

The line between saving a life or the planet

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A sector analysis of the alpine outdoors equipment sector

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DJ41002

(Hollingsbee, 2024c)

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OEI **Outdoors Equipment Industry**

The industry at the focus of this sector analysis.

MOI **Members of Industry**

The people that were interviewed from various areas of the industry.

CSR **Corporate Social Responsibility**

a CSR works to ensure that a company stays ethical environmentally and toward their community

OEP **Outdoors Equipment Products**

The category of equipment that this report focusses on, used in outdoors pursuits.

PET **Polyethylene Terephthalate**

A precursor to Polyester

TPA **Terephthalic Acid**

A compound used in raw material production

DMT **Dimethyl Terephthalate**

An organic compound used in material production

TFE **Teflon**

A non-stick polymer commonly used in cookware

UV **Ultraviolet Light**

The light radiation that comes from the sun and can degrade certain materials

Al **Aluminium**

A lightweight and malleable metal

Zn **Zinc**

corrosion resistant and common in alloy production

Cu **Copper**

Highly thermally conductive and used in alloy production

Mg **Magnesium**

A naturally shock absorbing material, common in alloy production

TNF The North Face

A well known global OEP manufacturer.

CF Carbon Footprint

A method of assessing a product, system or services environmental impact over its

UIAA International Climbing and Mountaineering Federation

A body working to develop criteria and testing practices for outdoor equipment to maximise user safety

GHG Greenhouse Gasses

Gasses that trap heat from the sun in the atmosphere and leads to global warming

CO₂e Carbon / Carbon Equivelant

A standardised unit of measure to show the GWP of GHG's equivelant to the amount of

GWP Global Warming Potential

A measure of how much heat a GHG traps in the atmosphere comapred to CO₂.

LCA Lifecycle Analysis

A method of assessing a product, system or services environmental impact over its

PFAS Perfluoroalkyl and Polyfkuoroalkyl Substances

Water resistant chemicals, commonly used in waterproofing clothing.

EUCA European Union Circular Assessment Tool

The European Union's Circular Assessment method

BCIA B-Corp Impact Assessment

A tool to measure how "good" a company is

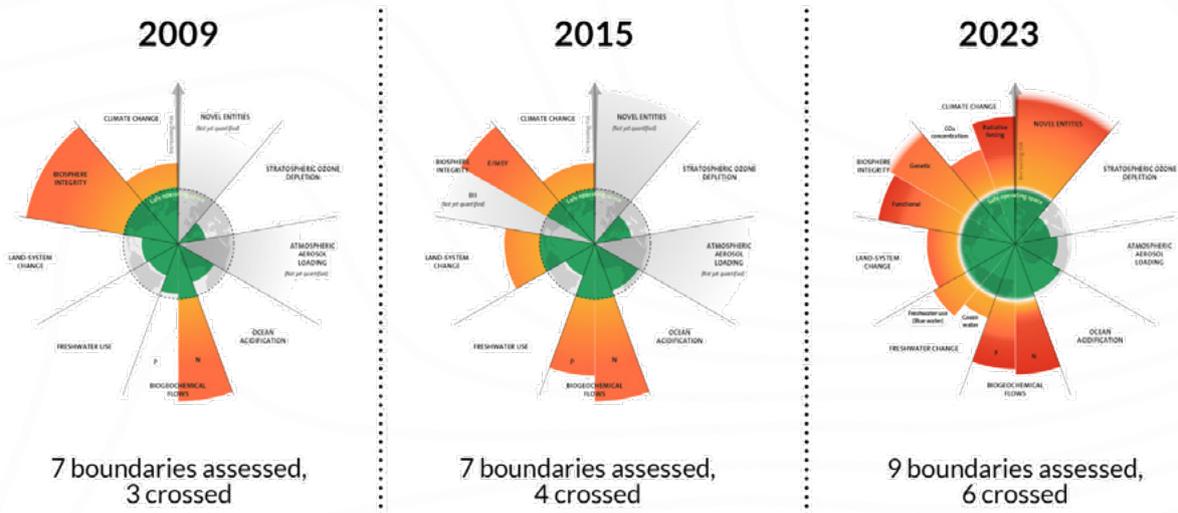
DWR Durable Water Repellent

A waterproof coating applied to clothing, typically in a liquid form

This analysis explores the considerations made in designing outdoors equipment in the interest of user safety. To identify where the principles of circular design have been applied effectively. And to uncover where and how they might be implemented without ignoring the importance of commercial advantage in mass adoptability, as Yvon Chouinard (2016) shares in "Let My People Go Surfing".

The need for more sustainable design and manufacture only increases over time. With The Climate Crisis worsening daily, now more than ever, we must do everything we can to limit our damage. We need to not only do less bad but instead focus on doing more good. Within the outdoor equipment sector, steps are being taken to mitigate its impact on the planet, but is that enough? And why does it matter?

The planetary boundaries model, developed by Stockholm Resilience Centre (2023), depicts nine environmental areas critical to maintaining Earth's ecosystem. From the three iterations of this model, we can see that since the first report, the number of sectors beyond their safe operating limit has doubled. This poses significant risks of irreversible environmental damage proving the importance of research like that carried out in this report.



(Stockholm Resilience Centre, 2023)

The OEI produces many products, ranging from breathable baselayers and waterproof garments to fall-arresting climbing equipment and helmets. To develop and manufacture this equipment, a vast library of materials and manufacturing methods is used. Various plastics, metals, composites, and natural fibres are processed in different ways to keep users comfortable and safe.

The OEI, like most, encounters difficulties when it comes to implementing sustainable practices. When designing equipment to withstand natural forces, it makes sense that those same products don't break down naturally at the end of their life. This is particularly problematic as the industry relies on consumers having healthy, interesting environments to explore in order to sell its products.

Various interviews and secondary research were conducted during the writing of this report, and a consensus was found. That consensus is that while brands in this sector agree that they are making good progress toward employing sustainable processes, not a single source agreed that they were doing enough. This agreement across all sectors, while heartening, underlines the need for greater endeavour.

This report examined the OEI's impact on the planet and how user-focused design contributes to it, enabling the development of strategies to mitigate it. Research uncovered an inadequacy in current pollution reduction methods, and the resulting insights led to the development of three revised solutions.



(Hollingsbee, 2024a)

03 Introduction



3.1 Research Aim

The exploration of where the line between designing for consumer safety and sacrificing in favour of sustainability lies is the focus of this report. To achieve this, I will explore what is currently being done to reduce emissions and how circular design principles might be applied to accelerate adoption. I aim to uncover the methods currently utilised by interviewing MOI, consulting life cycle analyses, and exploring material limitations. In addition to seeking existing solutions, this research will identify areas for developing new long-term solutions to be applied by the industry.

3.2 Research Questions

How are principles of circular design being used in the design of alpine outdoor goods?

How might we further implement the use of circular design principles during this design process to reduce the environmental impact of the outdoor equipment industry?

Explore how lifesaving product durability and mindful material and manufacturing process choices minimise user risk.

Engage industry experts to build a better understanding of how circularity is currently being implemented across several stages within the outdoors industry.

Develop new ways to reduce environmental impact of the industry for the future.

3.3 Research Objectives

The design process largely decides a product's impact (Lings, 2024). Therefore, a thorough understanding of the design process is crucial to truly understanding the negative impact this industry has on the planet and what can be done to reduce it.

3.4 Value of Design



04 Method



After initial research to establish what had been previously explored, it was identified that the intersection of performance and climate impact in this sector was underrepresented. Once this area was identified, the next step was to arrange interviews with MOI to develop a clearer idea of the steps manufacturers are currently taking to combat climate change. Secondary research was used to back up assumptions made during the primary research phase regarding the material and manufacturing process and to prove that the proposed changes were, in fact, feasible. Building from these initial findings, solutions to more effectively reduce the industry's negative impacts on the planet were developed, and their feasibility interrogated.

The principal source of primary research was discussions with MOI employed in various companies within the OEI.

These experts ranged from manufacturers and material suppliers to retailers and CSR officers from brands like Keen Footwear, Findra, VF Solutions (Parent company of The North Face and many other activewear brands), Tiso Ltd, and other stakeholders working within the sector.

Interviews

The purpose of these interviews was to hear the experiences and opinions of MOI to aid the development of solutions for specific sustainability challenges. For each interviewee, there was a separate array of questions to ensure a broad understanding of the market was achieved. While keeping most questions specific to each interviewee, three core questions were asked of each participant to highlight the differences between the brands and phases in a product's lifecycle.

These interviews offered a deep insight into the practices currently being applied and, more crucially, identified areas that required more work. With these insights, I could conduct further research and explore new ways to reduce negative impacts.

While the MOIs' opinions, experiences, and insights were crucial to this report's research, the validity of their claims was checked against alternative sources. This ensured the interviewees were truthful, not just using their sales points or greenwashing, and guaranteed that a genuine understanding of the industry was gathered and built upon.

Articles

A report carried out by Reid (2024) begins to look at a similar relationship, exploring how circularity has been overlooked in the sports and outdoors sector. However, she fails to go much deeper than general assumptions. While their report poses good questions, this report will explore topics she laid out, amongst others, in greater detail.

Books

A selection of books created the foundational research upon which the rest of this paper was written.

Cradle to Cradle - McDonough & Braungart

This book reimagines a linear “cradle to grave” product life-cycle and proposes circular “cradle to cradle” solutions for real-world processes.

Let my people go surfing - Yvon Chouinard

Yvon uses his life story to explain his rogue approach toward running a business committed to the environment sustainably in all ways.

The Uninhabitable Planet - David Wallace-wells

Wallace-Wells takes a more sombre tone when describing the devastating effects of climate change and how they will worsen if action is not taken. Offering a different perspective from these other books.

The Doughnut - Kate Raworth

This book, similar in tone to Cradle to Cradle, explains a framework for an economic structure that balances environmental and human needs.

Climate Change: a very short introduction - Mark Maslin

Maslin provides a concise, scientific overview of all legs of The Climate Crisis, including its impacts and solutions, alongside relevant statistics.



(Hollingsbee, 2024h)

08 Material & Manufactures Impact on Users



There are two types of durability: emotional and physical, the latter of which will be discussed in this report. Physical durability results from selecting materials and manufacturing processes that consider a product's longevity and resilience (Macarthur, 2021). A product's durability impacts several factors, including its environmental footprint, performance over time, and ability to withstand harsh conditions (Krozer and Vis, 1998).

Criteria like Abrasion, heat or weather resistance, insulation value, strength and longevity are all things that might be expected of a "durable" product to serve its purpose appropriately.

In the context of OEP, durability is typically designed into products to reduce the potential risk of failure from adverse conditions, harsh terrain, or sudden shock impacts on load-bearing equipment.

The production of OEP requires a wide variety of natural and manufactured materials, all chosen with a certain level of performance and functionality in mind (Campbell, 2024).

In the last several decades, material science has evolved to produce new technical fibers that are tailor-made for specific use cases and often cost less than natural alternatives (Cecilia, 2022). Typically referred to as "synthetics", these materials frequently have a petroleum base to which a mix of other chemicals is added. For example, PET (the precursor material to Polyester), ethylene glycol, TPA, and DMT are mixed to make a tacky, viscous compound that can be extruded into unwoven polyester (CFDA, 2016), an invaluable material for OEP.

There are many synthetic materials used in the production of equipment for the outdoors, with some of the most notable being:

Nylon is an abrasion-resistant and high-strength material used in several applications ranging from garments and apparel, to load-bearing equipment like ropes (Deopura and Padaki, 2015). With notable heat and chemical resistance alongside these other characteristics (British Plastics Federation, 2019), Nylon proves to be a strong choice for various outdoor applications.

Expanded Polytetrafluoroethylene (ePTFE) is the result of the polymerisation of Teflon™ (TFE) and consists of 4 key components: fluorspar, hydrofluoric acid, chloroform, and water. After these ingredients are heated and combined to create TFE and polymerised to create PTFE (Martucci, 2016), the material is stretched into sheets, expanding the polymer to make ePTFE (Sullivan, 2023). The material that comes from these processes is a vapour-permeable, waterproof, and windproof membrane used widely in the production of waterproof clothing (Gore, 2022).

Ultra-high-molecular-weight polyethylene (UHMPE) or Dyneema® is a lightweight, incredibly strong and abrasion-resistant fibre (Shelly, Lee and Park, 2024). According to communication with Dyneema® (2024), Dyneema® enhances fabric by making it lighter, stronger, and more durable while adding cut and/or abrasion protection. Primarily used in tents and backpacks, it is aimed at consumers focused on an ultralight system. Dyneema® can also be used in lifesaving climbing equipment by being woven into ropes and slings during the production stages. Despite its impressive strength and resistance to abrasion, the material remains supple and malleable, hence its popularity across the outdoors industry (Dyneema®, 2024).

5.2 Materials

While Synthetics have their place, many take a significant toll on the planet or don't perform as well in some categories as natural materials. Therefore, using natural fibres can help mitigate these issues with their typically lower carbon footprint (Woods, 2020) and other desirable traits. The most common of these are:

Wool comes in many forms, several of which are used in performance OEP, like Alpaca, Yak, and, most commonly, Merino (Slepian, 2024). Merino's ability to regulate a user's temperature, keeping the user cool when hot and warm when it's cold, is one of the primary contributors to its appeal (Blahoot, 2019). It is also a great material when it comes to moisture-wicking. Odours in clothing stem from the build-up of bacteria through sweat particles being capped on the surface of a fabric. However, Merino doesn't suffer from this issue as sweat evaporates off the fabric, leaving no sweat particles to grow into bacteria (Feechan, 2024). Another point of note is the biodegradability of Merino, biodegrading by about 90% in just 100 days (Muniyasamy and Patnaik, 2021).

Cotton is another natural and biodegradable material. While it may not be the best for technical performance alone, it is a valuable addition to many composites used in the OEI (Smith, 2018). With notable strength, high breathability, and exceptional comfort, Cotton has its benefits (Cariki, 2021). However, its full potential is somewhat hindered without being blended with other materials.

Hemp is a widely known but often overlooked material in the modern world. It still possesses a host of valuable characteristics for the outdoor sector. Its flexibility and adaptability translate to comfort. Its UV & water resistance and immense strength provide its versatility (Enarevba and Haapala, 2024). The relative simplicity of growing and processing the raw material is a final contributing factor to Hemp's viability as a textile (Ahmed et al., 2022).

A third category of material in OEP is metals and alloys, which produce crucial components, the most notable of which are:

Aluminium is used in load-bearing fall-arresting equipment because of its light weight, strength, and versatility. For climbing equipment, Aluminium 7075, often called "aero-space grade," is the usual choice (Bright, 2014). The alloy consists primarily of Al, Zn, Cu, and Mg (Imran and Khan, 2019).

Steel, while not as popular a choice as Aluminium and its associated alloys (Semenov, Schwantz, and Odenwald, 2017), possesses a strong resistance to chemical corrosion and remarkable ductility (Gardner, 2019). These properties make it a valuable material for fall-arresting equipment and high wear/strain rescue equipment (Bright, 2014). Due to the weight associated with steel, though, it is better suited to more static applications (Bright, 2014).

To make the products that fall under the scope of OEP, various manufacturing methods and processes are used. Different manufacturing methods are applied depending on the product type and its area within the sector. This stage of the process also includes quality control and product testing to ensure every unit is safe to use.

In the production of rope, the first step is to “reduce” the nylon used by up to 20% (EpicTV Climbing Daily, 2024) by “autoclaving” the spools of Nylon to accurately achieve the necessary shrinking (Dennis, 2017a). The core and sheath are then woven using this reduced Nylon (Dennis, 2017). However, depending on the desired rope characteristics, other materials like Dyneema® can be woven into the core alongside the nylon (Dyneema®, 2024). The braiding of the rope is simple in principle but requires complex tooling to achieve. It takes a machine with 40-48 bobbins of nylon thread, set to different speeds, weave angles and tensions to produce a rope with whatever characteristics are chosen (Dennis, 2017b).

Different plant and machinery is required to manufacture metal goods like carabiners or fall protection equipment. For carabiners, the first step is to cut lengths of wrought aluminium bar and bend them into the rough shape of the carabiner using cold dyes. The rough blanks are then hot forged and heat treated to soften the material before trimming. Then, they are tumbled through ceramic chips to finish the surface, milled to fit the gate, tumbled again, anodised, and finally, the gate is riveted into the carabiner body. All of these processes are in place to maximise the performance of the product and to ensure as high a level of safety for the user as possible (Alec Steele, 2023).

Unlike many product categories within the OEI, waterproof garments aren't produced in one single way. Each brand goes about waterproofing differently, whether that's Gore-Tex with their ePTFE membrane (Gore-Tex, 2022), TNF with a "nano-spun polyurethane membrane" for their Futurelight garments (The North Face Taiwan, 2019), or Nikwax's bio-mimicking, directional waterproof system (Nikwax Outdoor Innovation and Brown, 2014). Each of these brands has a fundamentally different waterproofing solution; however, they all laminate a durable outer fabric to keep out the elements and protect from abrasion, with a more comfortable liner material (Chang and Liu, 2023). After layering these fabrics with the waterproof element, the panels for the garment are cut, stitched, and then, in some cases, sealed with adhesive tape (Williams, 2018).

To ensure that all products within the OEI perform as they should, each batch of each product is tested in several ways. Due to the different nature of the products within the sector, there is no one way to test all products. However, there are bodies that exist to develop various tests for the different categories of equipment, providing users with reassurance of product safety (The International Climbing and Mountaineering Federation, 2023). These bodies focus on different areas within the industry, producing bespoke benchmarks for products that lead to minimised user risk.

Capability in climbing equipment, for example, is typically a measure of how much stress and strain a product can go through before it fails (Bright, 2014). The simplest way of understanding what is expected of a "good quality" piece of climbing equipment is to look at the UIAA (one of the previously mentioned "bodies") standards and accompanying tests (The International Climbing and Mountaineering Federation, 2023). Tests for this range of products vary from directional force strength and impact resistance to elasticity and adverse condition performance. These work to push a product to its limits and ensure it delivers the required results before reaching its point of failure. Being conducted before general production, though, manufacturers must periodically test the gear they produce themselves to guarantee consistency.

EN-892	DYNAMIC MOUNTAINEERING ROPES	UIAA-101	
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Note: This representation of EN 892 and UIAA 101 does not contain the full details of the test methods and requirements in these standards; it gives only a simplified pictorial presentation. For full details, EN 892: 2012 + A1: 2016 and UIAA 101: 2018 should be consulted. © UIAA 2020

Conditioning of Test Samples

All tests shall be done after conditioning as follows: 24 h (50 ± 5) °C and ≤ 20 % rel. humidity, after that 72 h (23 ± 2) °C and (50 ± 2) % rel. humidity, after that testing shall start within 10 min. at (23 ± 2) °C.

Marking

EN 892 requires durable bands UIAA 101 permits the option of marking that is printed directly on the rope.



single rope



half rope

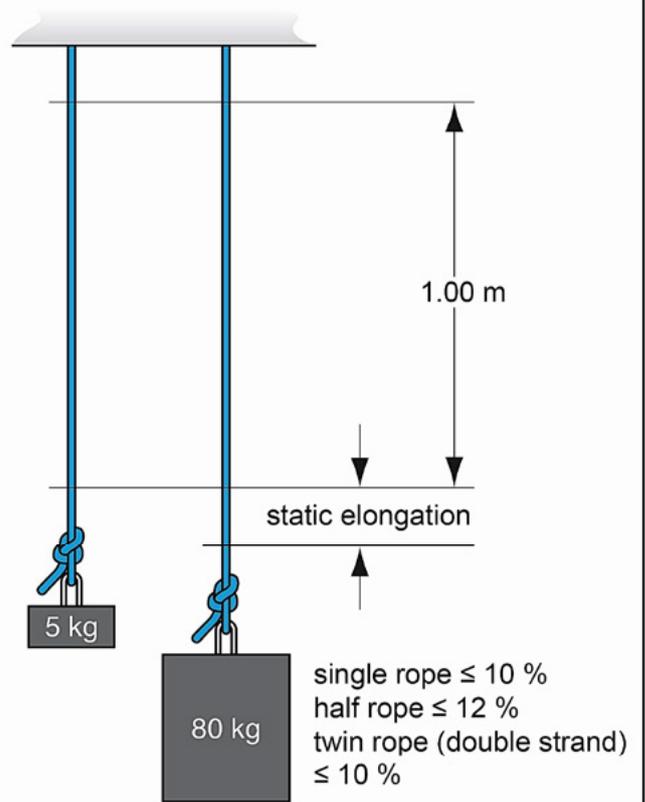


twin rope

- length and diameter of rope
- year of manufacture
- name of manufacturer

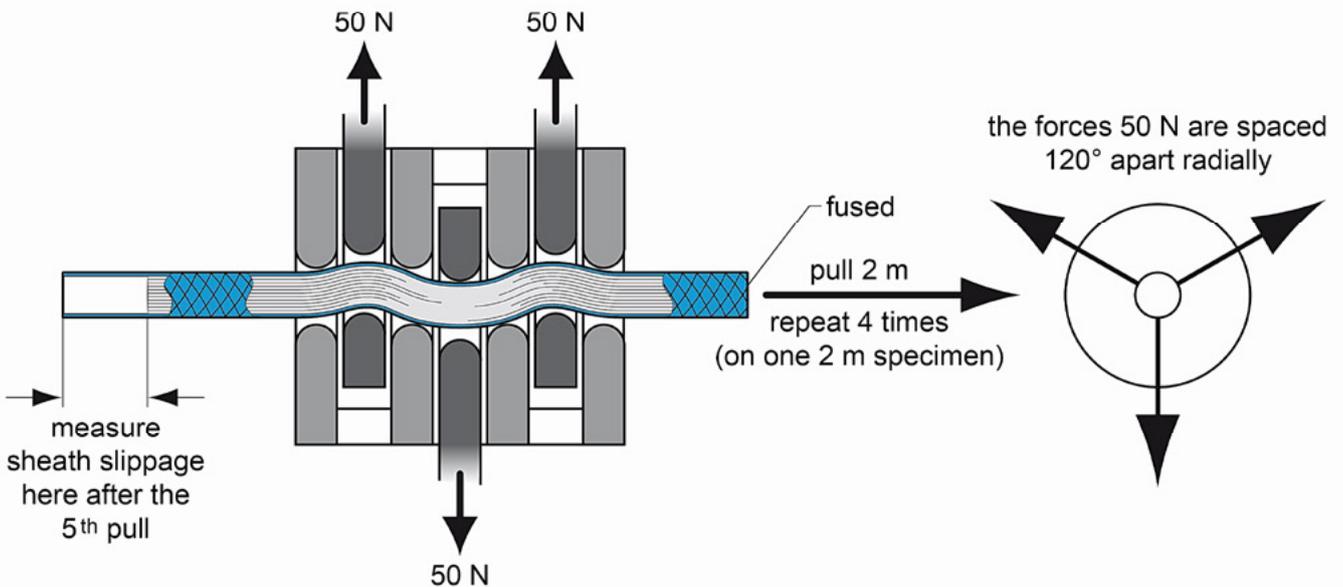
There are no constraints on rope diameter or mass per unit length, but both are measured by standard methods and given in the information for use.

Static Elongation Test



Sheath Slippage Test

Dynamic mountaineering ropes must consist of a sheath and a core.



Test requirement: sheath slippage as measured ≤ 20 mm

Designed by Georg Sojer



5.4 Testing

For waterproof garments, Gore-Tex is a prime example of in-depth product testing. Similarly to the UIAA, they test a variety of factors in their products. For a manufacturer to be licensed to use a Gore-Tex membrane, they must provide samples for these rigorous tests before earning the Gore-Tex logo on their label. Gore-Tex tests the abrasion resistance, hydrostatic head, tensile strength, breathability, crumple durability, and various other characteristics of their range of Gore-Tex membrane products (Gore-Tex, n.d.).

Each consideration made in these phases of the process will impact the user experience for the consumer. Through an interview with former RAF navigator turned Scottish Mountain Rescue Volunteer / Drone Pilot, Tom Nash (2024), new perspectives on these impacts were uncovered:

One of the most significant benefits of better quality, more durable gear is that it typically lasts longer, especially when the consumers are informed on how to maintain the equipment. By washing and retreating waterproof garments, you increase the durability of their waterproofness, contrary to what many think. This simple process can be done at home or professionally and provides better performance and longevity (Hill, 2019). By increasing the lifespan of a product, the consumer is saved from the financial cost of replacing worn-out garments as frequently (Nash, 2024).

Material choices and how they are worked with also greatly impact how waterproof garments perform regarding waterproofness and breathability. If a jacket can keep out torrential rain but lacks the air-permeability to stop your sweat from condensing on the inside, the user will end up wet regardless (Nash, 2024).

One of the more apparent effects of decisions made concerning material is the resulting strength of the final product. This may include a garment's abrasion and tear resistance, a piece of climbing equipment's tolerance for shear and dynamic forces, or many other factors. Strength isn't the only thing to be considered in this area, though; weight plays a big part in the functionality of a product, especially in contexts where the gear must be carried. By allocating some focus to a product's strength, manufacturers can obtain various certifications and kitemarks, like those from the UIAA, for their products, improving users' trust in their equipment (Nash, 2024).



06 Pollution



Pollution is the presence of any foreign matter in natural ecosystems to the detriment of the surrounding life and organisms (USEPA, n.d.). To identify the source of this foreign presence, it can be categorised into three different scopes.

Scope 1 includes all emissions created as a direct result of a company's machines and materials (Gregory and Krol, 2024). Within the OEI, this includes the off-gassing of newly treated garments (Braungart and McDonough, 2009) and the GHG produced during distribution (Gregory and Krol, 2024).

Scope 2 is a result of the generation of energy a company uses. For example, the source of power that is used to run machines, heat factories, and supply water (Gregory and Krol, 2024).

Scope 3 encompasses all products and materials that a company acquires from a third party, and anything else not covered in scope 1 or 2, such as the disposal of waste material or the purchase of standard components (Gregory and Krol, 2024).

Pollution comes in many forms, and the OEI, like many others, produces several. Whether that be chemical runoff from the waterproofing process or GHG emitted by the extraction and transport of material, it all falls under the term "pollution". For the sake of simplicity, throughout this report, these various sources of pollution will be referred to as "Carbon Equivalent" or "CO₂e".

The two key categories of material for OEP are metals for hard goods and textiles for soft. Aluminium production consists of 4 key stages, starting with the mining of the raw Bauxite ore, refining that to Alumina, smelting alumina into aluminium, and then mixing this molten aluminium with alloying components while it's cast into useable ingots (Farjana et al., 2019). While smelting is responsible for the most significant portion of environmental damage, each step produces a considerable amount. The whole process produces approximately 10.91kg CO₂e per kg of aluminium produced (Farjana, Huda and Mahmud, 2019), which equates to the same amount of CO₂e produced during the manufacture of over 200 paper coffee cups (van der Harst and Potting, 2013).

Given the variety of textiles used in OEP, it proves difficult to quantify its GWP as a whole; however, focussing solely on the production of Nylon, Polyester, and Wool gives an insight into the sector as a whole. Depending on its bio-material content, polyester produces up to 2.9kg CO₂e per kg (Berger and Pfeifer, 2024). Nylon produces 11.3kg CO₂e (He et al., 2024), and Wool produces around 15.3 kg CO₂e per kg; however, depending on how it is farmed, this amount may increase (Biswas et al., 2010).

Manufacture is the crucial phase of a product's life in which processed materials become tangible products (Hagen et al., 2020). and accounts for around 20% of global carbon emissions (Vaskovich, McCreesh and Farbstein, 2024). GORE-TEX identified in an LCA that 65% of a high-performance, waterproof and breathable jacket's GWP resulted from the production and distribution phases (GORE-TEX, 2013). More generally, across all outdoor apparel, this impact was nearer 90% (Butow, 2014). The three stand-out sources of pollution stemming from the manufacturing stages are Energy Consumption, GHG emission from machinery maintenance and tooling (Panagiotopoulou et al., 2021), and the use of PFAS for the waterproofing of garments (European Environmental Agency, 2024).

The emissions created by the consumption of energy to operate and maintain manufacturing plant are to be expected of any sector. Pollution created by means outside of energy production consist of the assembly and upkeep of machines, coolants, lubricants and other replaceable components, alongside the disposal of waste material at the end of the process (Panagiotopoulou et al., 2021).

The more unique issue posed by garments designed for the outdoors lies in the chemical treatments used to make them waterproof. These chemicals are known as PFAS or, more colloquially, "forever chemicals". These PFAS are harmful to both humans and the environment in various ways. They elevate the risk of breast cancer and damage the liver and immune system of humans (National Institute of Environmental Health Sciences, 2023) and aquatic life (European Commission DG for Environment, 2023). However, more importantly, they also speed up "eutrophication" (Kundu et al., 2015).

Eutrophication refers to the natural ageing of a body of water through nutrient increase and increased vegetation growth on the surface as a result. This event is natural in principle; however, due to chemical runoff from manufacturing processes (Yang et al., 2008), the speed at which these nutrients increase has risen. The reduction in oxygen reaching the water before being absorbed by surface vegetation has led to the degradation of aquatic ecosystems (Kundu et al., 2015).

The use of a product is another source of a great deal of CO₂e, with GORE-TEX finding that around 35% of a product's GWP stems from consumer care, with the majority of that impact coming from washing garments (GORE-TEX, 2013).

Machine washing clothes accounts for around 62 million tonnes of CO₂e annually, with 19 billion m³ of water used (Langheim, 2017). Considering this, it becomes clear the impact of taking care of outdoors equipment has on the planet. However, when you account for a consumer getting 4+ years out of their garment, the resulting carbon footprint becomes diluted and lowers its impact (GORE-TEX, 2013) over the course of its lifecycle (GORE-TEX, 2013).

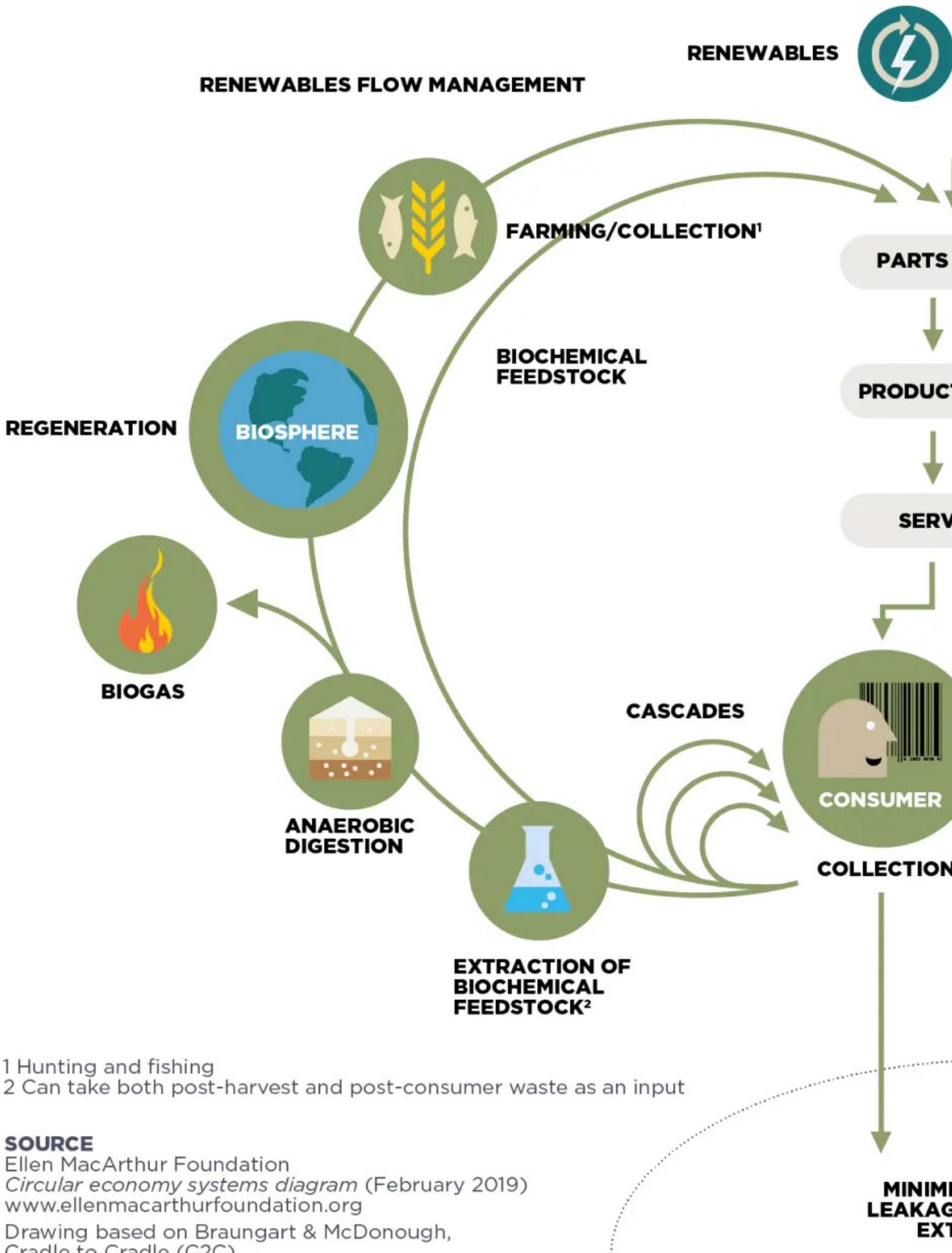
Garment care also contributes to eutrophication, just as manufacturing does. However, in the case of product care, the additional nutrients can be attributed to the detergents and re-waterproofing solutions used to clean garments (Kundu et al., 2015). These solutions mix with the grey water dispelled from the washing machines and make their way into bodies of water all over the globe. It has been found that 30-40% of all lakes and reservoirs around the world are affected by this accelerated eutrophication (Yang et al., 2008), showing the extent of the impact these forever chemicals can have on a global scale.



(Hollingsbee, 2023a)

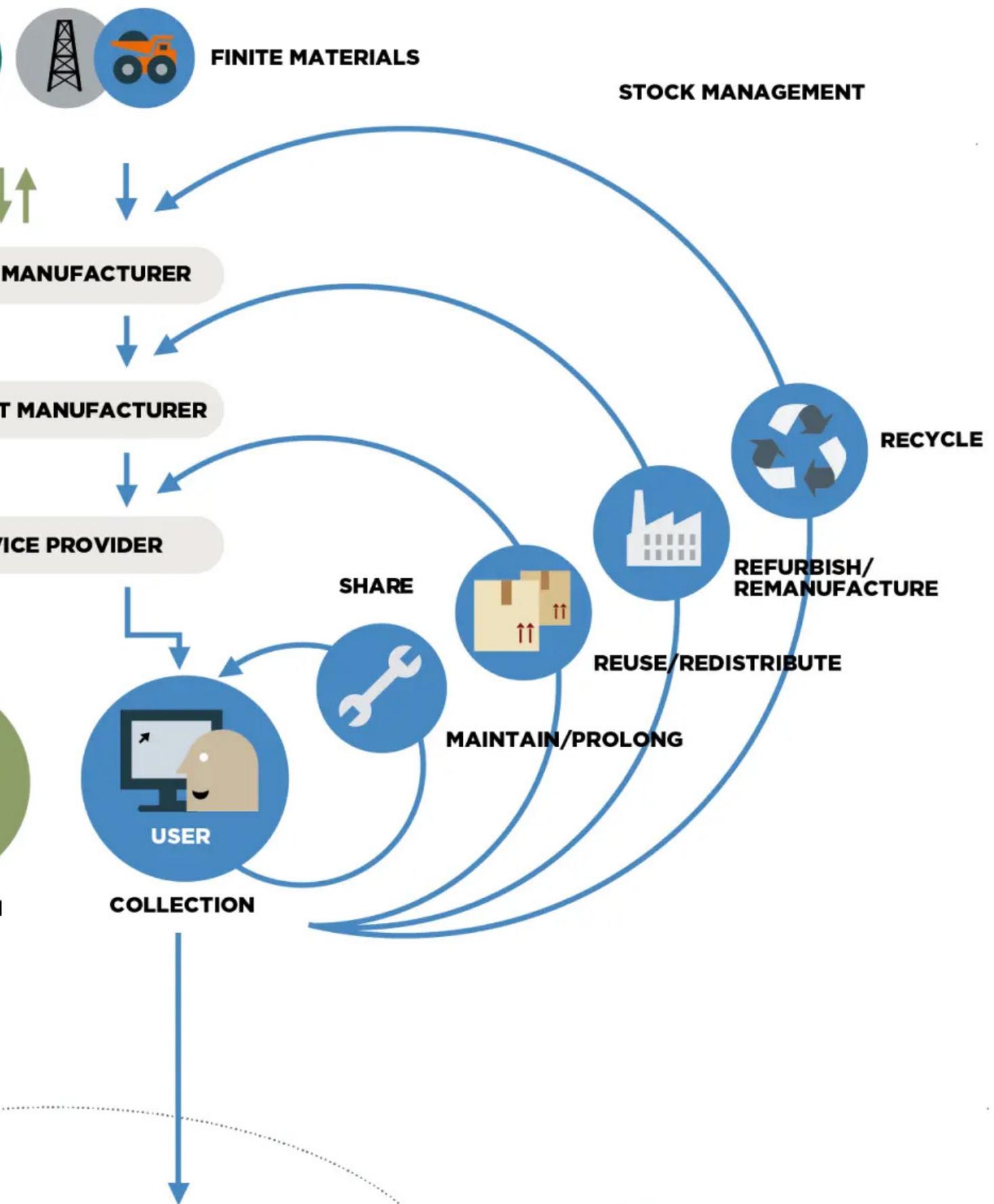
07 Circularity





1 Hunting and fishing
 2 Can take both post-harvest and post-consumer waste as an input

SOURCE
 Ellen MacArthur Foundation
Circular economy systems diagram (February 2019)
www.ellenmacarthurfoundation.org
 Drawing based on Braungart & McDonough,
 Cradle to Cradle (C2C)
 (Ellen Macarthur Foundation, 2021)



USE SYSTEMATIC POSITIVE AND NEGATIVE EXTERNALITIES

In its simplest form, Circularity is a new way of thinking about a product's lifecycle. Unlike the outdated linear model of "cradle to grave" manufacture, a circular process looks at waste as a resource, recirculating products at the end of their life back to the start of another (Ellen MacArthur Foundation (EMF) and IDEO, n.d.). There are three principles at the core of this concept:

Elimination of waste looks to our current methods of extracting materials from the ground, using them, and discarding them. Over time, these natural resources will eventually run out, meaning this cycle isn't perpetually sustainable (EMF, 2022).

Circulate products and material in the state that gives them their greatest worth. By slowing down and, in theory, eliminating material degradation, the opportunity to reuse products or take their materials to manufacture new components keeps valuable materials out of waste streams. As a result, the need for virgin material extraction dwindles (EMF, 2019).

Regenerate the planet. By prioritising natural materials and processes, society becomes less damaging to nature, allowing it to recover. We can look to natural systems that have functioned for millennia and model our natural processes after them, eradicating waste (EMF, 2022b).

While the material a product uses is crucial to the process as a whole, it is not the only consideration when creating a circular product.

Traditionally, when designing a new product, designers focus on the shorter-term requirements of their brief, closing themselves off from the outside world and ignoring the extended consequences (Waage, 2007). Circular design, on the other hand, takes a step back and assesses a product's broader implications over its life, taking care to minimise its negative impacts (Macarthur, 2022). This fundamental shift in approach accounts for some of the benefits of circular design.

The simplest way to implement circularity into one's process is to break it down into its 5 component parts:

At the beginning of any product's life, materials must be considered and gathered before production can begin. Sourcing materials in a circular fashion would mean that the designers have spent time researching materials that fit the product's criteria while balancing its impact on the planet. A material must provide the necessary performance while being recyclable, upcyclable or regenerative at the end of its life, meaning they have little or no negative impact on the planet, characterised as a "cradle to cradle" approach (Braungart and McDonough, 2009).

If recycled material is not a suitable option, virgin materials can be used without sacrificing circularity by opting for a regenerative/natural material. Typically, these materials impose less impact while being grown and decompose at the end of their lifecycle, fertilising soil and giving back to the ecosystem they came from (EMF, 2022b).

Being such a large contributor of emissions it is imperative that manufacture be addressed. To reduce its impact using circularity, manufacturers can implement some simple changes. Working to reduce waste limits the amount of raw material that needs to be extracted in the earlier stages of production (EMF, 2019). Switching to renewable energy to power factories reduces the amount of fossil fuels burned for electricity generation (Zhao, Guo and Fu, 2014). Closing production loops to recycle and reuse heat, coolant, lubricant, and chemicals reduces the operational cost of manufacture to the planet (Atasu, Dumas and Van Wassenhove, 2021).

The development of a disassembly line alongside the assembly (Braungart & McDonough, 2009) allows manufacturers to strip products at the end of their life to reuse and recycle materials, further reducing the need for material extraction.

Ensuring a product's durability throughout the design and manufacturing process will also help reduce its carbon footprint (Atasu, Dumas, and Van Wassenhove, 2021). However, these considerations are rendered obsolete if the resulting product lasts only a fraction of the time it should (GORE-TEX, 2013).

It's difficult to affect any real change in distribution, as variables like weight, timelines, and weather conditions limit what can be done (Ve, 2024). However, efforts can still be made. By researching the impact of the various means of transportation, companies can consciously decide how polluting they will let their distribution network be. For example, Keen uses sea freight where possible (Campbell, 2024) as it is proportionately less polluting than any other means of distribution (Greene, 2023). Alternatively, manufacturing networks can be kept tight, reducing movement and, therefore, the need for transport (Campbell, 2024).

The end of a product's life is one of the most crucial steps to consider when implementing circularity. If the correct considerations have been made at the start of the process, then the end of a product's life should lead to the start of another's. Whether through repair, disassembly of recyclable materials, or biodegradation to fertilise the growth of new materials and natural habitats.

For a material to be truly recyclable, it must be able to be taken back to its raw form so that it may be reused without any loss to its strength or performance. If a material loses some of its usefulness during recycling, it cannot be reused at the same level and must re-enter circulation in a lower-value product. The longer a material can be kept from landfill, the better; however, going back to "doing more good, not less bad," there must be more to be done.



08 What's Being Done?



Decisions made during the design process account for about 80% of a product's carbon footprint across its lifetime, as stated by E Macarthur (2022) and backed by J Lings (2024). Therefore, making a smart choice of materials used in a product and ensuring they are circular, safe and suitable must be a key consideration (Macarthur, 2024). This is one of the approaches already being partially adopted by the OEI to reduce the CO₂e created by their products.

An example of this strategy in action is the outdoors clothing brand Findra. Based in the Scottish Borders, they produce high-quality sporting goods, almost exclusively made of Merino Wool. However, being a small company, its impact is limited.

Regenerative and recycled materials are two of the growing areas of development within the outdoors industry. Another prominent example is The North Face's switch from virgin materials like Nylon or Polyester to recycled versions of the same (Lings, 2024). Rab, a UK-based brand, is also starting to adopt this mentality, using recycled down in many of its insulated products (Rab Support (UK), 2020).

Monomateriality is also being explored by Paramo and TNF to reduce emissions. Using one material in a garment rather than blending multiple (Lings, 2024) makes the recycling process at the end of a product's life much simpler, thus reducing the product's overall CF (Quinn et al., 2023).

The footwear brand Keen has also developed the tanning and treatment of leather into a "closed-loop system" that recycles water and heat energy (Campbell, 2024). Small changes like this reduce manufacturers' overall energy consumption at a low cost (Meyers, 2024).

Keen has also spent time researching the balance of morality and sustainability. They explored using vegan/synthetic alternatives instead of traditional leather materials. However, while vegan leather may be more moral, using such material disproportionately negatively impacts the CO₂e produced (Campbell, 2024).

In commercial manufacturing, there are many moving parts; because of this, it can be challenging to keep the processes sustainable (Efthymiou et al., 2012). When renewable energy sources (wind, solar, etc.) are implemented, as Keen and The North Face have, you can partially reduce the carbon footprint of manufacturing (Lings, 2024).

The shoemakers, Keen, appear to be putting significant effort into the sustainability of their manufacturing processes and their choice of materials (Campbell, 2024). As trailblazers in the PFAS-free waterproofing movement, they established themselves as a force for good in the outdoors sector. In addition to removing PFAS from their process, they are also working to remove all “forever chemicals” from their products, reducing not only the carbon they produce but also drastically reducing water pollution from their facilities’ run-offs.

Getting products from the factories where they’re manufactured to the countries where they’re sold produces a great deal of carbon (Greene, 2023). Sea freight is currently the most environmentally considerate means of distribution. While some sacrifices must be made to utilise this method fully, brands like Keen are willing to delay order fulfilment or manufacture quotas to keep their carbon footprint as low as possible (Campbell, 2024).

While retail doesn’t account for as much of the industry’s carbon footprint as manufacture or distribution, brands like Tiso still make some efforts by using low-energy LEDs, recycling initiatives, and using heat sensors to control thermostats (O’Flynn, 2024). Tiso also operates a small resale initiative in some of their stores called “worn but not worn out”, which offers used products a second chance at life when they still have enough durability and longevity to be used safely. This provides customers with a more sustainable alternative for some of their gear requirements with the added security of knowing that the second-hand product is still safe to use.



(Hollingsbee, 2024e)

09 Solutions



When it comes to environmental impact “The goal is zero: zero waste, zero emissions, zero “ecological impact”” (Braungart and McDonough, 2009). The implementation of circularity won’t solve every problem. However, it will drastically reduce the need for virgin materials (European Environment Agency, 2024), the extraction of which results in almost 50% of worldwide GHG production (United Nations Environment Programme, 2024). To truly address the environmental impact of the OEI, new approaches also need to be developed and executed on top of the work already being done (Lings, 2024).

I have built on the insights gathered from industry experts and research into all facets of this sector’s environmental impact to develop three potential solutions:

Measure

Taking steps toward reducing one’s carbon footprint is becoming more commonplace (Wu and Pagell, 2011), with the testimony of MOI reinforcing this claim by sharing the current strategies. To make meaningful change, though, it’s imperative that companies know exactly where this effort is required and what areas are causing the most issues. Without knowing exactly what steps in a company’s process are the most problematic, it becomes too convenient to do the “easy” thing over the “valuable thing” (Lings, 2024).

Guidelines and benchmarks already exist to allow manufacturers and suppliers to begin to grasp what can be done and how everyone stands to benefit. There is a range of these systems with varying breadths of scope, and while this range provides smaller businesses with an accessible means of understanding their impact, failing to continue with the more lengthy, in-depth processes limits their effectiveness.

EU circular assessment tool

The EUCA delivers a basic understanding of a single product or business and how it incorporates the principles of circularity. From this baseline, the participant will have highlighted areas for improvement alongside ways to improve. The tool will also identify potential hurdles that may be encountered while working to reduce impact. Through the understanding built of what the company or product is, the tool will also provide case studies of success stories to educate the user on circularity and its benefits. The result is a general understanding of what it means to implement circularity, coupled with a more industry or product-specific library of inspiration for change (European Circular Economy Stakeholder Platform, 2023).

Macarthur Foundation Circulytics

Circulytics develops a score based on two sets of questions for three different sections. These two question sets are split into Enablers (factors and people within a company that can implement circular strategies) and Outcomes (the resulting circular outputs). The answer to these questions produces qualitative and quantitative data scored on a linear or percentage scale. These scores are then grouped into themes, and an overall score for each is generated; the themes are weighted depending on their value in a circular economy before being grouped into overall categories where scores are averaged and provide a final overall mark.

Finding the data required to carry out this process is taxing, and because it's done in-house, there is potential for bias. However, the service offers an accessible and comprehensive evaluation of a company, providing it with a means of benchmarking itself with fellow industry partners with little investment.

B Corp Impact Assessment

Earning the B Corp certification symbolises exceptionalism across a range of categories, one of which is environmental impact. While the BCIA develops a score across a range of factors, it still serves as a valuable tool in the context of climate impact.

Similarly to the other tools, the BCIA is another questionnaire-based system with various parts. Its premise is to reward companies that are sustainable in all ways. Each question is worth 'X' points; if a company scores 80 or higher, it is entitled to a review. Once this score has been verified, the company becomes a registered B Corp after making some commitments to maintain the standard at which it was operating when receiving the certification.

Circular Economy Assessment Method

The first step of the process is to create an image of what is being assessed, what sector it belongs to, where its areas of impact lie, and what circular principles it currently implements. Then, a company will complete an extensive series of questions using a quantitative scale of 0-4, with zero being poor and four being excellent. Things like material flows, energy consumption, product design and the processes implemented by the company are the focus of these questions. Indicators are then used to highlight performance in core elements like efficiency, innovation, or environmental impact. The answers to the questions are then analysed and developed into a report of what the company does well and where change is required, overviews of evaluation criteria, and benchmarks against industry partners and global targets. Using the points highlighted in the report, the company can then build an action plan for achieving these new goals (Bohannon et al., 2021).

Lifecycle Analysis

LCAs are referenced throughout this report without much clarification on what they are. While previous measurement methods have been applicable to companies, an LCA looks solely at a product or product system. It uses science-backed processes to define the impact of a product or system's life-cycle (Hagen et al., 2020).

LCAs are time-consuming, expensive, and inflexible; however, the information that comes as a result is immensely detailed (Hur et al., 2005). Before starting the main body of the LCA, the scope must first be defined. For example, the Gore-Tex LCA's scope was to assess the environmental performance of a waterproof garment, find its environmental impact throughout its life cycle, and identify ways to improve their products' impact (GORE-TEX, 2013). Following this, the material and energy flows used in the product, including the input materials and output waste and run-off, are analysed.

The next step in the process is an impact assessment, in which the impacts of all product factors are quantified. The resulting data can then be clarified, and critical areas can be discerned. The process ends by combining these statistics, insights, and clarified impacts into a single document, producing a report to be published (Herrchen and Klein, 2000).

The various measurement methods allow all businesses, regardless of size, to build an image of where they lie on the scale of circularity. There is the scope to delve deeper and break every element of a company's process down to its component parts to find exactly where it needs to allocate resources to improve sustainability. This understanding increases the efficiency of resource application and process altering to ensure that changes make sense environmentally and commercially. The development of standardised metrics also provides a straightforward means of comparison against competing brands.

End of Life Infrastructure

By developing an infrastructure to keep products as high on the spectrum of value as possible, companies reduce their need for virgin material and, in turn, cut their CO₂e (EMF, 2019). Many of the OEI already have a form of this functioning; however, these appear only to be tackling parts of the problem—doing the “easy thing.”

To increase the effectiveness of these processes without a loss in performance for the consumer, manufacturers can adopt strategies like:

Making material choices that are regenerative or recyclable at the beginning of the design process means that when a product reaches the end of its life, it can be put straight into a recycling or regeneration flow without the need for complex waste solutions. While this practice has been demonstrated throughout this report, with Paramo's use of 100% Polyester and Findra opting for the natural material Merino, widespread adoption is required for real change.

Again, during the design stages, considerations can be made for the end of a product's life and how it will be taken apart to be recycled or disposed of. Using fewer materials or components aids this, as does utilising less permanent bonding solutions, like Nikwax's use of unsealed seams compared to Gore-Tex's tape-sealed seams. Disassembly lines can be developed for more complex assemblies. However, every step of a process leads to more energy use and, therefore, more GWP. For that reason, the more straightforward the process, the better.

Regardless of how streamlined and efficient these frameworks are, they will never reach their circular potential if consumers are unaware of their existence. Educating consumers on their options for repairing or disposing of their equipment will be vital to the effectiveness of these solutions.

Elements of these strategies are starting to appear in the OEI; however, very few of these offerings go far enough or are well-known enough to make meaningful change. The start has been made, but the process must be refined.

Going back in time

9.4 Going back in time

Exploring the feasibility of older, more traditional performance solutions (material and technology) in modern equipment. The natural materials and systems of old have many valuable properties and have functioned for centuries, but how can these be utilised in the modern world?

9.4.1 Material

This report discusses several natural/traditional materials, each with its benefits and shortcomings. The most notable is Merino, with its incredible temperature regulation and antimicrobial properties (Blahoot, 2019). While these benefits typically cost a considerable sum, Merino proves that natural materials can still perform at the highest level and, in many cases, outperform their synthetic counterparts (Feechan, 2024).

Gore-Tex holds the largest share of any manufacturer in the high-performance waterproofing market (Cognitive Market Research, 2022). This position has been obtained through developing its second-to-none waterproof membrane, but its performance has come at the cost of sustainability (GORE-TEX, 2013). On the other hand, manufacturers like Paramo and Nikwax have taken a totally different approach to developing a waterproofing system that is altogether more sustainable (Nash, 2024).

Named Nikwax Analogy[®], this solution works like a mammal's fur does, expelling water molecules away from the skin out to the less dense fur to evaporate, using a mechanism called "directionality" (Nikwax Outdoor Innovation and Brown, 2014). Nikwax has applied this by developing a liner that wicks moisture in the same way and is laminated with a DWR-treated outer fabric to protect from the elements (Nikwax Outdoor Innovation and Brown, 2014). This is a clear example of how a natural system can be developed and repurposed to fit the requirements of active humans.

Innovation and the human desire to want the next, best thing has led society to look too far ahead instead of finding ways of improving the solutions we've used for centuries. The directionality system of Nikwax is a testament to the feasibility of this approach, while merino is just one of the already existing materials that don't need a lab of scientists to perfect its performance. These are 2 of the strongest examples of traditional solutions being feasible in the modern world, proving that solely focusing on developing synthetic materials is not the only way to innovate for the outdoors.



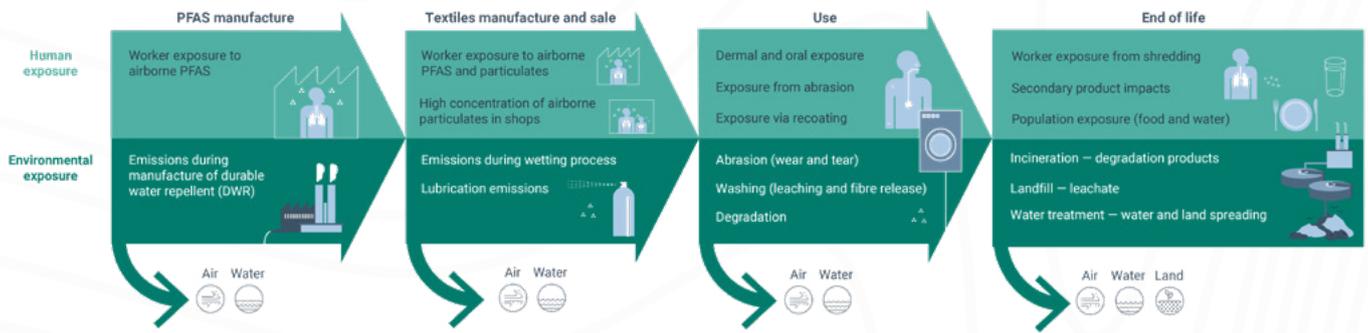
(Hollingsbee, 2024b)

10 Conclusion



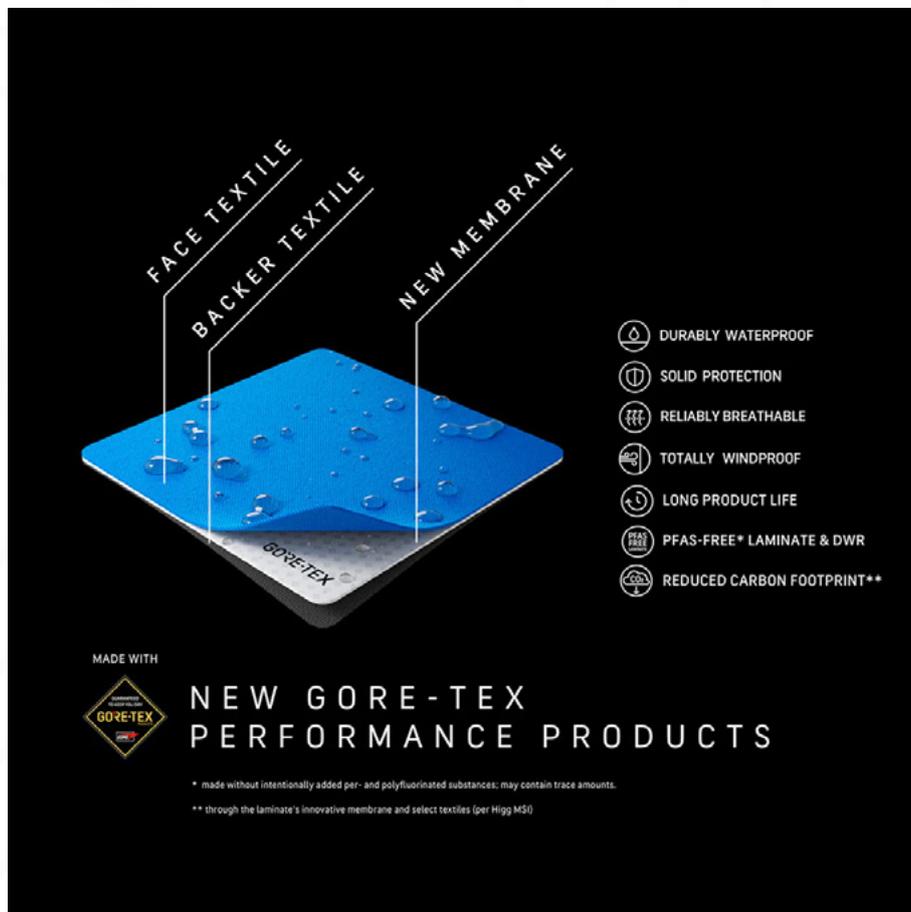
The purpose of this report was to examine the impact of the OEI on the planet and how user-focused design considerations contribute to it. Based on these insights, strategies were developed to mitigate this impact in a more meaningful way than current strategies. This work is vital in addressing the worsening climate crisis, which affects every industry and demands innovative solutions. All industry interviewees agreed that current efforts are insufficient against the complex processes required to produce OEP. Consequently, three solutions were developed to tackle The Climate Crisis from different perspectives with the shared goal of enhancing what is already being done. While these solutions can potentially drive meaningful change, it will require more than marketing recycling programs and improving material choices to solve the issue posed by this hugely elaborate industry.

PFAS from lifecycle of clothing



(European Environment Agency, 2024)

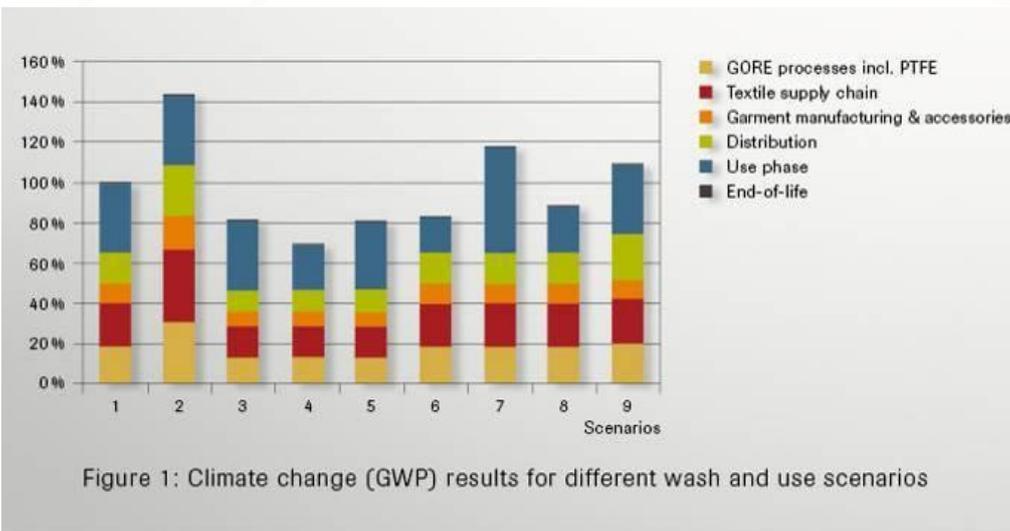
Gore-Tex Structure



(Eisenmann, 2017)

LCA of a Gore-Tex waterproof jacket

Scenario	1 Base line	2 Short life-time	3 Long life-time	4 Best case	5 Good compromise	6 Less washing	7 More frequent washing	8 Higher washing load	9 More air transport
Life time	5 years	3 years	7 years	7 years	7 years	5 years	5 years	5 years	5 years
Annual washing cycles	2	2	2	2	3	1	3	2	2
Washing machine load	1 jacket	1 jacket	1 Jacket	2 jackets	2 jackets	1 jacket	1 jacket	2 jackets	1 Jacket
Overseas air freight percentage	10%	10%	10%	10%	10%	10%	10%	10%	50%



Name	Acronym	Unit	Result
climate change	GWP100	kg CO ₂ -eq	72.7
ozone depletion	ODPinf	kg CFC-11-eq	9.27e-5
terrestrial ecotoxicity	TETPinf	kg 1,4-DCB	5.37e-3
terrestrial acidification	TAP100	kg SO ₂ -eq	0.363
freshwater ecotoxicity	FETPinf	kg 1,4-DCB	0.092
freshwater eutrophication	FEP	kg P-eq	0.020
marine eutrophication	MEP	kg N-eq	0.118
marine ecotoxicity	METPinf	kg 1,4-DCB	0.053
human toxicity	HTPinf	kg 1,4-DB-eq	4.33
photochemical oxidant formation	POFP	kg NMVOC	0.19
particular matter formation	PMFP	kg PM ₁₀ -eq	0.10
ionising radiation	IRP_HE	kg U235-eq	1.32
metal depletion	MDP	kg Fe-eq	1.33
water depletion	WDP	m ³	2.08
fossil depletion	FDP	kg oil-eq	19.2
agricultural land occupation	ALOP	m ² a	0.88
urban land occupation	ULOP	m ² a	0.50
natural land transformation	NLTP	m ²	0.0075

(GORE-TEX, 2013)

Circulytics Overview

Circulytics is no longer open for submissions. These resources are for reference only.

Circulytics | Weighting and scoring approach 3

Tailoring the assessment to your company:

The Circulytics methodology applies to a diverse range of companies. The indicators can be used by all companies, regardless of size or complexity, as well as service providers, energy providers, and financial institutions. Questions in the Company characteristics section of the indicator list determine which Circulytics indicators will be used for the assessment.

An overview of how different types of companies should be assessed is shown in Exhibit 2.



EXHIBIT 1

Companies are measured using a sum of weighted indicator scores, resulting in an overall alphabetical score from A to E. The scorecard will provide tailored insights by theme.

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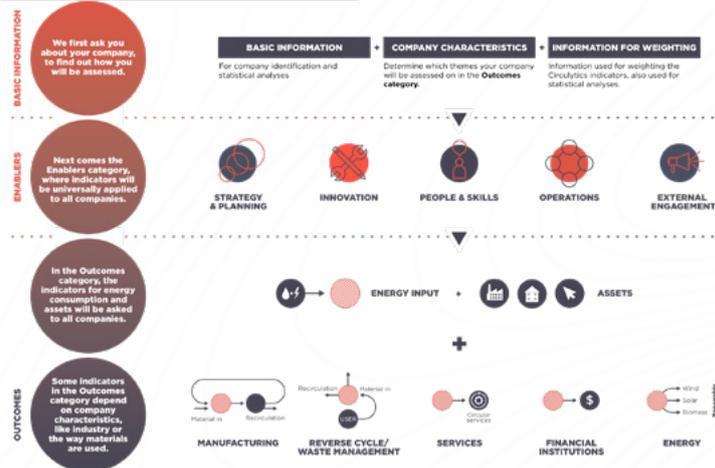
Appendix

Circulytics is no longer open for submissions. These resources are for reference only.

Circulytics | Weighting and scoring approach 4

EXHIBIT 2

The relevance of the themes in the Outcomes category is based on a set of company characteristics (e.g. whether the company has material flows, whether it operates in a water-intensive industry, or whether it is a financial institution). To understand in more detail which indicators are relevant to your company, please refer to Appendix 1, Theme 9. Water is described in more detail in Appendix 4.



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(Ellen MacArthur Foundation, 2021)

VF Interview - Julian Lings

[R. Hollingsbee]

Yeah so just for the sake of the transcription stuff, if you could just give me your name and your job title and then we'll go from there.

[J. Lings]

Yeah so I'm Julian Lings. I lead brand operations for sustainability at VF Corporation.

[R. Hollingsbee]

Perfect, thank you. So the first question I've got is, as a company of your size and standing within the market, how vital do you think it is that you lead by example in terms of putting money into a more sustainable practice.

[J. Lings]

So lead by example for what, sorry?

[R. Hollingsbee]

To promote a more sustainable practice in terms of the design through to the consumer just everything in between.

[J. Lings]

Okay, so lead by example. Good question. So I'll come back to two things. One would be the expectation of the consumer and the other would be the expectations of the brand. So from a consumer side, we know that sustainability is a key filter that they use when making choices about where they spend their money and what product they want. So from a kind of demand side, yeah, there's important that we lead by example, because there's a demand that we... that we live up to the ideals that our consumers are using to guide the purchases. On the other side of it is what the brand values are and the brand purpose, which is very much aligned with having a future where people can explore just as we've been able to do beforehand. I'm talking particularly around the North Face here, for example, which is the brand I mainly work on. you know, that's to be able to make that happen. We have to shift to being more responsible in reducing our impacts on the environment. Actually, I'd say that's pretty common for pretty much every brand. You actually, they've got to be able to continue to operate. They need to do it in a way which is sustainable. That means having a supply chain which will sustain. It will mean having products which will last. all those things will be really key to having a business that will last from generation to generation. So there's a different side to it.

[R. Hollingsbee]

Perfect. And then assuming there are already guidelines and initiatives in place within VF and the companies that you own. What do you think could be improved within those in terms of lowering carbon footprint? So like if there's like worn, not worn out for tiso or the worn wear for Patagonia. Is there's stuff like that, that VF do company wide or just within some of the smaller companies. And yeah, start off with those and then maybe there's some improvements you can think of. So what can we do better or what can we improve? What do you currently do? And then maybe what could you do to improve that?

[J. Lings]

Okay. So strategy as it sits at the moment, it focuses it on some of our key areas, but it all ladders up to our science-based targets. So our science-based target carbon reduction. So 50% reduction by 2030, carbon neutral by 2050. To go after those, there are certain things that are unavoidable. So looking at material substitution, materials are a massive... Actually, I'll come back a step. Scope 3 is where it's at, because in Scope 3, it's over 98% of our entire footprint of the whole business. So unless we're doing Scope 3, and that's not unusual. Most organizations be heavily leveraged into Scope 3. So unless we're addressing Scope 3, we're not doing justice to those targets, and we're not putting our resources in the right places. So within that, the main area we're focused on today is material substitution. So looking at that. where are our biggest material volumes? Where are those drivers? And what are the ways that we can reduce the impact of those materials? So for example, we traditionally have a lot, we've had a lot of technical brands as a consequence. We use a lot of polyester and a lot of nylon because they're very commonly used in performance fabrics. Shifting from virgin polyester and virgin nylon to recycled poly and recycled nylon has a big impact. Similarly, shifting away from using conventional cotton to using more sustainable options or regenerative options, again, has a big consequence in terms of impact. The other things or big drives are going after is looking at our tier one and tier two supply partners. So our cut and sew tier ones and then our fabric supply tier twos and working with them on impact reduction. So things like putting in solar, replacing boilers, super efficient dyeing processes, all of those kinds of things. They have a massive, massive impact. So those two key vectors on their own are really, really important. Coupled to that is going further down the supply chain. So you want to do things like regenerative materials. You don't do that at tier two, tier one. You really have to go down to four and five and six. So changing the relationship we have with our supply chain to get closer to where some of those big impacts are around raw material extraction. It's also been a key point of focus.

[R. Hollingsbee]

So maybe staying in the same vein as the material substitutions and that kind of thing. Is it uncommon to sort of encounter a bit of resistance from consumers when using non-virgin materials because of concerns about durability or safety in terms of climbing equipment? Are they more reluctant?

[J. Lings]

We never compromise on performance. There are certain areas where that message needs to be nuanced. But the consumer perception is shaped by the way that we communicate. And we have to find this balance. With a performance outdoor brand, like the North face. consumer expectation rightly is that it will perform in tough environments because that's where a lot of our consumers take those products. Similarly, if you're a footwear company and you're doing running shoes like Altra, for example, or other brands, you need a midsole and a sole performance, right? That's something you can't really compromise on. So it's all really in the messaging to make sure consumers understand, hey, we are doing these things, but we're also quality that you would expect.

[R. Hollingsbee]

Okay. Yeah. that makes sense because that's the, especially in terms of like climbing equipment stuff, that's one of the big things where I think this might end up going is just exploring how far you can take material recycling and stuff before you're losing so much durability that it's not safe. Um, I think it's going to be sort of exploring the line between saving the planet and saving the consumer. and where you can where the compromises can kind of go too far

[J. Lings]

I think is where I would agree with that interesting discussion within there and it dovetails with quite a lot of stuff that is happening on the regulatory side right now when we look at circularity products it's a big lever right 80% of the impact of a product is decided at the design point One way of leaning into circularity is to lead into recyclability. So for example, shifting into mono-material design really helps with the recyclability of a product. Um, to your point, you're right. There is, there are, whether there are functional, sometimes, um, ceilings to what you can do when you're pushing for certain levels of performance, or be it innovation is helping to square some of those circles. But when we think about circularity, there are other levers that we can pull. And I mean, talking about hard grades, like climbing ropes. durability and repairability are also super, super important. And I think that trying to incorporate durability, repairability and recyclability, that's going to look slightly different depending on the type of product you're talking about.

[R. Hollingsbee]

Yeah, that makes sense. what is one thing you would urge every company to start doing in an effort to save the planet reduce carbon?

[J. Lings]

I would say measure. That is the number one thing because the only way your impact is it's very there's this I think in a nutshell there are lots of nice things to do genuinely there's a lot of nice things to do. but it's really being able to focus in on what is the actual meaningful thing to do. That's not always the easiest thing to do, but in terms of the impact reductions that we need, that's the key thing. If you have them, you have a data to say, Hey, these are our hotspots are. And when you come and then you come around to building a strategy, you want strategy, all it is, is choices. If you know where the impact is, it really helps you build better strategy.

[R. Hollingsbee]

Perfect. One big issue with society's current consuming habits is that we tend to buy things that don't last, whether that's because the products break down, or they come to the end of their life, or because they go out of fashion. One theoretical way of countering that is by implementing circular design principles. Is that something that VF, as a wider company, use? Are they just focusing... solely on circular design principles from the very beginning rather than just designing something to fit a trend?

[J. Lings]

Uh, yes, a lot of the brands have circularity in their sustainability strategy, so every brand has a slightly different take on it. Most have it explicitly as one of their pillars and so does VF in its strategy. Um, it takes slightly different forms depending on which brand you're talking about. And one of the reasons for that is that each brand comes with its own particular sort of heritage. I would say baggage is the wrong word. Something more positive than baggage, but you know where I'm going. Like for the North Face, one of the design principles it's had since it started was durability. So. That is not necessarily a part of circularity that is going to be a great shock to the North face because it's done it for a long time. It's being able to more think about the recyclability and how to, how to, how to merge the recyclability with the durability, for example, whereas something like, kind of a good example, Let's say take one of the merino brands like Smartwool or Icebreaker. Merino is an amazing fiber. It does very clever things in terms of being able to stay functionally in a strong condition for a long time. If you care for it the right way, it can be used for a very long time. So it has a, in terms of use phase and circularity, it has very strong design components already. And also it has great end of life properties as well. It can biodegrade in the right conditions. For them, the challenge is, okay, often, Merino, many companies will blend in with stuff like elastin or polyester, something like that, which means that actually you're compromising the end of life by degradation of that garment. they're doing is working on the design piece to move completely to a natural solution. So doing a lot of tensile merino blending, looking at construction so they can move to 100% natural so that when that product is finally done it is something that can be returned to the environment in a safe way. Yeah, stuff like that I think is a really big part of what needs to be done more of. Because I've Yeah, which it's not something I thought of that you would just assume it's all the same thing, but it's not, it can't be used as it can again. It has to be used for something even cheaper. Yeah. It's, um, it's a common challenge. You look a lot of recycling textiles, same problem, same conceptual problem.

[R. Hollingsbee]

Yeah. Um, I suppose to start this question is kind of irrelevant, but have you encountered any issues with the implementation of circularity?

[J. Lings]

Depends on which aspect of circularity you're talking about. Thanks to circular design, I wouldn't say issues, but it required us to build out a whole infrastructure. End of life suppliers, a circular design toolbox of trims, zippers, pullers, fabrics. Yeah, took some build. I wouldn't say it's a hurdle, but say it's more kind of, it took time to do it. and also to build out the parameters of what we would class as being circular. So what are those parameters for end of life, which makes sense. So on that side of it was more kind of time investment rather than necessarily a burden. When it comes to more like circular business models, so things like resale, it does require a different, well, no. It requires different parameters. Like resale is not going to give the business the kind of margins that you would anticipate from the inline business. So it's an expectation management piece and also tends to be the business models that facilitate resale. slightly different to the business model we would normally use in our business. That's quite tough when you've got a business that's very streamlined in working certain ways and also treating inventory in certain ways. Imagine like a company like VF is dealing with millions and millions of units every single day. It's not designed to deal with the units of one, which is what resales all about, right? If you even have jackets, they may all have a different type of repair on them. So they're all unique items. That's not something that a company like VF or any big company is set up to, to handle. Um, so often the solution to implementing things like resell has been to partner with other organizations that they often have the nimble agility. an organisation that is just designed to scale doesn't necessarily always have.

[R. Hollingsbee]

Yeah, that makes a lot of sense. It's not a sort of way I've looked at things before, but yeah, I can understand how that would be a struggle. I suppose just a short one, do you think VF is doing enough in terms of sustainability?

[J. Lings]

I don't think any company's doing enough.

[R. Hollingsbee]

Fair enough. And, next one. But leading on from that, do you think that VF as a company is one that can be looked up to in its

response to limiting climate change or are there other people that you would be looking to be more like?

[J. Lings]

I think the challenges that a company like VF has are very common to those that many companies of its structure and size have. There's a lot of companies who are publicly traded, who have to manage a lot of different expectations alongside, well, and the compromise of having to meet short term expectations versus long term responsibilities. That's a very common challenge. I would struggle to think of many companies who have reconciled that challenge. Are they an exemplar? VF made some good progress, not got everything right there. And I think here... there's so much need to have open dialogue around the shared challenges. Because they also help identify where the real problems are. I think any company that thinks they've got it all right, probably not telling the truth.

[R. Hollingsbee]

I think that's more or less all the questions I've got, the last one was about material which we've spoken about already. Is there anything else just generally speaking about sustainability, circularity that you think is worth talking about?

[J. Lings]

I think there's an interesting trend. semantics around sustainability have shifted. We've gone through quite a few phases from sort of sustainability we shifted quite more towards restoring sorry to circularity and now the narrative is shifting into regenerative and I think although that I think probably from a PR side that can feel quite consuming, sorry confusing rather, I think it's important because, particularly with circularity, circularity needs, it needs the regenerative aspect of circularity to work. Because of the laws of thermodynamics, you need regenerative, otherwise it just doesn't add up. So I think it's really, really important that argument and that... that phraseology is coming through and you're also seeing a huge growth in the uptake of particularly regenerative materials. I think that's really, really important. I think the risk is that regenerative becomes the whole story when actually what we need is regenerative alongside circularity. It's not one or the other. It's both together are going to be really key levers towards sustainability.

[R. Hollingsbee]

Yeah, that's great. Yeah, that was a lot more than I thought I was going to get as well. I was talking to Gareth, I knew you were going to be a good source, but it was all really good stuff. And a lot of this sort of is backing up the sort of assumptions that I'd made when I was thinking about this sort of gestation topic. So it's good to see that it's not just something I kind of pulled together in my head and there is actually a bit of evidence behind it.

[J. Lings]

No worries? Yeah, that's been really good. What's your deadline? Good question.

[R. Hollingsbee]

The first draft is due just before Christmas and then the actual deadline will be a month or so after that, I think. And then for the project itself, that'll be April-ish, I think. So still got some time for that. Yeah, that's been really helpful. Thank you.

[J. Lings]

No worries. Happy to help, Rohan. And I'll ping you back the consent form next time in the office. Yeah, that'll be perfect. Thanks. All right. No worries. Perfect. I'll leave you to enjoy the rest of your day. Cheers, Rowan. Take care. Bye. Thanks. Bye.

Mountain Rescue Interview - Tom Nash

interviewee audio recording failed

Why is waterproof performance important and what requirements do you look for in outer layers?

[T. Nash]

So, I've kind of got two hats, so I will probably give you two different answers at times. So, like most of us, we're all foot soldiers and we go out on the hill in whatever weather is thrown at us. But we're pretty active, certainly getting to somewhere.

Then we stand around for quite a while. Then we're active again, getting off the hill. So that's kind of, if you like, your typical profile.

I'm also a drone pilot, along with about 30 others across Scotland. That's a very different scenario. We tend to get out of a nice warm car and then stand absolutely dead still for an hour, hour and a half while we're flying over various different batteries.

So that requires a lot more dry warmth type clothing, because if it's pouring with rain, then it wouldn't matter because we wouldn't be flying. Whereas when you're moving on the hill, you need to try and stay as warm as possible without overheating. But then when you stop, you need to not get cold.

And then you move again. And there are definitely two different camps of people. There are people that love big, heavy type jackets, a bit like Paramo.

Their philosophy is very different to I'm on the other end of the scale, which is I'd like a really robust shell that then I can go up and down underneath. But my outer layer stays the same because I just run really hot. So that gives you a guide to, if you like, I'll answer sometimes in two different bits, depending on what the question is.

Well, you say it is. They go hand in hand, but waterproofness without breathability is pointless. So our team invested in some waterproof jackets a while ago.

They were designed for kind of spring, summer, autumn, shower type weather. But they are of a material and a finish that I think of as dog walking jackets. They're not they're not designed, in my view, to be under great exertion.

If you're going for a gentle walk with the dog, you're not going to sweat much. Therefore, keeping the water out is your primary aim. The trouble is the kind of, if you like, the rubberised finish on the inside means that when you're active in them, it keeps the water in.

Therefore, you stay dry from the rain, but you end up soaked because you're sweating. There's also no pit zips or any design features like that. So I basically just put myself in a boil in a bag suit.

So I don't wear it that often for exactly that reason, because I just end up absolutely drenched. And then you get to the far end and you're standing on the middle of the hillside and you get really cold really quickly because your base layers are wet. So waterproofness is important, but it's only as I say as important as breathability on the converse side of it.

Yeah. Yeah. But it's the same with I've got an event jacket and events, exactly the same.

Is there any impacts you've noticed from the ways that things are manufactured

You know, you've got the different levels of Gore-Tex, whether it's pack-like or pro, things like that. The advantage with pro, and it's one of your later questions, is it's just a bit more durable and rugged. You know, I only need to look at a bramble in this one that I've got and it will tear.

You know, you put a rucksack on that's got water or grit on it or whatever, then the rucksack straps just gnaw away at your shoulders. So it's always, always going to be a balance. The other thing with waterproofness is it's temporary.

People think that they could spend 600 quid on a jacket and then they get really pissed that it's not waterproof after a couple of winters. And it's like, no, and it won't be. You know, they don't understand that there is a requirement to keep trying to retreat them, however, that is.

And I think that's the other key thing about waterproofness is there's a big piece of education that needs to go with it. That you invest in a jacket just like you invest in a car. You need to maintain your car.

You need to maintain your jacket. And I'd say that. Folks like Paramo are actually quite good at that because of their immediate tie with Nikwax.

You know, they're kind of you see it from both sides, you get it from the clothing company, but you get it from Nikwax. And they're always saying, yeah, you need to rewash it and you need to treat it and put it in the tumble dryer. And you don't see so much of that with any hard shell that I've bought, whether it's a vent, whether it's Gore-Tex.

You know, there's a small line somewhere on the tag that you rip off and never read that says, you know, this will need reproofing. So I think there's definite education piece that can be done about waterproofness in the fact that, you know, it's it's a high. Technical garment.

Designed for use. If you fill it full of grit and mud, then that is not going to perform anywhere near as much. So, you know, people think I don't want to wash my cokes.

It loses waterproofness. Actually, if you wash it right and follow the instructions, actually washing it and tumble drying it lightly is good for it. But people don't read the line that says make sure your washing machine is absolutely clean of any other domestic cleaners that you've put in.

They don't read that. So they shove it in. Oh, this this Nick wax or this Granger's or whatever you put in is rubbish.

Hasn't waterproofed it at all.

[T. Nash]

Yeah. And there are there are companies making a small fortune now by reproofing your jackets for you. And it's like you're bonkers.

They're charging you 50 to 70 quid to reproof your jacket. That if you did it properly would cost you 10. Yes.

Yeah, no, absolutely. But that's that was the point I was exactly going to say. I've just had two pairs of walking through water-proof trousers re-zipped.

And, you know, it cost me 70 quid for new zips, but it's still a heck of a lot cheaper than 200 pound for new pair of trousers. And there's nothing wrong with the trouser. So I've done it on my jackets and things like that.

And, you know, and you don't want to spend a fortune on buying new kit, because let's be frank, the outdoor industry prices now are mental. Even on sports pursuit, you go, oh, brilliant. Here we go.

Here's a reduced jacket at 50 percent. It's like, oh, it's still 300 quid.

Brands like Norrona charge high prices for theoretically higher performance, more durable products, do you think these are worth buying into?

So I love Nerona kit. I've got two pairs of trousers that are absolutely bomb proof. I've worn them for three, four, five years now.

I can't exactly remember, but they still look as good as new once they've been washed. And there is a little element if you get what you pay for. But all of those kind of scandy things, you know, Jotnar in the same boat.

They just make some really good stuff. So that's a bargain that you've got that one. Yeah.

Yeah, completely. So, yeah. So durability is right up there.

Waterproofness is taken as a given. And whether it's 10,000 or 15,000 milligrams per watt, it doesn't really matter. So.

Yeah, there's waterproofness, but with that is breathability. I just don't want a jacket that's not got some form of breathable side. And that's why Paramo's approach to it is very interesting.

And they just do it in a different way. But it does seem to work. And then durability.

And by that, I mean, it just needs to be a little bit more robust. We're not the brigade walking up Helvellyn or Ben Nevis, where we're going to get rained on, but we're on the motorway path. We are in and out of gorse bushes.

You know, we are walking through forests with trees everywhere. Our clothing just gets caught and nothing will survive a big bramble. You know, if you get a big thing, it's going to rip.

That's fine. But what I'd like is for it to be able to take a brush against a rock if I slip and fall or something like that and just kind of knock it off. I don't want it to tear at the first look at it.

And then features. I've done quite a bit of equipment testing through. I was an equipment reviewer for Singletrack for several years and also I did some stuff for Keyless early stuff.

And it always amuses me when outdoor companies focusing on people that go into the hills proper, that generally wear a rucksack, put pockets here (gestures to lower torso). So why? I'm never going to use them because my rucksack strap is going to go right over those pockets.

So I don't want anything in them because it'll be as uncomfortable as heck. So chest pockets, a map pocket, you know, something that can be accessible. And the other thing is.

So I used to be in the military. And one thing they always used to tell you was you never get up before you've checked all of your pockets and things for like your ammunition were all done up and secure. So you see a lot of zips, especially on legs and thigh pockets that zip bottom to top.

But gravity naturally takes anything from top to bottom. And if I leave something open, then I leave it open at the bottom, which means my phone falls out. And I invariably use a leg thigh pocket for a phone because I can still get to it, but it's far enough away from other electronics.

So I'd really like to see people go. That just doesn't quite work. So closed being down, you know, real simple things like that.

And in any jacket, pit zips. And for the female community, I would like to see clothing that actually caters for them and the need to go to the toilet without needing to get freezing cold by taking every single layer off. We used to do it in flying.

So flying suits were adapted for females. So you didn't have to take all your clothing off. You know, it's fairly easy for a bloke.

We don't get cold, but for a female to have to take off a jacket and then something else and then strip down to bare nakedness to then go all the way back up. That's just not a pleasant experience. So considerations in that.

And it's not a gripe of mine, but I know it's a gripe of some folks, is we ordered. A bunch of jackets. Including some in a smaller female fit.

And the female ones turned up in pink. Now we'd never ordered pink. But because we'd ordered female sizing, it came in pink.

And I just don't stereotype by color in this day and age. So I think everything should be available in male and female sizes in exactly the same color schemes, designs. But maybe the cuts differ slightly.

Granted.

Again, I would like to see more rugged zips on outdoor clothing. You know, I'm constantly doing up and undoing zips and the number of times that teeth go and you need to get something re-zipped.

That's just annoying. It's like put something on that's a bit more robust. The only thing I'd say about manufacturing is I would pay a little bit more.

To know that that manufacturer has happened either in the UK. Or has not come from a sweatshop in Taiwan, Philippines or India somewhere. And it's difficult.

You really have to know your supply chain, I guess, for that. But it's a difficult one because equally margins are always squeezed. So you need to keep your costs down somewhere.

The UK is not a cheap place to do business or employ people. Certainly not now that we've got to do more employee national insurance and stuff like that. So I understand why people outsource it and outsource it overseas.

But then from your carbon footprint point of view, you might have saved some money, but now you've flown things halfway around the world to get to the UK. Whereas if you manufacture it in the UK, you know, that's it. So, you know, I quite like keela stuff.

It's not high high end, but I know that pretty much all comes out of Scotland, give or take. And it's a price point where I don't mind rebuying it again in 18 months if it is just not quite as robust. But actually, I have to say it's pretty robust and it lasts for ages.

It's just not the lightest or the most breathable, maybe. So that's what I'd say about manufacturing, really. It's not necessarily procedures and processes.

I do understand that. You know, all the PTFE type stuff that's used to give you DWRs. That's a massive challenge for the industry, as I understand it, because we need to be more sustainable.

But some of these things are just gross. No way you can get away from it.

And there's a reason that it's been used is because it works.

It doesn't break down in nature because that's the whole idea and purpose of the garment that you're wearing. So it's a massive challenge. But I think, yeah, mainly on the manufacturing, it would just be as much as onshore.

Or even if it's not onshore, you know, you can just assure that, you know, it's not been slave laboured somewhere. I think is for me is a personal thing.

Yeah, I think we'll do. And Alpkit are pretty good as well, actually. Yeah.

In the load bearing / fall arresting equipment used in rescues, what do you look for?

Apart from the like the blatantly obvious, like the appropriate kite marks. I don't really look at so that across the industry it will be kite marked. Then there's probably a little bit of user experience.

So I know the guys that really like climbing and really like ropes. Have pretty much used the same ropes for years or the rope manufacturer, should I say, because they just like the ropes that they make or whatever. Ease of packing up, using and putting away again.

And anything that can be done to minimise weight, but increase strength, you know, again, it's that balance that we play. Is the more robust and strong you want it, generally the bigger it gets or the thicker it gets. All that means is I've got to carry it.

So everyone, if we know we're doing some rope work, you will never see people crowding around the wagon because somebody knows they're going to get 100 metre rope thrown at them and they don't want to carry it. So especially when kit gets wet, it gets even heavier. But no, I think generally people just look for, I'd say, choices done on reputation and previous experience.

You know, some people will only use DMM stuff or some people will only use Black Diamond stuff. I'm not that into it that I choose. But if you were to ask me what drivetrain I want to put on my mountain bike, I'll buy Shimano.

And I think it's a bit like that. I think everyone has their own individual preferences. If the team are looking at buying a new set of harnesses, they will choose based on value for money, really, because that's what they've got a job to do as trustees of a charity is make sure they're getting good value for money.

So they will canvas the market. And if DMM is cheaper than Black Diamond, they're not going to care. They will just buy what does the job through a set criteria and then just generally go for the best value for money.

Not hardcore carabiners, that kind of gear. I've had gear fail more from things like zips just stopping working. I've had a rucksack strap break, a lot of webbing, you know, the stuff on maybe ratchet straps or stuff like that.

Over a period of time that just gets weaker and weaker and then can just snap. So I've had a couple of bits snap there. Other than that, have I had any failures?

Have you got any examples of gear failing? Could you work out why?

No, not particularly. It's predominantly been either zips failed or I've torn something, which isn't necessarily a failure of the jacket. It's more a weakness of the design, but actually it's not even a weakness of the design.

It's a weakness of how we're using the piece of kit that isn't designed for what we're using it for, i.e. walk your dog in it fine. Don't try and do heavy duty rescues with it, that kind of stuff. But no, I haven't had too much true failure, touch wood.

What happened as a result of this gear failure?

No, not really bad. Yeah, I've got my foot wet, things like that. But generally, I don't don't regard that as we've had nothing sinister.

I'd say the one thing that happens and it's nothing to do with clothing at all. Battery failures. Is a problem.

And that can be through people not understanding what they're looking at. So drones do fall out of the sky every now and then because the power required is not the power that's being delivered because there's a complete cell that's dead. So although it says 75 percent, what they don't realise is they're only getting 12 volts, not 16 volts.

So that that kind of stuff. So battery failure most definitely has hampered a few drones. But again, a lot of it is down to back to looking after your kit.

If you store your bag and your batteries and your head torches in the back of your car because it's easy, but it's five degrees or below outside, everything will just be cold. Therefore, you won't get the performance that you need out of it. And therefore, you will get some failures like your light will stop far earlier than you expect or whatever.

But no, touch wood, I've not had any significant failures that have led to significant outcomes. Yeah. So what I'd actually do, most of the failures come from inappropriate use of inappropriate equipment.

What steps would you take to ensure that this gear failing can't happen again?

So for me, the key thing is, is way before you even buy the equipment, whether it's a jacket, trousers, boots, doesn't matter. You do a proper, if you like, capability requirements exercise. So everyone, everyone, there's a big thing.

Right. We need I want the mountain equipment Kongle jacket. OK, fine.

What do you actually want? The mountain equipment. No, no, no.

What do you want? OK. So you want a jacket that's waterproof.

OK, cool. And then break it down into must haves, should haves, be nice to haves. And therefore you go through all of that and then you start surveying the market to find out what gives you that capability.

I had two police officers really excited because they bought a new drone and they're like, this is going to be amazing. We've just spent twenty six thousand pounds on these two new drones. We're going to do night work.

We're going to be tracking all the bad guys around. And I'm like, you do realise what you bought doesn't actually physically attach the thermal camera that you want to get. You've bought the Hollywood daylight drone, not the non-Hollywood night one.

And I said, what do you mean? I said, look, well, here's here's this bit and here's this bit. Those two don't go together.

And they were absolutely dismayed. But that was a classic example of not going. I want to search at night.

Therefore, what gives me that this thermal camera gives me that. What carries this thermal camera? These drones here. They just went, that's the latest thing on the market, must be the good one, we'll buy that and then we'll buy the thermal.

And that for me is, to answer your question, that's how you avoid inappropriate failures of stuff is, but people don't do it. They just go, that's a bargain, that's discounted by 50%, we'll buy that. And that's how you end up with jackets where you sweat your ass off wearing them and it's got no vents and it tears when it even looks at a bramble.

It's because you don't go what to, because actually we might have found that the really lightweight Paramo would have been a better solution to that problem we were trying to solve. Yeah. Completely.

Yeah. Yeah. Yeah.

It, it would depend on, it would depend just on whether I was helping you as somebody that wanders up the hill or as a drone pilot, because as a drone pilot, I want stuff that's as warm as possible. That really holds insulation. And you could argue even has heating elements within the jacket to help warm up the batteries, you know, it'd be a very different thing.

If you were to be involved in the design of a full range of equipment for mountain rescue equipment (clothing, rope gear, etc) what would your fundamental criteria be?

What would I see? So again, I've done, so before I've done quite a lot of equipment reviews and stuff for mountain biking because I was on the hill a lot. And actually from that, you kind of tailor what you want or what you think is good. The trouble is most manufacturers there isn't a business case for developing something particularly bespoke, certainly not when it's then to charities that have got diddly squat money and try and bring you bargain, your hard bargain.

So kind of, we're always adapting the same with the drones. We've always adapted something that's mass produced commercial off the shelf to our requirements. But I bet you the outdoor industry as a whole is quite big.

So if you've got stuff that works for mountain rescue, then you'd probably find that it would work for the general outdoor population. Like a vertically closing zip to the bottom, people won't know that that's a good idea until they've gone. Do you know what? My phone never falls out my pocket anymore.

It's like, no, weird that. So I think from that point of view, it's a really difficult one. There are certain people in the in the environment that really like branding and colour uniformity and stuff.

So there's no point in going for wacky colours and things like that. I would say on the whole, it's a balance between longevity and robustness with value. Because everyone's different.

Some people take the view that they'd rather spend less and they don't mind replacing it every 18 months. Some people take the view they'd rather spend more up front and get a really quality thing. But what they can't, nobody can afford is to spend the more, but then still be replacing it at the same rate as the cheaper.

And I think that that's probably the point there. Now, clearly, there's a balance from a commercial point of view. If you if you if a company really goes hard on education about washing, treating your coats and everything, and they last for four years, not two, you've just halved your income over a four year period.

So again, from the company's point of view, there's a real balance between sustainability being green, you know, encouraging people to not throw away stuff to still retaining a financially viable business. So yeah, that's kind of what I'd say on the whole of the business itself. Yeah, absolutely.

So I've got, out of interest, I've got a Gore bike wear jacket that I reviewed for a magazine. It's got to be six years ago now. I really ran it through the mill.

And it's blooming brilliant. It's still holding its waterproof. It's got kind of zips in the right area.

I'll see if I can find the review and I'll bring you the review. But I still wear it now, you know, it's got tiny reflective bits on it that are good for cycling, but don't make it like, I don't want to wear that. That's too embarrassing.

So I'm wearing a silver reflective coat. It's one of the best bits of equipment I've ever had. And it's Gore.

And it's a Gore Pro, but I don't know what variation of Gore Pro it was. But it's brilliant. And you know, I cannot, it gets absolutely laced in mud.

You know, all of the pores get filled full of dust and dirt and everything. You give it a wash, you treat it and it just keeps coming back. I just can't break it.

And yeah, so that's the, that's one bit of equipment now, whereas I've been in the team seven years. I'm on my second jacket. I was issued the big primary thing, which I just can't wear when I'm walking.

It's brilliant when you stop. It's absolutely fantastic when you stop by just overheat otherwise. And then we've got this, I think it's packed like this rubber dog walking jacket.

So what I actually do is I bought a Mammut Gore-Tex Pro, you know, proper high-end jacket that goes nowhere. It sits in my garage until the one or two nights a year when it is minging outside. And I go, I just want to put on something that I know is going to survive and still is the right colour.

So people will still say, oh, that must be MR because he's in red. And yeah, so that just sits in the garage, but four years and it's been outside three times, I think. But I just know that I'll put it on one day and it'll work.

Keen Interview – Graham Campbell

[R. Hollingsbee]

I'm here for a bit, yeah, I'm here for studying. Yeah, usually I'm back in the borders, but for uni, I'm up here, you loving people, I do this. Why is this not recording?

Yeah, right. So if you could just give me your name and then your job title, that would be great. Please.

[G. Campbell]

My name is Graham Campbell and I am the brand manager for Keen Footwear, covering the perfect.

[R. Hollingsbee]

So my first question is, reading through the King website, there's definitely like a clear effort to reduce your carbon footprint and all the initiatives that you've implemented, which have you noticed or which do you think have made the biggest difference?

[G. Campbell]

The biggest difference is getting rid of forever chemicals. Keen was again, you'll see us on the website. But I think the biggest one was we were one of the first outdoor footwear brands to be completely PFAS-free and reducing the fluorocarbons. And that's through the supply chain. And, you know, not only just in the waterproofing of the water repellency of other products, but everything through laces, through any sort of additional pieces that you add in. It's entirely PFAS-free. And since 2018, we were the first company to do that. And it's kind of a real kind of medal of honor to do that.

So that's probably the biggest one, that's the biggest impact and the biggest kind of sort of a headline kind of moment, I think, for Ken. And getting rid of antibacterial treatments, which includes chemical sobriety. This is about six chemicals that are included in footwear. They were regulated, five of them. The last one is solvents. And they're working stringently to work towards that, you know, towards getting rid of solvents in footwear as well. And that is down to, you know, you can do that by different bonding structures because, you know, it's a real kind of balance of there's a kind of triangulation point between the price, the performance, and then the sort of the production process and how you do these things. The three Ps, if you like.

So, you know, if we can find a really quick, if we find a really effective way to, you know, get rid of solvents. But it costs a small price of, know, a developed nation on the budget, then it doesn't become that practical.

So it's just finding that balance between, you know, it's got to be, you know, it's got to perform properly, it's got to be the right price. So it's not going to elevate the shoes into the stratosphere on price point. That then becomes not commercial.

And then it's got to be an easy production process as well. So that that's the last final piece of the pie to get it, you know, to get, you know, eradicating forever chemicals like our FO wear production.

So. And we're working hard towards that, and I would say over the next three to five years, we'll get rid of that fully any solvents in our production. Perfect. Yeah, that's a really good. Description. I knew that you'd done some climate stuff, but I didn't know quite the extent to which that went. And for that just for that there's a direct there's from a Production Standpoint, it's a Direct Attach for you Using the Midsol as the Bonding Structure is the Easy Way to describe it.

So it's a really durable structure as well. So it adds to the longevity of the book, but it means people won't have to replace them as often, et cetera.

You know, there's a number. I think it's probably in the website again. And so I think it's twenty four billion pairs of shoes sold every year for 8 billion people on the planet.

Yeah, it's crazy. There's. Okay. And again, this goes back to that point where as the commercial side of my job of selling shoes, and there's a bit like turkeys voting for Christmas, they say, well, you know, we're selling too many shoes. No, we're trying to shoot sell shoes that impact the planet in a lesser way and lasts longer so we don't have to replace them as often.

So again, you're just, you know, rather than shoes floating around the oceans and in rivers and landfill, et cetera. They're trying to get more longevity out of the shoes as well. And it was something sort of I can talk for ages in this, but it was something came up and a customer emailed just on the day that we don't ar shoe currently that you can replace the outsole on the shoes like replacing shoes.

Yeah, and, you know, and that's a balance, because if you have a shoe, you know, I mean, as a bra scarper, you're probably a Scarpa. Yeah, they do one of the best. The best I think I the UK is called terror. You can't replace that so either, but it gives you a mice out the box fit. Ours come with a nice out the box athletic shoe kind of fit. Not like a trainer, but, you know, it's a nice, you know, nice and light and easy to wear, et cetera.

So if we had a shoe that would. You could replace a soul on it. Then elevates the price point. And that would tight, you know, require somebody to break the shoe in.

You know, we're trying to, you know, as a balance between the shoe comfort and ready to wear versus, you know, that kind of really sort of blated construction. So. But we try and offset that balance by having a shoe that's constructed in a meaningful way and inducing chemicals.

So there isn't really a silver bullet that kind of shoots through everything. And we'll tick a lot of boxes, but we try and do tick a lot of boxes that will ultimately make the making shoes for the best way for the planet and for the funds, for the consumer as well. Okay.

Yeah, that's great. Do you think there's any sort of big hurdles or issues you encountered while incorporating any of these initiatives? Like they're, getting rid of the PFS and that kind of thing is obviously going to have its own challenges. But was there anything that stood out more than anything else from a production standpoint? Not that I'm aware of.

I mean, yeah, I'll say. You know, like the PFAST thing is one, you know, and that is an open secret. We share that with anybody because Keynes a fairly big business globally.

You know, we're about half a billion dollar business, but we're not in Nike and we're not, you know, Wolverine versus Metal and various other brands. Like, for example, you know.

You know, we're making a chunk of shoes, but we reckon that we share that information with people who sees them having to go and develop it and ultimately makes the planet a better place to be. You know, gooy eyed about it.

So we share that. But anything that involves a production process. What I will say to any time I'm doing staff training is that Key is not shoe business. We're shoemakers. We produce about 35 40% of our shoes, depending on the season.

You know, in our own factories, you know, whereas a lot of other manufacturers, they make for shoes with partners. And we do use Vend, you know, or what they call vendors, the suppliers or the factories. And that's working with these vendors.

But the factor is we are making our own shoes. We're a bit more nimble.

You know, we'd never make all our shoes because, you know, by using vendors, that allows us to be a bit more flexible depending on the season, depending on the ranges, et cetera. But, you know, I think 40% is a fairly reasonable number, percentage wise. Or shoes that we make ourselves. But we are owned by one family, so that makes us pretty nimble. We're not having to require details from the, you know, like Wall Streets shareholders, et cetera. And our owner is a shoe, he's a shoe dog. He's been in the shoe industry for like 50 odd years, and he goes down to the details and has lost production. He lost a factory.

So, yeah, I think you know things like anything that involves, you know, changing formulations and developing. But then it adds into the detail. But there's always an eye on that.

You know that you've got to do it the right way, the best way we possibly can for the planet, you know? So yeah, in fact, that is always going to cause some challenges with the PU mixture, the rubber, the supply chain, et cetera, trying to be the supply chain. And that's sort of kind of a key factor for us as well.

So yeah, it's... But you know, the factors. Our boss and the guys at the top have been in the shoe industry for a long time.

And that comes itself with these challenges because, well, this is why we've always done it this way. Okay, that's fine, but that doesn't necessarily mean to say we should always do it that way. But you know, our owner is, you know, in and around shoe factories a lot, our own plus our suppliers, so he's always looking at ways to simplify and make shoes in a better way.

So yeah, kind of a long-winded answer. I did not really answer that question. But you know, yeah, I think that the key thing is developing the product and the materials to then make sure that the shoes are made in a sustainable way as possible. Getting the leather... Make sure the supply chain... And that was a challenge through Covid and all that sort of hassle and supply chain that we had. But 2021 was ensuring that the continuity and supply of certified leathers and everything was, you know, still as clean as we can make it, you know?

[R. Hollingsbee]

Yeah, right. Yeah, that's good stuff. So I suppose staying on that same kind of topic, you're talking about sharing the struggles that you've had with implementing these changes with other companies. Have you noticed other competitors or other brands working in the same kind of space, adopting the initiatives that you've set out?

[G. Campbell]

So Solomon in 2021, they joined the PFAST revolution.

So they've joined. And that to date is the only one I can think of that has actually done that because Solomon and are arguably bigger forerunner brands than us. So yeah, that's the... And actually, Pete took an advert in the American brand. It was, you know, a full-page advert to congratulate and welcome Solomon, you know, because, yes, you're a competitor. But you know, if... If we can do it and they can do it, everyone can do it.

So yes. So Solomon, absolutely we welcome them in 2020 to the PFAS free revolution.

[R. Hollingsbee]

So yeah, absolutely yeah's nice to hear that. There's sort of a celebration about it rather than just competitors trying to one up one another the whole time.

[G. Campbell]

I think it goes down to your we've worked in the this recipe for this pfas free payments and how we get to that point. And this is for the coating on the for the shoes. Anything that we do, then we kind of, you know, appreciate it.

You know, and the best analogy I can make is, you know, Volvo, when they invented the Nery belt. There's no patent on it because they f.

Well, every car should have it. You know, you should make money out of it because it will save lives and make things better.

So, yeah, it's it was an open it's an open secret. Yeah, somebody wants it's on the website, you can find it.

[R. Hollingsbee]

So yeah, that's a really cool idea, just sharing that for the betterment of everyone rather than just your guys brand. That's nice.

Yeah. So I suppose then another question leading off from that is there anything that you've seen other brands doing, not necessarily footwear brands, but just outdoor brands in general and any initiatives that you've seen other people implementing that you'd like to try? And bring into your own practice.

[G. Campbell]

Well I think the one of the qu I had with my product team was you know speaking about vegan sware you know and you know of any brand should be doing vegan freewear should be ke keen. Our head office in Portland, Oregon, which is a free.

I mean the states quite a blue state. It's a red state. Sorry, quite Republican as a state, but Portland as a city is very free and liberal. And I kind of thought, you know, we should be. And our owner is very liberal. And he's, you know, he's. He's a Californian.

He's, you know, he's 70 7273 years of age. But you're a very sort of free thinker, you know, a very strewd businessman. But, you know, and I was so I spoke of a vegan footwear. I said, you know, surely we should be doing something vegan footwear or getting that sort of stage. And they said, well, yes, we can. They said, but that as an offset against your, you know, by using leather.

Yeah, it's not very good for the animal part, but if you use vegan product, then that has a bigger impact on the planet because you're using, you know, other materials to make the shoe in whatever way if it's canvas or to make it do its job or a leather can do, you've got to do other process to make it work. So you know whils it's good for the animals, it's not very good for the planet.

So we've always kind of struck the balances of. But we'll try and do the best we can. But we make our footwear, and we have got shoes that are in essence and more friendly, but not vegan. But you know that they are made of plastic, they're made of nylon, polyester uppers, so that comes from oil, et cetera.

So those are the balance for that. I think the one I would like to see is from our sales guy. I think would give us a bit of an edge would be to have that out the box fit and comfort. As I said earlier, that can be resold.

Yeah, you know, they can go back. And then we have a resoling process that will still keep the integrity of the boots. Keep that out of the box, you know, quick and easy comfort. And by the way, if you wait it for five years and you love it and you do everything you want with that book, you know, then you can resold it as well. But that would be the kind of the dream. But you know, it's a fine balance because the uppers are a bit softer so they don't kind of break down a little bit in that production as well in that period of time.

So that would be the one thing I, you know, I did ask. Is to kind of have something a bit more sustainable that you can buy a pair of shoes and then you can resol them. And we did do one a couple of years ago called the Carriig, but it was a very.

I mean, if I lose you because this is a black spot historically, so I'll lose your phone you right back.

[R. Hollingsbee]
No worries.

[G. Campbell]
Thanks and but if, let's put a new realty system and give anyway. Okay, keep going to Illusion.
Yeah, we sho call ca but that I did that for me. But you know, it was you had to break in your. And so?
Yeah. I think that would be the base. The base? Not sure if I lost you.
The five years anyway.
Yeah, so yeah, that would be the we did that boot called the Carriig and it was a great boot but required a bunch of breaking in.
So, yeah, that makes sense.

[R. Hollingsbee]
Yeah. So I suppose staying on the same vein in terms of materials and braking and that kind of thing. My understanding is that materials do tend to be like the majority of the initial sort of carbon production in Design. And so what considerations do you make as a brand in order to mitigate the carbon emissions without sacrificing the durability?

[G. Campbell]
So, you can still get three or four or five years out of a pair of shoes without having a massive environmental cost. We're trying to use the supply chain as tight as possible.
So, instead of having missiles made in China, shipping to Vietnam, and then shipping on a boat somewhere across the rest of the world, that would be the kind of most obvious one. Just, you know, keep that harvest footprint as low as possible.
So, that's one thing. And shipping your product rather than airfreighting product again, that's even having late deliveries or, you know, delays in production.
You know, we'll still stick them on that boat because it's cost-effective and it reduces that footprint.
Other things are our leather. Our leathers come from LWG-certified tanneries, again, which is reducing the carbon footprint because we are using, you know, TCR, so it's a fairly heavy kind of energy-intensive sort of manufacturing or processing a piece of leather because you're using hot water and blah.
But we're, you know, but we're using systems that are, we're looking at a process, which is where the water is recycled, closed-loop systems, et cetera, that can, you know.
You know, we're not wasting water, and we're not losing heat. We're. Just, if it says 80 degrees, you're going to have the water at, you know, we're using the same water, filtrated, and you know, stuck back through.
Sorry, I just got my boss phoning me for a second, so you sent a voicemail, give us back, so we're ready today.
But you know that would be the kind of most clearest one year I just quite one to time, you just reduce the carbon footprint on the harvest map, and just like again, the chemical reduction and the tanning process of the leather, try to reduce the carbon footprint on that as well.
So, it sounds like it's less about the raw material itself, it's just how that's processed into what we use it for. Okay, to be sensitive about that as well.
Yeah, that makes sense.

[R. Hollingsbee]
There was another question I had gone up my head. I forgot to write it down. Something I've been asking everyone that I've been interviewing is, do you think Keen is doing enough in terms of, like, your environmental impact and all that?

[G. Campbell]
Are we doing more than others? Yes, are we doing enough? No, I think would be the answer. I think we can do more. There's always more we can do.
We have a whole team in Portland that is their job entirely, looking at the consciously creative side of the business. That is because it's not only the production on the shoes, it's what we do to the planet. It's about what we do to the people on the planet, and we support that as well, whether it be, you know, supplying food. We are for people who've got nothing, you know, refugees or, you know, but in the production process, yeah, we're working, striving to make things better all the time.
So, are we doing more than some or a lot? Yes, we are, absolutely. Haven't got the answers yet. Have we got the full answers yet? Yeah, no, we still got work to do, but it's I think we're definitely at the forefront, especially in footwear. We're at the forefront of doing that to be the best we possibly can be.

You know, it's, I think nobody. You know, Patagonia is the one that gets lauded heavily on the apparel site because, you know, because Patagonia. But nobody's really doing it on footwear. And I think you... Whether our GM for Europe would like to be. He says he'd like to be the Patagonia of Europe.

So that's, and so are we doing enough? Hard No, but I think we're doing pretty well, better than a lot of people. I think that seems to be the consensus.

[R. Hollingsbee]
Like I've been talking to Tiso and North Face as well. They're saying the same thing, like, yeah, we're doing some, but some isn't enough. And like the general sort of consensus seems to be just finding the right compromise between not sacrificing your product and your reputation but still not being terrible to the planet.

[G. Campbell]
I mean, most of the way I use it is that we... We could attach the stones to the shoes by using flour and water, you know. But, you know, it won't last very long, it won't be very environmentally friendly, 'cause we're just... You're harvesting some grain, mixing something about water. Stick it on. It wouldn't last to it in the shoe, but stick it on and put it's in the box until you actually use it. It's got to be fit for purpose as well. That's the balance, you know, and that that's a challenge on footwear because making a jacket fit for purpose and doing everything you can from an environmental standpoint... And, you know, it is a lot easier than

than doing a piece of footwear because it's under a lot more rigorous wear and tear than a jacket is. It gets that gets a rock sack. You'll come with some... Maybe about... 25 kilos in it. You know, versus, you know, you putting a hundred kilos down on a pair of rubber boots, you know, rubber households, et cetera.

So it's striking... The balance of performance, price, and planet is a kind of key thing.

Yeah, and I really like that three-part sort of way of thinking about things. It's a really good, concise way to sort of encompass the whole process. And it's going to take all three boxes because if it's hidden, there's a price and there's performance, and it's about the planet, and then there's no part doing it.

And then you can be doing a combination of those three, but you're going to have all three to make it right, yeah, or to take the next step forward. Yeah, exactly. And yeah, that's great. I don't think I have any more questions written down here, but that was super helpful and definitely contributed to the report.

Yeah, the report. I didn't look for it. I don't know if I knew of the thing, but I'll get you. It should be on the website, but if you're not just thinking of what a WhatsApp report is through, and I'll send you through an impact report. Just the one. It's usually about a year, a bit. You know, because we get it from the previous year in the March-April time from the previous year.

So I'll send you the most recent one I have. I'll give you some indication of what we've done because, you know, it's since day one, Keen has done that. You know, it's about the product, but it's all about the people as well. And that is, there's a Keen core about giving stuff back to the local community. And we have a space in our office in Portland that we give out to local groups that they can come in and use for meetings, et cetera. We'll provide coffees and teas, et cetera, for people.

And we've just done some, you know, like when Ukraine was, you know, with that kicked off when people were running across borders, et cetera. And they were just, you know, basically the shoes we're standing in, you know, worked with our partners in Poland, at the border countries of Ukraine who were sending shoes out to these people because they were, you know, turning up.

Plus, there was cash. You were supporting Everyday Refugees, which was a Dutch-based charity to kind of help refugees. The recent hurricanes down in Florida were sending cash and product as well to aid to various aid organizations, plus work boots, et cetera, for people who are, you know, standing there trying to, you know.

So it's not only just the planet, it's the people on the planet. How we can support them as well. And cash is one thing, but it's a product.

And then you know, it's a combination of things, which kind of all give you that sort of silver bullet to try and make sure, in the best way we can, for a company that you know, and then we do the right thing when we repurpose production. Then, you know, all balances out of this carbon footprint. Now, it's treating people in the right way.

[R. Hollingsbee]

Yeah. I mean, yeah, when I sort of started looking at this as a dissertation topic, I was very much looking just at, like, the sustainability, the planet side of things. But yeah, having spoken to some people, I'm definitely hearing and learning more about the people side of things as well.

[G. Campbell]

Like, it's not just making less carbon; it's educating people and providing them with more sustainable options and teaching them why they're more sustainable and why that's important. And that all kind of filters down into a bigger impact overall. And, you know, we do collabs with various other brands, et cetera.

You know, like Dmitri or Skalp Studios, which is a Danish-based women's fashion brand, and anything with our co-brand, there's a give-back element to that as well. With our collaboration partners, to say, rescue, we want a clothing; we did one with them.

You know, we'll give some, you know, sales. We'll go back to supporting a local charity or their local, or something that is relevant to us and to them as well.

So yeah, it's a combination of things, which is community and, you know, inclusion and all these other, you know, right things that we should be doing for people. Yeah, absolutely. I'd save the planet as well. Again, the balance of people on the planet; it's all very well to save the planet, but we don't have people to use the product, then, you know.

So we don't have a planet, but we've got people living on it at the same time. Yeah, but that's really good, send you. I'll send a voicemail to remind myself, and I'll send that impact report to you tonight as well when I get to the hotel.

[R. Hollingsbee]

Perfect, thank you. And there is an informed consent sheet. I think I emailed you earlier in the week. Or, sorry, last week. Perfect. That's great. I'll leave you to drive home then, so some really good thanks to you. Cheers.

Findra Interview – Alex Feechan

[R. Hollingsbee]

Good, okay. Perfect, yeah, so if we could just start with you giving me your name and where you stand within findra, just for the transcription, then we'll go from there.

[A. Feechan]

I'm Alex Feechan, and I'm the founder and CEO, um, at Findra.

[R. Hollingsbee]

Perfect. Um, so I think it probably makes the most sense to start with the materials that you guys use.

[A. Feechan]

Yep. Merino is the big one. Um, how do you source that? Is there any specific, uh, criteria or requirements that you look for in suppliers, the material itself? So we look for ethical suppliers. We use, um, what's called non mulesed merino, so mulesing is a process that farmers, um, implement, um, to prevent blowfly, but it's quite a cruel, um, process, so we look for non mulesed, um, Farmers, um, to ensure that the sheep are ethically treated and looked after.

[R. Hollingsbee]

Perfect. Is there any sustainability considerations you have for that or is it purely ethicality for the animals?

[A. Feechan]

Well, merino is a really sustainable, uh, raw material, so obviously with it being wool, um, it's biodegradable. Um, it's a natural fibre and, um, just because of the qualities of the actual fibre, it's good, it's good, it's good.

It makes a great product for the outdoors because it's temperature regulating, um, the fibers evolved to, um, the structure of the fiber means that it wicks the sweat away from the body, um, and disperses it into the atmosphere. So, it will work with your body to temperature regulate you, so when it's warm outside, it keeps you cool, and when it's cold outside, it keeps you warm.

So, all of these things are great. Great qualities to have for a fibre and therefore a product for the outdoors. The fact that it's, um, it wicks the sweat away and it doesn't sit on the surface of the fabric means that it's odour resistant. Um, synthetics, um, the sweat particles, um, get capped on the surface of the synthetic and then bacteria builds up and that's what causes them to stink.

Um, whereas Merino will The sweat is wicked away, so there's no bacteria build up on the surface of the fabric, so you can wear it for longer, you don't have to wash it as much, you can hang it out to dry, just air it, um, you don't have to wash it, so there's less water usage, um, and it's got a lower kind of footprint therefore, because of that.

[R. Hollingsbee]

Yeah. Um, so staying on the same vein with the materials and like the properties that it has naturally, is there anything you blend it with in any case to enhance any of those or is it just?

[A. Feechan]

We predominantly use pure merino, um, but we have got one of our products, um, it's blended with, um, sort of nylon and that is for additional durability.

just, just to allow the product to stretch a little bit more and have a little bit more of a durable, longer lifespan if you like, um, because the Merino fibres can, they've still got a long lifespan, but um, 100 percent Merino is less durable than one with a small blended composition. Um, so then, I suppose, leading off the materials, um, the one issue I've been encountering with blended materials and things like that is the end of life disposal of it.

[R. Hollingsbee]

Is there a way that you've found to separate out the nylon from the merino so that it can be biodegradable in the same way that natural merino is, or is that a problem you've encountered?

[A. Feechan]

I've not been asked that and I've not had to, um, consider it, but one of the things that we as a business are trying to do for end of life is to repurpose, um, product.

So, um, make it something else so that you extend its life. Um, so I haven't had to consider the separation of the nylon and the merino, but I'm sure there are ways to do that. Um, but what we're trying to do is look at how we can keep the product in use and make it into something else. So a kind of repurposed project, basically.

[R. Hollingsbee]

And do you have any examples of what that stuff might become? What the repurposed products are? Okay.

[A. Feechan]

So we've got, um, some of the merino blended products that we've got and we're kind of developing that. This is just a new project, but we're taking that product and making it into felted fabric. So if you boil wash wool, it becomes a very dense fiber.

And that becomes a fabric that you can then make into other things, so we're looking at making that into headbands at the moment. Okay, makes sense. Yeah. Um, and then outside of merino, um, I'm not sure if you still do, but I know I've seen, uh, cycling shirts and that kind of thing as well.

[R. Hollingsbee]

Do you have any requirements or criteria for the non merino materials that you use in clothing as well?

[A. Feechan]

Yes. We try to find, um, recycled fabrics for our non merino items. That's a big part of what we're developing, or if we use, um, like one of the fibers we're going to look at is a merino cotton blend, so we look at organic cotton. So we're always trying to find innovative fabrics, but, but also fabrics that are, um, Recycled, yeah, to have the least impact as possible.

[R. Hollingsbee]

And then going back to the end of life stuff, outside of repurposing the Merino, is there anything else that you do? Like, do you have a way of disposing of it rather than just repurposing, or is that the only thing you've looked into?

[A. Feechan]

Um, well, we haven't got a full, you know, full, full circular, um, program because the majority of it is still with the customers, so the customer is in control of how it's disposed of predominantly.

Um, but there are things that we're looking at, whether it's resale or resell, or finding ways to repurpose it or finding ways to bring it back into the cycle in some way, but we don't know what all of those things are, or what we would do fully yet. So we've not got a fully circular model as of yet.

[R. Hollingsbee]

Um, and then staying on the topic of circularity, do you have any more broad, um, sustainability initiatives that you're trying to incorporate to make that more circular or just lower your carbon footprint in general?

[A. Feechan]

Um, I guess it's just very much about the product at the minute. It's very focused on the product and, um, using natural or recycled raw materials and then how to extend the lifespan. And then you can see the information for the product and the product's lifespan of the product, um, or repurpose it. So those are the main things at the minute.

I mean, we're going through the process of B Corp, um, applying to be a B Corp. So I'm sure that off the back of that there might even be things that we can start to learn about and do.

Um, so,

[R. Hollingsbee]

yeah. Um, a lot of the other companies that I've been talking to, they're functioning and operating within the sort of outdoors sector outside of just sustainability initiatives. They also do a lot of more social stuff like educating customers on their sort of climate impact and what they can do to reduce that as well as just how to more positively interact with the outdoors.

Is that something you guys have explored yet? Or is it just the product stuff?

[A. Feechan]

We're very small, so we've got a good community, but we haven't kind of done an impact report or anything like that yet. We're just too small. We don't have enough bandwidth. We don't have enough people to do that yet. But it's something we'd love to do, but we're just too small at the moment.

[R. Hollingsbee]

And staying on the topic of you being a smaller company, outside of that, is there any other issues or hurdles that you've encountered just by being a little bit smaller than the likes of NorthFace and SmartWheelback and stuff?

[A. Feechan]

Yeah, so it's, it's much, much harder for a small company to get access to recycled materials and the minimums for recycled raw materials.

So for me to find a recycled fabric, I have to pay surcharges. The minimums are really, really high on recycled fabrics. So it's actually very, very difficult, um, as a smaller business to be as sustainable as you would like. There's a lot of challenges around that because the bottom line is the industry is not set up to be sustainable and um, a lot of these bigger brands can do a lot of greenwashing so the bigger brands can market themselves as being sustainable but I am not convinced that they are, and I think that the marketing of it is something that, you know, is done brilliantly, but it doesn't mean that they are actually a sustainable business or brand.

So there's a lot of challenges to, to, when you're small and you want to do things the right way. It can be really, really difficult and a lot of hurdles to overcome. Um, we, we just don't have the buying power, um, that a lot of people like Patagonia or the North Face have. So it's difficult. I suppose on the topic of Patagonia and those kinds of brands, when the North Face and all those kinds of companies were starting out, sustainability wasn't as big a topic, whereas now it is.

[R. Hollingsbee]

So there may be some benefits to being a smaller company in this day and age, factoring that in to the DNA of your company as you grow.

[A. Feechan]

Definitely. I think, I mean, even 10 years ago when I started at ThinDrip and I started with it's quite a different approach, and I used Merino wool, and sustainability wasn't even talked about then.

So, I think it's just something that's always been part of who we are, um, and that's what I think is a good thing, but what we do, but it just means that, um, there's challenges, but it's part of, it is absolutely in our DNA, which is a good thing. Yeah, absolutely.

[R. Hollingsbee]

Um, so I was looking through your website last night and I saw some stuff about low impact packaging.

Is that just on like the retail side of things or an online distribution as well? What kind of form does that take?

[A. Feechan]
What's that for?

[R. Hollingsbee]
Packaging? Low impact packaging.

[A. Feechan]
Oh, yeah, so we, our garment bags are, um, whether you use biodegradable garment bags or, um, recycled garment bags, you've got, you know, we've got to keep products in garment bags, unfortunately, because they would just get ruined or they could get, um, damaged.

So, we always use a recycled or biodegradable garment bag. clear garment bag and then we just use brown craft paper envelopes, um, for shipping. So it's a very, it's quite simple, but definitely, um, recycled and, um, like, environmentally friendly packaging. Yeah. It's something I was going to talk about, but you've just mentioned shipping.

[R. Hollingsbee]
Um, yeah. I know on like this sort of online distribution side of things it's not really feasible to use sea freight and stuff to get things over across the UK, um, but getting your stuff in from suppliers, is there any consideration for carbon emissions in that sense? Like do you choose sea freight over air freight or rail, uh, rail over planes, or do you just go whatever's fastest?

[A. Feechan]
Um, I think getting products in, so 65 to 70% of our products are made in the uk. Okay. Uh, and, and we're trying to get more, um, product made here and then about. So we could do a small amount in Europe and then the rest is overseas in China, and we try to bring that in by sea. It's not always possible because of timelines, um, but we do try to bring that in.

And we, we haven't gone into a lot of detail about our carbon emissions, which I would, it's something I'd like to do. Um, but again, it's just time and, and people resources, um. But we do feel that we are trying to source more in the UK, but there are certain products that the best materials or the sort of highest quality is in China, and we only work with ethical suppliers out there.

Um, and we kinda feel that if we do have to bring it in by air, then we can, um, the fact that the product itself is very sustainable kinda helps to balance that out a little bit. So that's, um, does the Marino come from the UK or is that a museum thing? Merino is from Australian. Okay. Because Marino sheep need to be reared. Um. where there's extreme conditions, so a really warm and really cold, and the conditions in the UK don't really work for Merino sheep. There's very small, one small farm, a lady that farms, um, Merino sheep down south, but she's not got enough of a big enough flock to produce enough of the fibre to sustain a kind of production cycle, if you like.

Um, but yeah, you can't, you can't rear them in the UK, because we don't get enough heat, so the fibre Wouldn't work, wouldn't work for the sheep.

[R. Hollingsbee]
Okay. Um, and then also on your website I saw you've got a repair program. Yeah. How does that work?

[A. Feechan]
So we offer, um, one year warranty with our products. So if anything goes wrong within the first year, we repair it for free.

And then thereafter, because moths absolutely love merino, so quite often merino products get moth eaten. Um, so the customer, um, pays for a repair, they book it in online, They let us, they download a form and they just let us know the product type and where the problems are. There's a little drawing and they just highlight where the problems are.

And then we've got a lady that works locally who will do what's called an invisible repair. So you shouldn't be able to see it. Um, so she'll fix it and then we, um, send it back to the customer to extend the life. time of the product.

[R. Hollingsbee]
And then I suppose the last question I've got that I could think of in terms of, uh, like practice and production, all those processes, um, is with the dye of the, the wool. Is that done in a sustainable way or is that something that you do?

[A. Feechan]
So I don't know huge amounts about it, but I know that the companies that we work with, um, have lots of accreditations and, um, that it is done in a way that has minimal impact, um, to the environment. So I know it's done in a good way. A way that is, um, because the fiber, you couldn't use a lot of chemicals in it because it would damage the fiber.

So, um, it would, yeah, it's something that I need to look into a little bit more, but I'm confident that it is sustainably done. Okay. Yeah. So it's something you buy uncolored already and then.

[R. Hollingsbee]
And then the question I've been ending with everyone I've spoken to is, do you think you do enough?

[A. Feechan]
There's always more that you can do and I think you could always do better. Um, and I think that we probably do better than a lot of people. Um, it is very, very difficult and You know, what I always think is that the most sustainable brand is the brand that doesn't exist because we don't really need any more, especially in clothing.

We don't really need any more products in the world, but if you are going to put a product out there, um, you know, you make sure it is a product that has minimal, um, impact on the environment and that has a longer lifespan. So we're not fast fashion business. Um, We've got core products that we've been running for a long time, and it's all about, um, encouraging the, the consumer to extend the lifetime of their product.

So that's why we offer repair. That's why we've got plans for this sort of circular, um, approach. So I think that it's about, for me,

it's about finding ways to take responsibility for what we're putting out. and take responsibility for its lifetime value and lifetime, um, overall lifetime and how we can be responsible for it at the end of its lifetime because we're the ones that are in the world.

So I think there's always more you can do, um, but I feel if You know, to be a brand that produces clothing. Um, I think that we are people that do it in a responsible way. And therefore I feel, um, that that is an important part of, of anybody that starts a brand or, or, or adds more clothes to the world is to do it responsibly.

And I think that we work hard to do it and we will continue to work harder to get better at it.

[R. Hollingsbee]

Yeah. Perfect. Yeah, that was really useful. Um, it's nice to get a different perspective because I've been speaking to the likes of like North Face and their parent company and where they've all got millions of pounds of funding behind them and teams that do the sustainability research. So it's nice to get.

[A. Feechan]

Yeah, that's good. Well, hopefully it's helpful for you. Is this for your dissertation?

[R. Hollingsbee]

It is, yes. And then I might use some of the research in my project as well, but this is, it's definitely going to go into the dissertation and I'll see how else I can use it.

[A. Feechan]

Yeah, good. Excellent. Oh, well, what products are you designing?

[R. Hollingsbee]

That is still to be decided. Yeah, I'd quite as do something outdoorsy and looking into True circularity and sustainability and that kind of thing, but I don't know what form that's going to take yet.

[A. Feechan]

Yeah, very good. Well, good luck with it all.

[R. Hollingsbee]

Thanks again for your time. It was really helpful.

[A. Feechan]

Yeah, nice to meet you and take care.

Tiso CSR Interview - Joanna O'Flynn

[R. Hollingsbee]

I can, yeah. Yeah, I don't remember. There was some other people I think I forgot to attach the consent sheets and stuff, but I'll if I did, I can send them to you as soon as we finish this. And but I can. I can keep this on. OK. Yeah, I'll. I'll fire them over here after this. And I won't anything with this until you say it's OK.

[J. O'Flynn]

Yeah, I haven't had those yet. So it would be good to get them. Thank you. It should be absolutely fine, but it should just be. I should check with Chris seeing as I'll be speaking about Tiso.

[R. Hollingsbee]

Yeah. No worries. Yeah, no problem.

[J. O'Flynn]

And then just at the end, after we've done the introductions and the questions, I was actually hoping it could be quite a nice opportunity for me as well.

[R. Hollingsbee]

Mm hmm.

[J. O'Flynn]

If we could leave maybe 10 minutes at the end and something that I'm working on at the moment is improving the communication from what we're doing in terms of CSR at tiso, how to communicate that better to shop staff so it would be great if you had some feedback if we could just leave 10 minutes at the end to do that.

[R. Hollingsbee]

OK. Yeah, absolutely. Right. I'm ready when you are. Do introduction.

[J. O'Flynn]

Oh, my God. Yep. I'm ready. Do you want me to start?

[R. Hollingsbee]

Yeah. True. So.

[J. O'Flynn]

I'm I'm happy for you too.

[R. Hollingsbee]

Yeah, I mean, do you want me to introduce myself then? Because, yeah, so I'm a fourth year product design student.

I'm just starting my dissertation now. Starting the research. I haven't really decided what it's going to be yet. OK, I know I want to do something within this sort of sustainability, like sustainable design practises and the outdoors industry and finding a way to sort of combine the two. At the minute I think I'm looking more at sort of exploring the line between.

Designing for the betterment or the safety of the users and where the line is between sort of saving a life for saving the planet is kind of the narrative that I've got in my head. Yeah, I still need to survive. I know exactly where that's going to go, and that's the rough kind of idea.

[J. O'Flynn]

I like it. And interesting. Good, right? Well, so as you know, I am the corporate social responsibility manager at Tiso group. That means in my role I cover all of our social and environmental impact projects. A little bit kind of pre that. I have a background in environmental policy, so I did my master's in environmental policy. I'm at senior support in Paris. And before that, I studied geography and international relations up in Saint Andrews. With a focus kind of on nature based solutions and circular solutions. So it's great to hear that you're doing things around circular design principles and I've done some sustainability consulting as well around circularity for a variety of different businesses. And then I joined Taizo about a year and a half ago to take on this corporate social responsibility role here.

[R. Hollingsbee]

Perfect. So. That's my questions. So first question is from a retail perspective, how do you think Tiso, can impact sustainability, like what's the biggest way in which ties as a company can contribute to the betterment?

[J. O'Flynn]

Yeah, I think that's a good place to start the conversation. Without being able to quantify this with any particular numbers, because we haven't had the opportunity yet to kind of look at a full picture of what the quantifiable carbon or biodiversity impact is of tiso as a business, I can make kind of, I guess, an informed judgement on what our biggest impact areas will be. And there's a kind of two key areas, the first one being through the products that we sell. And the second one being the way in which we sell those. So would you like me to go into a little bit more detail on what I mean by that?

[R. Hollingsbee]

Please. Yeah, thanks.

[J. O'Flynn]

Yeah. So from the product perspective, I think there's two key areas in which we would impact sustainability in the industry. The first one being if we look at product and the material composition of the product. So as you're sure, as I'm sure you're aware, I think and this is just off the top of my head. But if you look at the carbon footprint of. A apparel or a footwear product about 40% of the carbon footprint will come from material production and so obviously the materials that the products that we sell are made of will have, you know, quite a substantial environmental impact.

Whether that's looking at polyester and recycled polyester versus polyester, or if we're looking at cotton, we could look at cotton versus regenerative cotton versus recycled cotton versus organic cotton. And so all of those choices will have an impact. On the environment and thereby the impact of Tiso. But within product you've also got through I guess the brands that we work with. Because then if you look at product at the brand level, you would then look more broadly at. So what's the environmental and social impact of their supply chain? And that could be from. Energy use in the factories that they source from. It could also be manufacturing conditions from a social perspective, ethical, legal practises, etcetera. And that kind of operates a little bit more at the brand level. So when I look at products, I have kind of two streams that I would look at in terms of how do we impact the environment that would be the first one through the material composition. And the second one through more of a focus on the social side, the ethical supply chain practises at the brand level.

[R. Hollingsbee]
OK.

[J. O'Flynn]
So that's. Please interrupt me if I'm just talking, but I feel like that might be the most useful.

[R. Hollingsbee]
It's it's all useful. Yeah. Any. Anything you have to say will, yeah.

[J. O'Flynn]
OK, good. OK, cool. So that's the first one at the product level where I think we have a big impact. And then the second one that I said was how do you sell our products and that's where kind of my background and circularity. And I think maybe your interest also might come in is obviously you could look at selling products at just being well, we buy something from our brand partners or supplying suppliers. We'll then send that on to the customer and if you take a linear model that will then be used and eventually disposed of. But actually you could look at retail from a different perspective and we could have quite a big impact if you're looking at well selling in a more circular fashion. So that could be through second hand. So we run our one, but not one out scheme, but it could also be through rental or it could be through offering repairs. And so thinking about how is it. We sell not just what we sell. Is also a big part in in how ties are could impact the industry. And sustainability in the industry.

[R. Hollingsbee]
Perfect. Yeah, I guess that all makes sense. I didn't know about the worn, but not worn out thing until I went back to Dundee a few weeks ago. Like I I don't think it's that newer thing. But independent St there wasn't anything about that. And then I was away for six months. So yeah, but it's.

[J. O'Flynn]
Oh yeah. Yeah, so the one but not worn out, we can chat about it a little bit more later, but that's running in Dundee and in Perth. So it's still quite small.

[R. Hollingsbee]
Mm hmm. OK. Yeah, right.

[J. O'Flynn]
But yeah.

[R. Hollingsbee]
Cool. So the next one would be. In steps here. Yeah. So there's steps that you're taking as a company already. Do you think that there's enough being done or there's no perfect solution?

[J. O'Flynn]
Mm hmm.

[R. Hollingsbee]
Everyone will always be working to try and improve sustainability, but do you think given the steps that you've taken so far, you're on the right path? Or do you think that a bigger effort needs to be made moving forwards?

[J. O'Flynn]
It's a very difficult question. Do I think we're on the right path? Yes, I do. I've outlined quite a comprehensive strategy that I think sets us on the right path from my personal perspective. Do I think we're doing enough? No. That you know, that's my background in environmental policy and in climate and I think. Businesses have a huge role to play in the climate crisis. And so, even though we are taking steps in the right direction, is it enough where we're at the moment? No, I think there's still a lot to be done.

[R. Hollingsbee]
Yeah, that makes sense.

[J. O'Flynn]
Do you want me to expand more?

[R. Hollingsbee]
If you have more to say, I I have plenty time to listen.

[J. O'Flynn]
The strategy, maybe I'll just go over that the strategy that I set out for us as a business so. There's four key pillars. The first two are the ones that I mentioned in the previous question, which is through the products that we sell. So material impact and. Brand supply chain. And the second one around circularity. And then there's two more. The third one being around operational sustainability. So looking at what's the direct impact that we have through our owned operations. So that's scope one and two emissions basically and waste. So looking at the carbon emissions from our heating and electricity and transport facilities.

And then also looking at waste and then the 4th and final pillar is more around community. So that's looking at social sustainability a little bit more rather than environmental sustainability. So there we run a very successful initiative called Connect Outdoors at the moment. So I think it's, I think it's kind of the strategy is covering the key areas. What I've had to do is take a step back and think about well before we can actually implement a lot of actions in here. We need to be able to measure what it is that we're doing. And I think in that sense, we're still at the early stages where even though we're doing a lot, we haven't really been recording. What we have been doing and it makes it hard to quantify and communicate about it and assess how far we've come because we haven't yet put in the ground work or we're putting it in in the process at the moment of measuring our impact in these areas.

[R. Hollingsbee]

OK. Yeah. So then as a retailer, you would assume that because you're just selling stuff, you're not designing, you're somewhat removed from the sort of base decisions that would impact the product sustainability. Is there a way in which as a retailer you can influence the manufacturers and suppliers in the early stage of the design in order to just increase this the sustainability of the whole process? is that something that exists?

[J. O'Flynn]

I think it's a really interesting question and it's something that I've been working on a lot at the moment. So I would say it's. A work in progress rather than something that we can actively say that we're doing at the moment. So. I guess there's two key areas there in which I think we can probably influence some of the brands that we sell. The first one is by training our buyers. Because obviously, so I'm not sure how familiar you are with the different people who work in the lease office. But you've got the buying and merchandising team. To lead on what products we buy. And so part of what I've been working on is creating resources to give to our buyers so that they understand the impact of their choices in terms of what products they're buying from which brands and that's giving them resources both on material composition. So what are the choices and different materials and also at the brand level, what is the brand doing as a whole. To manage its environmental impact. So in that sense. Once the buyers kind of have more of that knowledge and hopefully are empowered to make decisions that are more sustainable based on that, this can then have a knock on effect. On the brands. That makes sense. I feel like I've explained that in a little bit of a roundabout way, to be honest.

[R. Hollingsbee]

Yeah, yeah, for sure. Yeah. So it's giving the staff the tools they need to make more informed decisions for the right. Yeah. OK.

[J. O'Flynn]

Yes. I think so. Then another way that it has been done, and this initiative started before my time and I'm assuming you might be a little bit aware of it, but it hasn't been very big. If the think green initiative.

[R. Hollingsbee]

Yeah, I've seen them go. I know nothing about what it really is other than something on the T-shirts.

[J. O'Flynn]

Yes. Yeah. Yeah. So I'll say this. This is off the record.

[R. Hollingsbee]

OK. Yeah.

[J. O'Flynn]

[redacted]

That being said, and this is on the record again. There are some benefits at the think Green initiative did have in that the way it worked basically is that we had an environmental and a social impact criteria. So if a brand met a certain social impact criteria, so the brand needed to either be B Corp certified manufacture more than 80% of their products locally or. Partner with the Workers rights organisation. If the brand met one of those 3 criteria, we would then look at the product and look at whether the product met environmental criteria and those were whether the product was made from more than 50% recycled or responsibly sourced natural materials or if it was ecotex or blue science certified, which are certifications that relate more to kind of chemical input.

[R. Hollingsbee]

OK.

[J. O'Flynn]

In the manufacturing process. And if both the brand and the product met those criteria, it was awarded a think green badge. Now, even though. That approach, as I said, needs time to go. Some changes. The one benefit with that is that a lot of brands wanted to receive the think Green Green label on their products and that was a way of very kind of practically incentivizing them to. Create products that would meet the criteria because they wanted it to be highlighted as products that were taking additional steps in terms of the environment.

[R. Hollingsbee]

Sure. Yeah. Yeah, that makes sense.

[J. O'Flynn]

Yeah. And then I suppose, yeah.

[R. Hollingsbee]

Yeah, 'cause like.

[J. O'Flynn]

Go ahead.

[R. Hollingsbee]

I've seen it and I knew that there was something that different like Midwest products, different from the ones that didn't have

the logo. It just I didn't understand what the criteria were that got them that label.

[J. O'Flynn]

Yeah. And I think it's really important that. It's super transparent and what the criteria are. That it's more specific. So what I'm working on is to create a system where it's less about saying that product is think green or not, but a lot more about giving people the information, whether that's customers, shop staff buying stuff, the information that they need that they know what is a product made of, what is its impact. And then people can assess independently whether it aligns with their values and what they want to buy or not. Rather than telling someone that something is a thick cream product.

[R. Hollingsbee]

OK. Yeah. Yeah, like the the main sort of. Thing that I've picked up on from the little bit of research I've done for this project, as well as other stuff in the past is. I think the biggest issue with sustainability, or the lack thereof, is the lack of education. It's the same with conservation in the outdoors and stuff that people knew more about what they what they were doing in their impacts. It would be a lot easier to change the narrative, change the people interact and mobilise. It's just that's not. And available enough, not necessarily available enough, but people don't want to know what they're doing wrong. Then they have to accept it.

[J. O'Flynn]

Yeah, yeah, I would agree. So I'm working on the kind of educational piece that I mentioned for buyers. I'm working on creating a resource for customers as well and I'd really quite like to do some training for shop staff as well.

[R. Hollingsbee]

OK.

[J. O'Flynn]

So I need to see if I can get that organised.

[R. Hollingsbee]

So then sort of leading off that my understanding of the more sustainable the PTFE free Gore Tex or whatever chemical it doesn't have. My understanding I've had that conversation with Patagonia or pressuring Gore Tex into doing that and developed it alongside them. Which I think is a pretty good example of. A consumer pressuring a supplier for positive change. Is there elements of that process that Taizo have taken on board? Or would like to or.

[J. O'Flynn]

So I think I might need a little bit more detail on that example because I'm less familiar with kind of how Patty I may have been involved in it. So if you have a little bit more details that I can think about that.

[R. Hollingsbee]

OK. Yeah, I'll leave that for now. Let me come back to it, 'cause. It's something I've heard in passing from a few of the shops I've worked and and I've heard parts of it but never sat down and had a look at the whole story myself. So. Yeah. So moving back to Tiso. I'm sure there are guidelines within Tiso internally for. Reducing their carbon footprint. And outside of just educating us on the standard of the products as a more day-to-day process, are there initiatives or guidelines that have been implemented like for daily tasks in the shops or the offices and stuff?

[J. O'Flynn]

Mm hmm. Yep. So this is a question kind of if I understand correctly, more under the operational sustainability. So what does Kaiser directly own as a company? Yeah.

[R. Hollingsbee]

Yeah, mm hmm.

[J. O'Flynn]

So again, with this, the first step has been to take a little bit of a step back and think about. Can we measure? The operational impact that we have, so from heating and electricity. To waste. Now I because I've only been here for a year. I don't know all of the measures that have been taken, but I know from our estate managers and from more of the retail staff. So Phil Keith. Craig, that there have been kind of a lot of steps in terms of minimising that operational impact from an estate level. So that will be kind of our biggest impact area. So whether that's energy efficiency improvements through LED lighting. Or temperature sensors for heating. Those I know are things that the company as a whole has done, but I just don't have the data on that yet, so I can't comment as fully as I would want. It's something that I'm working on which is taking a little bit of time.

[R. Hollingsbee]

OK.

[J. O'Flynn]

I think from a waste perspective, that's something that's very big because it's very present, so obviously. And I actually don't know if there's regulation around this for all businesses, but for me it's a given, obviously that we recycle as a business. So that just means general guidelines on. Recycling in terms of paper, plastic food waste cans, et cetera. So I would hope that everybody, not only at the head offices but across the estate, knows the different recycling streams that they can use and if that's not clear then I'd love some feedback on that.

[R. Hollingsbee]

Mm hmm mm hmm.

[J. O'Flynn]

Then obviously. There's in terms of waste, I think it's very present when it comes to packaging. And initiatives that we have there and we don't. So that's something that I thought we might come on to later.

[R. Hollingsbee]
OK.

[J. O'Flynn]
A little bit in terms of some of the challenges. Because I think packaging is something that is very present, especially for retail staff. And I think it's an area where there's a bit of ambiguity and also it's not so clear what we can be doing there. So that's to say I have not, and perhaps this is something that I could have prepared. I don't have a list in front of me of different kind of initiatives that we have ongoing. Kind of general. Comments like this, always a mission towards reducing our consumables. So producing print by possible reducing consumables in the office environment as such, but there aren't any policies as such that. Or guidelines as a whole.

[R. Hollingsbee]
OK.

[J. O'Flynn]
Set out formally, but it's quite a good idea to maybe do.

[R. Hollingsbee]
Yeah, I mean, like outside of the separating waste, it's not masses that I've noticed. And you can see or Dundee?

[J. O'Flynn]
Yeah.

[R. Hollingsbee]
Yeah, I mean. We can. We can go into that later if that's what you wanted to talk about anyway.

[J. O'Flynn]
That could be useful. I'd appreciate that.

[R. Hollingsbee]
And then I sort of, I think the last group of questions would be this title currently implement any of the circular design principles like you, we've already talked about one, but not worn out, which I would suppose is kind of the most obvious example of that. But are there any others that would share similarities with that?

[J. O'Flynn]
Good. Yeah. Yeah. So. I'd say there's technically three areas, so warmer, not one out. That's our second hand scheme. Tiso does still offer equipment hire, so I would say rental design principles. I kind of went off kind of more systems because I know that we don't make our own product, so it's a little bit removed from what design principles will have. But I was kind of thinking of the question of circularity as a whole. So we've got this resale second hand through one, but not one out equipment rental.

[R. Hollingsbee]
Oh yeah. Yeah, yeah, yeah.

[J. O'Flynn]
Across some of our Tiso stores and then repairs for Alpine bikes.

[R. Hollingsbee]
Mm hmm.

[J. O'Flynn]
But Tiso no longer offers direct repairs as they may be used to whatever it was 30 years ago. For footwear, they don't do that anymore.

[R. Hollingsbee]
Yeah.

[J. O'Flynn]
Instead, for repair, we point customers in the directions of third party. Organisations like Scottish Mountain Gear and Lancaster sports repairs.

[R. Hollingsbee]
OK.

[J. O'Flynn]
So I can go through a little bit more detail on all of those if you think it's useful.

[R. Hollingsbee]
And then for that stuff, because it is just. That's a solid principles. I can research that myself.

[J. O'Flynn]
Good.

[R. Hollingsbee]
Just.

[J. O'Flynn]
Perhaps. Yeah, go ahead.

[J. O'Flynn]

I was just thinking a little bit more broader. I wasn't sure if this aligns with circular design principles as such, but. I wondered whether on the side of eliminating waste and also regenerating nature, I'm not sure if you plan on integrating those principles as well. I. Felt like on the regenerating nature, potentially our community impact initiatives aligned with that a little bit. It's removed from obviously product design principles. But in terms of I think as a business Tiso is very aware that we also impact the environment not just through the products that we sell, but also how our end users use the products. And that's kind of. Engaging with outdoor spaces in a very practical sense.

[R. Hollingsbee]

Yeah.

[J. O'Flynn]

And so I'm not sure how familiar you are with our with our Connect outdoors initiative. But. Maybe a little bit.

[R. Hollingsbee]

I've heard of it, but I've yeah, I've seen a couple posts on the title Instagram and that's sort of the extent.

[J. O'Flynn]

Yeah. OK, good. Basically, it's about promoting inclusion and responsible engagement with the outdoors, and so we work with a social enterprise called more outdoor and the drama trust, the conservation charity. And so I suppose in that element of regenerating nature, our relationship with the drum, your trust, I think is quite relevant in the sense of really trying to work with different partners to promote. Responsible outdoor engagement. Through kind of making sure people use the right path so that the environments around walking paths can regenerate and those kind of elements which are important for outdoor use. But it's not so related to product. So I wasn't sure if that was relevant.

[R. Hollingsbee]

Yeah, I mean, it's good to have it. The last question I just thought while you were talking is the rental gear sold when it's retired or is it?

[J. O'Flynn]

On me.

[R. Hollingsbee]

The rental gear, when that's retired from rental, is that sold as ex demo or does it go somewhere else?

[J. O'Flynn]

And so it depends.

[R. Hollingsbee]

OK.

[J. O'Flynn]

Has anything? On exhighed gone. That I've been involved in skis, I think, sold separately. I can't comment on that.

[R. Hollingsbee]

OK.

[J. O'Flynn]

Same with bikes.

[R. Hollingsbee]

I know in the upland bikes and glentress the demo bikes are often sold, but they're not necessarily the higher ones, and they're. I don't think they have a full life as a rental. And then they're sort of it's like they're there for however long and then.

[J. O'Flynn]

I can't comment on that. Yeah. Yeah.

Some might find their way, if relevant to one, but not one out, but only if it doesn't have a safety element. So obviously nothing like ice hacks or that could go through one but not one out because there's one of the challenges is just ensuring that the safety isn't compromised.

[R. Hollingsbee]

OK. It.

[J. O'Flynn]

And that's really important. So the only thing that might. Go through one, but not one out. Might be the four season boots, but if that has attachments. For crampons. And we can't guarantee that their safety provision is. Safe then, that can't be resolved through Tiso.

[R. Hollingsbee]

Yeah. OK, which I suppose fits in quite nicely with the whole topic of this dissertation. Anyway, hopefully.

[J. O'Flynn]

Yes.

[R. Hollingsbee]

Perfect. Well, that's everything I can think of. And I have written down. So if it is anything else you can think of but or if not, then I can answer you questions.

[J. O'Flynn]

Well, potentially just on that safety dimension. And I'm not an expert, but. One additional thought that I had and I'm not a product designer, so I can't necessarily comment that, but linking a little bit to what safety means for material composition, which we talked about quite a lot, I know that that's a discussion in the industry and that I have with a lot of different brands. Then worrying about the integrity of their product and the way in which it can keep customers safe, whether that's through waterproofness or durability. If, if it's even made from recycled materials. Or through kind of less harsh chemicals, especially in the waterproofing. So that's a conversation that I'll often have with my counterparts at various brands, be that montane or rad. And having conversations with them. What? Demand for customers and would they still want to buy products that potentially aren't as durable because the recycled synthetics aren't as long lasting as using virgin polyester for example? So that's I think quite an important discussion around safety. And the same goes for waterproofness. If the waterproof membranes aren't as durable, what does that mean for safety in terms of keeping dry in the outdoors?

[R. Hollingsbee]

Yeah, for sure.

[J. O'Flynn]

I just I'm not an expert. On that. So I can't really talk about it.

[R. Hollingsbee]

Yeah, I mean, I've got some meetings lined up with the sustainability guy for VF as well as some designers within. Yeah. Mm hmm. Yeah. And there's a product designer with a north face and hopefully management and Keene are interested in helping. So that should.

[J. O'Flynn]

No junior links. Yeah. I think you might have. You do have any contacts at Rab.

[R. Hollingsbee]

I haven't yet, no.

[J. O'Flynn]

Because I think they might be quite a good brand to talk to.

[R. Hollingsbee]

Yeah.

[J. O'Flynn]

They're doing a huge amount in terms of products and sustainability data and design and their CSR person. If you'd like me to put you in touch, I can send a quick e-mail asking if that's right, but he's I think quite involved in the design process of products itself.

[R. Hollingsbee]

OK. Yeah. No, that would be great if you don't mind.

[J. O'Flynn]

No, I don't. Good.

[R. Hollingsbee]

Thanks. Yeah, should be more than enough to get started.

[J. O'Flynn]

All right, cool. I hope that was somewhat helpful.

[R. Hollingsbee]

So yeah, very much so. Yeah, I've got. There's definitely enough here to sort of get pointed in a in a direction and start thinking about where this might actually end up in a few months time.

[J. O'Flynn]

Yeah, I think you could. I think there could be something interesting both from a materials perspective looking at safety. From materials, what do the material choices have? Safety versus planet, but then also in terms of how products are sold? So what safety means? For rental repairs and second hand. I think that would be quite interesting.

[R. Hollingsbee]

Yeah.

[J. O'Flynn]

Yeah.

[R. Hollingsbee]

And then you had some questions, if you've still got time.

[J. O'Flynn]

Yeah, just kind of general discussion. I'm not sure if you want to keep this recorded or not. You're welcome to.

[R. Hollingsbee]

Yeah.

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DJ42001 Design Enterprise 2 dissertation project validation

Invitation

My name is Rohan, a final year Product Design student at Duncan of Jordanstone College of Art & Design, University of Dundee. Design Enterprise dissertation projects aim to investigate real-world problems and/or business opportunities and use design methods and skills to propose innovative solutions and/or new business propositions. Based on my research topic: The line between saving a life or the planet, I would like to invite you to review my initial output and provide your comments and suggestions to help me refine the Sector Analysis from an expert's perspective to better fit the project contribution to the real-world situation.

Research aim and key research questions

Research Questions

How are principles of circular design being used in the design of alpine outdoor goods?

How might we further implement the use of circular design principles during this design process to reduce the environmental impact of the outdoor equipment industry?

Research Objectives

Explore how lifesaving product durability and mindful material and manufacturing process choices minimise user risk.

Engage industry experts to build a better understanding of how circularity is currently being implemented across several stages within the outdoors industry.

Develop new ways to reduce environmental impact of the industry for the future.

Research methods

Interviews with industry experts to uncover what is currently being done and to build an idea of what members of industry feel could be improved.

Researching sustainability and circularity as wider topics in order to apply them to the outdoors equipment sector.

Gain a foundational understanding of what can and has been done in terms of reducing negative impact on the planet through design processes, using various books as sources.

Key findings and initial output:

From initial research it was found that all members of industry interviewed, while aware of the steps that various brands are taking to reduce their impacts, shared the mentality of this effort not being sufficient.

It was also found that while this topic has been looked at by other parties, the existing report I found lacked the depth required to develop any actionable solutions.

Through a clearer understanding of the principles of circularity and the methods that exist to provide companies with clearer pictures of their impact on the planet, strategies can begin to be formed to counteract the pollution created during the production of outdoors equipment.

Reviewer's feedback

- Are the key findings and initial output addressing the research aim and key research questions?
- What are the merits of the project output?
- Could you please comment on improvements and give suggestion on further development or considerations?

I found the report very interesting and it's a real conundrum for manufacturers to achieve and sustain a viable business while trying to meet social and regulatory expectations for sustainability. From a user perspective I want to buy something that can be re-proffed, re-zipped, re-soled etc so prolonging its life both saving money and being more sustainable by not putting old clothes into landfill so often.

The aims of the dissertation are sound and the report covers a great amount of the considerations as part of the problem analysis; I honestly don't think there is a right or wrong answer. Just look at where the electric car debate is right now - the government are relaxing timelines for phasing out ICE vehicles but EVs are still waaaay to expensive for the everyday consumer and car manufactures are struggling for viable business models given the costs vs. targets they have to meet.

The one thing I think you could look at more is manufacturer life dates and what can be done to extend these. For instance, we might buy a harness or some ropes that live in a dry storage bag that rarely get opened or used yet I may be forced to dispose of it after a few years because of a manufacturer date and a safety / regulatory culture that is quite binary in terms of a date/time duration rather than being based on use and exposure.

Reviewer sign:



date: 05/01/25

