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SYSTEM INNOVATION FOR
SUSTAINABLE DEVELOPMENT

IT Tools and Governance for Traceability (of chemicals in leather)

Workshop #3 | Subproject 2 | Eleni Kaluziak, Julian Schenten | 20.07.2021

Innovative Hochschule

Bundesministerium für Bildung und Forschung

Gemeinsame Wissenschaftskonferenz GWK

Organisational matters

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Agenda

1. **Focus of Leather Subproject 2:
    IT-Tools and Governance for Traceability**

2. Empirical experience gathered so far:
    - Pilot-Study: Early learnings from an IT-Traceability-Tool
      tracing chemicals in leather
    - Survey

    - Discussion
      *Next steps towards a sector wide framework for IT traceability
      of chemicals along leather supply chains?*

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s:ne aims to help the leather industry make the transition to a more sustainable chemistry.
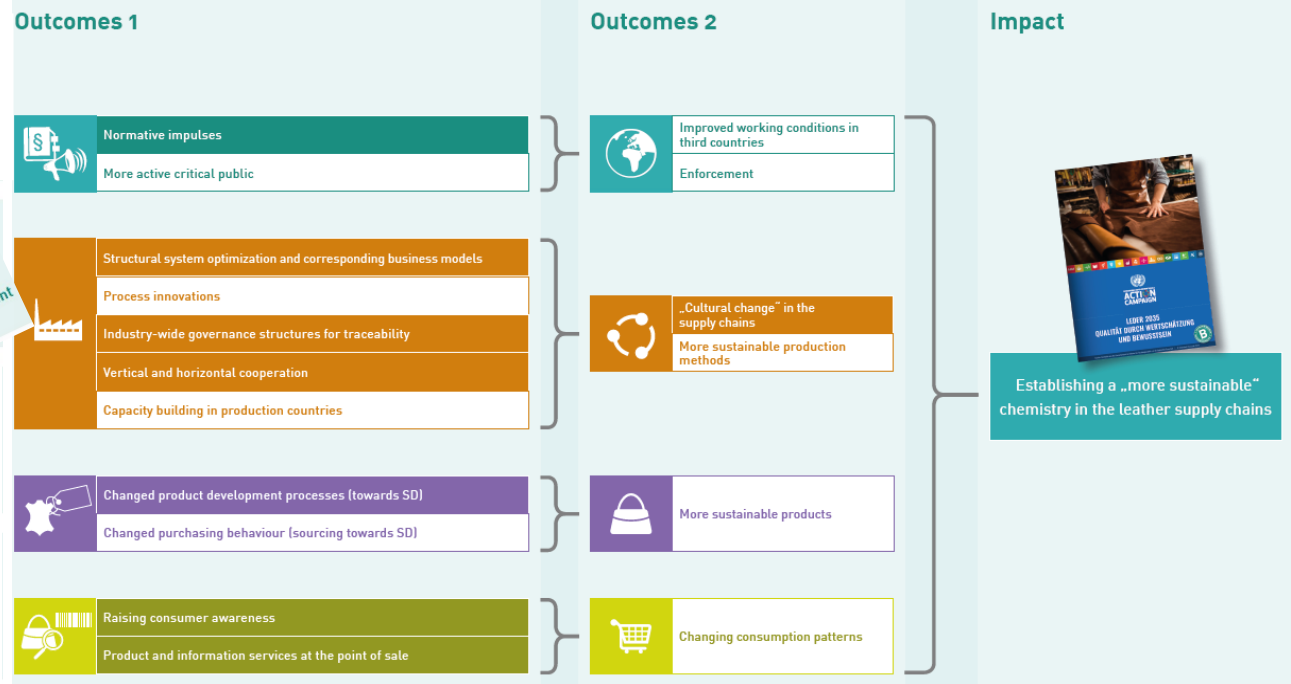
sne.h-da.de/leather-chemistry/

s:ne zielt darauf ab, die Leder-Branche beim Übergang zu einer nachhaltigeren Chemie zu unterstützen.

Leverages for more sustainable leather chemistry

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Harmonisation of Standards **1**

IT Tools and Governance for Traceability **2**

Chemicals and Prozess innovation **3**

Leather Design Guidelines for Sustainable Development **4**

**Subproject 2 aims to build a framework for the reporting of chemicals along the leather supply chains**

Outcomes 1

Normative impulses	
More active critical public	

Structural system optimization and corresponding business models	
Process innovations	
Industry-wide governance structures for traceability	
Vertical and horizontal cooperation	
Capacity building in production countries	

Changed product development processes (towards SD)	
Changed purchasing behaviour (sourcing towards SD)	

Raising consumer awareness	
Product and information services at the point of sale	

Outcomes 2

Improved working conditions in third countries	
Enforcement	

„Cultural change" in the supply chains	
More sustainable production methods	

More sustainable products

Changing consumption patterns

Impact

Establishing a „more sustainable" chemistry in the leather supply chains

create global impact, create awareness, now consider measures, concepts, so that 2030/2035 traceability of chemicals along the leather supply chain is there

Subproject FOCUS

to build a framework for the reporting of chemicals along the leather supply chains

✓ Traceability of chemical substances along the supply chains

✓ **Know what substances are in your products (and processes)**

✓ Data basis provided by suppliers

✓ Facilitated by IT tools and governance framework

✓ Initiate, i.e. create a momentum, for an international sector wide dialogue to define common rules for the application of such a system

✓ business-to-business supply chain – from preservation at slaughterhouse until placing final product on the market
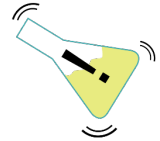
Traceability is understood as the ability to trace what chemicals are in which parts of a product and who is responsible for in a supply chain

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"Pilot study" Design

Purpose:

Test an <u>examplary</u> IT-Traceability Tool for feasibility in the leather industry.

Can it help to trace chemicals in leather articles?

What are benefits, limitations, lessons learned so far?

→ Proof of concept

"Pilot study" Design

🔍 German shoe brand **RICOSTA** launched a pilot test with the IT traceability tool provided by Darmstadt University h_da under the project **LIFE AskREACH**.

🔍 Ricosta selected for the pilot test one of its leather supplier, Lederfabrik Josef Heinen GmbH & Co. KG

"Pilot study" Design – Tool Description

🔍 Quick introduction of the (iPoint-systems) Traceability-Tool (a MDS – Material Data System)

🔍 Provided within the framework of the EU LIFE project „AskREACH" - https://www.askreach.eu/

🔍 (Co-)Funded by EU Commission / aligns well with green deal

🔍 Procurement criteria based on interviews and IT tool benchmarking

🔍 Video tutorials etc. at www.askreach.eu/supply-chain-tool/

IT-Tool Workflow (Example for shoes)

Legend:
- → Request for reporting of substances
- ← Answer

Shoe-Brand → **Final Product Manufacturer (Assembly)**

Final Product Manufacturer (Assembly) → **Leather Supplier**, **Shoe-Lace Supplier**, **Sole of Shoe Supplier**

Leather Supplier → **Hide/Skin preservation** → Tier... n
Leather Supplier → **Chemical Supplier** → Tier... n
Shoe-Lace Supplier → **Cotton/ Synthetic-Supplier** → Tier... n
Sole of Shoe Supplier → **Rubber- Supplier** → Tier... n

IT-Tool Workflow

The tool controls communication (requests and responses). Supplier information/ email addresses can be stored.

⬇

→ The brand sends a request (for reporting of substances) to its direct supplier (Tier 1), Tier 1 also sends a request to its supplier (Tier 2), ...etc.

→ ...Tier 2 sends a response to Tier 1; Tier 1 provides information to the brand,

→ i.e. each actor writes to the next actor in the supply chain without knowing who the previous actor is.

⬇

Competitive relationships are protected.

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LIFE ∙ ASK
REACH

"Pilot study" Design-Example

Example for the substance regulation (REACH; RoHS; etc). that a brand can request ist supplier to report on.

"Pilot study" Design-Example

"Pilot study" Design-Example

Further Example for a Product- Strcuture-Tree of a dress with different components generated by the Traceability Tool

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"Pilot study" Design-Example

Further Example for a (non-leather) Product-Strcuture-Tree with automated red flags in Traceability Tool

Ricosta´s Expectation of the IT-Tool

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"Pilot study" Design

German shoe brand **RICOSTA** launched a pilot test with the IT traceability tool provided by Darmstadt University h_da under the project **LIFE AskREACH**.

Ricosta selected for the pilot test one of its leather supplier, Lederfabrik Josef Heinen GmbH & Co. KG

Expectation:

To demonstrate how the communication and exchange of information on the IT-Tool works

To receive a Full Material Declaration (FMD) - Bill of Material (BOM) on the chemicals present in the supplied leather

To search for products containing e.g. future SVHCs (Substance of Very High Concern) to ensure REACH-compliance in case of legislation changes

Ensure due diligence in the supply chain („German Lieferkettengesetz")

IT-Tool - Features I

🔍 Display a structure tree for a product, showing which components and materials a product is made of

🔍 Questionnaires/ attachments on e.g. sustainability aspects such as land use, animal welfare and social criteria can be uploaded

🔍 Reuse of existing declarations for new requests, data can be duplicated. Business added value for companies (brands and suppliers).

Supplier can report substances in a standardized way for all customers:
🔍 Mixtures (e.g. pure tanning process chemicals) can be recorded as modules and stored in the tool

IT-Tool – Features II

- 🔍 Show, via CAS-numbers, which leather chemicals are contained in the product

- 🔍 Show, also which process chemicals have been used:

  Via a BOM: one for the composition material and

  one for process chemicals

- 🔍 „Placeholders" can be selcted, if quantity information is uncertain

- 🔍 Create a FMD for leather, i.e. substances used can be declared up to 100%

- 🔍 Present which substances/ materials are in products and at what concentration

IT-Tool – Features II

IT-Tool – Features II

Example for a product with two BOMs -Bill of Materials: 1. Finished Shoe / 2. Process Chemicals and Mixtures 1, …

IT-Tool – Features III

Automated signals for regulated substances:

→ When displaying chemicals/substances, red flags appear in case they are regulated substances, currently SVHCs + Annex XVII are deposited.

Other relevant substances/lists can be included.

Product Screening/ Search Functions:

→ Brand can search for recorded specific substances via the tool on its products: Full Material Declaration (FMD) helps identifying substances that are not yet declared in Safety Data Sheets (SDS).

If their legal status changes, a decision can be made immediately by the brand as to whether action is required.

IT-Tool-Benefits

Ensure compliance with existing legislation

Prepare in case of regulatory developments to be compliant in future

Proactively manage chemicals used in supply chains for more sustainable ones

Benefit from the reporting standard shared with other sectors or companies as this increases suppliers' willingness to provide data

Enhance companies risk management, and of supply chain processes

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IT-Tool-Benefits

More informed product design

Help to draw conclusions on the reaction of two process chemicals, by process chemical screening

Reduce costs of risk based testing

Facilitate the material classifications needed for recycling

Substantiate green claims (consumers, investors, NOGs)

Allow for trustful transparency

Establish new business models

Prerequisite: Leather Sector in collaborative approach agrees on framework / approach to untap efficiency

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Ricosta´s feedback

Lederfabrik Heinen´s feedback

Questions on feedback?

"Pilot study"– Points of Discussion I
What should be reported?

Full Material Declaration 100% (FMD) or Partial Material Declaration x?

Should the IT tool only report what remains in the product?

Should additionally also the process chemistry be reported and how can we manage that?

Background: Groups of chemicals in relation to leather:

⇒ Chemicals intended **to be present** in the product (e.g. coating)

⇒ **Process chemicals**: these are <u>not</u> intended to remain in the finished product (e.g. salt, biocide, tensids)

Boundaries to be discussed with the leather sector

"Pilot study"– Points of Discussion II

Leather supplier may need to test his product for chemicals prior to provide data to the tool:

➡ The composition/ recipe of chemicals for the treated leather is difficult to provide:

➡ Substances may be washed-out during the treatment of leather (how much remains in the product?)

Safety Data Sheets of chemicals to not declare every single chemistry contained (black box). Supposedly (non classified) harmless substances are missing.

There must be communication from actors in multiple directions.

"Pilot study" – Points of Discussion III

- Preparation needed for tool: Shoe manufacturer needs to tell suppliers how much weight (grams) of leather goes into the finished shoe:

- If goal is to end up with a full declaration for all components of the shoe: material/ substances would have to add up to 100 percent by weight, so it is important to know exactly how much of that is leather.

- Therefore, it makes sense that the supplier of the leather already indicates the appropriate number of grams.

There needs to be communication from actors in both directions.

How many shoes will be manufactured out of 1 sqm (squaremeter) leather?

What chemicals/ at what concentration are in 1 sqm leather?

Questions?

What do the workshop participants think of the IT-tool?

Open Discussion

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     tracing chemicals in leather
   - **Survey**

   - Discussion
     *Next steps towards a sector wide framework for IT traceability
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NACHHALTIGE ENTWICKLUNG

IMPLEMENTATION PROJECT   CITIZENS' PANEL

You are here: ⌂ | Implementation project | More sustainable chemistry in the leather supply chains | Details More sustainable Leathe

04/06/2021

Survey on Traceability – Call for Participation

Have your say regarding the scope of chemicals reporting, and related exemptions, which IT Tools for Traceability should take into account.

Since intense communication with industry and other stakeholders is essential for the project, we are inviting you to take part in the first round in a series of surveys. This is a call to chemical suppliers, tanneries, brands, retailers and all other actors in the global leather supply chains, as well as to NGO's, consultants and certifiers. This time, the survey focusses on a bunch of subjects related to IT Tools and Governance for Traceability of chemicals along the leather supply chains. Please have your say regarding the scope of chemicals reporting, and related exemptions, which IT Tools for Traceability should take into account. Your answers will help the project to derive rules for a governance framework for the reporting. It is important that the sector agrees on such basic rules, as standardisation will unlock reporting efficiency and thus reduce costs.

How would an IT Traceability Tool work? The goal is that a company knows exactly which chemicals are present in the products it places on the market. Thus, it is necessary to report chemicals along the leather supply chains, meaning that all suppliers will have access to such an IT tool (or adequate interfaces in regions with poor IT accessibility).

The upstream suppliers will report information to their downstream users/customers. This means that a "data requestor" (e.g. brand, retailer, tier1, tier2, ...) will receive a Bill of Materials (BOM) with chemicals present in his/her article. It is intended that a "data requestor" only communicates with the direct supplier while he/she cannot access the identities of other (sub)suppliers in the value chain.

☑ Start Survey

PLEASE take part: The leather project designed a survey addressed to all leather stakeholders, aiming to identify a common ground when it comes to the reporting of chemicals in leather (visit our homepage).

Julian Schenten,
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MELDUNGEN

News

New Article on our Theory of Change
Our theory of change for a more sustainable leather chemistry has been published by the swiss academy of sciences. Click here to read the open access...

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Survey on Traceability – Call for Participation
Have your say regarding the scope of chemicals reporting, and related exemptions, which IT Tools for Traceability should take into account.

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Results Leather Survey 2020
This Factsheet outlines the results of the "Survey on Leather Goods and Consumer Behaviour" conducted by the Citizens' Panel in the period from April...

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MATERIAL & RESOURCES

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Survey „IT Tools and Governance for Traceability of chemicals along the leather supply chains "

Aim: Inform subproject 2 (and others) on scope of reporting

Implementation:

Launched together with our project newsletter in March 2021

Dissemination via LinkedIn

Freiberg Leather Days (FILK)

Participants, N = 21

Product group(s) relevant for activities

Product group	
Shoes	15
Fashion	13
Accessories	11
Furniture	15
Automotive	14
any leather application	1

Region

Region	
Europe	15
Asia	8
North Amercia	3
Central America	3
South Amerca	3
Oceana (e.g. Australia, New Zealand, …)	3
Africa	5
Middle East	3
Global	9

Role in the leather sector

Role	
Chemical supplier	3
Slaughterhouse/abbtoir	
Tanner: pre-tanning	3
Tanner: tanning	3
Tanner: finishing	3
Trader	
Leather (products) manufacturer	2
Brand	3
Retailer	
Wholesaler	
Importer	
NGO	2
Consultant	7
Certifier/Inspector	2
Other	5

Chemicals in articles (materials)

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The Traceability IT-system needs a **SUBSTANCE REPORTING LIST (SRL)** on chemicals in materials. What criteria can trigger the inclusion of chemicals to such a list?

Additional ecological factors	12
Relevance for recycling	14
Social aspects	9
Responsible resourcing	12
Potential relevance for quality (e.g waterproof) or potential for reactions with other chemicals (e.g. relevant for different types of coating)	1

Chart:
- Substances that are "hazardous": 18
- Substances fulfilling other relevant criteria: 16
- Don't know: 2
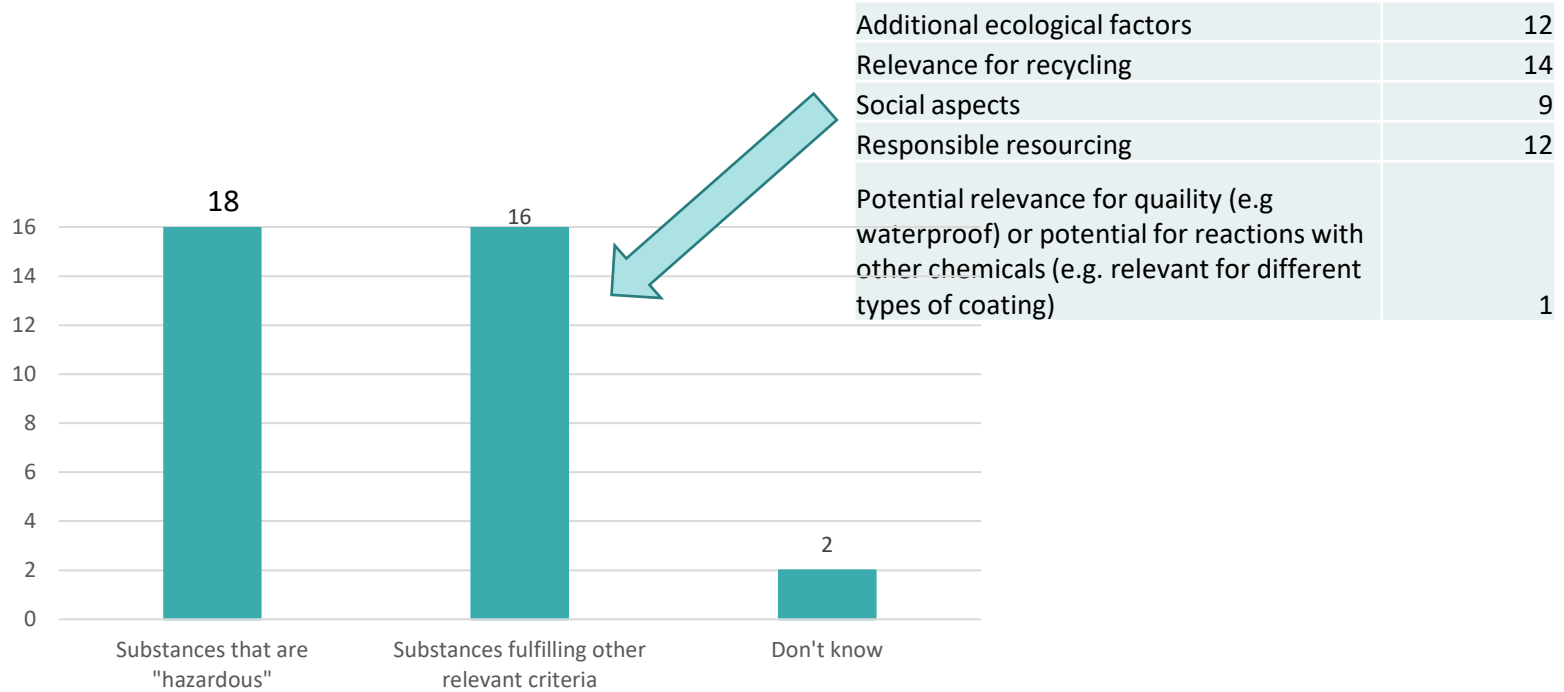
Which existing substances lists on chemicals present in the materials (e.g. regulatory lists such as the REACH SVHC list, widely used RSLs etc.) should be embedded into the tool?

"From a brand perspective in regard of compliance, the more lists included, the better. But with every list increases the effort to keep it up to date, some lists offer comparability problems, e.g. CA Prop 65 uses exposure values instead of total content limit values."

Detox
California
Prop.65 green
Bluesign AFIRM
Annex
SVHC Reach
CADS XVII

Automotive Inditex
RSLs TSCA AAFA
peace e.g XIV
Leather ZDHC Prop
Afirm
Oekotex
LEVI Affirm REACH
ECCO
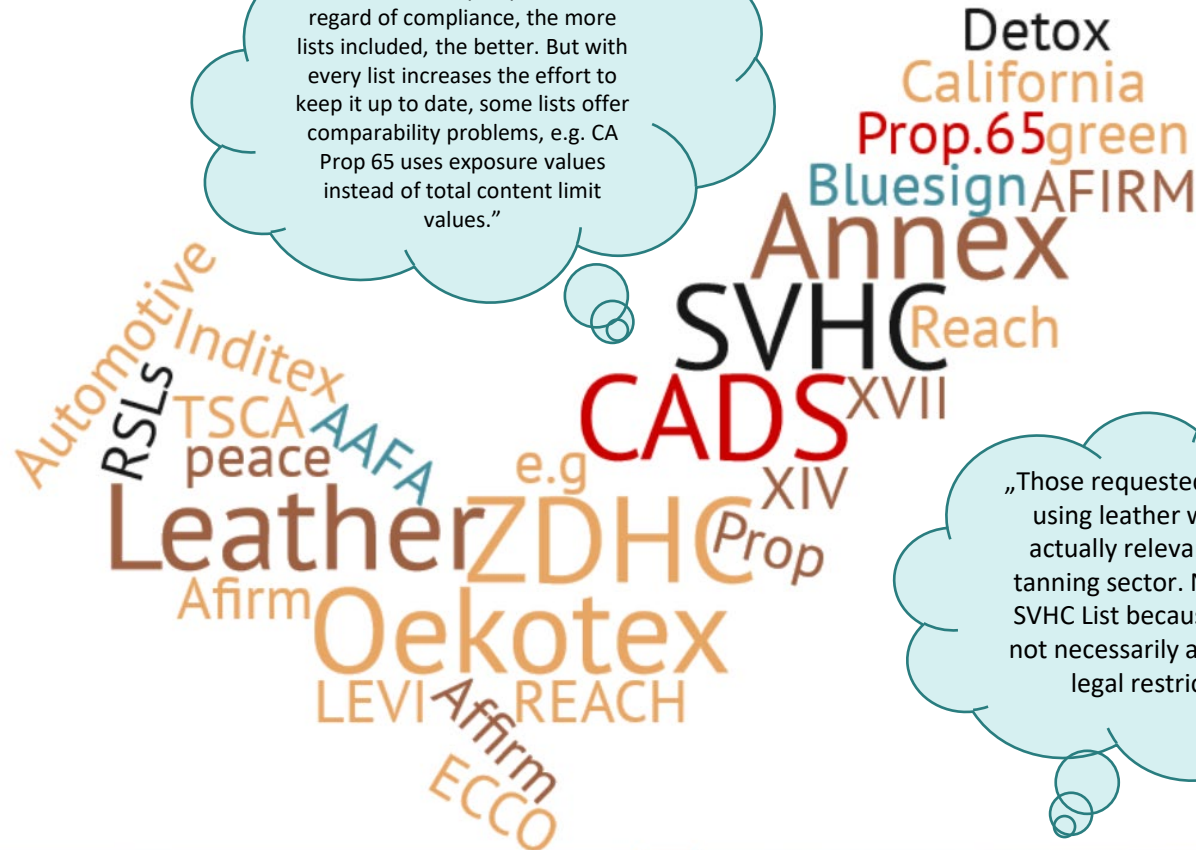
„Those requested by Brands using leather which are actually relevant for the tanning sector. Not REACH SVHC List because listing is not necessarily a reason for legal restriction"

Additional substance groups to be added mentioned

What	Who
Recycle contents/ components	Brands
Skin sensitisers	Leather Association
data on CO2-emissions producing chemicals, water usage and other ecological effects	NGO
sector specific/ product specific lists (many times yet tbd)	Consultant
Bisphenols, D4, D5, D6 containing products, products based on renewable raw materials	Chemicals
Biocides	Chemicals
Bisphenol, Aldehydes, Chrome, VOC, TOC	Consultant
plastic	Leather Association

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Substance groups NOT to be added (and why)

	AZO, CHROME VI, DMFA, HEAVY METALS, PFOS	Impurities	In general substances that are used in the context of processes e,g, machinery, ETP etc. (some NGOs like to put them on RSL as well...)
Reporting this substance (group) would infer with our intellectual property	X (Brand)		
This substance (group) is negligible		X	X
Why negligible?		They are not reported in SDS and are not used on purpose	In general substances that are used in the context of processes e,g, machinery, ETP etc. (some NGOs like to put them on RSL as well...)

Chemicals in processes

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The Traceability IT-system needs a substance reporting list on chemicals in processes. What criteria can trigger the inclusion of chemicals to such a list?

Additional ecological factors	10
Relevance for recycling	8
Social aspects	6
Responsible resourcing	9
waste water regeneration	1
quality	1

Additional lists / groups:

- ZDHC MRSL
- ZDHC Candidate List
- Optional: Chemicals regulated in China

Chart: bar chart with values — "Substances that are "hazardous"" = 16, "Substances fulfilling other relevant criteria" = 11, "Don't kn..." (cut off). Y-axis from 0 to 16.
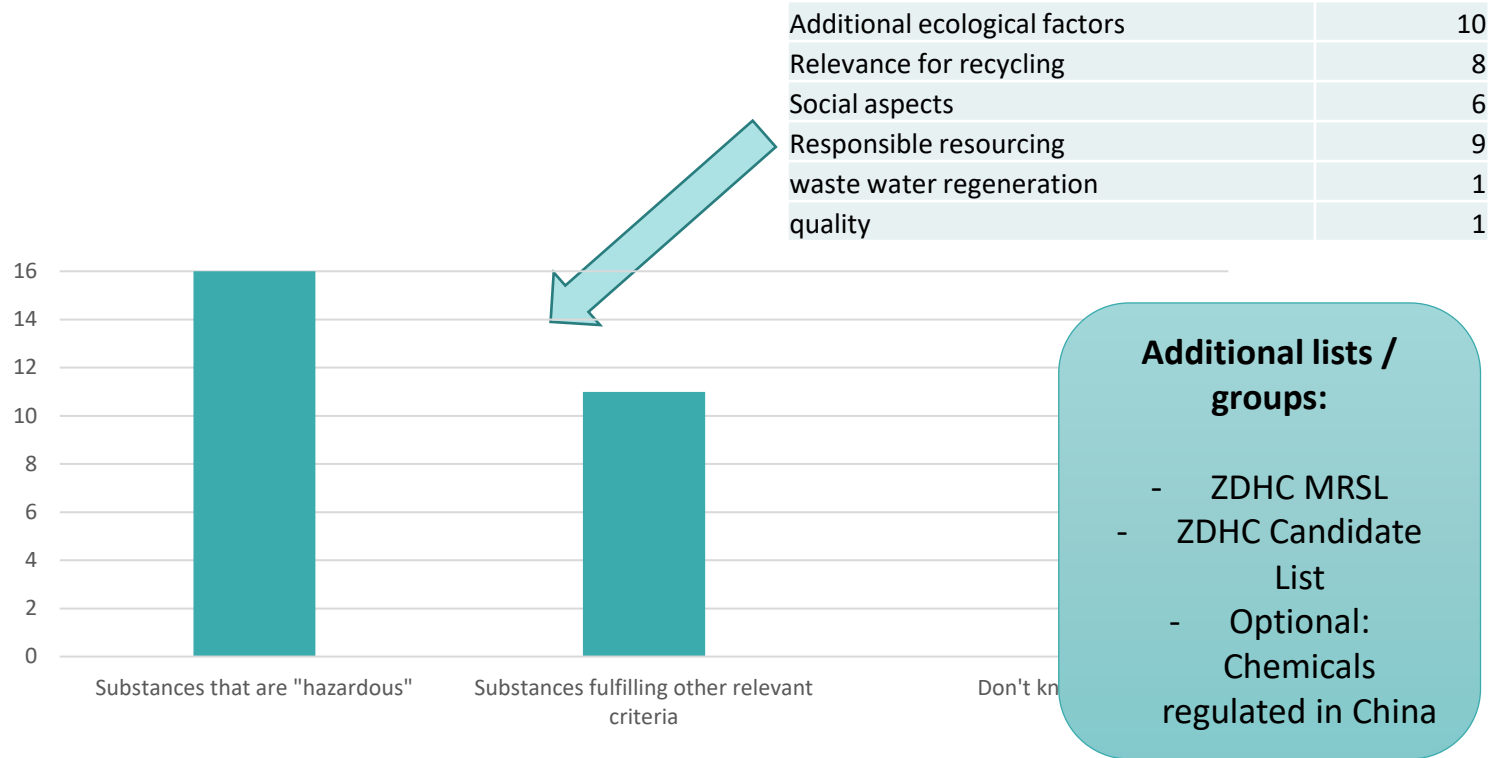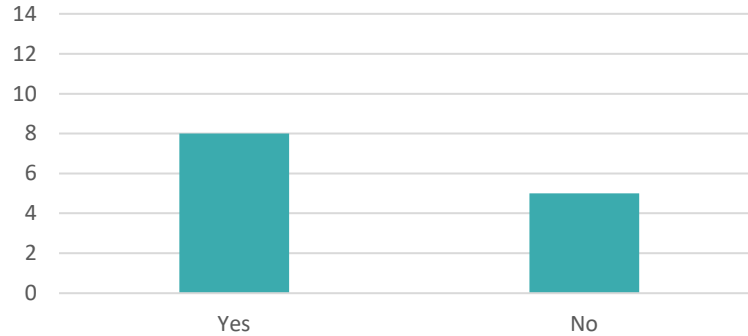
Substance groups NOT to be part of reporting (and why)
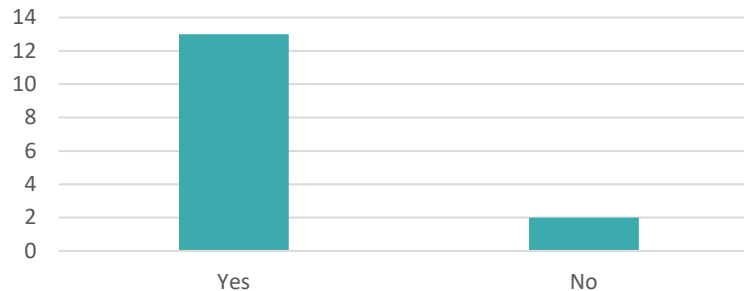
Installation Cleaning Chemicals or *similar* → They are not relevant for leather

Other aspects

.

Should the IT Traceability Tool cover data on social aspects as well?

(Bar chart: Yes ≈ 8, No ≈ 5)

Should the IT Traceability Tool cover data on occupational health as well?

(Bar chart: Yes ≈ 10, No ≈ 3, only if sectorally relevant ≈ 1)

Should the IT Traceability Tool cover data on environmental aspects (e.g. emissions) as well?

(Bar chart: Yes ≈ 13, No ≈ 2)
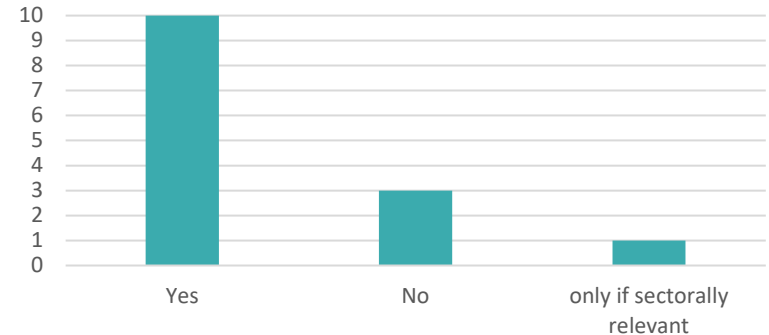
Next steps?

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      *Next steps towards a sector wide framework for IT traceability
      of chemicals along leather supply chains?*

Next steps?

Additional case studies

Interviews

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Our Leather Subprojects

Subproject #1

Harmonisation of standards for a "more sustainable" leather chemistry

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

Subproject #2

IT Tools and Governance for Traceability

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Subproject #3

Chemical und Process Innovation

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Subproject #4

Leather-Design-Guidelines for Sustainable Development

Dr. Jonas Rehn | jonas.rehn@h-da.de

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Thank you for your attention
For any comments or questions please reach out to us

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