



Madaster has won the 2018 European Digital top 50 award (by Google, McKinsey and Rocket Internet) in the category "Tech for social impact".

2020



This initiative has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement No 779024.

Introduction

Purpose of the document

This document specifies key information on Madaster for potential investors. In five chapters the following is described:

- Why, how & what
- Offering
- Strategy: three phases towards global scale & impact
- Revenue model & outlook
- Legal set up



Dear reader,

I am looking forward to provide further information on Madaster and the opportunities at hand in a personal introduction session. Please feel free to contact me.

*Best regards, Martijn Oostenrijk (Co founder & CEO)
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Request for funds

- Madaster aims to attract funds;
- Funds attracted are a combination of European Commission grants, equity investment at a Holding level and through local equity investments and donations in the specific branches;
- The funds will be used to facilitate phase II and III of our strategy, in short: 'Madaster becomes the standard for the built environment in the Netherlands & Madaster is rolled out to 11 countries in Europe';
- Purpose of funds attracted are solely to fund this further growth (capex & operating expenses) i.e. no funds will flow towards existing shareholders;
- Funds will primarily be allocated to the development of the Madaster organisation and the Madaster online platform/ eco system over the next four years.



WHY | HOW | WHAT



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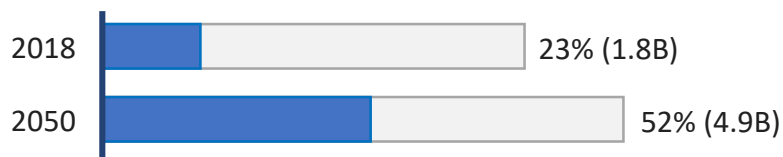
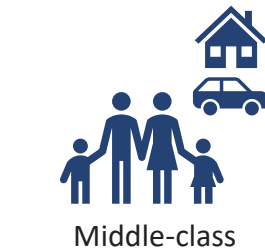
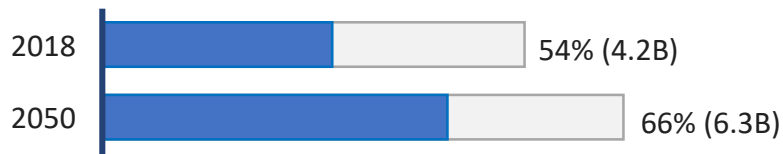
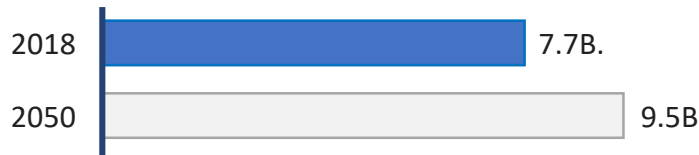
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Madaster in two minutes

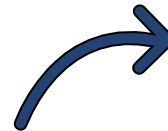
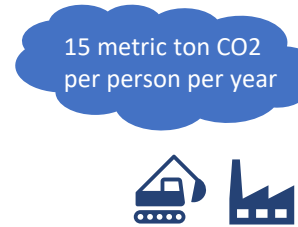
<https://youtu.be/VN92AndNoZ0>

Need: our way of consuming depletes the Earth

The world is inhabited by more and wealthier people...



... which leads to increased pressure on the earth.

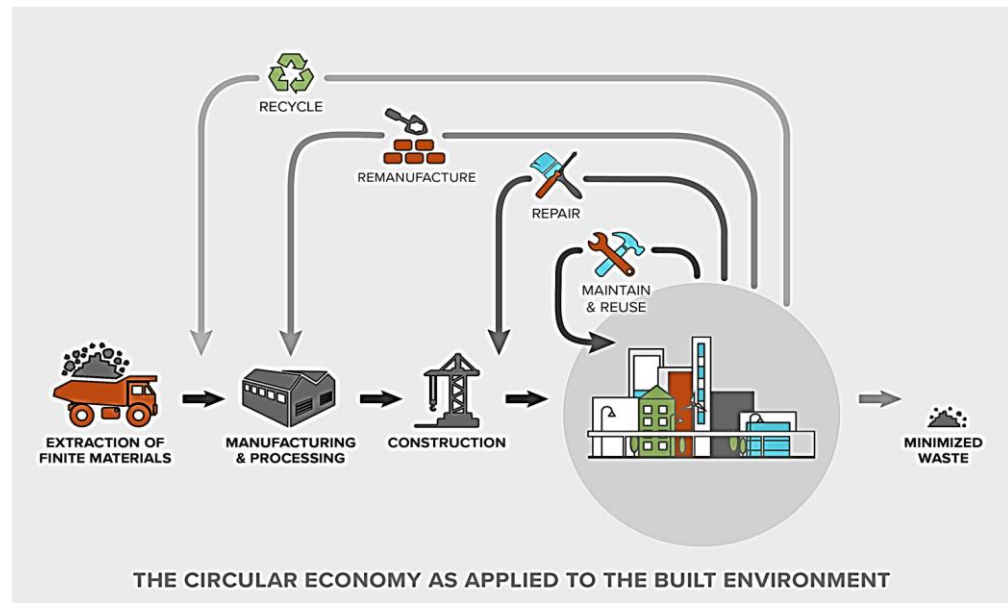


- As developing countries become richer, their CO2 emissions converge to the higher levels in developed countries;
- Our worldwide consumption currently requires 1.5-2 planets Earth to maintain itself and this will increase with the emerging middle class;
- If everyone in the world were to consume at the American level, the world needs 4 planets Earth.

It is clear that the 'take, make and dispose model' in its current form is not tenable in the long term.

Solution: move towards a circular economy

Given the challenges we face, it is critical that we change our current linear economy and move towards a sustainable circular economy in which materials and products are reused in order to eliminate waste and reduce the negative impact of CO2 on our climate.



Ambition and objective

In the Government Program 'Netherlands Circular in 2050', the cabinet outlines how we can redirect our economy to a sustainable driven, fully circular economy in 2050.

The first goal is 50% less consumption of primary raw materials (mineral, fossil and metals) in 2030. The second goal is 100% less consumption in 2050.

This objective is comparable to the level of ambition in peer countries.

For the construction industry, a sector whose climate impact is great, the cabinet wants to stimulate reuse of all concrete in 2030 and supports the experiment with the materials passport, which describes exactly what material has been incorporated into a building and how that is to be extracted. "If necessary, this is enshrined in regulation". This passport was created by architect Thomas Rau, who has been leading in the sustainable top 100 in the Netherlands for many years.

Stientje van Veldhoven, State secretary of Infrastructure & Water

Madaster: from write off to write down

Vision

- The earth is a closed system in which no wastage can take place.
- Raw materials are limited and finitely available.
- "Waste is material without identity".
- To keep materials infinitely available they need to be documented.



Mission

- The mission of Madaster is to eliminate waste by giving materials an identity.
- We focus primarily on the materials in the built environment.



The cadastre for materials

- Madaster attaches material identity to location and documents it in a materials passport.
- A materials passport specifies which materials have been used and in what quantities. It also contains information on the quality of the materials, the location, the circular and the financial value.



Madaster is a public, online library of materials in the built environment. As such, Madaster aims to be the 'single source of truth', at the center of an eco-system of circular business models, to allow materials to circulate through the economy indefinitely.

By registering materials in Madaster, materials will always keep their purpose.



OFFERING



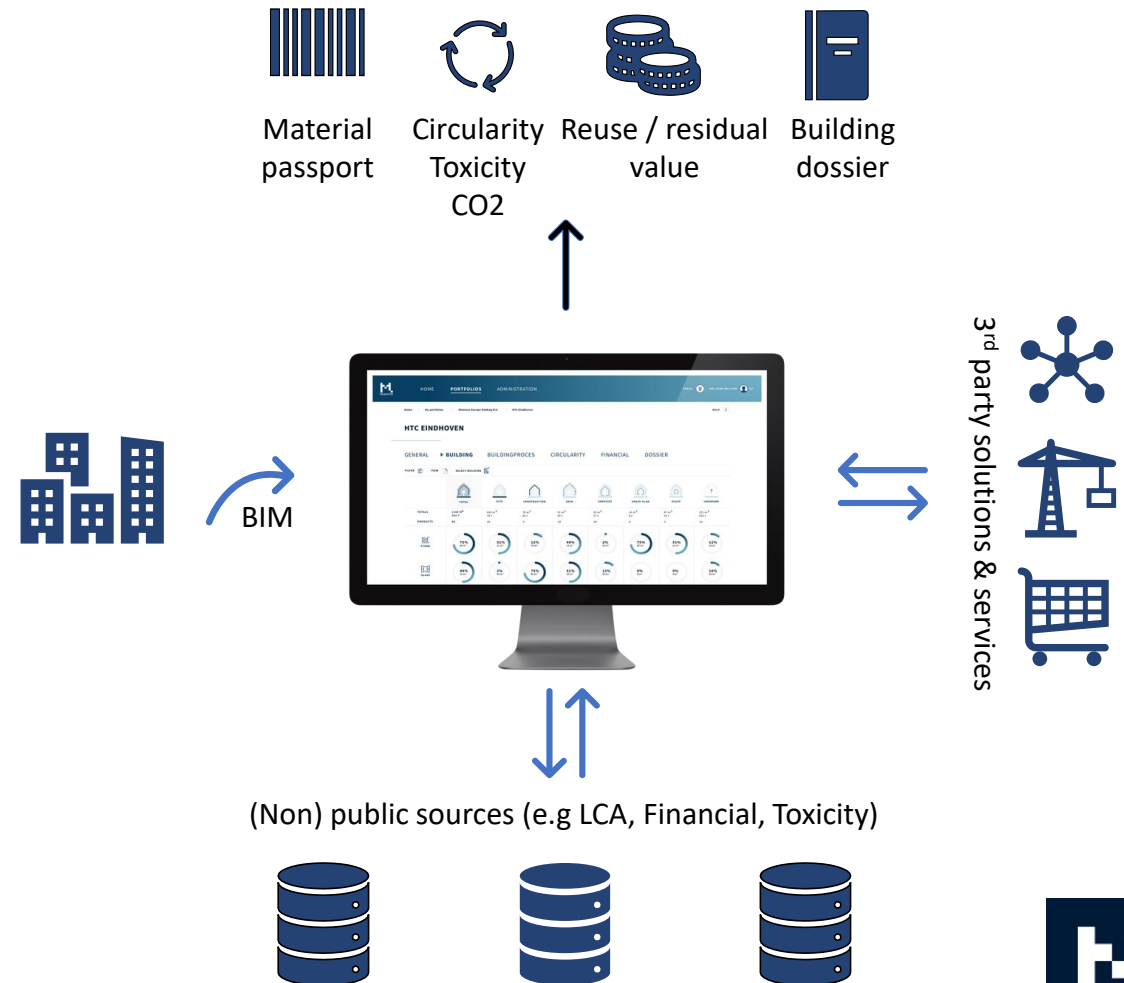
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Digitisation meets circular economy

- Madaster has developed a unique, innovative, disruptive online cloud platform providing the user a **'one stop access point'** to leverage their property data to meet and exceed their environmental, regulatory and financial driven ambitions **across the full lifecycle of the object.**
- Madaster automatically **processes BIM files** and enriches the information with data from other **public and non-public sources**. Data is safely and securely stored and can be easily managed by the users.
- Madaster creates transparency about material assets by generating **material passports** (a digital twin) of a physical object based on the registration of materials, components and products used. It generates **insight in the financial valuation, embedded carbon, toxicity and reuse potential** of the applied materials, components and products.
- Through Madaster the client can choose to **access third party applications and services**, like valuers, reused material marketplaces and property managers.



Our clients

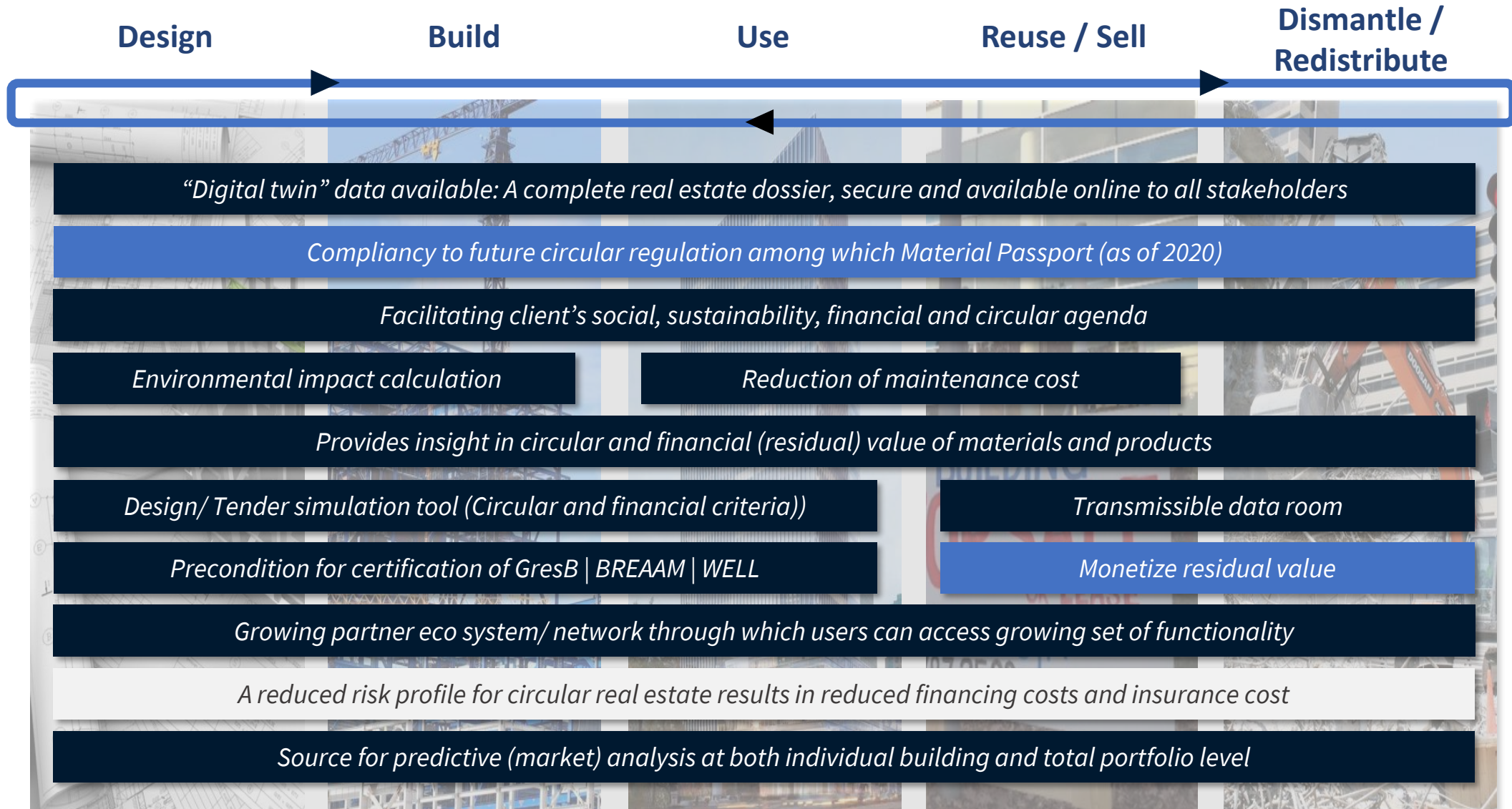
- The users cover primarily real estate owners like real estate investors, public and semi-public bodies, residential and non residential owners.
- The primary owners have the need to register / document their property to gain insight in their non-monetary (reuse potential, toxicity, LCA values, CO2) and monetary value, in a safe and secure fashion.
- Through the Madaster services and connected 3rd party services and solutions the Madaster user is able to leverage their property data for smart decision making across the lifecycle of their property.



GEMEENTE BARENDRECHT



Client benefits across the full lifecycle



Our partners: 3rd party services and solution

Goal of the partner program:

The Madaster partner program is established to build an ecosystem around Madaster to provide services and solutions on top of the platform to our users, provided by our partners.

Partner opportunities:

Madaster distinguishes 3 types of partnerships in its program:

- **Service partner:** provides advisory and implementation services to new Madaster users.
- **Solution partner:** provides new functionality on top of the Madaster Platform, similar to a new app on your smartphone.
- **Data partner:** enriches the Madaster database strengthening the accuracy and reliability of data in material passports.

Our partners:

Major construction companies, advisory firms, marketplaces, and data parties use Madaster for themselves and for their clients. An overview of our growing network of Partners:



Business testimonials

- ING - Ralph Hamers (CEO): "Digital Material Passport supports the circular economy and reduces waste";
- Volker Wessels - Lars van der Meulen (Manager Corporate Responsibility): "Verschrikkelijk trots dat we eerste Kennedy hebben mogen zijn in dit revolutionaire initiatief";
- TBI - Wendeline Besier (Manager MVO): "Dit soort initiatieven hebben wij nodig om onze organisatie klaar te stomen voor de toekomst";
- Alliander - Bart Blokland (Directeur Shared Services): "Goed nagedacht over hergebruik van materialen";
- IMD Raadgevende Ingenieurs - Pim Peters (Directeur): "Vastleggen van de primaire grondstoffen om te hergebruiken in de toekomst";
- W/E adviseurs - John Mak: "We denken dat het echt een verandering gaat betekenen in de bouw- en vastgoedwereld".
- Mitsubishi Elevator Europe - Ronald Koedam (Sales Manager): "waardering en adressering van grondstoffen in de toekomst is bijzonder belangrijk";
- ProRail - Karen te Boome (Manager Milieu en Duurzaamheid): "hoe mooi zou het zijn als je weet waar die materialen zich bevinden";
- Heijmans - Robert Koolen (Directeur Strategie & Beleid): "Madaster belangrijke bouwsteen voor de materialentransitie";
- ING - Joost van Dun (Circular Economy Lead): "Madaster is een geweldige oplossing om gebouwen te kunnen tracken en monitoren, uit welke componenten het bestaat en hoe de waarde hiervan is bepaald".





STRATEGY



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Strategy: three phases towards global scale

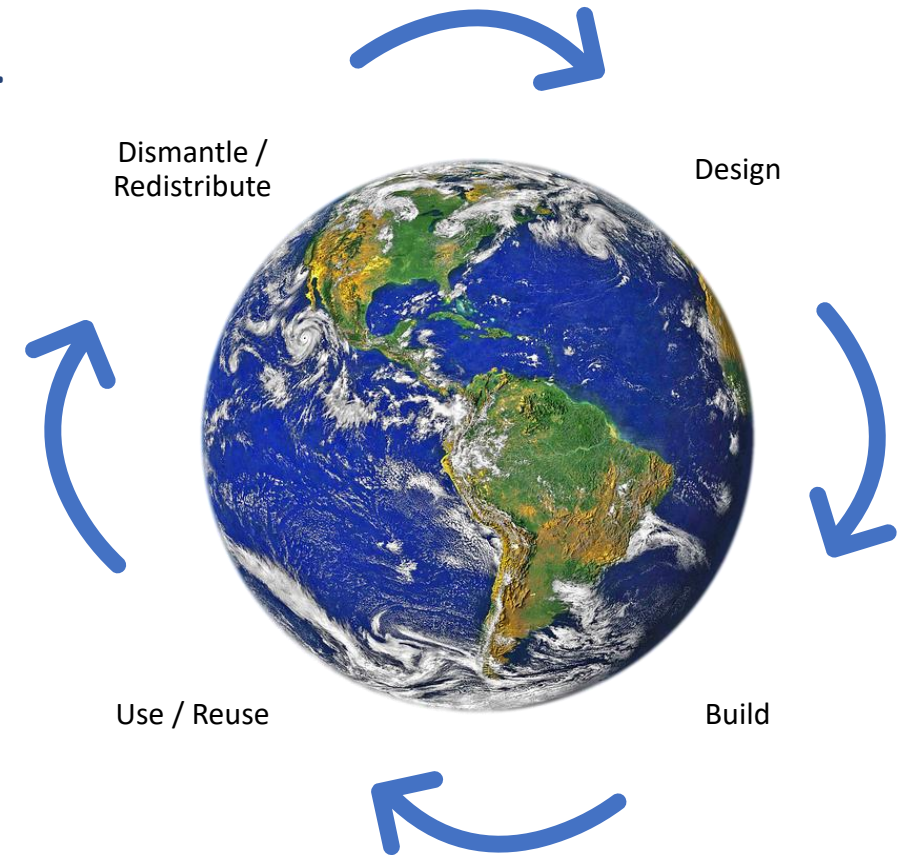
Phase I has been achieved. In phase II, Madaster is developed as the public online library of materials for the Netherlands. This development is based on the ambitions of the central government programme 'Netherlands Circular in 2050'. In phase III, Madaster will be rolled out internationally.



I Vision & operational foundation ✓

II Madaster becomes the standard in the Netherlands

III Madaster becomes the internationally recognised standard



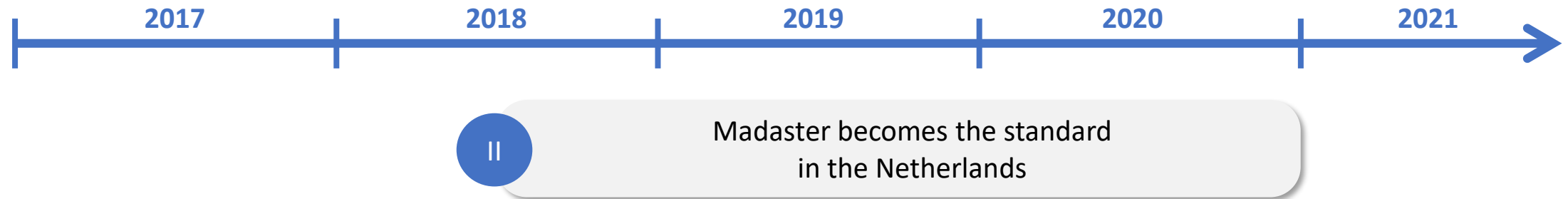
Material with an identity always keeps its purpose

Phase I – Vision and operational foundation

The Madaster platform has been operational since 29 September 2017 and receives broad social support and media attention. Below is a summary of important moments:

- In 2015 [VPRO Tegenlicht](#) on Dutch national television is broadcasted with Thomas Rau about the vision of Madaster;
- In 2016 Thomas Rau (co)published the book ["Material Matters"](#);
- [Launch of the Madaster Foundation](#) in February 2017 with signed strategic partnerships with 33 [Kennedy's of Madaster](#);
- Per May 2017 Madaster receives funding from the European Union's Horizon 2020 research and innovation program of €2.5 Mio;
- [Madaster Go Live Event](#) in September 2017;
- On December 5th 2017 Madaster was presented in the Vatican;
- Madaster is mentioned in the Dutch government program ["Nederland Circulair in 2050"](#);
- As of March 2018 the [first educational institute](#) is registered;
- In Q1 2018 [a learning environment](#) was launched for Infrastructure with Prorail, Alliander and Rijkswaterstaat;
- In April 2018 [the first partner company signs with Madaster](#);
- Madaster is mentioned in [annual report of VolkerWessels](#) as Key Performance Indicator for the future.
- [Madaster Kennedy's anniversary](#) in May 2018;
- On June 8th 2018 [Madaster wins the Digital Top 50 Award by Google, McKinsey en Rocket Internet](#), as European number 1 "Tech for Social Impact".
- In June 2019 Madaster has been launched in [Switzerland](#);
- Currently roughly 250 clients have registered 2.500.000 m² and [35 partner companies](#) have been contracted.
- [Deloitte research](#) proves financial impact of Madaster.

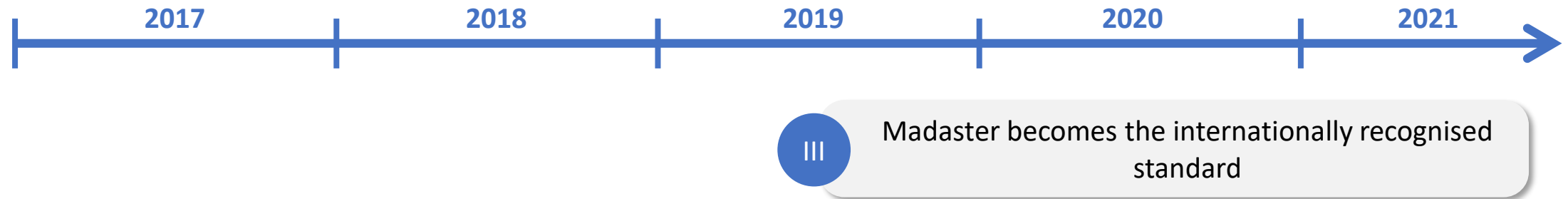
Phase II – Real Estate Netherlands



Aim phase II:

- Madaster becomes the standard for the build environment in the Netherlands and is recognized as a (pre) condition for the realization of the goals as defined in the Government-wide program 'Nederland Circulair in 2050'. In this, the government outlines how we can turn our economy into a sustainable, fully circular economy in 2050. The first goal is ambitious: 50% less use of primary raw materials (mineral, fossil and metals) in 2030.
- At the end of this phase we aim to achieve the following:
 - Madaster is the online and public register for the build environment in the Netherlands and is recognized as a reliable source of material data through links with public sources from, among others, the Land Register (Kadaster), TNO, NMD and NIBE;
 - Madaster is recognized by the national government as the authority for issuing material passports for real estate objects;
 - In addition to registering data, Madaster offers functionality to value materials and products in a circular and financial manner;
 - Madaster is the 'single source of truth', at the center of an eco-system of circular business models, to allow materials to circulate through the economy indefinitely. Consider the connection of, for example, (public) data sources and marketplaces.

Phase III – Internationally recognised standard



Aim phase III:

- Madaster becomes an internationally recognized standard, more specifically:
 - Madaster is the online and public register for the real estate & infrastructure sector and is recognized as a reliable source of data through adaptation of local standards and cooperation with local leading parties;
 - Madaster is seen as a driving force behind the realization of the 17 Sustainable Development Goals of the United Nations. Madaster contributes in particular to the achievement of objective 12 'Responsible consumption and production':
 - Reducing the use of resources (eliminate waste and encourage reuse);
 - A systematic approach and collaboration (facilitating via an open platform).

Madaster will first be implemented in Europe. After the Netherlands, Madaster will be rolled out in Switzerland, Germany and Austria (2020), Italy, France and the UK (2021), Norway, Belgium and Spain (2022), Poland and Portugal (2023).

- Outside Europe concrete interest has already been shown from the United States, Canada, Dubai, China, Taiwan and Singapore. Depending on the business case, we will determine whether the countries outside Europe will receive a higher priority on the implementation schedule.



REVENUE MODEL & OUTLOOK



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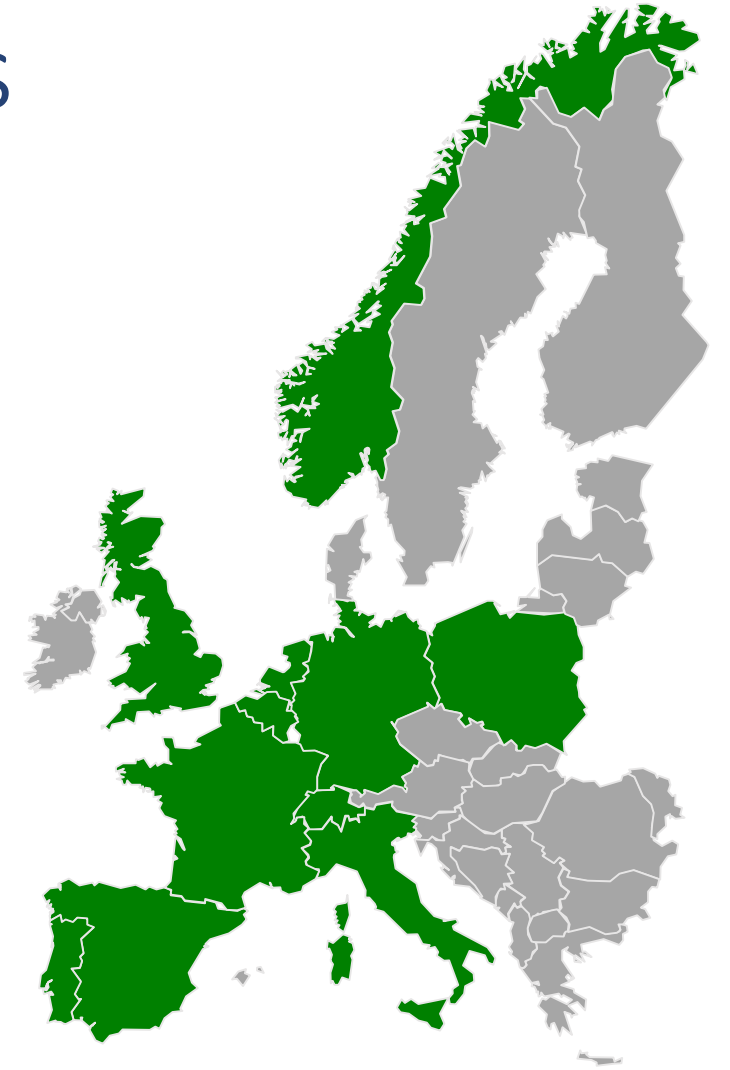
Business opportunity

- The potential market consists of all buildings in the world
- In the 27 EU countries there are 250 million homes and 15 million buildings
- Every year more than 1% is newly built, 1% renovated and slightly less than 1% scrapped; therefore the market grows
- We consider each building to be a depot of materials



Roll-out plan: the first 12 countries

- After the Netherlands, Madaster will be rolled out in Switzerland, Germany and Oostenrijk (2020), Italy, France and the UK (2021), Norway, Belgium and Spain (2022), Poland and Portugal (2023).
- Based on a very conservative market share projection per country of 0.5% of the residential stock and 1% of the non-residential stock, the annual revenue in 2025 is projected at over € 24 million.



Revenue model

- Given low marginal expense the revenue model is based on creating volume to cover the relatively fixed costs of the platform;
- Entrance of each 'new' country will result in an increase of the contribution margin for the platform and overhead;
- Initially each country will require an amount of capex to 'customize' the platform for the specific needs.



Financial outlook (I)

Madaster - TOTAL

P&L	2020E	2021E	2022E	2023E	2024E	2025E
in EUR / * 1000						
Revenues	1,055	2,612	4,039	7,585	14,731	24,080
chg yoy	150.8%	147.6%	54.6%	87.8%	94.2%	63.5%
COGS	219	392	549	889	1,436	2,120
Gross margin	835	2,220	3,491	6,696	13,295	21,960
as % of revenues	79.2%	85.0%	86.4%	88.3%	90.3%	91.2%
Personnel expenses	2,339	3,629	4,395	5,518	6,118	6,584
as % of revenues	221.8%	138.9%	108.8%	72.8%	41.5%	27.3%
as % of gross margin	280.0%	163.5%	125.9%	82.4%	46.0%	30.0%
Operating expenses	478	772	935	1,391	1,772	2,359
as % of revenues	45.3%	29.5%	23.2%	18.3%	12.0%	9.8%
as % of gross margin	57.2%	34.8%	26.8%	20.8%	13.3%	10.7%
EBITDA	-1,981	-2,181	-1,840	-214	5,405	13,018
as % of revenues	-187.9%	-83.5%	-45.5%	-2.8%	36.7%	54.1%
as % of gross margin	-237.2%	-98.3%	-52.7%	-3.2%	40.7%	59.3%
Capex	1,320	1,740	1,425	1,845	630	590
Cash EBITDA	-3,301	-3,921	-3,265	-2,059	4,775	12,428
as % of revenues	-313.0%	-150.1%	-80.8%	-27.1%	32.4%	51.6%
as % of gross margin	-395.2%	-176.6%	-93.5%	-30.7%	35.9%	56.6%
Depreciation	331	484	642	806	930	991
Financial result	0	0	0	0	0	0
Tax	0	0	0	0	0	-3,007
Net result	-2,313	-2,665	-2,482	-1,019	4,476	9,020

Main assumptions:

- Figures include solely Real Estate sector
- Figures include all countries of international roll out schedule
- In the Netherlands the IT platform is initially developed including the preparation of the platform for international rollout. For the sake of convenience, the entire investment (capex) is taken in the Netherlands.
- The central organization and the central processes are run in The Netherlands unless this is not permitted on the basis of local (fiscal / legal/ commercial) restrictions. As such, the operating costs (opex) are consumed in the Netherlands.

Financial outlook (II)

Madaster - TOTAL

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Net result	-2,313	-2,665	-2,482	-1,019	4,476	9,020

Main assumptions:

- Figures exclude all foreseen grants, equity investment, Kennedy donations or other types of financing;
- Capex is capitalized on the balance sheet and amortised;
- As of 2024 the company is cash EBITDA positive.



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LEGAL SET UP



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Target legal set up

- Consolidate the interests of the current shareholders in one holding for the prevention of dilution and to reduce complexity. This keeps the interests of the various shareholders > 5%, which is critical for the Dutch participation exemption.
- Madaster Holding BV is 100% owner of Madaster Local Services BV, Madaster IP BV and Madaster Shared Services BV:
 - Madaster Local Services BV is the holding entity with ownership in the underlying local operating entities. Initially this is only the operating company Netherlands BV however in future all other operating companies abroad.
 - Madaster IP BV owns the IP of the Madaster platform and has the global license from Madaster Foundation to use the Madaster brand. Because the IP in this entity is without activities, the IP is not 'at risk' i.e. protected.
 - Madaster Shared Services BV is the central operating unit servicing the local operating entities.
- This set up is scalable and allows for multiple set up's for the local operating entities for instance: 1. Full or majority ownership by Madaster Local Services BV, 2. joint venture set up between Madaster Local Services BV and local entity (entities), 3. licence / agency agreement.

