Leather-Design-Guidelines for Sustainable Development **Review Phase 4**

Results of the 4th Workshop on June 29th, 2021

Release: July 2021

Background:

This document illustrates the interim results of the subproject "Leather-Design-Guidelines for Sustainable Development" as part of the research project "System innovation for a more sustainable leather chemistry". The key insights will be described derived from the workshop on June 29th 2021. This paper aims at elaborating and summarizing the work done so far and supporting the continuation of the writing phase.

ORGANIZATIONAL REMARKS

Project members are kindly asked to review and comment on this document. They are also invited to support the ongoing collection of methods and examples.

The project group agreed on being transparent regarding the overall project progress and interim results and the parties involved. The university team will therefore present parts of this process and a list of parties involved in publications such as its website and progress reports.

What's in this **Review Paper?**

1. Labels & Indicators for "Sustainable Leather" (p.2)

Your Task: Rate and add labels.

2. Informal meetings and follow-up work (p.3)

Your Task: Connect with each other and follow-up the the topics you discussed in the workshop.

3. Purpose of the Guidelines & Role of Design (p.3)

Your Task: Read and Comment.

4. Leather Product Design Canvas (p.3-4)

Your Task: Have a look at it and comment.

5. Updated Project Plan / Timeline (p.5)

Your Task: Have a look at it and comment, if necessary.

6. Possibility to Conduct a Case Study (p.5)

Your Task: Consider conducting or supporting a case study. Get in contact with other project members

and/or the university team





2. Labels and Indicators for "Sustainable Leather"

During the workshop, a lively discussion arose regarding the use and appropriateness of labels, certificates and indicators (such as the HIGG Index) to evaluate and choose leather in terms of sustainable development. Here, we want to have a closer look at this topic from the designer's perspective.

We kindly ask you to name and rate labels and indicators according to your expertise and knowledge. This selection might be biased by our German working context. Therefore, in case you can add other labels or indicates your consider relevant, we appreciate you mentioning them in the text field below.

NOTE:

By mentioning the label or indicator the guidelines do not necessarily recommend using it, but merely educate on it.

Please fill out the fo	ollowing form:	Reliable / Trustworthy	High Standards	Useful and practicable for designers	menti	uld be oned in idelines	Reason for inclusion / exclusion
GRÜNER KN PF SER DRUSER MANOR. UMBRÄGE (ZEITEVEK).	GRÜNER KNOPF / GREEN BUTTON Federal Ministry for Economic Cooperation and Development						
OEKO-TEX ® LEATHER STANDARD	OEKO-TEX Leather Standard International Association for Research and Testing in the Field of Textile and Leather Ecology						
	DER BLAUE ENGEL / THE BLUE ANGEL Federal Ministry for the Environment, Germany						
(Control	IVN Leather Label International Association of Natural Textiles						
GOS S	GOTS GLOBAL ORGANIC TEXTILE STANDARD						
Higg Index	Higg Index Sustainable Apparel Coalition						
BRONZE RATED State	LWG BRONCE RATED Leather Working Group						
SILVER RATED similar	LWG SILVER RATED Leather Working Group						
GOLD RATEL STATE	LWG GOLD RATED Leather Working Group						
ENV	PEFCR Leather Product Environmental Footprint Category Rules - Leather Eurpean Commission						
coale-coale	C2C Gold Certified Cradle to Cradle						
Along Nario world in Along Nario world in Along Nario world in Scale Washington in Scale Washington in Scale Washington in Along Nario was accord along Nario was accord along Nario washington in Scale Washi	ECARF European Centre for Allergy Research Foundation						
bio	Biokreis Verband für ökologischen Landbau und gesunde Ernährung						
Missing here:							
Additional Comments:							







2. Informal meetings and follow-up work

During the 3h-workshop, a number of topics and issues were touched upon both in plenary discussion as well as during the breakout sessions. Participants agreed to follow-up these discussions in their respective co-author teams.

With regards to topics that were yet unmentioned in the guidelines (such as the role and relevance of labels and indicators) participants who share expertise in these fields were willing to follow-up on these issues. The university team will create a new google document in the project folder that shall serve as a starting point.

3. Purpose of the Guidelines & Role of Design

The participants of the workshop agreed to the following:

The leather design guidelines for sustainable development primarily aim at supporting design and development processes to create more sustainable leather products. This shall be achieved through capacity building as this document will increase knowledge and broaden the scope of designers and other professions involved in this process by integrating perspectives from various disciplines and professions. Furthermore, the guidelines shall sensitise both design departments as well as consumers and the industry by pointing out relevant aspects and topics that should be addressed when designing leather products. These guidelines can be used for specific projects and products both as inspiration as well as a source of information. Further, the guidelines can serve as a general piece of reference for instance for departments or companies aiming at making their product portfolio more sustainable in a broader sense.

The Role of Design

In the context of these guidelines, as opposed to some more popular definitions, design refers to all the steps and aspects that aim at creating new or improving existing products and services. Thus, design decisions influence other aspects in the products broader context (e.g. sourcing, manufacturing processes, marketing etc.).

Therefore, design in the context of these guidelines includes but is not limited to the design of

- ... leather products
- ... marketing strategies and communication efforts
- ... business models and services
- ... (product eco-) systems

Design usually is (and should be seen as) an interdisciplinary team effort including, among others, designers, marketers, product managers and more.

Leather product design for sustainable development requires:

- a systems perspective
- an awareness for rebound- / side-effects
- a willingness to continuously learn and question existing believes
- interdisciplinarity

The guidelines aim to contribute to these skills and knowledge.

4. Leather Product Design Canvas for Sustainable Development

The following Canvas is based on the concept of the "Business Model Canvas" and aims at supporting the product development and design process of leather products to create more sustainable products. This shall be achieved by providing a quick and multi-perspective overview of relevant topics and considerations. Each box resembles a critical aspect of the leather product at hand with regards to sustainable development.

The impulse questions in each box are meant to guide the design process and initiate considerations to improve the design concept. The canvas is not meant to be a strict formular or checklist but rather an exploratory analysis and concep-

tualisation tool that can be used at any stage throughout the design process. Boxes and questions do not necessarily have to be adressed in their order of appearance. The canvas can be fulfilled by one person alone or as part of a workshop or team effort. It is recommended to use the canvas in an iterative manner.

One of the most important aspects of working with the canvas is to identify and indicate relations and interdependences. Therefore, it is recommended to draw arrows, lines and circles visualising connections of several aspects.



Leather Product Design Canvas for Sustainable Development

Designed by: Iteration no. Date: Project:



Material Knowledge

What are all the relevant material options? Can you ensure sustained supply of these materials?

Appropriateness of Material Choice

What functional or aesthetic properties of the leather are used in your product?

How does the material choice relate to the overall design? Can leather replace another (less sustainable) material? Can another (more sustainable) material replace leather?

Chapter: 0.1 Example, ...

Business Model

How can you make your business model (more) circular?

Chapter: 0.1 Example, ...

Marketing & Communications

How do you communicate so that consumers value how your product fosters sustainable development?

How and how much information on chemicals, working conditions etc. do you share with your consumers?

0.1 Example, ...

Type of Leather

Is the type of leather used (tanning process, animal origin, etc.) appropriate for the products functionality and aesthetics?

Chapter: 0.1 Example, ...

Chemicals & Finishing

Did the chemical managament during the production ensure a high level of protection of human health snd the environment? Does your finishing require specific (and potentially harmful) chemicals? Is the finishing appropriate to the anticipated usage (e.g. does it lead to a higher usage of chemical protection or caring products?)?

Chapter: 0.1 Example, ...

Material Diversity

How can you reduce the total number of materials used for your product?

Chapter: 0.1 Example, ...

Who is your Consumer?

What do you know about your target group regarding the usage and disposal of leather products?

What are their values, believes and behavioural patterns?

What do they know about sustainable development with regards to this product?

Chapter: 0.1 Example, ...

Consumer Behaviour Change

How can your design foster more sustainable consumption patterns regarding your product (e.g. maintenance, sharing, repairing, etc.)? Can your design / marketing strategy increase awareness regarding sustainability issues in the context of leather products?

Chapter: 0.1 Example, ...

Sourcina

What is the geographic origin of the hide?

From where does the leather come from (company / country)? What are socio-economic consequences from sourcing (and not sourcing) the leather from this origin?

Can you establish trustful and sustained cooperations with manufacturers?

Chapter: 0.1 Example, ...

Traceability

What can you trace regarding the origin of the leather and the

How can you be sure the information you are receiving is valid? To what extent can you trace back chemicals used in during the production of the leather?

Chapter: 0.1 Example, ..

Legal aspects and business potentials

What are the relevant regulatory frameworks (e.g. EU Green Deal, REACH supply chain due diligence in terms of social and environmental aspects, ...]?

What are working and environmental standards at the locations your are sourcing from?

Can you find business opportunities derived from these regulatory impulses?

PRE-CONSUMER ASPECTS

Process Optimisation & Waste Avoidance

Does producing your product create unnecessary waste (e.g. from splitting, cutting,

Could you adapt the design in a way that producing your product require less harmful chemicals?

POST-CONSUMER ASPECTS

Recyclability & Circular Economy

What happens with your product after its use-phase?

Can it be easily dissassembled? Are there collection points and other infrastructure that facilitate recycling? Can you use (or avoid) specific added materials, chemicals or processes to ensure or increase recyclability?

Product Lifespan

How do you extend the product life? How do you ensure a specific quality level?

Reparability

How can you increase reparability of your product? Can you help your consumer to repair (e.g. with services or additional products)?

Chapter: 0.1 Example, ...

Longevity

How can you extent the product's lifetime? What are the specific technical and conceptual features that make your product more durable?

How aesthetics and emotionals aspects of the design make consumers use your product for a longer period of time?

Product Ecosystem

What is the ecosystem around your product? Can you add or adjust additional products or services to make your product more

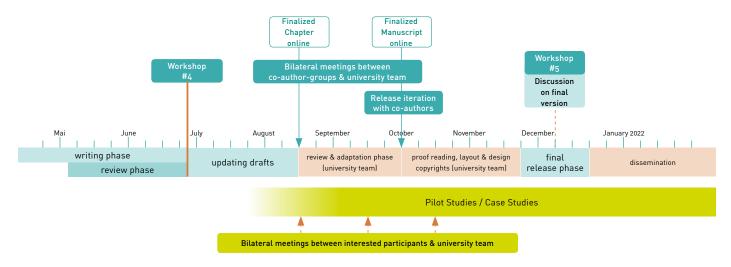
sustainable?



Jonas Rehn, Darmstadt University of Applied Sciences | Release: July 2021 | This Leather Product Design Canvas is a result of the project "More sustainable leather chemistry" as part of the transformative research project "System innovation for sustainable development" at Darmstadt University of Applied Sciences

5. Timeline & Project Plan (updated version)

The proposed project plan is an updated version that takes into account the stage of the writing process and ongoing exchange with the project team. It is subject to change according to project progress. The exact dates for workshops will be communicated once agreed upon by the project team.



6. Possibility of Pilot Study

As illustrated in the timeline (5) an interim version of the final manuscript is expected to be finalised by end of September. Already now, the content and narrative of the guideline can be anticipated at large. Therefore, possible pilot studies or case studies can be ideated and initiated from now on.

If you are interested in conducting a pilot study or case study with your company or supporting the implementation of the guidelines by e.g. evaluating and analysing concepts and products, get in contact with other project members you want to cooperate with and/or with the university team to discuss the further process. We highly welcome any ideas and attempts to implement and evaluate the guidelines and support this process in various forms. The university team can support case studies by planning and conducting design-thinking-workshops, concomitant research and interdisciplinary consultancy.

Overall Criteria for Pilot Studies

We encourage innovative and disruptive concepts and ideas and multi-stakeholder cooperations. In order to ensure effective project managenemt and shared goals, the following criteria apply to any case study in this subproject:

- Pilot Studies should focus on "leather products" (product that are made of leather by more than 60%)
- ► The pilot study should aim at a goal / interim goal that can be accomplished before Q4 2022
- Process and outputs can be shared publicly as part of the university's dissemination activities
- Industrypartners agree to evaluation activities as accompanying research by the university team
- Selection of pilot studies will be transparently shared in subproject group and publicly

Potential types of pilot studies could be:

a.) Concept Study (cf. automotive)

This is usually done as a speculative design that is illustrated graphically or presented as a prototype or built model.

b.) Marketed Product

A more comprehensive approach is to apply the guidelines in a real product and develop it up to market maturity.

c.) Master Thesis

Additionally, the University can facilitate and support master theses on the application of the guidelines together with an industry partner or consortium.



Next Steps & To Do's

- 1. Please, update and finalise your chapters based on the insights of the workshop until **August 20th**.
- Consider conducting or supporting a pilot study / case study and get in contact with the university team and or each other.

Other subprojects

In several subprojects, potential solutions are to be examined to foster "more sustainable leather chemistry". Together the subprojects address different aspects of the system innovation required in this respect. Any person or organisation wishing to contribute to the achievement of the objectives in the subprojects can participate.



Subproject #1

Harmonisation of standards for a
"more sustainable" leather chemistry

Dr. Julian Schenten | julian.schenten@h-da.de

Click here to go to subproject #1



Subproject #2 IT Tools and Governance for Traceability

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Subproject #3
Chemical und Process Innovation

Prof. Dr. Frank Schael | frank.schael@h-da.de

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Subproject #4

Leather-Design-Guidelines for Sustainable Development

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Click here to go to subproject #4

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SYSTEM INNOVATION FOR SUSTAINABLE DEVELOPMENT



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Further information concerning the project to find under:

▶ sne.h-da.de/leather-chemistry