



MADASTER

# 'Waste is material without an identity'

T.M. Rau



## VISION | MISSION | OBJECTIVE

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*We consider the earth a closed system within which nothing is allowed to be wasted. Raw materials are finite and scarcely available. To ensure that materials remain infinitely available, they need to be documented. **‘Waste is material without an identity’***

Madaster’s objective is to eliminate waste by providing it with an identity. The Madaster platform functions as a public, on-line library of materials within the built environment. It couples a material identity to a certain location and registers this in a material passport.

A material passport provides insight into the materials and amounts of materials used in a particular building. In addition, it also contains information about the quality and location of this material as well as its financial and circular value. Reusing materials, minimalising waste —and thus saving costs— becomes simpler.

Madaster is an independent platform, accessible to everyone: private citizens, companies, government authorities and scientists. In this capacity, Madaster is part of an ecosystem of initiatives and innovations that, together, facilitate the transformation towards a circular economy.

Madaster is an initiative by the Madaster Foundation, a Dutch non-profit organisation with PBO status. The foundation has farmed out the development and management of the Madaster platform to Madaster Services B.V. This services company consults with the Madaster Foundation on the policy agenda and represents Madaster both in the Netherlands and abroad.



# HOME (BUILDINGS & PORTFOLIOS)

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Having insight, at a glance, into the collection of registered buildings available to you. These are the buildings of which you are either the owner or designer, or to which the owner or manager has granted you access. Dependent on your user profile, the HOME screen provides you with the option to:



Consult the data of one of the available buildings.



Add a new building to a specific portfolio.



Modify an allocated building portfolio.

If you are a first-time visitor to the platform, the wizard function will take you through the necessary steps in Madaster.



HOME

PORTFOLIO'S

ADMINISTRATIE

PROFESSOR

WELKOM



MIJN (3)

## MIJN PORTFOLIO'S

MIJN PORTFOLIO'S

Shimano Europe Holding B.V.



Liander Duiven



Opella Benelux



Wooncoöperatie gemeente Alblas...



Gemeente Amsterdam



Gemeente Zeist



# GENERAL

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Here, you will see all the information of a registered building, organised in an orderly fashion. Per building, the GENERAL screen shows you:



An overview of the documented building data (e.g. cadastral information, Madaster information, images).



The uploaded source files (BIM/IFC or Excel), which form the basis of the building registered in Madaster, including an indication of the degree of completeness and quality of the data.



The users with access to these building data and their specific user profile.



This is also the page where you can generate a building's material passport — with one push of a button.

The quality and level of completeness of a building's source files have a major impact on the level of accuracy of the information on the building registered in Madaster and on the material passport that is generated on the basis of that information.

The minimum guidelines for exporting IFC files from your 3D CAD application and the available tools to provide insight into the quality and completeness of your IFC file can be found on our website ([madaster.com](https://www.madaster.com)).

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## HTC EINDHOVEN

[ALGEMEEN](#)[GEBOUW](#)[BOUWPROCES](#)[CIRCULARITEIT](#)[FINANCIËEL](#)[DOSSIER](#)[OVERZICHT](#)[OVERZICHT](#)[OVERZICHT](#)[OVERZICHT](#)

### ADRES

High Tech Campus 2a  
5050 AE Eindhoven  
Nederland

### MEESTER INFORMATIE

Portfoliowaar:  
Gebouwkategorie:  
Meyx recente BIM informatie:  
Bruto vloeroppervlakte:  
Diverse oplevering (bouwjaar):  
Laatste renovatiedatum:

High Tech Campus  
Kantoor  
24-1-2018 23:55  
4.500 m<sup>2</sup>  
2016  
12/11/2017

### KADASTRALE INFORMATIE

Kadastrale aanduiding:  
Kadastrale oppervlakte:

Eindhoven C4235  
8.000 m<sup>2</sup>

### OSM KAART



# BUILDING

On the basis of the active source files, the BUILDING screen provides insight into the location of the materials and products within the various layers of a building (e.g. construction, outside/shell, installation), as well as the related totals; expressed in volume, weight and percentage of the whole. At some point in the near future, this will be supplemented with financial information, which will also provide insight into the historical, current and future value of the material and the building as a whole.

Per building layer, a further refinement of a building's elements can be shown up to the level of the NL-SFB coding allocated in the source file (standard for the construction and installation branch that is applied in the designing, realising and management of buildings). The user-friendly search function provides an immediate overview of the location or locations of a specific material within a building.

## Building layers to be refined



Totals



Location



Construction



Outside/shell



Technical installation



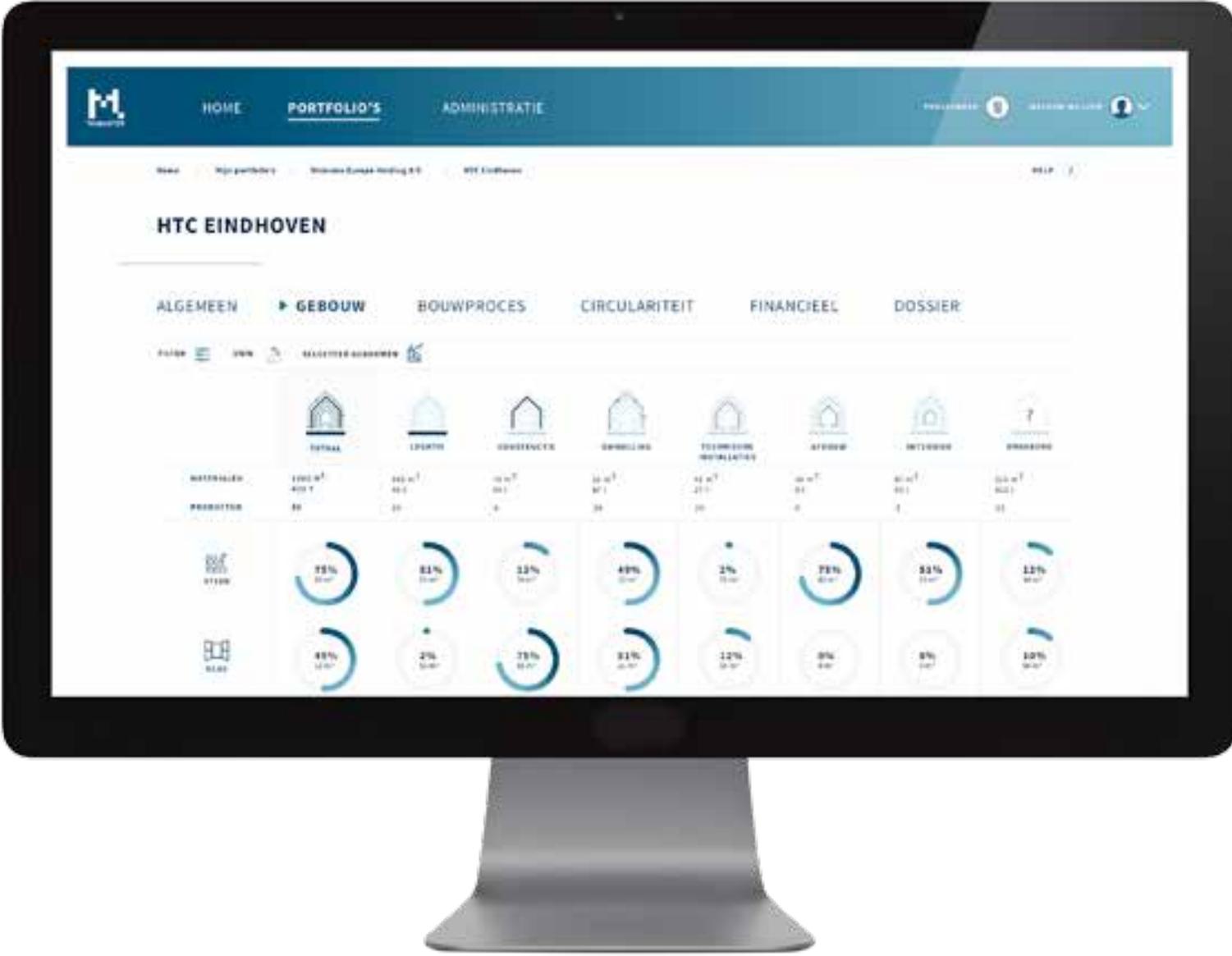
Finish



Interior



Unknown



HOME

PORTFOLIO'S

ADMINISTRATIE

PROFIEL

WELKOM WELKOM



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HELP

### HTC EINDHOVEN

ALGEMEEN **GEBOUW** BOUWPROCES CIRCULARITEIT FINANCIHEEL DOSSIER

FAKTOREN **OWN** **SALICITEIT** **BOUW**

	DETAIL	LEVEN	ONDERDEK	ONWIKING	TECHNISCHE INSTALLATIE	AFWERK	INTERIEUR	ONDERHOUD
MATERIALIEN	1000 m <sup>2</sup> 400 T	800 m <sup>2</sup> 400 T	1000 m <sup>2</sup> 400 T	2000 m <sup>2</sup> 800 T	4000 m <sup>2</sup> 1600 T	6000 m <sup>2</sup> 2400 T	8000 m <sup>2</sup> 3200 T	10000 m <sup>2</sup> 4000 T
BEHOEFTE	20	20	5	20	20	5	1	20
PROGRESSIE	75% 1000 m <sup>2</sup>	82% 800 m <sup>2</sup>	12% 1000 m <sup>2</sup>	40% 2000 m <sup>2</sup>	2% 4000 m <sup>2</sup>	78% 6000 m <sup>2</sup>	82% 8000 m <sup>2</sup>	12% 10000 m <sup>2</sup>
BEHOEFTE	48% 20	2% 20	75% 5	82% 20	12% 20	9% 5	8% 1	10% 20

# CONSTRUCTION PROCESS

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Carefully administrate the modifications to your building during renovation projects and make them available to be consulted. The BUILDING PROCESS screen provides a clear overview of the five phases of a renovation project, on the basis of a building's active source files.

For each construction phase, a clear overview is shown of the materials applied and their quantities (volume, weight, and percentage of the whole). In the near future, this will be supplemented with information about the financial value of the materials.

## The 5 phases of construction



### **Current situation**

The materials in the existing building.



### **Demolition**

The materials removed from the building during demolition.



### **Body**

Remaining shell of the building.



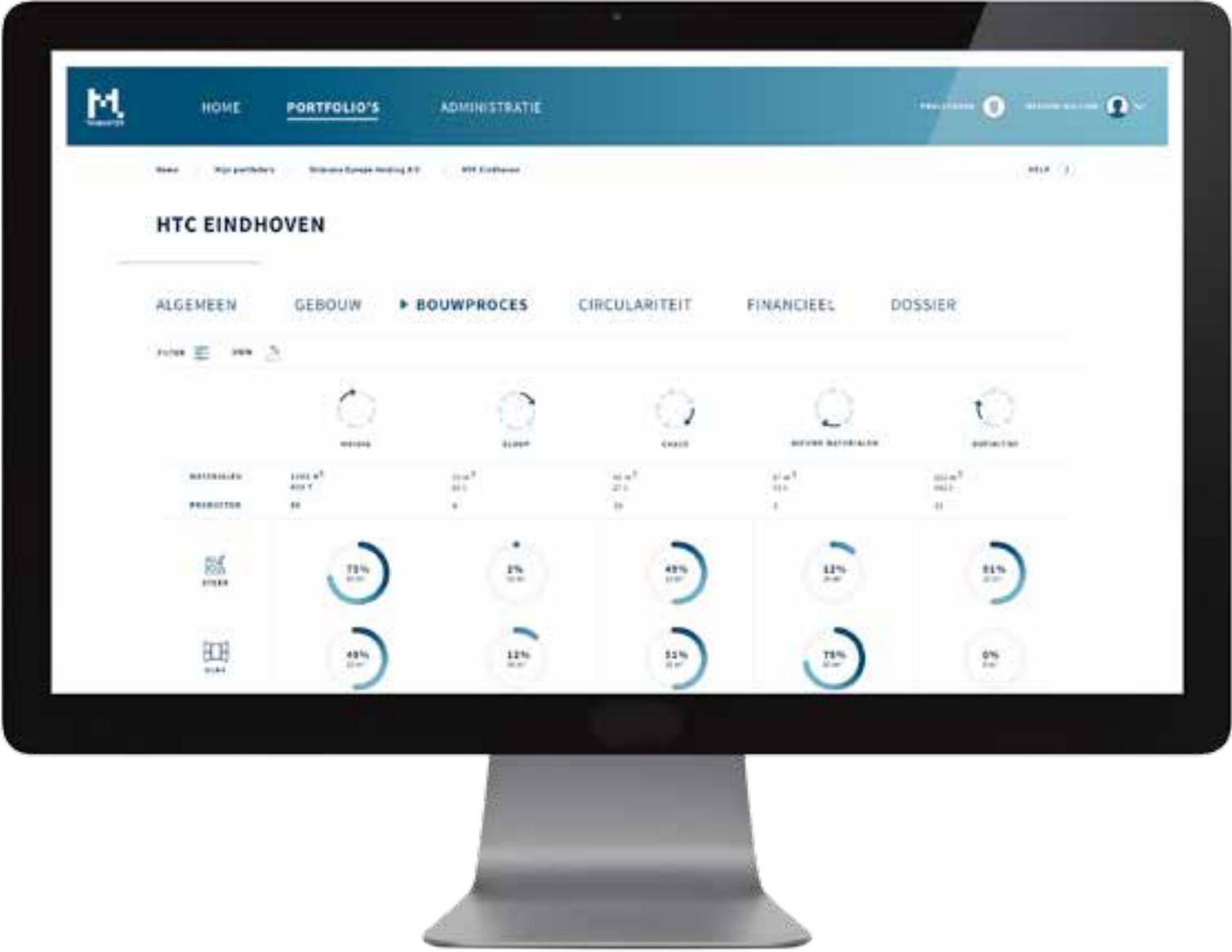
### **New materials**

New or reused materials.



### **Definitive**

The new situation.



HOME

PORTFOLIO'S

ADMINISTRATIE

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WELKOM WELKOM

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HELP

### HTC EINDHOVEN

ALGEMEEN    GEBOUW    **BOUWPROCES**    CIRCULARITEIT    FINANCIEL    DOSSIER

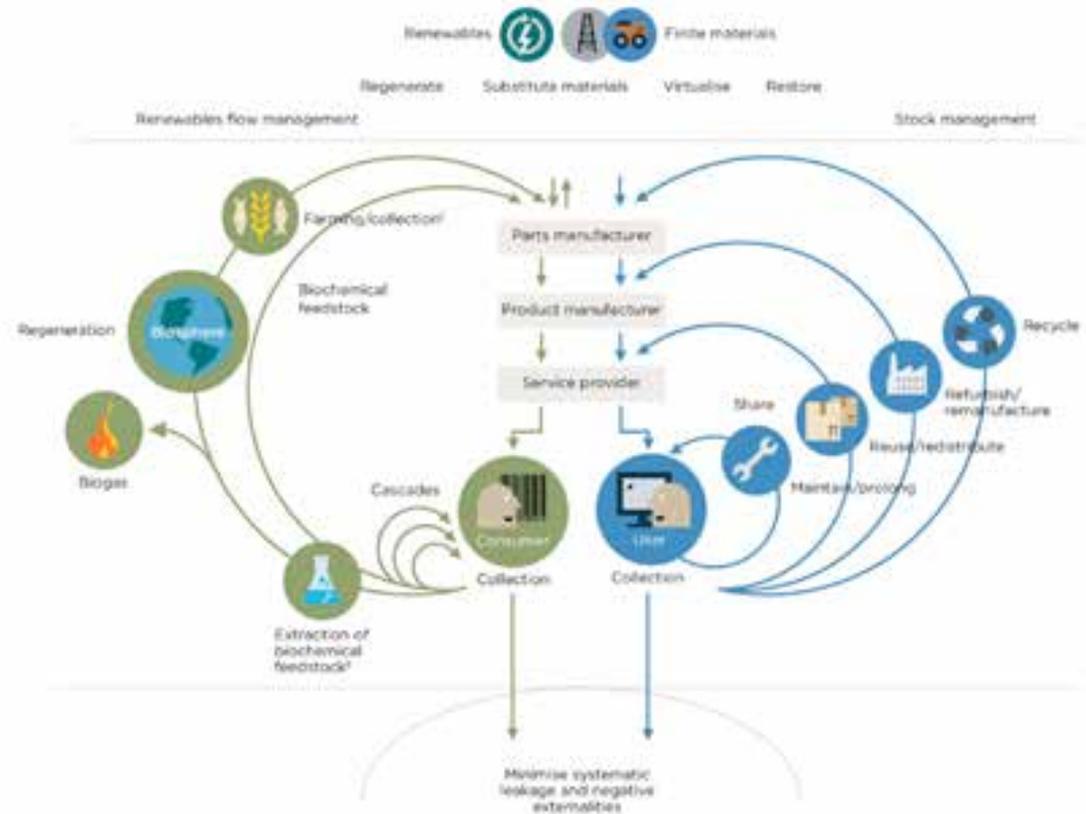
FILTRER    0/0    0/0

	WEGEN	SLAAP	GAS	NIEUW MATERIELEN	AFVAL
MATERIELEN	1000 m <sup>3</sup> 400 T				
REDUCTIE	50	50	50	50	50
WEGEN	75%	2%	45%	12%	51%
SLAAP	45%	12%	55%	75%	0%

# CIRCULARITY

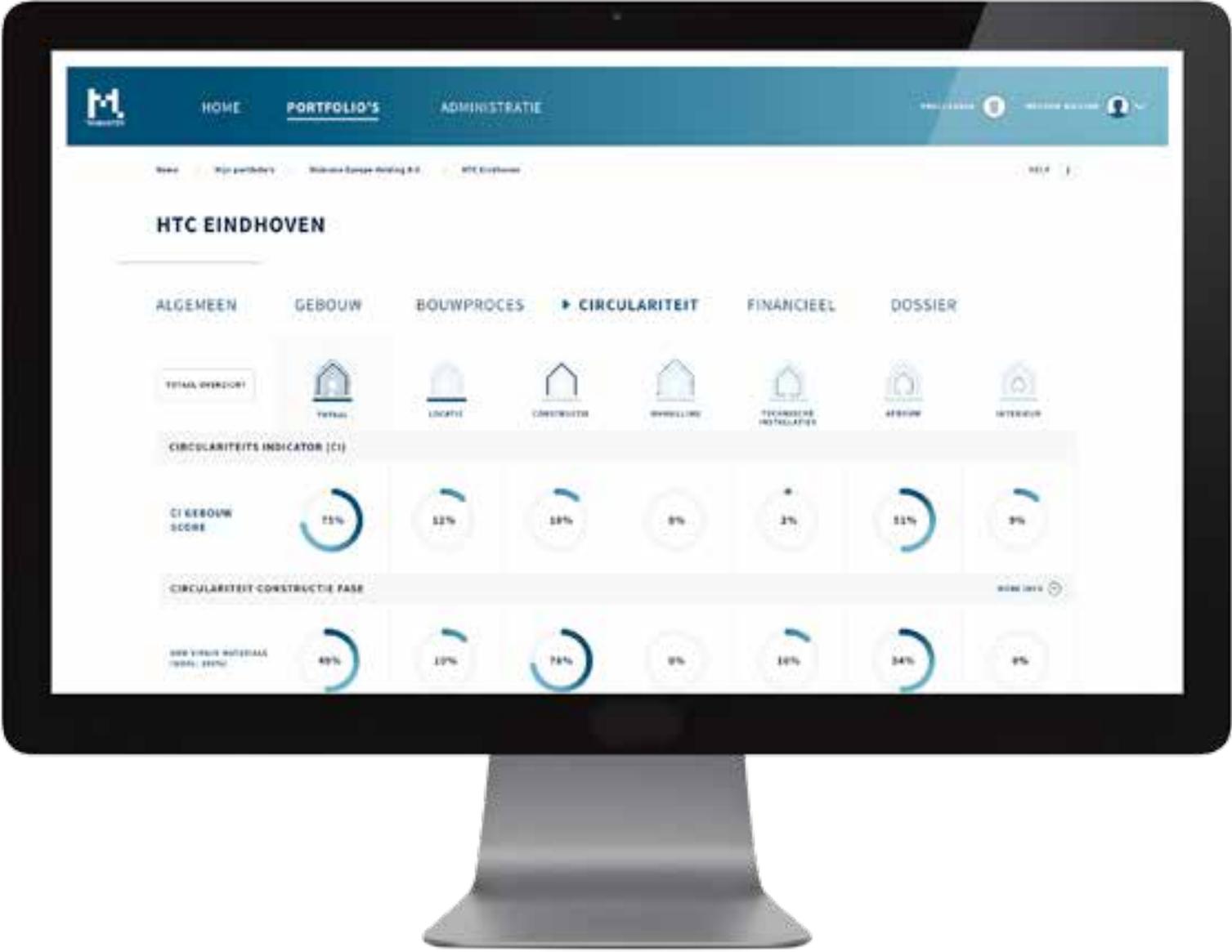
Obtain insight into the circular value of your building. The Madaster Circularity Indicator, which is based on that of the Ellen MacArthur Foundation, scores a building at between 0% and 100% on the basis of data uploaded by the building's owner or manager. A fully circular building will score 100% and consists, among other things, of reused materials, it has a longer than average lifespan, after which it can be demolished relatively easily. In close collaboration with market experts, including EPEA and Copper8, Madaster is developing its Circularity Indicator to achieve a final version. No rights can be derived from the resulting scores.

In addition to a total indication, on building level, Madaster also provides insight into the degree of circularity per phase (i.e. construction, use & reuse). This is presented for the entire building, but also for its various layers.



## Outline of a circular economy

Source image: <https://www.ellenmacarthurfoundation.org/circular-economy/interactive-diagram>



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### HTC EINDHOVEN

ALGEMEEN

GEBOUW

BOUWPROCES

CIRCULARITEIT

FINANCIEL

DOSSIER

TOTAAL OVERZICHT



TOTAAL



LOCATIE



CONSTRUCTIE



BEPALING



TECHNISCHE INFORMATIE



AFBODING



INTERIEUR

#### CIRCULARITEITS INDICATOR (CI)

CI GEBOUW SCORE



#### CIRCULARITEIT CONSTRUCTIE FASE

100% VIRALE MATERIAAL (TOTAAL: 337KG)



WISSELIJK

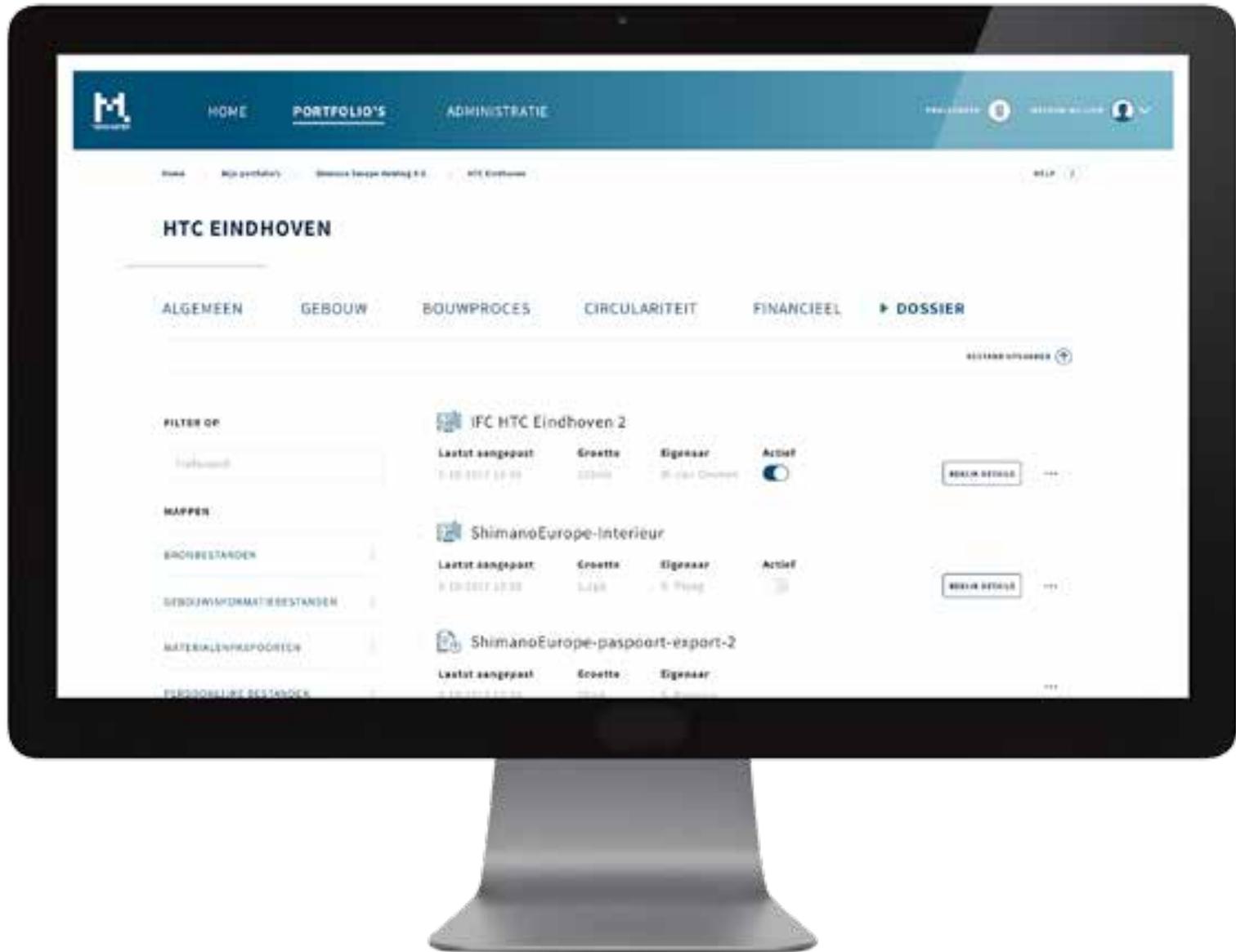
# DOSSIER

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Create a central location for standardised and simple archiving and sharing of building-related documentation. In addition to the IFC/Excel source files, a building's DOSSIER may also contain files with other building information, such as reports on energy and environmental performance, scanned documents or drawings, photographs, assembly instructions, and maintenance plans. Finally, the dossier also contains all of a building's material passports.

Create a standard folder structure, on portfolio and building level, for users to add their own themes and sub-themes. Attach specific search words to the files, to facilitate easy and rapid retrieval.



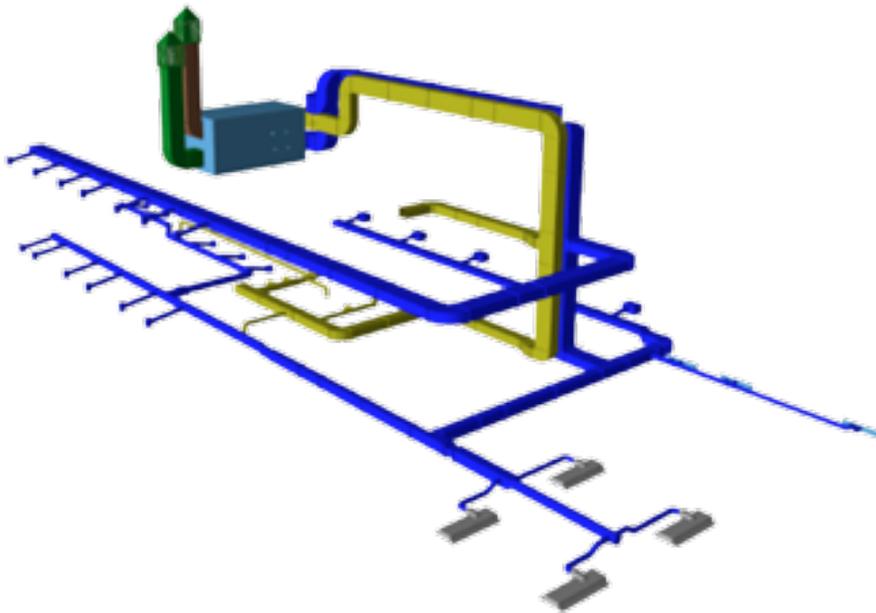


## DOSSIER (3D MODEL)

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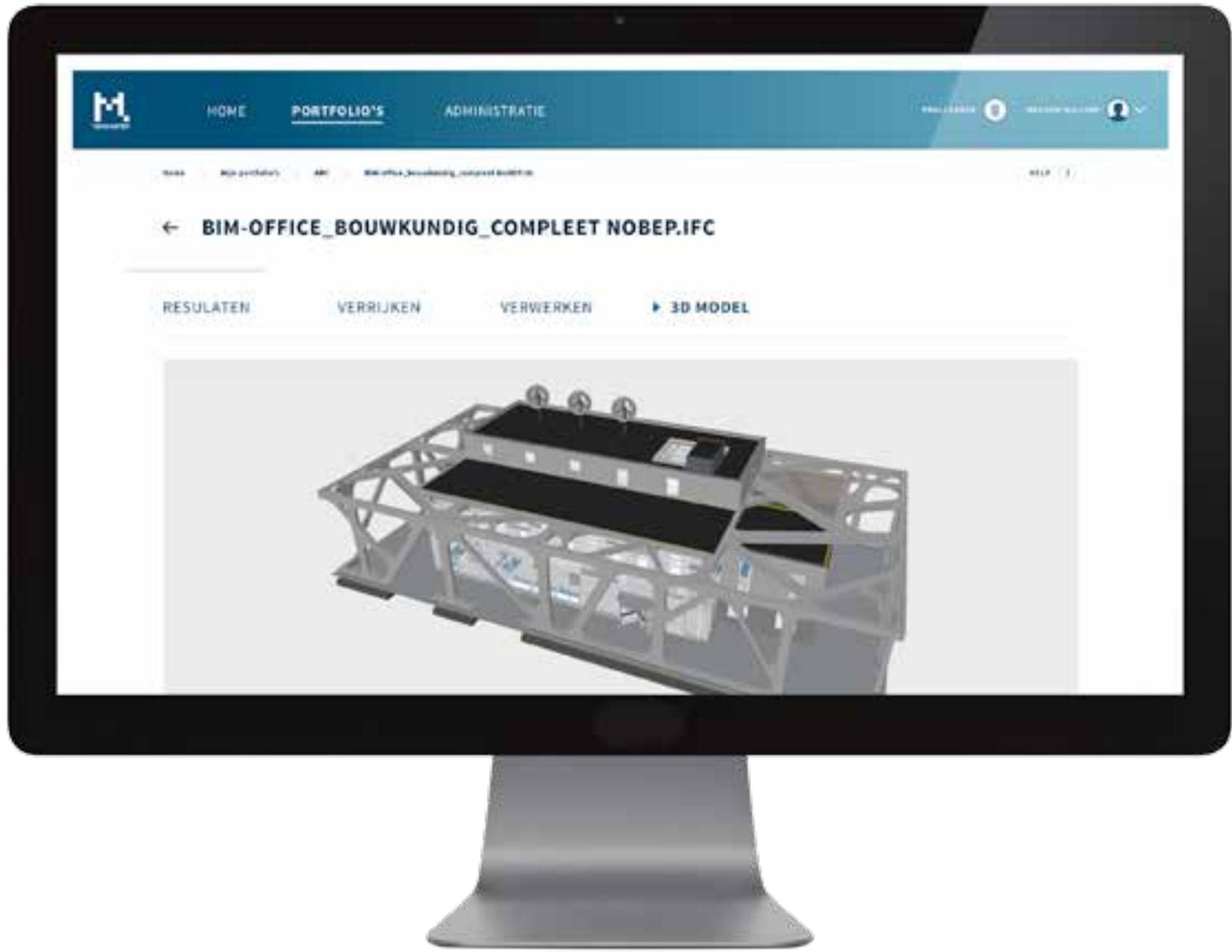
All the information on a building that is registered in Madaster will also be visually depicted in a 3D model. Take a virtual tour through the building and see where materials and products are located. The level of detail of the 3D model improves as more—and more detailed— data becomes available in the underlying source file.

The 3D model provides cohesion for the underlying data and gives the user a clear idea of the situation in reality.



### Madaster 3D Model viewer

Curious about the materials or products included, for example, in your ventilation system? You can find out by zooming in to a specific building layer, using the 3D model viewer.



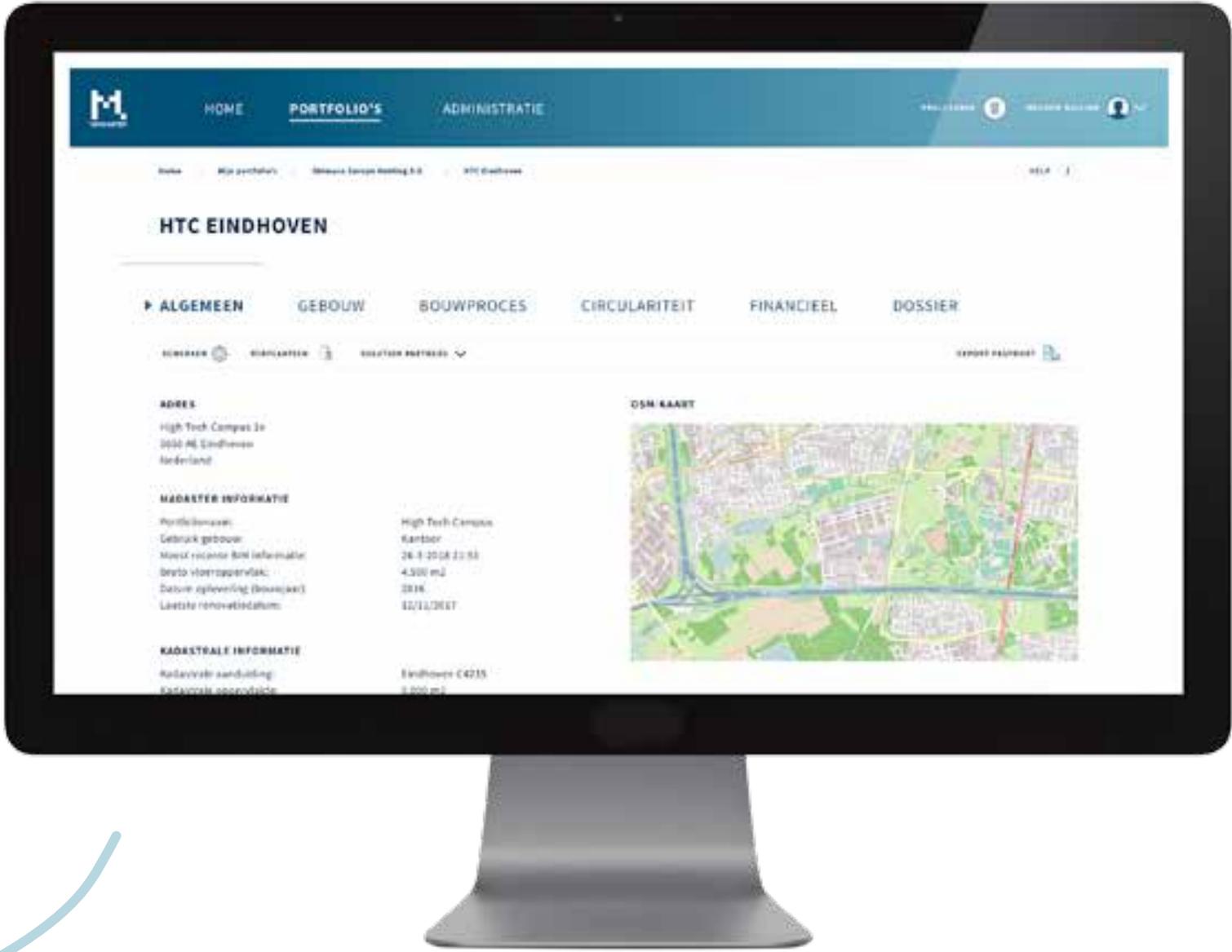
# MATERIAL PASSPORT

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The material passport is a complete and clear presentation of all the information about your building as registered in Ma-daster. The material passport —like a regular passport— gives your building and all of its components an identity. The quality of the passport depends on the information from which it is created. As more —and more detailed— information becomes available, the quality of the material passport also increases.

The material passport is a PDF document that will be added to your building's dossier and can be printed or downloaded. The passport can be generated whenever necessary, and each newly generated version will be saved.



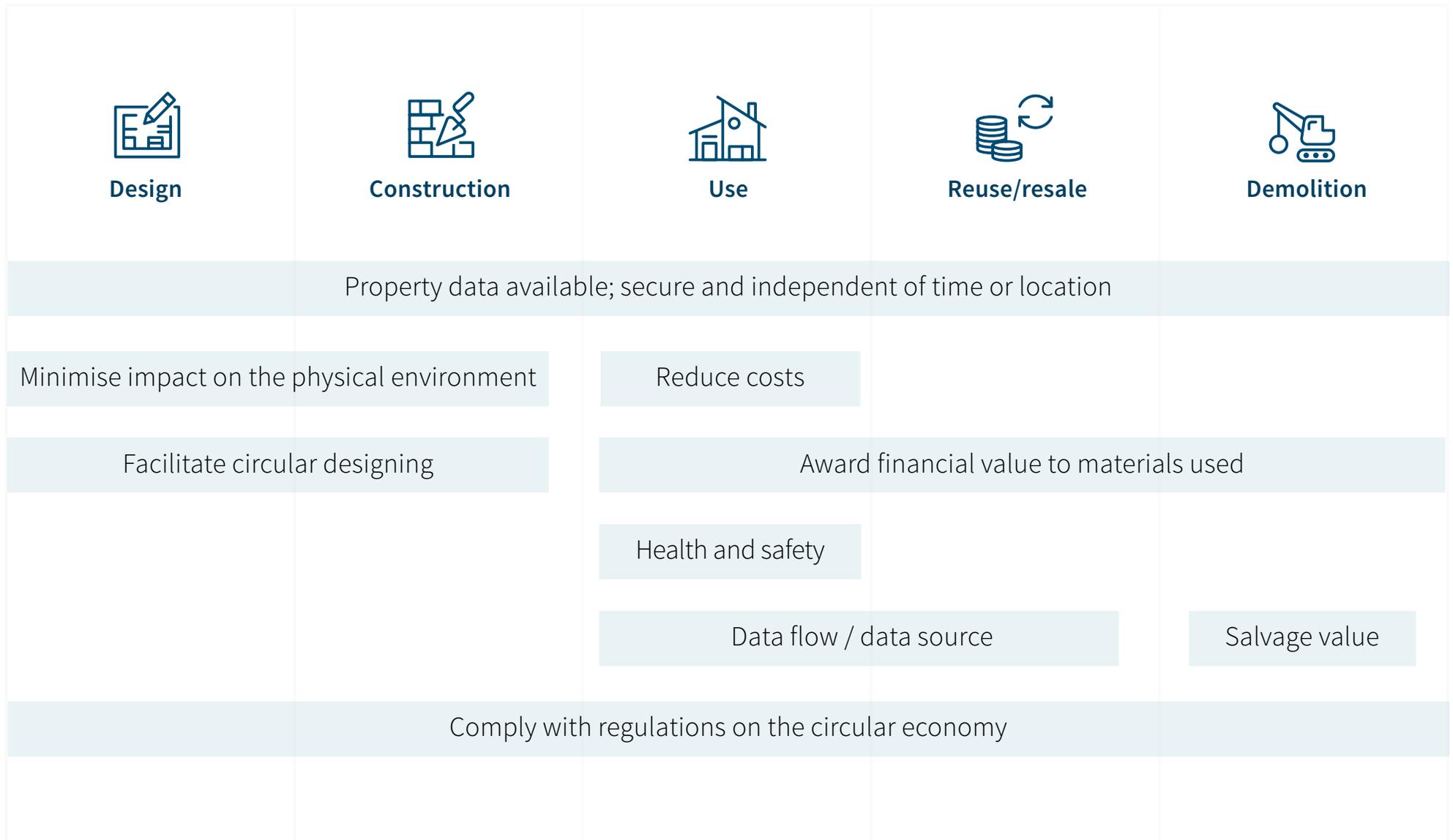


# MADASTER'S ADDED VALUE

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## **By using Madaster, you:**

- have access to property data; with a high level of security, where and when you need it;
- know which materials and products your building contains.
- In this way, you can minimise its environmental impact;
- are able to lower maintenance costs,
- and facilitate and encourage circular designing;
- can assign financial value to products and materials and gain insight into the salvage value.
- It also shows which materials and products are safe and beneficial to human health;
- develop a centrally located property dossier;
- comply with current regulations related to circularity.



## A building's lifecycle

# TYPES OF SUBSCRIPTIONS

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## Small



Max. 2  
users



Max.  
1.000 M<sup>2</sup> GFA



€ 100,-

Annual  
price

## Large



Max. 5  
users



5.000 -  
10.000 M<sup>2</sup> GFA



€ 1.000,-

Annual  
price

## Medium



Max. 3  
users



1.000 -  
5.000 M<sup>2</sup> GFA



€ 500,-

Annual  
price

## Xlarge



Max. 10  
users



10.000 -  
20.000 M<sup>2</sup> GFA



€ 2.000,-

Annual  
price

## Tailor-made subscriptions

Subscription fees decrease for larger portfolios. For example, the fee for 1,000,000 m<sup>2</sup> in real estate is € 25,000 (excl. BTW) per year. There are special subscription fees for non-owners, depending on the number of users and data use. For questions about the various types of subscriptions or about our subscription fees, please feel free to contact us, so we can present you with a tailor-made offer.



## Are you a professional builder or construction company?

For professionals, there is Madaster's 'Enterprise licence'. Please contact us for more information about the various options.



# DEVELOPMENT

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Madaster continually works on improvements and expansion of the online platform. Changes that benefit all platform users are implemented quarterly. Improvements and expansions are related to products and materials, circular and financial valuations, as well as data storage. Our most recent multi-annual development plan is provided on our website.

In addition to the registration of real estate objects, Madaster meanwhile also has entered into collaborations with various infrastructure parties in the Netherlands, to improve registration of material use in infrastructure projects (e.g. civil engineering, roads, railroads, cables, and pipes and drains) and to stimulate high-quality reuse. The ultimate goal is to create an online library of the materials used in infrastructure projects. This initiative contributes to the national government's objective for a fully circular economy by 2050.

Madaster is part of an ecosystem of initiatives and innovations that, together, facilitate the transformation towards a circular economy.

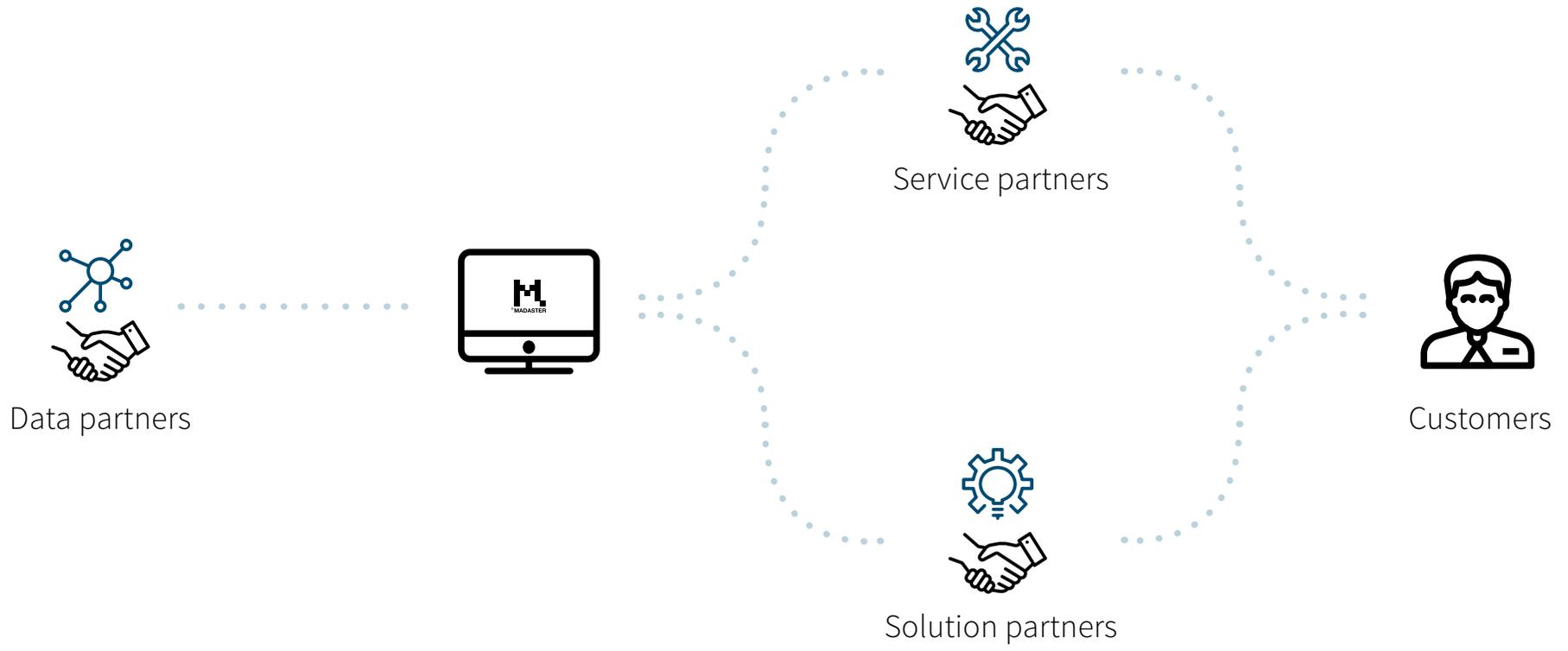
Within this system, Madaster is collaborating with various partners:

**Service partners:** companies who offer their services directly to the clients of Madaster. Goal is to stimulate the use of Madaster (e.g. training courses, BIM modelling).

**Solution partners:** companies who offer technically integrated software solutions to the clients of Madaster (e.g. BIM Collab van Kubus, MPG module of W/E consultants).

**Data partners:** companies who supply data services to enhance the Madaster platform (e.g. financial, circular and material data).

Interested in collaborating with Madaster? Please contact our sales team at [sales@madaster.com](mailto:sales@madaster.com).



Data partners



Service partners



Solution partners



Customers







## **Madaster Services**

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