LEATHER WORKING GROUP

2022 LWG MEMBER CONFERENCE

Hybrid • September 22, 2022

SESSION 5:
Environmental Impact

SESSION 5

Environmental impact

Monitoring and quantifying the environmental impact of leather as a material is crucial for setting and meeting goals for the future. Our conference will showcase how leather industry leaders are paving the way to zero through lifecycle assessments, innovation, circularity and more.

14:30 **LWG sustainability initiatives: driving environmental impact reduction in the leather industry**
Dr. Leticia Millward, *Leather Working Group*

14:40 **LCAs for the Leather Industry: Data-driven approaches for a new competition scenario**
Federico Brugnoli, *SPIN360*

14:55 **Made to Last: Circularity**
Rosie Wollacott Phillips, *Mulberry*

15:25 *BREAK (30m)*

15:40 **Leathermaking Environmental Footprint Reduction Strategy**
Kim Sena, *JBS Couros*

15:55 **Understanding tannery carbon footprint & energy use with ECO2L**
Andreas Meyer, *VDL (German Leather Federation)*

16:10 **Q&A Panel Discussion**
Panellists: *Dr. Leticia Millward, Federico Brugnoli, Rosie Wollacott Phillips, Kim Sena (Facilitator), & Andreas Meyer*

Andreas Meyer
Managing Director

Verband der Deutschen Lederindustrie e.V. (VDL)

Understanding tannery carbon footprint & energy use with ECO2L

The carbon footprint of leather as a material continues to be a focus for many brands, manufacturers, consumers, and even legislators. One of the key metrics for understanding the footprint of a tannery is their energy consumption. We can use benchmarks such as the Best Energy Efficiency for Tanning (BEET) to understand whether one tannery is more efficient than another. To calculate these complex relationships, the German Leather Federation (VDL) has developed the ECO2L tool 2.0.

Speaker Profile

Andreas Meyer took over as Managing Director at the Verband der Deutschen Lederindustrie e.V. in October 2018. After school Andreas completed an apprenticeship as a farmer and studied agricultural sciences in Weihenstephan, graduating as an agricultural engineer.

Later, Andreas started as a trainee at Westfleisch AG in Münster (slaughterhouse) before moving to the by-products and quality department. Andreas continued with animal fats at Gebr. Smilde in Gelsenkirchen (fat melting). From there Andreas moved to the Friedrich Sturm company, a hide trading company near Hamburg.

ECO2 Energy Controlled Leather

LWG Member Conference 2022

VDL - ECO_2L Tool 2.0 - 2022

VDL
Verband der Deutschen Lederindustrie e.V.

VDL – The ECO_2L - Tool 2.0

Determination of the

PRODUCT CARBON FOOTPRINT FOR LEATHER

as well as the

ENERGY CONSUMPTION AT THE TANNERY SITE

compared to

ENERGY BENCHMARK BEET (BEST ENERGY EFFICIENCY FOR TANNING)

with the help of **THE ECO_2L 2.0 CALCULATION**

VDL - Content

1. Introduction
2. The new tool
3. Data
4. Requirements
5. The certificate
6. Summary
7. What else is important?

VDL – Who is the VDL?

The **V**erband der **D**eutschen **L**ederindustrie e.V. –
the German Leather Federation

We represent the interests of the German Leather Industry:

Our members: tanneries and companies closely connected to the tanning industry

Our tasks: to inform our members, to represent them,
to promote education, practice-oriented trainings,
and research,
and we take care of misuse of the term leather

VDL – Introduction – the tool

The idea for the tool ECO_2L 1.0 started

- in 2012
- developed by some **operationally active tanners / members of the VDL.**
- with the determination of the **energy consumption and the CO_2 emissions of a tannery.**

The results should

- be comparable between tanneries,
- help to improve ecological performance and efficiency

VDL – The new tool 2.0

The new tool 2.0 is based on the old tool:

CCF – **Corporate Carbon Footprint –**
internal energy use
compared with
BEET – Best Energy Efficiency for Tanning

VDL – The new tool 2.0

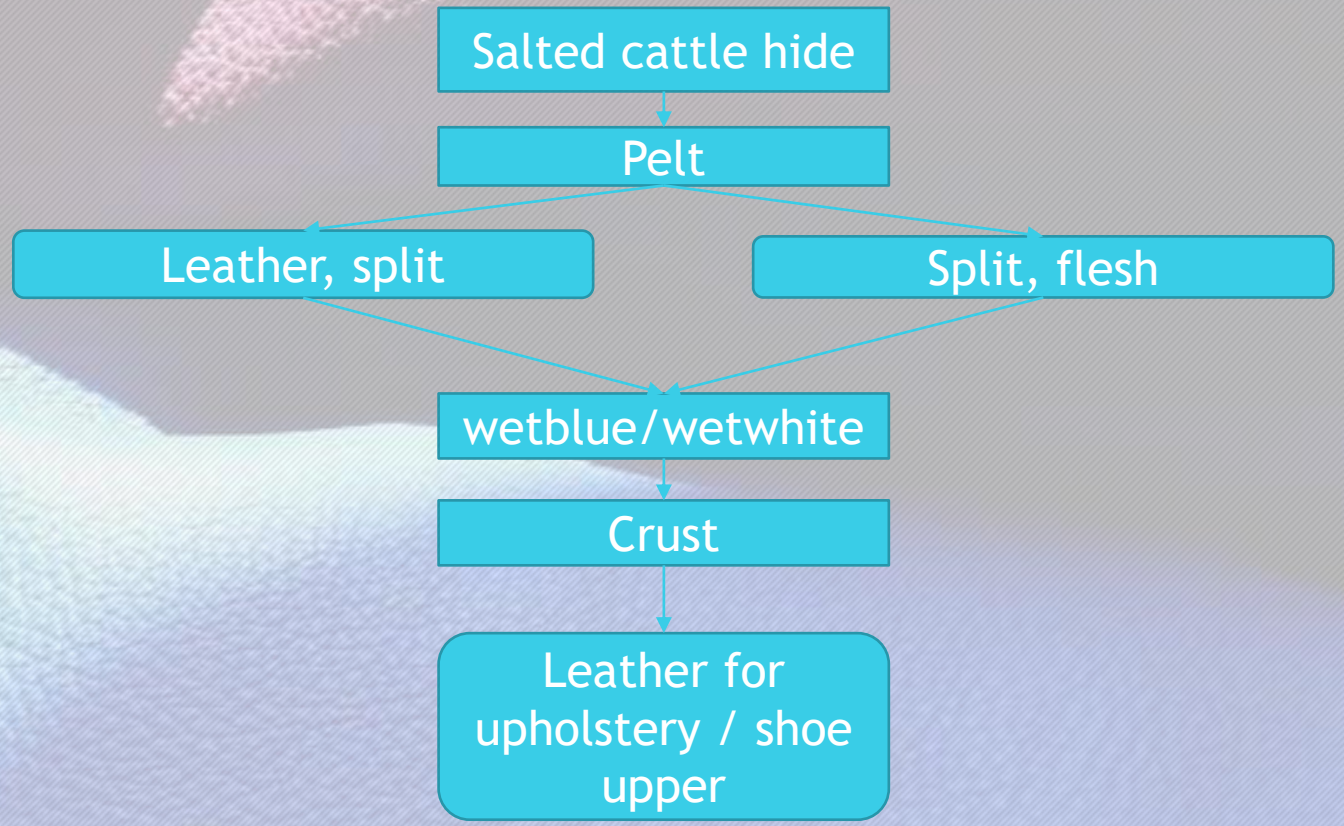
The new tool 2.0 extends 1.0

- In recording and determing the core process by including all up- and downstream processes (from cradle to gate)
- Focuses on energy efficiency and on CO_2 emissions
- Results received are comparable between different tanneries worldwide

VDL – The new tool 2.0

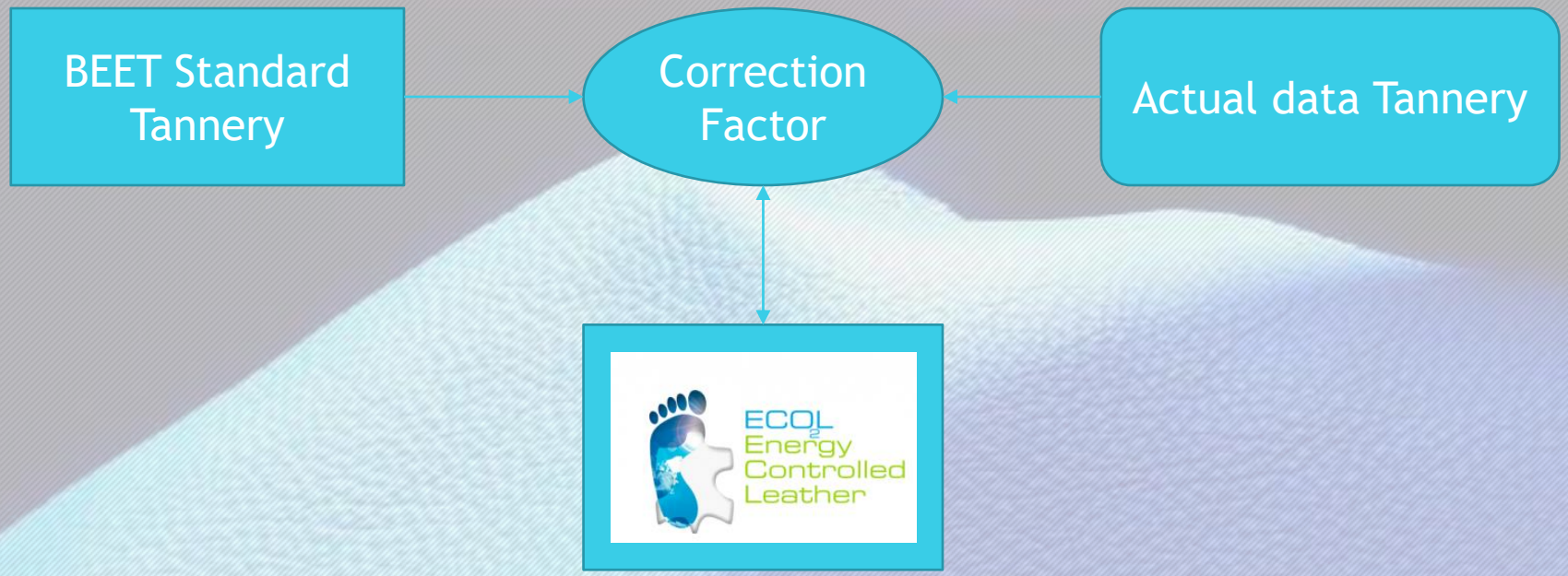
Basic:

Standard core processes
of leather production according
to BEET



VDL – The new tool 2.0

Standard core processes



VDL – The new tool 2.0

Nowadays there is more focus on CO_2 product assessment

- within the whole supply chain
- arguments towards customers
- comparative assessments with other materials
- clients ask for standardised determination of CO_2 emissions

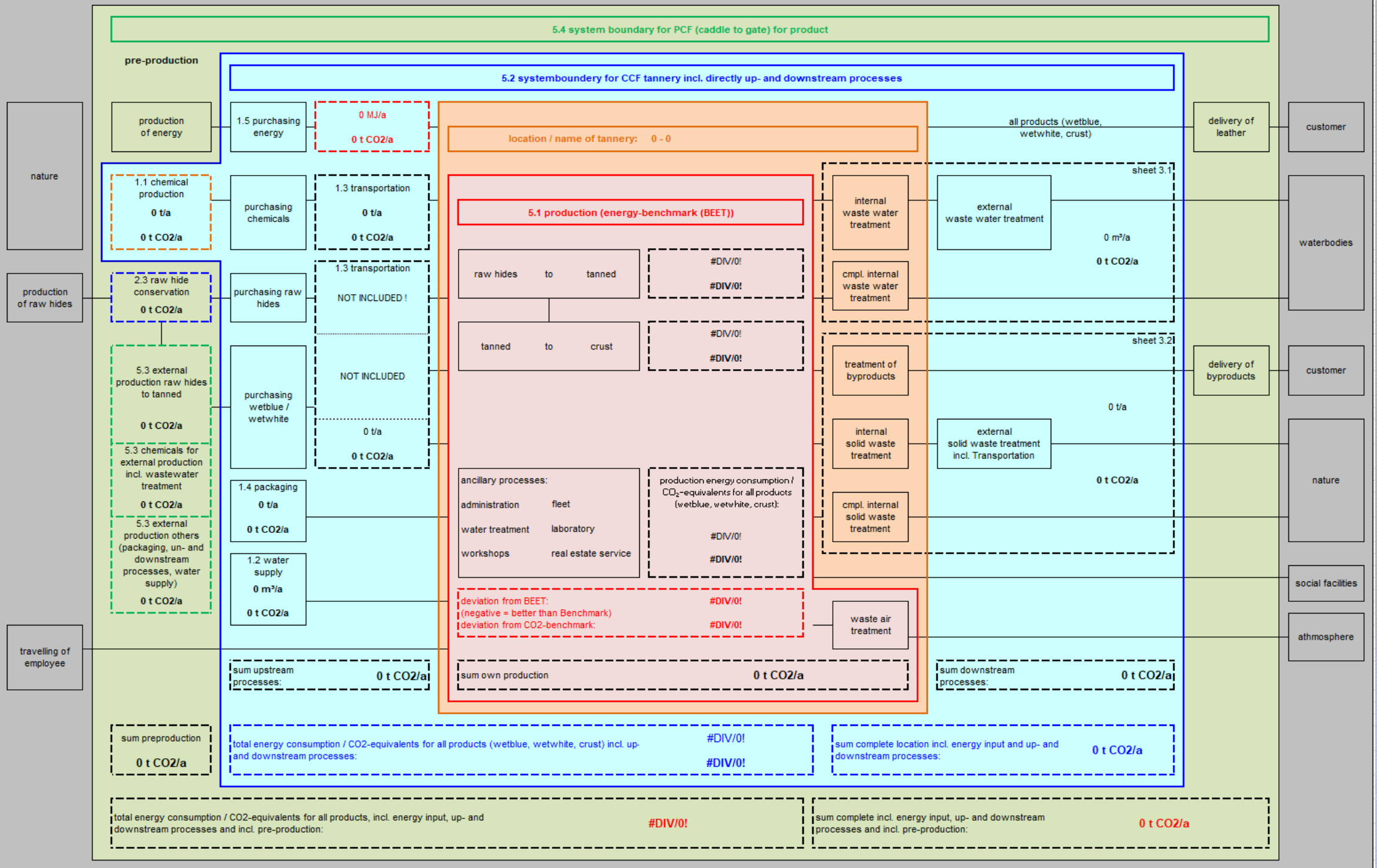
VDL – Data

Boundaries of the tool

- Green PCF, cradle to gate
- Blue CCF, Tannery
- Red energy benchmark BEET

ECO_2L 1.0

ECO_2L 2.0


5.4 system boundary for PCF (caddle to gate) for product
pre-production
5.2 systemboundery for CCF tannery incl. directly up- and downstream processes
nature
production of energy
1.5 purchasing energy
0 MJ/a
0 t CO2/a
location / name of tannery: 0 - 0
all products (wetblue, wetwhite, crust)
delivery of leather
customer
1.1 chemical production
0 t/a
0 t CO2/a
purchasing chemicals
1.3 transportation
0 t/a
0 t CO2/a
5.1 production (energy-benchmark (BEET))
internal waste water treatment
external waste water treatment
sheet 3.1
0 m³/a
0 t CO2/a
waterbodies
production of raw hides
2.3 raw hide conservation
0 t CO2/a
purchasing raw hides
1.3 transportation
NOT INCLUDED !
raw hides to tanned
#DIV/0!
#DIV/0!
cmpl. internal waste water treatment
5.3 external production raw hides to tanned
0 t CO2/a
purchasing wetblue / wetwhite
NOT INCLUDED
tanned to crust
#DIV/0!
#DIV/0!
treatment of byproducts
sheet 3.2
delivery of byproducts
customer
0 t/a
5.3 chemicals for external production incl. wastewater treatment
0 t CO2/a
0 t/a
0 t CO2/a
internal solid waste treatment
external solid waste treatment incl. Transportation
0 t CO2/a
nature
1.4 packaging
0 t/a
0 t CO2/a
ancillary processes:
administration
fleet
water treatment
laboratory
workshops
real estate service
production energy consumption / CO2-equivalents for all products (wetblue, wetwhite, crust):
#DIV/0!
#DIV/0!
cmpl. internal solid waste treatment
5.3 external production others (packaging, un- and downstream processes, water supply)
0 t CO2/a
1.2 water supply
0 m³/a
0 t CO2/a
social facilities
deviation from BEET:
(negative = better than Benchmark)
deviation from CO2-benchmark:
#DIV/0!
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waste air treatment
athmosphere
travelling of employee
sum upstream processes:
0 t CO2/a
sum own production
0 t CO2/a
sum downstream processes:
0 t CO2/a
sum preproduction
0 t CO2/a
total energy consumption / CO2-equivalents for all products (wetblue, wetwhite, crust) incl. up- and downstream processes:
#DIV/0!
#DIV/0!
sum complete location incl. energy input and up- and downstream processes:
0 t CO2/a
total energy consumption / CO2-equivalents for all products, incl. energy input, up- and downstream processes and incl. pre-production:
#DIV/0!
sum complete incl. energy input, up- and downstream processes and incl. pre-production:
0 t CO2/a

VDL – The new tool 2.0

Therefore the new tool

- extends consequent on all upstream and downstream processes
- is based on Product Category Rules for the ecological footprint of leather (PCR) according to DIN EN 16887:2017
- means a determination of CO_2 emissions associated with leather production in a comprehensible and comparable manner

VDL – The new tool 2.0

ECO_2L determines

- a CO_2-benchmark for the company specific production process
- in relation to the manufactured product mix
- on basis of the previous audits

VDL – The new tool 2.0

For awarding the ECO_2L-Label

The company‘s energy efficiency will be compared with the BEET (Best Energy Efficiency for Tanning)

Principle: A product with a good ecological footprint can only be sustainable if it has been produced in energy efficient way.

VDL – Data

ECO_2L 2.0 always determines the BEET and PCF only for the audited location

- on basis of the data of the last 12 months preceding the current quarter.
- the recording period for the production data, the associated chemicals, energy and water consumption and all other company data must be identical.
- Data collected remain protected in a proven manner!

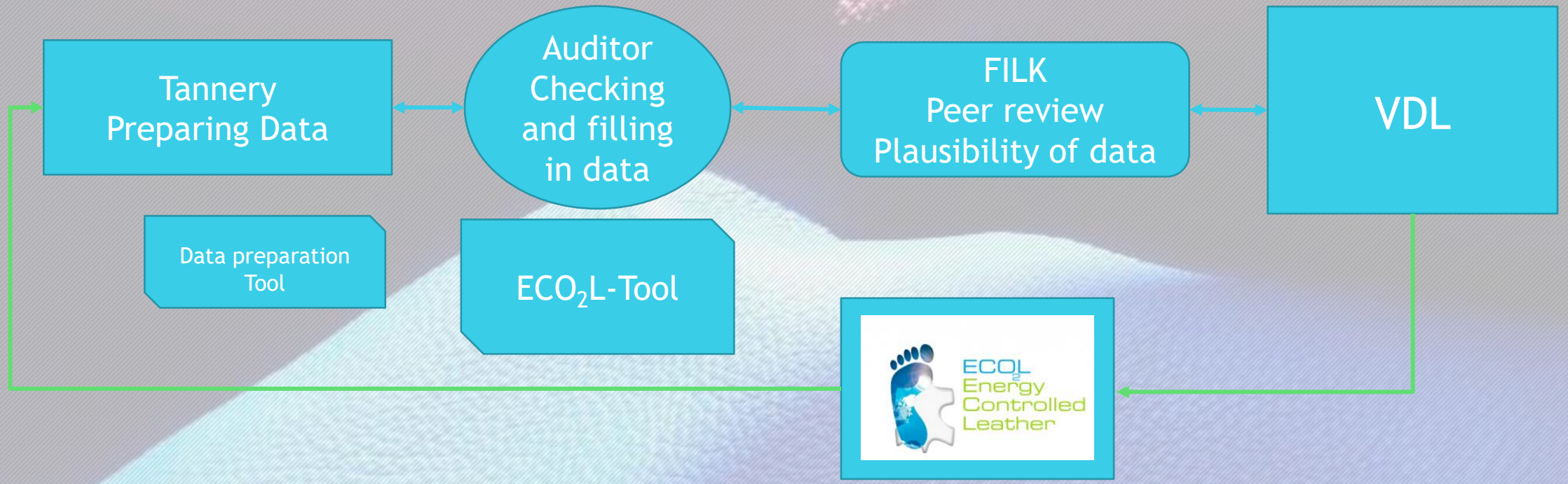
VDL – Requirements

To award the new ECO_2L label – we need the calculation of:

- the actual specific energy consumption of the company at site.
- the site-specific, international standard "Best Energy Efficiency for Tanning" (BEET) for the production type and quantity used.
- the percentage deviation of the actual energy consumption from the BEET.
- the Product Carbon Footprint (PCF) according to DIN EN 16887:2017.

VDL – Requirements

Preparation of data – audit – peer review – issuing certificate



VDL – The certificate

If all requirements are met, the certificate certifies:

- Energy consumption
- Product Carbon Footprint for the manufactured product mix

VDL – Summary

The ECO_2L 2.0 aims to determine the Product Carbon Footprint (PCF)

- within defined system limits
- according to DIN EN 16887:2017 and the Product Category Rules (PCR)
- for the manufactured product mix.

VDL – Summary

The results:

- CO_2 emissions as Product Carbon Footprint (PCF) for leather production - comparable

- actual specific energy consumption of the company at site
  - compared with the energy benchmark BEET (Best Energy Efficiency for Tanning).

- **used by companies to be able to document CO_2-neutral production with the help of offset measures.**

VDL – What else is important?

VDL and LWG (Leather Working Group) are working on a partnership

-> VDL and LWG are both non-profit

-> The aim: - to link the ECO_2L-Tool with the LWG Audit.

- to reduce data preparation / audit costs

- we want to offer our members reliable tools

proofing leather is produced sustainable

-> The introduction is planned for January 2023.

Thank you for your attention!

Our Homepage: www.eco2l-leather.com

Andreas Meyer

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Thank you!