



# Madaster release notes

2023



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## 1 Releases

Release	Build number	Release date
2023.1	19365	16 February 2023
2023.2	20190	23 March 2023
2023.3	21116	18 April 2023
2023.4	21775	1 June 2023

Table 1: list of releases in 2023



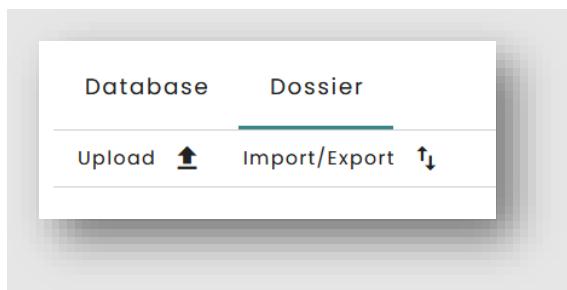
## 2 Build 21775

### 2.1 New or Changed functionalities

#### 2.1.1 Excel import/export for databases

This release functionality has been introduced to be able to export or import excel files from or to your database. This new functionality is only available on request.

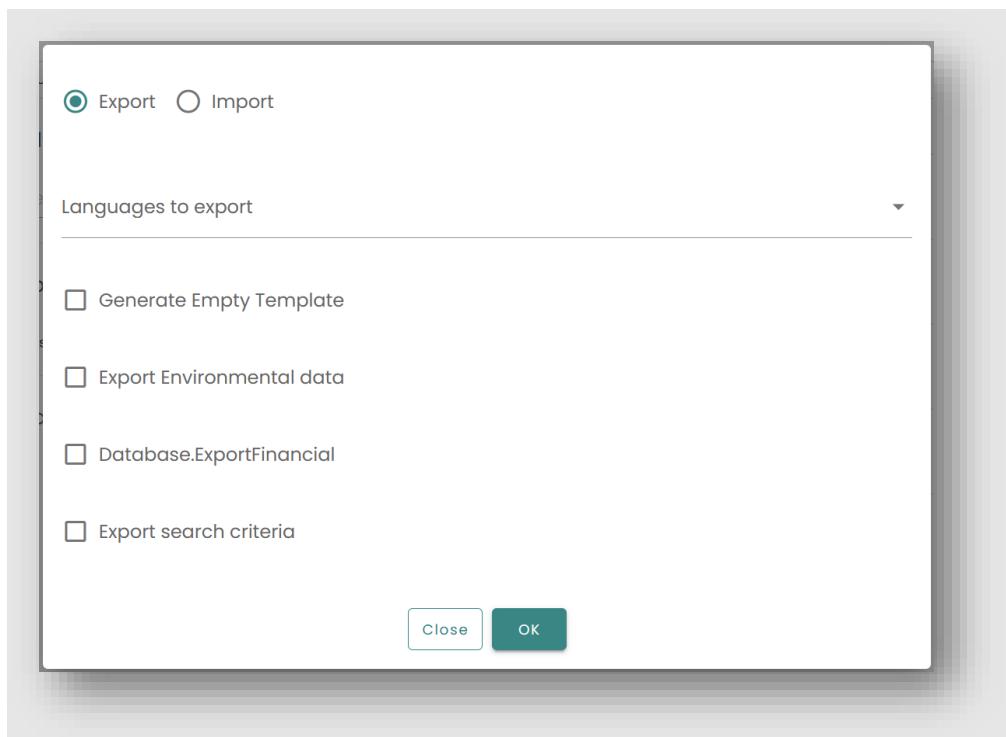
From the dossier tab of a database this option has been added:



Using the button shows the different templates available for importing and exporting.

##### 2.1.1.1 Exporting data

Exporting data can be done with the following options:





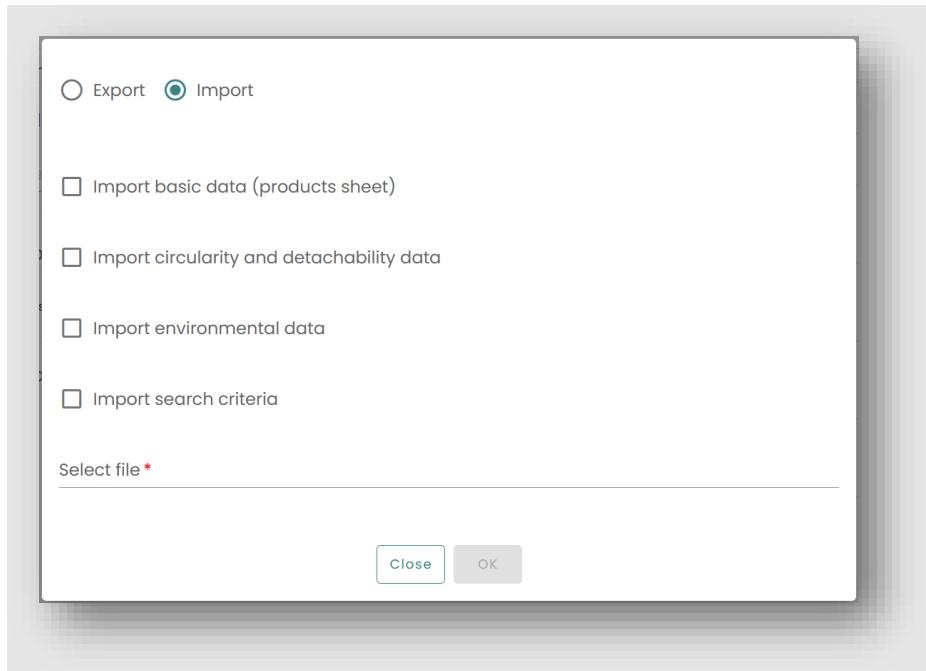
All of the options will place the excel file in the dossier of the database. These options are:

- For which languages you want to export the data, multiple options are possible.
- Generate empty template: this will create an empty excel template which can be used to fill in and upload to get all the data in more easily.
- Export environmental data: this will export all the environmental data from the records in the database.
- Export financial data: this will export all the financial data from the records in the database.
- Export search criteria: this will export all the current search criteria of the database.

Please note that only products will be exported or imported, and not materials.

### 2.1.1.2 Importing data

Importing the data only works when the excel is structured in the same way the export templates are. The following options are available for import:



The following data can be imported:

- Regular product data, which are also the fields shown on the product information tab in the database.

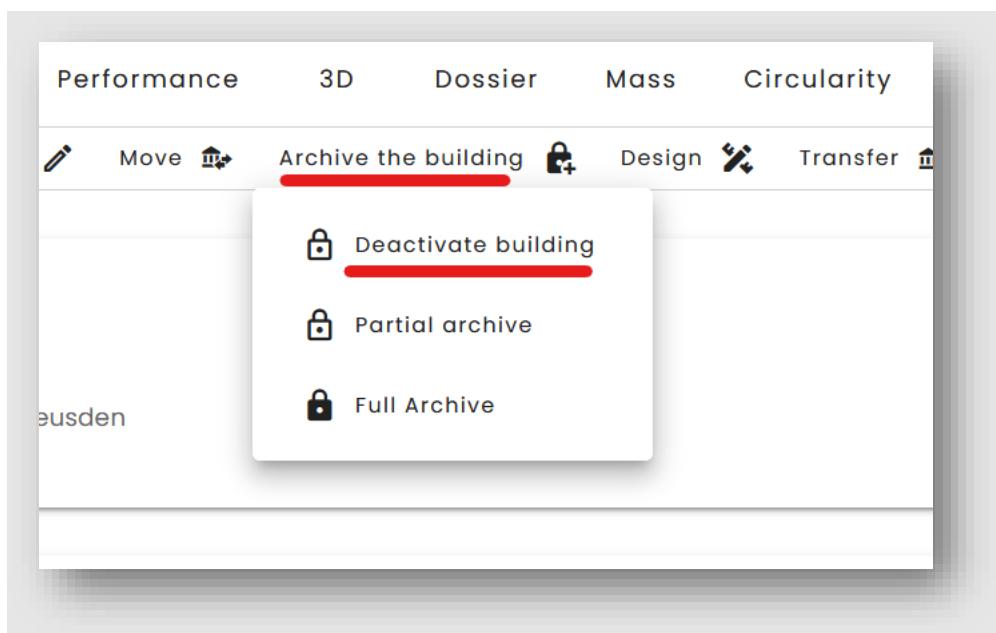


- Circularity and detachability data, corresponding to the data shown on the circularity tab.
- Environmental data, which is the data as shown in the environmental tab
- Search criteria

It is possible to select multiple of these.

## 2.1.2 Deactivating a building

It is now possible to deactivate a building:



Which is a far quicker way to change an existing building into an 'archived building'. It is also possible to immediately deactivate the building in your own account when you transfer a building.



Choose account

Building Name  
Dorpsstraat 1

Deactivate original building

▼ □ ▲ Aan de Steeg Twello

### 2.1.3 Targets

In the data settings on either account, folder or object it is now possible to add your own targets for a given KPI. This does not as of yet show up in the dashboarding or reporting, so stay tuned for further updates on this functionality.

Data settings

Select preferences Targets

<input checked="" type="checkbox"/> MCI	50 <input type="button" value=""/>
<input checked="" type="checkbox"/> Material Flows	<input type="button" value="+ Add target"/>
X	Key Performance Indicator Input Primary <input type="button" value=""/>
<input checked="" type="checkbox"/> Scarcity	<input type="button" value=""/>
<input checked="" type="checkbox"/> Detachability	<input type="button" value=""/>
<input checked="" type="checkbox"/> Environmental	<input type="button" value="+ Add target"/>
<input checked="" type="checkbox"/> Net Present Value (NPV)	<input type="button" value=""/>
<input checked="" type="checkbox"/> Current value	<input type="button" value=""/>

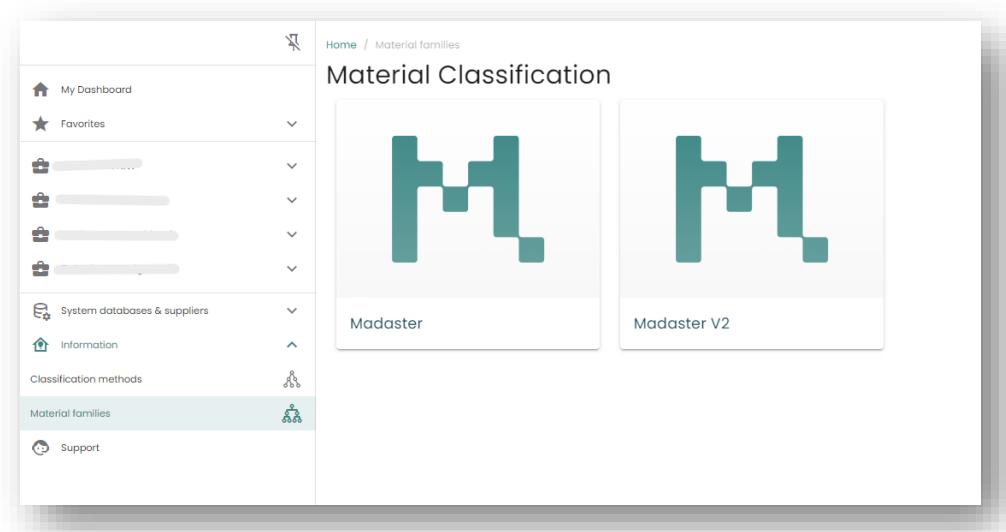


## 2.1.4 Financial updates

This release a number of sources for prices of materials have been updated. This concerns the following:

- Wood
- Rubber
- Platinum
- Palladium
- Plastics
- Glass
- Sand
- Asphalt
- Gravel
- Gypsum
- Stones

The fallback for pricing has been made more granulated, so that for example not all metals with unknown pricing will default to the price for Steel scrap. The price sets connected to the material families can be seen in the platform now as well:





Home / Material families / Madaster V2

## Madaster V2

↑	Name	Default priceset	Last known value
	E - NATURAL STONE	Mixed stones	€0.057/kg
	E1 - Igneous rock	Mixed stones	€0.057/kg
	E2 - Marble	Mixed stones	€0.057/kg
	E3 - Limestone (other than marble)	Mixed stones	€0.057/kg
	E4 - Sandstone, grit stone	Mixed stones	€0.057/kg
	E5 - Slate	Mixed stones	€0.057/kg
	E9 - Other natural stone	Mixed stones	€0.057/kg
	E - PRECAST WITH BINDER	Concrete	€0.034/kg

### 2.1.5 Other changes

- The preset for passports has been made more clear in the UI when generating a passport and if there is a custom preset this one is now chosen by default.
- Icons giving more information about selected databases have been implemented on more places and extended:



- The recalculate button has been added to more places on a building
- When searching in a database and going back to the overview the last search term will be kept



- The fields 'gross internal area' and 'gross asset value' have been added on the building form
- The filter for delivered date on the map on a account or folder has been changed from a slider to start and end years. It is now also possible to filter on a year in the future:

The screenshot shows the Madaster software interface. At the top, there is a navigation bar with tabs: General, Performance (which is currently selected), Dossier, Subscription, Mass, Circularity, and Environmental. Below the navigation bar, there is a search bar with a magnifying glass icon. Underneath the search bar, there is a modal dialog box. The dialog box has two input fields: 'from' with the value '1200' and 'to' with the value '2023'. There are also up and down arrows between these fields. Below these fields, there is a dropdown menu set to 'Usage'. Underneath the dropdown, there is a checkbox labeled 'Hide Map'. Further down, there is a section for 'Items per page:' with a dropdown menu set to '10'. To the right of the dialog, a small map of an area is visible.



## 2.2 Bugfixes

- The sorting arrows for the building pictures were not visible on a black background. This has been fixed.
- Property values in the 3D viewer could go offscreen, which has been corrected.
- Fixed a bug where the map could overlap with the topbar
- When saving a passport preset without filling all the required fields the form would close and nothing would be saved. This has been changed so that a message is shown.



## 3 Build 21116

### 3.1 New or Changed functionalities

#### 3.1.1 Account and folder level dashboarding

In this release dashboarding details for account and folder level have been introduced. This means it is now possible to see how the building scores on different KPI's on for example a whole portfolio.

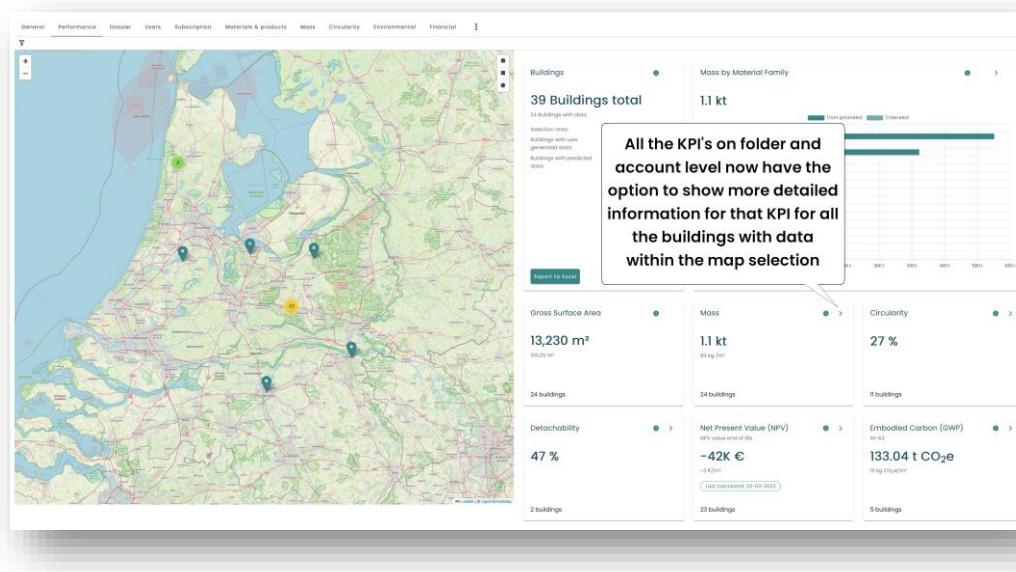


Figure 1: the performance tab on an account with the default settings for KPI's shown

It is also possible to go straight to one of the new tabs in the folder or account

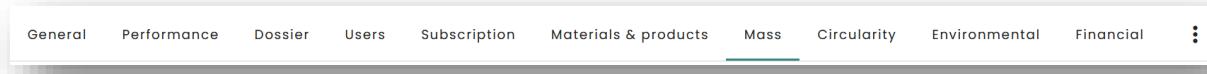


Figure 2: the new tab structure of an account with the new mass, circularity, environmental and financial tabs. These new tabs have also been added to folders.

The KPI's shown are dependent on which have been chosen in the edit lay-out settings for the user. If no specific lay-out has been chosen the default KPI's from the Madaster platform will be shown.



### 3.1.1.1 The Mass tab and general dashboarding options

The mass tab on folder and account level will show the map on the left and on the right an overview of all the buildings with data for the chosen KPI within the map selection:

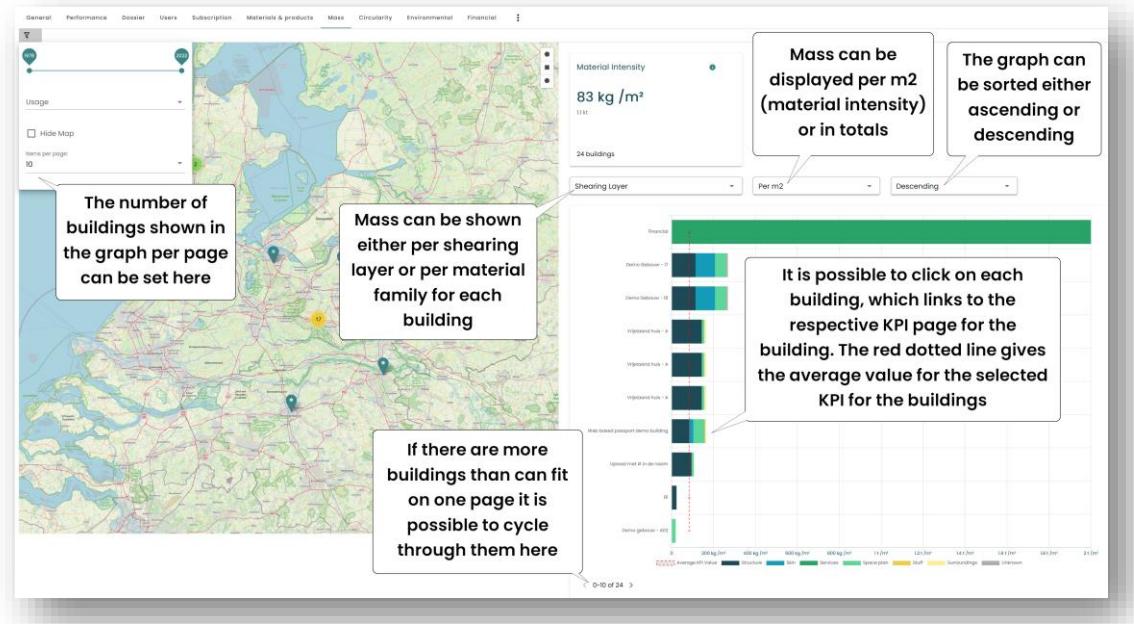


Figure 3: an example of the mass tab on an account

Note that a number of options will be available on every tab, whether it is mass, circularity, environmental or financial. These are:

- Paging: setting the number of items per page and cycle through them.
- Clicking the building in the graph, this will for all tabs and KPI's result in navigating to the selected KPI page of that specific building.
- The average is shown for a lot of KPI's, but not all of them.
- Sorting the graph ascending or descending.
- Hovering over the bars in a chart will show a tooltip giving more specified information.

For mass specifically the following options are available:

- The bar for each building can be stacked showing either the mass or material intensity for each shearing layer or the mass or material intensity for each material family.
- The mass can be shown per m<sup>2</sup>, which is the material intensity, or for the total mass of the whole building. This will also change the card above the chart.



### 3.1.1.2 The Circularity tab

The circularity tab on account or folder level has the following options:

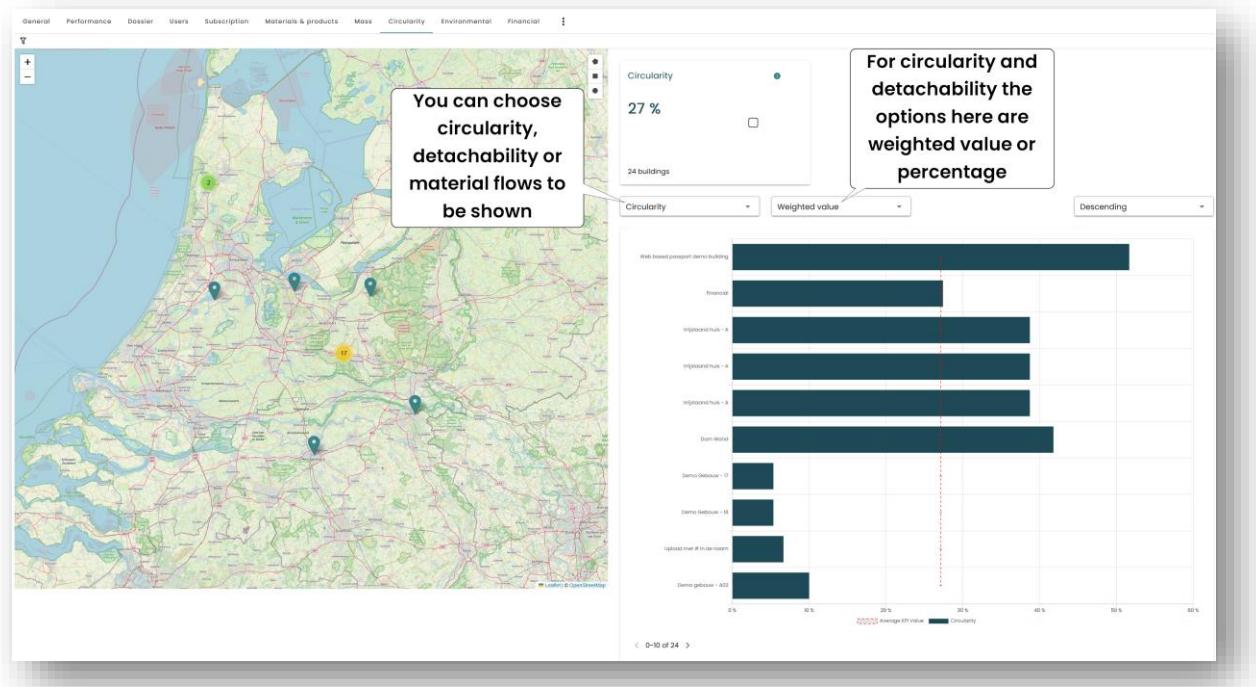


Figure 4: the new tab for circularity on an account

For the circularity and detachability information:

- When choosing the percentage the buildings will be sorted by their respective KPI scores; either the MCI or their detachability score.
- The weighted value will sort the buildings by their KPI score multiplied by their mass. This gives insights into which buildings have the largest impact on the aggregated circularity score of the selected buildings. The graph itself will still show the actual MCI or detachability score.



For the material flows there are slightly different options:

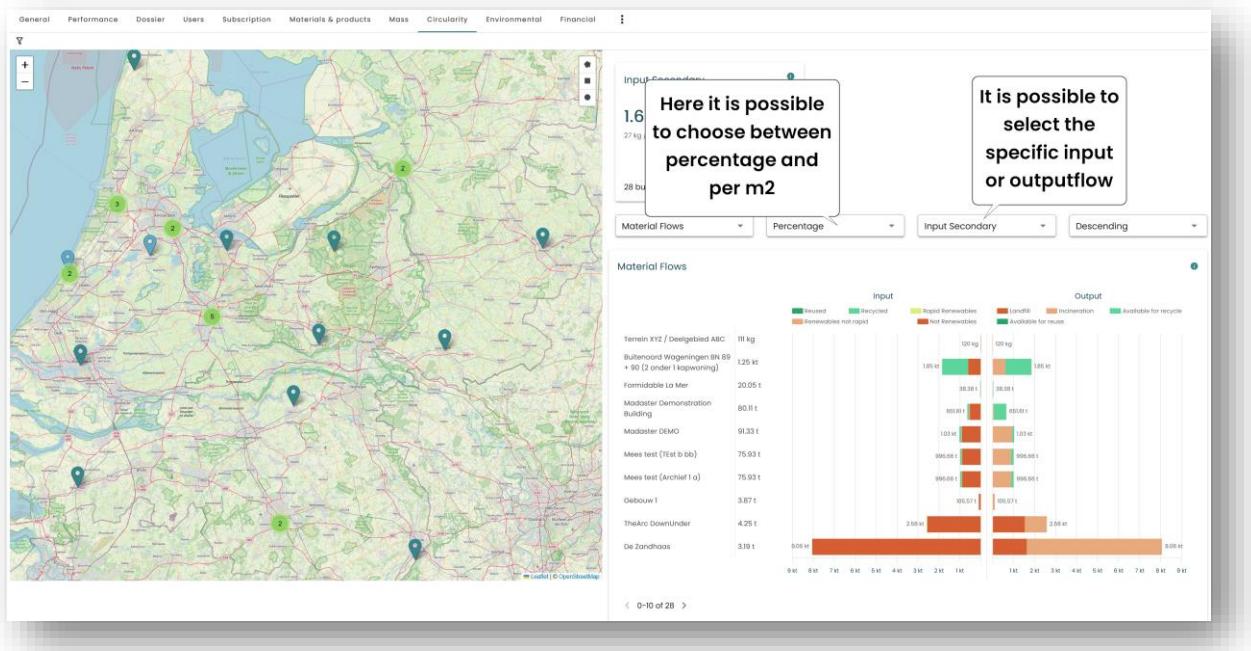


Figure 5: the material flows on the circularity tab on an account

- Percentage orders the buildings by which building has the highest percentage of the chosen material flow. It is also possible to order by m<sup>2</sup>.
- The material flows can be ordered by the following:
  - Total mass
  - MCI
  - Input Primary
  - Input renewables sustainably produced
  - Input Secondary
  - Output Waste
  - Output recoverable



### 3.1.1.3 The Environmental and financial tabs

As elsewhere in the platform the environmental KPI's are based on compliance. Furthermore, it is possible to choose from a set of LCA phases or combination of phases. It is also possible to sort based on the totals or by m<sup>2</sup>.

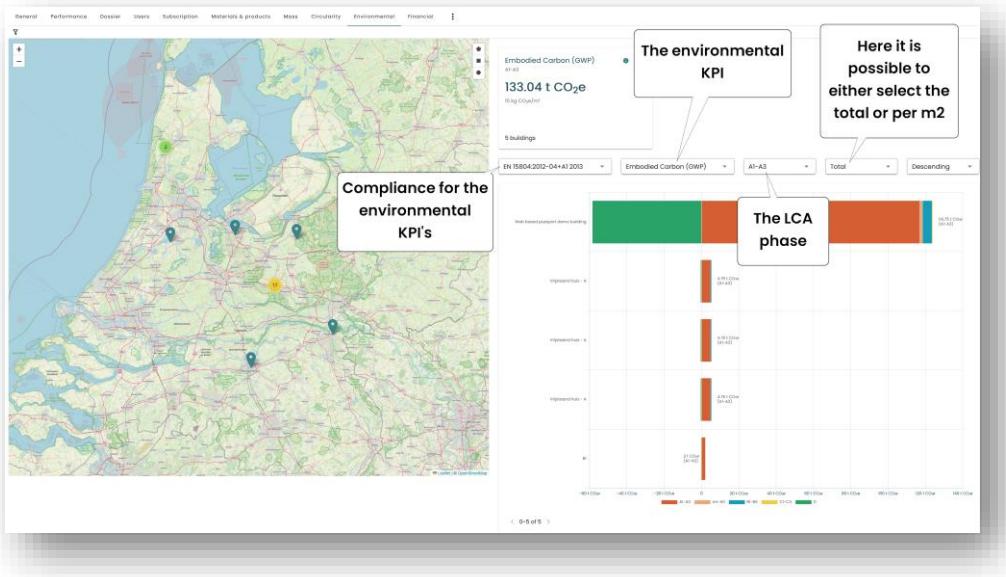


Figure 6: the environmental tab on an account

The financial tab shows the residual value of the buildings in terms of material value. You can choose either the Net Present Value, for which a stacked bar with the layers of Brand is shown, or the Current Value, which shows the material families.

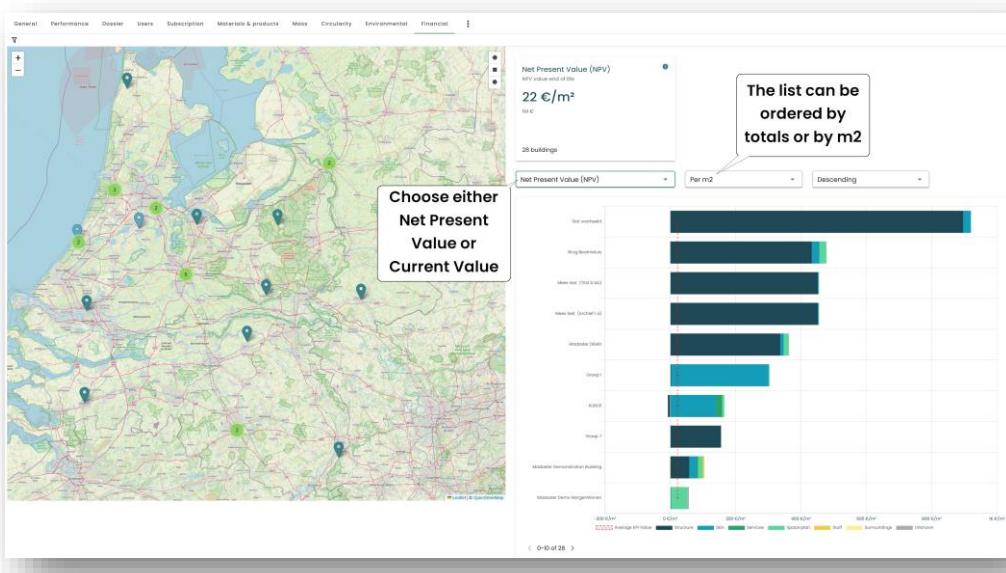


Figure 7: the financial tab on an account



### 3.1.2 Web-based passport

The web-based passport is a one-pager material passport that is published on the internet and can be shared by either directly sharing the link or via social media.

#### 3.1.2.1 Generating a web-based passport

To generate a web-based passport the 'issue material passport' on a building is used.

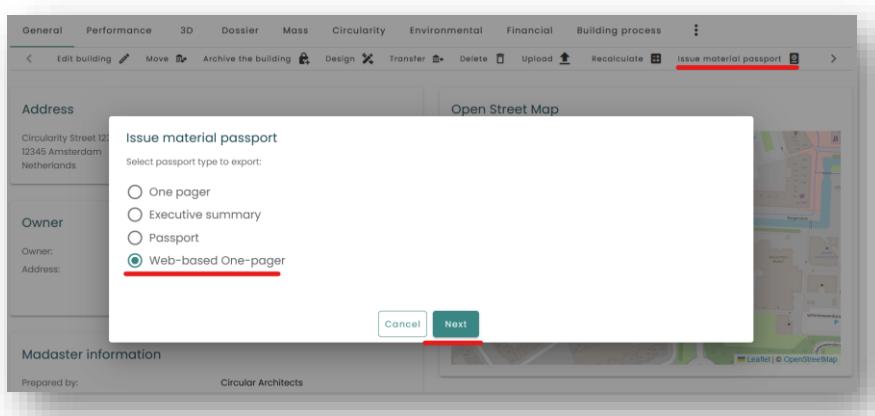
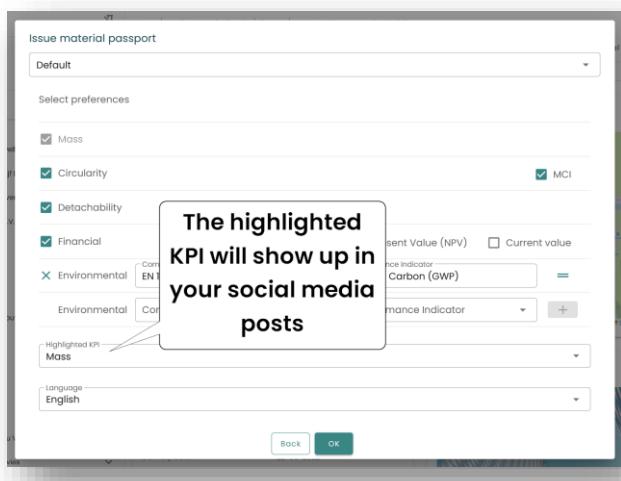


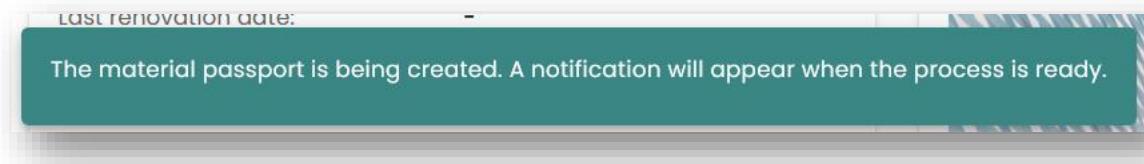
Figure 8: selecting to issue a material passport on the building page

The options for what to show on the web-based one-pager material passport are the same as for the regular one-pager with the addition to select a highlighted KPI. This KPI is the one which will show up on the preview in the social media post that are made using this passport. As with the regular one-pager, only a maximum of four KPI's (excluding mass) can be chosen.

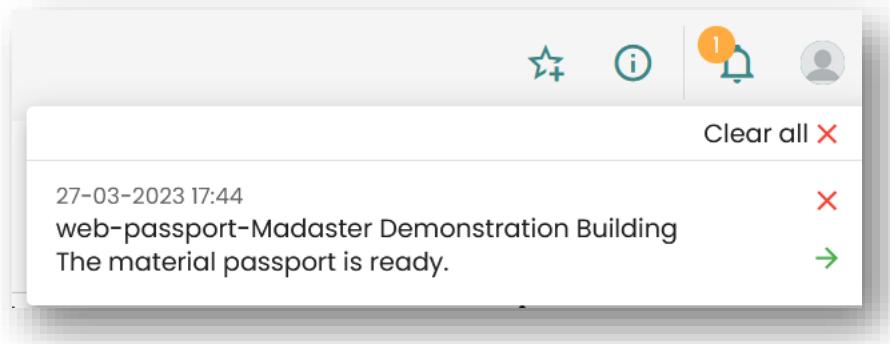




After selecting the preferred options a notification will appear



Followed by an alert once the passport is ready



### 3.1.2.2 Using the web-based passport

The web-based passport will appear in the dossier of the building, from where it is possible to open the link, share it on social media or delete it.

The web-based passport can be opened in the browser, shared on twitter or linkedin, or deleted

Opening the link will show the web-based passport in the browser. This is a responsive design, meaning it will scale to the size of the screen and therefore fits on both a bigger screen and a smaller one, such as on a mobile device.



**Material passport**  
Madaster Demonstration Building

**PREPARED BY**  
Circular Architects

**ADDRESS**  
Circularity Street 123  
12345 Amsterdam  
Netherlands

**GROSS SURFACE AREA**  
300 m<sup>2</sup>

**Material Intensity** **2.17** t/m<sup>2</sup>  
Material Intensity measures the amount of materials used per m<sup>2</sup>.

**Circularity** **48%**  
Circularity measures the degree of secondary materials used during construction, and potential for reuse & recycling at their end of use.

**Detachability** **73%**  
Detachability measures the degree to which materials and products can be disassembled without being damaged.

**Madaster**  
This Passport was created using Madaster – the online register for materials and products in the built environment. In Madaster, data is recorded on all materials and products used in a real estate or infrastructure object, providing insight into an object's material composition, circularity, detachability, environmental impact, and material value at end of life. Documenting materials in such a manner enables a better future with more material reuse, less impact on natural ecosystems, and less CO<sub>2</sub> emissions.

**Madaster platform** **Our purpose**

**Disclaimer**  
This Material Passport was realized without any intervention by (personnel and/or employees of) Madaster Services B.V. (hereinafter referred to as: "Madaster") and/or the Madaster Foundation is the sole and exclusive result of data imported by, or on behalf of the user, from the user's source files. Consequently, Madaster cannot be held accountable in any way for the incorrect, and/or incomplete and/or injudicious entry by the user of the required information.

**madaster**  
Increasing the value of Materials

**Material passport**  
Madaster Demonstration ...

**PREPARED BY**  
Circular Architects

**ADDRESS**  
Circularity Street 123  
12345 Amsterdam  
Netherlands

**GROSS SURFACE AREA**  
300 m<sup>2</sup>

**Material Intensity** **2.17** t/m<sup>2</sup>  
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**Madaster**

Figure 9: the web-based passport in different sizes. Left on a bigger screen, right how it looks on a mobile device.

Some remarks about the web-based passport:

- Generating web-based passports can be disabled by disabling the web-based passport feature.
- You can only have one web-based passport for a building, creating a new one will overwrite the existing one.
- When you archive or transfer a building the web-based passport will not be copied.
- Deleting the building will also delete the web-based passport.
- The picture chosen for the passport is the first picture on the building. If the building has no pictures a warning will be shown when a web-based passport is generated

Issue material passport

Default

This building has no image to be displayed on the passport.

Select preferences

Mass



- Like the other passports, data settings can limit the KPI's to be used in the passport.
- It is possible to define a passport preset for a web-based passport
- Deleting the passport will result in a 404 when navigating to the URL



- Using the sharing buttons in the dossier will open either Twitter or LinkedIn. The preview card used in the social media post shows the chosen highlighted KPI. The card on the post links to the whole web-based passport:





### 3.1.3 Other changes

#### 3.1.3.1 UI changes

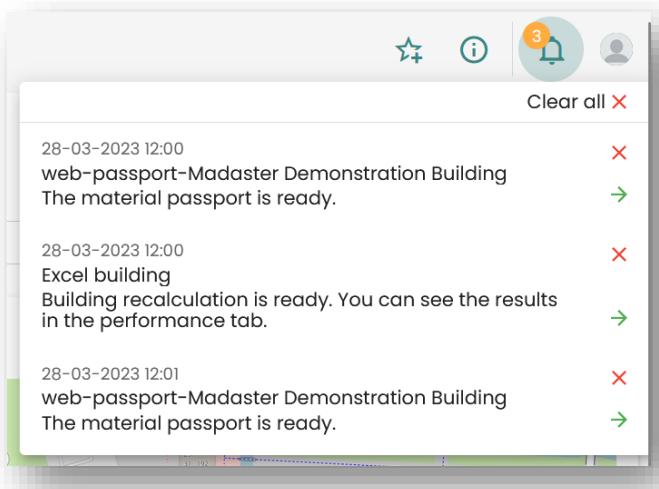
##### 3.1.3.1.1 Show unavailable data when generating a passport

If certain data has been made unavailable in data settings this now also shows up when generating a passport:

The screenshot shows the 'Issue material passport' dialog box. At the top, there's a dropdown menu set to 'Default'. Below it is a 'Select preferences' section with several checkboxes: 'Mass' (checked), 'Circularity', 'Detachability', 'Financial', 'MCI', 'Material Flows', 'Scarcity', 'Net Present Value (NPV)', and 'Current value'. A note says 'This data is not allowed to be shown.' In the center, there are input fields for 'Compliance' (EN 15804:2012-04+A1 2013), 'Phase' (A1-A3), and 'Key Performance Indicator' (Embodied Carbon (GWP)). Below these are dropdown menus for 'Environmental', 'Compliance', 'Phase', and 'Key Performance Indicator'. At the bottom, there's a language selector set to 'English' and two buttons: 'Back' and 'OK'.

##### 3.1.3.1.2 Notifications

It is now possible to dismiss all notifications at once. Furthermore, if you dismiss one notification and there are more the popup will not close.





### 3.1.3.1.3 Focus on missing fields on building form

When you create or edit a building and try to save without one of the required fields not filled in the screen will now focus automatically on the location of the missing fields.

Usage \*  
Detached house

Override the demolition costs (default: 64 euro/m<sup>2</sup>)

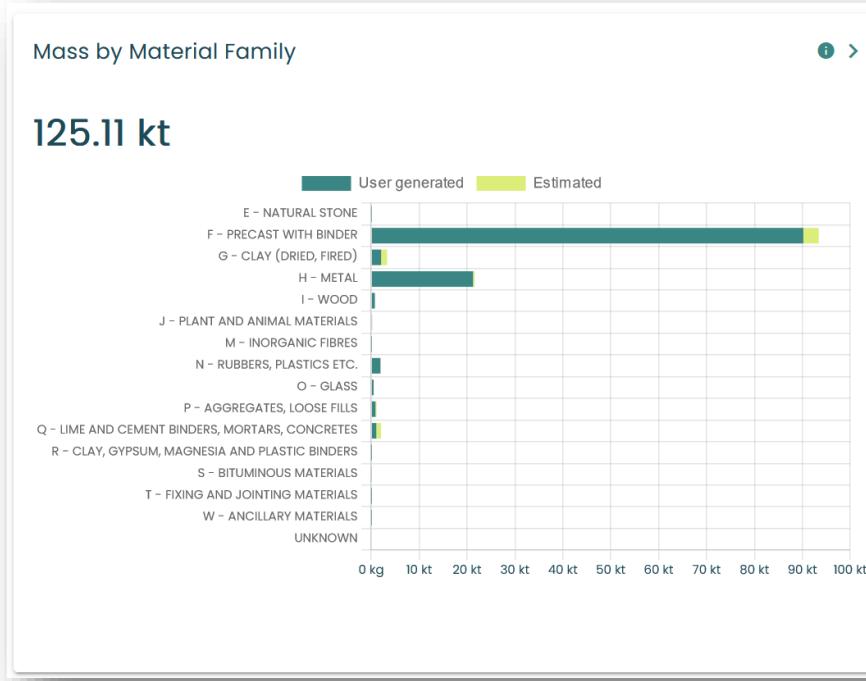
Gross Surface Area \*  
300 m<sup>2</sup>

Building phase \*  
The Building phase field is required

Calendar icon Delivery date \*  
The Delivery date field is required

### 3.1.3.1.4 Color difference between user generated and estimated data

When the difference is shown between user generated and estimated data the colors were very similar and it was difficult to distinguish. The colors have been changed.





### 3.1.3.1.5 Sort or select all filters

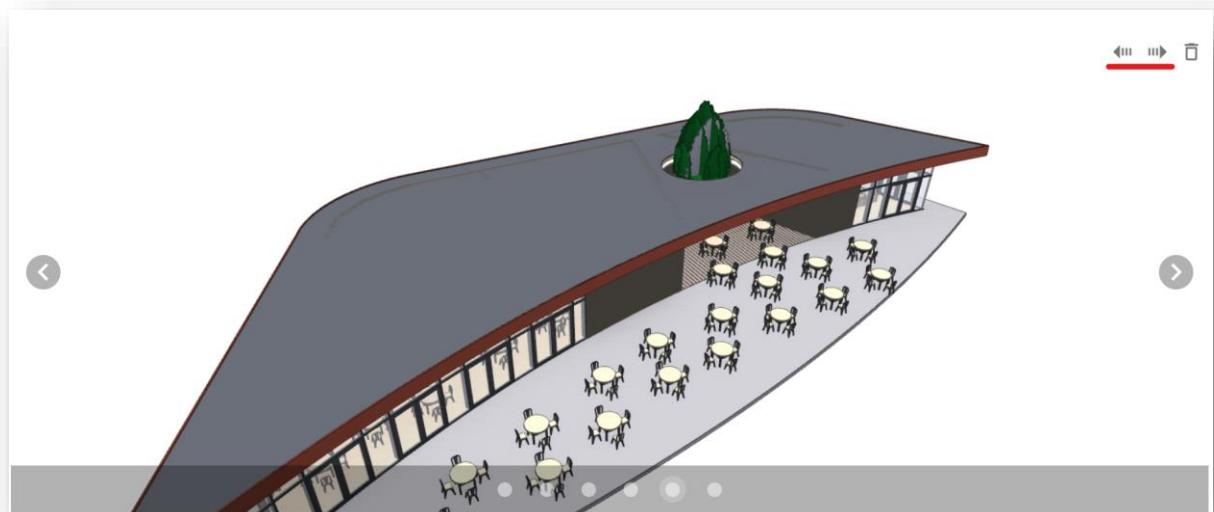
When using the material & products tab on an account or folder, when using a database or when linking an element from enrichment it is now possible to sort the filters alphabetically or to select/unselect all of them.

The screenshot shows a 'filter on' interface with three main sections:

- Manufacturer:** A dropdown menu with sorting options (A-Z, Z-A, ▲, ▼).
- Product type (5):** A list with 5 items:
  - Area (30)
  - Length (10)
  - Material (154)
  - Quantity (25)
  - Volume (443)A red horizontal bar highlights the 'Area' item.
- Status (1):** A list with 2 items:
  - Active (662)
  - Inactive (0)A red horizontal bar highlights the 'Active' item.

### 3.1.3.1.6 Sorting of pictures and adding a screenshot picture

It is now possible to sort the pictures on a building by using the arrow icons when editing a building. Also, taking a screen capture from the 3D model will now add the picture without a need to refresh.





### 3.1.3.2 Support for IfcMaterialConstituentSet from the IFCv4 standard

In the IFCv4 standard the property IfcMaterialConstituentSet can be used to define the material and optionally the fraction of that material within a single IFC element. When this is used in an IFC file Madaster will now support this.

### 3.1.3.3 Material flows now available as KPI in edit-layout

When defining which KPI's to show in the edit lay-out options it is now also possible to add the material flows to building, folder or account level.

The screenshot shows the 'Edit layout' dialog box with the 'Building' tab selected. Under the 'Show' section, several KPIs are listed with checkboxes and 'Hide charts' buttons:

- Mass (checked)
- Circularity (checked)
- Detachability (checked)
- Embodied Carbon (GWP) (checked)
- Net Present Value (NPV) (checked)

Below these, there is a checkbox for "Hide cards when data is not allowed." A note says: "Once configured the material flow KPI is added using the '+'".

On the right side, there are three boxes:

- A box containing "It is possible to choose either percentage or per m<sup>2</sup>". Below it is a dropdown menu set to "Sorting Per m<sup>2</sup>".
- A box containing "Any of the material flows can be chosen here". Below it are two dropdown menus: "Key Performance Indicator" (set to "Input Secondary") and "Key Performance Indicator Input Secondary".

At the bottom right are buttons for "Cancel", "Restore default", and "Save".



### 3.1.4 Bugfixes

The following bugs have been resolved:

- Archives, designs and splitted buildings were not shown correctly in the list view on accounts and folders. This has been fixed.
- When cancelling a transfer a notification would appear that the process was scheduled. This wrong notification has been removed.
- The color representation on the percentage of elements linked after enrichment could be wrong. That has been corrected.
- When archiving or splitting a building and generating a passport the passport would not appear, which has been fixed.
- Selecting a database in the navigation could result in it looking like multiple databases were selected. This is fixed.
- An empty template used as a source file would result in infinite loading in the enrichment screen. This is fixed.
- When linking an element in enrichment to a material it was possible to match it on typename. This option has been removed.



## 4 Build 20190

### 4.1 New or changed functionalities

#### 3.1.1 Data settings and edit-layout

This release new functionality has been added which enables administrators to choose which data to show for their buildings and also for a user to decide which KPI's they want to see.

##### 3.1.1.1 Data settings

On an account, folder or building it is now possible as an administrator to select which data from a building is accessible/shown in the platform.

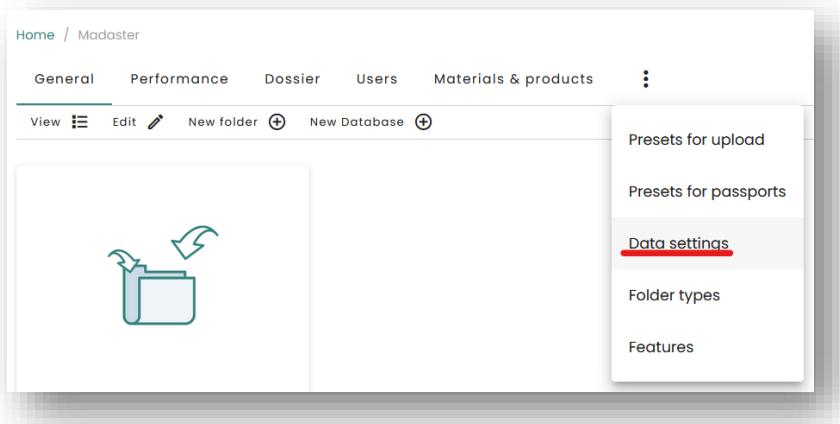


Figure 10: data settings at the account level. It is also available in folders or buildings.

This gives the following options:



General   Performance   Dossier   Users   Materials & products   :

Data settings

Select preferences

Circularity    MCI    Material Flows    Scarcity

Detachability

Environmental

Financial    Net Present Value (NPV)    Current value

Save

Figure 11

Unmarking and saving an option will exclude that information from being available in the platform. So if an administrator would exclude detachability, for example because it is not known or there is not enough data for it this will show up in the circularity tab in the following way:

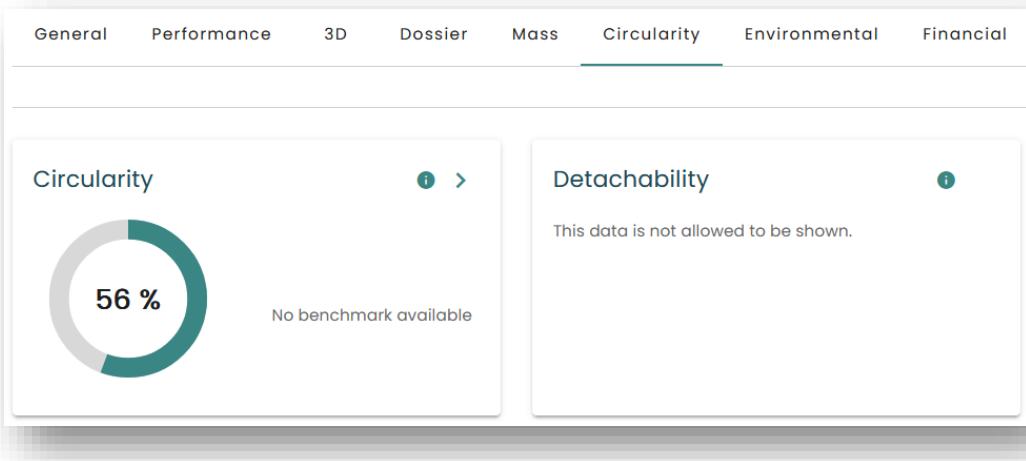


Figure 12: detachability has been excluded in the data settings

This will also impact the passport: in this case detachability will not be part of the material passport. For aggregations of data it will also be excluded; if on the data settings of a building the detachability is excluded then the detachability of that building is not taken into account for the detachability score on the account or folder that building is a part of.



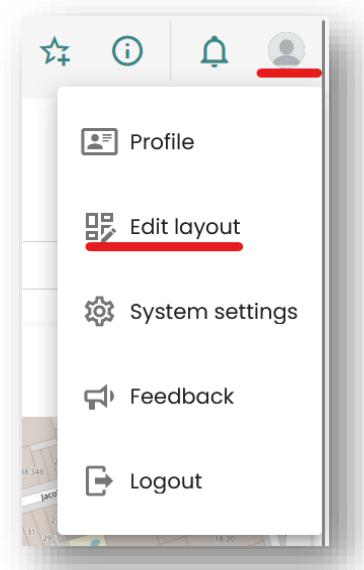
The data settings are inherited from higher levels. So the building inherits the data settings from a folder, and a folder from another folder or the account. This inheritance can be broken if it is necessary to have different settings at a lower level. If no data settings are set at any level the default from the Madaster platform is used.

The screenshot shows the 'Data settings' page within the 'Building process' section of the platform. At the top, there is a breadcrumb navigation: Home / Madaster Demo BE / Vlaanderen / Portfolio / Madaster Demo / Data settings. Below the breadcrumb, there is a horizontal menu bar with tabs: General, Performance, 3D, Dossier, Mass, Circularity, Financial, and Building process. The 'Circularity' tab is currently selected. A red box highlights the 'Restore inheritance from parent level' button, which is located just below the menu bar. The main content area is titled 'Data settings' and contains a section for 'Select preferences'. Under 'Select preferences', there are several checkboxes: 'Circularity' (checked), 'MCI' (checked), 'Material Flows' (unchecked), 'Scarcity' (unchecked), 'Detachability' (unchecked), 'Environmental' (unchecked), 'Financial' (checked), 'Net Present Value (NPV)' (checked), and 'Current value' (unchecked). A 'Save' button is located at the bottom right of the form.

Figure 13: this building does not inherit the data settings from its parent, but it can be restored.

### 3.1.1.2 Edit Lay-out

As any user in the platform it is now possible to define your own preferences for which KPI's should be visible in the performance tab on account, folder or building level.





It is possible to have different settings for accounts/folders on the one hand, and buildings on the other:

A screenshot of a software interface titled 'Edit layout'. At the top, there are two tabs: 'Account/Folder' (underlined in red) and 'Building' (underlined in green). Below the tabs is a section labeled 'Show' containing four items: 'Mass', 'Circularity', 'Detachability', and 'Embodied Carbon (GWP)'. Each item has a 'Hide charts' toggle switch and a horizontal bar for dragging. At the bottom of the screen, there is some small text: 'FN 15804:2012-04+A1 2013' and 'A1-A3'.

Figure 14: the edit layout screen with the building tab selected

There are a number of options in this screen:

- It is possible to include or exclude KPI's; the KPI's at 'shown' are included, the ones at 'Don't show' are not.
- It is possible to let the chart related to a KPI be shown or not
- It is possible to drag the KPI's; this will influence the sequence in which the cards are shown
- The 'Hide cards when data is not allowed' is related to the new functionality as described in 2.1.1: the option for administrators to hide data. Here it is possible exclude these cards from the overview. If included a card is shown with the message that the data is not allowed to be shown.
- Pressing the cancel button will close the screen without any changes being saved
- 'Restore default' will restore the Madaster default settings
- Save will save the changes you've made and close the screen



Edit layout

Account/Folder Building

Show

Embodied Carbon (GWP) EN 15804:2012-04+A1 2013 A1-A3  Hide charts

Mass  Hide charts

Circularity  Hide charts

Hide cards when data is not allowed.

Don't show

+ Current value

+ Detachability

+ Net Present Value (NPV)

+ Environmental Compliance ▾ Phase ▾ Key Performance Indicator ▾

Cancel Restore default Save

Figure 15: a different configured lay-out for the building level

Example: for the lay-out settings as shown in figure 7 and for a building for which the environmental data has been excluded in the data settings I see the following on the performance tab of that building:

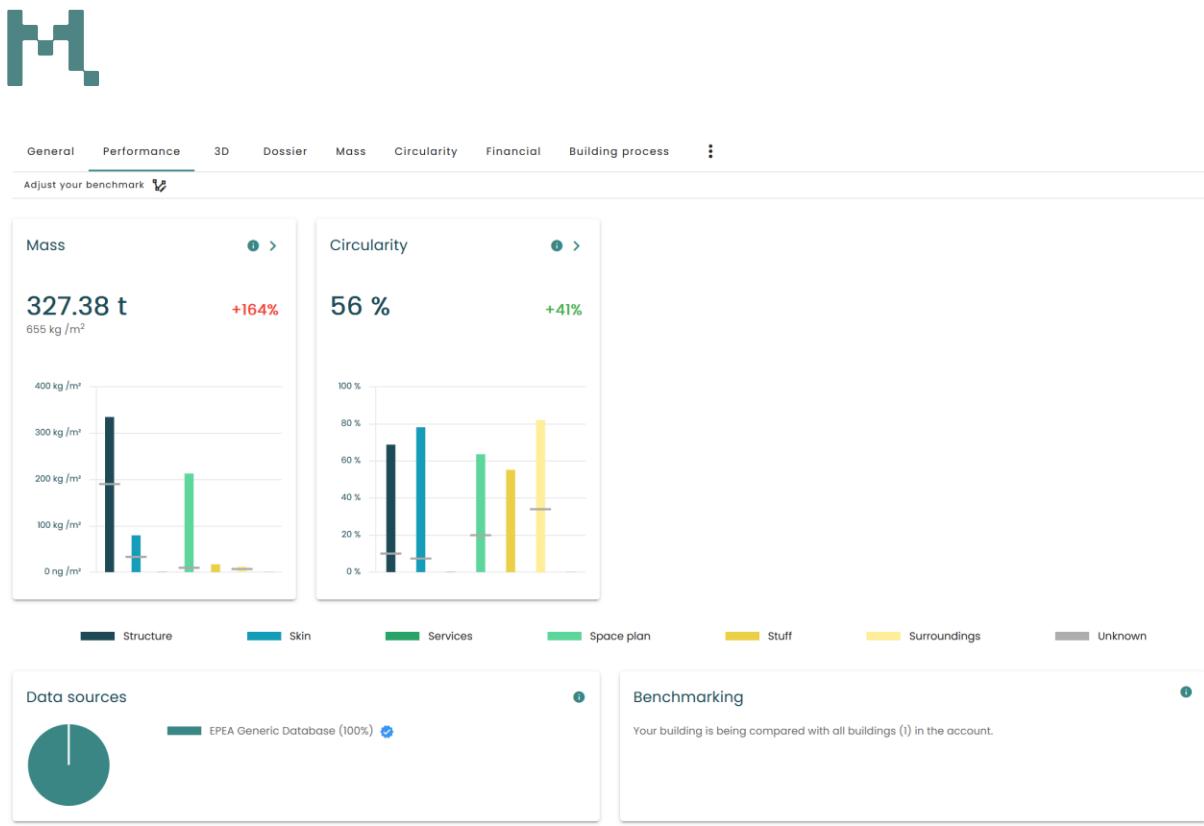


Figure 16: the embodied carbon is not shown because it is excluded in the data settings and I've chosen not to show cards for excluded data. Mass and circularity are shown

If I now allow environmental data to be shown for this building in the data settings it will change to this:

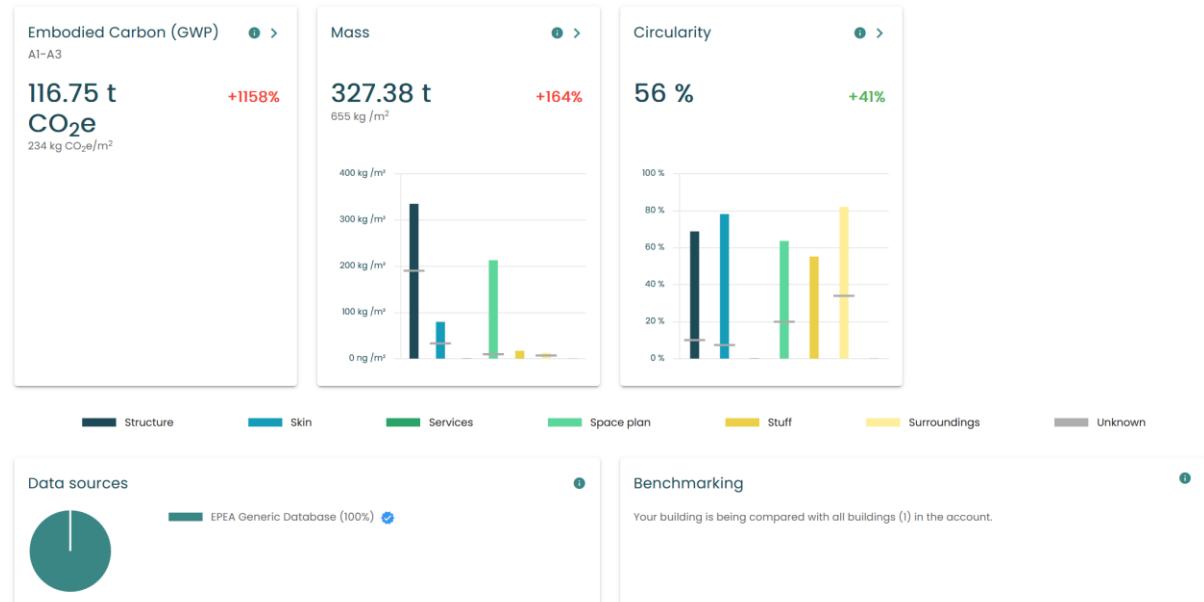


Figure 17: now the embodied carbon is shown. Since I've chosen to hide the chart for it there is no chart for it.



### 3.1.2 Other changes

#### 3.1.2.1 Changes to the general and performance tabs on accounts and folders

This release a number of changes have been made to the general and performance tab on both the account and folder level. The area map has been integrated with the KPI cards on the performance tab for a better overview of the buildings in that account or folder. Furthermore; in the general tab it is now more clear in both the icon and list views which buildings have either designs, archives or have been split. Only the 'real' objects are counted (as per last release). This means that if you have for example a building with two designs the data for those designs are not aggregated in order to prevent one single real building to be included multiple times.

##### 3.1.2.1.1 Area map integrated into the performance tab

The performance tab now has the area map integrated into it.

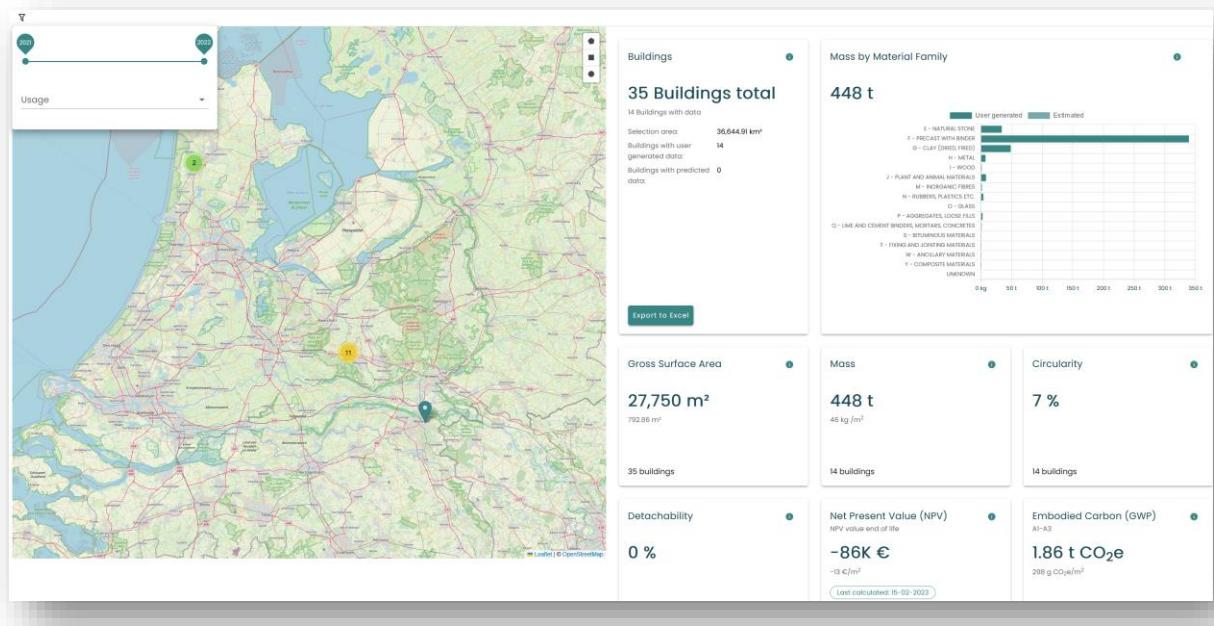


Figure 18: the performance tab with the area register



The following elements are therefore now moved from the area map to the performance tab:

- The map
- The summary card (now called 'buildings')
- The mass by material intensity card
- The filters on construction year and usage; you have to click on the filter icon in the toolbar in the top left to set these.

The selection on the map changes the scope of the calculations. To prevent the map zooming because of scrolling in the page zooming can now only be done by double clicking (which zooms in) and using the '+' and '-' icons on the map. In the cards the number of buildings which are used for the calculations is shown.

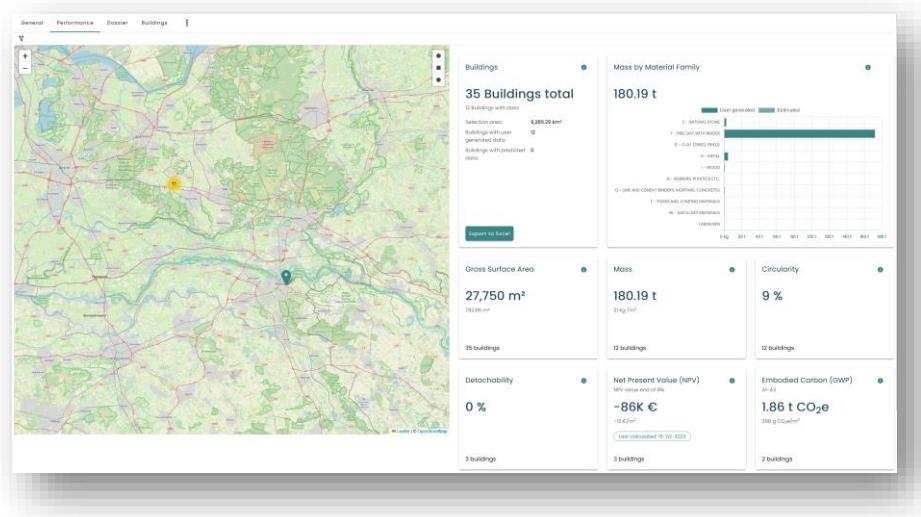


Figure 19: in this map section there are 12 buildings with data about their mass and 2 buildings with GWP data. In the buildings card it is shown that in the whole account/folder there are 35 buildings, 12 of which have data that we use in this performance tab.

Within each map segment buildings which are excluded from the calculations are:

- Designs
- Archives (unless there only is an archive)
- If a building has been split into multiple buildings all the newly split buildings are included, but the building that has been split is not



### 3.1.2.1.2 Visibility of designs, archives and split buildings

This release designs archives and split buildings have been removed as separate building cards from the general tab on accounts and folders. Icons have been added to buildings cards in the general tab of accounts and folders and in the list view for designs, archives and split buildings.

The image shows two screenshots of the Madaster software interface. On the left, a building card for 'Madaster Demo' is displayed, featuring a large image of a modern building facade and a green status bar at the bottom indicating 'Design' and 'Size x 1000m²'. On the right, a list view of buildings is shown, with each item having a small icon next to it, such as a building, a design icon, or an archive icon, followed by the building's name and a tooltip.

Figure 20: on the left an example of how the new icons are implemented on a building card, including the tooltip. On the right how it looks in the list view

### 3.1.2.2 Changes to enrichment and source file processing

There are new options for filtering in the enrichment screen:

- It is now possible to filter on the database:

The image shows the enrichment screen in Madaster. On the left, there is a sidebar with various filters: 'Search' (with a magnifying glass icon), 'Progress enrichment' (showing 92% completion with a progress bar), 'Filter on' (with sections for 'Element status', 'Mapping status', and 'Database'), and dropdowns for 'Building number', 'Element calculation', and 'IFC-type'. The 'Database' section is currently selected and has a red underline. On the right, there is a table with columns for 'Element' (listing items like '... Wand-x', '... Dak-x', etc.) and 'Mat' (listing materials like 'Hout', 'dam', 'ALG', 'Dakp', 'Hout', 'dam', 'Steel', 'Hout', 'dam', 'ALG', 'Hout', 'dam', 'Steel', 'Hout', 'dam', 'ALG', 'Dakp', 'Grinx'). Each row in the table has a checkbox in the first column.



- When the mappings have failed an alert is shown. It is also possible to filter on all the mapping mismatches. This alert is triggered when the element quantity does not match with that of the product or material. So for example when the element is described in volume whilst the product/material is described in area.

Filter on								
Element status								
Mapping status								
<input type="radio"/> Invalid	120	<input type="checkbox"/> ... Ceiling grille (steel)	IPE	<input type="checkbox"/> ... Steel - Profile	1/1			
<input type="radio"/> Valid	112	<input type="checkbox"/> ... Ceiling grille (steel)	IPE	<input type="checkbox"/> ... Steel - Profile	1/1			
Database		<input type="checkbox"/> ... Ceiling grille (steel)	IPE	<input type="checkbox"/> ... Steel - Profile	1/1			
Building number		<input type="checkbox"/> ... Toilet	unglazed tile	<input type="checkbox"/> ... Ceramic Tiles - Unglazed Porcelain	1/1			
		<input type="checkbox"/> ... Toilet	unglazed tile	<input type="checkbox"/> ... Steel - Profile	1/1			
		<input type="checkbox"/> ... Toilet	unglazed tile	<input type="checkbox"/> ... Ceramic Tiles - Unglazed Porcelain	1/1			
		<input type="checkbox"/> ... Ceiling grille (steel)	IPE	<input type="checkbox"/> ... Ceramic Tiles - Unglazed Porcelain	1/1			
				<input type="checkbox"/> ... Steel - Profile	1/1			

- It is now possible to add a element description in the excel templates when uploading an excel as a source file

GTIN	ArticleNumber	Madaster Id	External Database	Description	Material/Product	Class

### 3.1.2.3 Additional phase groupings for LCA KPI's available

Two phase groupings for LCA have been added for use in the passports or on the performance and environmental tabs:

- Sum of the product and end-of-life phases: [A1-A3] + [C1-C4]
- Sum of all phases: A-D



### 3.1.2.4 Usability changes

#### 3.1.2.4.1 Spinning wheel

After uploading a file as long as the platform is busy processing this file a spinning wheel is shown in the dossier:

<input type="checkbox"/>	Name	Size	Classification method	Date exported	Tags	Owner	Active
<input type="checkbox"/>	 <a href="#">Office_A_20110811.ifc</a> 20100326_1700 (Solibri IFC Optimizer); IFC2X3	3.91 MB	NL-SfB V2019I2	11-08-2011 16:18		Paul Klein Lankhorst	
<input type="checkbox"/>	 <a href="#">Office_A_20110811.ifc</a>	3.91 MB	NL-SfB	27-02-2023 09:50		Paul Klein Lankhorst	

#### 3.1.2.4.2 Tooltips

The styling of the tooltips have been made uniform throughout the platform.

#### 3.1.2.4.3 Show that a recalculation is done when changing the lifespan of a building

When you change the lifespan of a building a recalculation is done, this is now also shown:

 Building information is being recalculated. While this process is running, no changes which affect calculations are possible on the building.



### 3.1.3 Bug fixes

The following bugs have been resolved:

- Saving an EPEA urban mining tool object would sometimes be stopped by an empty value which was unnecessary. This has been fixed.
- A number of checkbox bugs with the passports presets and generating material passports have been fixed.
- For smaller resolutions the tool bar could become too big, with buttons disappearing offscreen. This has been resolved.
- In the mass tab of a building, with the material family selected, the colors and offset of the chart could be wrong, what has been corrected.
- The building process tab would not open detailed information; this has been solved.



## 4 Build 19365

### 4.1 New or changed functionalities

#### 4.1.1 New material passport options and design

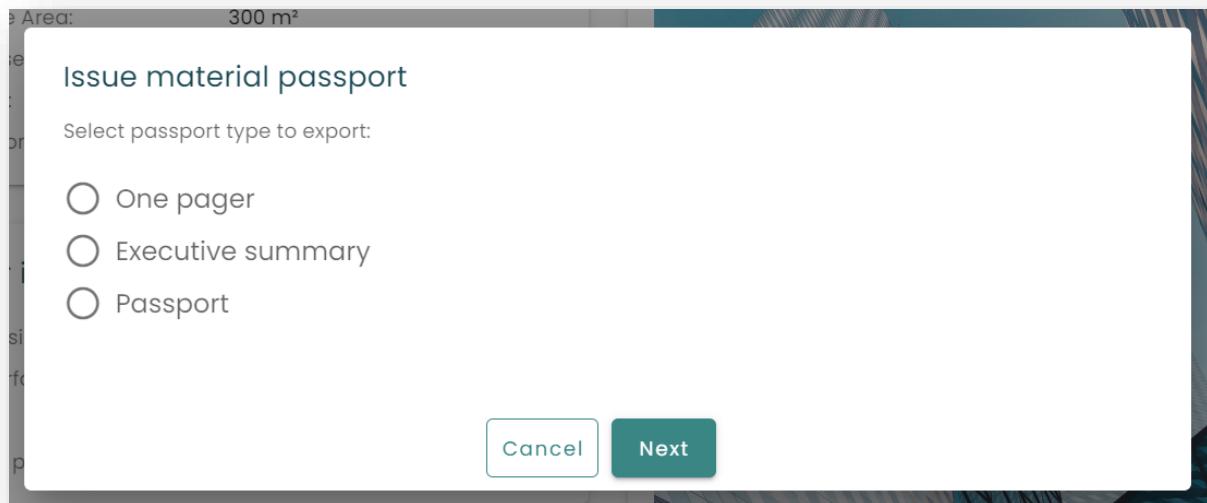
In this release, the material passports have been redesigned. They have a different look and feel as well as new options. There are different types of passports now: the one-pager, an executive summary and a (full) passport that can include a technical annex with the base data in an excel file. Apart from that it is now possible to preset what data can be included in the passport, such as the Madaster Circularity Index or any of the environmental KPI's.

##### 4.1.1.1 Issuing and generating a passport

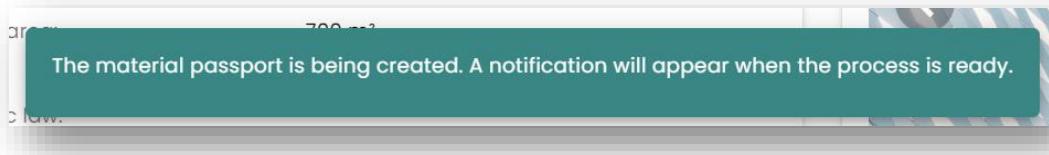
The option to generate passports from a folder has been removed; this can now only be done from the building.

The screenshot shows a navigation bar with links: Home / Madaster Netherlands / Demo / Madaster Demonstration Building. Below the navigation is a horizontal menu bar with tabs: General (underlined), Performance, 3D, Dossier, Mass, Circularity, Environmental, Financial, and a more icon. Underneath the menu bar is a toolbar with various icons: Edit building (pencil), Move (arrow), Archive the building (trash), Design (cross), Transfer (arrow), Delete (trash), Upload (up arrow), Recalculate (refresh), Issue material passport (highlighted with a red underline), and New Database (plus). The 'Issue material passport' button is the second from the right in this row.

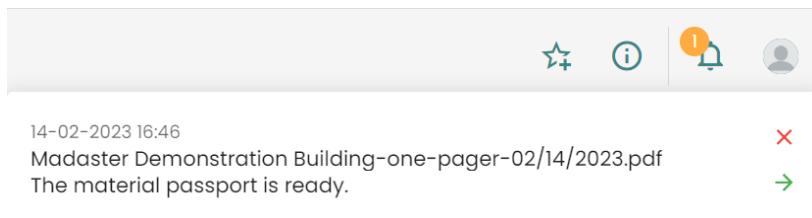
Once selected, this will open a pop-up from which it is possible to choose the type of passport to be generated for this building.



Regardless of the type, once the passport setup has been chosen a message is shown that the passport is being generated.



And as soon as it is ready a user notification is shown.



*21: the notification which will appear on the top right when a passport is ready. Clicking the 'x' will remove the notification, clicking the arrow will open the dossier where the passport is located.*

Which means it is available in the dossier of the building. Note that if data is unavailable for a chosen KPI or for a default field it will not appear in the passport.



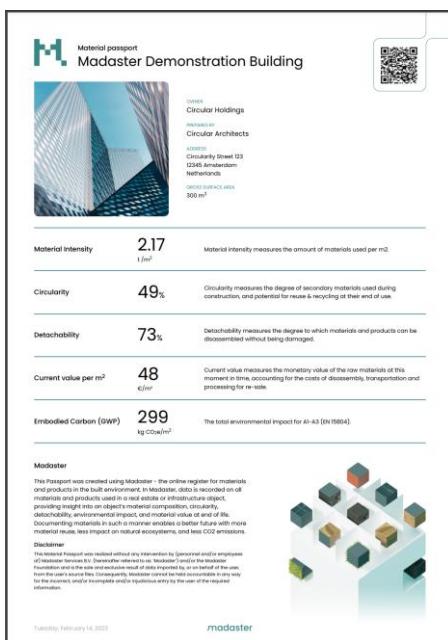
#### 4.1.1.2 One pager

The one pager passport is meant to give a concise overview of the building without too much additional insights. It can include only few items, since it needs to fit on one page. Therefore only a maximum of 5 KPI's can be included. Mass will always be included, which leaves 4 more options for configuration.

The screenshot shows the 'Issue material passport' dialog box. Under 'Select preferences', 'Mass' is checked by default. Other options like 'Circularity', 'Detachability', and 'Financial' are also checked. Under 'Environmental', 'Compliance EN 15804:2...' and 'Phase A1-A3' are selected. The 'Key Performance Indicator' is set to 'Embodied Carbon (GWP)'. There are additional fields for 'Environmental' and 'Financial' with dropdown menus for 'Compliance', 'Phase', and 'Key Performance Indicator'. At the bottom, there are checkboxes for 'Net Present Value (NPV)' and 'Current value', both of which are checked. A note at the bottom states: 'On a one pager it is only possible to select a maximum of four options. (Excluding Mass)'. The language is set to English. At the bottom right are 'Back' and 'OK' buttons.

22: the one pager screen with too many KPI's selected

The one pager has the following design:



23: an example of the one pager passport. Only known data is shown. Elements like the building picture or the owner are included by default, the KPI's be chosen apart from mass – which is mandatory.



### 4.1.1.3 Executive summary passport

The executive summary is meant to give a lot more information than the one pager. It does not have a set maximum for the KPI's to be included.

Issue material passport

Select preferences

Mass

Circularity

Detachability

Environmental

Environmental

Environmental

Environmental

Financial

Key Performance Indicator

MCI

Material Flows

Language English

Back OK

But also in general it contains more detailed information.

Material passport  
Madaster Demonstration Building

Address: Circular Street 123, 12345 Amsterdam, Netherlands

Owner: Circular Holdings

Prepared by: Circular Architects

Published on: 01/01/2023

QR code

Material passport

Madaster Demonstration Building

General information

Building

Name: Madaster Demonstration Building

Address: Circular Street 123, 12345 Amsterdam, Netherlands

Circularity: 300 m<sup>2</sup>

Building Phase: New building

Community: Conference complex/small complex (2000 m<sup>2</sup>)

Labels

BRGEM: Excellent

MINERAL APIS SCORE: 124 cm<sup>2</sup>/g

Energy

EFFICIENCY LABEL: A+++

Cadaster information

CADASTER INFORMATION: Amsterdam 1234

GENERAL SURFACE AREA: 700 m<sup>2</sup>

LOT NUMBER: 1234

Delivery date: 01/01/2022

Architectural area: 300 m<sup>2</sup>

Building phase: New building

Community: Conference complex/small complex (2000 m<sup>2</sup>)

Labels

BRGEM: Excellent

MINERAL APIS SCORE: 124 cm<sup>2</sup>/g

Lifespan

PREDICTED LIFESPAN BUILDING (YEARS): 60

PREDICTED LIFESPAN STRUCTURE (YEARS): 100

PREDICTED LIFESPAN ENR (YEARS): 20

PREDICTED LIFESPAN SERVICES (YEARS): 15

PREDICTED LIFESPAN SPACE PLAN (YEARS): 10

PREDICTED LIFESPAN STAFF (YEARS): 5

PREDICTED LIFESPAN SURROUNDINGS (YEARS): 20

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24: In the executive summary a lot more general information from the building is shown - if available



## Material passport Madaster Demonstration Building Source Information

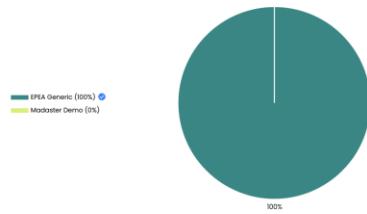
### Sources

When preparing this building file to generate the material passport, it is very important to have a clear overview of the objects in the report. The objects must be assigned a material property, as well as a classification code. Madaster does not calculate quantities or geometric information and all quantities are imported directly from the IFC model. On the Madaster platform, it is possible to check if the classification codes are correctly assigned and if the geometry is correctly made within these frameworks. Consequently, any missing and/or incomplete and/or incorrect information in the source files immediately results in inaccurate results. Therefore, Madaster cannot warrant the quality of these results. As a secondary source of information, a Microsoft Excel file (based on a Madaster Excel template) can be imported containing geometric information about the building. Information on the building parts and/or components/materials, as well as classification codes.

### Active Source files

Name	Classification method	Date exported
20279 DMG - Instalaties.ifc	Omniclass	8/1/2022
20279 DMG - Bouwkenmerken.ifc	Omniclass	8/1/2022
20279 DMG - Interieur.ifc	Omniclass	8/1/2022
20279 DMG - Constructie.ifc	M-GB	8/1/2022

### Applied Material and Product Databases



### Completeness of Source Information

0 (0%) Elements unlinked	0 (0%) Elements with unknown layer	762 (23.2%) Elements with insufficient geometry
--------------------------	------------------------------------	---

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## Material passport Madaster Demonstration Building Mass

Total mass and mass/m<sup>2</sup> demonstrate the quantity and intensity of materials temporarily stored within the building. While mass cannot be eliminated, the goal is to use less materials to achieve the same goal.

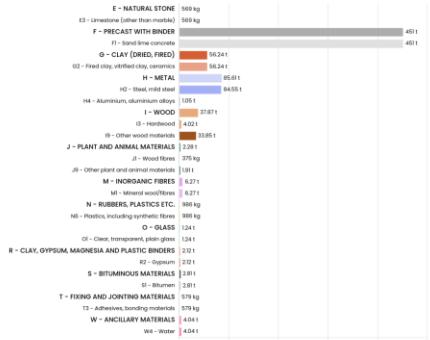
651.61 t

### Construction Materials

2.17 t/m<sup>2</sup>

The building is comprised of material subfamilies, grouped into the following material families:

### Material families



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25: Source information like the classification method for the source files or the used databases is summarized. Each KPI, in this case the mass, is provided with insightful charts.

### 4.1.1.4 Full passport and the technical annex

The (full) passport is the most extensive passport option. It shows a lot more of the underlying data and it also has the option to include a technical annex, which is a separate excel export of the products and/or materials per shearing layer.

26: the configuration options for the full passport. It is possible to exclude the explanation about a material passport and to also generate the technical annex. Scarcity is also an additional option for the full passport, but is only available together with material flows.

An example is the mass, where it is clear from the screenshot from an example passport that it contains more detailed information about what it is and where it is located.



## Material passport Madaster Demonstration Building

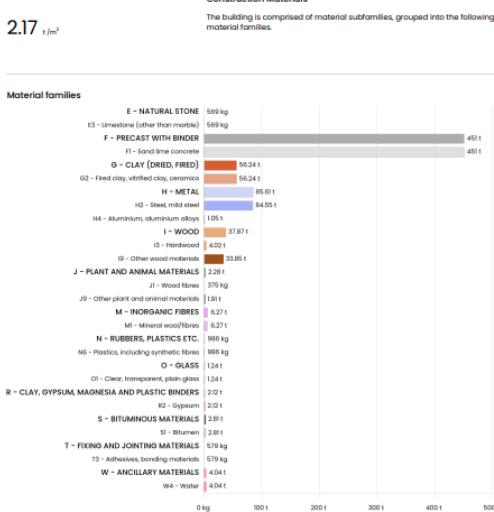
### Mass

Total mass and mass/m<sup>2</sup> demonstrates the quantity and intensity of materials temporarily stored within the building. While mass cannot be eliminated, the goal is to use less materials to achieve the same goal.

**651.61**

#### Construction Materials

The building is comprised of material subfamilies, grouped into the following material families.



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## Material passport Madaster Demonstration Building

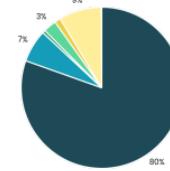
### Mass by Shearing Layer

#### Shearing Layers

Madaster uses the "Shearing Layers" model [Duffy, Brand, 1994] to divide a building into 6 layers: Site, Structure, Skin, Services, Space Plan, and Stuff.

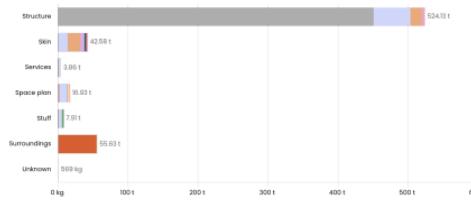
#### Material families

The 3283 unique materials comprising the building have been grouped into 29 material families.



■ Structure ■ Skin ■ Services ■ Space plan ■ Stuff ■ Surroundings ■ Unknown

#### Layer Composition



■ E - NATURAL STONE  
■ F - PRECAST WITH BINDER  
■ G - CLAY (DRIED, FIRED)  
■ H - METAL  
■ I - WOOD  
■ J - PLANT AND ANIMAL MATERIALS  
■ M - INORGANIC FIBRES  
■ N - RUBBERS, PLASTICS ETC.  
■ O - GLASS  
■ R - CLAY, GYPSUM, MAGNESIA AND PLASTIC BINDERS  
■ S - BITUMINOUS MATERIALS  
■ T - FIXING AND JOINING MATERIALS  
■ W - ANCILLARY MATERIALS

0 kg 100 t 200 t 300 t 400 t 500 t 600 t

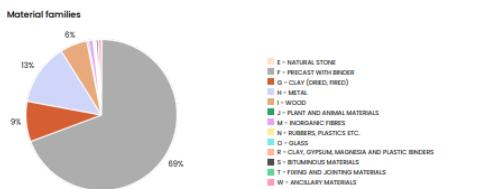
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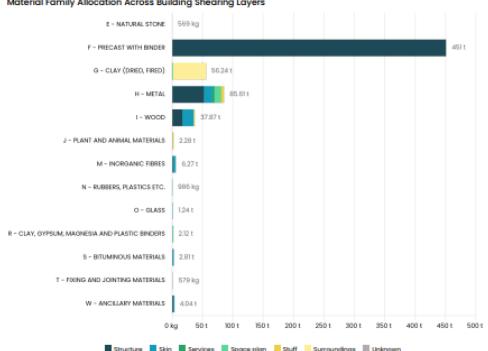
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## Material passport Madaster Demonstration Building

### Mass by Material Families



#### Material Family Allocation Across Building Shearing Layers



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## Material passport Madaster Demonstration Building

### Mass details

Material family	Total	Structure	Skin	Services	Space plan	Stuff	Surroundings	Unknown
E - NATURAL STONE	0.76 kg	0 kg	0 kg	0 kg	0 kg	0 kg	0 kg	0.76 kg
E3 - limestone (other than marble)	0.76 kg	0 kg	0 kg	0 kg	0 kg	0 kg	0 kg	0.76 kg
F - PRECAST WITH BINDER	491 kg	491 kg	0 kg	0 kg	0 kg	0 kg	0 kg	0 kg
F1 - Sand lime concrete	491 kg	491 kg	0 kg	0 kg	0 kg	0 kg	0 kg	0 kg
G - CLAY (DRIED, FIRED)	8.0% kg	0 kg	0 kg	0 kg	0.2% kg	0% kg	8.4% kg	0% kg
G2 - Fired clay, vitrified clay, ceramics	8.0% kg	0 kg	0 kg	0 kg	0.2% kg	0% kg	8.4% kg	0% kg
H - METAL	12.7% kg	12.7% kg	0 kg	0 kg	0.2% kg	0% kg	0.7% kg	0% kg
H2 - Steel, mild steel	12.7% kg	12.7% kg	0 kg	0 kg	0.2% kg	0% kg	0.7% kg	0% kg
H4 - Aluminium, aluminum alloys	0.2% kg	0.2% kg	0 kg	0 kg	0.2% kg	0% kg	0% kg	0% kg
I - WOOD	5.8% kg	5.8% kg	0 kg	0 kg	0.2% kg	0% kg	0.2% kg	0% kg
I1 - Hardwood	5.8% kg	5.8% kg	0 kg	0 kg	0.2% kg	0% kg	0.2% kg	0% kg
I2 - Other wood materials	0.2% kg	0.2% kg	0 kg	0 kg	0.2% kg	0% kg	0.2% kg	0% kg
J - PLANT AND ANIMAL MATERIALS	0.4% kg	0 kg	0 kg	0 kg	0.3% kg	0% kg	0% kg	0% kg
J1 - Wood fibres	0.4% kg	0 kg	0 kg	0 kg	0.3% kg	0% kg	0% kg	0% kg
J2 - Other plant and animal materials	0.1% kg	0 kg	0 kg	0 kg	0.1% kg	0% kg	0% kg	0% kg
M - INORGANIC FIBRES	0.1% kg	0 kg	0 kg	0 kg	0.1% kg	0% kg	0% kg	0% kg
M1 - Mineral wool/fibres	0.1% kg	0 kg	0 kg	0 kg	0.1% kg	0% kg	0% kg	0% kg
N - RUBBERS, PLASTICS ETC.	988 kg	988 kg	0 kg	0 kg	107 kg	0 kg	0 kg	0 kg
N1 - Plastics, including synthetic fibres	988 kg	988 kg	0 kg	0 kg	107 kg	0 kg	0 kg	0 kg
O - GLASS	1241 kg	1241 kg	0 kg	0 kg	0 kg	0 kg	0 kg	0 kg
O1 - Clear, transparent, plain glass	1241 kg	1241 kg	0 kg	0 kg	0 kg	0 kg	0 kg	0 kg
R - CLAY, GYPSUM, MAGNESIA AND PLASTIC BINDERS	0.3% kg	0 kg	0 kg	0 kg	0.2% kg	0% kg	0% kg	0% kg
R2 - Gypsum	0.3% kg	0 kg	0 kg	0 kg	0.2% kg	0% kg	0% kg	0% kg
S - BITUMINOUS MATERIALS	0.4% kg	0 kg	0 kg	0 kg	0.4% kg	0% kg	0% kg	0% kg
S1 - Bitumen	0.4% kg	0 kg	0 kg	0 kg	0.4% kg	0% kg	0% kg	0% kg

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27: Mass in the full passport. An additional page with mass details is excluded here for the sake of brevity



Another KPI, circularity, in the full passport contains not just the MCI, but also information about how it is calculated, as well as circularity by either shearing layer or phase.

**Material passport**  
**Madaster Demonstration Building**  
**Madaster Circularity Indicator (MCI)**

Circularity measures the degree of secondary materials used during construction, and potential for reuse & recycling at their end of use.

**Madaster Circularity Indicator (MCI)**

The Madaster Circularity Indicator (MCI) assesses the total circularity of a building based on three phases: 1) Input in the construction process, 2) the utility during the use phase, and 3) the destination of the materials at the end-of-life phase. A building with a high score is constructed with reused and recycled materials and has a higher-than-average utility. A fully circular building has a score of 100%. The MCI is based on the Material Circularity Indicator that has been developed by the Ellen MacArthur Foundation. All rights reserved.

**MCI Calculation Components**

**MCI by Shearing Layer**

	Structure	Skin	Services	Space plan	Stuff	Surroundings	Unknown
Madaster Circularity Indicator (MCI) Score	58%	88%	47%	77%	52%	64%	46%
CI building score	58%	88%	95%	53%	67%	94%	46%
Score Subcomponents							
Circularity Construction Phase Secondary materials (goal 100%)	9%	34%	77%	80%	53%	3%	0%
Circularity Use Phase Utility (goal >100%)	97%	304%	334%	532%	777%	742%	83%
Circularity End of Life Phase Recoverable content (goal 100%)	99%	82%	93%	72%	58%	99%	100%

**Material passport**  
**Madaster Demonstration Building**  
**Circularity Construction Phase**

	Structure	Skin	Services	Space plan	Stuff	Surroundings	Unknown
Secondary materials (goal 100%)	9%	34%	77%	80%	53%	3%	0%
Mass of product (t)	47.02 t	14.31 t	2.98 t	10.12 t	4.18 t	1.62 t	0 kg
Mass Composition							
Applied recycled materials (% of mass)	0%	34%	77%	80%	53%	3%	0%
Applied rapidly renewable material (% of mass)	0 kg	0 kg	0 kg	0 kg	0 kg	0 kg	0 kg
Applied reused components (% of mass)	0%	0%	0%	0%	0%	0%	0%
Recycling							
Efficiency of recycling process for construction phase (%)	100%	100%	100%	100%	100%	100%	0%
Mass of waste generated during recycling process (t)	0 kg	0 kg	0 kg	0 kg	0 kg	0 kg	0 kg
Circularity Use Phase							
	Structure	Skin	Services	Space plan	Stuff	Surroundings	Unknown
Utility (goal >100%)	97%	304%	334%	532%	777%	742%	83%
Actual average lifetime of materials (years)	97	61	50	53	39	148	50
Actual industry-average lifetime of materials (years)	100	20	15	10	5	20	60
Circularity End-Of-Life Phase							
	Structure	Skin	Services	Space plan	Stuff	Surroundings	Unknown
Recoverable content (goal 100%)	99%	82%	93%	72%	58%	99%	100%
Mass of product (t)	524.93 t	42.58 t	3.86 t	16.93 t	7.91 t	55.63 t	569 kg
Mass Composition							
Materials for recycling which are going to be collected (% of mass)	99%	82%	93%	72%	58%	99%	100%
Components for reuse which are going to be collected (% of mass)	0%	0%	0%	0%	0%	0%	0%
Mass of potential landfill & energy incineration (t)	3 t	7.86 t	286 kg	4.69 t	3.36 t	548 kg	0 kg
Recycling							
Efficiency of recycling process for end of life phase (%)	100%	100%	100%	100%	100%	100%	0%
Mass of potential landfill & energy incineration of the recycling process (t)	0 kg	0 kg	0 kg	0 kg	0 kg	0 kg	0 kg

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When one has opted for also generating the technical annex a separate excel file will be placed in the dossier of the building. This annex will be filled with the materials or products divided in separate sheets for each shearing layer. The columns for each product/material are dependent on which KPI's have been chosen for the passport.



Classification Level 1	A	Classification Level 2	B	Classification Level 3	C	D	Materiel/Product	E	AA	AB	AC	AD	Embodied Carbon (tCO2e)	Use of non renewable primary en ergy (tCO2e)
									Insulation (kg)	Madaster Circularity Indicator (MCI)	Detachability Indicator		AL AS kg CO2e	81.38
1	21-01-00 Substructure	21-01-10 Foundations	21-01-10 Standard Foundations			TRUE	Oak wood		0	18	0%	0%	21.8011939	
2	STRUCTURE PRIMARY ELEMENTS	28 Building frames	28.1 houtframeconstructie; kolommen en liggers			TRUE	Steel - Profile		121	0	84%	72%	2331232945	
3	STRUCTURE PRIMARY ELEMENTS	21 External walls	21.22 buitenwanden; constructief; spouwanden			TRUE	Porous Concrete		0	0	24%	0%	790.040454	
4	STRUCTURE PRIMARY ELEMENTS	23 Floors	23.20 vloeren; constructief; algemeen			TRUE	Mineral wool [mined roof insulation]		480	0	0%	0%	2794.35642	
5	STRUCTURE PRIMARY ELEMENTS	23 Roofs	23.21 vloeren; constructief; verhoogde vloeren			TRUE	Reinforced concrete C25/30 (2% Reinforcement)		0	0	57%	0%	2609.352025	
6	STRUCTURE PRIMARY ELEMENTS	26 Retaining walls	16.0 funderingsconstructies; algemeen			TRUE	Reinforced concrete C25/30 (2% Reinforcement)		0	0	57%	0%	1398.4803	
7	1- GROUND, SUBSTRUCTURE	28 Building frames	28.11 houtframeconstructies; kolommen en liggers / liggereconstructies			TRUE	Reinforced concrete C25/30 (2% Reinforcement)		0	0	57%	0%	2444.06731	
8	STRUCTURE PRIMARY ELEMENTS	21 External walls	21.21 buitenwanden; constructief; massive wanden			TRUE	Reinforced Laminate Timber		564	0	43%	20%	-1438.65905	
9	STRUCTURE PRIMARY ELEMENTS	28 Building frames	28.1 houtframeconstructie; kolommen en liggers / liggereconstructies			TRUE	Reinforced Concrete C25/30 (2% Reinforcement)		0	0	57%	0%	2147.361557	
10	1- GROUND, SUBSTRUCTURE	37 Pile foundations												
11														
12														

Classification Level 1	A	Classification Level 2	B	Classification Level 3	C	D	Materiel/Product	E	F	G	H	I	J	K	L	M	N	O	P
									Weight (kg)	C1	C2	C3	C4	C5	C6	C7	Volumes (m³)	Amount	Madaster Circularity Indicator (MCI)
1	21-01-00 Substructure	21-01-10 Foundations	21-01-10 Standard Foundations			TRUE	Oak wood		18	22.437	22.437						0,024	5	0%
2	STRUCTURE PRIMARY ELEMENTS	28 Building frames	28.1 houtframeconstructie; kolommen en liggers			TRUE	Steel - Profile		22.437	1.046	1.046						2,858	169	84%
3	STRUCTURE PRIMARY ELEMENTS	21 External walls	21.22 buitenwanden; constructief; spouwanden			TRUE	Porous Concrete		1.046	1.046	1.046						0,023	10	24%
4	STRUCTURE PRIMARY ELEMENTS	23 Floors	23.20 vloeren; constructief; verhoogde vloeren			TRUE	Mineral wool [mined roof insulation]		1.480	1.480	1.480						49,324	1	0%
5	STRUCTURE PRIMARY ELEMENTS	23 Roofs	23.21 vloeren; constructief; verhoogde vloeren			TRUE	Reinforced concrete C25/30 (2% Reinforcement)		342.458	321.029	31.429						136,492	2	57%
6	STRUCTURE PRIMARY ELEMENTS	26 Retaining walls	16.0 funderingsconstructies; algemeen			TRUE	Reinforced concrete C25/30 (2% Reinforcement)		116.488	100.512	7.335						46,561	17	24%
7	STRUCTURE PRIMARY ELEMENTS	28 Building frames	28.1 houtframeconstructie; kolommen en liggers / liggereconstructies			TRUE	Reinforced Concrete C25/30 (2% Reinforcement)		2.327	1.998	333						0,081	2	57%
8																			
9																			
10																			
11																			
12																			

28: two different excel annexes from the same building with differently chosen KPI's

#### 4.1.1.5 Passport presets

Since it is now possible to select the data you want to include in the passport, functionality has been added to preset your own default KPI's. This can only be done by the Madaster administrator. The presets are available on account, folder and building level. Normally only the presets at the account level are available, but it is possible to break this inheritance in case the presets at a lower level should be different.

Presets for upload

Presets for passports

Folder types

Features

29: presets for passports can be picked at the three vertical dots on accounts, folders or buildings

In this screen it is possible to add a new preset

General	Performance	Area register	Dossier	Users	Subscription	Materials & products	⋮
Presets for passports <span style="color: red;">+</span>							
Presets for passports							
Name	Type						
	No data available						



Once clicked a new popup will open where it is possible to define this new preset. All the options for the KPI's you have on the regular passport screen can be filled in here as well as a name for your preset and of course for which passport type it is.

Presets for passports

Name\*  
One pager Madaster

Type\*  
One pager

Select preferences

Mass

Circularity

MCI

Detachability

Environmental

Compliance ▾

Phase ▾

Key Performance Indicator ▾

Financial

Net Present Value (NPV)

Current value

Cancel Save

This new preset will then be an option when you generate a new passport of that type

Issue material passport

One pager Madaster

Default

Select preferences

Mass

Circularity

MCI

Detachability

Environmental

Comp. ▾

Phase ▾

Key Performance Indicat... ▾

Financial

Net Present Value (NPV)

Current value

Language  
English

Back OK

30: Options at the top of the screen for generating a passport. "Default" is the default from the Madaster platform.

Now, to have different presets on for example the building level it is possible to break the inheritance



General Performance 3D Dossier Mass Circularity Environmental Financial :

**Break inheritance**

Presets for passports

Name	Type
One pager Madaster	One pager

Rows per page: 10 1-1 of 1 < >

This will make a copy of the current presets, but they can be edited or deleted

Presets for passports

Name	Type
One pager Madaster	One pager

It is also possible to restore the inheritance. This will, however, delete the presets on this level.

Presets for passports Restore inheritance from parent level.

Presets for passports

Name	Type
One pager Madaster	One pager

#### 4.1.1.6 Generate passport options when splitting, transferring or archiving

It is possible to generate a passport when splitting, transferring or archiving buildings



## Split the building

Prefix for building name (Will be concatenated with Building Number) \*

Split test

Choose building numbers \*

Choose passport types to generate

One pager

Executive summary

Passport

Language

English

[Cancel](#)

[Split](#)



## 4.1.2 Other changes

### 4.1.2.1 New feature: 3D insights on circularity and environmental tabs of a building

A new feature has been added to the platform, which when bought will give 3D insights on circularity and environmental information of the materials/products of a building.

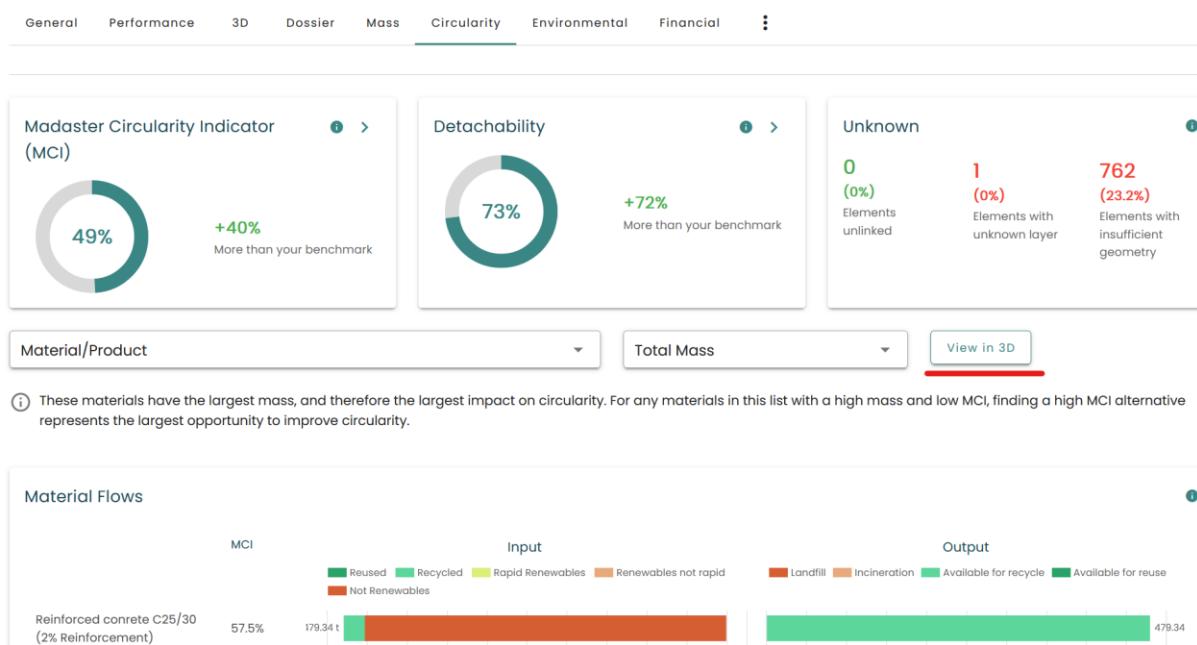


Figure 31: in the circularity and environmental tabs it is now possible to view the materials/products in the 3D model by using this button



Material/Product      Total Mass      View Graph

These materials have the largest mass, and therefore the largest impact on circularity. For any materials in this list with a high mass and low MCI, finding a high MCI alternative represents the largest opportunity to improve circularity.

<input checked="" type="checkbox"/>	Name	Mass	Madaster Circularity Indicator (MCI) Score
<input checked="" type="checkbox"/>	Reinforced concrete C25/30 (2% Reinforcement)	479.34 t	<span style="color: yellow;">57.48%</span>
<input checked="" type="checkbox"/>	Facing bricks / Clinkers (NL)	54.76 t	<span style="color: green;">94.12%</span>
<input checked="" type="checkbox"/>	Steel - Profile	54.56 t	<span style="color: green;">92.15%</span>
<input checked="" type="checkbox"/>	Glued Laminated Timber	36.76 t	<span style="color: yellow;">64.59%</span>
<input checked="" type="checkbox"/>	Mineral wool (pitched roof insulation)	5.51 t	<span style="color: yellow;">54.72%</span>
<input checked="" type="checkbox"/>	Bituminous sheeting	2.81 t	<span style="color: yellow;">40%</span>
<input checked="" type="checkbox"/>	Beech wood	2.79 t	<span style="color: green;">82%</span>
<input checked="" type="checkbox"/>	Gypsum Fibre Plate	2.5 t	<span style="color: green;">82%</span>
<input checked="" type="checkbox"/>	Cotton sheet	1.91 t	<span style="color: yellow;">55%</span>
<input checked="" type="checkbox"/>	Plywood Board	1.72 t	<span style="color: green;">82%</span>

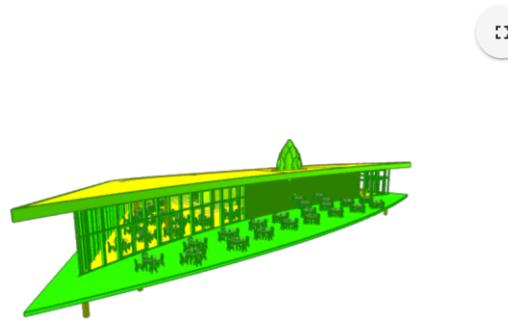
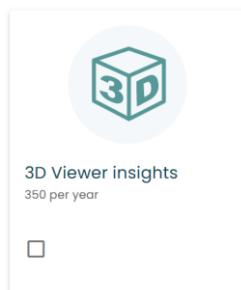


Figure 32: when using the 3D button the graph will change to the 3D model where it is also possible to select certain materials or products. With the view graph button it will switch back to the graph.

The 3D insights can be bought from the subscription tab on the account.

Choose Features



When the feature is not active a preview is shown when clicking the 'view in 3D button' in the circularity or environmental tabs.

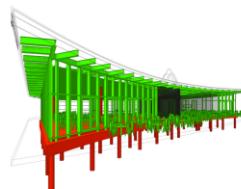
Material/Product      Total Mass      View Graph

These materials have the largest mass, and therefore the largest impact on circularity. For any materials in this list with a high mass and low MCI, finding a high MCI alternative represents the largest opportunity to improve circularity.

<input checked="" type="checkbox"/>	Name	Mass	Madaster Circularity Indicator (MCI) Score
<input checked="" type="checkbox"/>	Zirkonite	278.36 t	<span style="color: red;">0%</span>
<input checked="" type="checkbox"/>	Plaster board	47.56 t	<span style="color: red;">0%</span>
<input checked="" type="checkbox"/>	Plywood Board	14.18 t	<span style="color: orange;">32.5%</span>
<input checked="" type="checkbox"/>	Cabinet of Wonders	256 kg	<span style="color: green;">73%</span>
<input checked="" type="checkbox"/>	Buffalo Bill oM	190.71 kg	<span style="color: red;">0%</span>

Interested in 3D Insights?  
Buy the '3D viewer' feature to enable this functionality.

Subscription



#### 4.1.2.2 Designs, archived and split buildings in the performance tab and area register

For the calculations on the performance tab on folder, account level or in the area register, and also for which buildings are shown in the area register a number of objects are excluded:



- Designs of buildings
- Archives of buildings
- If a building is split: the original

33: Two buildings, one of them is split, results in 3 buildings in the performance tab and for calculations and in the area register.

#### 4.1.2.3 Changes to benchmarking on the performance tab of a design or archive

It is now possible to change your benchmark settings in the performance tab on a design or archived building to compare it with other specific buildings, for example other designs:

This selection is visible on the performance tab itself



## Benchmarking



Your building is being benchmarked against the following 1 buildings:

Dorpsstraat 1

### 4.1.2.4 Changes to the calculations for LCA stage B4 (use stage: replacement)

The lifespan of a product connected to a building is now taken into account in relation to the lifespan of the whole building. This means that if a product is expected to be replaced four times during the lifespan of the building this is taken into account for the calculations in the replacement use stage.

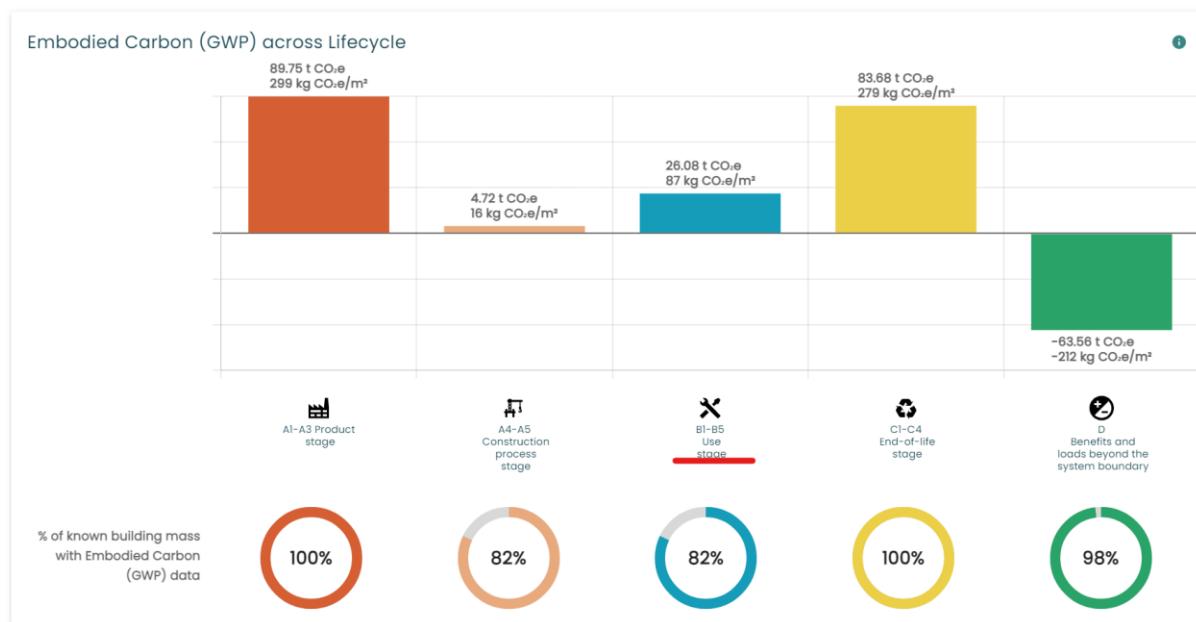


Figure 34: a building with an expected lifespan of 60 years



Embodied Carbon (GWP) across Lifecycle



Figure 35: the same building as in figure 12; but now with an expected lifespan of 120 years

#### 4.1.2.5 Additional information at the MCI detail view

When clicking on the MCI details two new columns have been added:

- The penalty for unknown materials
- Madaster Circularity Indicator (MCI) Score

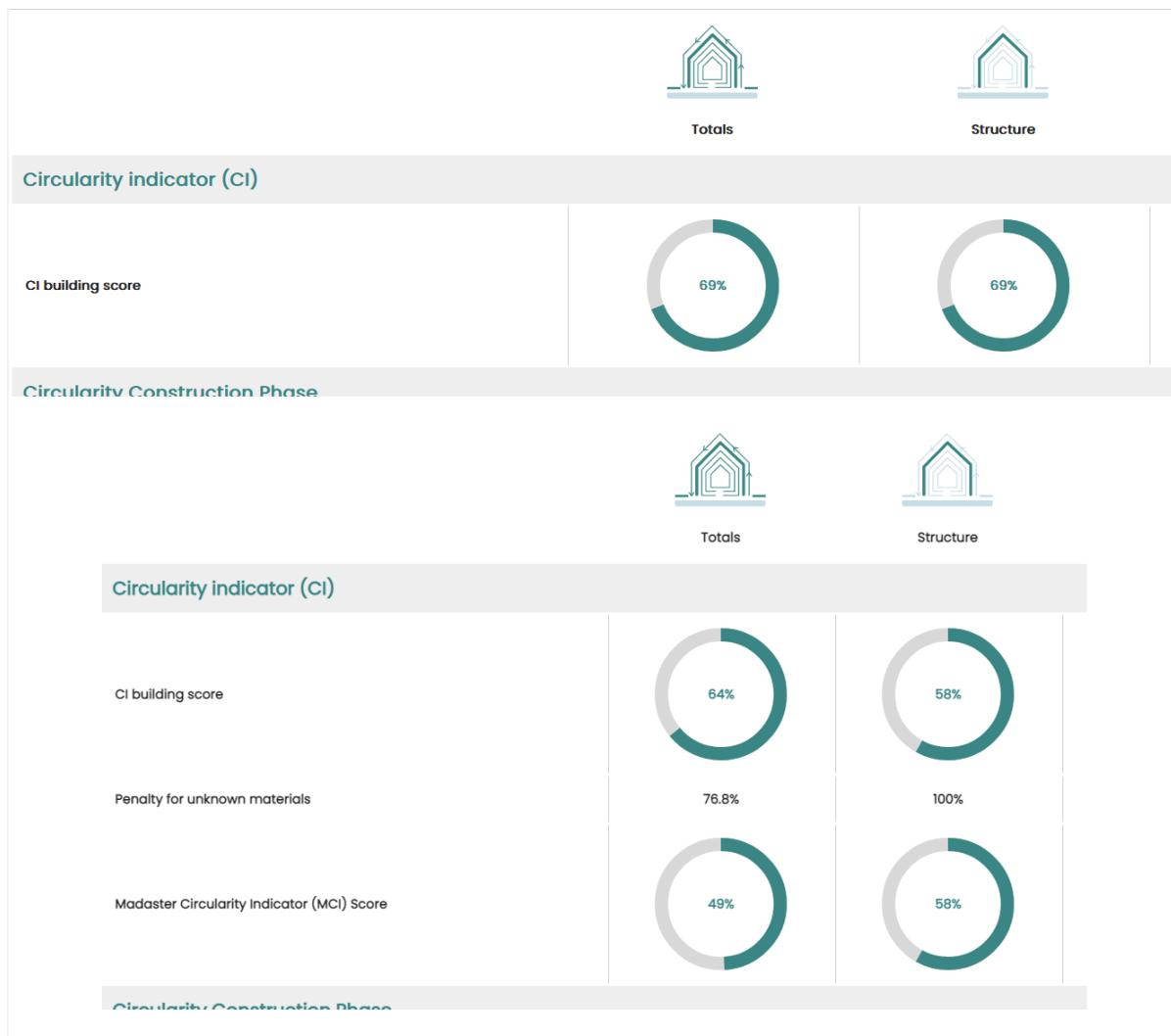


Figure 36: on top how it was, on the bottom what it is now.

#### 4.1.2.6 Split building can now be activated

The split building feature used to be only accessible through invitation, this has been changed

#### 4.1.2.7 “See more” at database information

To indicate that there is more text a ‘...see more’ has been added to the database information field



#### Database information



The EPEA Generic database enables country-specific, full-building calculations regarding material composition (mass), circularity, and embodied carbon (kg CO<sub>2</sub>e).

The database, which is expert-rev ...[see more](#)

#### 4.1.2.8 Billing information shown when modifying a subscription

When a subscription is modified, the current known billing information is shown:

##### Billing Information

Billing email:

Company name:

att.:

Refence / PO number:

Address:

I agree that the billing information is correct

If the above billing information is not correct, please [contact us](#). before proceeding with the su

#### 4.1.2.9 Database selection when uploading files for a building

The EPEA generic database is now the default when uploading a file for a building. We've removed the blue checkmark for the Madaster database.



Add file

Indicate to which sources in the Madaster platform the elements in the file to be uploaded should automatically be linked and in which order this should be done per element. To add or remove a source, select the '+' or 'x' sign at the end of a source name.

Available sources

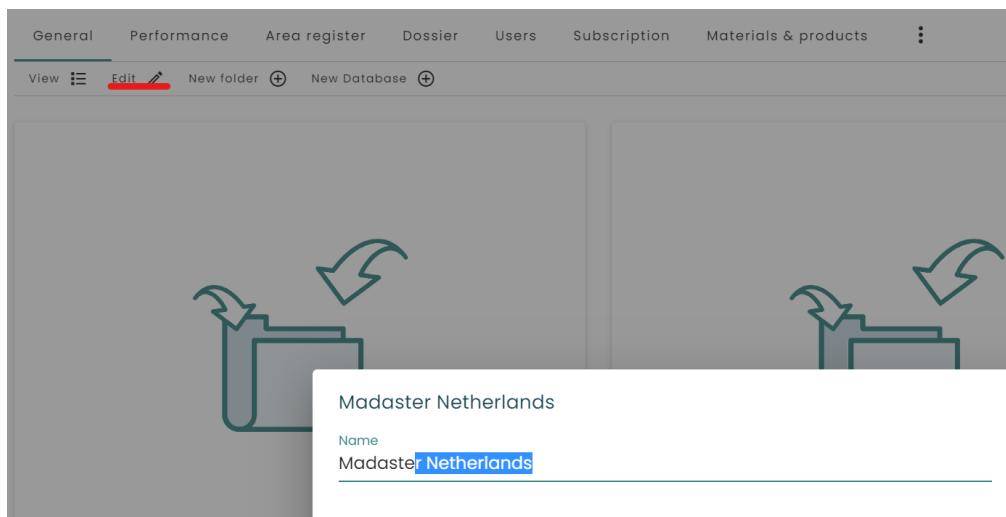
- NMD  +
- Madaster  +
- 2BA  +
- Hook Producer  +
- MRPI  +
- IBU DATA  +
- ECOPLATFORM  +
- ENVIRONDEC  +
- ÖKOBAUDAT 2019-  +

Selected sources

- EPEA Generic
- Lankhorst B.V.

#### 4.1.2.10 Possibility to change the name of the account

It is now possible to change the name of an account in Madaster by using the edit button in the general tab of an account. This will only change the name in the platform, so not for billing or other purposes.



#### 4.1.2.11 Additional Madaster V2 classification

There is now an additional option for the Madaster V2 classification when adding or editing a material in a database and when enriching.



Material information    Circularity    Environment    Search criteria    Fin

Save Close

Material name \*

Kryptonite



Specific weight \*

5,000

kg/m<sup>3</sup>

Madaster

Unknown



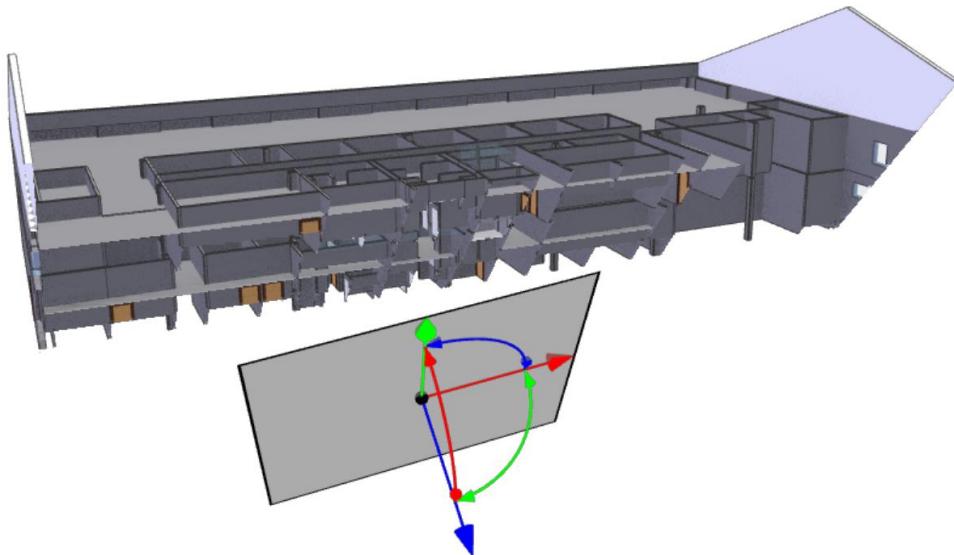
Madaster V2 \*

Z - OTHER



#### 4.1.2.12 Slice a 3D model

In the 3D viewer of a building it is now possible to slice it.



Slice object





#### 4.1.2.13 The 'bill of materials' for circularity is unchecked by default

If you would add a product to a database in Madaster the default was to use the bill of materials for the circularity data, this has been changed.

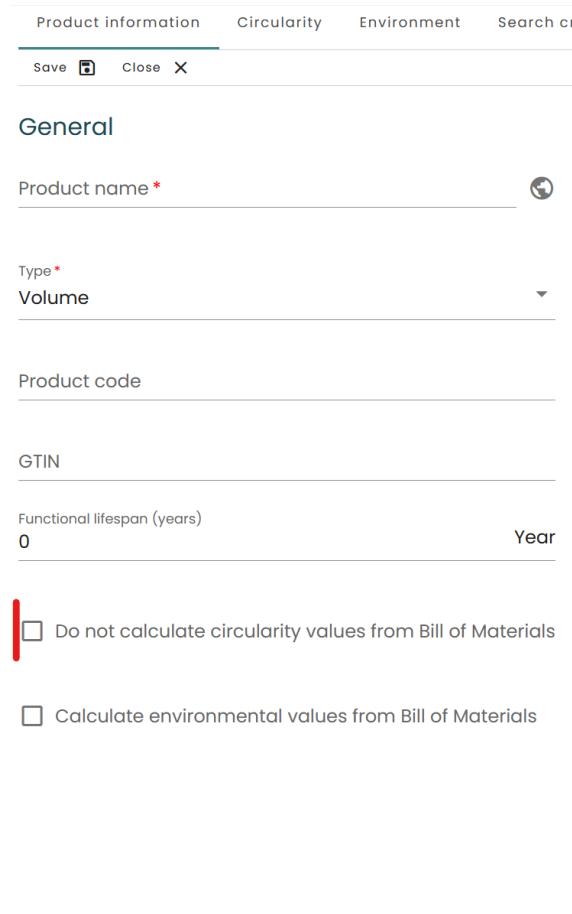
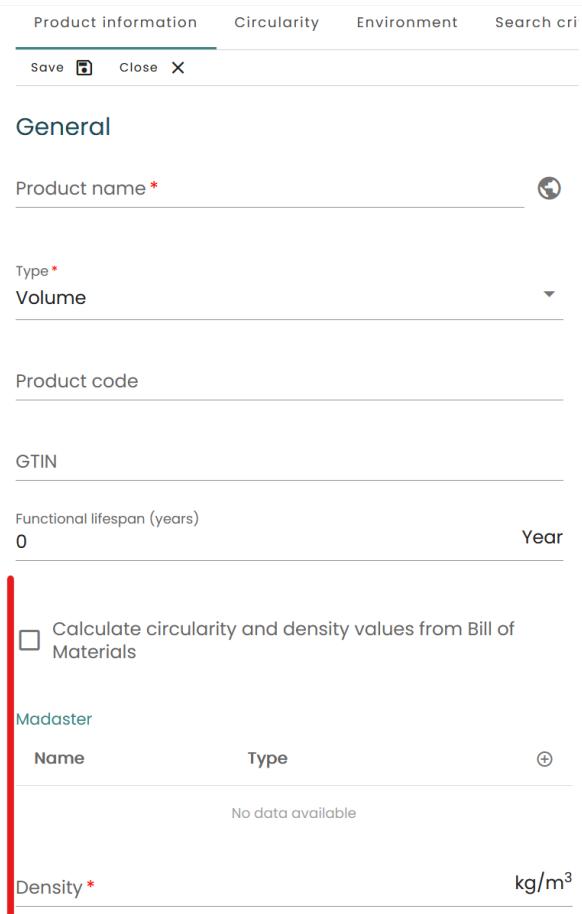
	
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Figure 37: on the left the old situation, on the right the new one

#### 4.1.2.14 Color changes in the charts

A number of charts have been given different colors in line with our new design which was introduced not long ago.

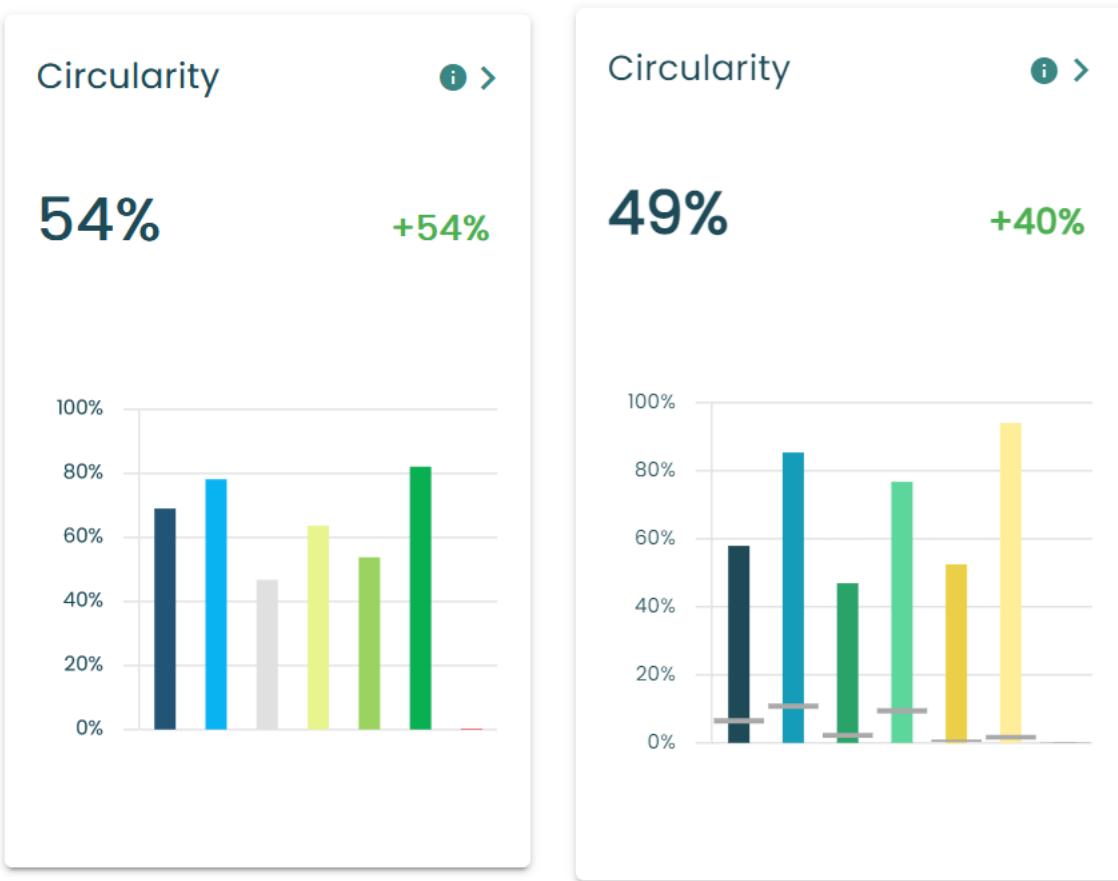


Figure 38: on the left the old color scheme and on the right the new one. One of many charts that have changed colors.

#### 4.1.2.15 Changes on building and folder type fields

- The manual or indicative MPG score is now shown in €/m<sup>2</sup>.jr instead of €/m<sup>2</sup>

##### Labels

BREEAM:  
Manual MPG score:

Excellent

12 €/m<sup>2</sup>.jr

- There are new fields for the owner on a building



Owner  
Owner  
Circular Holdings

Address line 1  
Reuse Street 123

Address line 2

Postal code  
12345

City  
Amsterdam

Country  
Netherlands

General Performance 3D Dossier Mass Circularity En  
Edit building ⚒ Move ⚖ Archive the building 🔑 Design ✎ Transfer 🛡

#### Address

Circularity Street 123  
12345 Amsterdam  
Netherlands

#### Owner

Owner:  
Circular Holdings  
Address:  
Reuse Street 123  
12345 Amsterdam  
Netherlands

39: The new owner fields. Left how they are when editing a building, on the right what they look like in the general tab of the building

- Because of the addition of the owner field on the building the fields 'specify owner in passport' and 'owner label in passport' have been removed from folder type.

New Folder type

Name \* Portfolio Description

Plural Name Portfolios

Foldertype allowed directly under account? Allowed folder types in subfolders

Buildings can be added in this folder type icon

Does folder of this folder type requires an address? Logo

Folder of this type is a region defined by spatial coordinates?

Specify owner in passport

Owner label in passport

Cancel  Save

- Fields for 'prepared by' and 'design stage' have been added. The design stage is filled using the level of detail (LOD).



## Madaster information

Prepared by  
Circular Architects

Design Stage \*  
Unknown

Design Stage \*  
Unknown

LOD 100 - Concept Design

LOD 200 - Schematic Design

LOD 300 - Detailed Design

LOD 350 - Construction Documentation

LOD 400 - Fabrication & Assembly

LOD 500 - As-Built

General Performance 3D Dossier Mass Circularit Enviro

Edit building Move Archive the building Design Transfer Delete

**Address**  
Circularity Street 123  
12345 Amsterdam  
Netherlands

**Owner**  
Owner: Circular Holdings  
Address: Reuse Street 123  
12345 Amsterdam  
Netherlands

**Madaster information**  
Prepared by: Circular Architects  
Design Stage: Unknown

- It is now possible to choose any country at the address for a building

### Address

Use map to create a location

Street

Circularity Street

House number

123

House number suffix

Postal code

12345

City

Amsterdam

Country \*

Afghanistan

Åland Islands

Albania

Algeria

American Samoa

Andorra

- It is now possible to allow search criteria for a folder type:



New Folder type

Name \*  
Complex

Plural Name  
Complexes

Foldertype allowed directly under account?

Buildings can be added in this folder type

Does folder of this folder type requires an address?

Folder of this type is a region defined by spatial coordinates?

Allow search criteria

Allowed folder types in subfolders  
 Complex  Portfolio  Project

Icon  
 mdi-domain

Logo

[Cancel](#) [Save](#)

#### 4.1.2.16 Changes in navigation

- When at a dossier on a building the source files are now a 'folder', and when you select a folder only the files from that specific folder are shown. It used to be that the source files were always kept on top, which is still the case when no folders are selected. Also, the sequence of the folders has been changed.

Source file (BIM or Excel)								
Keyword	Filter on	Name	Size	Classification method	Date exported	Tags	Owner	Active
Consumer dossier		220729 DM2 - Installaties.ifc IFC file generated by GRAPHISOFT ARCHICAD 25.0 NED FULL Macintosh version (IFC add-on version: 4017 NED FULL); IFC2X3	108.26 MB	Omniclass	01-08-2022 18:11	Michiel Lankamp	<input checked="" type="checkbox"/>	
Source files		220729 DM2 - Bouwkundig.ifc IFC file generated by GRAPHISOFT ARCHICAD 25.0 NED FULL Macintosh version (IFC add-on version: 4017 NED FULL); IFC2X3	19.85 MB	Omniclass	01-08-2022 19:14	Michiel Lankamp	<input checked="" type="checkbox"/>	
Contractual agreements		220729 DM2 - Interieur.ifc IFC file generated by GRAPHISOFT ARCHICAD 25.0 NED FULL Macintosh version (IFC add-on version: 4017 NED FULL); IFC2X3	14.84 MB	Omniclass	01-08-2022 17:50	Michiel Lankamp	<input checked="" type="checkbox"/>	
Usage, Maintenance & Renov.		220729 DM2 - Constructie.ifc IFC file generated by GRAPHISOFT ARCHICAD 25.0 NED FULL Macintosh version (IFC add-on version: 4017 NED FULL); IFC2X3	6.91 MB	NL-SFB	01-08-2022 19:15	Michiel Lankamp	<input checked="" type="checkbox"/>	
Tags								
General document								
		Name	Size	Last modified	Tags	Owner		
		Madaster_Demonstration_Building-technical-annex-02/14/2023.xlsx	26.29 kB	14-02-2023 20:15		Paul Klein Lankhorst		
		Madaster_Demonstration_Building-passport-02/14/2023.pdf	30.86 MB	14-02-2023 20:15		Paul Klein Lankhorst		

40: the view when no folders are selected. The source files are on top and the other documents below.

The screenshot shows a file management interface. At the top, there are tabs: General, Performance, 3D, Dossier, Mass, Circularity, Environmental, Financial, and three vertical dots. Below the tabs is a 'Upload' button with a file icon. A sidebar on the left is titled 'Filter on' and contains sections for 'Consumer dossier', 'Source files', 'Passports' (which is selected), 'Contractual agreements', and 'Usage, Maintenance & Renov...'. There is also a 'Tags' section. A search bar with a magnifying glass icon is located above the file list. The main area is titled 'Passports' and lists files with columns for Name, Size, Last modified, Tags, and Owner. The files listed are related to 'Madaster Demonstration Building' and include various annexes, passports, and executive summaries in PDF and XLSX formats.

Name	Size	Last modified	Tags	Owner
Madaster Demonstration Building-technical-annex-02/14/2023.xlsx	26.29 kB	14-02-2023 20:15		Paul Klein Lankhorst
Madaster Demonstration Building-passport-02/14/2023.pdf	30.86 MB	14-02-2023 20:15		Paul Klein Lankhorst
Madaster Demonstration Building-executive-summary-02/14/2023.pdf	28.58 MB	14-02-2023 19:55		Paul Klein Lankhorst
Madaster Demonstration Building-passport-02/14/2023.pdf	30.90 MB	14-02-2023 19:52		Paul Klein Lankhorst
Madaster Demonstration Building-technical-annex-02/14/2023.xlsx	39.48 kB	14-02-2023 18:29		Paul Klein Lankhorst
Madaster Demonstration Building-passport-02/14/2023.pdf	33.21 MB	14-02-2023 18:29		Paul Klein Lankhorst
Madaster Demonstration Building-executive-summary-02/14/2023.pdf	29.05 MB	14-02-2023 17:46		Paul Klein Lankhorst
Madaster Demonstration Building-one-pager-02/14/2023.pdf	27.24 MB	14-02-2023 16:46		Paul Klein Lankhorst
Madaster Demonstration Building-one-pager-02/13/2023.pdf	27.24 MB	13-02-2023 17:31		Paul Klein Lankhorst
Madaster Demonstration Building-one-pager-02/13/2023.pdf	27.24 MB	13-02-2023 16:52		David Parker

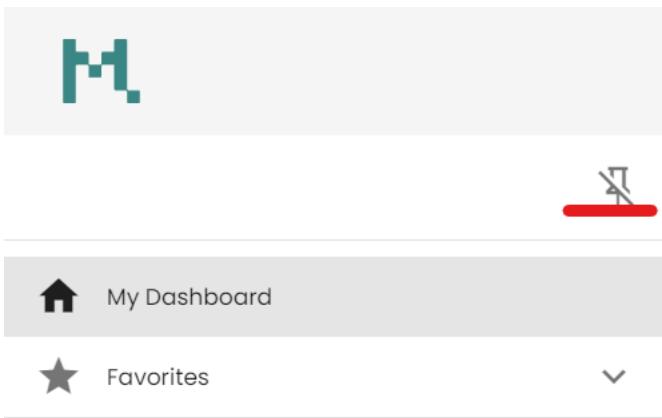
Rows per page: 10 | 1-10 of 62 | < >

41: once a folder is selected only the files from that folder are shown.

- In the building tabs “Users” and “Presets for Upload” (and the newly introduced “Presets for Upload” have been placed as additional options under three vertical dots

The screenshot shows the main building dashboard. At the top, there are tabs: General, Performance, 3D, Dossier, Mass, Circularity, Environmental, Financial, and three vertical dots. Below the tabs are buttons for 'Edit building' (pencil), 'Move' (location pin), 'Archive the building' (lock), 'Design' (wrench), 'Transfer' (hand), 'Delete' (trash), 'Upload' (up arrow), and 'Reset' (refresh). To the right of these buttons is a vertical navigation menu with sections: 'Address' (containing 'Circularity Street 123, 12345 Amsterdam, Netherlands'), 'Open Street Map' (with a map and coordinates like 134, 85, 123, 15, 12), and 'Users', 'Presets for upload', and 'Presets for passports' (all three are highlighted with a light blue background). The bottom of the screen shows the URL 'Home / Madaster Netherlands / Demo / Madaster Demonstration Building'.

- For new users the left navigation is pinned by default



- Linking to specific results on the circularity or environmental tab

It is now possible to copy an URL that contains the specific filters on the circularity or environmental tab.

platform.accept.madaster.com/building/b61f9cc5-005c-4935-833b-8ac0e26e1336/circularity/?view=materials&sorting=4&viewer=false

≡ **Madaster Demonstration Building**

Home / Madaster Netherlands / Demo / Madaster Demonstration Building / Circular

General Performance 3D Dossier Mass **Circularity** Environmental Financial :

**Madaster Circularity Indicator (MCI)** >  
49% +40% More than your benchmark

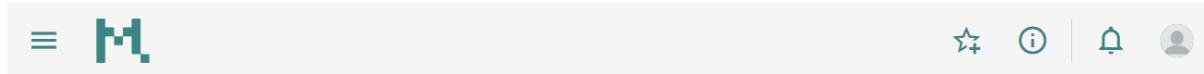
**Detachability** >  
73% +72% More than your benchmark

Material/Product ▼ Output Waste ▼

- Users with regular authorizations will no longer see the user tab
- The option to create a design or archive a building have been removed for home-owners



- When a user enters the platform with no recent items on 'my dashboard' a welcome text is shown:



## Welcome to Madaster

Madaster is an innovative platform that provides an easy way to register, manage and analyze the materials used in your construction projects. We believe that to achieve a circular construction industry, materials must be centrally registered so they can again become resources in the future. Thank you for taking this important first step.

*Things look a little empty, but not for long!*

We've put together a user guide for you to create objects, enrich them with data, and view and share their performance.

[Get started](#)

### 4.1.3 Bug fixes

The following bugs have been resolved:

- When transferring a building the authorizations on the transferred building were set wrong, this has been adjusted so that the authorizations are set correctly on the transferred building.
- Rounding has been adjusted so that for example 2 kt of CO<sub>2</sub>e as displayed on the performance tab for GWP can now be displayed with two decimals (i.e. 1,7)
- In the mass tab of a building at 'unknown' the values would sometimes incorrectly be '0', this has been fixed.
- When creating a new design the notification when this design is ready would mention that the archive was ready. This has been fixed so that it correctly mentions design.
- Deleting a design would mention that the whole building would be deleted where it would only delete the design, this has been textually adjusted so that it mentions only deleting the design.
- We found some wrong mappings in the Omniclass classification, these have been corrected.