

Prolong

From Fast to Last

Mapping strategic pathways to longer-lasting clothes



PROLONG

Data for product longevity

D2

Mapping Design for Longevity Strategies and Related Data Gaps
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0.0 Executive summary and scope

This interim report, *'From fast to last: Mapping strategic pathways to longer-lasting clothes'*, communicates the Design for Longevity (DfL) strategies currently implemented or under consideration in a sample of Danish fashion companies. It further highlights existing data gaps that limit systematic evaluation of these strategies. The broader question on whether DfL strategies ultimately reduce product replacements, decrease production volumes, and thereby mitigate the environmental impact of the fashion and textile industries remains a central concern of the overall project but is not directly answered in this report. The findings are based on 21 interviews conducted in April and May 2025 with representatives from 10 Danish fashion companies. Interviewees included professionals across a range of functions from design, ESG, pattern making, and executive management (CEOs and CPOs). The companies vary in size and market segment, and while factors such as scale, production volume, customer profile, and time of market entry inevitably shape strategic choices, the analysis does not assign specific DfL strategies to individual companies. All company and participant identities are anonymized. The report therefore concentrates on identifying and describing variations of DfL strategies rather than on linking them to specific organizations and customer groups. Nor does it attempt to assess the relative prevalence or effectiveness of strategies across the sample. The analysis clusters the identified strategies into five broad orientations:

1. Design-driven strategies
2. Material-driven strategies
3. User-driven strategies
4. Care-driven strategies
5. Reclaim-driven strategies

These orientations should be understood as general groupings, and companies may interpret and enact them differently in relation to their specific contexts. As an interim report, *'From fast to last: Mapping strategic pathways to longer-lasting clothes'*, does not present best practices or recommend particular strategies for adoption. Rather, it highlights critical areas for further research, particularly the need for methods to close data gaps and thereby strengthen the evidence base for assessing the long-term impact of DfL strategies.

The report also serves a project-oriented purpose. It represents the first delivery (D2) from WP1 in the PROLONG project, which has the objective of mapping DfL strategies and related data gaps in companies. Furthermore, it contributes to Delivery 9 (D9), which aims to develop data-collection concepts various data points. Finally, the report is closely interconnected with the findings from user studies carried out within WP2

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1.0 Introduction

One thing is to create a product that can last a long time, but the even bigger challenge lies in how to actually ensure that customers use it for a longer period. A long-lasting product that isn't used isn't long-lasting at all! It's just a product collecting dust — and that's certainly not good for the environment in any way

(CEO, Case company)

In doing the biography of a thing, one would ask questions similar to those one ask about people: Where does the thing come from and who made it? What has been its career so far, and what do people consider to be an ideal career for such things? What are the recognized “ages” or periods for the thing’s life, and what are the cultural markers for them? How does the thing’s use change with its age, and what happens to it when it reaches the end of its usefulness?

(Kopytoff, 1986: 66-67)

What makes a garment last? What allows it to sustain a long and meaningful life? While clothing lifetime extension has traditionally been framed as a durability issue linked to intrinsic qualities such as stronger seams or higher-quality materials, both research and policy increasingly emphasize the importance of also understanding it as a longevity issue linked to how garments move through time, bodies, wardrobes, and everyday lives (Maldini et al., 2025). In this view, a product’s lifespan depends not only on what it is made of, but also on how it is used, cared for, and valued across multiple users (Evans, 2017, Haase et al, 2004). While companies can influence durability through design and material choices, they have less to none control over how often garments are worn, for how long, or in what contexts. This asymmetry presents a central challenge for companies and complicates the development and implementation of Design for Longevity (DfL) strategies (Ceschin & Gaziulusoy, 2016). As we will demonstrate, our data shows that longevity presents an epistemic challenge for fashion companies: While the industry is increasingly urged to design for extended use, the very notion of what it means for a garment to “last” is relative, context-dependent, and highly assumption based (Fletcher, 2012; Maldini et al., 2025).

For instance, knowledge of how garments are worn, cared for, and discarded remains largely tacit and embodied in user practices, and is highly difficult to transfer to designers and managers on large scales. For example, what constitutes “long enough” in terms of use is not clearly defined. Is a garment worn 30 times considered “long-lived”? What about items that are passed on to another user after just five wears? Across the cases in our study, such thresholds vary depending on product type, consumption patterns, user types, context, as well as brand identity and reputation. Longevity, as our informants reveal, is very much a ‘moving target’ that continuously is redefined through everyday routines, style preferences, shifting aesthetic

values, and social expectations. Unlike durability, which more easily can be tested and verified under controlled conditions, longevity unfolds through dynamic, socially and culturally embedded trajectories (Jensen et al, 2021). This uncertainty is a central concern for our case companies. While they indeed acknowledge that garments may have varied and multiple lives, many of them rarely witness the unfolding of such lives. Hence, they understand the importance of designing for longevity, yet have limited visibility into the consumption patterns, everyday practices, and decision-making processes that shape how garments actually are used over time. As one case company puts it, the point of sale marks a threshold: *“after that, it’s a black box. We enter into darkness.”*

This tension is further amplified by new and upcoming regulatory frameworks. EU policies such as the Strategy for Sustainable and Circular Textiles and the Ecodesign for Sustainable Products Regulation (ESPR) are increasingly formalizing longevity as a measurable performance criterion. Instruments like the Digital Product Passport (DPP) and Product Environmental Footprint (PEF) embody a vision of full lifecycle traceability, in which product performance is documented, quantified, and, ideally, optimized across use phases (European Commission, 2022; European Parliament, 2025). Longevity is widely considered an environmental improvement in policy (European Commission, 2022; European Parliament, 2025), and this report adopts the same perspective. However, we also acknowledge that this relationship remains a black box as well. For product longevity to yield environmental benefits, it depends on the degree to which extending product lifespans results in actual fewer replacement purchases and, consequently, a reduction in production volumes and resource use.

Despite the growing pressure to account for garments’ long-term use and impact, the majority of case companies rely on indirect signals and partial feedback rather than systematic data, thus making DfL strategizing a situated, interpretive, and often uncertain task. Our study underscores the urgent need to shed light on the knowledge gaps and to explore new ways of generating, accessing, and using data to support more informed design and business decisions that enable companies to step out of the “darkness”, as mentioned above.

This report contributes to this effort in three ways: first, by identifying DfL strategies, both in use and planned, among Danish fashion companies; second, by establishing where gaps emerge between companies’ strategic intentions, their assumptions about product use, and actual outcomes; and third, by indicating future methodological pathways to help bridge these gaps through improved data practices. Based on 21 interviews with Danish fashion companies, we examine how designers and managers understand and approach clothing longevity, the types of data they rely on, and the challenges and opportunities they face in aligning their practices with emerging policy demands. In doing so, we aim to inform future avenues for data-driven and practice-sensitive strategies for extending product lifetimes in the fashion sector.

As the anthropologist Kopytoff (1986) argues in the opening quote, things have “cultural biographies” just as we humans do because things such as clothing shift meaning and value as they move through different bodies, contexts, and moments in time. We suggest that this biographical perspective is highly relevant to DfL strategy work. In line with the CEO quote above on how to prevent “*garments to collect dust*”, we argue that companies, methodologically speaking, must interrogate their clothing items and their interrelations with users by asking biographical questions: Where does the garment come from, and who made it? What has its journey been so far, and what is considered an ideal trajectory for such garments? What are the recognized “ages” or stages in the garment’s life, and what cultural meanings are attached to it? How does its use shift over time, and what happens when it reaches the end of its perceived usefulness? By approaching DfL strategies not only as a technical property but equally as a socially embedded and unfolding process, companies may begin to close related data gaps. This report explores how such thinking is taking shape in current industry practice and what it might take to support it going forward.

2.0 The notion of clothing longevity

We distinguish between durability and longevity as two related but different dimensions of product life (van Nes and Cramer, 2006; den Hollander et al. 2017; Maldini et al. 2019; WRAP (2017). Durability refers to the material and technical properties of a product, such as its fabric quality, seam strength, resistance to wear and tear, which altogether allow it to physically endure over time. It is largely a design and production concern, shaped by choices around materials, construction methods, manufacturing, and testing standards. In this sense, durability is relatively easy for companies to create and control, and it is often seen as a prerequisite for longevity. Longevity, by contrast, relates to the actual use phase pertaining to how many times a product is worn, for how long, and across how many users. It is shaped not only by the material qualities of the garment but also by its aesthetic relevance, emotional value, and social adaptability. A garment may be highly durable but rarely worn. Conversely, a beloved but fragile item may have a long life through care, repair, or restyling. In this way, longevity is tied to temporality, to unfolding practices of use and ultimately to consumer behaviour, wardrobe ecologies, and cultural meanings.

This distinction exposes important asymmetries between companies and their end users. Durability is easier for companies to create than it is for consumers to evaluate, especially at the point of purchase. Without testing or technical knowledge, it is difficult for a consumer to assess how well a garment will endure – and although the price tag may be indicative of product quality and thus durability, such monetary metrics may be illusory (WRAP, 2025). Longevity, on the other hand, is easier for consumers to evaluate but harder for companies to ensure. A

consumer may look back and know exactly which garments lasted in use, but from the company's perspective, these life trajectories remain largely invisible. (Klepp et al, 2020)

The notion of longevity plays a significant role in the circular economy, which is mirrored in the Danish Innomission strategies such as TRACE. Figure 1 illustrates how DfL strategies intersect with the four key constituting elements of a circular economy as defined by TRACE Innomission 4: Materials, Design & Production, Systems & Services, and Recovery (TRACE, 2025). These elements provide systemic framing for circularity but also introduce a series of tension fields, in which DfL strategizing must navigate. For example, the push for mono-materials and recyclability in the *materials domain* may conflict with aesthetic or tactile goals in the *design domain*. Or maybe circular business models in the *systems and services domain* (e.g., rental, resale) may challenge traditional production logics and brand control or it might be that *design and production* choices aimed at durability may hinder end-of-life initiatives in the *recovery domain*. Also, *recovery* infrastructures assume certain consumer behaviors (e.g., garment return), which may not align with real-world practices. These tension fields highlight that designing for longevity is not a neutral act but one that requires balancing priorities across potential competing logics. The 'stitching' in our model metaphorically represents the need to 'sewing' together these elements not seamlessly but still in ways that address trade-offs and reinforce product life extension as a shared systemic goal.

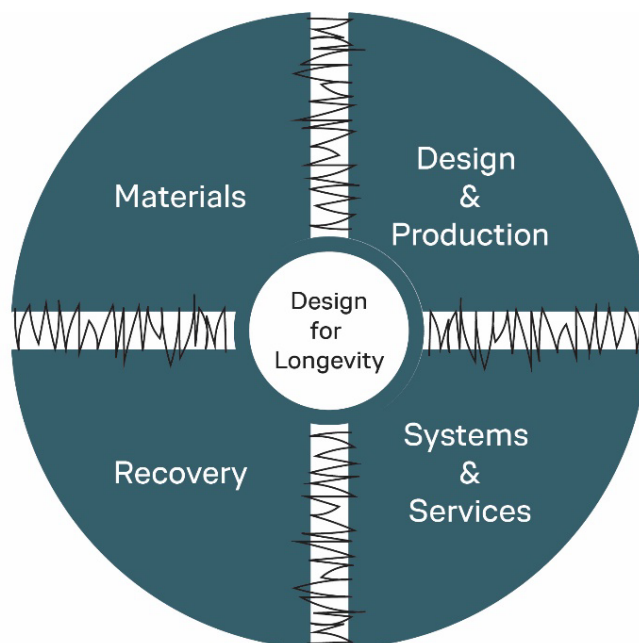


Figure 1. DfL strategies in relation to circular economy and corresponding tension fields. Source: The authors.

3.0 Methodological approach

A qualitative and explorative research design (Denzin & Lincoln, 1994) was applied to gain rich and practice-oriented insights into how Danish fashion companies work with DfL. A case study approach was chosen to enable an in-depth understanding across our sample companies and to capture both shared patterns and context-specific perspectives (Flyvbjerg, 2006). This design allowed the exploration of not only the strategies companies currently use, but also the challenges they face and the kinds of data they need to evaluate and strengthen their efforts.

Between April and May 2025, 21 semi-structured interviews (Kvale & Brinkmann, 2015; Gubrium & Holstein, 2002) were carried out with representatives from 10 Danish fashion companies within menswear, womenswear, and childrenswear. The companies varied in size, from micro-enterprises (1–2 employees) to medium-sized and larger firms. Interviews involved people in different roles across the value chain, including CEOs, CPOs, ESG managers, e- and re-commerce managers, designers, and pattern makers. The purpose of the study was twofold. Firstly, to identify the *DfL strategies* that companies were working with or were considering implementing. Secondly, to highlight the types of data needed to evaluate whether such strategies have the intended impact in terms of the green transition and upcoming EU Eco-design Directive. The interviews lasted approximately 1½ hour each and followed a semi-structured guide to ensure comparability across companies while leaving room for company-specific perspectives and examples. All interviewees were asked the same set of guiding questions, but with different emphasis depending on their role. With CEOs and managers, the focus was on strategy and regulation. For example, whether they were engaged in national or EU-level initiatives on the Eco-design Directive, how longevity featured in their strategic priorities, and how it connected to business models and customer relations. With designers, greater attention was paid to design practices and choices. Here focus was on how they define product longevity, what decisions they make on materials and construction, and asked for concrete examples of collections or products where durability had been a goal. Across all interviewees, questions were asked on the role of data in evaluating product longevity, such as return rates, customer feedback, or material performance and whether data gaps made this work difficult. Finally, all interviewees reflected on the challenges and opportunities they see for longevity strategies, including barriers in the market, skills needed, and the strongest drivers of change.

Each interview was conducted by two researchers – one leading the conversation and the other taking notes and asking supplementary questions. Interviews were recorded, transcribed verbatim, and then coded. Most interviews took place at company locations, with a few conducted online for practical reasons. The analysis followed a three-step process. First, all researchers participated in a joint workshop where they shared impressions of what stood out

in the interviews. This step helped identify central themes and strategies to focus on, as well as additional interesting insights beyond the project's core scope. Second, the transcriptions were coded based on themes identified in the workshop and subsequently structured in relation to the four circular economy dimensions proposed by TRACE (2025): Materials, design/production, systems/services, and recovery. This process allowed us to, thirdly, group findings, and to pinpoint patterns in how DfL strategies are understood and practiced.

4.0 Identification of DfL strategies: in use and planned

The interviews revealed a range of DfL strategies in use across the participating companies. Some of these strategies were distinctive to individual firms, while others could be identified across multiple cases. The strategies varied not only in form but also in maturity: in some companies, DfL principles were deeply embedded in core design and business practices; in others, they had been introduced more recently and were still in early stages of development. Strategies also differed in motivation: some were proactive, anticipating regulatory change or consumer demand, while others were more reactive, developed in response to external pressures or emerging challenges. Similarly, certain strategies reflected an inside-out perspective anchored in the company's own design philosophy and organizational values, while others took an outside-in perspective, shaped by collaboration with customers, partners, and policy requirements. While the companies used similar vocabular to describe the content of what we term "strategic orientations", they did however attach different meanings to the orientations based on company characteristics such as size, products offered, markets addressed, pricing, and brand DNA. Overall, the identified strategies span diverse areas, from design approaches focused on aesthetics, quality, and emotional durability to service offerings and business models that support prolonged use. In the following sections, we elaborate on these strategies as they are currently applied or planned across the participating companies.

DfL strategy orientations

Across the interviews, we identified a set of distinct strategic orientations through which companies articulate and operationalize their approaches to DfL strategy work. While specific implementations vary, these orientations reflect broader areas of strategic concern and action spanning design decisions, material selection, business model innovation, repair and maintenance offerings, and takeback systems. Each orientation adopts different core dynamics and foci that guide how DfL is pursued in practice. Pricing emerged as an important, though often implicit, factor influencing companies' longevity strategies. Rather than functioning as a standalone strategy, pricing decisions were implicit in the orientations, particularly guiding material choices, design principles, and business model viability. This is illustratively voiced by one of the case companies arguing for how "*we're positioned in a certain part of the market where we have a specific price point, and sometimes the price is simply a*

barrier to what we can do". For example, higher price points may create expectations of durability and long-term use, while others acknowledged that low-cost items were more difficult to justify repairing or reselling. In this way, pricing is transversally shaping consumer perceptions, enabling or constraining service offerings, and aligning or misaligning with the value companies intend to embed in their garments. Whereas understanding the interplay between pricing and DfL remains essential for developing robust strategies, it did not appear in our data as an isolated strategic focus.

Table 1 summarizes the five strategic orientations identified in our study, each representing a key area where companies are actively engaging with DfL. Each of the five orientations are elaborated below in subsections. For each orientation, we distinguish between core dynamics (the underlying strategic logic and rationale guiding how the company approaches longevity) and main foci (the concrete activities, tools, and practices) companies implement to pursue longevity in practice. The third column in the table outlines the foundational conceptual assumptions that underpin each strategic orientation. However, it is important to note that these assumptions do not in themselves establish whether such strategies actually succeed in reducing the overall volume of clothing produced or consumed. As highlighted in recent research (Maldini et al., 2025), there is limited empirical evidence to support a direct link between product-level strategies and systemic reductions in overproduction or overconsumption. Therefore, these assumptions should be viewed as starting points for action, not as evidence of environmental effectiveness.

Table 1. Strategic orientations shaping DfL

Strategic orientation	Core dynamics	Main foci	Key assumptions
Design-driven	Product attachment	Styles, collections, aesthetics, versatility, timelessness	Aesthetically "classic" garments are kept longer.
Material driven	Physical properties and material identity	Use of high-quality and natural materials; mono-materials	Better materials lead to longer use.
Use(r) driven	User access and product circulation	Closing brand-customer gap; rental, resale, made-to-order.	Circularity reduces environmental impact by delaying disposal.
Care driven	Product care and maintenance	In-store repair, tailoring partnerships, online repair guides, care labels	Care helps consumers keep garments longer and deepens product attachment.
Reclaim driven	Product reclaiming and revaluing	Customer returns for resale, redesign, upcycling, or recycling	Consumers will participate if offered incentives.

Design driven

Several companies were explicit about their design intentions, emphasizing how conscious design choices can actively contribute to extending product lifespans. A key aspect of this is what one of the interviewed designers terms “aesthetic durability,” pointing to the importance of versatility and designing products that can be worn across many different occasions and situations by past and future generations. This approach is mirrored in how several case companies expressed their focus on timeless qualities, adaptability and modularity, as well as fostering emotional attachment between garments and users. For instance, another designer recollects how the goal is to “design products that people develop an emotional bond with making them more likely to keep and continue using them.” In practice, this often translated into creating adaptable “basics” or “essentials” that could be worn across multiple contexts and remain relevant over long periods of time across generations. A CEO of one case company summarized it as follows:

“It’s expected that we work on that (materials, ed.). All companies must. So how can we take it a step further? And for us, it made sense to focus on one of our core values: designing products that go beyond trends, that is, the kind of items that should always be someone’s ‘go-to’ in their wardrobe”.

However, at the same time, the design strategic orientation also reflected the alluring power of trends and the struggles attached to resisting a too trend-based approach. This is, for instance, clearly described by a designer emphasizing the temporal dimension to designing, and how conceptual decisions regarding seasons and number of collections should be a key matter of concern:

“If we’re going to talk about durability, then we also must talk about the temporal dimension, and we need to consider how we focus our design and product development processes. We also need to look at how, and at what pace, we want to develop, design, and produce collections.”

This tension was not only expressed in relation to trend cycles and timelines but also to materials. The strategic design orientation was in many cases shaped by material availability, but equally, the selection of materials was shaped by a design attitude and set of self-imposed constraints. As one designer described:

“You may easily fall in love with a nice piece of wool only to discover it has 20% nylon, and then I rule it out because I must stay true to the criteria, I’ve set for myself. Blended materials are a no-go, and that weighs more heavily than achieving the perfect look. Then I must find something else, and I find that process super interesting because that’s a *design challenge*.”

This quote illustrates a broader point observed across the cases: that design decisions and material constraints are mutually shaping. Designers actively construct internal rules and limits such as avoiding blended materials and these rules, in turn, provoke creative adaptations. Rather than viewing constraints as obstacles, several informants embraced them as a meaningful design task. Thus, the interplay between design ideals and available materials can be seen as a double loop in the sense that one modifies design decisions based on experiences with materials at hand.

Material driven

In contrast to strong design visions, some companies prioritized a material-driven orientation to longevity. Here, the emphasis was not on form or aesthetics as the primary driver, but rather on the material composition, quality, and technical performance of the product. This orientation often went hand in hand with deep operational knowledge, long-term relationships with trusted suppliers, and a high degree of hands-on material engagement in the development phase. Several companies saw the path to longevity as beginning and often ending with making the right material choices. One designer explains how they must “nerd out on quality, and to nerd out on yarn and on fibres to really understand what it is that creates a durable product”. This material orientation was often grounded in close collaboration with suppliers and production partners. Rather than treating fabric or yarn selection as downstream to design, it was treated as foundational for product development. Designers and developers in these companies emphasized that knowing how materials behave, age, and interact with users was as important as visual or trend alignment. As a designer in one of the companies argued:

“We now know that appearance isn’t everything. We’re not just here to make something that looks good. We must understand what customers want, but more importantly, we really have to know the materials we’re working with. We must dig deeper, figure out how we can improve them, and how to get better at using materials.”

This logic was often tied to a strong belief in the relationship between material quality and durability. Some companies working with organic cotton, for instance, placed pride in selecting thick, tightly woven textiles with the intention that their products should not only last but also “age with grace”, as another designer described it. At the same time, this material-centric approach was not without critique as some questioned whether the industry’s focus on materials may overshadow systemic concerns, such as overproduction or structural inefficiencies in the value chain. As a creative director in one of the companies puts it:

“We’ve been talking about materials for God knows how many years. I may be exaggerating but materials are perhaps the least of our problems. If we really want change, we need to address the structural issues because that’s where the root of the problem

lies. We talk a lot about overconsumption, but I think that's the wrong term. We have to start talking about overproduction because it's overproduction that leads to overconsumption".

Together, these perspectives reveal that while a material-driven orientation can serve as a route to improving durability, it may also risk narrowing the longevity agenda if not connected to broader questions of production scale, user behavior, and system-level constraints. For example, several pointed to the complexity of what constitutes "good quality," highlighting epistemic conflicts between key stakeholders. Still, material expertise was not just a technical matter but one that shaped values and boundaries of the design process itself.

User driven

Other companies in the study expressed a consumer or user orientation toward longevity, as primary driver. While specific design visions or material properties of course play a key role, these companies focused on reshaping the relationship between the brand, the user, and the garment. What unites these approaches is an ambition to move closer to the consumer to reduce the distance between design decisions and real-life wardrobe behavior, and to make longevity a shared project rather than a one-sided offering. One pattern maker described this as a core strategic goal:

"It's really important for us to reach out to them (the users, ed.). To ask: what do you actually need? Outerwear is a big category so do you really just need a shell jacket and then build something underneath? Or do you want a full piece of outerwear? What is it you really need? That's part of our strategy."

Several companies emphasized how important it is that garments not only last materially but also fit well and feel right in everyday use, thus becoming part of the small percentage of a wardrobe that is actually worn, and not just 'collects dust' as said in the introductory quote. As one CEO explained it:

"Of course, it's important that it's a durable material, and that it's been properly processed to last. So yes, the technical elements are crucial but fit is also really important if it's going to be part of the percentage of a wardrobe that people actually wear. The one pieces that are pulled out again and again and again. And in the end, hopefully they're worn out so they can be composted or recycled."

These companies were often critical of the traditional, trend-led system, where design is distanced from the end user and filtered through multiple intermediaries. One designer described this disconnect:

“You don’t actually see who the customer is. You might have a vague idea. Or maybe you don’t think much about it, because you’re working from trends, looking at the catwalk and so on. (...) You’re often sitting far away and just presenting the collection to a salesperson, who then presents it to stores, who then sell it. Thus, there’s a long way out to the end customer.”

In this strategic orientation, longevity is not simply about technical performance or timeless design, but importantly about building the kind of brand-user relationships that enable an “informed feeling” of one’s customers, and thus access to how garments are chosen, kept, and eventually worn out. Yet this orientation also brought challenges. Several companies noted that scaling a consumer-driven approach is difficult. While smaller companies tended to have closer proximity to their customers and thus a deeper understanding of their expectations and motivations, larger companies, on the other hand, were seen to have greater potential to create impact at scale when implementing new practices or innovations, due to scale and scope.

Care driven

A fourth strategic orientation observed among the companies revolves around supporting product longevity through repair and aftercare services. Here, the focus is on creating conditions that prolong the life of garments through maintenance, mending, and support. These efforts take various forms, from in-store repair offers and digital repair guides to partnerships with local tailors and the strategic use of care labels. Several companies saw repair not only as a technical fix but as a way to enable garments to enter a new phase of life, often framed in terms of added value, continuity, and emotional attachment. In many cases, the provision of repair services was described as part of an ongoing customer relationship effort. Repair became a form of extended brand care or a commitment that garments sold would not simply be “left to die”. One company owner explained:

“It’s very, very durable the clothing we make. So, I always tell people, when they buy something, that if anything happens to it, just bring it back. Because it’s not the fabric that breaks, it doesn’t! I know it. But a seam might come undone, and that takes me five minutes to fix, and then it often gets a longer life.”

Interestingly, material quality becomes a risk mitigation measure in repair services, in the sense that if quality is very good the number of claims is subsequently low. Thus, low risk of cost running out of control in repair services. As brand you then must “trust your quality”, as one of the CEOs said. While the perceived value of repair was often high, many companies also acknowledged practical challenges. Several services were still in pilot phases or limited in scale, and uptake among customers remained uneven. Logistical barriers such as access to tailors or time constraints for consumers were often cited as obstacles. One ESG manager described the ambition and its challenges:

“We’re really looking at how we can create some business models where repair is a big part of it. How can we offer repair service to those customers where a button is missing or the seams are coming apart and make it an easy thing to fix, because unfortunately right now it’s a headache to have to find a tailor and deliver to a tailor.”

Infrastructures therefore play a significant role, both physical networks of local actors (such as tailors, logistic partner, etc.) as well as digital data platforms and data repositories. Alongside logistical solutions, some companies emphasized the importance of promoting a care mindset among users. As one owner put it: “we encourage people to take care of their products and to see the beauty in doing so.” This recognition, that product care can also be a form of appreciation, is tied into broader reflections on consumer behavior and responsibility. Even the best-designed garments and services cannot prevent premature wear if care instructions are not followed. This is illustrated by one quality manager recalling an incident from a store visit:

“I was visiting one of our shops, and a guy came in with one of our Merino knits that had shrunk two sizes. And I could just tell by looking at it: “yeah, you didn’t wash that on the wool program, and you definitely didn’t use wool detergent’. Well, of course the store gave him a new one as that’s part of the service we offer. But he was missing a skill. I think we can design whatever we want and have the very best intentions but if the consumer uses it incorrectly, then it’s pointless. It’s like building the smartest car in the world but if someone comes along and just grinds the clutch, then the clutch breaks, no matter how well it’s made. So, we also need to re-educate consumers.”

The care-driven orientation, then, is not only about keeping products in use but also about reducing friction between the customer and the act of repair together with an increased attention to communication of care and maintenance. It highlights how longevity needs infrastructure and “care-based” communication but also recognizes that consumer skills and routines matter deeply. At its best, repair is not an afterthought, but a natural extension of product design and customer service. Yet, the degree to which repair services are accessible, scalable, and supported by user knowledge remains a key challenge.

Reclaim driven

A fifth strategic orientation observed among the companies involves various forms of take-back systems aimed at reclaiming garments after use. While still emerging and often experimental, these initiatives reflect a growing ambition to retain control over product lifecycles, build circular infrastructures, and signal environmental responsibility to consumers. Depending on their design, such systems may serve different functions from enabling resale and redistribution, to redesign and upcycling, or simply to feed used garments into textile recycling streams. Some companies have developed deposit-based models, which not only encourage

customers to return products but also open up dialogue about product lifespans and use. As one of the managers described:

“We have our deposit scheme, which we’ve actually had almost since we started, which allows customers to come down and hand in their t-shirt, and then they can buy something new in return for some deposit [...] We can have an open dialogue with our customers there. Why have you had that t-shirt for so long? And how often have you actually used it? And why are you handing it in now? So, it’s a golden opportunity to collect some data for us.”

Other companies saw reclaim systems as one key precondition for circular business models, especially resale, but pointed to the difficulty of achieving the right product quality at return. If items are too worn or damaged to be reused, the logic of circularity breaks down and the brand risks taking on the role of “waste managers”:

“I can’t be successful with circular business models without having some products that can be resold. So, if we make t-shirts that get twisted from washing, we take them in and the customer always gets their money, but if we can’t resell them, what are we going to do? Should we send them to recycle? That’s fine, but then we become a sorting plant more than we become a commercial business.”

Some companies experimented with incentivized return systems, where users receive points or discounts for handing in garments, which can then be used to purchase new products. While such schemes are meant to create a feedback loop between past use and new consumption, their long-term impact on volume reduction remains unclear. As one pattern maker reflected:

“If you sell something on Vinted, you get the full profit. But if you use a resale platform like we did through Create2Stay, you just get some points you can spend on a new product. So, is that good or bad? Does it lead to more consumption? Maybe. But it’s also an incentive to hand stuff in. Otherwise, people might not bother, or they’d just sell it themselves. So, it’s about figuring out what the best solution really is.”

Beyond formal systems, some informants suggested informal or community-based alternatives, such as brand-specific secondhand markets. These would allow consumers to sell directly to one another, while the brand facilitates the platform and fosters brand loyalty. A designer argued that “it would be a great initiative if a brand hosted its own flea market, where people could come and sell their items in secondhand manner. Then we as brand just connect to that platform.” However, others voiced skepticism about whether consumers are willing to re-sell through brands, especially if the return is lower than what peer-to-peer platforms offer. The value proposition, in other words, remains ambiguous, as one designer reflected: “Why would a user sell it back to the company instead of just going on Vinted and making more

money?” The reclaim-driven orientation captures a growing sense of responsibility for garments beyond the point of sale, and a desire to influence how products exit the wardrobe. It also reflects the early stages of an infrastructural shift, where brands begin to imagine themselves not only as producers and sellers, but also as receivers, sorters, and redistributors. Yet as the quotes illustrate, such systems raise important questions: How can circularity be made economically viable? Who benefits from resale? And to what extent do these models reduce rather than redirect overall consumption? In short, reclaim strategies offer promising tools for prolonging product life and reclaiming value, but they also risk reproducing linear habits under a circular banner.

In sum, figure 2 visualizes how the five strategic orientations presented above, *Design-driven*, *Material-driven*, *User-driven*, *Care-driven*, and *Reclaim-driven*, are not discrete or mutually exclusive. Rather, they are interconnected through overlapping practices, shared concerns, and evolving business models. Importantly, none of the companies we interviewed focused exclusively on one single orientation. Instead, companies moved across strategies, often combining approaches or shifting emphasis based on internal priorities, evolving market conditions, and external pressures such as upcoming EU regulations. This dynamic interplay reflects how DfL is less a fixed strategy and more a field of ongoing navigation, where companies adapt, experiment, and negotiate within and across multiple frames of action. Therefore, figure 2 positions DfL at the center of the model, with the five main orientations depicted as surrounding circles that contribute to its realization. Each orientation is further specified through a set of smaller circles, which denote distinct approaches embedded within that orientation. The relative size of the circles does not convey importance but indicates their relational placement as elements constitutive of the overarching orientation. Solid lines illustrate direct linkages between orientations and approaches, whereas dashed lines signify coherence and reciprocal influence across elements. The illustration should be regarded as a work in progress and does not claim to provide an exhaustive representation.

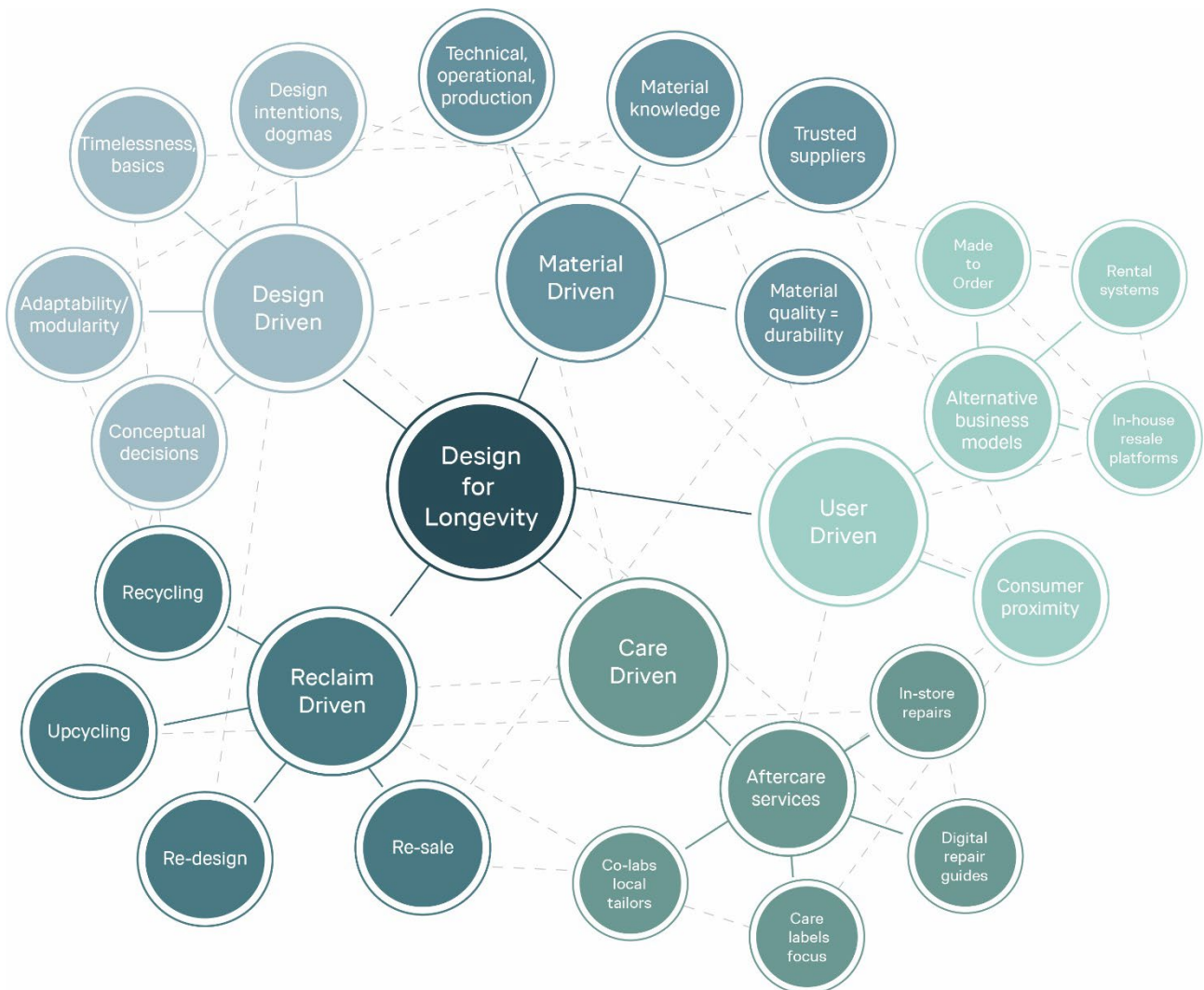


Figure 2. Overview of DfL strategies in companies and how they interconnect through network interdependencies. Source: The authors.

5.0 Gaps between strategies, effect assumptions and reality

“[...] The whole understanding of what it means for a product to be long-lasting, we could really use some data on that. I mean, a brand can create a style with the best intentions. But if consumers don’t use it, then the environmental impact per use becomes enormously high.”

(CEO, case company)

While our case companies are increasingly committed to extending the life of garments, our study reveals several gaps between this ambition and its realization. These gaps are not the result of unwillingness or resistance but reflect deeper uncertainties, blind spots, and

organizational constraints and inertia. Based on our data, we identify three broader types of gaps that shape and impact the current DfL strategy practice, each involving multiple struggles and variations across companies. Table 2 summarizes these gaps and their key focus areas while figure 3 show how the gaps connect to circular economy and corresponding tension fields.

Table 2. Summarizing of gaps in three overall areas

Gap	Focus	Core challenge
Directional Gap	Defining a path forward	Lack of shared frameworks and strategic priorities; uncertainty around what longevity means in practice, and how to approach it.
User Gap	Gaining insight into real-world garment use	Feedback loops are based on claims; anecdotal, everyday use remains invisible.
Coordination Gap	Implementing and scaling DfL practices	Activate and mobilize skills and competences and to coordinate across organizational units.

Directional gap:

One type of gap is concerned with figuring out what to do and how to do it. While most companies in our study expressed a clear ambition to design longer-lasting products, many struggled to define what that means in practice. How do you balance extrinsic and intrinsic factors in product longevity including technical durability, life events, body changes, emotional attachment, and multi-user potential? Should the focus be on classic design, high-quality materials, or repair-friendly construction? And how should these priorities be balanced against other business imperatives such as affordability, trend responsiveness, or margin? This ambiguity reflects a lack of shared frameworks and reference points for strategizing around longevity. For some companies, DfL is a default setting and core to its business DNA; for others, it's an add-on and an aspiration without clear anchoring in design philosophies, buying criteria, or internal KPIs. In many of the cases, longevity was treated as a desirable goal, but without clarity on how it should shape day-to-day decisions across the organization. This lack of a clear directional path also stems from limited feedback loops: without robust data on how products are used, companies cannot easily evaluate whether their DfL strategies are effective.

User gap:

A second type of gap concerns the lack of visibility into how garments are used. While companies invest in designing products for extended use, they rarely receive systematic feedback on how garments are worn, for how long, or under what conditions. In many cases, the primary post-sale insights come from customer service channels and claims systems, forming what can be described as claims-driven feedback loops. These loops offer valuable information, but only when something goes wrong. As such, they tend to highlight problems rather than providing insight into positive or typical patterns of use. If a product performs well,

it often disappears from view, making everyday success stories invisible to the company. Beyond claims, some companies collect fragments of post-sale information through resale platforms, take-back programs, or direct customer engagement, but these initiatives are still limited in scope and consistency. Still others rely on informal feedback from friends and family members, which, while offering occasional insights, remains highly anecdotal and biased. This practice is not due to negligence or unwillingness but often emerges in the absence of more systematic ways to access use-phase data. Thus, most companies continue to operate without clear definitions of what constitutes a “long life,” and lack the tools or methods to trace the biographies of their products across different users and use phases. As a result, longevity strategies are often based more on assumption than on verified patterns of use.

Coordination gap:

A third gap concerns the internal capabilities required to support DfL. Even if the companies articulate a clear ambition to design for longevity and generate insights into product use, these ambitions and insights often fail to translate into coordinated action. Importantly, this is not because firms lack capabilities altogether. On the contrary, many of the companies in our study possess relevant skills, knowledge, and expertise. The challenge lies in mobilizing and coordinating those capabilities in the right places and at the right times. Several companies highlighted difficulties in working with available data, not just collecting it, but also interpreting and applying it meaningfully in design, sourcing, and purchasing decisions. In some of the cases, longevity-related data existed but remained siloed, under-analysed, or inaccessible to the teams who could act on it. Others described how internal divisions between product development, buying, and marketing made it difficult to coordinate on shared longevity goals. Beyond data, companies also noted uneven access to tools and frameworks for style forecasting, material selection, and value creation through alternative business models. In this sense, DfL is not simply a matter of technical design or policy, it is a broader challenge of organizational alignment and learning, in which existing capabilities are often fragmented or misdirected, rather than missing altogether.

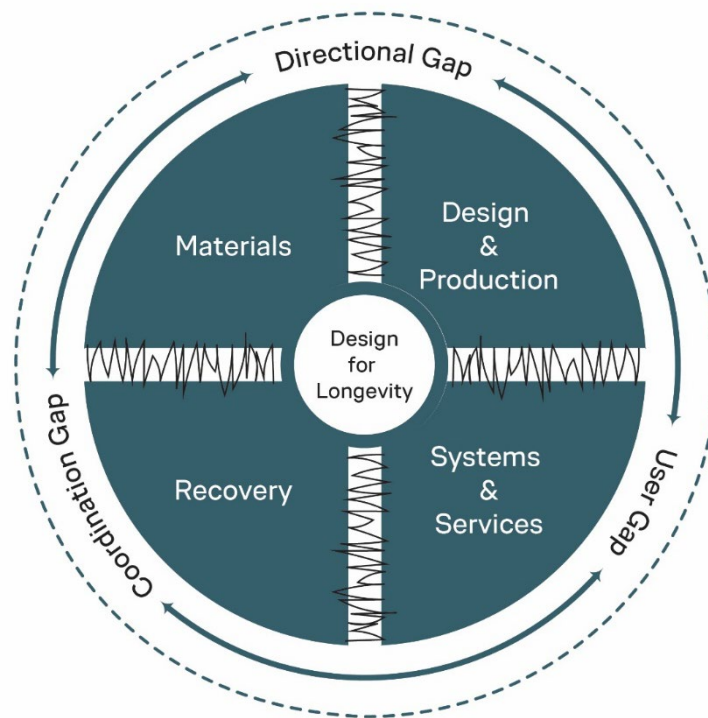


Figure 3. Potential gaps relating to DfL strategies in companies. Source: The authors.

6.0 Discussion: From fragmented perspectives to entangled methods

In the previous section, we outlined three interconnected gaps that shape the current state of DfL: uncertainty in strategic direction, limited insight into real-world use, and coordination difficulties. Our study reveals that efforts to bridge these gaps are already taking place such as when companies experiment with e.g. reclaim systems, care guides, materials, and design approaches. However, our analysis suggests that many case companies still operate with fragmented methodological logics treating product, user, and system-level concerns as separate domains, rather than parts of a dynamic whole. Much of the work around DfL is organized according to a dualistic logic: products are designed here, users behave over there; materials belong to the object, values belong to the consumer; business happens in the firm, regulation happens outside of it. While analytically convenient, this separation often obscures the relational and entangled nature of how garments live, age, circulate, and acquire meaning. Products do not exist in a vacuum. While companies, policymakers, and users often treat them as independent entities, product interdependencies constitute a crucial yet largely invisible dimension. In an ideal DfL context, products would effectively compete with one another for use, which is a perspective that is commonly overlooked because focusing exclusively on single products obscures this interdependent dynamic.

As our data shows, a decision made in the design phase (e.g. a zipper choice) influence reparability years later, just as a user's care habits reshape a garment's longevity trajectory, even if the product itself remains unchanged. To move beyond the limitations of this logic, we need methods that can trace these entanglements and treat longevity not as a fixed attribute of garments, but as a co-produced outcome that unfolds across systems, bodies, and time. This means rejecting any strict division between user-level data, product-level analysis, or market-level insights, and instead developing ways of seeing how they interact and co-constitute each other.

Table 3 outlines key data collection points and corresponding methods that can help qualify DfL strategies. Rather than approaching longevity as a product attribute fixed at the point of design, we draw on a biographical perspective (Kopytoff, 1986) that follows garments across time and use in the interaction with a user. This structure begins with the strategic intent behind a product, follows the consumer-facing phases of acquisition, use (appropriation), and disposal, and ends with organizational integration as a necessary condition for turning data into insight and action. Together, these focus areas reflect the entangled nature of garment longevity and offer a more situated basis for evaluating DfL strategies in practice. Selected methods from table 3 will be targeted and explored in the coming research period and elaborated in forthcoming project deliverable.

Table 3. Example of methods & implementation areas

Focus area	Example methods	Type	Purpose and contribution
Design intent & strategy	-Product development briefs.	Qualitative	Aligns company vision & mission throughout the company value chain
	-Environmental action.	Qualitative	
	-Regulation compliance.	Mix of quantitative & qualitative	
Acquisition	-Point-of-sale interviews	Qualitative	Captures purchasing habits, preferences and attitudes; expectations, and projected garment lifespans.
	-Online customer surveys	Quantitative	
	-Store observations	Mix of quantitative & qualitative	
	-Consumer Panel Data	Quantitative	
Use	-Wardrobe studies	Qualitative	Reveals wear frequency, care routines, emotional value, and forms of attachment and/or detachment
	-Garment biography interviews	Qualitative	
	-Photo/self-tracking diaries	Qualitative	
	-Repair service logs	Quantitative	
	-Complains & returns	Quantitative	
	-Netnography: SOME	Qualitative	
Disposal	-Take-back timestamps	Quantitative	Documents how and when garments exit use, and under what conditions they transfer to
	-Netnography: Second hand platforms	Mix of quantitative & qualitative	
	-Exit interviews	Qualitative	

	-Returned garment condition assessments	Qualitative	new users or are destroyed/discarded
	-Resale data	Quantitative	
Organizational data integration	-Cross-functional workshops	Qualitative	Enables firms to interpret and act on longevity-related data across roles and decision areas
	-Internal knowledge mapping	Qualitative	

7.0 Concluding remarks

Materiality, temporality, and the social domain of products emerge as key themes in our findings. Companies must make decisions without a clear picture of how their products are used or how longevity unfolds in the real world. While DfL is often treated as a matter of technical optimization, our study shows it to be deeply entangled with uncertainty, negotiation, and organizational sensemaking. These observations resonate with the findings of Maldini et al. (2025), whose comprehensive literature review reveals that much of the environmental policy discourse around Product Lifetime Extension (PLE) rests on untested assumptions: namely, that longer lifespans will reduce production volumes, and that consumers primarily acquire new products through replacement. However, as their work shows, these assumptions are not well supported by empirical evidence. In practice, garments may accumulate rather than substitute, and production volumes may remain unaffected by extended use. Similarly, very few of the companies addresses whether any DfL initiatives as such would reduce their overall product volumes. Several companies reveal that they have reduced collection sizes - numbers of styles pr. collection or numbers of yearly collections - however with the intention of having more time for each product and to meet production requirements in relation to numbers. Building on this critique, our report brings forward the internal struggles and reasoning of companies navigating DfL in real time not as a theoretical goal, but as a situated, often uncertain design and business practice. In doing so, we aim to contribute a more grounded and nuanced view of product longevity, one that treats it not as a fixed outcome, but as a relational achievement, shaped by design intentions, organizational constraints, and the uncertain biographies of the things we wear.

Avenues for future research include developing methodologies that both address existing data gaps and are applicable in practice for companies. This requires strong interconnections with users and customer segments across different levels and complexities. Within the context of PROLONG, the next step is to relate the findings of this report to insights from the user studies carried out in WP2 and the LCAs developed in WP3. Together, these will contribute to establishing criteria for data points (Deliverable 6). Delivery 6, in turn, forms the basis for Deliveries 9 and 10, in which PROLONG develops data-collection concepts for each of the collection points (D9) as well as provides recommendations of methods for further data collection (D10).

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