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Making LCA easier: onlineLCA as a tool to bring LCA expertise into enterprise workflows

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Agenda

- Introduction to onlineLCA
  - The requirements
  - Our solution
- The new form editor
  - Objectives
  - User view
  - Results
  - Report
  - Admin view
- Outlook
- Conclusion

Introduction to onlineLCA – The requirements

Increasing regulatory requirements and standards involving LCA:

- EPDs
- CBAM
- ESPR
- CPR
- EF

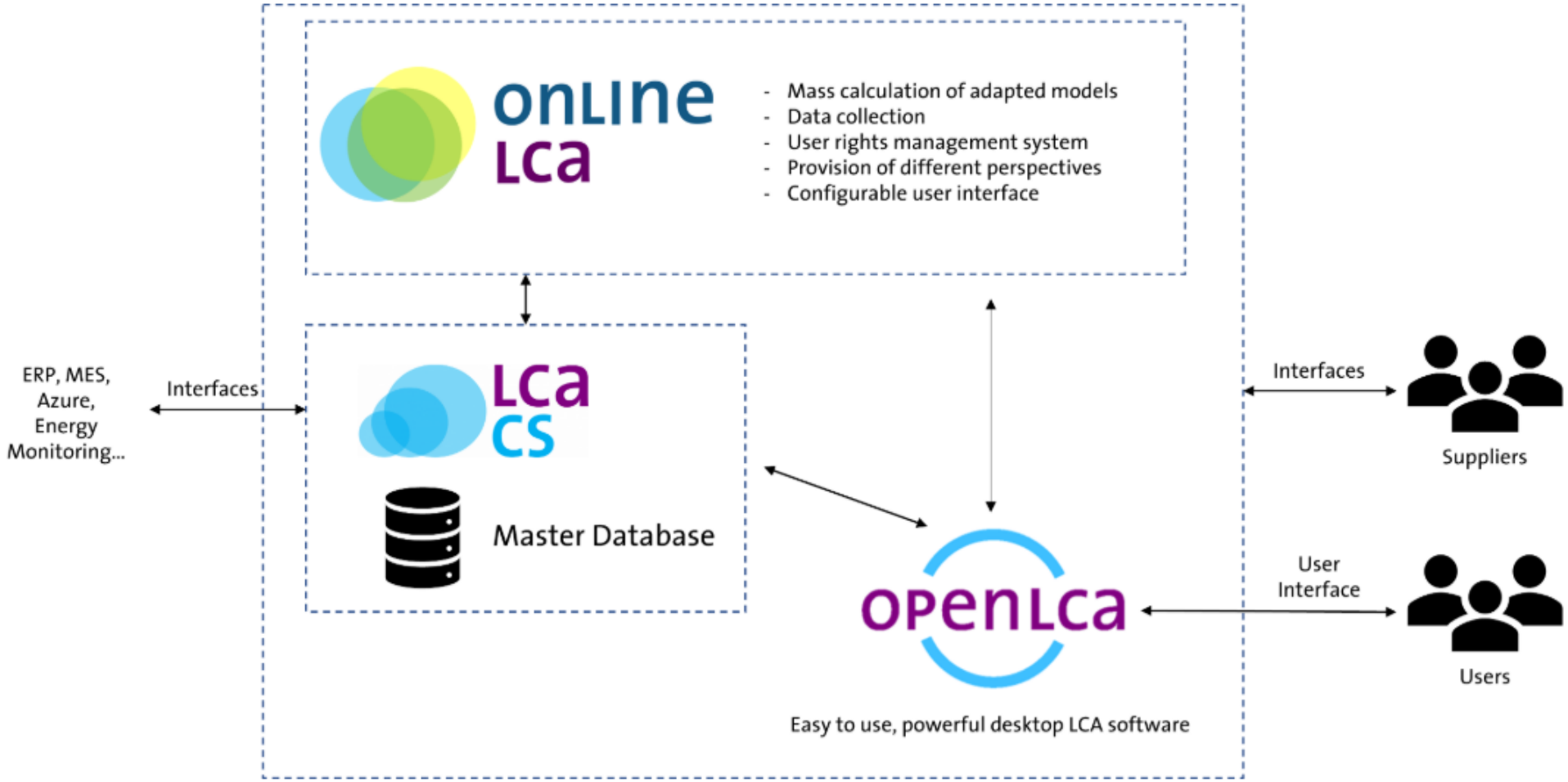
→ Need for tools that allow compliant and consistent calculations.

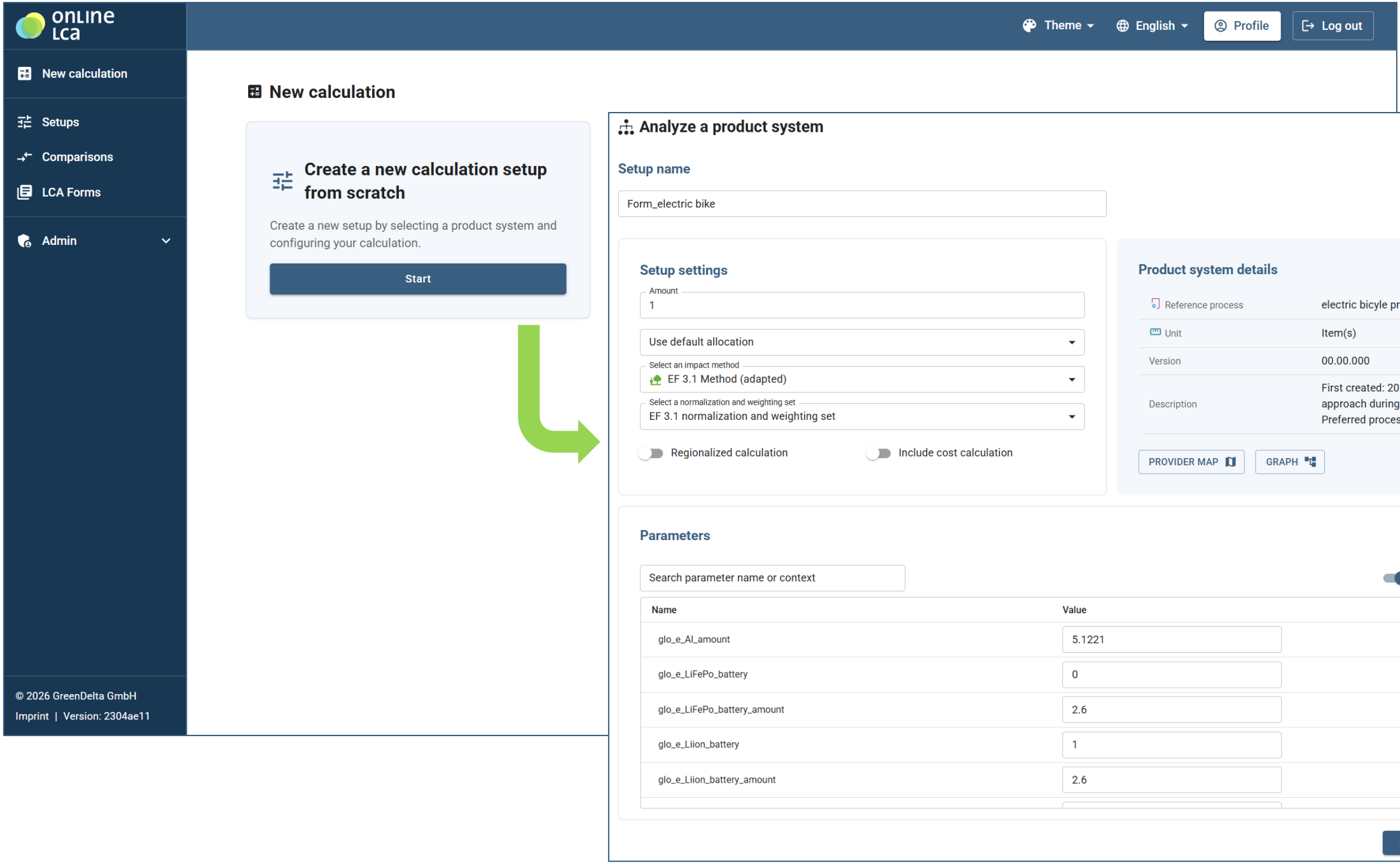
...But a lot of LCA tools are difficult to use for non-experts.

Introduction to onlineLCA – Our solution

- About three years ago: webtool to allow non-LCA-experts to perform mass-calculations of LCAs through an intuitive interface.
- Many people in an organization, independent of their level of expertise, can explore different variants and options securely, fast, and correctly.

Introduction to onlineLCA – Our solution




online LCA
Theme
English
Profile
Log out
New calculation
Setups
Comparisons
LCA Forms
Admin
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Imprint | Version: 2304ae11
New calculation
Create a new calculation setup from scratch
Create a new setup by selecting a product system and configuring your calculation.
Start
Analyze a product system
Setup name
Form_electric bike
Setup settings
Amount
1
Use default allocation
Select an impact method
EF 3.1 Method (adapted)
Select a normalization and weighting set
EF 3.1 normalization and weighting set
Regionalized calculation
Include cost calculation
Product system details
Reference process
electric bicyle production_global parameters
Unit
Item(s)
Version
00.00.000
Description
First created: 2026-04-07T12:15:38 Linking approach during creation: Prefer default providers; Preferred process type: Unit process
PROVIDER MAP
GRAPH
Parameters
Search parameter name or context
Show global parameters
RESET
Name
Value
Context
glo_e_Al_amount
5.1221
global
glo_e_LiFePo_battery
0
global
glo_e_LiFePo_battery_amount
2.6
global
glo_e_Liion_battery
1
global
glo_e_Liion_battery_amount
2.6
global
CALCULATE
SAVE

The new form editor - Objectives

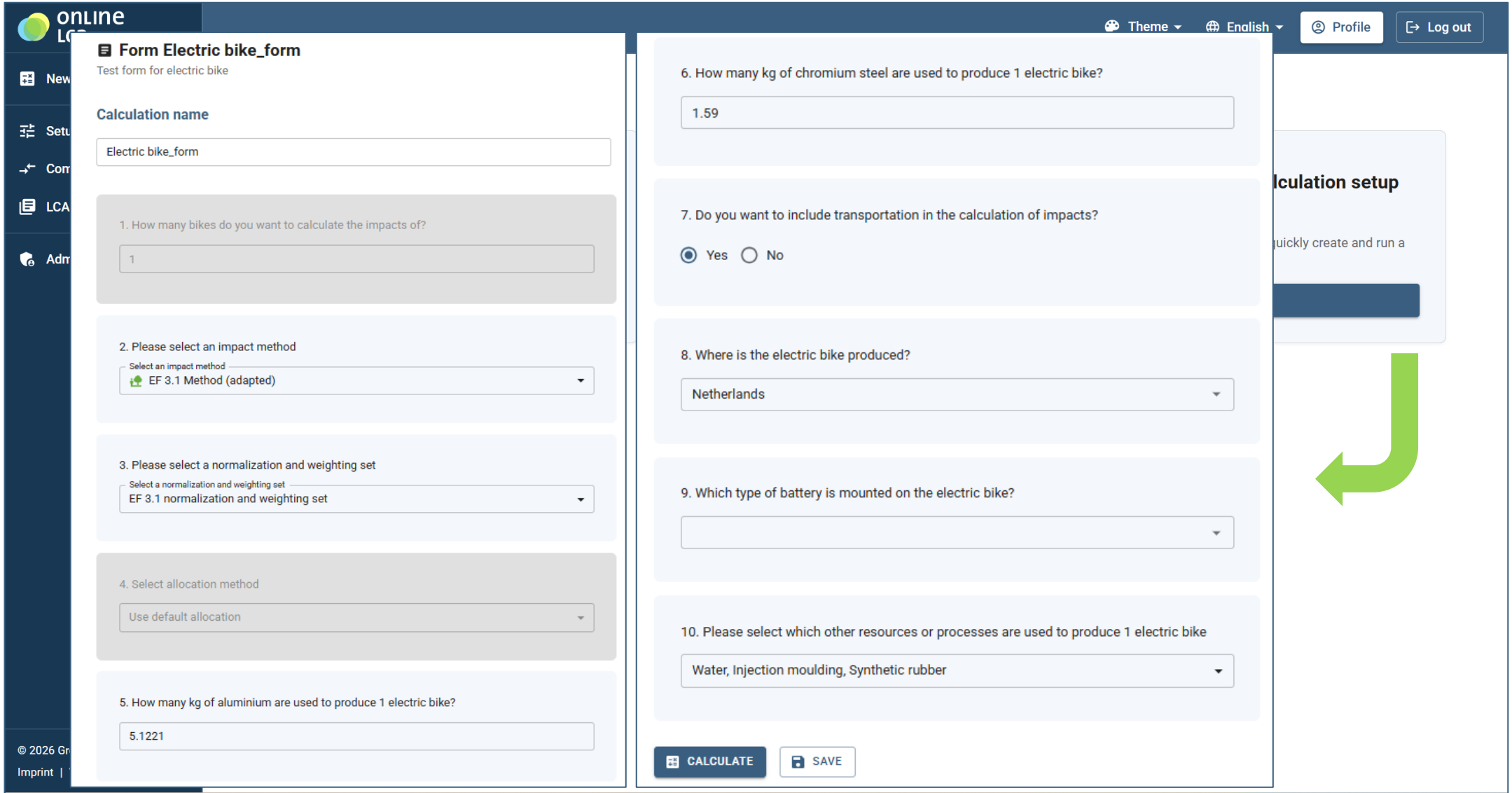
- Two main objectives:
  1. Offering users an even simpler, questionnaire-style form to fill-in the required information

     → easier to interact with the model and modify info such as quantities of materials, transportation distances or country of production.

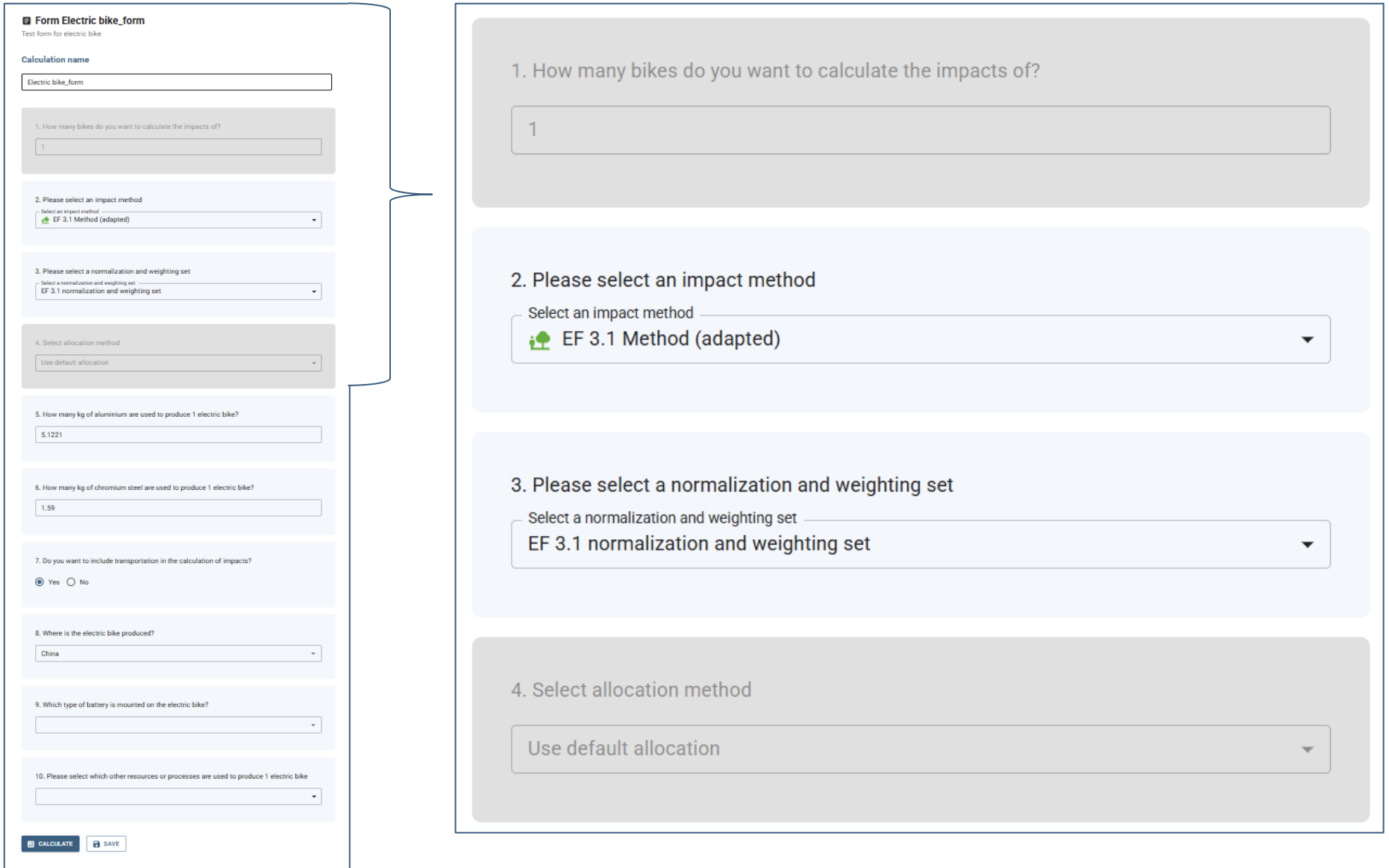
  2. Giving greater flexibility to Admins

     → possible to hide certain entries from the end-user view or make them read-only depending on the level of expertise of the user.

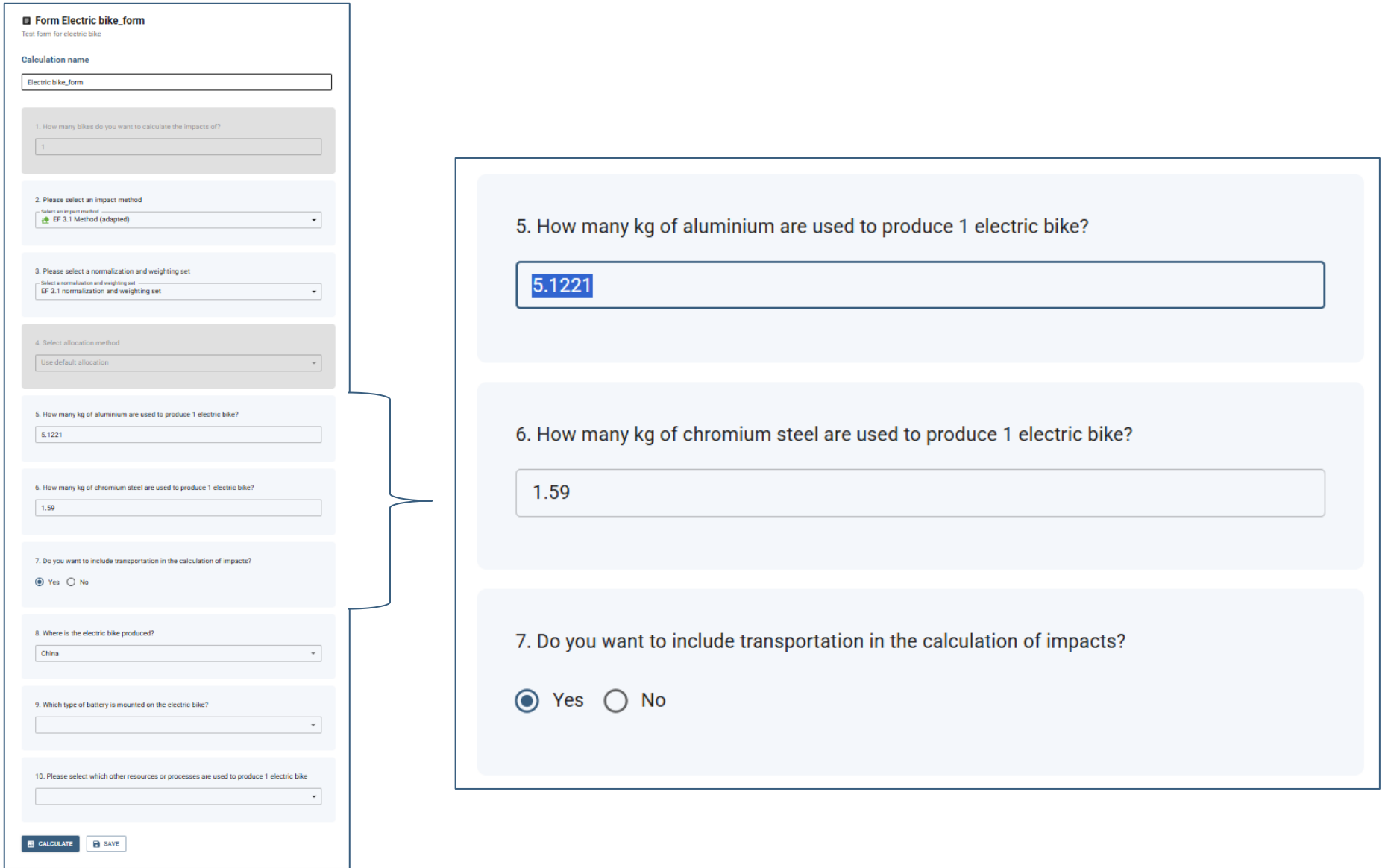
The new form editor – User view



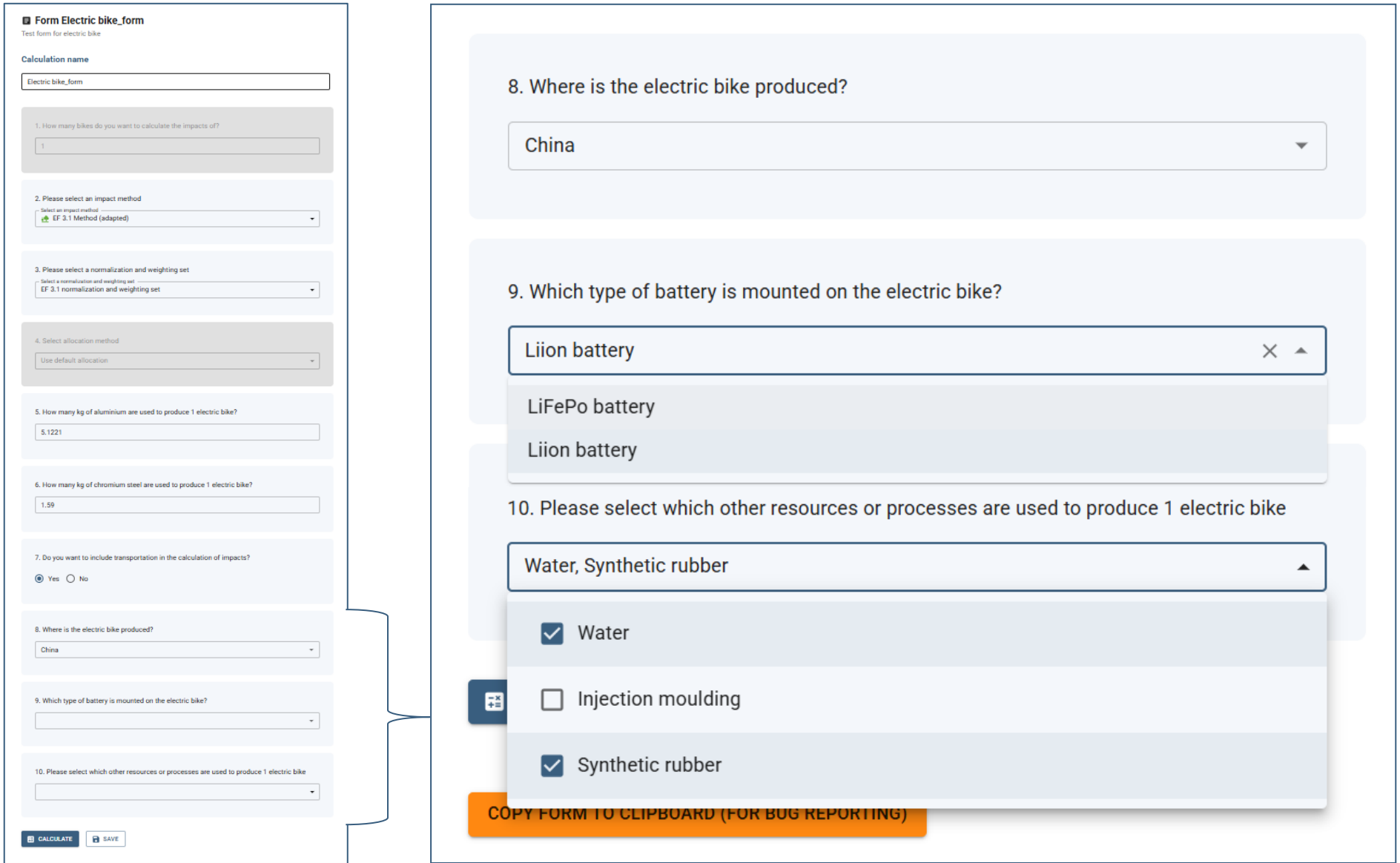
The new form editor – User view



The new form editor – User view



The new form editor – User view



The new form editor – Results

Calculation result

Form_electric bike (global parameters)

TOTAL IMPACTS | IMPACT CONTRIBUTION | INVENTORY | CONTRIBUTION TREE | ANALYSIS | MODEL GRAPH | SANKEY | REPORT

Impact name	Category
Acidification	openLCA LCIA Categories 2.7.5/EF
Climate change	openLCA LCIA Categories 2.7.5/EF
Climate change (biogenic)	openLCA LCIA Categories 2.7.5/EF
Climate change (fossil)	openLCA LCIA Categories 2.7.5/EF
Climate change (land use)	openLCA LCIA Categories 2.7.5/EF
Ecotoxicity freshwater	openLCA LCIA Categories 2.7.5/EF
Ecotoxicity freshwater (inorganics)	openLCA LCIA Categories 2.7.5/EF
Ecotoxicity freshwater (organics)	openLCA LCIA Categories 2.7.5/EF
Eutrophication freshwater	openLCA LCIA Categories 2.7.5/EF
Eutrophication marine	openLCA LCIA Categories 2.7.5/EF
Eutrophication terrestrial	openLCA LCIA Categories 2.7.5/EF
Human toxicity cancer	openLCA LCIA Categories 2.7.5/EF
Human toxicity cancer (inorganics)	openLCA LCIA Categories 2.7.5/EF
Human toxicity cancer (organics)	openLCA LCIA Categories 2.7.5/EF
Human toxicity non-cancer	openLCA LCIA Categories 2.7.5/EF
Human toxicity non-cancer (inorganics)	openLCA LCIA Categories 2.7.5/EF
Human toxicity non-cancer (organics)	openLCA LCIA Categories 2.7.5/EF
Ionising radiation (human health)	openLCA LCIA Categories 2.7.5/EF
Land use	openLCA LCIA Categories 2.7.5/EF
Ozone depletion	openLCA LCIA Categories 2.7.5/EF
Particulate matter	openLCA LCIA Categories 2.7.5/EF
Photochemical ozone formation (human health)	openLCA LCIA Categories 2.7.5/EF

Calculation result

Form_electric bike (global parameters)

N | INVENTORY | CONTRIBUTION TREE | ANALYSIS | MODEL GRAPH | SANKEY | REPORT

Calculation result

Form_electric bike (global parameters)

TOTAL IMPACTS | IMPACT CONTRIBUTION | INVENTORY | CONTRIBUTION TREE | ANALYSIS | MODEL GRAPH | SANKEY | REPORT

(○) Flow (●) Impact category

Select an impact category

Climate change

(●) Tree (○) Sunburst

Process	Required amount	Unit	Total result [kg CO2 eq]	Contribution
100.00% - electric bicyle production_global parameters	1	Item(s)	82.9	100.00%
35.96% - Battery, Li-ion, NMC111, rechargeable, prismatic	2.6	kg	29.81	35.96%
29.61% - Aluminium, production mix, at plant	5.122	kg	24.55	29.61%
15.15% - Electric motor, electric vehicle, at plant	4.4	kg	12.56	15.15%
8.47% - Chromium steel 18/8, at plant	1.59	kg	7.025	8.47%
5.95% - Electricity, medium voltage, at grid	24.8	MJ	4.936	5.95%
2.40% - Injection moulding	1.958	kg	1.993	2.40%
1.94% - Synthetic rubber, at plant	0.5625	kg	1.612	1.94%
0.27% - Road vehicle plant	1.32e-9	Item(s)	0.2264	0.27%
0.23% - Transport, freight, lorry, fleet average	1	t*km	0.1886	0.23%
0.00% - Tap water, at user	0.744	kg	1.51e-4	0.00%

The new form editor – Report

GreenDeLTa

4/16/2026

Calculation name : Electric bike_form

Product system : electric bicyle production_global parameters
Product description : First created: 2026-04-07T12:15:38
Linking approach during creation: Prefer default providers; Preferred process type: Unit process
Impact method : EF 3.1 Method (adapted)
Reference process : electric bicyle production_global parameters

Total impacts table:

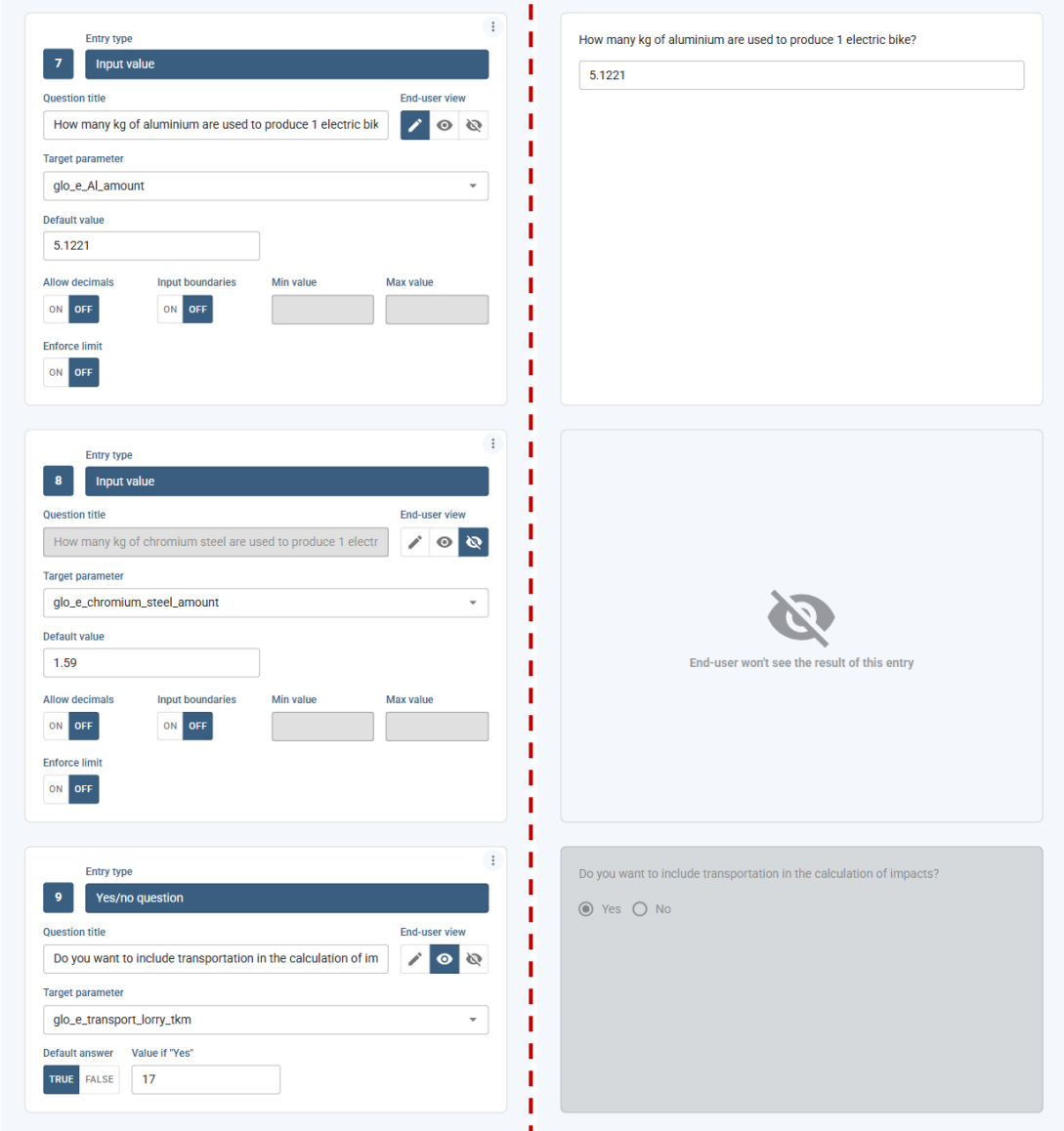
Impact name	Category	Amount	Unit
Ecotoxicity freshwater (organics)	openLCA LCIA Categories 2.7.5/EF 3.1 Method (adapted)	17.91171337730351	CTUe
Ecotoxicity freshwater (inorganics)	openLCA LCIA Categories 2.7.5/EF 3.1 Method (adapted)	373.3631199421141	CTUe
Ionising radiation (human health)	openLCA LCIA Categories 2.7.5/EF 3.1 Method (adapted)	28.868322476438333	kBq U235 eq
Ozone depletion	openLCA LCIA Categories 2.7.5/EF 3.1 Method (adapted)	0.0000027241318101956984	kg CFC11 eq
Eutrophication marine	openLCA LCIA Categories 2.7.5/EF 3.1 Method (adapted)	0.09810858960753915	kg N eq

Parameter table:

Parameter name	Value
glo_e_Al_amount@global	5.1221
glo_e_chromium_steel_amount@global	1.59
glo_e_transport_lorry_tkm@global	17
glo_e_electricity_CN@global	0
glo_e_electricity_NL@global	1
glo_e_electricity_DE@global	0
glo_e_LiFePo_battery@global	0
glo_e_Liion_battery@global	1
glo_e_water_amount@global	0.744
glo_e_injection_moulding_amount@global	1.9575
glo_e_synthetic_rubber_amount@global	0.5625

The new form editor – Admin view

Admin view to set questions



Rendering / user view

Outlook

- The same as openLCA, onlineLCA is a live tool that will be continuously developed to meet users' needs and expectations.
- Next release: direct upload of databases.

Conclusion

- onlineLCA, especially with the addition of the new form editor feature, allows easier interaction with the LCA model for non-experts.

→ Making LCA easier: onlineLCA as a tool to bring LCA expertise into enterprise workflows

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Thank you!

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