JSON guide for LCAbyg 2023 (5.3.1.0)

How to understand and use the export function

LCAbyg
{...} JSON

Title	JSON guide for LCAbyg 2023
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Disclaimer

LCAbyg is under constant development and for that reason, there may be changes in the JSON files. Always remember to download the latest version of LCAbyg and download the latest version of the JSON guide, which you can find here https://www.lcabyg.dk/download-program. Sign up for our newsletter here https://www.lcabyg.dk/news-letter, if you do not want to miss the latest updates and bug fixes.

Readme

Before starting, you should read and understand the basics in the **JSON guide for LCAbyg 5 Creation of JSON projects in LCAbyg - import** which can be found here https://www.lcabyg.dk/da/usermanual/brugervejledning-andre-vaerktojer/.

1 Export from LCAbyg to JSON

1.1 Export the project to JSON

The building model and the operations can be exported LCAbyg to JSON. The steps are shown in Figure 1.

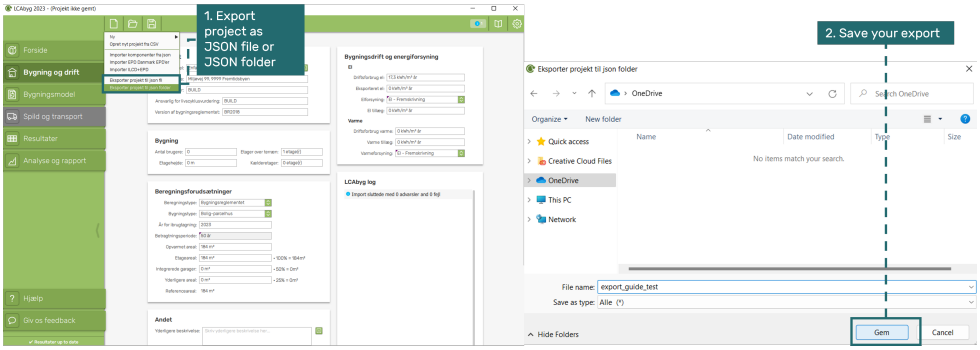

Figure 1: Export project from LCAbyg to JSON

The exported JSON project is structured either as a JSON file with all nodes and edges or into a folder named "User" that contains the project, see Figure 2. The different components of the project are organized into individual JSON files to help give an overview of the content. The JSON file "Others" contains specific edges.

Figure 2: The structure of the exported json project

1.2 Results in JSON

The computed results are structured in JSON as a dictionary containing two keys "model" and "results" – see Figure 3. The key, "model", contains the nodes and edges of the entire building project, including quantities. The organization of the quantities follows the structure of how they are organized inside LCAbyg. The nodes in the model key are used to look up names of components to find their respective unique ID's. The found ID's can then be used to search for specific components inside the "results" key. The results key contains nodes with results organized by instance. These are organized into nodes that each contain results with values for stage, year, and indicator, see Figure 3.

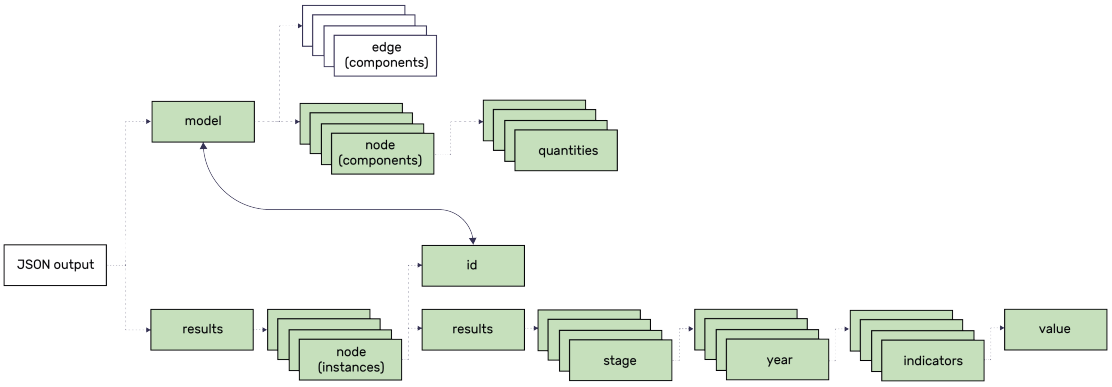

Figure 3: Structure of the json output

1.3 Step-by-step guide - Export results to json

Step 1: Export the json results from LCAbyg, Figure 4

- Step 1a: Go to the view “Results”
- Step 1b: From the drop-down menu select “Results”
- Step 1c: Click on the button “Exporter til json”
- Step 1d: Open the output file in Notepad++ to get an overview of the data.

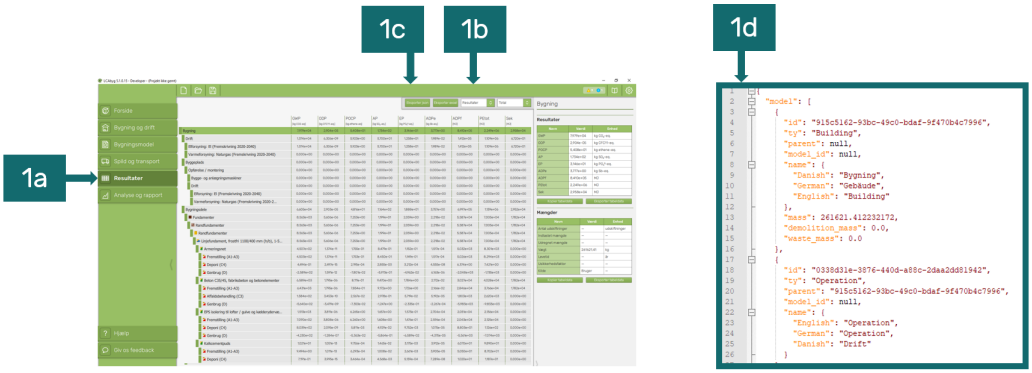

Figure 4: Export of results to json viewed in Notepad++

Step 2: Create an overview of the results, Figure 5

To get a quick overview of the output click on the “-” icon next to model and then do the same for results. This will hide all the respective nodes.

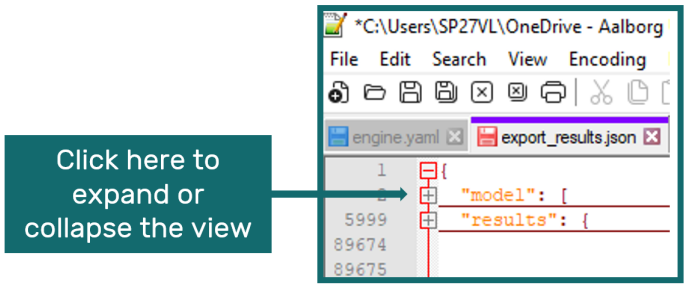

Figure 5: View the two keys “name-lookup” and “result” in Notepad++

Table 1 and Table 2 lists the stages and helpers in the results.

Table 1: Description of stages in the results json file

Stages	Description
A1to3	Raw materials, Transport, Manufacturing
A4	Transport
A5	Construction Installation
B4	Replacements
B6	Operation
C3	Final End of Life
C4	Final End of Life
D	Potential for recycling (D stages are excluded in sums with no D stages)

Table 2: Description of helpers in the results json file

Helpers	Description
9999	Is the total sum of all years for a phase
Sum	The sum of all non-helper stages, except any stage D
SumD	The sum of all D stages
SumEx	The sum of stages for the existing building, demolished in year 0, excluding the D stage
SumNew	The sum of stages for the new building, the main project, excluding the D stage