfort and functionality. Historically, women's athletic shoes have often been developed using scaled-down versions of men's shoes, with all proportions reduced uniformly based on foot length. However, as female foot shape differs significantly from male foot morphology, this method is inadequate and often results in poor fit and discomfort (Wunderlich & Cavanagh, 2001).

On average, female feet have a relatively wider forefoot, a narrower heel and higher arches. The instep and ankle are often lower in height and the overall foot volume is typically smaller. These anatomical variations are influenced not only by genetics but also by differences in pelvic structure, as women generally have a wider pelvis that alters leg alignment and load distribution across the feet. As a result, women are more prone to issues such as overpronation, bunions and plantar issues when wearing footwear designed for male foot shapes (She Wear, n.d.)

Further research confirms that male and female feet differ not only in proportion to body size but also in specific anatomical features. For example, even when foot length is the same, men's feet tend to have greater measurements in areas such as instep circumference, ankle height, bimalleolar width, (the distance between the inner and outer ankle bones), calf height, calf circumference, medial malleolus height and ball of foot breadth (Hong, Wang, Xu, & Li, 2011).

Additionally, women's ligaments tend to be more elastic, which increases the risk of joint instability and ankle sprains if the shoe lacks sufficient support. Despite these well-documented differences, many women's shoes on the market are still based on modified men's lasts, compromising both performance and long-term comfort (She Wear, n.d.). To address this issue, Dolomite has developed a specific footwear technology called "Woman Fit" (Dolomite, 2023a) (Figure 4). The result is a product line that better supports natural movement patterns and improves overall performance in outdoor activities. This approach exemplifies a shift toward more inclusive and evidence-based design in footwear development, where anatomical accuracy translates into practical benefits for female users.

Failing to incorporate these gender-specific adjustments can lead not only to decreased comfort, but also to a higher risk of injury during hiking.

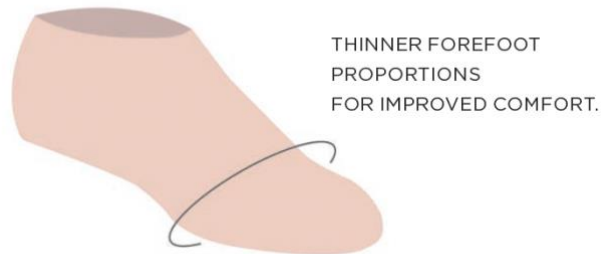


Figure 4. Woman foot. Note. From Dolomite Workbook Fall Winter 2024/25. Reproduced with permission from Dolomite.

2.4 Different hiking levels

There are several different types of hiking. Depending on the degree of difficulty, terrain, speed or duration, hiking has been divided into different categories. Below is a brief explanation of the most common hiking types.

2.4.1 Trekking

Trekking is a physically demanding activity that involves traversing long distances across rough and often remote terrains. It typically requires a significant amount of endurance and preparation, as trekkers frequently embark on multi-day journeys in environments such as mountainous regions, forests or wilderness trails (Dolomite, 2023b). Given the potential for unpredictable weather conditions and challenging landscapes, individuals undertaking trekking adventures must be equipped with appropriate gear like navigation tools and provisions for extended stays outdoors.

2.4.2 Hiking

In contrast to trekking, simply “hiking” is a more approachable activity that takes place on designated paths or trails, often within easily accessible areas such as national parks or nature reserves. Hiking trails vary in length and difficulty, ranging from short excursions lasting a few hours to full-day outings (Dolomite, 2023b). This activity requires minimal preparation and is suitable for a wide demographic, including beginners and families. Since hiking generally occurs on well-marked trails, it allows participants to appreciate scenic surroundings without the necessity of specialized equipment or advanced outdoor survival skills.

2.4.3 Fast Hiking

Fast hiking is a high-paced alternative to traditional hiking, focusing on covering greater distances in a shorter amount of time. This activity combines elements of hiking and endurance training, requiring a good level of fitness and muscular strength (Dolomite, 2023b). Unlike trekking, which prioritizes exploration and endurance over extended periods, fast hiking is designed for those who seek a dynamic and efficient way to experience nature without committing to multi-day expeditions. Participants often carry lightweight gear to maximize mobility and sustain a consistent, brisk pace throughout the journey.

2.5 Brand identity

Brand identity refers to the visual, verbal and emotional elements that represent a brand and differentiate it from its competitors in the market. A successful brand consists of a series of interconnected elements that together communicate its core values. Beyond the brand sign or logo, this may include a tagline, a recurring pattern, a signature color or a distinct detail, something that enables consumers to recognize the brand even in the absence of its logo. These visual cues are often closely tied to the brand's identity, and in some cases, a single detail can evoke an immediate sense of the brand itself.

Thoughtful design, especially one that incorporates handcrafted aesthetics, can convey a sense of quality and authenticity. A notable example is Apple, which evolved from using a colorful apple logo to embracing a minimalist design language with a subdued palette of greys and whites. This shift emphasizes purity, modernity and reinforces the brand's focus on technology. Apple consistently uses the same forms, details and color schemes across its product range, making their products instantly recognizable, even without the logo (Slade-Brooking, 2016). This exemplifies strong brand identity. Another example is Milka chocolate. Its signature purple packaging has become so iconic that even a glimpse of the color, a cow or a cow-patterned motif in a chocolate context immediately evokes the Milka brand. This level of visual association demonstrates a well-established identity (Slade-Brooking, 2016).

A strong brand identity is crucial for several reasons. Firstly, it helps a company stand out in a competitive market. In a world where consumers are faced with many choices, it is important for a brand to differentiate itself and be instantly recognizable. A consistent brand identity, from the logo to the style of communication, establishes trust and loyalty with consumers. This ensures that the brand remains trustworthy and recognizable over time.

In addition, brand identity plays a central role in fostering an emotional connection between the brand and the consumer. By clearly communicating values and maintaining a consistent visual style, a brand can resonate with consumers' own beliefs and lifestyles. This in turn leads to stronger customer loyalty and long-term success.

3. Methods

This chapter explains the methods that will be used in the project. The workflow will be an iterative process, meaning that many steps will be repeated and refined multiple times to ensure that no data has been lost.

3.1 Research Methods

In order to ensure a solid basis for the project, it begins with a preliminary study. This approach facilitates a deeper understanding of the topic, providing essential insights and guiding the direction of the research process.

3.1.1 Market Analysis

Market analysis is a method within the design process used to gain insight into a particular product or industry. It involves examining existing competitors, consumer behavior and industry trends to understand both current market conditions and potential future developments. A key aspect of market analysis in a design context is reviewing a brand's earlier collections and product launches to identify aesthetic direction.

According to Wikberg Nilsson, Ericson and Törlind (2021), market analysis is typically conducted during the initial phases of a design project and forms the foundation for identifying user needs and guiding design decisions. This process includes gathering materials such as product catalogues, archive and online brand communication, which offer insights into how companies position themselves and how that positioning has evolved over time.

As part of this broader analysis, benchmarking plays a crucial role. It involves comparing companies within the same industry or related fields to identify best practices and competitive strategies (Johannesson, 2013). Benchmarking helps highlight key design features by examining how different brands address similar needs. In addition, trend analysis is used to identify shifts in consumer preferences and product development directions, helping to ensure that the design aligns with current expectations and market standards.

3.1.2 Literature Studies

Literature studies is executed to gain an understanding of the current state of the industry (Osvalder, Rose and Karlsson, 2015). Involving reading and analyzing prior publications within the same field of products and design projects. Literature studies gives a deeper understanding of the industry as a whole.

3.1.3 Interviews

Interviews are a crucial method for understanding users' perspectives and gathering insights into their preferences and decision-making processes. This approach provides qualitative data and can be conducted in a structured, semi-structured or unstructured manner (Johannesson, 2013). In this study, semi-structured interviews will be employed.

Semi-structured interviews involve using a predefined interview guide with open-ended questions, while allowing flexibility to explore emerging topics and follow-up questions based on the participant's responses. This method provides a balance between consistency across interviews and the opportunity to gain deeper insights into individual perspectives.

3.1.4 Survey

Surveys represent an indirect questioning method, in contrast to personal interviews, where quantitative data is collected from users through distributed written questionnaires. These questionnaires can be distributed via mail or online. Surveys may consist of both open-ended and closed-ended questions, where open-ended questions allow respondents to answer freely, while closed-ended questions provide predefined response options (Bryman & Bell, 2017).

To ensure accurate data collection, it is essential that survey questions are well-formulated to prevent misinterpretation and misleading responses. A combination of open and closed questions is preferred, as it generates a balanced mix of short and detailed responses. Since survey administrators typically have no direct contact with respondents, surveys often suffer from low response rates. Therefore, it is important to design the survey and its questions carefully to encourage more people to respond.

3.1.5 KJ-analysis

The KJ-analysis method is used to organize and structure large amounts of data, like interviews and surveys, and presenting it in a clear and understandable way. The responses are grouped into themes, allowing for the identification of key insights that are essential for further investigation. This analysis technique aids in pinpointing the primary issues (Österlin, 2010).

The process begins by noting facts and quotes from collected data on post-it notes, which are then affixed to a wall. One note is randomly selected and placed in the center of the wall. The remaining notes are reviewed one by one and those that are related are placed together.

The result of a KJ-analysis is a clear, graphic overview of the collected data, which not only illustrates the relationships between different elements but also reflects aspects such as requirements or problem definitions (Österlin, 2010).

3.1.6 Persona

Personas serve as a tool to translate abstract requirements into more tangible and relatable elements during the design process. A persona represents a fictional character that encapsulates key characteristics of a specific target user group. These profiles are typically developed based on data gathered through methods such as interviews and observations, allowing for a more nuanced and human-centered depiction of potential users. By grounding design considerations in a detailed representation of the intended audience, personas help to contextualize user needs and support the creation of more effective and empathetic solutions (Österlin, 2010).

3.2 Concept Development Methods

The goal is to develop a concept proposal based on the requirements, in order to clearly evaluate whether the desired outcome is achieved and to assess the reliability of the guidelines.

3.2.1 Iterative sketching

Iterative sketching is a method that involves repeatedly sketching and refining ideas to explore form, function and aesthetics. It supports the creative process by allowing for quick visualizations, ongoing evaluation and gradual improvement of concepts.

3.2.2 Moodboard

A moodboard is a visual collage that displays details, colors, materials and other elements that represent shared values and concepts. Images with various motifs are assembled to convey a particular feeling or atmosphere that is desired in a product. The moodboard can then serve as a tool during the idea generation process.

3.2.3 Morphological Matrix

A morphological matrix can be used as an idea generation method, where the goal is to develop a range of possible solutions by combining sub-solutions for different functions derived from a functional analysis. The matrix is structured with rows and columns, where functions are listed in the rows and each column contains alternative solutions for the same function. Total solutions are generated by selecting one sub-solution per row. These solutions must then be further examined to ensure they meet all the requirements outlined. Typically, these solutions are supplemented with simple descriptions and sketches (Österlin, 2010).

3.2.4 Pugh Matrix

Pugh's matrix is used for the evaluation and elimination of concepts. The starting point is a set of selection criteria, derived from the requirements. The reference product can be a competing product or one of the company's previous products (Johannesson, 2013).

In Pugh's matrix, all the concepts to be evaluated are listed in columns and the criteria for evaluation are listed in rows. Each concept is then compared against each criterion, and it is assessed whether the concept meets the criterion better, worse or equally well as the reference product. The evaluation criteria can also be weighted.

The result of this evaluation clearly indicates which concept or concepts meet the most criteria and these will be carried forward in the development process.

4. Project Research

This chapter presents an analysis of the material collected through interviews and observations, with the goal of identifying user needs. The purpose of the project research is to build an understanding of female users in the context of hiking. The insights gathered from the research will establish requirements that will guide the product development process.

4.1 User studies

This chapter outlines key findings from the preliminary user study, which incorporated both interviews and survey results. Only the insights considered significant for shaping the continued development process have been included and emphasized.

4.1.1 Survey

The survey consisted of 20 questions, combining multiple-choice and open-ended formats to gather both quantitative and qualitative insights (Appendix 1). A total of 85 responses were collected, providing a good base to make relevant conclusions. All participants identified as women. Approximately 75 percent were between the ages of 25 and 35, while the remaining participants were over 45 years old.

The survey began with general questions regarding lifestyle and background, followed by more specific topics related to footwear preferences, attitudes toward sportswear and their picture of the brand.

The responses clearly highlight a gap in the current outdoor footwear market, where products often fail to address the needs of women. Many participants reported difficulties finding shoes that accommodate wider feet or specific conditions such as hallux valgus. There was a strong desire for improved comfort and better fit designed around the anatomy of the female foot. This observation reinforces the identified problem and further supports the motivation for developing a new concept focused on women's needs.

When addressing specific product features, lightweight and flexible shoes were preferred (Figure 5). A particularly notable insight was the strong interest in more "fashionable" hiking footwear. The desire to feel stylish and presentable during hikes or outdoor walks was frequently mentioned and a clean, Scandinavian design was repeatedly requested. In this context, Scandinavian design is associated with minimalism, functionality and timeless aesthetics, characteristics that convey a sense of quality, calmness and modernity without excessive detailing. Versatility also emerged as a key theme. Several responses revealed a demand for footwear suitable not only for hiking but also for use in urban settings. Current models were often described as too clunky, dark, and heavily influenced by traditionally masculine aesthetics for everyday wear.

Aesthetic preferences played an important role. Many respondents expressed interest in more natural and muted color options, rather than bright or traditionally "feminine" colors such as pink and red.

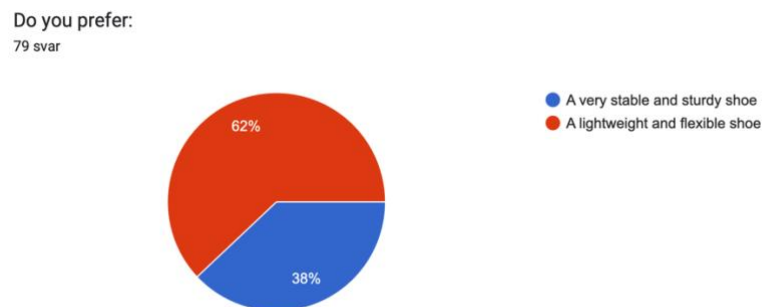


Figure 5, from the survey

In terms of materials, waterproof options such as GORE-TEX and leather were most favored. Shiny or glossy finishes were generally disliked, materials perceived as more natural, such as suede and leather, were generally preferred by the respondents. Preferences regarding shoe height (low-cut, mid-cut or high-cut) varied, which is reasonable given that such choices depend on individual hiking experience and terrain. However, mid-cut shoes emerged as the most preferred option, offering a balance between ankle support and freedom of movement (Figure 6).

What type of hiking shoes do you prefer? (If you never hike, think of it as a running shoe)

81 svar

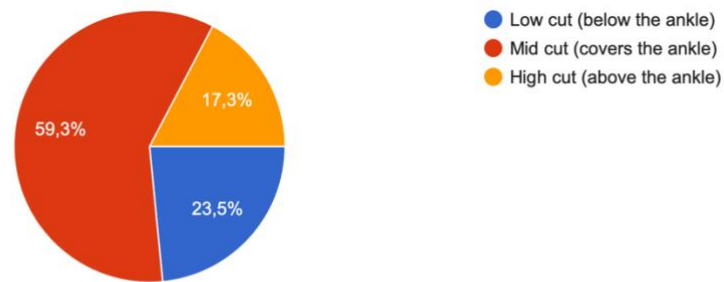


Figure 6, answers from the survey

The highest priority was functionality and comfort. This emphasis reflects a desire for products that meet practical needs (Figure 7). Following functionality and comfort, design and aesthetic appeal were important, indicating that users value not only how the shoe performs but also how it looks and feels. Price came next in the hierarchy of priorities, suggesting that while affordability is relevant, users may be willing to invest more if the product meets their functional and aesthetic expectations.

Environmental consciousness was the lowest-ranked factor, which may point to a general awareness of sustainability issues but a lower influence of such concerns on final decision-making in this context.

This order of priorities shows that people focus more on practical and immediate benefits when choosing a product, rather than thinking about bigger issues like the environment or ethics.

Overall, the findings point to a clear demand for footwear that combines fashion, comfort and aesthetic female appeal. These insights provide a strong foundation for further concept development within this area.

What matters most to you when buying new products (clothing/shoes/bags, etc.)?

81 svar

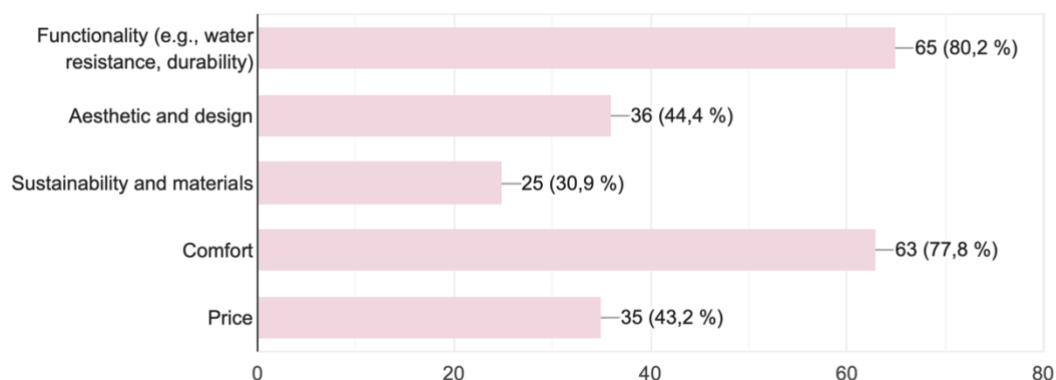


Figure 7, answers from the survey

4.1.2 Interviews

In addition to the survey, a series of semi-structured interviews were conducted to gain deeper insights into user preferences and experiences.

Five of the interviewees were women in their early 30s who regularly engage in hiking, particularly during holidays or weekends, several times a year. While none of them considered themselves advanced hikers, they described hiking as an important and recurring activity in their lifestyle. The remaining three participants were women aged between 40 and 60 with an active interest in sports and outdoor activities. This variety of perspectives helped provide a broader understanding of the expectations and needs among different user groups.

The interviews provided valuable insight into the varying needs and preferences among women in different age groups. A notable distinction emerged between participants in their early 30s and those within the 40 to 60 age range. The older demographic expressed a clear preference for comfort, wider fit and understated design. Versatility was also emphasized, with a strong desire for footwear suitable for both everyday use and hiking activities. These respondents prioritized practicality, stability and discreet aesthetics, often preferring neutral tones such as black or earth colors that easily match with a variety of outfits.

In contrast, women in their 30s, who described hiking as a frequent recreational activity, placed greater importance on lightweight construction, sleek Scandinavian-inspired design and overall flexibility. Aesthetic appeal played a more central role in this group.

One key insight was the emotional engagement many participants, particularly the younger, active women, demonstrated in discussing the topic. A sense of frustration was evident, especially regarding the perception that outdoor footwear designed for women often lacks thoughtful consideration. One recurring sentiment captured this feeling: *“They take a men’s shoe, add a pink shoelace and think that’s enough for women.”* The color pink was strongly disliked across all age groups and the bulky appearance of most hiking boots was another frequently mentioned concern. While the functional need for stability and support was acknowledged, many voiced dissatisfaction with the excessive weight and stiffness of traditional hiking footwear.

Mid-cut boots were described by several interviewees as slightly too high, often causing discomfort around the ankle. This highlights a common trade-off between comfort and ankle stability, which is particularly relevant for moderate-level hikers.

When discussing materials, leather was often appreciated for its durability and the way it ages over time. However, among the younger participants, there were more mixed feelings. Some preferred synthetic, matte-finished materials due to ethical concerns related to the use of animal-derived products. The use of leather was viewed as a personal value-based decision, highly important to some, while irrelevant to others.

Preferences also varied in terms of the overall impression or appearance the shoe should convey. Younger women tended to favor shoes that clearly signal their intended use for hiking, rather than resembling an urban sneaker. There was interest in technical and visually interesting design elements, as long as the overall aesthetic remained clean and soft. Meanwhile, participants from the older age group valued shoes that could transition seamlessly from hiking trails to casual city environments. Their design preferences leaned toward simplicity and softness, with a focus on practicality. Another important observation was the role of color coordination in long-term use. Multiple interviewees highlighted the importance of choosing a shoe in a color that matches various outfits, given that footwear is typically a long-term investment. While a jacket or outerwear piece could serve as a colorful, playful element in an outfit, footwear was expected to be more neutral and adaptable across different settings.

4.1.3 Study Visit at Naturkompaniet:

A study visit was conducted at Naturkompaniet, a retailer that sells Dolomite hiking shoes in Sweden. The purpose of this visit was to gain insights into customer preferences and identify potential areas for product development. Valuable information was gathered through observation and discussion with staff. One of the most striking findings from the visit was that young women often entered the store, glanced at the hiking shoe selection and quickly left without making a purchase. When asked about their reasons, a common response was dissatisfaction with the aesthetics of the shoes. Many found them visually unappealing and not aligned with their style preferences.

Fast hiking shoes, in contrast, appear to be gaining popularity among younger customers. These shoes, characterized by their modern and sporty design, sell well and resonate with a younger audience. This suggests a market opportunity for a hiking shoe that incorporates design elements inspired by fast hiking footwear while maintaining the technical performance and stability required for more advanced hikes.

Several elements of Dolomite's current hiking footwear were perceived as unappealing by young Scandinavian women. One commonly mentioned concern was the color of the sole, many respondents felt that the grey sole created an undesired contrast against the black leather upper, resulting in a less cohesive and modern aesthetic. Additionally, the use of leather materials was viewed critically by a substantial portion of the target group, who expressed ethical objections related to animal welfare and a general preference for more sustainable, cruelty-free alternatives.

Hiking is becoming increasingly popular among young Scandinavian women, presenting an opportunity for brands to engage with this growing segment. While traditional hiking shoes may not appeal to younger consumers, fast hiking shoes, with their modern, lightweight and performance-driven designs, are performing well in this demographic. By integrating these design principles into a dedicated hiking shoe for young women, Dolomite can better capture this market and enhance its product offerings.

During the study visit, I also gained a deeper understanding of the materials and construction of hiking shoes. In particular, I learned more about Gore-Tex technology and its importance in providing waterproofing and breathability.

4.1.4 Foot specialist

To gain insights from a professional perspective regarding the anatomy of women's feet, an interview was conducted with a foot specialist. The information provided indicated that women's feet are often slightly wider than men's relative to foot length, particularly after pregnancy, when the feet tend to expand. It was also explained that many shoes are too narrow in the toe area. For instance, sneakers are commonly designed with a low toe box, which has become a standard despite not being ideal for foot health. According to the specialist, shoes should allow more vertical space above the toes, especially above the big toe, to better support natural foot function.

4.3 Identification of user requirements

This chapter outlines the identified needs and requirements.

4.3.1 Function analysis

In order to ensure that the developed product aligns with the identified user requirements, its functions must be designed to address these needs. The required functions are outlined in Figure 9. The Main Function (MF) define the product’s primary purpose, while the Part Functions (PF) support the execution of the main functions. Additionally, Supportive Functions (SF) represent desirable but non-essential features that enhance the concept without being crucial for the primary functionality. To guide the design process, all functions are weighted according to their priority, classified into three levels: Necessary (N), Desired (D) and Considered (C). This categorization supports a structured evaluation of functionality based on user relevance and design feasibility.

FUNCTIONS	CLASSIFICATION	LIMITATIONS AND NOTES	PRIORITY LEVEL (N, D, C)
Facilitate desirable hiking experiance	MF		N
Provide stability	PF	While hiking	D
Offer protection against water	PF		D
Breathable	SF		N
Wear-resistant	SF		N
Be visually appealing	SF		D
Easy to fasten	SF		D
Adapt to the wearer's foot	SF		C

Figure 9, Function analysis

4.3.2 Requirements specification

To summarize the pre-study, all collected data was compiled into a set of product requirements, outlining various criteria along with their target values (Figure 10). The table below presents the criteria that a future product must fulfill (Requirement, R) or is desirable to fulfill (Preferable, P). Each preferable criterion (P) is assigned a priority level ranging from 1 to 5, where 1 indicates the highest importance. Multiple criteria may share the same priority value. This prioritization enables a structured way to weigh different goals against one another during concept evaluation.

Criteria (Requirements + Specification)		Goal value	R/P	Prioritize	Stakeholder
Provide Support	For easy-to medium-medium-intensity hiking		R		Dolomite
Be adjustable	To enhance user control and increase comfort	Easy to handle	P	2	Dolomite
Water resistance	Handle wet terrain	Tolerate a water pressure of 10,000 mm, according to the standard test EN ISO 811	R		Dolomite
Be light weight		< 500 g (size EU 38)	P	2	Customer
Require minimal effort to maintain			P	4	Customer
Enhances its visual appeal over time	Material should not be less appealing after using and the design should be attractive in years ahead.			3	
Aligning with the brand's identity.			R		Dolomite
Express femininity through its design			P	1	
Be sustainable	Minimize environmental impact		P	1	Dolomite

Figure 10, Requirements specification

4.5 Benchmarking

This benchmarking analysis highlights three distinct approaches to contemporary hiking footwear, each aligning to varying degrees with the outlined requirements of this project (Figure 11).

Chingo - Roa Hiking

The ROA Cingino illustrates a shift in hiking footwear design where technical capabilities are combined with a more refined and urban-influenced aesthetic. Its construction features a synthetic, leather-free upper that offers water resistance, along with a Vibram XS Trek outsole engineered for durability and grip. The material selection points to a focus on innovation and environmental considerations. Cingino has a design adaptable for both outdoor activities and everyday wear. Although designed as a unisex product, its form and understated visual language resonate well with female consumers seeking a modern clean design. (ROA, n.d.).

Retailing at a premium price point, the Cingino positions itself as a hybrid between outdoor performance gear and modern fashion, appealing to users who value both functionality and progressive aesthetics.

When evaluated against the requirements, the ROA Cingino performs notably well. The shoe provides solid structural support through its robust Vibram outsole, designed for traction and stability across uneven terrain. However, its adjustability is somewhat limited due to a traditional lace-up system. In terms of water resistance, the shoe meets high standards. There is no information to be found about the exact weight of the shoe, but it is described in several articles as lightweight.

Salomon x-alp suede

The Salomon X-Alp Suede is a versatile and technically inspired shoe. The shoe features a construction that combines soft suede leather with open 3D mesh, providing both breathability and a modern visual identity.

The X-Alp Suede incorporates several protective features such as a rubberized toe cap and a lateral power band, which offer additional structural support and safeguard the foot during demanding activities. These details also contribute to the shoe's overall stability, addressing the requirement of providing support during movement across uneven ground. The shoe includes flat laces, allowing for secure, adjustable fastening, which enhances both fit and functional reliability (Salomon, n.d.).

Despite its robust structure, the X-Alp Suede maintains lightweight, weighing only 425 grams, which contributes to reduced fatigue during prolonged use. The 11 mm drop ensures a balanced and natural stride, supporting ergonomic comfort. In terms of water resistance, the combination of suede and textile offers moderate protection against light moisture, suitable for everyday outdoor usage, though it may require additional treatment or care in very wet environments. This shoe is not waterproof enough to meet the requirements.

Regarding maintenance, the use of quality leather and durable textile materials ensures that the shoe remains structurally sound over time, requiring only basic cleaning and care. As the suede ages, it naturally develops a unique patina, which enhances its visual appeal over time and adds character to the shoe.

While not explicitly targeted at a female audience, the refined silhouette, material softness and color options offer subtle opportunities to express femininity through design, particularly for users seeking a balance between technical performance and aesthetic sophistication.

Arc'teryx Kopec GTX Shoe Women's

The Arc'teryx Kopec GTX Women's shoe is a high-performance hiking shoe tailored for day hikes and multiday excursions. The shoe is engineered to be fast, light and secure, aligning with the needs of users who seek both versatility and durability in varied terrains.

The upper is made from highly durable Cordura mesh, which ensures breathability, quick-drying performance and long-term resistance to wear. This contributes to the shoe's lightweight construction while offering effective protection in rugged environments. The use of GORE-TEX fabric ensures that the shoe remains fully waterproof and breathable, meeting the requirement for water resistance while also aligning with environmentally conscious design principles.

The lacing system, which combines integrated webbing and metal eyelets, offers a secure and adjustable fit, allowing the wearer to tailor the shoe to their comfort level and activity.

Weighing less than traditional hiking boots while retaining robust structural elements, the Kopec GTX meets the requirement of being lightweight. The use of LITEBASE Vibram Megagrip outsole ensures excellent traction while also providing a precise grip across a wide range of surfaces, including dirt, mud and rocky paths (Arc'teryx, n.d.).

In terms of maintenance, the quick-drying materials and reinforced high-wear zones help ensure that the shoe is low-effort to care for, even after exposure to moisture and dirt. Its clean design language, durable materials and minimalist color palette contribute to a refined appearance that is likely to enhance visually over time as it ages with use.

While the shoe does not explicitly market itself with a gendered design, the women's version includes features such as a tailored fit and streamlined silhouette, offering subtle nods toward feminine expression through form and comfort, rather than through color or decorative elements.



Figure 11, From right to left: Chingo Roa Hiking, Salomon x-alp suede and Arc'teryx Kopec GTX Shoe Women's. Images from ROA hiking, Salomon and Arc'teryx. Permission requested.

This benchmarking reveals three different approaches to modern hiking footwear. All models integrate functionality with a refined aesthetic, appealing to women without relying on stereotypical feminine cues. Instead, they use considered shapes, materials and minimalistic detailing. Arc'teryx Kopec GTX stands out for its performance in waterproofing, fit and lightweight design. ROA Cingino and Salomon X-Alp Suede show strengths in urban adaptability and material choice but have limitations in adjustability and weather protection. A clear market gap remains for a fully waterproof, lightweight shoe with a consciously feminine design tailored to women's specific needs. This highlights an opportunity for a product that combines performance, comfort, and modern identity.

4.6 Brand identity

Dolomite's design language is deeply rooted in its alpine heritage, combining traditional craftsmanship with advanced functionality. The brand's visual identity is characterized by a distinct aesthetic that seamlessly merges outdoor performance with urban adaptability. One of the most recognizable elements in Dolomite's footwear is the signature stitching techniques, which serve both functional and aesthetic purposes.

Double stitching, (Figure 12), a hallmark of Dolomite's craftsmanship, reinforces durability while creating a recognizable design feature that distinguishes the brand's footwear. Similarly, cross-line stitching (Figure 12) is a distinctive detail associated with Dolomite, consistently present in many of their collections throughout the years. The aim is to function as a symbol of quality and skilled craftsmanship.



Figure 12 , Example of Dolomites stitching. Images from Dolomite.it. Reproduced with permission from Dolomite.

The Dolomite logo is consistently integrated into the footwear, ensuring a clear brand identity. Whether embossed on leather, stitched onto fabric or featured on the tongue or heel, the logo remains a constant element that reinforces the brand's legacy. Additionally, the Italian flag is often incorporated as a subtle yet meaningful detail, typically placed on the heel, side or laces. This tricolor accent is meant to serve as a reminder of Dolomite's origin, emphasizing the brand's commitment to Italian craftsmanship and design excellence.

Another key feature of the brand identity is the zigzag pattern positioned along the side of the shoe (Figure 13). This design element not only adds visual interest but also evokes the silhouette of mountain peaks, subtly reinforcing the brand's deep connection to alpine environments and outdoor exploration. Its recurring presence across collections highlights Dolomite's commitment to blending functional design with symbolic aesthetics.

By integrating these visual and structural elements, Dolomite maintains a recognizable and cohesive aesthetic that resonates with both outdoor enthusiasts and those seeking a refined, heritage-inspired style.



Figure 13, Example of Dolomites stitching. Images from Dolomite.it. Reproduced with permission from Dolomite.

4.7 Identification of target group

The target audience for the project has been further specified, as the initial description was relatively broad. The refined target group consists of women aged 20–35 residing in Scandinavia who maintain a physically active and sporty way of life. These individuals are middle-income earners and seek a timeless Scandinavian design with a minimalist aesthetic, viewing their purchase as a long-term investment. The shoes should reflect high quality.

This group was chosen as they represent a growing segment of consumers within the outdoor market, yet they remain underrepresented in terms of products tailored specifically to their needs. Their desire for minimalist, feminine and long-lasting footwear that bridges functionality, trends and style highlights a gap in the current market.

4.7.1 Persona

Emma is a 31years old marketing consultant based in Stockholm. With a demanding yet flexible career, she values an active and well-balanced lifestyle, seamlessly integrating physical activity into her daily routine. She commutes by cycling through the city and enjoys running as a way to unwind after work. For Emma, exercise is not just a hobby but an essential part of her identity, providing both physical benefits and mental clarity.

Beyond her everyday routine, Emma is passionate about outdoor adventures. She frequently hikes in Sweden's mountain regions and, whenever possible, seeks new challenges in Norway, Italy or Canada during her vacations. These trips allow her to connect with nature, push her physical limits, and experience breathtaking landscapes. She prioritizes high-performance gear that offers durability and comfort, ensuring her equipment can withstand varying terrains and weather conditions.

Emma also has a strong interest in fashion, particularly Scandinavian design. She appreciates timeless, minimalist aesthetics that blend functionality with style. As someone who values quality over quantity, she carefully selects her wardrobe pieces, viewing them as long-term investments rather than seasonal trends. Her clothing and footwear choices must reflect her personal style while supporting her active lifestyle. She seeks products that are not only practical for outdoor activities but also sophisticated and feminine for her style.

4.8 Trend analysis

The outdoor fashion industry is undergoing a significant transformation, according to ISPO (2025), increasingly aligning with the values and aesthetics of high fashion. This shift is marked by a stronger emphasis on technical innovation, sustainability and elevated design. Brands are responding by introducing multifunctional materials, circular production concepts and exclusive designer collaborations, reflecting the evolving expectations of both athletes and consumers regarding style, performance and environmental responsibility.

Outdoor fashion is experiencing a significant transformation, seamlessly integrating with high fashion through designer collaborations, advanced material innovations and an emphasis on sustainability. High-end brands such as Jacquemus, Collina Strada and Balenciaga are incorporating performance-driven aesthetics, while outdoor brands such as Salomon leverage their sportstyle strategy to penetrate luxury markets (ISPO, 2025). This confluence of luxury and technical apparel highlights the increasing consumer demand for clothing that is both fashionable and functional. The trend reflects a broader movement where structured silhouettes, volume and technical materials define a new outdoor aesthetic that blurs the lines between performance and style.

A key driver of the outdoor fashion evolution is the continued rise of athleisure, a trend where athletic wear is designed to be stylish and comfortable enough for everyday use outside of sports contexts. Consumers seek clothing that transitions effortlessly between outdoor activities and urban environments (Gleaden, 2024). As a result, brands are expanding their product lines to include garments that offer both technical utility and street-ready designs, ensuring consumers no longer have to compromise on style when choosing performance apparel.

Sustainability is no longer an option but a necessity in the fashion industry. The EU's Eco-Design Legislation, introduced in July 2024, mandates digital product passports, circularity and resource efficiency, prompting brands to prioritize high-quality materials and construction techniques that extend product lifespans. This regulation underscores the tension between durability and the fast fashion industry's business model, which relies on high product turnover. However, for performance brands, enhanced durability serves as a competitive advantage, fostering brand loyalty and aligning with the growing popularity of rental and resale models.

4.9 Concept Development

With the identified customer requirements in mind, the concept development phase was performed. As mentioned in the research phase, the insights from surveys, interviews, trend analysis and benchmarking provided a clear understanding of user needs and preferences. These requirements served as a foundation for generating initial ideas. Through sketching, several early concept directions were explored and visualized. The concepts were then compared and evaluated based on how well they responded to the defined requirements.

4.9.1 Moodboard

A combined moodboard and inspiration board was developed to visually communicate the overall direction and emotional tone of the project (Figure 14). The board integrates key references derived from both the trend analysis and user research phases, including elements from contemporary footwear design, impressions of natural landscapes, organic and flowing shapes, as well as inspiring materials. These components were carefully selected to reflect the aesthetic preferences identified among the target user group.

The board does not merely function as a collage of inspiration, but rather as a strategic design tool. It synthesizes abstract ideas and concrete research findings into a cohesive visual narrative that informs subsequent stages of the design process. For instance, the emphasis on natural textures and muted earthy tones was informed by recurring themes that emerged during user interviews. Additionally, an image combining an urban skyline with an earthy background was included to reflect the expressed desire for a hybrid shoe, one that functions seamlessly in both urban environments and natural settings. Similarly, the inclusion of lightweight, adaptive footwear silhouettes corresponds with both ergonomic needs and fashion-related expectations uncovered during trend scanning.

By bridging research and creativity, this visual board ensures that the design development is rooted in both emotional resonance and practical relevance. It sets a clear visual and conceptual foundation for sketching, material selection and further iteration.



Figure 14, a combined moodboard and inspiration board

4.9.2 Idea generation

The idea generation phase involved extensive sketching (Figure 15) to explore different design directions and possibilities for the product. Sketching served as a fast and flexible method to visualize forms, functions and concepts without being limited to a single solution too early in the process. This approach encouraged creativity and made it easier to identify a broad range of potential ideas. In combination with inspiration from trend analysis and reference products, this helped broaden the scope and highlight opportunities for innovation and improvement.

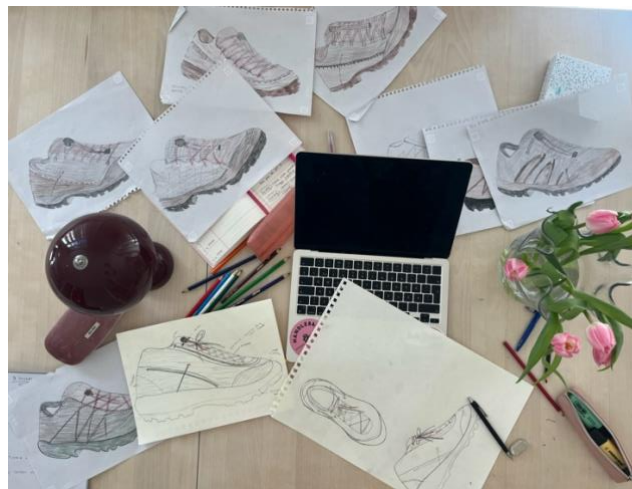


Figure 15, extensive sketching

Throughout the process, several recurring themes and interesting design elements emerged. Based on previously defined requirements and goals, a number of ideas were selected for further development. In the end, three main concepts were chosen due to their potential in terms of function, aesthetics and environmental impact.

These concepts are presented in the following section, along with updated sketches and additional development. Early idea sketches that formed the basis of this phase can be seen in figure 16.



Figure 16, early idea sketches

4.9.3 Morphological Matrix

The following morphological matrix (Figure, 17) has been developed as a methodical tool to explore a range of design alternatives based on key criteria derived from the requirement specifications. Each sub-function reflects essential functional, aesthetic and ergonomic demands that the final concept must fulfill. Based on the outcomes of the matrix, three design concepts, yellow, pink and blue, were synthesized to represent distinct yet complementary directions for further development.

Sub-function	Solution Principles		
Weather protection Material	GORE-TEX membrane	Water-repellent suede	Extended collar with sealing gaiter
Stability	Rigid heel counter + ankle support	Soft but high collar	Integrated lacing system around the ankle
Comfort / shock absorption	EVA midsole	PU insole with cushioning foam	Gel insert in heel
Ventilation	Mesh ventilation panels	Knitted textile upper	Perforations in upper material
Adjustable fit	Dual lacing systems	Elastic sock-like opening	BOA or quicklace system
Brand language (Dolomite)	Signature seam placement	Logo placement in traditional locations	Earthy muted color tones
Durability	Recycled or LWG-certified materials	TPU toe and heel protection	Reinforced stitching in stress zones
Urban/outdoor compatibility	Lightweight construction	Sporty, low-profile silhouette	Neutral tones for versatile styling
Aesthetics	Trend-inspired colors	Streetwear-inspired shape	Elegance
Feminine expression	Soft color accents	Slimline silhouette adapted for women	Subtle sculpted detailing (curved seams etc)

Figure 17, morphological matrix

4.9.4 The concepts

In this section, three concepts are presented without any hierarchical order. Each concept was developed based on the previously identified customer requirements and insights gathered during the research phase. Using morphological matrix and exploratory sketches, a wide range of possible solutions were systematically explored. This method enabled the combination of different functions, forms, and features in creative ways, leading to the development of three distinct concepts. The concepts aim to explore different approaches to fulfilling the same core needs, with varying emphasis on aspects such as functionality, aesthetics and user interaction. Together, they represent a diverse yet targeted response to the design challenge.

Concept 1

Concept 1, inspired of the yellow boxes on the Morphological Matrix, merges trendy sneaker aesthetics with performance-oriented design, creating a versatile silhouette that balances functionality and urban appeal.

At the heart of the design is a dual lacing system that enhances both fit and visual identity. The lower part features classic eyelets and traditional lacing for secure adjustment, while the upper section introduces a quick-pull lace system, lending the shoe a modern, modular character and making the shoe easy to take off. This detail not only offers adaptability to different foot shapes and user preferences, but also references the technical look of contemporary outdoor-inspired fashion.

A layered construction across the midfoot creates a distinct visual rhythm, adding volume, structure and reflects current trends seen in popular street sneakers. The overlapping design is inspired by the 'Baggy' shoe from the French brand Palladium, known for producing durable and robust sneakers. Together with carefully placed stitching lines in contrast color, the design builds a strong visual connection to Dolomite's brand identity.

The shoe is built with a reinforced and sculpted heel counter that provides lateral support and a stable ride. Its low-cut profile enhances freedom of movement and contributes to a lightweight feel, making it suitable for dynamic use both on trails and in daily urban life.

Beneath, a robust and lugged outsole delivers excellent traction and grip on uneven terrain. Its rugged profile signals capability without compromising the sleekness of the overall form. This hybrid sole design embodies the concept's dual-purpose ambition, equally suitable for hiking and everyday mobility.

Overall, the shoe reflects a refined fusion of Dolomite’s alpine DNA with contemporary design sensibilities, resulting in a lightweight yet supportive concept that is both technically functional and visually progressive (Figure 18).



Figure 18, concept 1

Concept 2

Concept 2, inspired of the pink boxes on the Morphological Matrix is a high-cut hiking boot concept reinterprets traditional outdoor footwear through a feminine design lens. The extended silhouette rises above the ankle, contributing to a bold and supportive look, while the chunky sole reinforces the shoe's rugged character and adds a sense of durability.

While rooted in the technical language of Dolomite's design heritage, as seen in the pronounced stitch lines and sturdy silhouette, the concept also explores more trend-forward aesthetics, drawing inspiration from luxury designer sneakers by Chloé. A pronounced stitch detail runs around the entire shoe. This bold seam becomes the visual focal point, replacing the need for excess detailing and giving the design a strong, fashion-forward identity. The ankle-high profile provides added stability and support, making the shoe suitable for more demanding conditions. It features a chunky outsole that ensures excellent grip and underfoot stability, essential for varied terrain. A waterproof construction further enhances its functional performance, protecting the wearer in wet or changing weather.

The lacing system is framed by a bold, petal-inspired shape that evokes natural forms and introduces a feminine expression, softening the traditionally utilitarian aesthetic of the hiking boot. A Quicklace closure replaces conventional lacing, reinforcing the clean, sporty and modern impression while enhancing ease of use.

Together, these features form a visually balanced design, one that blends sportiness with subtle elegance. The concept offers a more feminine take on classic hiking footwear, communicating versatility and strength without relying on color cues to define its target user (Figure 19).



Figure 19, concept 2

Concept 3

Concept 3, inspired of the blue boxes on the Morphological Matrix, is a low-cut hiking shoe embodies a compelling fusion of performance innovation and contemporary design, serving as an urban-ready reinterpretation of traditional outdoor footwear. Although featuring a low-cut profile, the shoe offers targeted ankle support, ensuring both freedom of movement and structural stability.

Inspired by the distinctive aesthetic of the Salomon XT-6, the design is defined by its streamlined silhouette, minimalistic construction and advanced lacing system, elements that collectively project a sense of speed, functionality, and modernity. The overall visual identity is dynamic and trend-aware, appealing to users who value both utility and style.

Despite its progressive appearance, the shoe maintains a clear connection to Dolomite's design heritage through considered seam placements and clean, architectural detailing. This careful balance between modernity and tradition enhances its versatility, making the shoe suitable for both fast-paced outdoor activity and everyday urban wear.

Tailored specifically for a female user, the design emphasizes aesthetic sophistication without compromising performance. It communicates Dolomite's outdoor design expertise while reflecting the growing influence of street-sport culture in contemporary footwear (Figure 20).



Figure 20, concept 3

4.9.4 Concept elimination

To support the selection of the most suitable design direction, a Pugh matrix was used to systematically compare the three developed concepts. Each concept was evaluated against a set of weighted criteria derived from the requirement specification.

In addition to this structured comparison, user feedback was gathered to understand how real users perceive and respond to the concepts. This helped to complement the analytical evaluation with personal preferences and practical insights from potential users. The combination of these two approaches, objective analysis and subjective feedback, formed the final concept decision.

To support the selection of the most suitable design direction, a Pugh matrix was used to systematically compare the three developed concepts (Figure 21). Each concept was evaluated against a set of weighted criteria derived from the requirement specification. As a design reference, one of Dolomite's best-selling models, the 54 Low Evo, has been used to ensure alignment with the brand's identity, existing product language and proven market appeal.

Chalmers				
<i>Clara Rönnäng</i>	Created: 19-04-2025			
	Modified:	29-04-2025		
Kriterier		1	2	3
Provide support	R	0	+	0
Be adjustable	E	+	0	0
Be ligh weight	F	0	-	0
Water recistace	E	0	0	0
Minimal effort to maintain	R	0	+	+
Enhances its visual appeal over time	E	0	-	-
Aligning with the brand's identity	N	0	0	0
Express femininity through its design	S	+	+	+
Be sustainable		0	0	0
$\Sigma+$		2	3	2
$\Sigma 0$		6	4	6
$\Sigma -$		0	2	1
Net worth		2	1	1
Ranking		1	2	2
Further development		YES	NO	NO

Figure 21, Pugh Matrix

The next step in the elimination phase was to take a closer look at the users' opinions and analyze how well each design concept matched their needs. This was done by showing the three concepts to women who had taken part in the earlier interviews, as well as to some who had answered the survey. They were invited to join a group discussion where they could share their thoughts and compare the different ideas. The goal was to decide which concept should be developed further.

In total, four women aged between 24 and 33 participated in this discussion. Even though the group was small, the feedback was clear and useful. All participants agreed that Concept 1 was the best option. They felt that it matched their needs the most and offered something new and practical. One of the main things they liked was the use of double fabric, which gave the shoe a unique look and made it feel more durable. The double lacing system was also appreciated, as it was seen as both stylish and functional, giving the wearer better support and flexibility.

Concept 3, on the other hand, was not as well received. The women said it looked too similar to shoes already on the market. Because of that, they found it hard to see what made it special or why it would be worth choosing over existing options. It lacked something that made it stand out.

Concept 2 received mixed feedback. Some details were appreciated, especially the thick, visible stitching which gave the shoe a handcrafted, solid feeling. The clean and minimal design was also liked, it gave a simple and classic impression that some found appealing. However, most participants still felt that the concept didn't stand out enough. One of the women pointed out that the design didn't give off a clear "Dolomite" feeling, meaning it didn't reflect the brand's identity or outdoor heritage strongly enough. It was described as a bit neutral and not as expressive or characteristic as expected from a brand like Dolomite. Overall, while certain elements of the design were liked, the concept lacked the uniqueness and brand connection that the women were looking for.

While Concept 1 was clearly the favorite, the women did point out some parts that could be improved. One concern was the deep cut around the ankle. Some felt that it might be uncomfortable or impractical, especially in outdoor settings or when walking in rougher terrain. They also worried that the double fabric, while nice to look at, could be hard to keep clean, especially in muddy environments. If the fabric traps dirt, it might not be suitable for regular use.

Based on the user feedback and the results from the Pugh matrix evaluation, Concept 1 has been selected for further development. It was seen as the most promising option due to its combination of innovative features, practical function and user appeal. However, some changes will be made to improve the design further. In the next stage, the deep ankle cut will be adjusted to provide better comfort and support.

5. Final Concept

The final concept represents a synthesis of technical functionality and contemporary aesthetics, with a clear focus on the female user. The shoe is designed to fulfil a dual purpose: as a reliable hiking shoe suitable for light to moderate trails, and as a versatile everyday sneaker with a strong visual identity. This dual functionality makes the concept relevant at the intersection of performance and fashion, an area where consumer expectations of comfort, quality, and self-expression converge.

The design draws inspiration from classic boot silhouettes such as Palladium, known for their robust yet urban character, and the Miu Miu x New Balance collaboration, which explores dual lacing systems and trend-driven forms. The dual lacing system is also a central feature in this concept: the lower lacing includes traditional eyelets for customised adjustment, while the upper section features a quick-lock elastic toggle, offering both practical ease of use and a distinctly modern aesthetic. This system allows for flexible adaptation to different foot shapes and contributes to a bold, modular appearance, an important characteristic for a target group seeking technical footwear with a strong design sensibility (Figure 22).



Figure 22, Final concept in perspective view

5.1 Fit Adapted to the Female Foot

Rather than being a scaled-down version of a men's shoe, this concept is based on a women-specific last, characterized by a narrower heel, reduced overall volume, and a shape that follows the contours of a female foot. This results in a better overall fit and helps prevent issues such as slipping, pressure points, and chafing, common concerns when female users wear shoes designed primarily for men.

To further optimize fit, the heel area is designed with a slightly higher and tighter construction, than the originally concept 1, for improved hold and to reduce unwanted movement. The forefoot offers enough flexibility and space for natural toe splay without compromising the streamlined silhouette. A slightly more pronounced arch supports the foot's structure and increases comfort during prolonged use. These adjustments result in a shoe that is not only more ergonomic but also more intuitive and reliable in both technical and everyday settings (Figure 23 and 24).

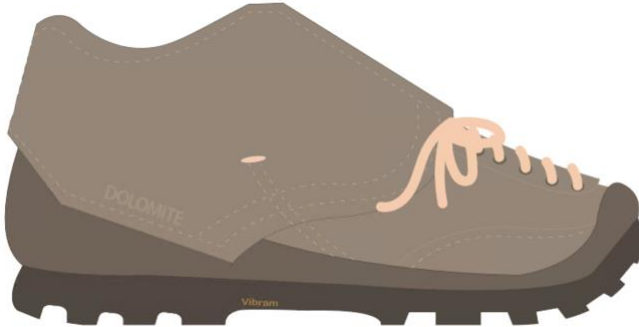


Figure 23, final concept in side view



Figure 24, final concept from above and back

5.2 Materials and Construction

All material choices are carefully considered to meet the demands of durability, comfort and functionality, see Figure 25.

The upper is made from suede leather, which provides a tactile and premium feel while ensuring resilience. The soft yet structured nature of suede is complemented by visible contrast stitching, which follows deliberate lines that reflect Dolomite's visual design language and emphasize craftsmanship and precision. To ensure protection in varying weather conditions, the shoe is equipped with a GORE-TEX Invisible Fit membrane, providing waterproof protection without compromising fit or breathability. The membrane keeps the foot dry while allowing moisture to escape, essential for both hiking and urban use.

The insole is made of polypropylene, offering lightweight structure and maintained support. The midsole is constructed from molded EVA (Ethylene Vinyl Acetate) in combination with an ESS shank, which together provide effective shock absorption, torsional rigidity, and long-lasting comfort. The heel counter is constructed with both internal and external fabric layers, contributing to a clean and structured silhouette. The forefoot is also reinforced with decorative layered detailing that creates visual contrast and underlines the shoe's geometric composition.

The shoelaces are constructed from reinforced polyester, incorporating Kevlar fibers for enhanced durability and tensile strength. This material choice ensures resistance to abrasion, minimizes wear over time, and maintains performance under high tension. Kevlar's lightweight yet robust properties make it suitable for demanding outdoor and athletic applications where reliability is critical.

The shoe is built on a Vibram outsole using the Vibram XS Trek compound, a high-performance material offering excellent flexibility and grip on both dry and wet surfaces. The outsole is engineered to be shock-absorbing and responsive on uneven terrain, making it suitable for natural surfaces as well as urban environments. The sole profile communicates capability and freedom of movement without appearing heavy or bulky, further reinforcing the shoe's hybrid identity.



Figure 25, final concept divided in parts

5.3 Visual Identity and Color Palette

Visually, the shoe challenges traditional perceptions of what a technical hiking shoe should look like. It has an elegant yet bold silhouette where volume and structure are carefully balanced between sporty and fashion-forward expressions. Stitch lines that follow geometric paths across the upper are inspired by classic Dolomite design elements and highlight the construction in a subtle yet effective way. The color scheme builds on earth-toned hues to reinforce the shoe’s connection to nature, an important value for the target audience. Suggested color ways include beige and warm brown (Figure 25), which harmonies with the texture of the suede and create a timeless, versatile look suitable for both outdoor gear and urban apparel. This palette helps blur the boundaries between performance and lifestyle, aligning with the overall ambition of the concept.



Figure 26, suggested colors on suede

5.4 Technical Measurement Table

Below is a table presenting the dimensions of the final concept, in a size EU 38 (Figure 27). The measurements are based on ergonomic considerations, user requirements and the intended use context, ensuring both functionality and user comfort.

Description	Description	Description
Foot length	245 mm	Based on Dolomite size chart for EU 38 (women's)
Ball width	85–90 mm	Width across the forefoot at the metatarsal heads, typical for women's last
Heel width	55–60 mm	Narrower heel to improve hold and reduce heel slip
Heel height (collar)	60–65 mm	Heel collar height from insole to top edge
Ankle dip depth	25–30 mm	Depth of the side dip at the ankle, lowered for style but reviewed for comfort
Toe box height	20–25 mm	Vertical space inside the front, allows for natural toe splay
Arch height (internal)	20–25 mm	Moderate arch support for women's foot anatomy
Lace length	800–900 mm	For 6–7 eyelets, reinforced polyester with Kevlar fibers
Outsole thickness (heel)	30–35 mm	Includes EVA midsole and Vibram XS Trek outsole
Outsole thickness (forefoot)	20–25 mm	Slightly lower than heel for natural forward motion
Insole thickness	3–4 mm	Polypropylene layer for support and minimal weight
Toe spring (lift)	10–15 mm	Front curve of the sole for better walking dynamics
Overall shoe weight	360–400 g	Estimate based on materials and Dolomite comparisons

Figure 27, Final concept measurement (EU Size 38)

6. Sustainability Analysis

During the process of developing the conceptual hiking shoe, it became clear that its environmental impact is not tied to energy consumption during use, as is the case for many other products. Instead, the most significant impact occurs in earlier life cycle phases, specifically during raw material extraction, production, distribution and at the end-of-life stage.

Like most of Dolomite's products, the concept proposal developed in this project primarily utilizes leather, more specific suede. The environmental impact of leather is a complex topic. While raising livestock contributes to deforestation and requires large land areas, leather is often a by-product of the meat industry. This nuance does not eliminate its environmental concerns but places them in a broader context.

Dolomite is an active member of the Leather Working Group (LWG), an international, non-profit organization that works to improve environmental performance in the leather industry. LWG engages stakeholders across the entire value chain and focuses on key issues such as responsible chemical management, improved tanning processes and water use reduction. Whether leather is inherently sustainable or not, being LWG-certified ensures that the material is sourced under the highest possible environmental and social standards (Leather Working Group, n.d.).

To further support environmentally informed decisions, the company uses the Higg Index, an assessment tool developed by Higg Co in collaboration with the Sustainable Apparel Coalition (Dolomite, 2025). This system evaluates sustainability performance across five modules: environmental impact at the factory level, social and labor conditions in production facilities, life-cycle-based comparison of materials, full product life cycle impact assessment and brand-level sustainability strategy (Dolomite, 2025). Through this framework, other materials used in the concept shoe, such as EVA and polypropylene in the sole, have been assessed with sustainability considerations in mind.

The hiking shoe's outsole, supplied by Vibram, is designed to be replaceable once worn down. This feature significantly extends the product's lifespan and supports a more circular approach to footwear design. From a long-term perspective, modularity and reparability are critical components of sustainable consumption.

While the materials used in this concept have been selected and certified with environmental performance in mind, the most pressing sustainability challenges lie in the production phase and at the end of the product's life.

Once the upper of the shoe is worn out or damaged beyond repair, the entire product is typically discarded. Without established take-back systems or material recovery infrastructure, even a partially reusable shoe often ends up in landfill. This underlines the need for more systemic solutions beyond material selection, particularly in addressing product longevity, end-of-life strategies and consumer behavior.

By making deliberate choices about materials and designing for repairability or recycling, the long-term sustainability of the concept can be meaningfully improved.

7. Ethics

Ethics in design and production is very important. When working with a brand like Dolomite, their clear commitment to responsible production and fair treatment of people throughout their supply chain is very appreciated. One aspect that really stands out is their collaboration with Youngone Corporation in Bangladesh. Youngone represents what a modern and ethical manufacturer should strive for today.

Something inspiring about Youngone is how they integrate sustainability and social responsibility into their entire business model (Dolomite, 2025). In particular, their focus on promoting women's employment caught the attention. This isn't only about representation, it's about creating opportunities, supporting empowerment and ensuring that women have safe and fair workplaces.

Knowing that Dolomite's products are developed in collaboration with a company like Youngone provide confidence in the ethical foundations of their production. It also reminds me how deeply ethics and sustainability are connected, and how important it is for design engineers and brands alike to take responsibility for the entire value chain. Ethical production requires conscious decisions, transparency and the will to work with the right partners.

In addition to ethical production, I believe that ethics must also be embedded in the design process itself. A big part of my project has focused on designing footwear that is actually made for women's feet, something that still isn't the norm in the outdoor footwear industry today. Inclusive design also means making the products for everyone. It could also be about adjustability, such as with the flexible lacing system in this project's concept. By allowing for individual adjustments, the shoe can better serve a wider range of users within the target group, regardless of specific foot shape. This, to me, is a crucial aspect of ethical design, creating products that genuinely work for the people they are intended for.

8. Discussion

This chapter reflects on the project process and the methods applied throughout the work, as well as suggestions for future development and potential improvements of the concept. Some of the methods discussed below had a meaningful impact on the project, but also showed potential for further development.

8.1 Methods used in process

The initial phase of the project involved establishing a clear framework for the assignment. At the outset, the project brief focused on developing a hiking shoe for women. However, after further discussions, it was decided to narrow the scope and focus on a more specific target group. The refined target group consists of women aged 20–35 living in Scandinavia with an active, sporty lifestyle.

During the research phase, interviews were conducted with individuals from the target group and other potential customers, as well as with outdoor shoe retailers and a foot specialist. These activities were carried out to better understand the users' needs and to define clear user requirements.

The idea of developing a 3D model of the concept was eventually not pursued, as it was considered too time-consuming and not essential for the outcome of the project at this stage.

User research and survey

The user survey proved to be an effective tool for gathering relevant data from the target group. It helped identify key user needs and preferences, which guided important design decisions later in the process. However, a potential improvement would have been to maintain more regular contact with users throughout the project. This could have allowed for continuous feedback and validation of design choices during idea generation. Instead, the main user involvement was concentrated in the early research phase and during the final concept evaluation, which limited the opportunity to test and adjust the early concepts in dialogue with real users.

Personas and user representation

To support user-centered design, a persona was developed based on the conducted interviews and own insights. The persona worked as valuable tool for visualizing and relating to the target users during the design phase. It helped ground design decisions in realistic user scenarios and strengthened the connection between user needs and design features. Even though the persona were a simplified representations, it was considered reliable and relatable within the context of this project.

Trend Analysis

The trend analysis offered insights into current and upcoming design trends, which proved especially useful during the concept development phase. It served as a reference for evaluating whether the visual direction of the shoe was aligned with broader design movements. However, the scope of the trend analysis was somewhat limited, mainly focusing on graphics and color. A more extensive trend analysis, including areas such as material innovation, lifestyle trend and product form, could have broadened the design perspective and provided a more holistic foundation for ideation.

8.2 Recommendation for further development

There is clear potential for further development in the project's approach to environmental sustainability. To strengthen the ecological responsibility of the final concept, future iterations should place greater emphasis on the integration of bio-based materials.

Beyond material selection, the design could also benefit from a more modular construction strategy. Dolomite already offers the possibility to replace worn-out insoles in some models, effectively extending the lifespan of the shoe. Building on this, the final concept could be further developed to allow for simple disassembly and reassembly of certain external components, specifically the outer fabric around the heel and rearfoot area, where double layers are already present in the current design. This would make the product easier to repair and maintain over time. This approach supports a more circular product lifecycle, encouraging longer use and reducing waste, while aligning with growing consumer interest in sustainable and repairable goods.

Another area of potential improvement for future development lies in comprehensive user testing. To ensure the final product meets the ergonomic and functional needs of the target demographic, it is essential to develop a physical prototype based on the current design specifications. This prototype should be tested on a diverse group of women with varying foot shapes and sizes to gather comprehensive feedback on fit, comfort and performance.

9. Conclusion

The final concept was created to satisfy the user requirements established during the project's pre-study phase. The aim of this work was to determine and analyze what women aged 20–35 seek in a hiking boot and to identify gaps in the current market for women's hiking footwear. Building on these insights, the project set out to propose a design concept that addresses these needs. At the outset, the following research questions were posed:

- How should Dolomite design the line of women's hiking footwear to better meet the requirements from the target group?
- What is the difference between male and female hiking footwear?
- What expression do women want the footwear to have?
- How should Dolomite develop their footwear to meet these requirements?
- How does the product line of other brands of women's hiking footwear look?

The research shows that female users prefer lighter and more urban hiking footwear with a softer visual language and subtle design details. In contrast to many existing men's models, often perceived as more bulky and with a technical aesthetic, women seek shoes that combine functionality with a sophisticated, modern look. There is a clear demand for footwear that feels contemporary and trend-aware, blending outdoor performance with a more fashion-conscious and urban expression. Key priorities include ergonomic comfort and a clean, minimalist design suitable for both hiking and everyday settings.

To meet these expectations, Dolomite should develop women's hiking footwear as a distinct product line, rather than adapting existing men's models.

Market analysis shows that many other brands still rely on masculine or generic design approaches in their women's collections. This presents a clear opportunity for Dolomite by offering a concept that genuinely reflects female preferences, where performance and aesthetics are equally prioritized.

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Hiking footwear for women

I am doing my thesis in collaboration with the outdoor brand Dolomite, where I am designing a hiking shoe tailored to women, since hiking boots often have a very masculine look. Your answers means a lot to me – THANK YOU!

1. Which age group do you belong to?

Markera endast en oval.

- Below 18
- 18 to 25
- 25 to 35
- 35 to 45
- Over 45

2. How would you describe your lifestyle? (Select all that apply)

Markera alla som gäller.

- Active and sporty
- Enjoy being outdoors, but not very often
- Love outdoor adventures and nature experiences
- Not enjoying outdoor adventures

3. What matters most to you when buying new products (clothing/shoes/bags, etc.)?

Markera alla som gäller.

- Functionality (e.g., water resistance, durability)
- Aesthetic and design
- Sustainability and materials
- Comfort
- Price

4. Have you ever bought products from outdoor brands (e.g., Fjällräven, The North Face, Haglöfs)?

Markera endast en oval.

- Yes, regularly *Fortsätt till fråga 5*
 Yes, occasionally *Fortsätt till fråga 5*
 No, never

Fortsätt till fråga 5

5. Were you satisfied with the products you bought?

Markera endast en oval.

- Yes, totally
 Yes, mostly *Fortsätt till fråga 6*
 No *Fortsätt till fråga 6*

6. What could have been better with the products you've purchased?

Markera alla som gäller.

- The price
 Colors
 Comfort
 Materials
 Product Quality
 The appearance/design

7. Please describe shortly what you felt was missing in products

8. What type of product are you thinking about when answering these questions?

Markera alla som gäller.

- Shoes
- Clothing
- Accessories (hats, gloves, etc.)
- Ski clothing (jackets, pants, base layers, etc.)
- Bags
- Other

9. How important is the look/design of a hiking boot to you?

Markera endast en oval.

- Very
- Secondary
- Not important, I only care about functionality and comfort

10. What kind of design would you prefer for your hiking boots?

Markera alla som gäller.

- Sporty
- Colorful
- Simple and minimalistic
- A technical look (visible features and functionality)
- Nature-inspired colors (e.g., brown, green, beige)

11. Do you prefer hiking boots that look more traditionally feminine, gender-neutral, or don't care?

Markera endast en oval.

- Feminine
- Gender-neutral
- I don't care

12. In your opinion, what characteristics define a feminine shoe? Choose several if you want!

Markera alla som gäller.

- Sleek and elegant design
- Slim silhouette/shape
- Soft or curved lines
- Bright or pastel colors
- Decorative details (e.g., embroidery, patterns, metallic accents)
- Lightweight appearance
- Fashionable rather than purely functional
- Trendy or eye-catching design
- Subtle branding (not too bold or technical)
- Robust and chunky shape
- Dark, muted, or earthy colors
- Focused on performance and durability
- Bold branding/logos

13. Are you familiar with the brand Dolomite?

Markera endast en oval.

- Yes *Fortsätt till fråga 14*
 No *Fortsätt till fråga 17*

14. What do you primarily associate Dolomite with?

Markera alla som gäller.

- Outdoor and hiking
 Style and design
 High quality
 Sustainability

15. If you have used a product from Dolomite, how would you rate the quality of Dolomite's products? 1-5

Markera endast en oval.

- I haven't
 1
 2
 3
 4
 5

16. What do you think makes Dolomite stand out compared to other outdoor brands?

17. What type of hiking shoes do you prefer? (If you never hike, think of it as a running shoe)

Markera endast en oval.

- Low cut (below the ankle)
- Mid cut (covers the ankle)
- High cut (above the ankle)

18. Do you prefer hiking shoes made from: (If you never hike, think of it as a running shoe)

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- Suede
- Leather
- Smooth, shiny materials
- Gore-Tex or other waterproof membranes
- Textile

19. Do you prefer:

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- A very stable and sturdy shoe
- A lightweight and flexible shoe

20. If you hike, what terrain do you usually hike in?

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- Forest and soft trails
 - Rocky and mountainous terrain
 - Wet and muddy conditions
 - Mixed terrain
-

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