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HOCHSCHULE DARMSTADT
UNIVERSITY OF APPLIED SCIENCES

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SYSTEM INNOVATION FOR
SUSTAINABLE DEVELOPMENT

IT Tools and Governance for Traceability (of chemicals)

Final Webinar | Subproject 2 | Eleni Kaluziak, Julian Schenten | 16.11.2022

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Agenda

1. Challenges
2. Subproject 2 Focus
3. How to achieve Traceability regarding Chemicals in Leather Products?
4. Chemicals IT Traceability Benefits and Challenges
5. Governance Framework

Challenges

-  Complex production and global supply chains across different countries.
-  Negative impacts on human health, human rights and the environment are made public
-  Consumers and investors demand enhanced visibility of raw material origins and production processes
-  Existing/increasing legal requirements along the product life cycle (e.g. laws on environment, production or product safety)
-  Companies mostly do not know what materials (incl. chemicals) their products contain, nor where they originate from (risk of non-compliance or greenwashing)

The logo for SCIP (Sustainable Chemical Information Platform) features the letters 'SCIP' in a bold, sans-serif font. The letter 'C' is stylized with a colorful, multi-segmented circular graphic behind it.The logo for Digital Product Passport is a dark grey rounded rectangle with the text 'Digital Product Passport' in white, sans-serif font.

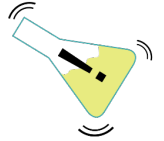
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Subproject 2 FOCUS

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
- ✓ 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

Specific Objectives of Subproject 2

- ✓ Have an *EARLY PILOT TEST* of such a traceability system using an available system (also involve a tannery).
- ✓ **Initiate, i.e. create a momentum, for an international sector wide dialogue to define common rules for the application of such a system. Taking into account interlinkages with other initiatives and interoperability with existing approaches.**
(GOVERNANCE FRAMEWORK)

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How to achieve Traceability regarding Chemicals in Leather Products?“



German shoe brand **RICOSTA** and shoe retailer **Deichmann** launched pilot tests with an **exemplary IT traceability tool**

	Study 1 (2021-1)	Study 2 (2022-1)
Data requestor	Ricosta	Deichmann
Data Supplier	Lederfabrik Heinen	Large manufacturer from India
Product	Leather material	Leather Shoe
Request type	Full material declaration (FMD)	FMD
Status	Completed	Pending



-  Added value to existing initiatives
-  **Work shows technical feasibility of approach**
-  Overall positive experiences from users

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“Pilot study” Design-Example

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

REACH Annex XIV

Product Fails to Meet Regulation Requirements

REACH Annex XIV acc. EU Regulation amended by EC 2017/999, http://eur-lex.europa.eu/Result.do?T1=V1&T2=2013&T3=348&RechType=RECH_naturel&Submit=search

Product Meets Regulation Requirements Product Meets Regulation Requirements with Exemptions Product Fails to Meet Regulation Requirements

COMPLIANCE CHECK RESULT	REMARK
Checked with errors	Sunset date: only to use if a notification has occurred to ECHA REACH Annex XIV and or granted by EC Commission
Checked	This substance is listed in REACH Annex XIV. Mind sunset dates and granted authorisations

Regulatory compliance status calculated at: 2020-03-16

Product Declaration

Declared Product

NAME	INFO	WEIGHT	CONCENTRATION	CAS-NO
▼ SURFACE	Product name		declared: 93mg / 93mg	declared: 100%
▼ Solder			declared: 3.4mg / 3.4mg	declared: 100%
▲ Confidential Substances	🔒		0.17mg	5%
▲ Lead chromate	⚠️	3.15mg	92.647059%	7758-97-6
▲ Silver		0.08mg	2.352941%	7440-22-4
▼ Encapsulation		declared: 48.5mg / 48.5mg	declared: 100%	
▲ Confidential Substances	🔒		0.12mg	0.247423%
▲ Additive 460			0.36mg	0.742268%
▲ Antimonytrioxide			0.49mg	1.010309%
▲ Reaction mass of Charcoal and Formaldehyc			5.82mg	12%
▲ Formaldehyde, polymer with (chloromethyl)ox			7.76mg	16%
▲ Quartz (SiO2)			33.95mg	70%
▼ Surface Finish		declared: 2.1mg / 2.1mg	declared: 100%	

Substance

Name: Lead chromate **Product name**

CAS No.: 7758-97-6

EINECS/ELINCS: 231-846-0

EU-Index: 082-004-00-2 **Quantity**

Weight: 92.647059 **Weight**

Regulated by: **RoHS (2011/65/EU) (v.14)**

Confidential Substance SVHC

UNITS

Substances Weight Concentration CAS-Nr.



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Chemicals IT Traceability Tool-**Benefits**



Ensure compliance with existing legislation (REACH/SCIP-Database/SVHC´s..)



Prepare in case of regulatory developments to be compliant in future



Proactively manage chemicals used in supply chains for more sustainable ones



Enhance companies risk management, and of supply chain processes

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

Chemicals IT Traceability 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, NGOs)










Allow for trustful transparency



Establish new business models

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

Chemicals IT Traceability Tool-Challenges

-  Lack of data on chemicals / compositions hinder FMD
-  Lack of knowledge (e.g. chemistry washed out)
-  Lack of standards (e.g. sqm to kg)
-  Lack of trust
-  Lack of business models
-  Lack of IT capacities (hardware, software, skills)
-  Burdensome

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Governance Framework

A commonly agreed set of rules will reduce challenges

- Scope of framework *see survey*
- Define roles of actors
- Scope of reporting *see survey*
- Data quality and reliability
- Research roadmap
- Data formats (xls, xml)
- Supplier support
- Governance of the process

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

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EINE GEMEINSAME INITIATIVE VON



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