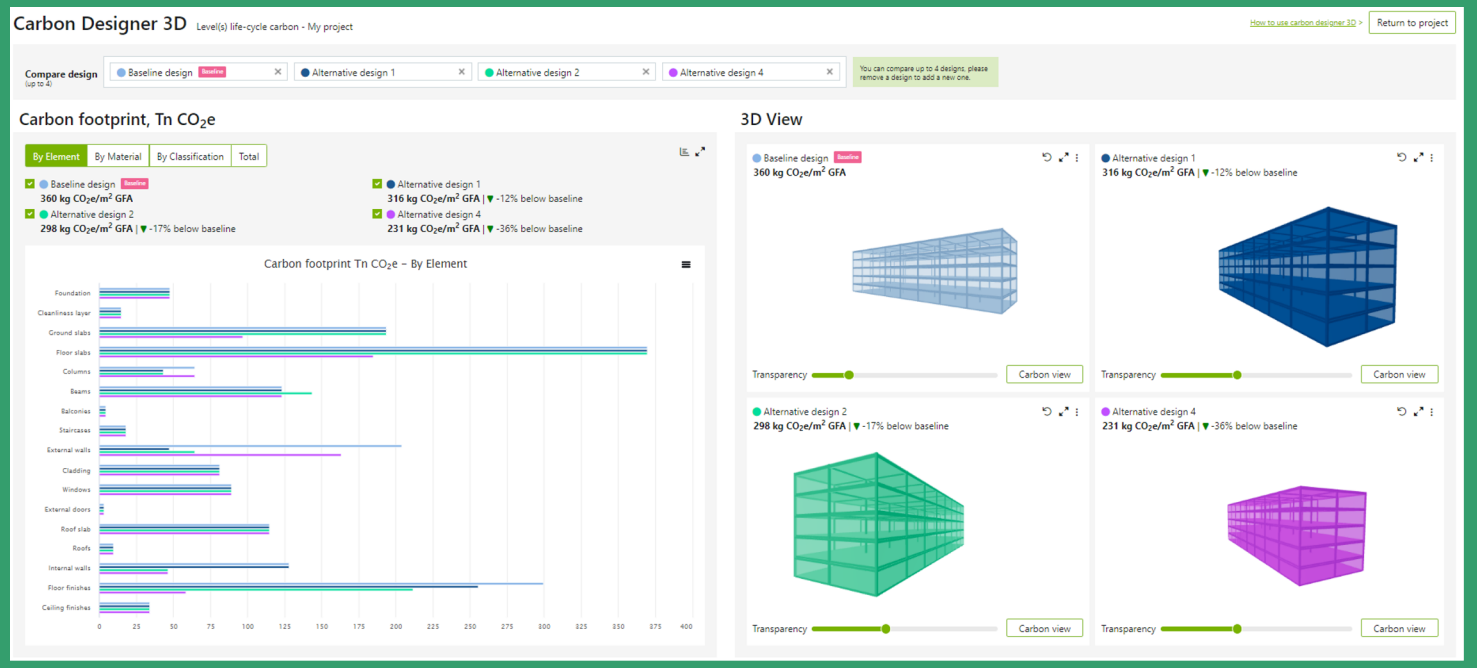
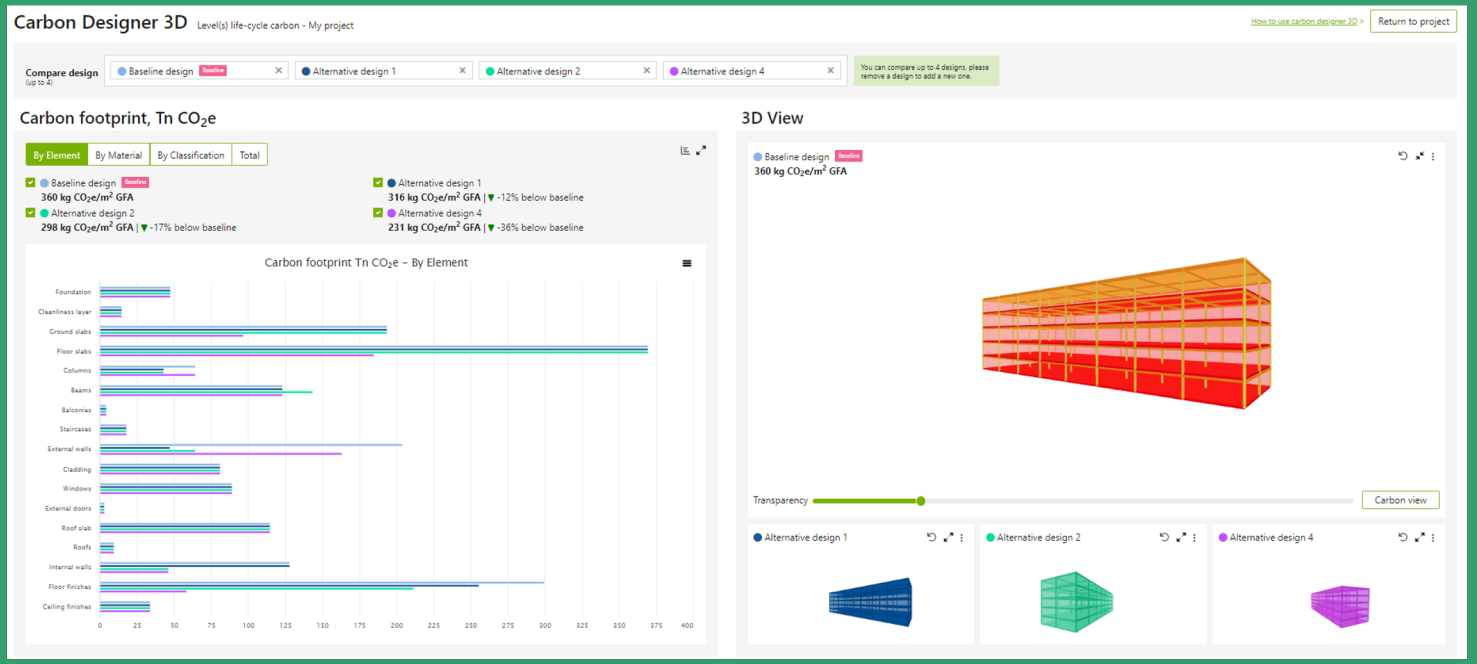
Release notes

- April 2022





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Release highlights

GENERAL IMPROVEMENTS

AWS Cloud, faster response time and cybersecurity improvements

One Click LCA now runs much faster on AWS Cloud, with calculations in the background

Continued cybersecurity improvements

More flexible data importing process

EPD SOFTWARE

New, efficient EPD program

One Click LCA is pre-verified for a new, cost-efficient EPD program: EPD Hub

New averaging feature speeds up EPD creation with inputs from multiple products

One Click LCA now generates INIES-aligned French FDES documents

BUILDING/INFRA LCA

Carbon Designer 3D & Bentley iTwin integration

Carbon Designer 3D released with advanced visuals and several requested capabilities

Bentley iTwin integration now available

GLOBAL DATA & COMPLIANCE

New Zealand national construction database, BRANZ is now integrated (1093 resources)

Several updates to the Swedish Klimatdeklaration building LCA

New tool & language for the Japanese market

Lots of tool updates, thousands of new datapoints & white goods generic datasets

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General improvements

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Customer request

Running on AWS & faster software response time

One Click LCA services are now entirely hosted on the AWS Cloud platform in the European Union. This gives the service a faster response time, better scalability and higher availability.

We are also releasing updates to the calculation processes and software architecture that will result in significant software response time improvements, for example in:

- Saving edits in queries and recalculating results
- BIM/Excel Import process
- Project page loading

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Customer request

Nearly instant saving with background calculation

Calculations are now done in the background, meaning that you can continue working and making further edits while the calculations are updated. Once the calculations have been updated, you can again save your newer edits.

> *It is not possible to save edits while the previous recalculation is in process. To make it clear that the calculation is still in process, the Save button is deactivated and shows a spinner. There is also a note at the top of the page about an ongoing recalculation.*

Saving edits in comments or private classifications is instant.

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Customer request

Continued cybersecurity improvements

In order to keep your data safe, we periodically test our cybersecurity safeguards.

To do so, we are regularly commissioning penetration tests from external cybersecurity experts. No critical or essential vulnerabilities were identified at this time.

We have successfully remedied identified low-level issues with some risk exposure and released fixes during the course of the fourth and first quarters.

We have also instituted new ongoing cybersecurity improvement measures as part of our software development and release process. We have a dedicated person working on cybersecurity improvements in our team.

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Customer request

More flexible data importing process

Improvements to the BIM / Excel import process:

- The limit on the number of imported rows has been raised to 500
- Quantity type column (QTY_TYPE) can no longer be unselected from combination criteria
- Materials that had UNIT as quantity type can now be combined with each other

Improvements to mapping of custom unit definitions when importing data:

- One Click LCA can map your own unit definitions in the source data to units used in One Click LCA, but there needs to be a one-to-one match
- While the feature is flexible, you can e.g. use it to import data with units in languages other than English. In Finnish, you could use **kpl** instead of **pcs**, **j-m** instead of **m**, and **tn / t / tonne** instead of **ton**.
- Contact One Click LCA Customer Support to enable this feature

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Building LCA – Carbon Designer 3D

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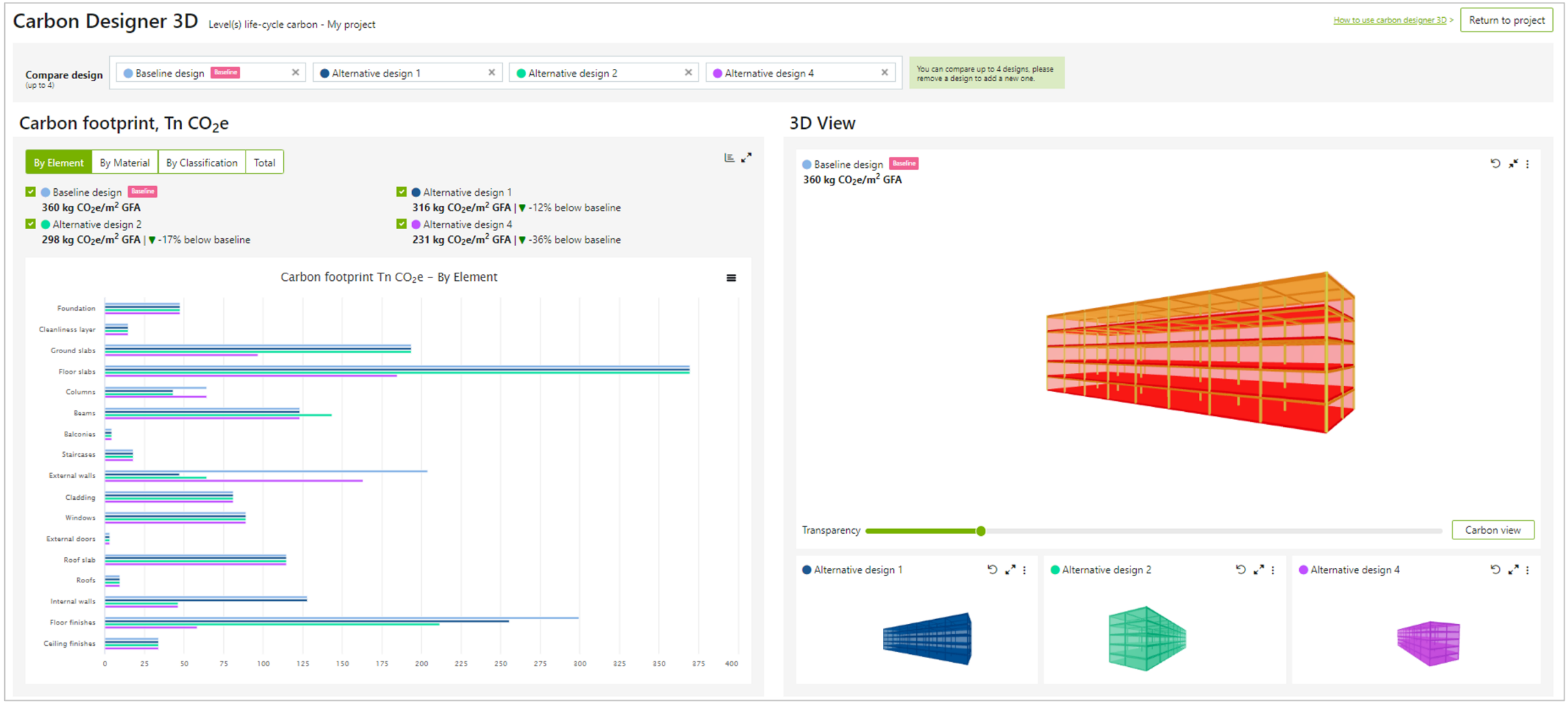
Carbon Designer 3D is now available



Carbon Designer 3D is a new product, available separately or as part of product packages. It's not active automatically for users of the previous Carbon Designer. Reach out to sales@oneclicklca.com for details.

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Customer request

Carbon Designer 3D: easier, faster & better comparisons

With Carbon Designer 3D, you can:

Set-up high-quality comparisons in seconds

Directly showcase comparisons with eye-catching visualizations

Create multiple alternative designs and compare up to 4 of them at a time. Alternative designs can e.g. have completely different dimensions and number of floors.*

Access and edit the data of all designs inside Carbon Designer 3D*

Directly switch default materials to any alternative resource in the database. You no longer need to create & publish private constructions each time you need to switch a datapoint.**

Create private company templates to overwrite default constructions (see next slides)**

Compare impacts per material type and classification directly in Carbon Designer 3D

Get a better grasp of building dimensions & the impacts of each building part with 3D models

Save design alternatives from Carbon Designer 3D to any regular designs in the project

* *The feature has limitations for Carbon Designer 3D lite version.*
** *The feature is not enabled for Carbon Designer 3D lite version.*

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Customer request

Carbon Designer 3D: updated structural model

Carbon Designer 3D increases the accuracy of structural calculations and offers flexibility.

The following structural elements have been added in Carbon Designer 3D:

- Shear walls are included in many concrete frame options
- Steel frames account for secondary beams (below slabs), steel connections & wind bracing
- Secant piling walls & soil stabilization

The structural frame selection affects the structural grid (i.e. column spacing) and determines if some building elements are included. The selection does not affect default constructions.

In the final step of creating a new design, you can choose whether to apply a public or private template (e.g. a template for steel frames or for concrete buildings with higher number of floors). A range of public templates will become available soon after the release.

Default structural frames are updated to include shorter column spacing distances and beams in both axis of the building (for most regions). Default constructions are aligned accordingly.

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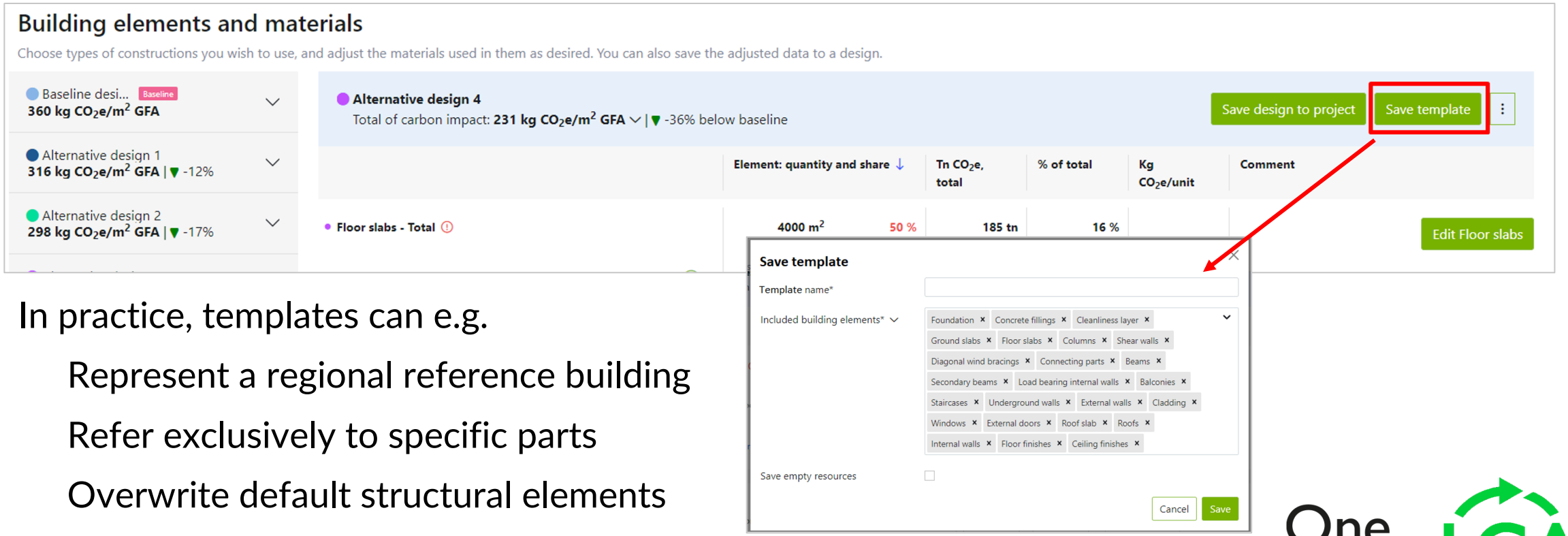
Customer request

Carbon Designer 3D: customize with private templates

Any design in Carbon Designer 3D can be saved as a **private template** in your company account. Hence, all users of the company account can use the template in any project. The template includes constructions and their given shares as they come from the relevant design.

Templates can be applied in the last step of design creation.



In practice, templates can e.g.

- Represent a regional reference building
- Refer exclusively to specific parts
- Overwrite default structural elements

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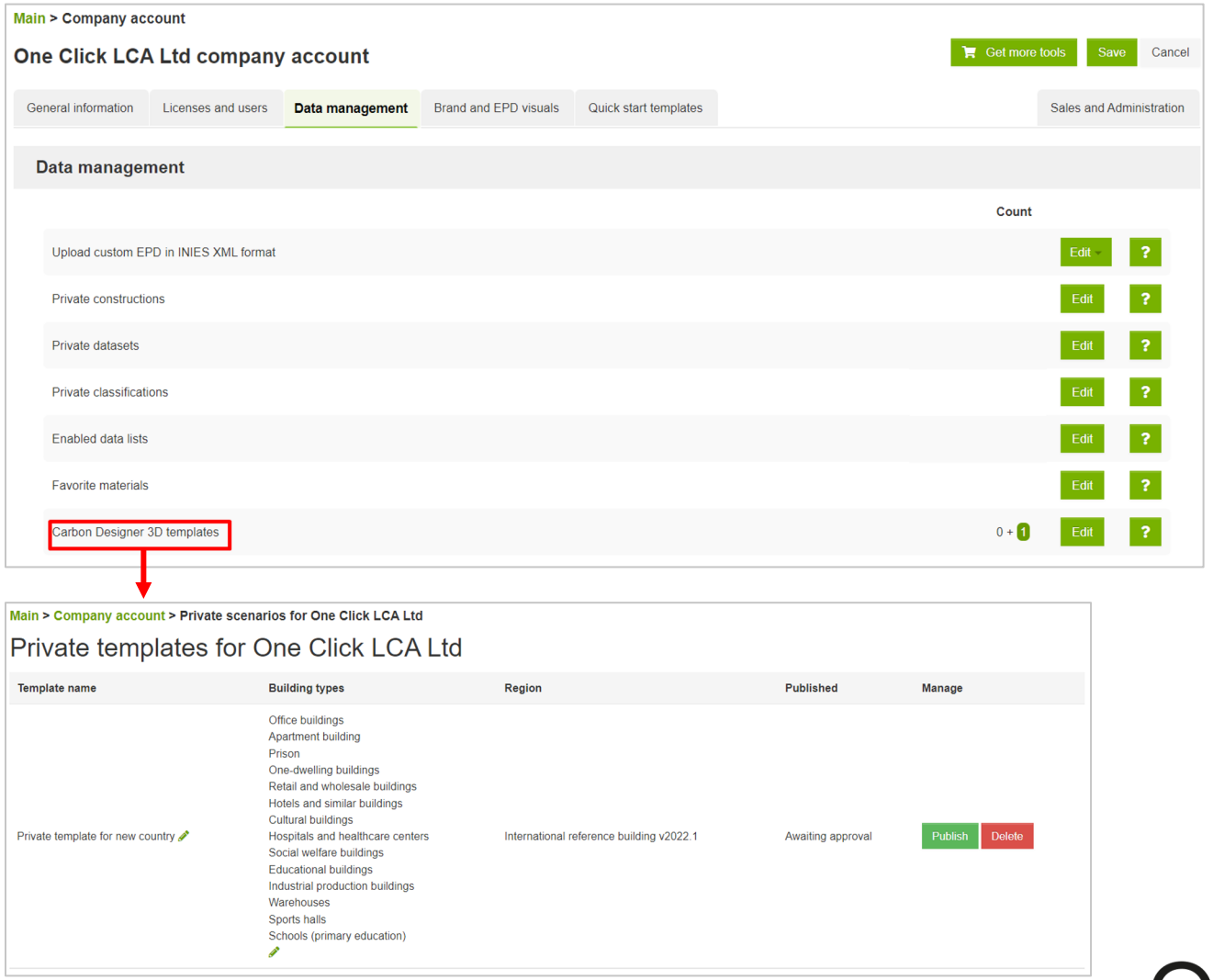
Customer request

Carbon Designer 3D: manage private templates

Private templates are managed in the same way as private constructions & datapoints.

The main users of the company account can publish any number of private templates.

Other company account users can submit suggested templates to be approved by a main user.



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Carbon Designer 3D: product launch summary

Carbon Designer 3D is a new product, available separately or as part of product packages. The product is not enabled automatically for users of the previous Carbon Designer version. Reach out to sales@oneclicklca.com for details.

Core differences between the previous version of Carbon Designer and Carbon Designer 3D:

- Carbon Designer 3D is not linked to a single design, but to a project. This allows data to be saved to any design and variants created can be stored without being saved to a design.
- Calculation remains the same for all building elements except the structural frame.
- Data remains the same, with the following exceptions:
  - Default constructions for columns and beams have been edited for most of the regions so that they align with the new structural calculations
  - The Norwegian region does not include the lavkarbonbetong data by default
  - New structural building elements have been added (e.g. shear walls, wind bracings etc.)
  - Energy data and default values are no longer available

Limitations: Carbon Designer 3D does not currently support Life-Cycle Costing and importing areas.

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Infrastructure LCA – Bentley iTwin integration

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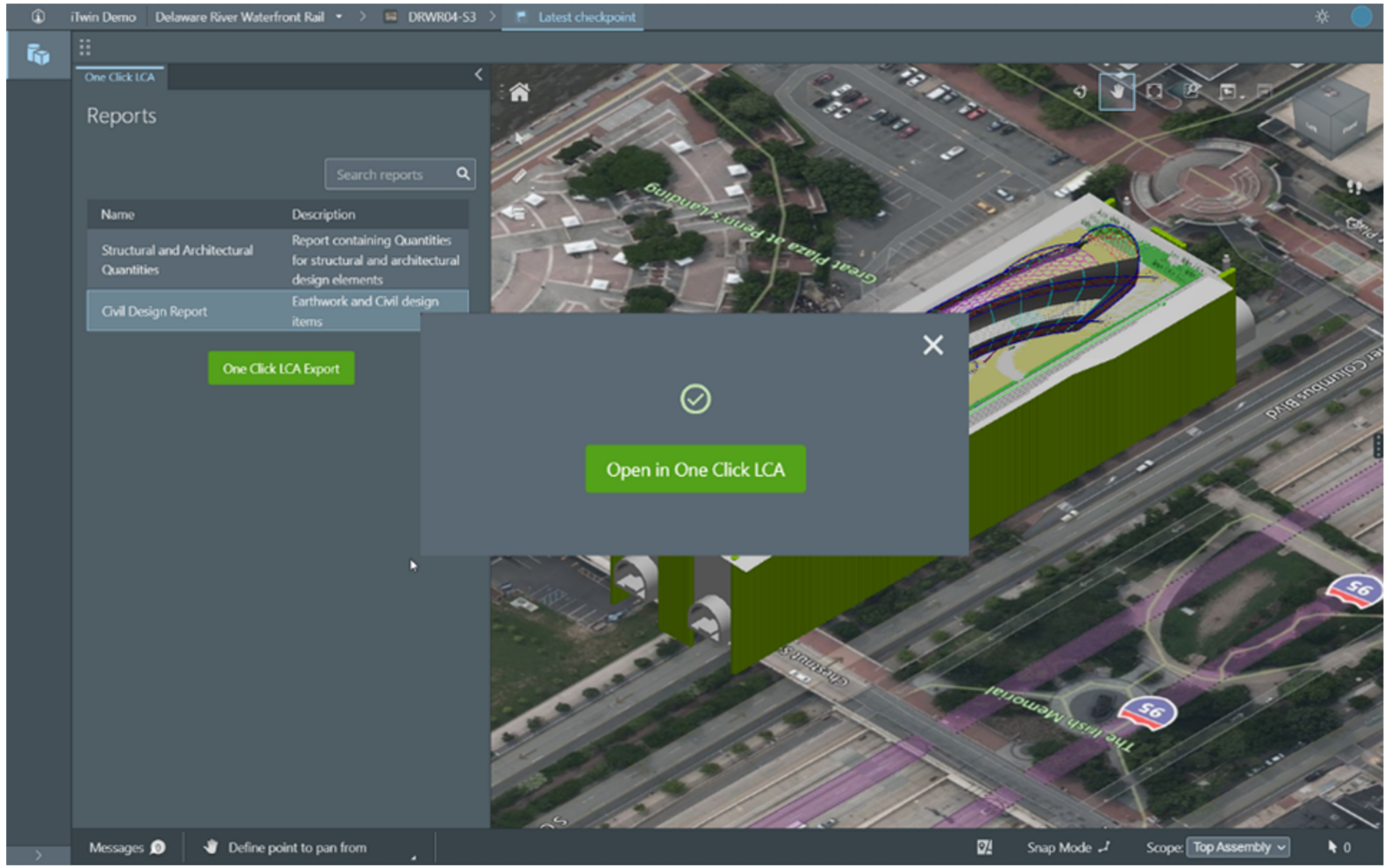
Bentley iTwin integration for infrastructure LCA

One Click LCA now integrates with Bentley Systems iTwin platform for infrastructure LCA automation. All Bentley users* can transfer their data via the iTwin platform to One Click LCA.



The solution is especially suited for large projects with complex take-offs which can be easily customized using the report generation module in iTwin.

Bentley®
Advancing Infrastructure

One Click LCA

* Users of any Bentley products, e.g. OpenRoads, OpenRail and OpenBuilding Designer.

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EPD software – EPD Hub pre-verification, product averaging feature & INIES-aligned French FDES document generation

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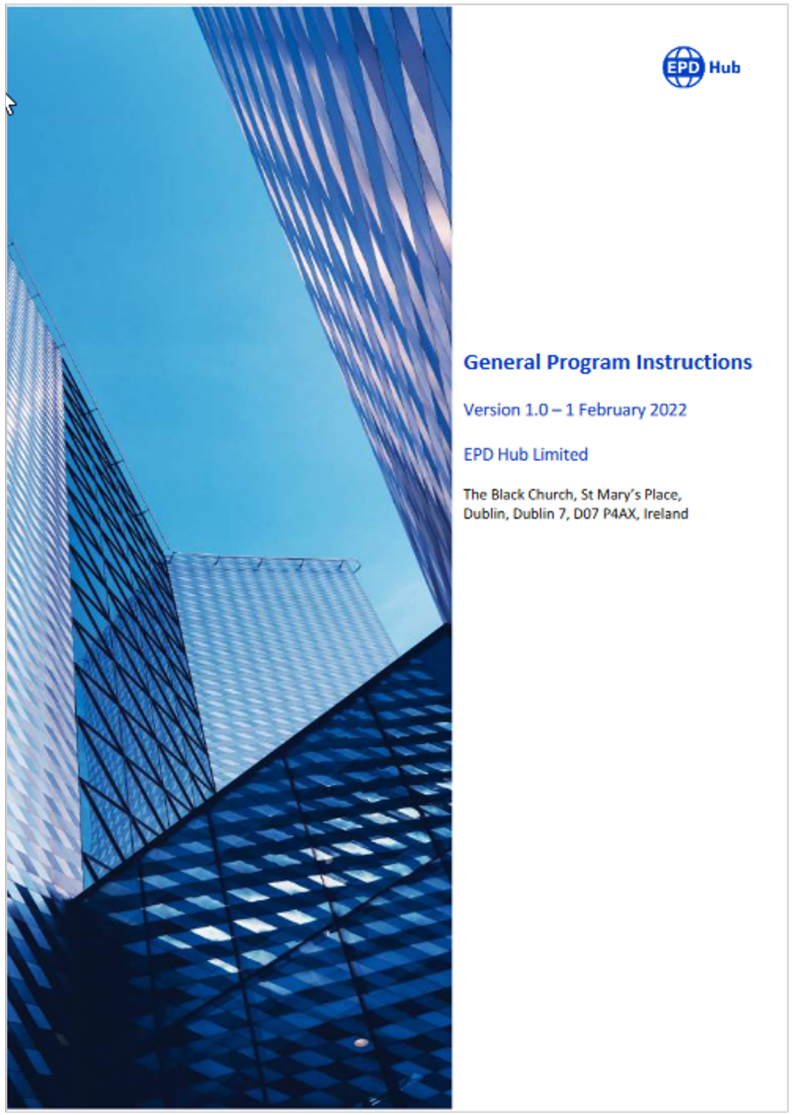
One Click LCA is now pre-verified for EPD Hub



One Click LCA is now pre-verified for EPD Hub, a program that makes publishing EPDs easy, reliable, automated, and cost-effective for manufacturers and consultants anywhere in the world.

EPD Hub has a single PCR for multiple standards: EN 15804, ISO 21930 & EN 50693. EPD Hub verifies EPDs itself for quality purposes.

For program documents, visit the EPD Hub website.

Many EPD types are available:

- Classic EPDs
- Sister EPD (variant of published EPD)
- Project EPD
- Design phase EPD for new projects
- Private EPD (confidential)

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New, leaner EPD Generator version for EPD Hub

A new EPD Generator is available in One Click LCA, dedicated to the EPD Hub program and with a much leaner project workflow.

This new EPD Generator does not require background report inputs at all. Instead, EPD Hub verification is based on the digital EPD data. Certain other EPD input data is no longer required either, resulting in additional time and cost savings.

For easier documentation of EPD information, many program requirements are met with pre-defined multiple-choice questions: type of average, reference standard, c-PCR, product sector, category of EPD, and scope of EPD

Transfer of LCA data from other pre-verified EPD tools in One Click LCA is seamless. Once the tool is activated, all previous designs can be copied to it with LCA data unchanged. Main impact results do not change between these tools.

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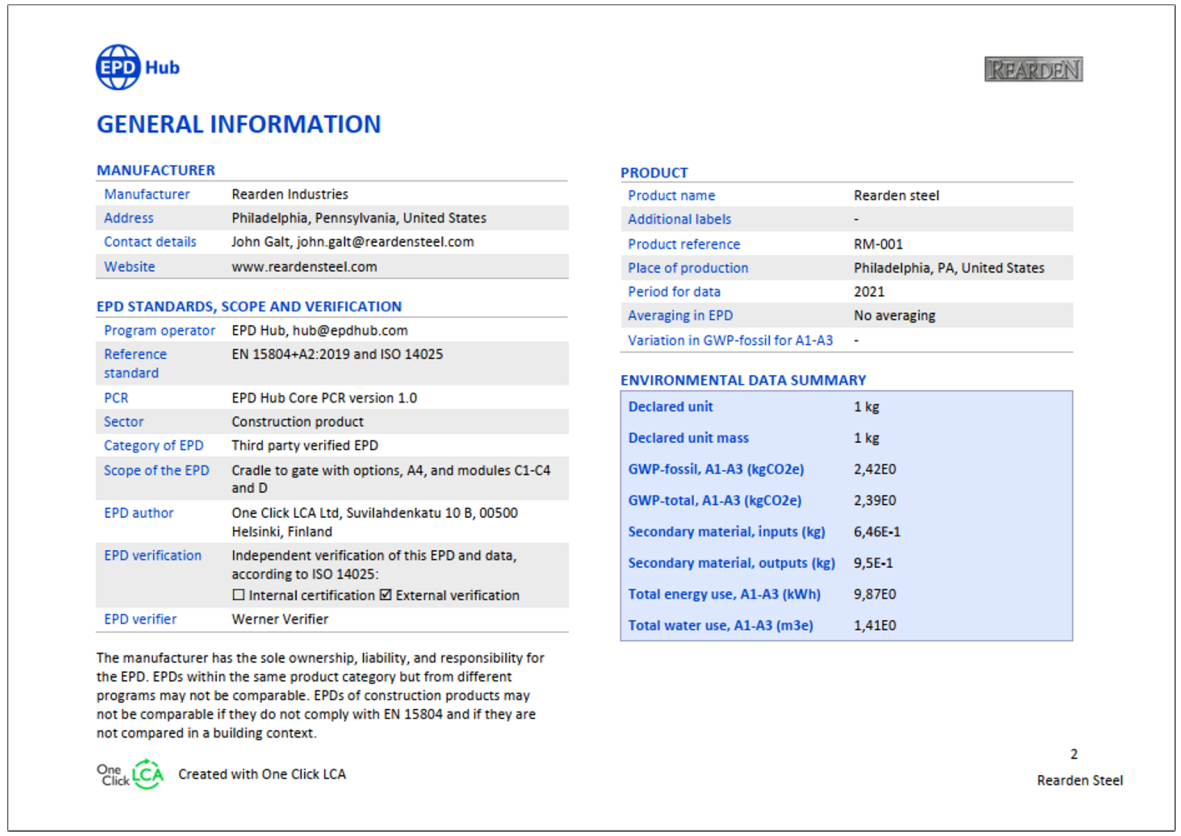
New EPD template for EPD Hub

The EPD document itself has undergone a facelift for the EPD Hub. The overall visual design has been updated, incl. a change in the color scheme and better visibility for key information.

The new Environmental data summary gives an overview of results, e.g. GWP-fossil, secondary material content, energy use, and water use.



EPD Hub

REARDEN

GENERAL INFORMATION

MANUFACTURER

Manufacturer	Rearden Industries
Address	Philadelphia, Pennsylvania, United States
Contact details	John Galt, john.galt@reardensteel.com
Website	www.reardensteel.com

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804+A2:2019 and ISO 14025
PCR	EPD Hub Core PCR version 1.0
Sector	Construction product
Category of EPD	Third party verified EPD
Scope of the EPD	Cradle to gate with options, A4, and modules C1-C4 and D
EPD author	One Click LCA Ltd, Suvilahdenkatu 10 B, 00500 Helsinki, Finland
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal certification ☑ External verification
EPD verifier	Werner Verifier

PRODUCT

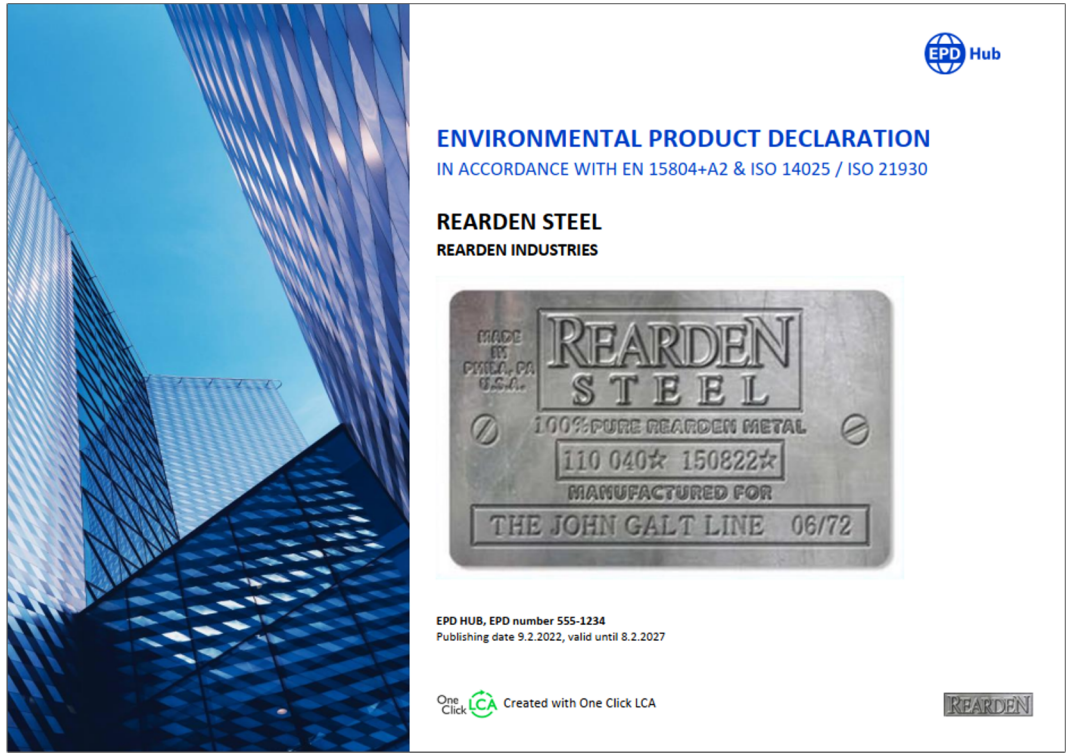
Product name	Rearden steel
Additional labels	-
Product reference	RM-001
Place of production	Philadelphia, PA, United States
Period for data	2021
Averaging in EPD	No averaging
Variation in GWP-fossil for A1-A3	-

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 kg
Declared unit mass	1 kg
GWP-fossil, A1-A3 (kgCO2e)	2,42E0
GWP-total, A1-A3 (kgCO2e)	2,39E0
Secondary material, inputs (kg)	6,46E-1
Secondary material, outputs (kg)	9,5E-1
Total energy use, A1-A3 (kWh)	9,87E0
Total water use, A1-A3 (m3e)	1,41E0

The manufacturer has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different programs may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804 and if they are not compared in a building context.

One Click LCA Created with One Click LCA



EPD Hub

ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025 / ISO 21930

REARDEN STEEL

REARDEN INDUSTRIES

EPD HUB, EPD number 555-1234

Publishing date 9.2.2022, valid until 8.2.2027

One Click LCA Created with One Click LCA

REARDEN

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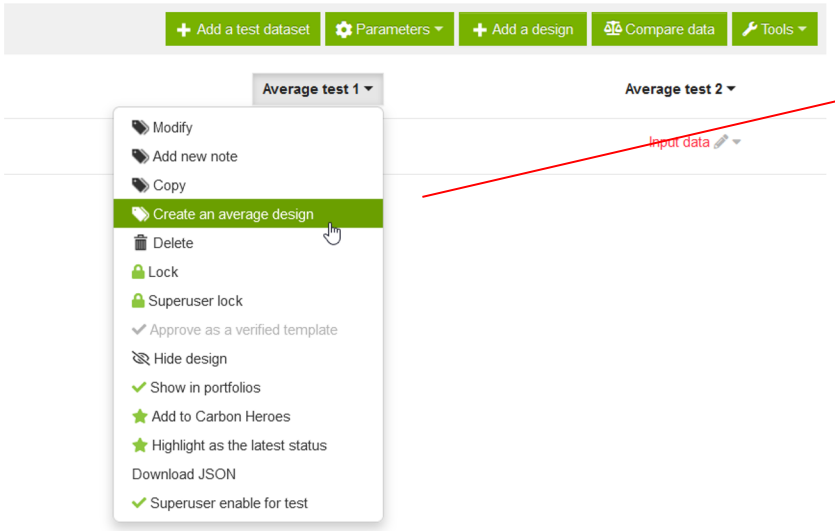
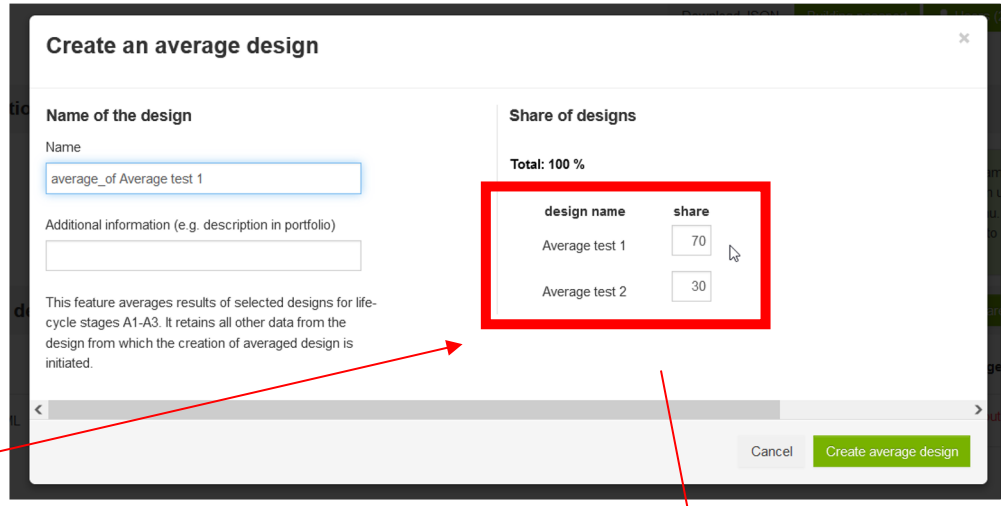
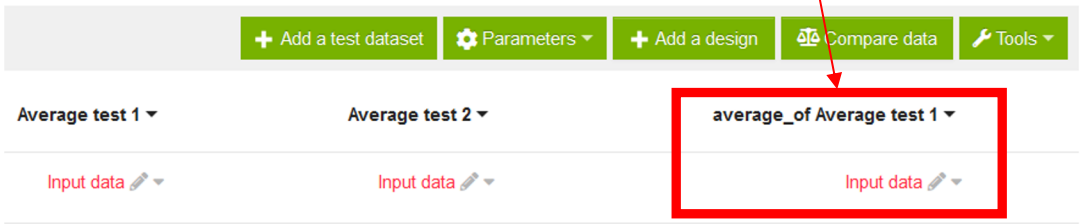
New EPD Generator feature for quick average designs

You can now create a design type called **average design**, combining the inputs of two or more designs according to percentages you assign.

This makes it faster to create EPDs that require inputs from multiple products modelled in One Click LCA.







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Customer request

INIES EPD reports and other EPD Generator updates

Manufacturers who publish FDES on the French market can now export INIES FDES documents from the EPD Generator using a new EPD template.

EPD Generator feature updates:

- Setting project scope in the design creation view. The answer given here populates the system boundaries information in the generated EPD.
- Volume capacity utilization factor now chosen from a drop-down menu. Options now limited to three: <1, >1, and =1 to make answering the question simpler for users
- Result graphs (pie charts) for business license are exported to the background report

Smaller EPD Generator improvements:

- Updated the Ecoplatform logo in the generated EPD
- The automatic product name in EPD tool is now the design name and not the project name
- Background report life cycle inventory tables now show construction names

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Global data and compliance

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Customer request

Updates to the Klimatdeklaration tool in Sweden

New transportation profiles are enabled in the tool. New profiles include train and ship alternatives, and lorry transportation alternatives that use different fuels.

Default transportation methods are now generated also for non-Boverket data. They are based on the relevant Boverket data. **To get the results correctly in all cases, set "Transportation distance default values for materials" in LCA parameters to be undefined and refresh any open tabs.**

The Boverket database has been updated during March and early April

Users can import energy data with Excel directly to the tool's site operations query. Updated template can be found here

Private constructions that are generated in Klimatdeklaration tool and get saved to a company account, will appear in the tool

The transportation stage in the Results table can be expanded, so that total impacts can be seen for both transportation legs

When users import data from Carbon Designer most data are automatically classified

The detailed report Excel output has been refined and simplified

A5.1 is no longer double-counted for EPDs (this issue was present for limited time)

A5.1 appears correctly in graphs.

IMPORTANT CHANGES THAT CAN AFFECT RESULTS – WILL BE RELEASED ON THE 15TH OF APRIL:

Site-waste impacts will be automatically marked as Specific data when EPD impacts are used in the calculation. This refers exclusively to the material impacts, as transportation impact allocation depends on the data source that is used (generic / specific). This saves users time and potential mistakes. If any specific data were wrongly classified as generic, they will be updated automatically when users resave.

In the table with the average Boverket data calculation in Results, the impacts for A5.1 site wastage for Boverket data are currently the conservative ones instead of the average. This will be now fixed.

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Customer request

New database, new EPDs and new generic data

Overall, since January 2022, we have integrated over 4000 new datasets into One Click LCA. This includes:

- BRANZ construction database for New Zealand fully integrated – 1093 datapoints in all
- Comprehensive range of white goods released as One Click LCA generic data, covering fridges, freezers, cooktops, ovens, dryers, dishwashers and laundry machines.
- Range of updated generic One Click LCA concrete profiles (C45/55, C50/60, C55/67) and updated cement and formwork resources were released

Depending on the data restrictions of different certification schemes, these data might not be available in all tools

Additionally, the recycled content of most resources appears in their data cards.

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Customer request

Updates to RE2020 tools for the French market

Improvements to the calculation logic in the B1 module (refrigerant and carbonation). To update the calculated results, please save your project again.

Added the option to import construction materials data in RSEE v1 format. You can now import project parameters data as an XML file in RSEE v1 format (instead of RSET) to convert the data into an Excel file with material quantities. The resulting Excel file is compatible with One Click LCA standard import.

Added the option to import private data from configurators in the future RE2020 v1 format. Private construction materials data from configurators can now be imported as XML files in RE2020 v1 format.

Mises à jour des outils RE2020 pour le marché français

Correction de la prise en compte du module B1 (réfrigérant et carbonatation) dans les calculs, re-enregistrez vos projets pour mettre à jour les résultats

Possibilité d'import du RSEE v1: import du RSEE au niveau des paramètres projet (à la place du RSET) pour convertir le RSEE en ficher excel avec les quantitatifs des matériaux. Cet excel est compatible au format d'import standard One Click LCA.

Import des données privées issues des configurateurs mis à jour pour supporter le future format de la RE2020 version 1.0.

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Other updates

A new DGNB DE tool has been published, replacing the previous one. The main change is a fix in the simplified calculation methodology which now affects automatically all LCA stages (including End-of-Life) as expected. Also, the whole section has been refined and the question about building technology is now omitted. Users of the method are advised to switch to the new tool.

Green Star: The tool now enables reporting the Repair rate per material and it also includes 2 new queries for Maintenance and “Emission and removals”. The latter enables users to model refrigerant leakages, Carbonisation of cementitious materials and Vegetation and landscaping scenarios.

Infrastructure tools: Impacts can be now broken down in graphs by Asset ID (similar to classification) in PAS 2080 tools and in EN17472 tool, and also by Discipline in "PAS 2080 with HS2 extensions" tool. Additionally, the latter tool now enables modelling vegetation and landscaping scenarios.

Rakennuksen vähähiilisyyden arviointimenetelmä 2021 tool: impacts shown next to the resources in the material query are no longer denominated.

Thickness is included in the detailed report of multiple building tools (NS 3720, Klimatdeklaration, all LEED tools, Levels, Global and Net Zero)

GHG reporting tools now include Sankey graphs and Bubble charts in their results.

Interior design tool includes Green Material Benchmarks (Expert feature).

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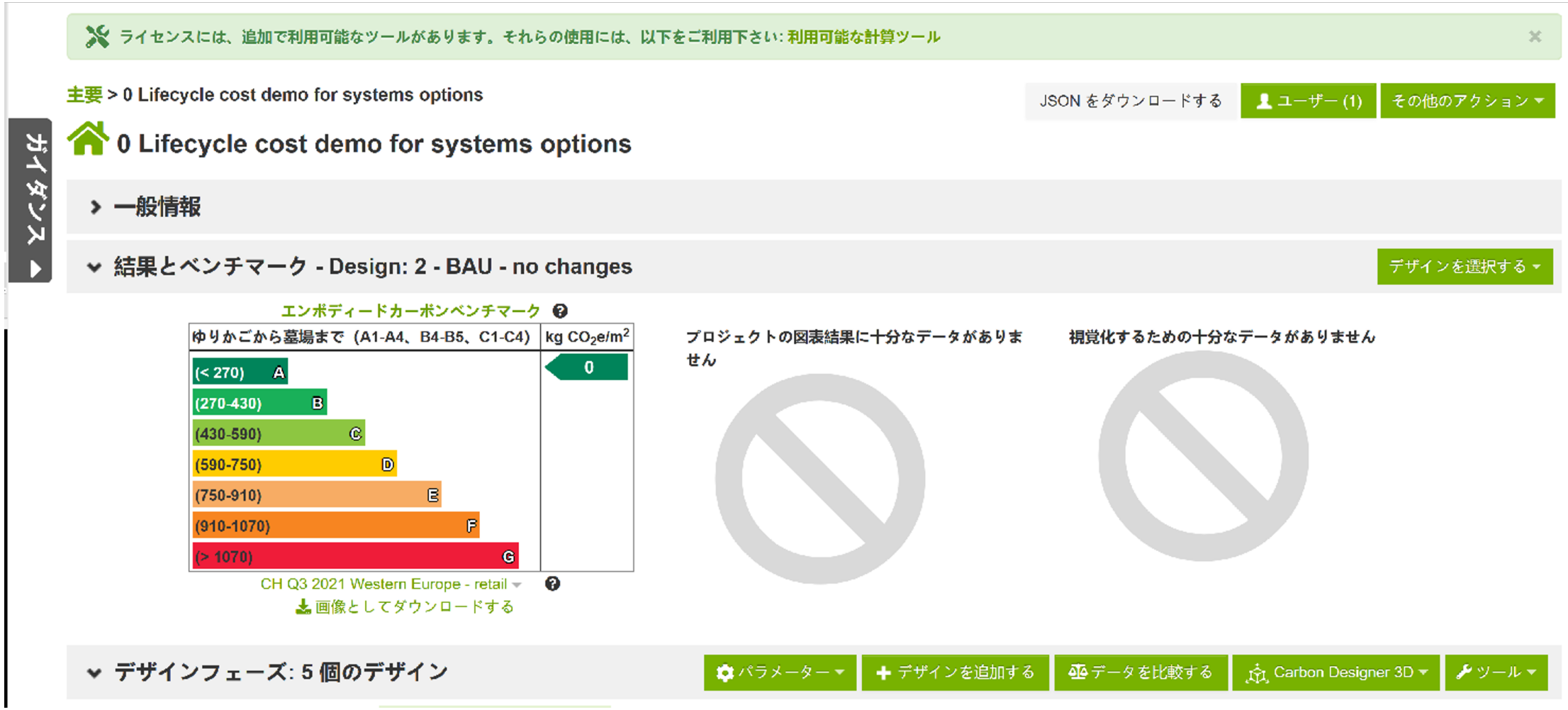
Customer request

Local tool and language version for Japan



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