

# A TRANSPORT SPECIFIC LIFE-CYCLE ASSESSMENT

## THE EUROPEAN SUPPORT ACTION TRANSENSUS LCA

Final Event

### Roadmapping for implementation

Thilo Bein

on behalf of the TranSensus LCA Consortium

June 24, 2025



Funded by  
the European Union

GA # 101056715



# Roadmapping for implementation

- Measures supporting uptake of TranSensus LCA approach
- Identification of research needs,
- Measures to continuously update approach

# Implement



# Measures to uptake the approach

- **Continuous dissemination**
  - Publications and presentation on conferences (e.g. LCM, TRA, RTR, ...)
  - Standard presentation and training material on guidelines and TS-LCA approach
  - Promotional video and electronic brochure
- **Participation in networks (UN ECE IG A-LCA, IEA EV Task 52, ...)**
- **Implementation of TS-LCA approach in subsequent projects / initiatives of Horizon Europe and FP 10**

# Research needs identified (I)

## ■ Goal & Scope

- Life time kilometers: Definition of vehicle 'segment' has to be standardized.

## ■ Life-Cycle Inventory

- Estimating the particulate matter emissions of tyres and brakes require more research in general
- Research enabling better traceability of electricity and modelling and use of residual grid mixes
- Multifunctionality EoL
  - research on how to handle multifunctionality in V2X cases

## ■ Impact Assessment

- Identification of individual limitations in the proposed methods (e.g.: ADP and EDP require a well mapped inventory of emissions, not always available)

# Research needs identified (II)

## ■ Social LCA

- System Boundary need to be updated in the future also based on social significance
- Product specific/Sector specific Reference Scales need to be developed for ZEV
- Site specific Social data need to be collected
- Process specific social database is needed in the future
- Activity Variables need to be developed such that it represents to each Impact subcategory.
- Impact Pathway approach need to be matured.

## ■ Road testing

- V2G: allocation of environmental credits for energy fed back into the grid
- CE & LCA: no unified indicator that comprehensively captures the concept of “resource savings.”

# Research needs identified (III)

## ■ Social LCA

- System Boundary need to be updated in the future also based on social significance
- Product specific/Sector specific Reference Scales need to be developed for ZEV
- Site specific Social data need to be collected
- Process specific social database is needed in the future
- Activity Variables need to be developed such that it represents to each Impact subcategory.
- Impact Pathway approach need to be matured.

## ■ Road testing

- V2G: allocation of environmental credits for energy fed back into the grid
- CE & LCA: no unified indicator that comprehensively captures the concept of “resource savings.”

# Continuous update needed

## ■ Goal & Scope

- Life time in years: The values are a conservative assumption and shall be updated in the future

## ■ Life-Cycle Inventory

- another round of consensus building can be considered to see if CFF should replace cut-off in the methodology

## ■ Impact Assessment

- continuous review of the advancements in the impact indicators (updates of characterization factors, new methods that replace existing ones)

# TS-LCA maintenance and update after project ends

## ■ Need to set up an organisation with a group of referent persons for after-project:

- To provide support for the TS-LCA method implementation
- To gather additional feedbacks
- To consider new regulations
- To update all default values/tables when necessary
- To update the method with improvements
- To ensure the dissemination of the updates

⇒ e. g. via ERTRAC WG on Circularity & Competitiveness (proposed solution)



A pair of hands is shown holding a small, realistic-looking globe of the Earth. The globe is positioned in the center of the frame, showing the Americas. The hands are cupped around the globe, with fingers pointing outwards. The background is a soft-focus green, suggesting foliage or grass. The lighting is bright and even.

**Thank you very much for your attention!**

*Disclaimer: Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor the granting authority can be held responsible for them.*