Madaster Release notes

2022

Made for
Madaster users

Date
23 September 2022

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1 Releases

Build number	Release date
15235	22nd September 2022
13245	17th June 2022
13222	14th April 2022
11940	7th March 2022

2 Build 15235

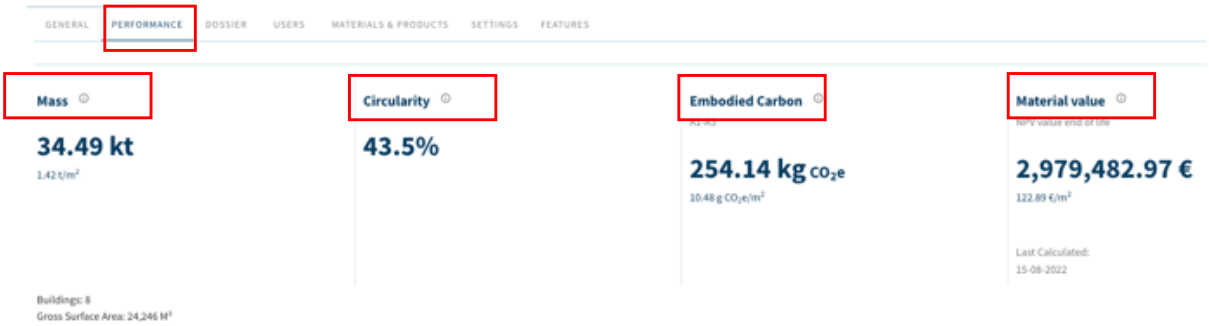
2.1 New functionalities

2.1.1 New “Performance” dashboard (incl. benchmarking)

The platform has been expanded this release with a new feature: 'Performance dashboards and Benchmarking'. This feature is activated by default for all users in the Netherlands and Belgium. As a result, a new “Performance” tab is available at account, folder and building level.

At both the account and folder level (the latter is only available to business customers), the 'Performance' tab contains the following totals:

- **Mass**: total mass of the materials, as well as the intensity of the materials used per m2.
- **Circularity**: measures the Madaster Circularity Indicator (MCI), which is based on the degree of non-virgin materials used during construction, their utility, and their potential for reuse & recycling at end of use. The MCI applies a penalty for unknown materials.
- **Embodied Carbon**: measures the equivalent CO2 emissions released during the production (A1-A3), installation (A4-A5), use (B1-B5), and disassembly (C1-C4) of a building. Since production data (A1-A3) is most commonly accessible, it is used to establish comparisons across shearing layers and different buildings. The embodied carbon intensity is also shown per m2.
- **Material Value**; measures the future monetary value of materials at their end of life, accounting for the costs of disassembly, transportation, and processing for re-sale. The material value is also shown per m2.

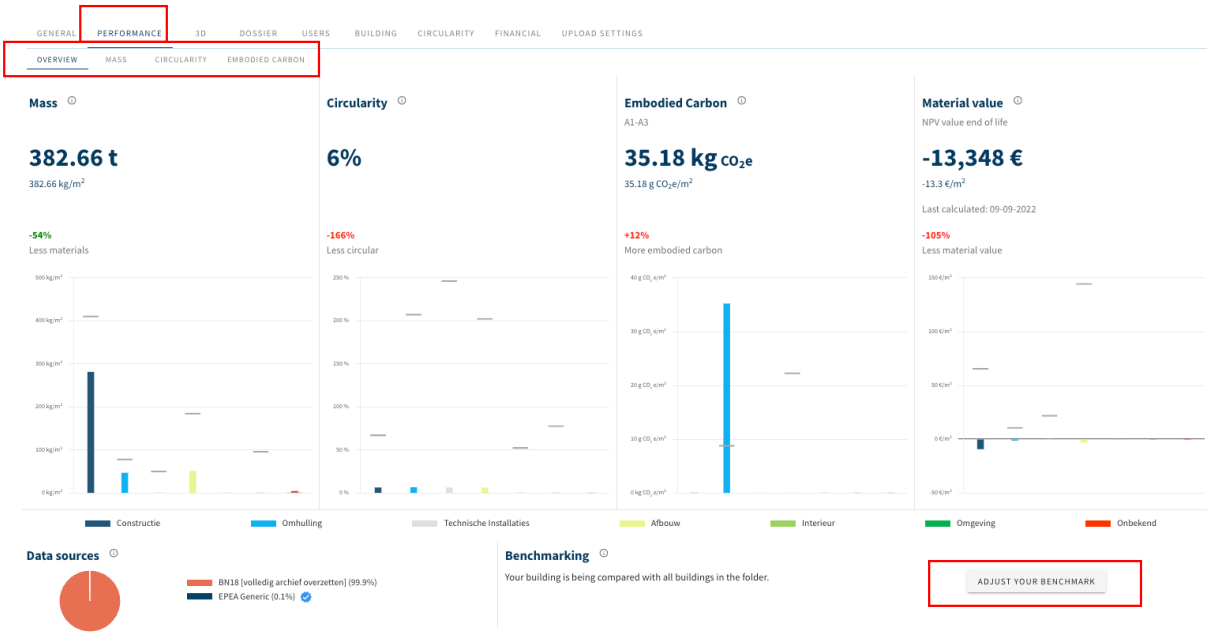


Four new dashboards are shown at the building level for business users:

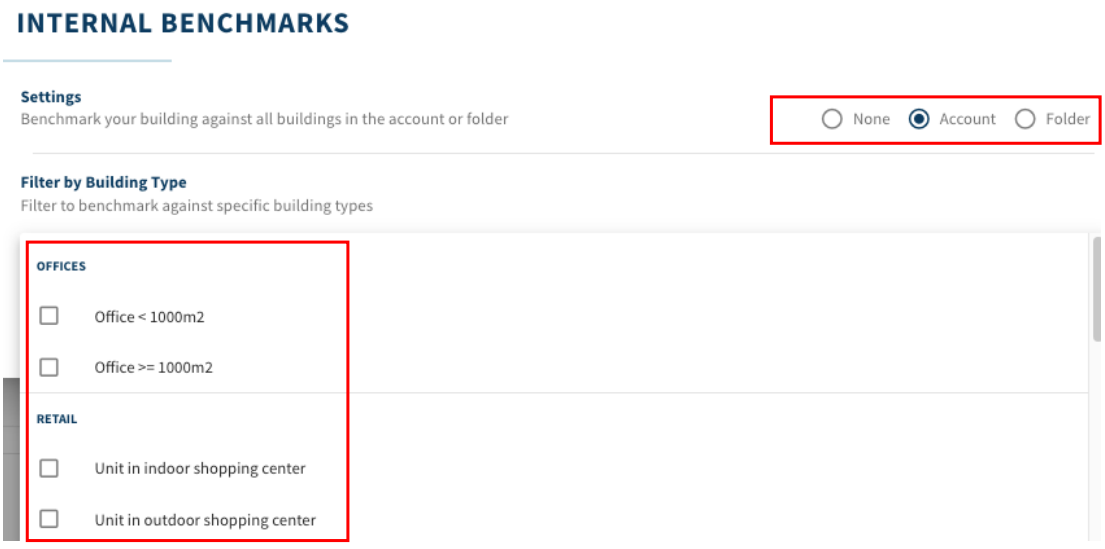
1. **Overview**: provides summary insights for the building and the building layers regarding mass, circularity, embodied carbon, and material value. The building can also be compared against a user-defined benchmark.
2. **Mass**: measures the total mass of the materials displayed per building layer and/or material families. In addition, the intensity of the materials used per m2 is shown.
3. **Circularity**: measures the Madaster Circularity Indicator (MCI), which is based on the degree of non-virgin materials used during construction (feedstock input), their lifetime and their potential for reuse and recycling at the end of use (feedstock output). The MCI applies a

correction for unknown materials. The 'Detachability' provides insight into the extent to which materials and products can be disassembled without being damaged.

4. **Embodied Carbon**: measures the equivalent CO2 emissions released during the production (A1-A3), installation (A4-A5), use (B1-B5) and dismantling (C1-C4) of a building. Because production data (A1-A3) is the most accessible, it is used to establish comparisons between building layers and different buildings. In addition, the embodied carbon intensity is shown per m2.

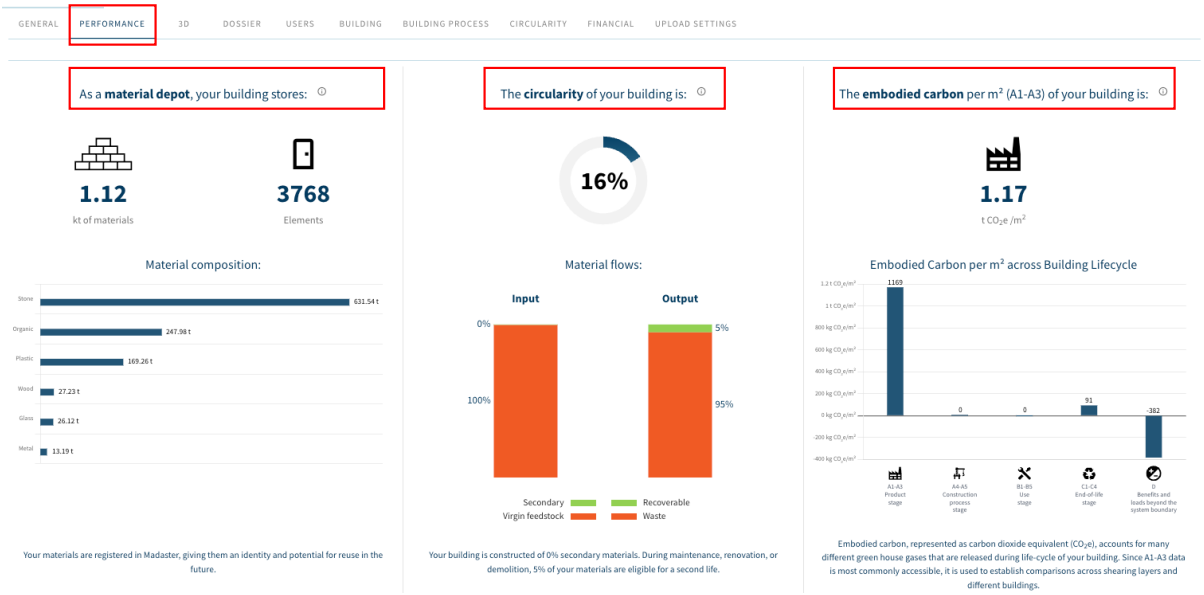


Using the benchmark function (bottom right of the tab), the building and its building layers (e.g. structure, skin, etc.) can be compared with all buildings in their own account or folder and can also be filtered for specific building types. The benchmark is against all buildings within the benchmark settings, including buildings for which a user does not have read rights.



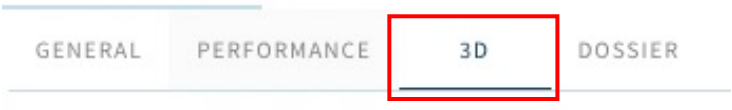
For private (residential) users, one new simplified dashboard is shown at the building level with the following indicators:

- **Material quantity and composition**: insight into the total mass of the materials displayed per material families.
- **Circularity**: representation of the Madaster Circularity Indicator (MCI), which is based on the degree of non-virgin materials used during construction (feedstock input), their lifetime and their potential for reuse and recycling at the end of use (feedstock output). The MCI uses a correction for unknown materials.
- **Embodied Carbon**: measures the equivalent CO2 emissions released over the entire life cycle of the building (from production (A1-A3) to the environmental benefits and costs outside the system boundary (D)).



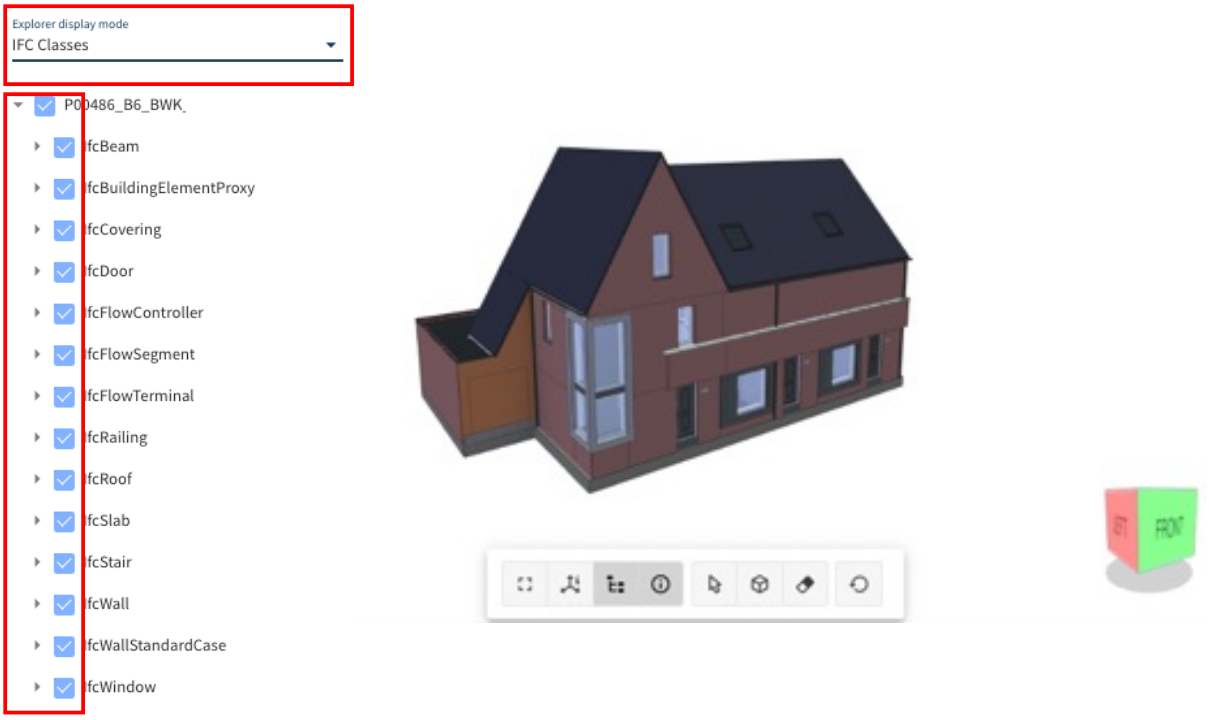
2.1.2 New “3D” viewer

The platform has been expanded this release with a new “3D” tab, which includes a new and advanced 3D viewer (available for all buildings with active IFC source files). In addition to the ability to display multiple IFC files in one 3D view, this 3D viewer has greatly improved performance when processing large files, and can, among other things, filter the model view, rotate it, and display the properties of individual elements.



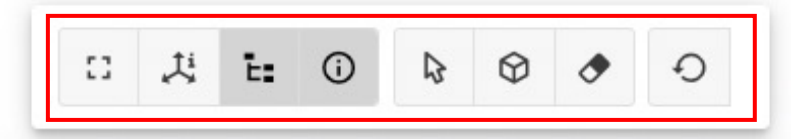
Using the display mode (navigation panel on the left), the geometry can be organized and filtered for any active source IFC file in the following ways:

- **IFC structure**: IFC elements are grouped by IFC class.
- **Storeys**: IFC elements are grouped by floor and then by IFC element classes per floor.
- **IFC classes**: IFC elements are grouped by IFC class.

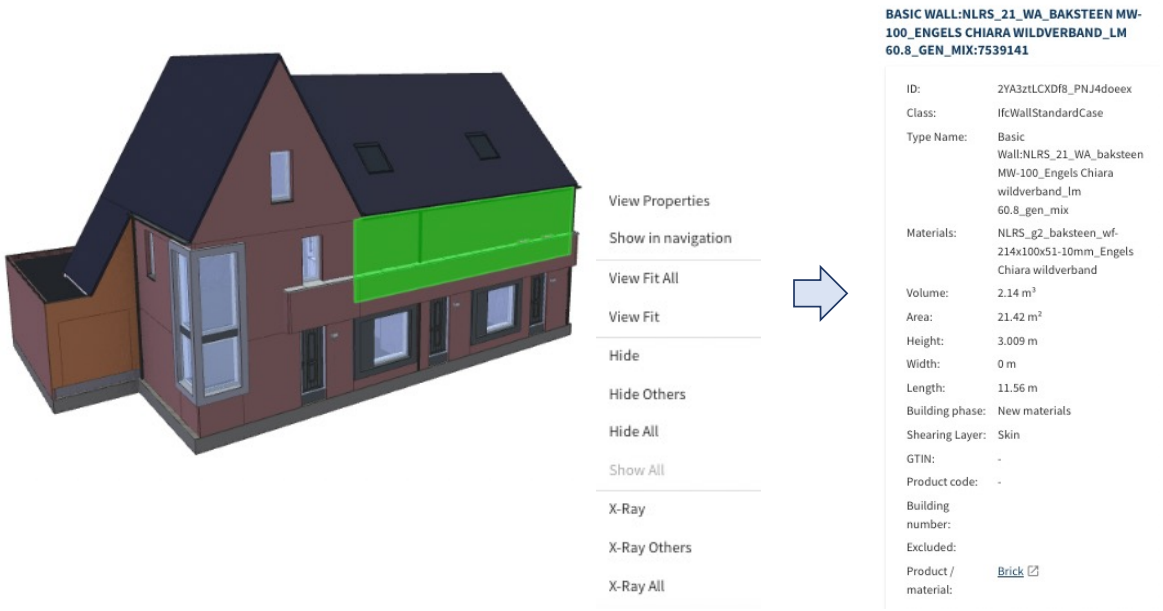


Any source IFC file, story, and IFC class can be expanded in this way until unique IFC elements appear in the hierarchy. This (unique) user selection is immediately visible in the 3D model (in the middle of the tab).

Using the toolbar (below the 3D) the model can be displayed in full screen and navigation and property windows can be shown and hidden. Elements can be selected to view their properties, viewed in X-Ray or hidden. Finally, the model geometry can be returned to the original default view.



Finally, use can be made of the so-called 'Context menu'. By right-clicking in the 3D model or in the left navigation pane displays, a context menu appears. IFC source files, floors, IFC classes and unique IFC elements can be isolated, hidden, shown, or viewed in X-Ray.



For a selected IFC element (on the right of the screen), the following properties are displayed:

- IFC Element Name: name of IFC element.
- Global Unique Identifier: unique reference of an IFC element.
- Class: IFC element class.
- Type name: IFC element type.
- Materials: material assigned to IFC element within the Madaster Platform.
- Volume: volume of IFC element.
- Height: height of IFC element.
- Width: width of IFC element.
- Length: length of IFC element.
- Excluded: whether an IFC element is excluded from construction calculations.

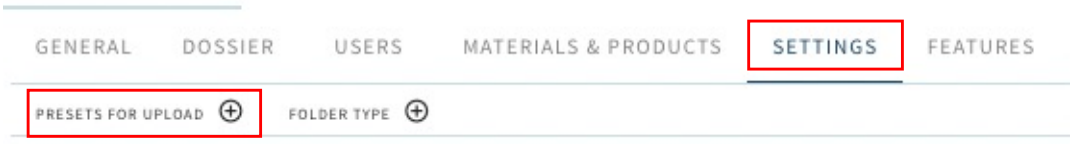
This new 3D viewer is also fully available in the 'Dossier' tab, where a 3D model can be displayed and edited per IFC file. IFC files that can be displayed by the new 3D viewer are marked with a new icon.

2.1.3 Extended functions “Building” and “Building process” tab

The platform has been expanded with several new edit functions, which make it possible to directly (from the pie charts on the “Building” and “Building Process” tabs) link/unlink IFC elements to a material/product or exclude these from calculations. As a result, adjustments to the original CAD file are less necessary and the enrichment of elements in Madaster can be carried out more efficiently.

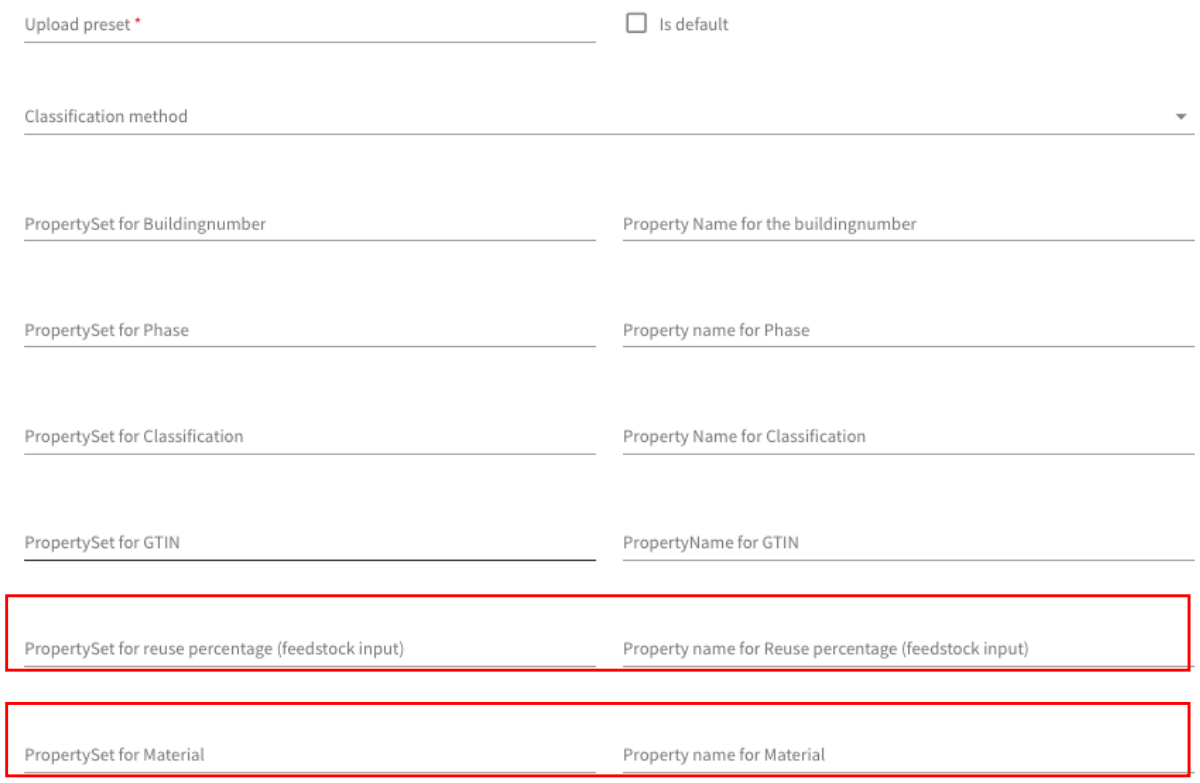
2.1.4 Expansion of data upload settings (preset)

In the Madaster platform, every user has the option to define preferred upload settings (preset) regarding classification method, the languages for enrichment, datasets, etc.



In addition to individual ease of use, this function also offers users the option of importing IFC data, captured in a specific IFC property set, into Madaster. The existing data upload setting (preset) has been expanded in this release with two new items, being:

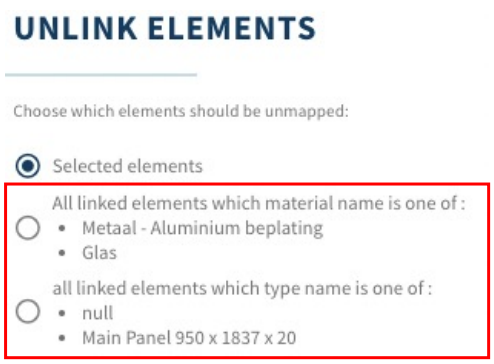
- **Reuse percentage (feedstock input)**: to indicate (in %) if IFC element is (partly) reused within the construction process of the building.
- **Material**: to indicate what material is used.



2.1.5 Extended feature manually unlinking elements

In the “Enrich” tab, users have the option to manually link/unlink elements from a source file (IFC/Excel) to a material or product. Earlier this year, this linking function was expanded. In this release, this extended feature is also available to unlink elements of a source file via:

- All linked elements with the same material description
- All linked elements with the same type (ifcTypeName)



2.1.6 Replace building layer 'Site' with 'Surroundings'

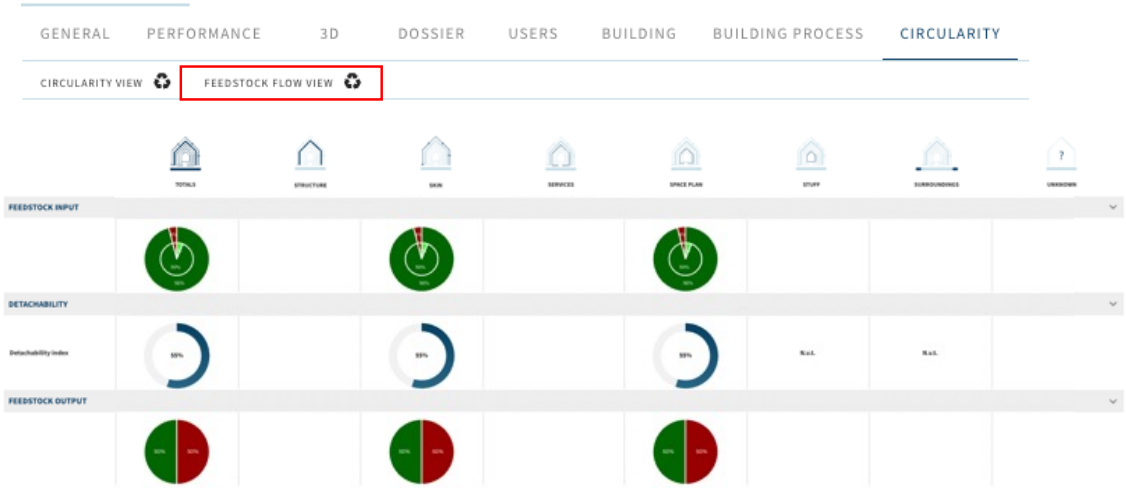
With this release, in accordance with the CB'23 guidelines, the building layer 'Site', including the associated default lifespan, has been replaced by the building envelope 'Surroundings'. This applies to the display on the “Building” tab, as well as to the generated materials passport (PDF & Excel) and underlying calculations on the “Circularity” tab.

2.1.7 Consider reuse in environmental calculations

In this release, environmental calculations on the “General” and “Environment” tabs now also consider the extent to which an element is being reused. If an element in the construction of a real estate or infrastructure object is partially or completely considered (in the form of a percentage) as 're-used', the system automatically calculates the lesser amount of the equivalent CO2 emissions released during production (in LCA phase A1-A3).

2.1.8 Adjustments “Circularity” tab

The “Circularity” tab has been slightly adjusted in this release. It is no longer possible for users to switch between the different Circularity versions (v1 & v2). Currently, the tab “Circularity” and the more detailed 'Circularity view' only contain the most extensive version (v2), including detachability section and feedstock input and output flows, etc. Finally, there is a new button 'Feedstock flow view', that gives the user a more detailed understanding of the building's input flow, detachability and output flow broken down by building layer.



2.1.9 Adjustments “Building process” tab

As of this release, the "Building process" tab is only visible if the "Renovation" option is selected in the "Construction phase" field (on the "General" tab). Previously, this tab was also activated in the platform when the construction phase 'Existing' or 'Demolition' was selected in Madaster.

2.1.10 API changes

This is the last time API changes are included in these release notes. Due to the API’s technical nature an API newsletter is created. Please subscribe on: https://docs.madaster.com/nl/nl/api.html.

API Version 4 has been updated with the following changes:

- The enumeration MatchingTermType is extended with an option “ContainsExactWord” to keep the API on par with the platform.

2.2 Bug fixes

The following bugs have been resolved:

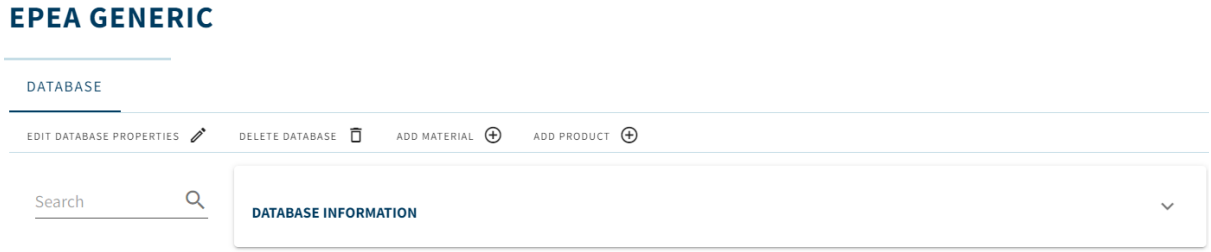
- “Financial” tab - material value (NPV) is not shown in detail view.
- Filter function on folder level is not available.
- Detail IFC element view on the “Building” tab does not display geometric properties.
- The portfolio 'description' field is not saved after it has been changed.
- IFC import: GTIN is not recognized as valid GTIN.

3 Build 13245

3.1 New functionalities

3.1.1 Expansion generic datasets: EPEA Generic database

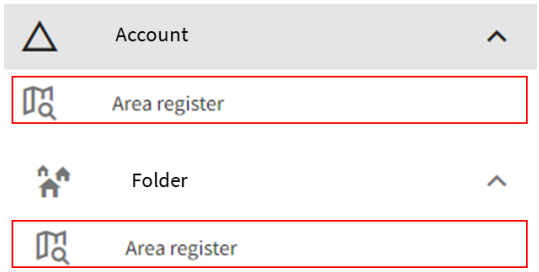
The new EPEA Generic database enables country-specific, full-building circularity and environmental calculations, even when specific manufacturer products have not yet been selected. The database, which contains over 180 generic materials and products, is verified by EPEA and sourced through a combination of EPDs and other scientific and public literature. The database will be periodically maintained to include the most up to date information and expanded to include more materials and products.



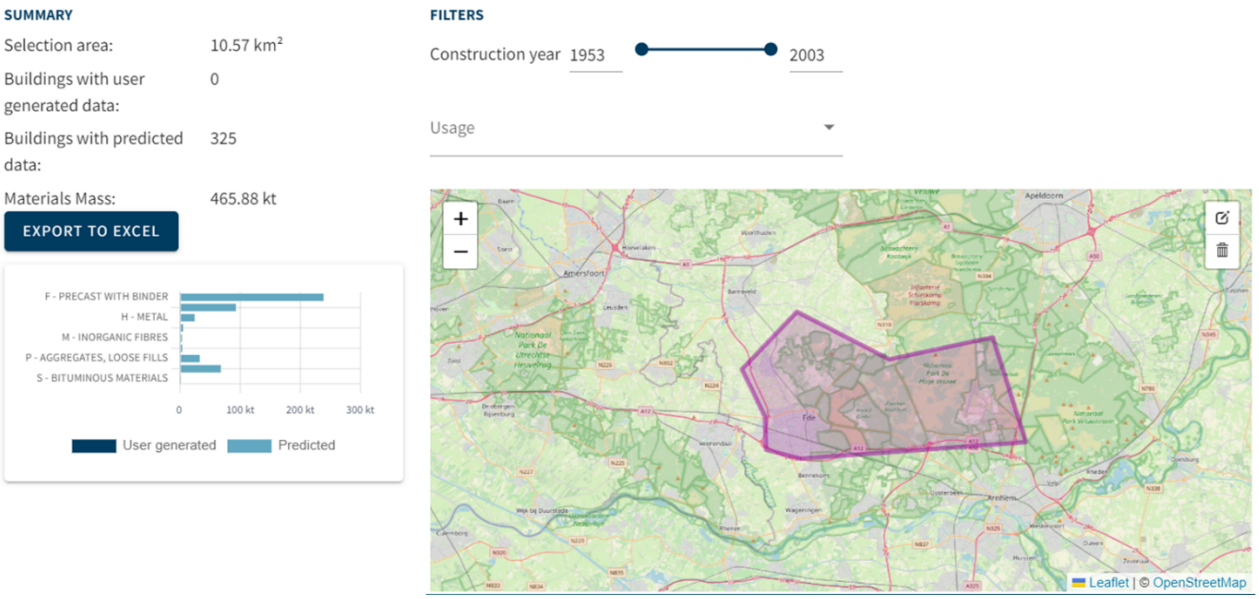
The Data is intellectual property of EPEA and may only be used within the Madaster platform. The data may not be exported, copied, or removed from the platform or be used for other purposes than calculations within Madaster. Any other use of the data violates EPEA's creator rights and EPEA will pursue any contravention legally. EPEA assumes no responsibility or legal liability concerning the Data's accuracy, reliability, completeness, timeliness, or usefulness.

3.1.2 Area Register (Private buildings only)

The new Area Register feature plots all buildings within an account or folder on a map for aggregated material mass reporting.



Using the mapping interface, users can draw custom boundaries to report only on selected buildings. Buildings within the map can be filtered by construction year and usage. The aggregated material mass can be exported to excel and downloaded within the dossier.

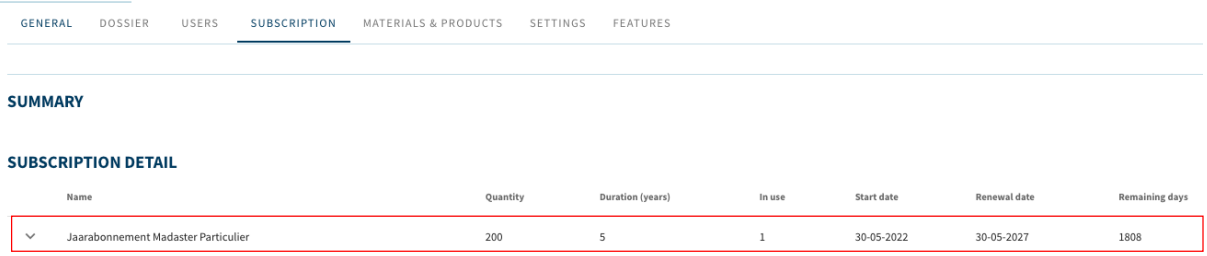


3.1.3 Create a new (private) account when transferring the building file (NL only)

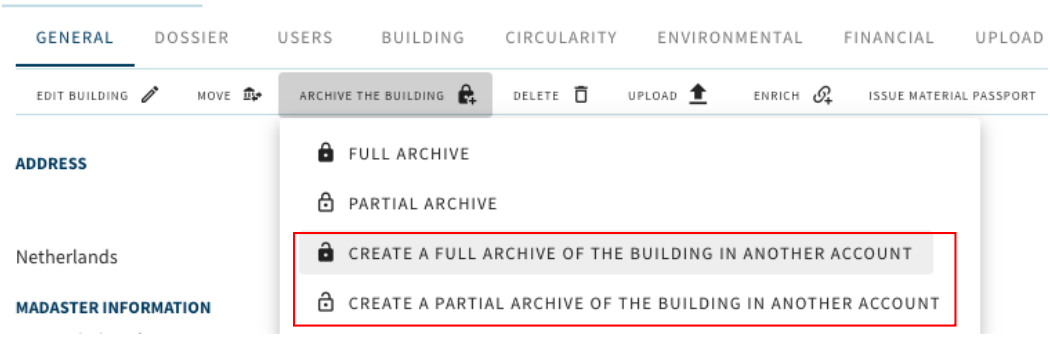
Note that this function is currently only available in The Netherlands.

In addition to transferring a building dossier to another existing account, it is now also possible to transfer a building dossier to a new account (to be created) in the Madaster platform. As a condition for this, a credit must be topped up in advance on the Madaster company account of the transferring party. Please contact your Madaster contact person for this.

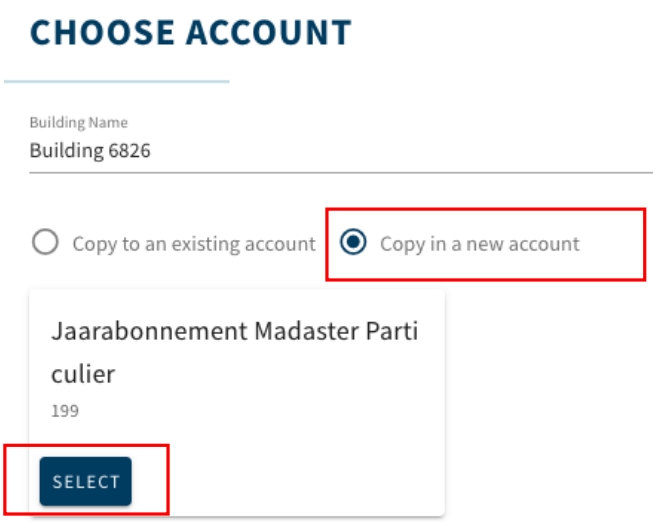
When transferring the building dossier to a new account, this subscription credit will automatically decrease. The remaining subscription credit is always visible via the subscription information. In the future, this feature will be extended to business subscriptions.



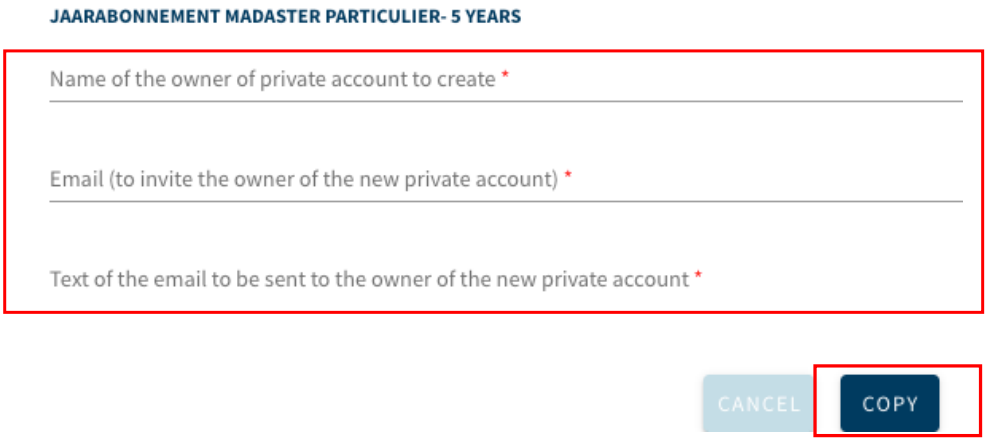
Before a new private account can be created, the building file to be transferred must be archived.



In the “Choose account” screen, then select the option “Copy in a new account” and then click the “Select” button.



Then enter the name and email address of the recipient of the new (private) Madaster account to be created. Finally, a short accompanying text must be entered. Finally, click on the “Copy” button.



The new account is now created in Madaster. The recipient of the new account will receive an email, including the added accompanying text, with a link. By clicking on this link, a short registration process is started, giving the new user access to his/her personal Madaster account containing access to the transferred building dossier.

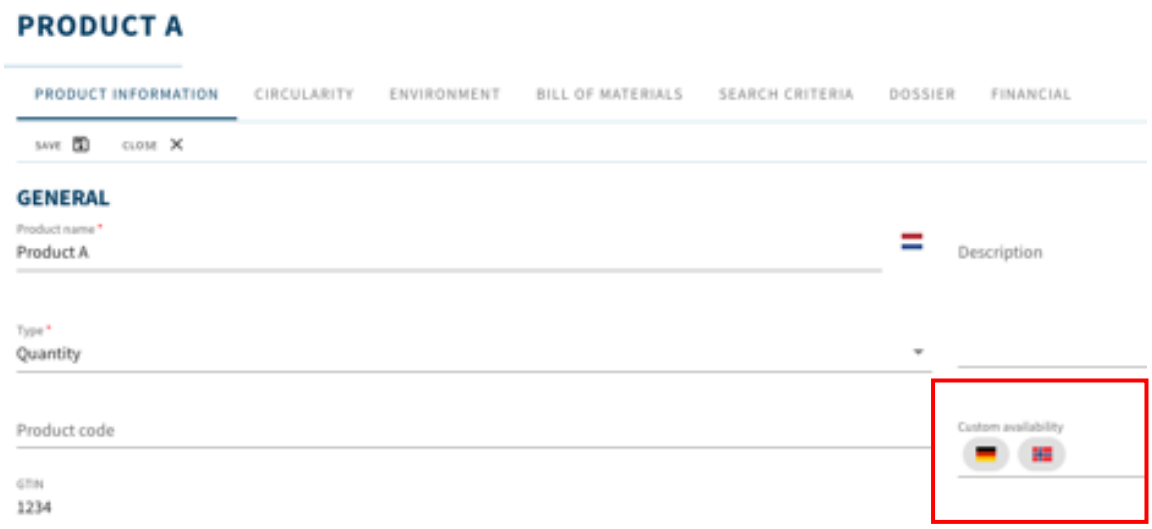
3.1.4 Volume information and calculations based on mass

In this release, various tabs and components in the Madaster platform no longer provide insight into volume information and calculations. Calculations are now displayed in mass. Including:

- Building tab: percentage of the mass is displayed. No longer possible to switch to percentage of volume.
- Source file quality: Volume percentages classification methods and material allocation are no longer shown.
- Matching quality: volume percentages of linked elements are no longer shown.
- Financial tab: the demolition costs are divided (per family or building layer) by mass (instead of volume).
- Material Passport (Pdf): Donut charts are displayed in mass.

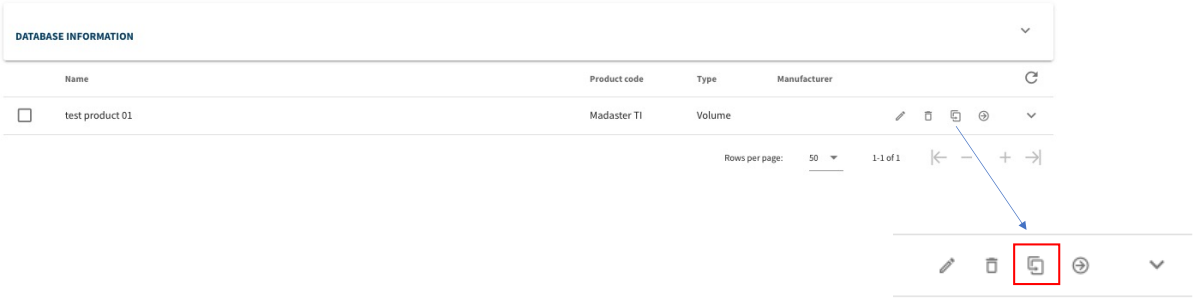
3.1.5 Adjusting product availability

In this release, the option has been added to make products, set up in generic and specific manufacturer databases, that are available in multiple countries, not available in Madaster in certain countries. In the "custom availability" field on the "Product information" tab, a selection can easily be made per product of the countries in which the product is available. In the non-selected countries, the product is also not visible in the database.



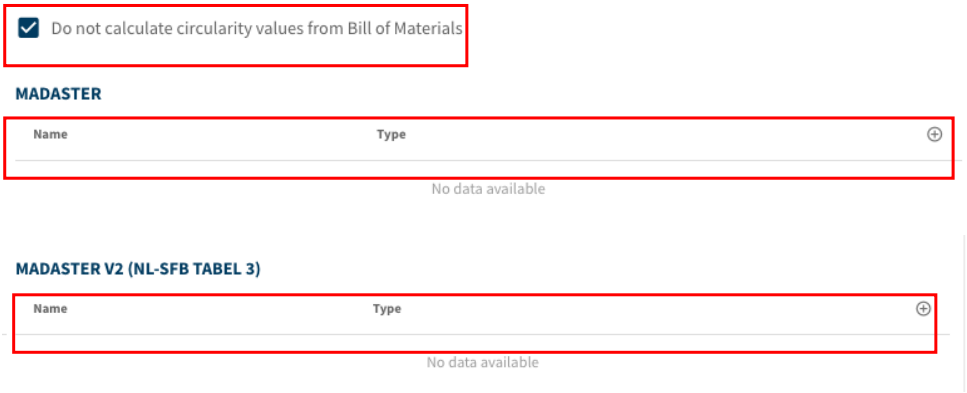
3.1.6 Extension material/product: versions

In this release it is possible to make a new version of an existing product/material. By clicking on the version icon in its own database, the system copies the current product/material to a new version, which can then be modified by the user. The initial version is automatically made inactive (although it remains visible via the “inactive” status).



3.1.7 Product extension: assign material classification

In this release a product, of which the option “Do not calculate circularity values from Bill of Materials” is selected (and the tab 'Bill of Materials' remains empty) can be assigned (in %) to one or more Madaster material families and/or NL-SfB Table 3 categories. This prevents that, due to the lack of the material composition, it is displayed on the “Building” tab in the “unknown” category.



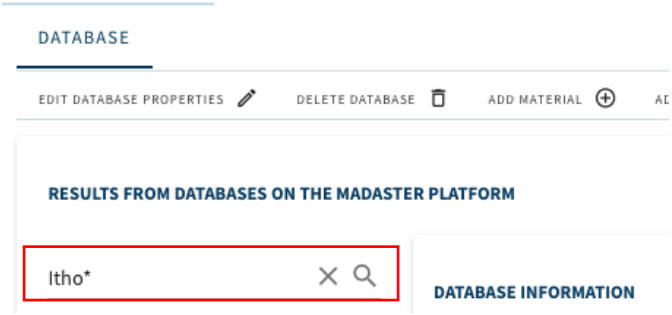
The Madaster classification is no longer mandatory for product and material, but the NL-SfB Table 3 is mandatory. Based on the choice made for NL-SfB, a value for the Madaster classification is automatically created.

3.1.8 Import data from generic external database(s)

In this release the option has been added for users to manually import materials and products from generic external databases (e.g., 2BA) to a shadow database in Madaster, if no automatic linking has taken place by GTIN (EAN) or article code. Adding your 'own' (account-specific) search criteria

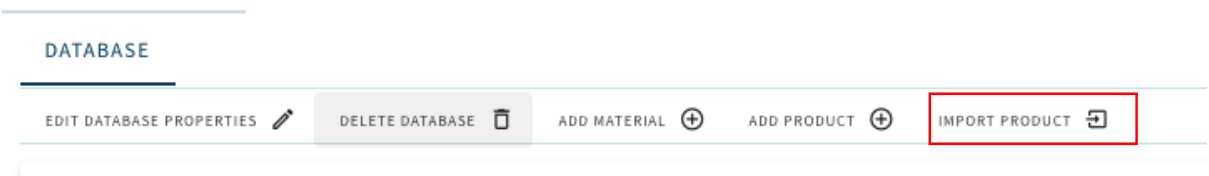
(existing functionality) to the imported materials/products, enables automatic linking to these materials/products in the future.

Search for the material/product in the generic external databases (e.g., 2BA)



The search results found from the external database are displayed at the bottom of the page. Then select the material to be imported to the Madaster shadow database.

Then click on the “Import product” button at the top of the submenu. The product is now imported from the external database and is available in the Madaster shadow database.



3.1.9 Other new functions

The following new features have also been added in this release:

- Changing a product type (e.g., volume, surface, length, and quantity product) is now possible in the “Product Information” tab, if a product is not in use and does not contain a bill of materials.
- The “Building” and “Building Process” tabs in Madaster have been expanded with the option to filter materials/products by floor of the building.
- Integration with Azure maps allows the address of the building to be found and displayed on a digital map in the “General” tab in case of incorrect spelling of the street name.

3.1.10 API changes

In this release the following changes are made to the Madaster API:

- Section 2.1.5 describes that it is possible to assign individual products and materials to a country (only available to manufacturers and verified databases). In the API this functionality has also been added through a new field ‘availableIn’.
- Section 2.1.7 describes that a product can be provided with a list of material families. Previously, the material families of a product were determined by the families of the Bill of Materials (material composition). With this release, it is possible to specify the material families yourself (like materials).
- The model of a product has been extended with a field materialFamilies, the value of this field can only be set if the field doNotUseBillOfMaterials has the value true.

3.2 Bug fixes

The following bugs have been resolved:

- Element information in “Enrich” tab is not fully displayed at the end of the page.
- IFC import will not be fully processed if it contains special characters.
- Own material/product database cannot be deleted by copied material/product from generic database.
- Element information in “Enrich” tab contains incorrect display of percentage distribution when splitting over multiple buildings.
- Linked IFC elements are shown in “Enrich” tab (in column 'number') as not linked (0/0).

4 Build 13222

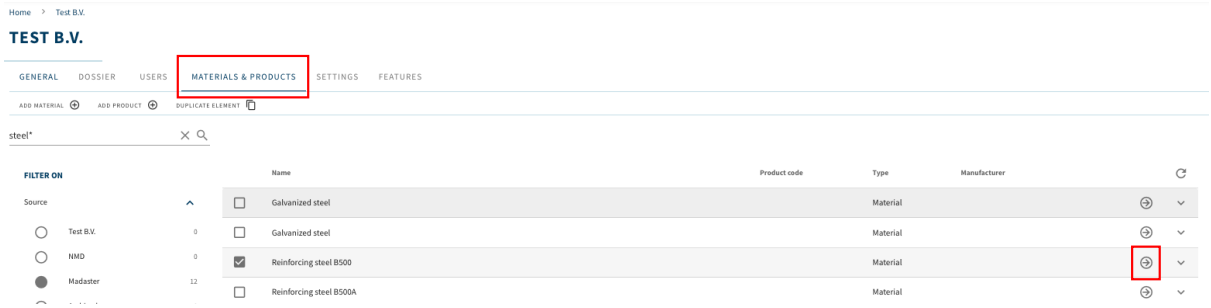
4.1 New functionalities

4.1.1 Add own search criteria to global database(s)

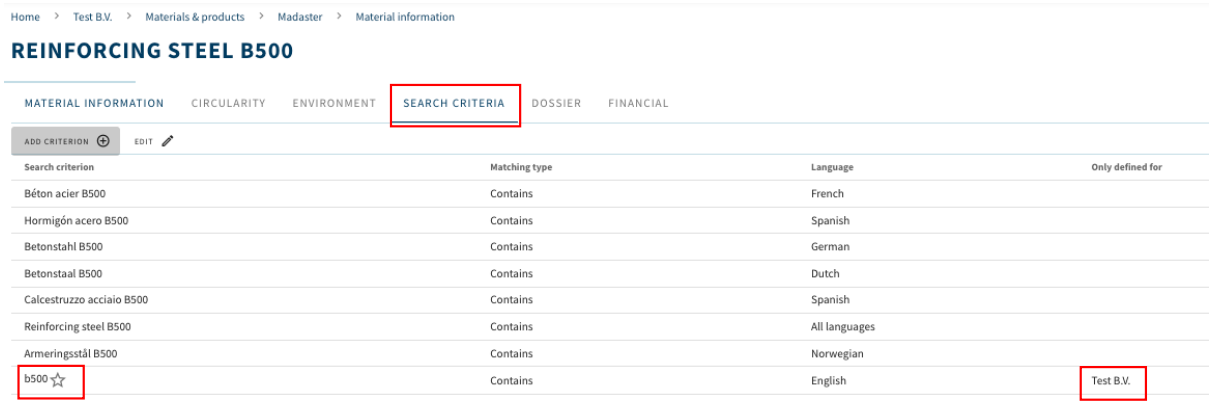
The Madaster platform now allows users to add their own (account-specific) search criteria to materials/products from globally available databases (including the "Madaster" database). This improves the automated matching process and prevents users from having to duplicate materials/products in their own database before adding their own search criteria.

This function is available at the Madaster account level (click on the company account name in the left vertical menu) under the section “Materials & products” and can only be used within globally available databases (including the “Madaster” database).

Search the desired material or product and click on the arrow icon.

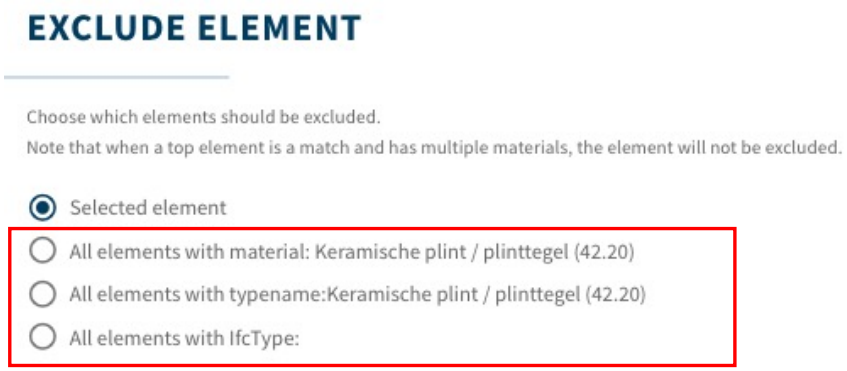


The characteristics of the material or product are shown. Then click on the 'Search criteria' tab and on the 'Add criterion' button. Enter one or more 'own' (account specific) search criteria here. These own criteria can be distinguished by the star icon.



4.1.2 Extension function to manually include/exclude source file elements

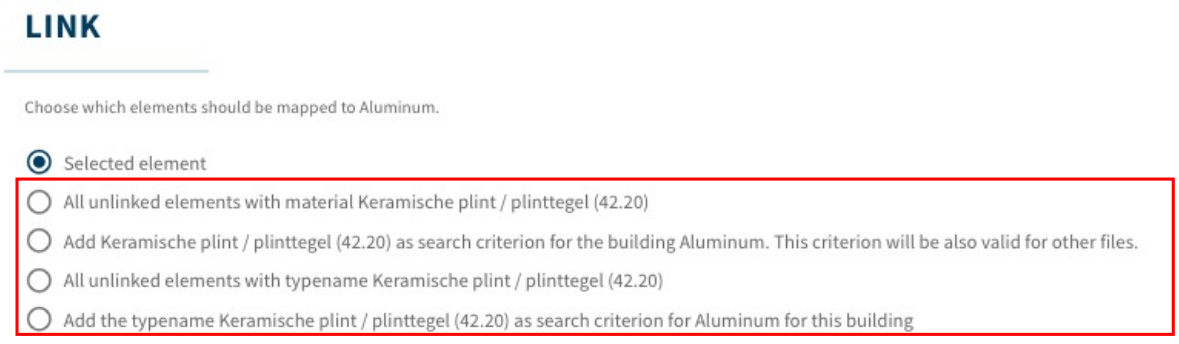
In the “Enrich” tab, users have the option to manually include and exclude elements of a source file (IFC/Excel). Excluded elements are not included in the calculation and display of the various insights (regarding material overview, financial display, etc.) in the other Madaster tabs. This include/exclude feature has now been expanded. In addition to the selected elements, the platform now offers users several additional options to include and exclude elements of a source file, if they contain the same material description, type name or the same ifcType.



4.1.3 Extension function to manually link source file elements

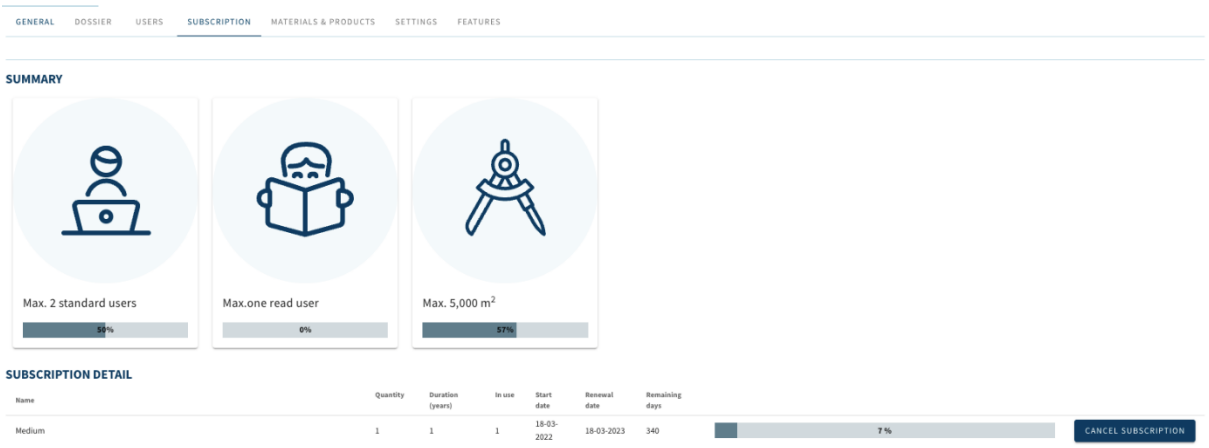
In the “Enrich” tab, users have the option to manually link elements of a source file (IFC/Excel) to a material or product. This feature has now been expanded. In addition to the selected elements, the platform now offers users several additional options for linking elements of a source file, namely:

- All unlinked elements with the same material description
- Add material name as search criteria for material to be linked.
- All unlinked elements with the same Type Name.
- Add Type Name as search criteria for material to be linked.



4.1.4 Subscription management summary

This release contains (as a preview) a summary of a user's current subscription (only for residential and business admin users). This makes it clear to these user groups which type of Madaster subscription they have and to what extent it is currently being used (based on number of users, square meters GFA, etc.). In addition, it is possible to cancel their subscription directly via the platform.



4.2 Bug fixes

The following bugs have been resolved:

- Invalid IFC Errors: If IFC entry contains no ID (file is corrupt).
- Building archive cannot be deleted if building is deleted.
- Financial tab: contains slider that displays value 'NaN'.
- Product composition: possibility to create a circular reference.
- Environmental tab: Clear Conformity (EPD) preserves data in database.
- Display error message "Page not found" when API token is removed.
- Display error message "Page not found" when 3D viewer is consulted.
- Active/interactive objects filter display is not always displayed correctly in own product database.

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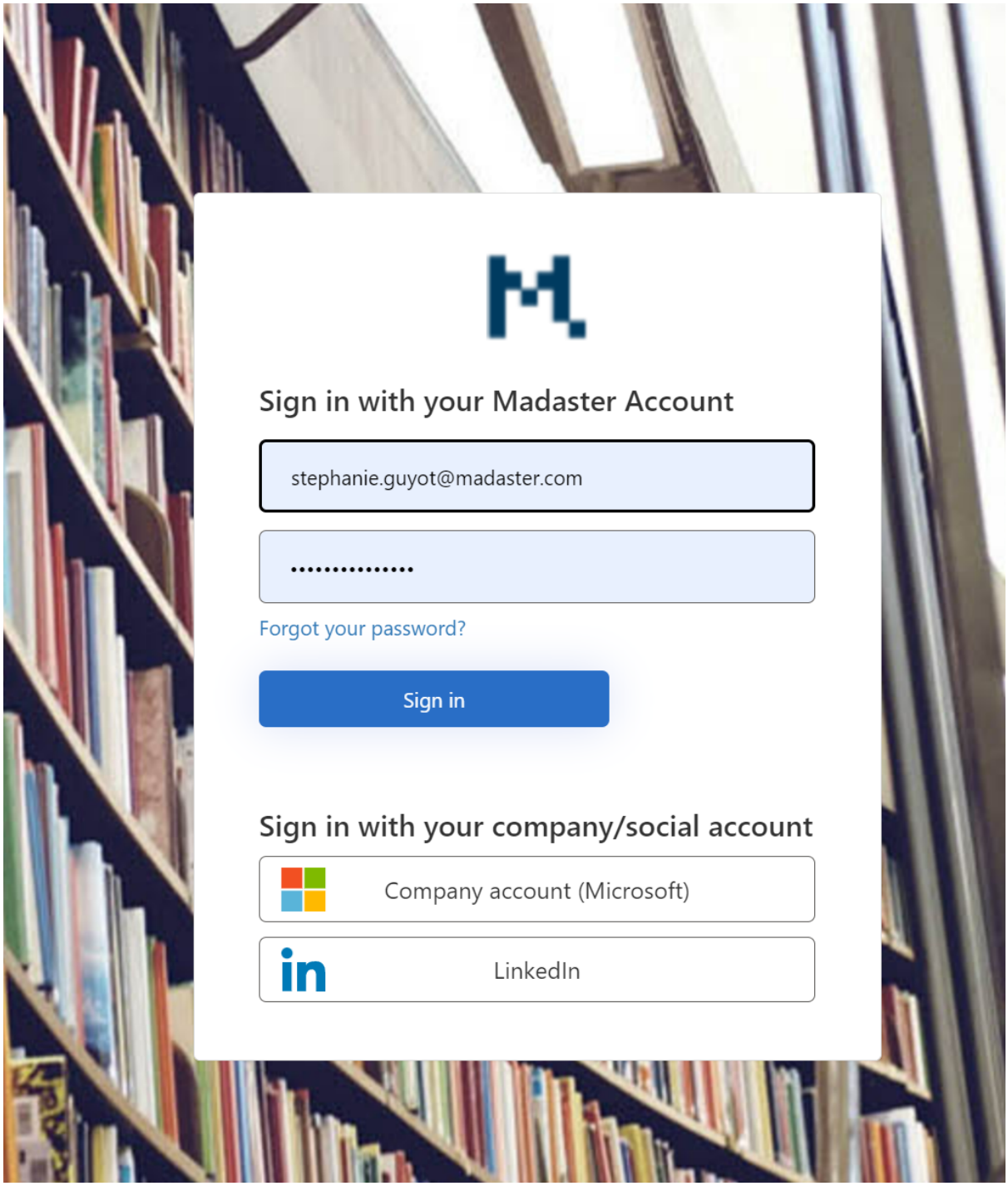
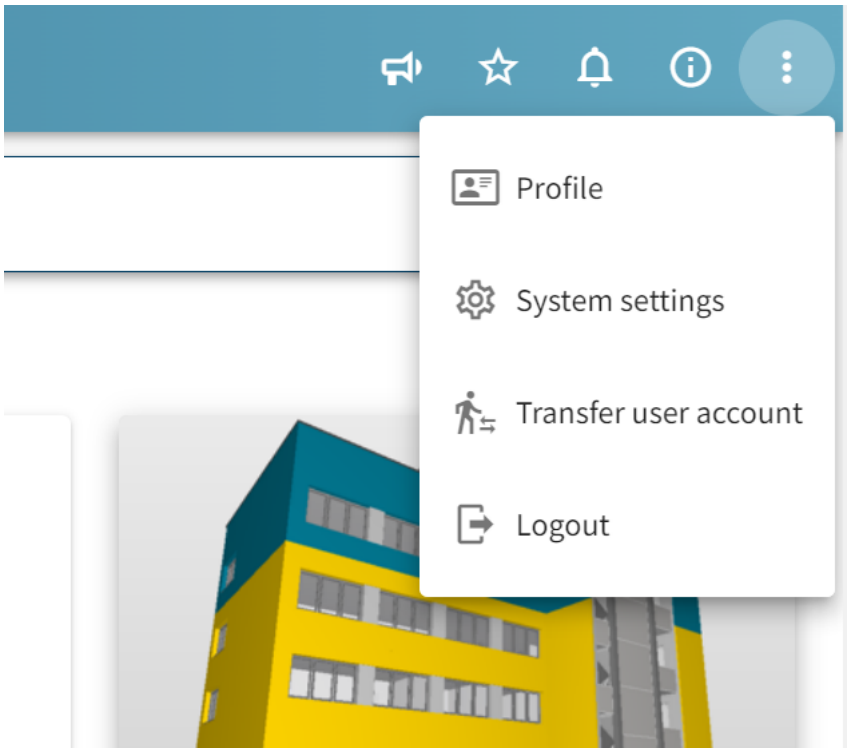
5.1 New functionalities

5.1.1 Sign in with an office 365. Microsoft Azure AD account

In this release, it is now possible to sign in with an office 365 / Microsoft Azure AD account instead of a Madaster account.



There is a possibility to transfer the rights of your local account to your office365 / Microsoft Azure Ad Account



5.1.2 API version 4

In this release, API version 4.0 has been added (https://api.madaster.com/?urls.primaryName=V4.0) and provides full support for the latest fields on materials and products (including LCA and detachability).

With this release, the API calls in version 3.0 related to materials and products have been marked as *obsolete*, these calls are supported until June 30, 2022. After this date, these calls will be removed and no longer work.

5.2 Bug fixes

The following bugs have been resolved:

- Environmental preview is missing when copying or archiving a building.
- Material Passport Pdf, Product information is not readable.