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B.O.N.D Standards

Extrinsic Durability
Stakeholder Report

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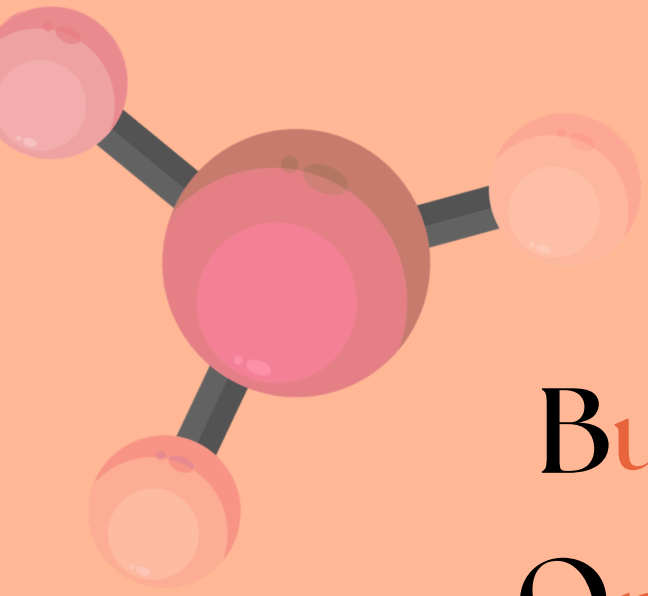
March 2026



Building On New Durability Standards

Extrinsic durability - a key to extending use cycles through value creation.

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ABOUT THIS PAPER

This report is the first stakeholder-facing deliverable of a greater multi-year scientific research project dedicated to establishing a robust, evidence-based understanding of ***extrinsic durability***.

This research is being conducted under the institutional leadership of **Institut Français de la Mode (IFM)** and has been initiated and financed by **DEFI**. DEFI's mission is to support and accelerate the development and transformation of French fashion and clothing players.

The purpose of this paper is to consolidate the approach and first insights of our research, in order to:

- Share and demonstrate the methods of development, aimed at exploring the structure and drivers of extrinsic durability.
- Invite active engagement from industry stakeholders, creating opportunities for dialogue, collaboration, and shared interpretation of a complex subject.
- Outline opportunities for integrating extrinsic durability considerations into brand practice and industry frameworks.

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INTRODUCTION

ABSTRACT

PURPOSE & APPROACH

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EXECUTIVE SUMMARY

Current sustainability strategies focus mainly on intrinsic durability, the physical qualities that allow garments to withstand wear and tear. However, most garments are not discarded because they are damaged, but because they lose relevance, desirability, or meaning for the user. This gap highlights the need to understand and address ***extrinsic durability***: the resistance of a garment to contextual changes such as trends, social expectations, or symbolic value loss. In other words, longevity is not solely a material problem; it is a meaning problem. Understanding extrinsic durability is vital to today's waste crisis and essential to closing the gap between design intentions, consumer realities, and circular economy targets.

Our research strives to advance industry perspectives of durability beyond physical properties and provide new levers for transforming the fashion industry. This research is international and science-driven, informed and supported by industry stakeholders and a consortium of international experts in different disciplines. Upcoming phases of the research will expand to involve consumer insights and content development with voluntary brands. Extrinsic durability has emerged as a growing area of regulatory interest within the EU. However, stakeholders have criticised its limited scientific foundation and the risk of fragmented legislative outcomes. This research seeks to address these concerns by grounding the concept in scientific inquiry and promoting regulatory coherence.

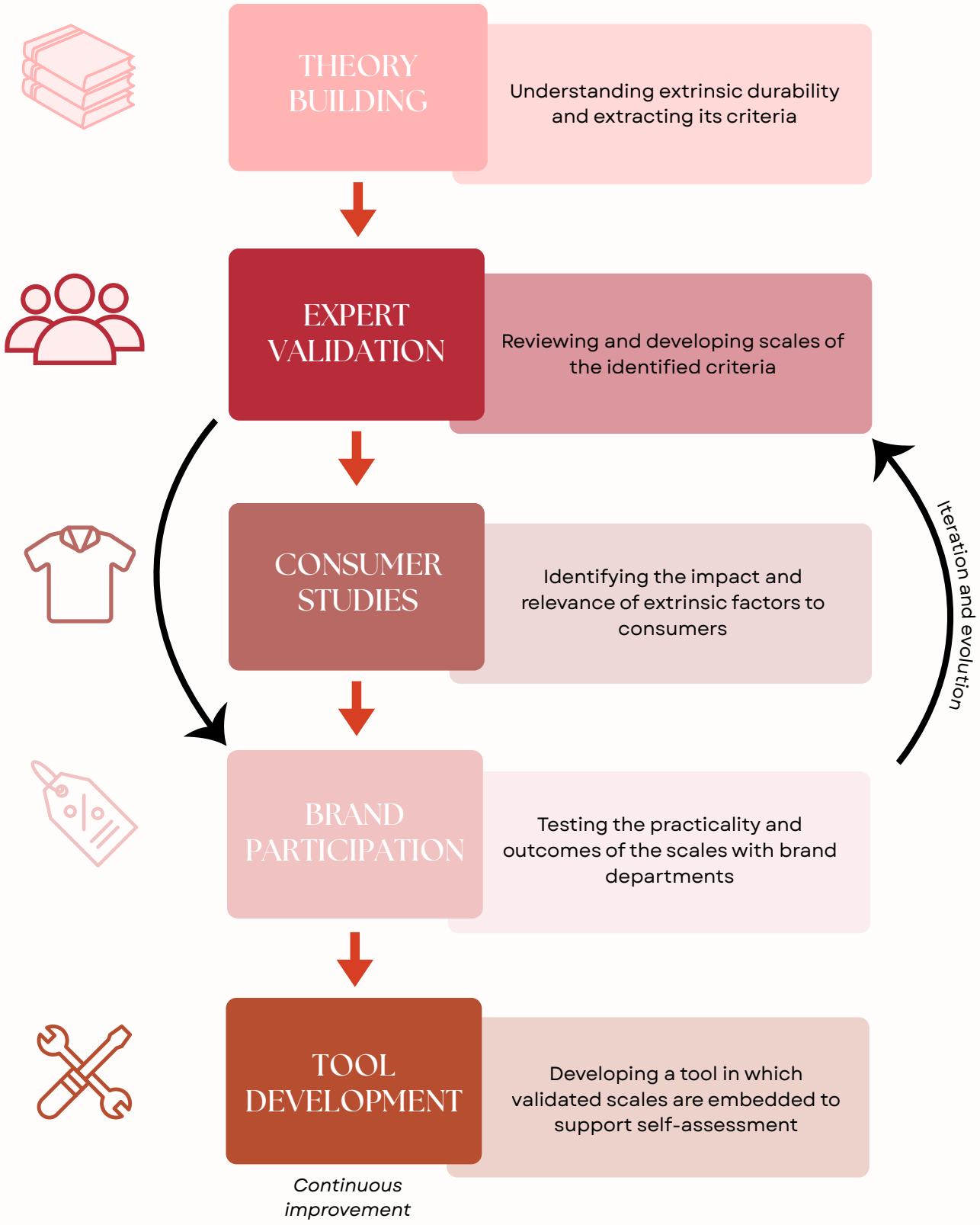
This ongoing research aims to develop operational scales that capture actions and transformations of extrinsic durability criteria. These scales are envisioned to be embedded in an open-source digital tool, enabling brands to evaluate their performance and identify opportunities for growth and continuous improvement. Beyond measurement, the tool is designed to drive added value not only for brands but also for consumers. Consumers' decision-making is not based solely on technical attributes. By clarifying how consumers evaluate garments over time, extrinsic durability helps identify where circular behaviours break down. Brands can adjust touchpoints –design, communication, service, education– to maintain perceived value and extend use phases. Therefore, by advocating for extrinsic durability considerations, consumers can be met with resonating garments, strengthening the upstream foundation of circularity and propelling garment longevity. Extrinsic durability has the potential to become a new lever of business performance, strengthening brand engagement, consumer retention, and service innovation. Unlike traditional marketing and sales insights, it values both pre- and post-purchase consumer behaviour, positioning our research toward demand alignment.

From this primary deliverable of an extrinsic tool for brand use, a secondary goal of the project is for governance actors to consider integrating extrinsic dimensions into durability evaluation criteria, which are currently grounded in intrinsic durability. This approach serves to complement existing regulatory guidelines and models, enabling comprehensive assessments and avoiding blind spots in policy or certification.

STEPS TO REACH THE AIM

RESEARCHERS, EXPERTS AND BRANDS WORKING TOGETHER ON NEW KNOWLEDGE

WITH THE INPUT OF CONSUMERS



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ROADMAP

P1

Oct. 2024 - May. 2025

THEORY BUILDING

UNDERSTANDING EXTRINSIC DURABILITY

- Conducted literature review comprising +200 publications
- Identified dimensions of extrinsic durability
- Developed a novel analytical framework
- Built mapping and initial hierarchy of factors

SECURED FUNDING FOR 2025 DELIVERIES

2025 -

P2

Jun. - Dec. 2025

EXPERT VALIDATION

REFINING PHASE 1 FINDINGS TOWARDS APPLICATION

- Defined 4 key thematic groups built on the framework
- Recruited a consortium of +30 global experts
- First round of criteria qualification through questionnaires and workshops with experts

SUBMITTED TO SCIENTIFIC JOURNAL (under review)

2026 -

Jan. 2026 -

ANALYSIS & PLANNING FURTHER WORKSHOPS

- Reviewing criteria
- Determining first scales

SECURED FUNDING FOR 2026 DELIVERIES

P3

Feb. 2026 -

CONSUMER STUDIES & BRAND PARTICIPATION

EVALUATING & TESTING FINDINGS WITH USERS & PRACTITIONERS

- Consumer survey design
- Onboarding international brands

Mar. - May 2026

LAUNCH

- Surveys across 4 countries
- Wardrobe study design and pilot
- Brand kickoff session

SECOND CONSORTIUM WORKSHOPS

- Continued development of criteria and scales

Jun. - Aug. 2026

PROGRESS

- Conducting wardrobe studies
- Operationalisation simulation with brands
- Practical testing with brands

THIRD CONSORTIUM WORKSHOPS

- Continued development of criteria and scales

Sept. 2026 -

BRAND INSIGHTS & FEEDBACK

- Collaborative assessments with brands
- Testing new or updated scales
- Check-ins and open Q&A

P4

Sept. 2026 -

TOOL DEVELOPMENT

FROM INSIGHTS TO AN ASSESSMENT TOOL

- Develop standards of implementation

Dec. 2026 -

REVIEWING ITERATION/ TESTING NEEDS

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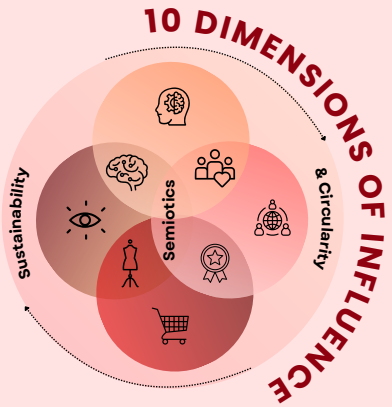
THEORY BUILDING

P1

+200

criteria and variables comprising the dimensions

Scientific paper under review



P2

EXPERT VALIDATION

+30 experts representing **+14 countries**

Criteria

52

+12 prioritised
+10 new
+30 nuanced

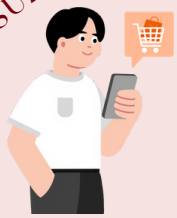
Working Groups

P3

CONSUMER STUDIES

ONLINE SURVEYS

1



WARDROBE STUDIES

2

In France, Portugal, Italy and Belgium

LEVEL

5
4
3
2
1

BRAND PARTICIPATION

- Development of scales
- Use-Cases

P4

TOOL DEVELOPMENT

Gathering and continuously assessing the criteria for brand implementation

01

INTRODUCTION

PROJECT TEAM

RESEARCHERS & SUPPORT

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MEET THE TEAM

LEAD TEAM

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Our leading team combines a blend of academic expertise and real-world experience.

We are researchers and practitioners, each deeply committed to advancing knowledge with purpose and impact.

Andrée-Anne Lemieux, Ph.D. HDR

Project & Research Director

Sustainability Director and Full Professor

Head of Sustainability IFM-Kering Research Chair

Michelle Dindi

Sustainability Researcher & PhD Candidate

Doctoral Student in Management Sciences focusing on extrinsic durability, within fashion and textiles

MEET THE TEAM

SUPPORTING TEAM

Additional team members are contributing to different phases

Together, our team brings forth academic rigour, industry insight, and methodological expertise. Combining research, strategic analysis, and hands-on experience across fashion, sustainability, and consumer studies, we work to generate knowledge that informs action and accelerates transformation in the fashion sector.

For Phase 1, we had the added support of IFTH:

Gaëlle Courage
Yacine Boukella

For Phase 3, we have the support of consumer studies experts:

Irene Maldini, Ph.D.
Gildas Minvielle
Magalie Beguin

Additional specialists are engaged to deliver ad-hoc support:

Hester Vanacker
Giovanna Casimiro, Ph.D
Alexia Tronel

01

INTRODUCTION

BACKGROUND

WHY EXTRINSIC DURABILITY IS THE MISSING PIECE

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THE PROBLEM

DURABLE YET DISCARDED

The Ellen MacArthur Foundation's [1] report showed that clothing production doubled between 2000 and 2015, while the use phase declined by 36% prior to disposal. The continued dominance of linear systems, coupled with rising consumer demand, results in overconsumption and escalating waste management challenges.

In response, regulatory and institutional bodies have introduced industrial initiatives and frameworks intended for implementation by governments and industry stakeholders to advance sustainable production practices. These legislative initiatives reflect progress in reform efforts within the textile and fashion industry, grounded in improving sustainability across the product value chain. However, additional interventions are required, particularly those addressing the enhancement of product use and longevity beyond physical durability, identified as **intrinsic durability**, which is the ability of a garment to withstand physical wear, tear, and deterioration over time. Extending the active lifespan of garments and reducing acquisition rates can mitigate premature textile waste.

Most clothes are not worn out but they are worn off

-30%

Extending the lifespan of clothing by 9 months could reduce resource use by 30%, generating annual savings of £5 billion [2].

Complementing physical durability is extrinsic durability. **Extrinsic durability** refers to resistance against changes that lead to the devaluation of a product across one or more context-dependent aspects, such as fashion trends or evolving user needs [3–5]. It is understood to play a more substantial role in purchase decisions and, ultimately, in determining whether garment lifespans are shortened or extended, as these decisions are driven by perceived value [5,6].

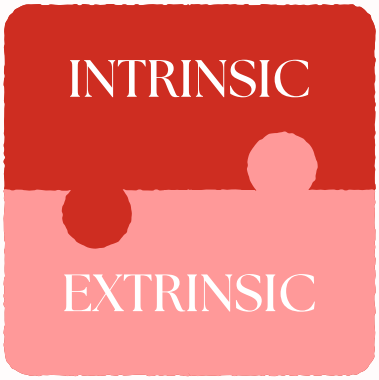
Furthermore, a product's expected lifespan and a consumer's desired lifespan for the same item may diverge. Consumers often expect products to endure longer than the period for which they intend to retain them, as contextual changes can trigger replacement desires, such as technological advancements [7,8]. These changes reshape consumer perceptions of meaning and value in already owned items, thereby weakening product attachment. Accordingly, this research positions extrinsic durability as primarily relevant to practices of use and longevity.

Intrinsic durability sets the potential lifespan.
Extrinsic durability influences the real lifespan.
This gap between technical lifespan and practiced lifespan is one of the key blind spots of current sustainability strategies.

CONTEXT

Extrinsic durability is proposed as a lever of extending use cycles through value creation, with the potential to slow garment turnover and reduce material waste.
Existing tools, such as ISO tests, allow brands to assess physical performance, yet there is no equivalent to understand the symbolic, emotional, social, cultural, or sensory forces that shape user behaviour and retention.
These forces are what the literature identifies as extrinsic durability, which determines perceived value over time. As no established method currently exists for assessing extrinsic durability, the research seeks to address this conceptual and methodological gap to develop business and policy-relevant findings.

Extrinsic durability is envisioned as the 'missing piece' of durability. Our research strives to complement existing assessment models, currently based primarily on intrinsic durability, and to provide operational tools for businesses. Both the ESPR and PEFCR have expressed the value of extrinsic durability, but the challenge of its articulation.



Our extrinsic durability research will also contribute to strengthening regulatory agendas by:

Establishing new standards:
To introduce robust quantitative and qualitative scales of extrinsic durability criteria, providing science-based benchmarks.

Activating diverse regulatory levers:
Operationalisation of the criteria supports eco-design directives, eco-modulation, consumer education initiatives, and labelling schemes, e.g., ESPR, DPP.

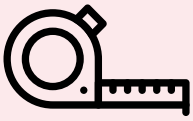
Driving cross-functional integration:
Incorporating extrinsic durability within different departments of the brand eco-system, not only product design, encouraging a harmonised business approach.

AIMS

We aim to reveal and translate scientific insights on extrinsic durability into feasible and scalable operational protocols of sustainable transformation. Our objective is to add value for brands by enhancing performance and for consumers by extending garment use.

FIRST DELIVERABLES:

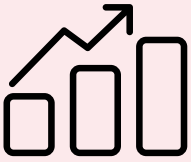
Provide insight on key criteria



Develop measurement scales of extrinsic durability

Identify the interaction between the criteria

Transfer knowledge in an open-source tool



Deliver brand recommendations

Provide new scientific frameworks to policymakers

02 THEORY BUILDING

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Phase 1

1 STATE-OF-THE-ART

Identified multi-dimensional influences on extrinsic durability, through the review of transdisciplinary literature.

227* final publications incl. spanning 1989-2025.

*Screening: Impact on consumer behaviour and relevance to extrinsic factors

2 ANALYTICAL FRAMEWORK

Developed a novel analytical framework of extrinsic durability comprising **10 dimensions of influence** impacting garment consumption.

To inform the theory of extrinsic durability, our goal was to identify and understand the influences on consumer perceptions of and sustainable use of clothing by reviewing existing literature.

3 PRELIMINARY MAPPING

Identified **variables** that constitute the interconnected dimensions of influence, as per the analytical framework.

1

STATE-OF-THE-ART

The research introduced a novel analytical framework comprising ten dimensions of influence on extrinsic durability, which guided a semi-systematic literature review aiming to answer the following:

Q1: Factors contributing to clothing attachment, retention, and the adoption of circular practices.
Q2: Factors weakening garment valuation and consumer practices aimed at prolonging clothing lifespans.

Diversity and Reliability of Sources:

Journals: *Journal of Cleaner Production*, *Journal of Consumer Psychology*, *Foods*, *Brain Sciences*, *Sustainability*, etc.

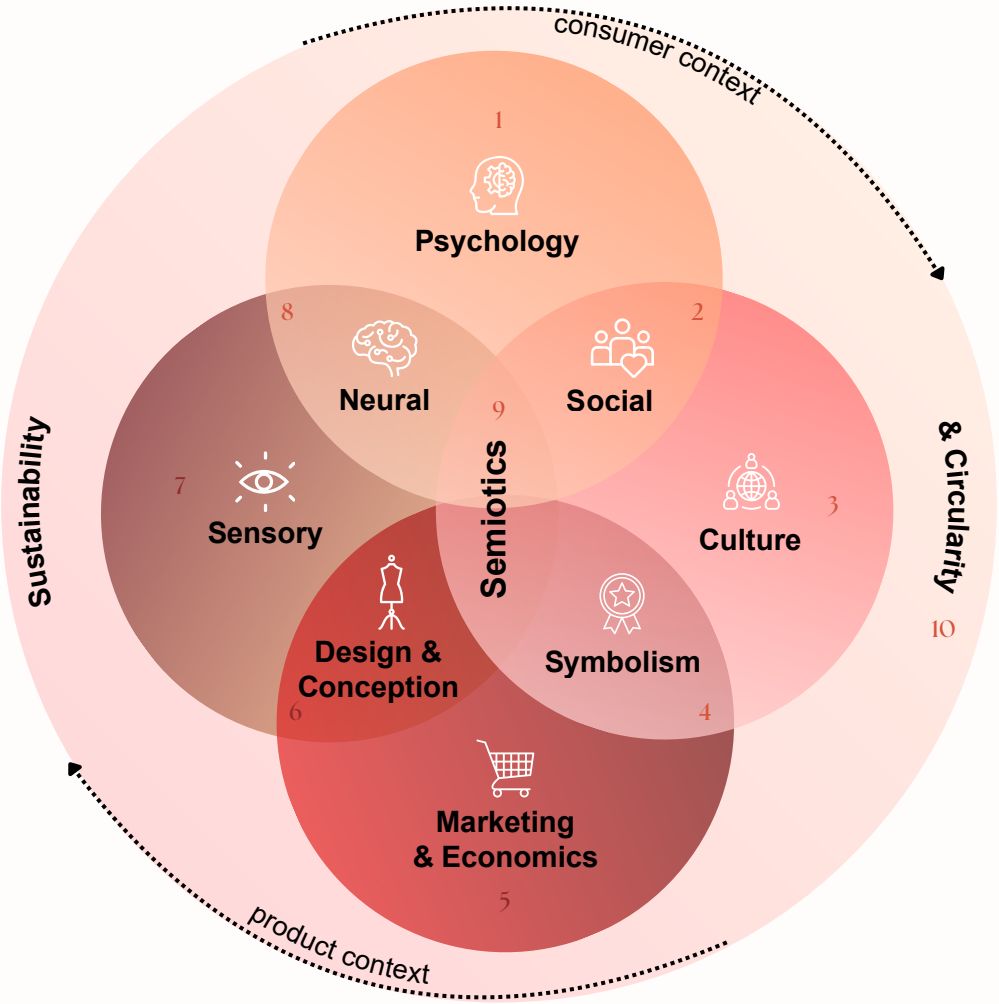
Publication Formats: Journal articles, books, institutional reports, white papers, theses, etc.

Industries: Fashion, textiles, energy, technology, food, luxury, etc.

Scientific Contribution:
Paper under journal consideration

ANALYTICAL FRAMEWORK

A MULTIDIMENSIONAL MODEL OF EXTRINSIC DURABILITY



2

Ten interdependent dimensions shape extrinsic durability, contextualising the immaterial influences that determine whether garments remain desirable, cared for, and used over time. Together, they reveal why physically durable clothes are often discarded before they are worn out, resulting in premature obsolescence.

Each dimension constitutes a set of variables (as per the preliminary mapping). The ten dimensions reveal that durability is not determined only by material quality but by a complex system of meanings, perceptions, habits, and cultural forces.

THE TEN DIMENSIONS

DESCRIPTIONS AND KEY INSIGHTS

1

PSYCHOLOGY

The mind's processes drive behaviours of acquisition, retention, and disposal
This dimension captures how personal needs and perceptions, related to the likes of identity, attachment, familiarity, and emotions, shape the relationship between people and their garments.

2

SOCIAL

How norms, status, and social perception influence the garment's duration of service
Key social drivers include a desire for social acceptance and perceived appropriateness in different contexts. These social pressures can contradict environmental intentions, pushing consumers toward premature replacement to avoid feeling 'out of place.'

3

CULTURE

The cultural codes and shared values that shape desirability and practices
Culture influences how certain garments acquire or lose meaning and how regional, historical, or generational values affect wearability. These factors can reinforce or undermine durability, depending on how practices such as reuse are culturally coded.

4

SYMBOLISM

The meanings assigned to garments beyond their functional purpose
Symbolic value plays a vital role in garment survival. Items with strong symbolic resonance (gifts, identity markers) are kept longer. A loss of this value can occur even when intrinsic durability is high, as physical integrity does not protect against symbolic obsolescence.

5

MARKETING & ECONOMICS

How commercial signals and economic orientations shape perceived value
This dimension includes the influence of brand activities on garment desirability. Economic cues can reinforce or erode value, such that promotional cycles or low price perceptions can signal that a garment is 'replaceable,' reducing its lifespan.

THE TEN DIMENSIONS

DESCRIPTIONS AND KEY INSIGHTS

6 DESIGN & CONCEPTION

Product design's role in driving appeal beyond material qualities
Design choices affect not only function but also extrinsic durability, including aesthetic stability, timelessness vs. trend dependency, comfort, and ease of use. Design weaknesses make garments more vulnerable to symbolic and emotional obsolescence.

7 SENSORY

The multisensory qualities that impact use through perception
This dimension refers to how garments interact with the senses, including tactile qualities, audio feedback of materials, and visual aspects. Sensory stimuli feed consumer associations, such as comfort, which impacts garment appeal.

8 NEURAL

Processing stimuli via response systems, which steer decision-making
Neural mechanisms help explain why consumers often act against their own sustainability values. Habit formation and cognitive load strongly dictate daily wear patterns and care practices, highlighting the importance of ease in action and integration.

9 SEMIOTICS

Independent dimension
How signs, codes, and symbolic systems shape consumer perception and behaviour
Semiotics anchor the meaning of garments through visual codes, style languages, and shared sign systems in fashion.

10 SUSTAINABILITY & CIRCULARITY

Dependent dimension
How sustainability intentions are shaped, or undermined, by real-life contexts
Acts of sustainability and circularity are considered in reference to the other dimensions, thus requiring alignment with these facets of consumer life.

3

PRELIMINARY MAPPING

The application of the analytical framework in the literature review not only validated and expounded the dimensions but also facilitated the identification and extraction of relevant variables pertaining to each dimension to illuminate the matrix of extrinsic durability. From this, a mapping of factors was developed, serving as a reference point for expert validation.

Mapping Breakdown:

19 Concepts: foundational contexts that support each thematic dimension
E.g., Relationship Satisfaction

42 Criteria: recognised channels to achieve the goals of the concepts
- focus of research inquiry and scales
E.g., Emotional Connection

153 Parameters: activating forces that propel the criteria
E.g., Personal Involvement (such as repair practices)

03 EXPERT VALIDATION

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Phase 2

1

WORKING GROUPS

Sharing our findings with experts, aiming to achieve **critical analysis**, **extension**, and **scalability**.

2

DELPHI

Provided independent iterative expert feedback and prioritisation.

2-phase mixed-format questionnaires on Phase 1 findings

Through the Delphi-Régnier*-to-Workshop method we strive to share our findings with experts within the diverse fields revealed in Phase 1, to extend and expand the scope of knowledge.

*A structured method where experts anonymously rate and contribute ideas in several rounds to identify and agree on the most supported options.

3

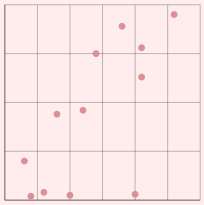
RÉGNIER-TO-WORKSHOP

Provides a collaborative session to discuss and develop the prioritised set of recommendations from the Delphi.

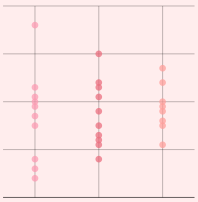
Beginnings of the scales of implementation

DEVELOPMENT PROCESS

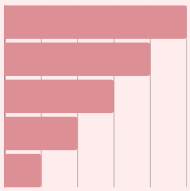
Extracted criteria through theory building



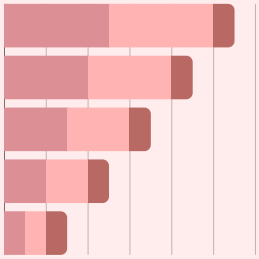
Qualified criteria through iterative questionnaires



Developing initial 5-point scales of each criterion through workshops



Analysing the scales and complementing them with the parameters derived from the theory investigation and consumer insights



Iteration and evolution between researchers, experts and brands

Brand Practice
Accessible to brands of all sizes

WORKING GROUPS

Our study draws on the insights of a carefully selected group of experts, with a blend of theoretical and applied knowledge.
We purposely strived to gather experts from different geographic and cultural contexts to develop highly applicable results.
+30 experts across +15 countries

BEHAVIOUR & PERCEPTION CLUSTER:
Psychology, *Sensory*, and *Neural dimensions*

Main expertise:
- Behavioural Psychology
- Sensory Evaluation
- Semiotics, etc.

Consolidating and validating:
20 Criteria

SOCIO-CULTURAL CLUSTER:
Social, *Culture*, and *Symbolism dimensions*

Main expertise:
- Social Psychology
- Socio-materials
- Anthropology, etc.

Consolidating and validating:
8 Criteria

COMMERCIAL CLUSTER:
Marketing and Economics dimension

Main expertise:
- Marketing
- CSR
- Sustainable Development Advisory, etc.

Consolidating and validating:
4 Criteria

PRODUCT CLUSTER:
Design and Conception dimension

Main expertise:
- Sustainable Design
- Creative and Innovation Strategy
- Circularity, etc.

Consolidating and validating:
10 Criteria

1

2

DELPHI

Provides independent expert feedback and prioritisation.

Why?

Iterative: enables identification of critical concepts and criteria through multiple rounds of inquiry

Remote and anonymous: garners unbiased perspectives through individual participation

How?

2-phase mixed-format questionnaires on Phase 1 findings

Objective: Refinement and Consensus on Priorities

The 1st Questionnaire:

- Identify critical concepts and criteria
- Identify missing variables or emerging ideas

30 out of 31 responses

The 2nd Questionnaire:

- Indicate and elaborate on points of agreement/ disagreement on the revised factors
- Rate the relevance of the factors

26 out of 30 responses

Response analysis informed the workshop →

3

RÉGNIER-TO-WORKSHOP

Facilitates group discussion and development.

Why?

Evaluative: prioritised set of recommendations can be analysed and developed accordingly

Interactive: experts collaborate, sharing convergences and divergences, enabling holistic contributions

How?

Workshops to discuss findings and provide scales of implementation

Objective: Recommendations

- **Ideation:** Levers and rating methods of the criteria guided by factors from the preliminary mapping
- **Best Practice:** How brands can rate and progress in their performance of the criterion
- **Assessment Methods:** Protocols of measuring the criteria
- **Practitioners:** Target profiles within a brand for implementation

Analysis of the first workshops is in progress

03

EXPERT VALIDATION

PRELIMINARY RESULTS & TOOL VISION

REFINING THE CRITERIA & DEVELOPING SCALES

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PRELIMINARY RESULTS

PROCESS OVERVIEW

PHASE 1 → 42 CRITERIA

Theory Building facilitated the identification of criteria of extrinsic durability, revealing multi-dimensional factors that both cultivate and challenge sustainable garment consumption and, by extension, product lifespans.

+

PHASE 2 → + 10 CRITERIA

The ***Expert Validation*** yielded valuable refinements and prioritisation of the criteria. 31 new criteria were suggested in the Delphi 1. 10 criteria demonstrated agreement among participants in the Delphi 2.

= 52 Influential Criteria

12
Consensus on relevance

EXAMPLE: **HAPTIC STIMULI**
Scalar Level Examples:
- Consistent touch after use (connected to intrinsic assessment)

Expert Feedback:
Prompts garment appreciation and can activate routine engagement.

30
Valuable but nuanced

EXAMPLE: **APPROPRIATENESS**
Scalar Level Examples:
- Modular design
- Adaptability to body changes

Expert Feedback:
Alongside the *utility* criterion, identified as key to unlocking wear possibilities.

10
Expert additions

The hierarchy of these recommendations is under review, e.g., they may be scalar levels of existing criteria.
Primarily within the *Commercial* scope.

FIRST RESULTS FOR REVIEW

Evaluate through consumer insights and brand testing

Identify patterns and overcome challenges
- Group criteria with overlapping scales
- Provide knowledge on the criteria that fall short of actionable scales

FURTHER VALIDATION

Iterative reviews and testing

Designate activities and proof indicators that justify the maturity level of each criterion.

OPERATIONALISATION

↓

x Criteria

DELPHI APPROACH

DELPHI ROUNDS

Objectives

1. **Round 1** aimed to assess the initial relevance of the proposed concepts and criteria identified within our literature review, while also providing room to identify any missing elements and gather qualitative feedback on the items.
2. **Round 2** aimed to reassess the relevance of the criteria. The findings from Round 1 were the foundation of this second round, as items, including new criteria propositions from the participants, were reviewed.

Panel Composition

1. We received 30 out of 31 responses from our panel of experts across all 4 clusters.
2. We received 26 out of 30 responses from our panel of experts across all 4 clusters.

Recap of Questionnaire Design

- Likert-scale items
- Checklist
- Open-ended questions
- Ranking questions

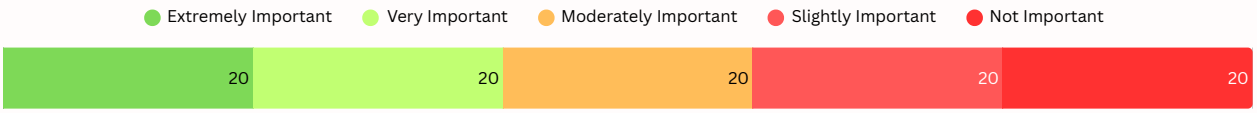
DELPHI DATA ANALYSIS

STRATEGY

Numerical data were analysed to identify relevance as follows:

Evaluating Criteria Relevance -

- **CVI:** Proportion of experts rating an item favourably (i.e., indicating it as important)
- **Median:** Central tendency of ratings
- **IQR:** Measure of consensus among responses
- For ease of interpretation, as per the Delphi-Régnier technique, heatmaps were used as a visual cue of agreement intensity.



While items fell below the conventional CVI threshold, their retention was justified by the binary response format, which captured only high-importance ratings (1 or 2). As such, moderate CVI values still indicated substantive relevance, which was particularly supported by open-ended responses. As such, these criteria were regarded as more contextual than those showing ‘global’ relevance.

Ranking New Criteria Suggested in Delphi 1 -

- **Median:** Central tendency of ratings (less affected by outliers)
- **Average:** Central tendency of ratings (sensitive to outliers)
- Both the median and average were used to comprehensively cross-check and confirm the results.

Open-ended responses were thematically analysed to elaborate on:

- Endorsed items
- Items suggested as missing

DELPHI OUTCOMES

NUMERICAL RESULTS SUMMARY

11 criteria found most relevant to consumer consciousness

ITEM	CVI ≥ 0.78	Median ≥ 4.0	IQR ≤ 1.0	HEATMAP
Self-image	0,80	5,00	1,00	52 28 20
Convenience	0,92	5,00	1,00	54 38 8
Emotional Connection	0,88	5,00	1,00	58 31 7
Emotional Satisfaction	0,96	5,00	1,00	65 31
Visual Stimuli	0,88	4,00	0,75	27 62 11

DELPHI OUTCOMES

NUMERICAL RESULTS SUMMARY

11 criteria found most relevant to consumer consciousness

ITEM	CVI ≥ 0.78	Median ≥ 4.0	IQR ≤ 1.0	HEATMAP
Community	0,85	5,00	1,00	58 27 11
Social Norms	0,85	5,00	1,00	58 27 11
Positive Brand Narrative	0,88	4,00	1,00	35 54 11
Brand	0,81	4,00	0,00	23 58 19
Design Attributes	0,88	4,00	0,75	27 61 8
Utility	0,96	4,00	1,00	46 50

DELPHI OUTCOMES

NUMERICAL RESULTS SUMMARY

8 criteria found most relevant to brand strategy

ITEM	CVI ≥ 0.78	Median ≥ 4.0	IQR ≤ 1.0	HEATMAP
Self-image	0,79	4,00	1,00	29 50 21
Convenience	0,88	4,00	1,00	38 50 12
Emotional Satisfaction	0,88	4,00	1,00	40 48 8
Visual Stimuli	0,80	4,00	1,00	40 40 12 8
Haptic Stimuli	0,80	4,00	1,00	32 48 12
Positive Brand Narrative	0,88	4,50	1,00	50 38 12
Design Attributes	0,92	4,00	1,00	36 56 8
Utility	0,81	4,00	1,00	46 35 15

DELPHI OUTCOMES

OPEN-ENDED RESULTS SUMMARY

Thematic analysis of the qualitative responses revealed several themes and related recommendations of practice for brands and consumers, which will inform further critical analysis and development of the criteria.

Working Group (Cluster)	**Themes**
 **Behaviour & Perception**	• Product Features & Use ◦ Sensory Stimulation • Integrating Emotions & Memories • Convenience

 **Socio-Cultural**	• Communication
	  ◦ Targeted Profiles and Social Norms
	  ◦ New Practices of Consumption
	• Belonging & Community
	  ◦ Feedback
	• Trends

 **Commercial**	• Communicating Value
	  ◦ Brand Value/s
	  ◦ Product Indicators
	• Pricing Presentation

 **Product**	• Connected Storytelling and Information
	• Education
	• Product Qualities
	  ◦ Value Perceptions and Perceptibility
	  ◦ Consumer Use and Care

RÉGNIER-TO-WORKSHOP APPROACH

FIRST ROUND OF WORKSHOPS

Objectives

The workshops aimed to provide a collaborative session to discuss the first prioritised set of recommendations from the Delphi and to begin developing the implementation scales for the criteria towards best practice.

Panel Composition

Our minimum threshold for conducting the workshop was 3 participants per cluster, in recognition of scheduling conflicts and the planned iterative nature of the workshops throughout the research. Thus far, we have hosted up to 7 experts in a single workshop.

Recap of Workshop Design

- Ideate levers of criteria
- Scale development
- Assessment methods
- Practitioner profiles

- **Régnier:**
  - Within the introductory presentation, heatmaps and icons visualising results, i.e., levels of agreement, were included.
- **Workshop:**
  - Moderated free discussion approach.
  - Each expert's contribution carried equal weight.
  - Diverse and minority viewpoints were welcome and valued.

WORKSHOP DATA ANALYSIS

STRATEGY *IN PROGRESS*

Criteria Operationalisation & Brand Scales of Implementation:

Developed on a collaborative digital board in a table format.

The language is edited for coherence, and content is analysed, such that scale levels are connected, similar notions are combined, and themes are noted across the clusters. This first level of ideation is to be followed by researcher evaluation and input, including *Theory Building* variables, as well as consumer insights.

Open Discussion:

Discussions and responses are coded to identify common themes and rationales that could not be captured in the collaboration board, as facilitated by the transcriptions.

WORKSHOP OUTCOMES

SUMMARY OF CRITERIA DISCUSSED

Working Group (Cluster)	**Criteria**
 **Behaviour & Perception**	• Self-image • Emotional Connection • Emotional Satisfaction • Visual Stimuli • Haptic Stimuli
 **Socio-Cultural**	• Demographics • Social Norms • Community • Trends
 **Commercial**	• Positive Brand Narrative • Price • Perceived Economic Value • Brand
 **Product**	• Design Attributes • Craftsmanship • Perceived Durability • Appropriateness

WORKSHOP OUTCOMES

EXAMPLE OF SCALE IDEATION (FIRST-LEVEL)

Criterion: PRICE	
Scale	**Example of an Action Per Level of the Scale** (multiple actions are being developed per level, to ensure accessibility and probe feasibility)
5 (high)	**Translation and education** • Price linked to construction time, craftsmanship, and social or environmental investments, with transparent cost breakdown and accompanied customer education
4	**Price decomposition** • Transparent breakdown of costs
3	**Relating labour to price** • Price tied to human effort, craftsmanship, or fair wages
2	**Price positioned above commodity** • Price signals differentiation, quality, or prestige
1 (low)	**Unsubstantiated claims related to price** • Brand avoids discussing price

Reminder:
Dimensions of framework → Criteria per dimension → Scales of each criterion = **Different levels of maturity**

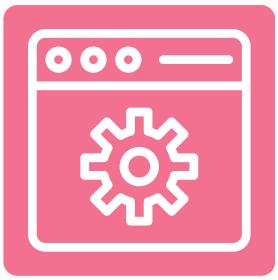
TOOL VISION

GATHERING THE CRITERIA INTO AN ACCESSIBLE TOOL

Through practice and a continuous improvement approach, multiple versions of a tool are envisioned. This iterative practice increases the user base, offering new experiences and perspectives.

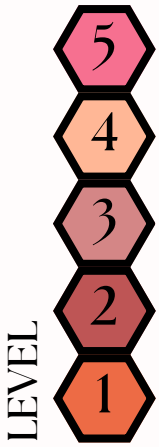
OPEN SOURCE DIGITAL/ IT TOOL

INCLUDING ALL CRITERIA



INFO ON CRITERIA AND SCALES OF IMPLEMENTATION FOR BRANDS

SELF-ASSESSMENT → SCORE



GUIDELINE OF IMPROVEMENT FOR THE BRAND AND ITS PRODUCTS

COMPLEMENT INTRINSIC EFFORTS

A 5-point scale is envisioned per criterion, where 5 represents the most effective actions, and 1 represents weak actions of achieving extrinsic durability via the criterion.

This scale aims to highlight strengths, identify gaps, and offer guidance for improvement, functioning as both an assessment tool and a roadmap for action. Background support and explanations from the research activities, e.g., outcomes of piloting with brands, will also be included to elaborate on operationalisation and predicted outcomes.

04 LOOKING FORWARD

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LOOKING FORWARD

CONSUMER STUDIES

INVESTIGATING CONSUMER-FACING FACTORS OF INFLUENCE

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CONSUMER STUDIES

ESTABLISHING VALUE ASSIGNMENT, ASSESSMENT, AND OUTCOMES

Via a two-part consumer study, we will investigate the extrinsic criteria relevant to consumer practice throughout the garment's lifecycle, and the resultant impact on garment retention and turnover.

Online Surveys

Quantitative findings

Extrinsic Probes:

- Clothing interests and wardrobe composition
- Acquisition vs. disposal
- Many wears vs. little or no wears

x4 European Countries

1,000 respondents

1,000 respondents

1,000 respondents

1,000 respondents

Balanced Target Profiles: Genders, age, socio-economic background, urban/rural area

CONSUMER STUDIES

WARDROBE STUDY METHOD

Wardrobe studies involve going into people's homes to analyse their wardrobes, including photos and clothing inventories. They are interviewed on their choices, practices, and experiences.

Wardrobe Studies

Qualitative findings

Extrinsic Probes:

- Wardrobe composition
- Acquisition vs. disposal
- Time of ownership vs. frequency of use
- Extrinsic motivations or failures

x4 European Countries

4-6 respondents

4-6 respondents

4-6 respondents

4-6 respondents

Balanced Target Profiles: Genders, age, socio-economic background, urban/rural area

04

LOOKING FORWARD

BRAND PARTICIPATION

CO-CREATION WITH PRACTITIONERS TO IMPROVE OPERATIONALISATION

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BRAND PARTICIPATION

CROSS-FUNCTIONAL COLLABORATION

We are inviting brands to co-interpret and test scales in real-world contexts through practitioner lenses, using iterative feedback loops to develop greater refinement of the criteria scales. This allows the end facilitator to provide feedback on the strengths and challenges of the scales whilst in development, leading to a context-sensitive tool designed for brand operationalisation.

Leverage the Insights

Extrinsic durability offers brands practical insights to strengthen their strategies by clarifying why garments are kept or discarded. The research strives to identify the drivers behind repeated wear, highlight where symbolic or sensory value begins to decline, and reveal why consumers often do not repair or resell garments even when they are technically durable. These insights enable brands to design more relevant products, improve circular engagement, and make more informed portfolio choices.

Projected Outcome:

Brands can...

Assess the **projected consumer-facing value** of what they put into the market.

Gain knowledge on the **after-sales experience** and vulnerable garment lifecycle points.

Target and enhance brand **engagement** and **consumer retention**.

Uncover **new service** opportunities.

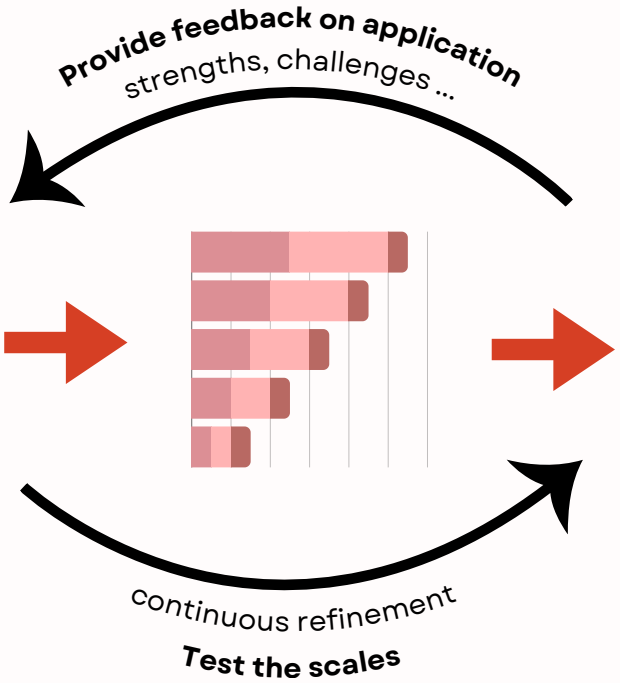
Diverse means of incorporation:

- Through the 10 dimensions of the extrinsic durability framework, brands can approach durability from multiple lenses.
- The criteria embody a full view of the brand to promote comprehensive integration from design to retail and beyond for the use phase and end of life.

ENGAGEMENT

TARGET PROFILES

Departments whose expertise aligns with the interpretive and applied dimensions of the scales, as identified by the researchers and consortium of experts.
Scales of implementation span departments and touchpoints to enable holistic transformation.



Brand Practice

Including the following departments:
Creative & Product Development
Brand Marketing
Communications
Sales & Customer Service
CSR & Sustainability

Procedure
Progressive guided collaboration involving:

- Scale walkthroughs
- Contextual probes
- Use-cases, etc.

Resource Investment

- Time and collaboration with the brand departments
- No financial commitment requested

04

LOOKING FORWARD

CONCLUSION

SUMMARY & OUTLOOK

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CONTRIBUTIONS

REVEALING NEW COMPETITIVE ADVANTAGES BEYOND COMPLIANCE

Fashion's sustainability challenge is not only technical, but it is fundamentally human. This report demonstrates that garments infrequently reach the end of their physical life, but more often the end of their perceived life. The likes of meaning, symbolism, identity alignment, comfort, cultural relevance, and social norms quietly determine whether clothes remain in use, are cared for, repaired, or prematurely abandoned.

By consolidating 227 academic sources across disciplines, the research reveals that extrinsic durability is not an abstract idea but a system of determinants that shape real garment lifespans. The model of 10 dimensions organises these immaterial forces, making them visible and laying the foundation for operationalisation. This research offers the fashion industry a new lens: one that complements material durability towards holistic longevity.

For brands and institutions, this shift opens new possibilities. Extrinsic durability provides a way to identify where value loss begins, why circular practices often underperform, and how certain garments remain favourites for years while others deteriorate symbolically within weeks. It can equip decision-makers with clearer signals for design briefs, portfolio planning, assessment frameworks, communication strategies, and circular business model optimisation.

OUTLOOK

FROM RAPID OBSOLESCENCE TO LONG-TERM VALUE

The research provides a shared language for an area long overlooked. It bridges academic knowledge with industry practice and establishes the foundations for new assessment tools in strategic and operational decisions. As regulation evolves and circularity becomes a structural requirement, understanding these determinants is no longer optional – it is essential.

Extrinsic durability invites the sector to move beyond a linear paradigm where physical integrity defines value. It encourages brands to design and communicate for long-term relevance, to foster stronger consumer–product relationships, and to create conditions in which garments can fulfil their true usable life. By embracing this multidimensional view of longevity, the industry can shift from rapid obsolescence to long-term value, aligning creative ambition, economic sustainability, and ecological responsibility.

Extrinsic Durability Matters

Emotional attachment, symbolic meaning, fit, sensory appeal, identity, cultural value, etc., impact realised longevity beyond the predictions of material strength.

Designing for intrinsic durability without addressing extrinsic factors can contribute to rebound effects, underuse, and premature obsolescence.

Circular practices (repair, resale, rental, upcycle) succeed when they align with subjective and context-sensitive motivators embodied by extrinsic durability.

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B.O.N.D Standards

Extrinsic Durability
Stakeholder Report

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March 2026