

# Chloé

## **Key Learnings Chloé Vertical Project**

**How Chloé Vertical is  
transforming our sourcing methods  
and our client relationships**

---

**2023**



# Introduction

---

In 2020 Chloé embarked on a transformational journey towards a purpose-driven model, with a goal to create beautiful products with meaningful impact for people and for the planet. Today, this ambition drives us in everything we do, extending to every level and every individual within our sourcing and supply chain, our activities and our communities.

The Chloe Vertical pilot project reflects our long-term commitment to improving our social and environmental impact through our everyday actions. It is a pilot project of our best practices, tracing our Vertical products from farm to finished product and delivering this information to customers, thanks to an innovative product Digital ID experience.

Starting with a blank page in January 2022, Chloé Vertical is a transformative and innovative project that challenged our business operations and mindsets.

This document addresses the key learnings gained and the challenges faced throughout the Chloé Vertical pilot project.

We are proud to share our 14-months of research with our peers. By doing so, we hope to witness and inspire transformative change in the industry.

We invite all brands who wish to embark on this adventure with us to contact us on [sustainability@chloe.com](mailto:sustainability@chloe.com).



**“The launch of Chloé Vertical is a testament to the meaningful progress that can be made towards developing a fully transparent and circular business model when there is collaboration across the industry.”**

**— Riccardo Bellini, President and CEO of Chloé**

# Introduction

---

An industry first, the Chloé Vertical pilot project will play a key role in accelerating Chloé's business model transformation and the changes needed in the fashion industry towards greater transparency, accountability and circularity.

## Why trace our materials from the field ?

- Our environmental report demonstrated that raw materials were a major contributor to Chloé's carbon footprint (58% of emissions in 2021).
- The main impact of raw materials on climate change and biodiversity can be traced back to the very start of the supply chain: agricultural operations in the field\*.
- Full traceability allows us to better direct our choices in favour of more responsible farming practices and improved working conditions.

## Why a Digital ID ?

- As part of our commitment to the Sustainable Markets Initiative project initiated by his Majesty King Charles III, developing this technology is aligned with the Maison's ambitious sustainability agenda for the future.
- This technology provides traceability throughout the entire product lifecycle - empowering customers to make informed purchasing decisions, offering care and repair instructions and direct resale options, thus extending the lifespan of our products.

\*Source: [the Science Based Target guidance / Apparel and footwear sector](https://sciencebasedtargets.org) (sciencebasedtargets.org)



# Project scope

---

## **Project ambition**

The Chloé Vertical pilot project is just beginning.

By 2024, Chloé has committed to:

- Roll out Digital ID on all Ready-to-wear and Shoes.
- Achieve at least 5% of its sourcing with fully traceable raw materials from the field on Ready-to-wear and Leather Goods.

## **Pilot objectives**

- Use 100% vertical materials (fully traceable and lower impact, see definition p.21)
- Equip all vertical products with a Digital ID

## **Pilot launch**

Summer 23 collection

April 2023 in store

## **Pilot collection offer**

- 3 main product categories: Ready-to-wear, Leather Goods and Shoes
- 4 materials: linen, wool, silk and leather
- 15 references
- 3 181 pieces in production



**“Implementing pilot projects like Chloé Vertical project – with ambitious, innovative and demanding goals – is key to achieving our long-term vision and prepare for the future. Chloé Vertical leads to new cross-functional projects that are already integrated in our sustainability roadmap.”**

— *Aude Vergne*,  
Chief Sustainability Officer, Chloé

# Learnings

---

Over a 14-months period, we worked continuously to improve our processes through research, sourcing and knowledge sharing. We learned a great deal piloting the Chloé Vertical project and wish to share the 7 key learnings that made this project possible:

- 1 -

**Multi-stakeholders  
collaboration drives  
innovation**

- 2 -

**Everything starts  
with Design**

- 3 -

**Take a deep dive  
into sourcing**

- 4 -

**Go beyond compliance  
with environmental and  
social measurement**

- 5 -

**Enhance and  
redefine the client  
experience**

- 6 -

**Technology brings  
the project to life**

- 7 -

**Cross-department  
collaboration is essential  
for successful outcome**

Alongside these learnings, the project also presented several challenges and obstacles that we will share in the following pages.



## Multi-stakeholders collaboration drives innovation

---

- Chloé's trusted and committed suppliers and manufacturers were involved in every step of the project and allowed the Maison to trace the entire production line from farm to finished product. Collaboration with the supply chain is key, including face to face interactions with farmers for example.
- The ambition of such a project required collaboration with industry-wide partners, peers and stakeholders, such as Vestiaire Collective, EON, Trust-Place, Neyret and Temera to achieve a successful outcome.
- Chloe launched the Digital ID project with the support of the Sustainable Market Initiative, and its SMI Fashion Task Force. The members of this taskforce created opportunity to share insights, innovate and accelerate the project's deployment. Taskforce members included:
  - Brands: sharing best practices
  - Resellers: building innovative partnership
  - Tech companies: supporting the launch of the Digital ID protocol

---

### Challenge

Complexity is inherent to multi-stakeholder collaborations, both in terms of alignment (finding common goals between multiple members with varying cultures, roles and interests) and in terms of expectations.



**Laurence Quenel**, farmer and member of Terre de Lin in Normandy, France

“The fashion industry is an incredibly creative and economically powerful world, but if it is to survive and indeed thrive in the future it has to use technology to put sustainability at the very heart of its operating models. It is what consumers are demanding and it is what the planet desperately needs”

— *Federico Marchetti*,  
Chair of the Fashion task force and founder of  
the Yoox Net-à-Porter Group

## Everything starts with design

---

- Chloé's Creative Director, Gabriela Hearst, is a powerful advocate for responsible sourcing. She embraced the Vertical project from the very beginning, integrating it in the heart of her design brief and ensuring its successful income.
- An eco-design brief established best practices and guided the design process:
  - Selecting *lower impact* materials (cf. Chloé guidelines for sourcing)
  - Enhancing product recyclability (e.g. mono-composition materials)
  - Encouraging product longevity (e.g. timeless designs & exigent quality requirements)
  - Minimizing waste (e.g. greater tolerances on leather quality)



**“We belong to nature, it doesn’t belong to us”**

— Gabriela Hearst,  
Creative Director of Chloé

## Everything starts with design

---

- 4 materials fundamental to Chloé business were selected, in order to address traceability and environmental impact with a potential to scale.
  1. Silk: The iconic material for our Ready-to-wear
  2. Linen: Ever increasing in our product mix, under Gabriela Hearst's initiative
  3. Wool: A key material for Ready-to-wear, that was important to tackle due to its environmental impact
  4. Leather: The main material of our Leather Goods and Shoes businesses
- Representation of products from all our main product categories (Ready-to-wear, Leather Goods and Shoes) helped increase the impact of this project by allowing us to build a full wardrobe of vertical products. It also gave us potential to substantially scale the project in the future.

---

### Challenges

- Some traceable materials are more costly than comparable standard materials currently sourced by Chloé.
- Traceability must extend to all the product's components, beyond the main material, to include lining, trims and hardware.





## Take a deep dive into sourcing

Collaboration from our suppliers was key to move forward:  
Over a hundred hours of interviews and a dozen on-site visits with new and existing partners were necessary to help disclose each step of their sourcing. It allowed us to trace the entire supply chain for each material and select the shortest circuits.

### The example of linen

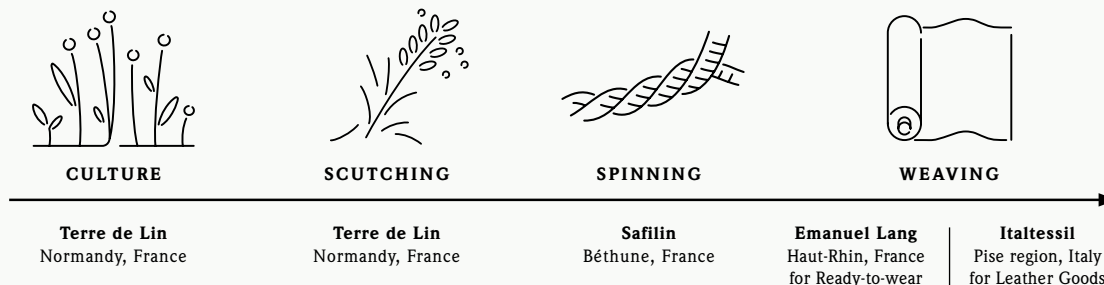
72% of linen fiber production is of European origin, with France being the global leader\*. However, due to a lack of industrial capacities, approximately 80% of its production is sent in China for processing\*.

Our Chloé Vertical project hopes to reverse this trend, building a shorter linen supply chain closer to home.

Our partners include:

- Terre de Lin, one of the largest linen cooperatives in Normandy, where linen is grown using partially lower impact cultivation methods, to select our linen fibers.
- Safilin, a major European spinner, that recently relocated a spinning mill to France. The Vertical project represented one of the mill's first orders since opening.
- Emanuel Lang and Italtessil, weaving mills located in France and Italy, both for Ready-to-wear and bags

The linen we sourced for our Vertical project is guaranteed 100% French to the thread and 100% European to the woven and dyed fabric.



“Terre de Lin is proud to have built a short supply chain in partnership with European yarn suppliers and textile mills, where the environmental impacts of the product can be measured at each step of the production process.”

— Anne Nizery,  
Coopérative Terre de Lin

\*Source: CELC Result of the linen fiber study, March 31<sup>st</sup> 2023

## Take a deep dive into sourcing

Once each of the 4 materials' supply chain was identified & selected, we proceeded to measure their environmental impact through a full Life Cycle Assessment (LCA) with critical review done by external independent experts. This was essential to both monitor and improve our practices.

Our Chloé Vertical LCA was carried out:

- from field to thread/yarn for our wool, linen and silk,
- from breeding to tanning in the case of our leather.

The LCA\* carried out with the support of Richemont's Research and Innovation team, highlighted the significant improvements made through our material selection, particularly with regards to climate change impacts:

Vertical materials	Impact on climate change (unit: kgCO <sub>2</sub> eq. /kg):	Good practices limiting the impact on climate change	Challenges
<b>Linen</b> French sourcing, with 2 spinning processes: Dry & Wet	2 for dry spinning 5 for wet spinning	1. No irrigation 2. Low fertilization inputs	The increasing share of linen in our product mix helps reduce our dependency on cotton, however it cannot be used as a substitute for all products
<b>Wool</b> From an Uruguayan breeding	22	1. Uruguay produces 100% hydraulic energy 2. Sheep are reared in a natural environment 3. Wool is certified organic	Uruguayan wool has a lower environmental footprint than Australian wool (68% of fine wool production**)
<b>Silk</b> From China cocoons farms	34	1. No irrigation 2. Low fertilization inputs 3. GOTS certified	There is no European silk production so all silk is sourced from Asia
<b>Leather</b> From French bovine breeding	80	1. Animal feed with a lower environment impact 2. Reduced greenhouse gas emissions during breeding 3. Reduced water and energy consumption at tanning phase	Along the supply chain, it is breeding that has the highest impact on climate change. We need to continue our research on breeding best practices and certifications

### Challenges

- Materials that are 100% *fully traceable* from the field are hard to come by. Suppliers demonstrate widely different levels of maturity when it comes to their engagement on traceability and transparency. However, under increasing pressure from brands pushing for greater transparency, the industry is evolving to meet this growing demand.
- Deep diving into an environmental LCA must be anticipated since it's time consuming and costly.

\*LCA carried out by external consultants EVEA between July and December 2022

\*\*The Woolmark company



**“Traceability covers two issues: that of the consumer who wishes to have information on animal welfare by ensuring that the breeding and slaughter have been done in good conditions and that of professionals who, in addition to this information, want to improve the quality of the skins.”**

— Jean Christophe Muller,  
Managing Director of Haas  
Tanneries

## Go beyond compliance with environmental and social measurement

---

Chloé takes full accountability for the impact we have on all stakeholders along the value chain.

- Chloé carries out on-site visits and supply chain audits according to SMETA standards & the Richemont Supplier Code of Conduct.
- Further, our raw material and finished product suppliers involved in the Chloé Vertical Project were required to comply with the Chloé Social Profit & Loss approach, developed by Chloé to measure positive social impacts throughout our value chain. The project required a total of 15 SP&L to be carried out.
- LCA allowed us to monitor and measure our materials' environmental impacts
- Chloé collected all transactional documents between our partners from the farm to our warehouses, as a necessary step to secure and justify end-to-end traceability.

The Vertical project allowed us to test our SP&L approach and measure positive social impact all along the value chain, alongside environmental performances.

---

### Challenge

The current lack of industry certifications and standards required us to define and apply our own guidelines to select the best sourcing partners.



“The SP&L approach is complementary to social auditing in that it helps measuring, evaluating and visualizing positive social practices, and go beyond legal requirements. Mobilizing the SP&L within the Vertical Capsule Collection was a crucial factor in verifying not only our supplier's decent practices but also in ensuring that products that are traceable are also made in working conditions that are beneficial to workers.”

— *Mathilde Asseman*,  
Social Impact (SP&L) Project Manager at Chloé &  
PhD candidate Institut Français de la Mode/CNAM

## Enhance & redefine the client experience

---

Product traceability and supply chain transparency are becoming increasingly important factors in the client experience, guiding and empowering our clients to make informed purchase decisions.

Through the Digital ID tool, we provide our clients with full transparency... and more.

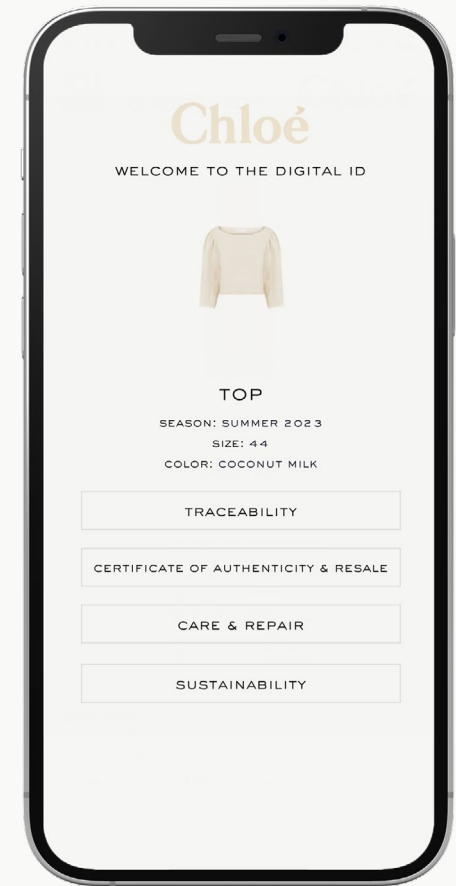
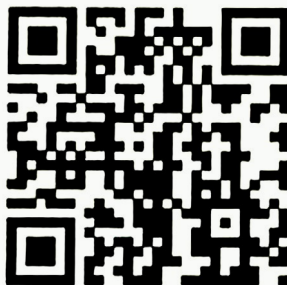
### Traceability

By scanning the unique Digital ID embedded in each product (QR codes or NFC chips), customers are directed to a site providing details on the entire manufacturing process from farm to finished product, as well as instructions and advice for product care and repair.

The technology can be used by our stylists as a tool to enhance the client experience in our boutiques, and to communicate Chloé's sustainability projects and actions throughout the client journey.

These innovative features mark a key milestone for the Chloé client experience, inducing greater trust and confidence in our products.

SCAN IT TO SEE  
THE CUSTOMER EXPERIENCE



## Enhance & redefine the client experience

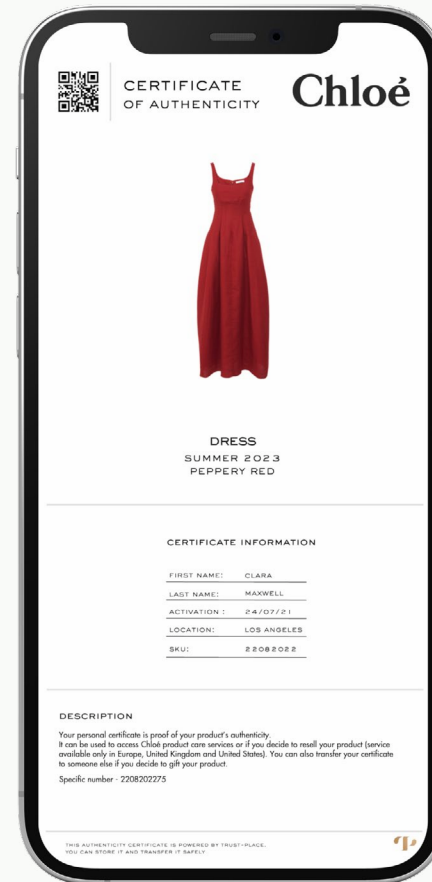
---

### Authenticity

The Digital ID also provides a product certificate of authenticity, which comes with a unique ownership number. This service secures the client in their purchase and facilitates the second life resale of their item.

The certificate of authenticity will help combat counterfeits and will facilitate after-sales services such as care, repair and resale.

Customers can have access to their certificate of authenticity as well as exclusive services into their dedicated and secured Chloé Digital wallet, in their customer account of Chloé website.



## Enhance & redefine the client experience

---

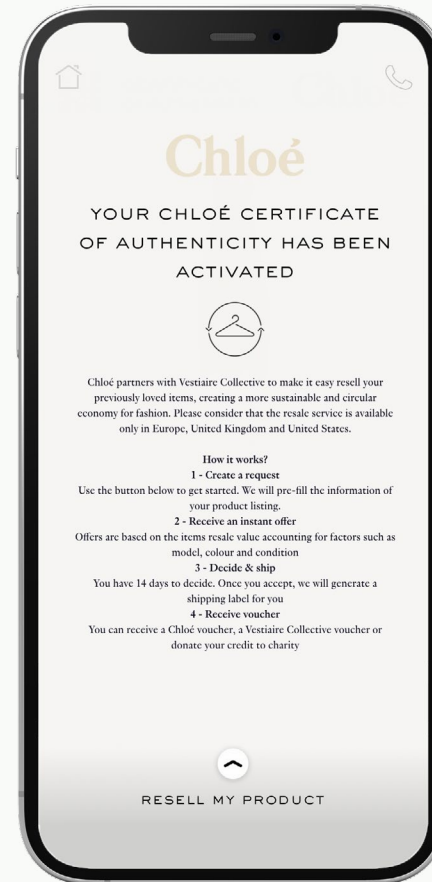
### Circularity

With the objective of extending the lifespan of our products, we have developed a Digital ID that allows customers to instantly resell their pre-owned Chloé item through Vestiaire Collective.

Customers are able to sell their pre-owned Chloé items via a co-branded platform powered by Vestiaire Collective, from the launch of Chloé Vertical. They can choose from three exchange options:

1. A Vestiaire Collective gift card, that can be used to purchase any item on the platform, demonstrating Chloé's support of the second-hand market.
2. A Chloé gift card that can be redeemed in Chloé boutiques or online on Chloé.com.
3. A donation to UNICEF's gender equality programmes, allowing our clients to directly and concretely contribute to our partnership.

Through this first initiative in second-hand resale, Chloé Vertical encourages circularity and provides clients with the information they need to consume more consciously.





## Technology brings the project to life

---

The nature of such a project requires collaboration with leading experts in the technology field, to leverage data collection and automatisisation. This technology and data are essential to deliver supply chain transparency to our customers.



**“More than ever, I’m convinced that combining different technologies and partners can make a big difference, especially when teamwork is at its best. Bringing the best possible client experience is doable by mixing tech teams expertise and high standards. Technology unleashes the Maison vision as well of transparency and circularity.”**

*— Morgan Colin, Chief Information Officer*

## Technology brings the project to life

---

1. The unique Digital ID is powered by EON technology platform, tailored to Chloé and available for all product types.
2. The Digital ID can be accessed thanks to 2 innovative technologies:
  - Serialized QR Codes: a unique ID is woven on labels that are easily stitched next to composition labels to Ready-to-wear and bags, in collaboration with Neyret.
  - NFC Chips: inserted into smaller products that don't have labels, like in the reinforcement of Shoes, in collaboration with Temera.

The Vertical project allowed us to test these 2 technologies and evaluate their costs, advantages and challenges with a view to be rapidly deployed and scaled up.
3. The Digital ID extends the lifecycle and value of Chloé products thanks to the instant resale option.  
In partnership with leading online marketplace for pre-loved luxury, Vestiaire Collective, the Digital ID allows the customer easy access to their product certificate of authenticity which are directly linked to resale platforms in Europe, the UK and in the US.
4. The Digital ID guarantees product authenticity thanks to a unique ownership number.  
In partnership with Trust-place, this unique number is integrated to the client's digital wallet once the purchase has been made, and marks the clients digital ownership of the product.



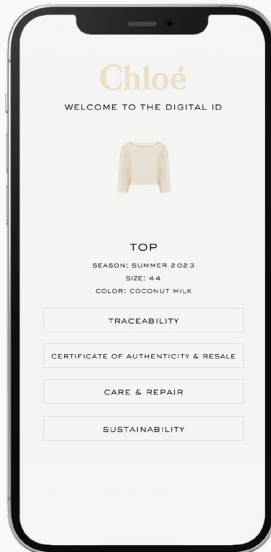
---

### Challenge

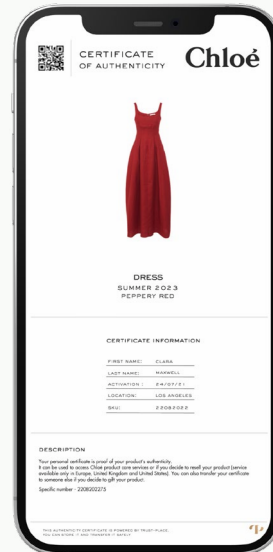
The cost of integrating a Digital ID to the product impacts the final product cost and/or margin.

## Technology brings the project to life

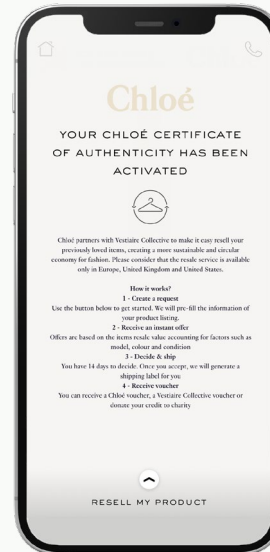
**Digital ID**  
developed with EON



**Ownership certificate**  
developed with Trust-Place



**Resell option**  
developed with Vestiaire Collective



**“Companies must collaborate to envision traceability across the entire product lifecycle, to reduce impacts and to enhance circularity, while allowing the essential transparent substantiation of their progress in this transition of the industry.”**

— *Josephine Riemens*,  
PHD candidate researching on traceability implementation towards sustainable value chains at the Fédération de la Haute Couture et de la Mode (FHCM) - IFM-KERING Sustainability Research Chair/ENSAM

### Challenge

Coordinating the technological synergies between the different partners and adapting them to our Chloé internal processes.

## Cross-department collaboration is essential for successful outcome

---

- The project was a strategic priority sponsored by the CEO and our executive committee members. Recurrent executive meetings informed management on the progress of the project and allowed decisions to be taken as and when needed.
- While initiated by the Sustainability team, the success of the project depended on employees across multiple departments, working collaboratively to support and coordinate the project.

Each department required a designated project leader to act as spokesperson and decision maker to ensure the advancement of the project.

Step-by-step on-boarding and involvement from all departments:

- Product, production and supply teams in each category on collection planning, development and data management
- Sourcing teams on anticipating traceable supply chains from the field
- Design teams on eco-design principles
- I.T & Digital support teams on developing the Digital ID protocol
- Communication teams on the Digital ID graphic charter and wording

“Vertical project confirms the need for cross-functional positions within fashion and luxury organizations: we had to combine compliance, environmental and social claims and traceability, and be innovative in the way we piloted the whole project. Although the difficult know-hows are often siloted in current organizations, new regulations and customer needs pushes us to streamline internal collaboration and make data flow seamless.”

— *Christophe Bocquet*,  
Director, Quality, Compliance, Customer service  
and Corporate Social Responsibility

---

### Challenge

The test-and-learn nature of the project lead to a considerable amount of additional workload and manual (non-automated) steps to complete the Digital ID experience for Summer 23.

The relatively small scale of the pilot capsule meant that this was possible. However, for deployment at scale, developments need to be made for data automatization, across all departments with a formal supply chain processes.

# What's next

---

The Chloe Vertical pilot project marks a key milestone in our journey towards greater transparency.

The implementation of Digital IDs in our pilot project has enabled us to prepare to scale the technology on all Ready-to-wear on Winter 23 collection for example. We are now working on the road map of product integration to achieve at least 90% of lower impact materials sourced by 2025.

The Chloé Vertical project allowed us to understand how to better source vertical materials. The 4 materials selected in the pilot project served as an inspiring base for us to build our sustainability objectives upon:

- Defining clear KPIs by category to reach 5% Vertical materials by 2024
- Working on the topic of leather, to define a traceability maturity chart of tanneries
- Working on verticalizing our permanent (carry-over) materials, across all categories

The project will intrinsically evolve over time as new regulation, standards and certifications on traceability emerge:

- France recently enacted the loi AGEC, anti-waste legislation for a circular economy: since February 1st 2023, all textile goods, household linen and footwear products marketed in France is subjected to mandatory labelling, disclosing country of weaving, finishing and production.
- The European Commission Digital Product Passport to be launched in 2025, aims to provide consumers with transparency information on the origin, environmental impact, and safety of products.



We hope that by sharing our experience and learnings with our peers, we can contribute to transforming our industry for the better.

# Industry lexicon

---

## **Digital ID**

A digital passport for individual products which includes information on its origins, supply chain history, sustainability of its production, authenticity, services and brand, all made available to customers through scanning a QR code of NFC chip on the product.

## **Leather Working Group (LWG)**

A global multi-stakeholder community committed to building a sustainable future with responsible leather. They are a not-for-profit that drives best practices and positive social and environmental change for responsible leather production.

## **Sustainable Market Initiative (SMI)**

The SMI is a CEO-lead global forum that aims to accelerate the world's transition to a sustainable future by engaging and challenging public, private and philanthropic sectors to bring economic value in harmony with social and environmental sustainability.

Founded in 2020 by His Majesty King Charles III when he was The Prince of Wales.

## **Members of the SMI Fashion Task Force:**

Aura Blockchain Consortium, Brunello Cucinelli, Burberry, Chloé, Emaar Properties - Noon.com, EON, Gabriela Hearst, Giorgio Armani, Johnstons Of Elgin, Moda Operandi, Mulberry, Puig, Selfridges, Stella McCartney, Vestiaire Collective and Zalando.

## **Entreprise du Patrimoine Vivant (EPV) or 'Living Heritage Company' label**

The "living heritage company" (EPV) label was created in 2005. It can be awarded to any company that owns economic assets, in particular composed of a rare, renowned or ancestral know-how, based on the mastery of traditional or high-tech techniques.

## **Life Cycle Assessment (LCA)**

Act of measuring the environmental impact of a product or service throughout its life cycle, from the resources used to create the product or service, across its use by the user, to its final end of life destination.

In the case of Chloe Vertical, life cycle analyses have been made from field to thread for wool, linen and silk, and from breeding to tanning for leather.

## **Critical review**

A process to verify whether an LCA has met the requirements of the methodology, data, interpretation and communication, and whether it is consistent with the methodology principles as indicated in the ISO standards.



# Chloé lexicon

---

## The traceability at Chloé

Traceability is the ability to trace the history, application or location of a material all along its life cycle. Acquiring full traceability of our supply chain, from field to finished product, is an ongoing and challenging process. Chloé publishes a [list](#) of our suppliers (non-exhaustive) for all Chloé categories on Chloé.com that is updated yearly.

A *fully traceable* raw material has a full known supply chain which is auditable, verifiable and constant during the production of an article. For each step of the supply chain, we require the names, addresses and precise regions (province, county, country) of the suppliers involved, including those of subcontractors.

A Ready-to-wear or Leather Goods product is considered *fully traceable* if its main material (i.e. above 80% of the product weight) is made from a *fully traceable* raw materials.

## Vertical

To qualify as vertical, a product or material must be considered *lower impact* and *fully traceable*.

For Chloé, vertical means being fully transparent with regards to our supply chain throughout the entire product life cycle: from the soil that nourishes the crops, to finished products that reach our boutiques.

Verticality implies the capacity to make continuous improvements along our supply chain, both environmentally and socially.

### Notes:

- The finishing step on a product (e.g. embroidery or washing) must occur in the country where the product is manufactured.
- A list of what we consider to be lower impact materials is available on chloé.com

## Social Profit & Loss (SP&L) approach

Business management tool, initiated by Chloé, which aims to integrate positive social impacts into performance reporting and accounting, alongside environmental and financial performance criteria. The tool accounts for a company's positive social impacts all throughout its value chain and product life-cycles.

# Bibliography & links

---

## Bibliography

Paris Good Fashion / Le lin

<https://parisgoodfashion.fr/fr/news/le-lin-fer-de-lance-dune-filiere-textile-francaise-ecologique-142/>

The Science Based Target guidance / Apparel and footwear sector

[https://sciencebasedtargets.org/resources/legacy/2019/06/GBT\\_App\\_Guide\\_final\\_0718.pdf](https://sciencebasedtargets.org/resources/legacy/2019/06/GBT_App_Guide_final_0718.pdf)

The case for native Digital Product Passport tokenization

<https://web-assets.bcg.com/53/c7/10edee1242d5a328e954a02a04cd/bcgxarianee-digital-product-passport.pdf>

La face cachée des étiquettes / Eloïse Moigno & Thomas Ebélé

Mode responsable - Guide pratique / Morgane Leprince &

Fanny Enjolras-Galitzine

## Inspiration projects

IFM / Le Paris de la circularité

<https://www.youtube.com/watch?v=5qbuh6FeRKY>

Christy Dawn brand / Farm to closet

[Farm-to-Closet – Christy Dawn](#)

1083 / l'histoire

[L'histoire – 1083](#)

Patagonia / le coton biologique

[Coton biologique - Patagonia](#)

**Chloé**