



Portada del documento The Amsterdam City Doughnut, Doughnut Economics Action Lab (DEAL), 2020.

Doughnut economy de Kate Raworth **Propuestas para la ciudad de Amsterdam**

José Pérez de Lama Halcón & José Ma. Sánchez-Laulhé

Arquitectura y Medio Ambiente, curso 2022/23
Escuela Técnica Superior de Arquitectura Universidad de Sevilla

Guion del documento

Circular Amsterdam.

Amsterdam City Doughnut.

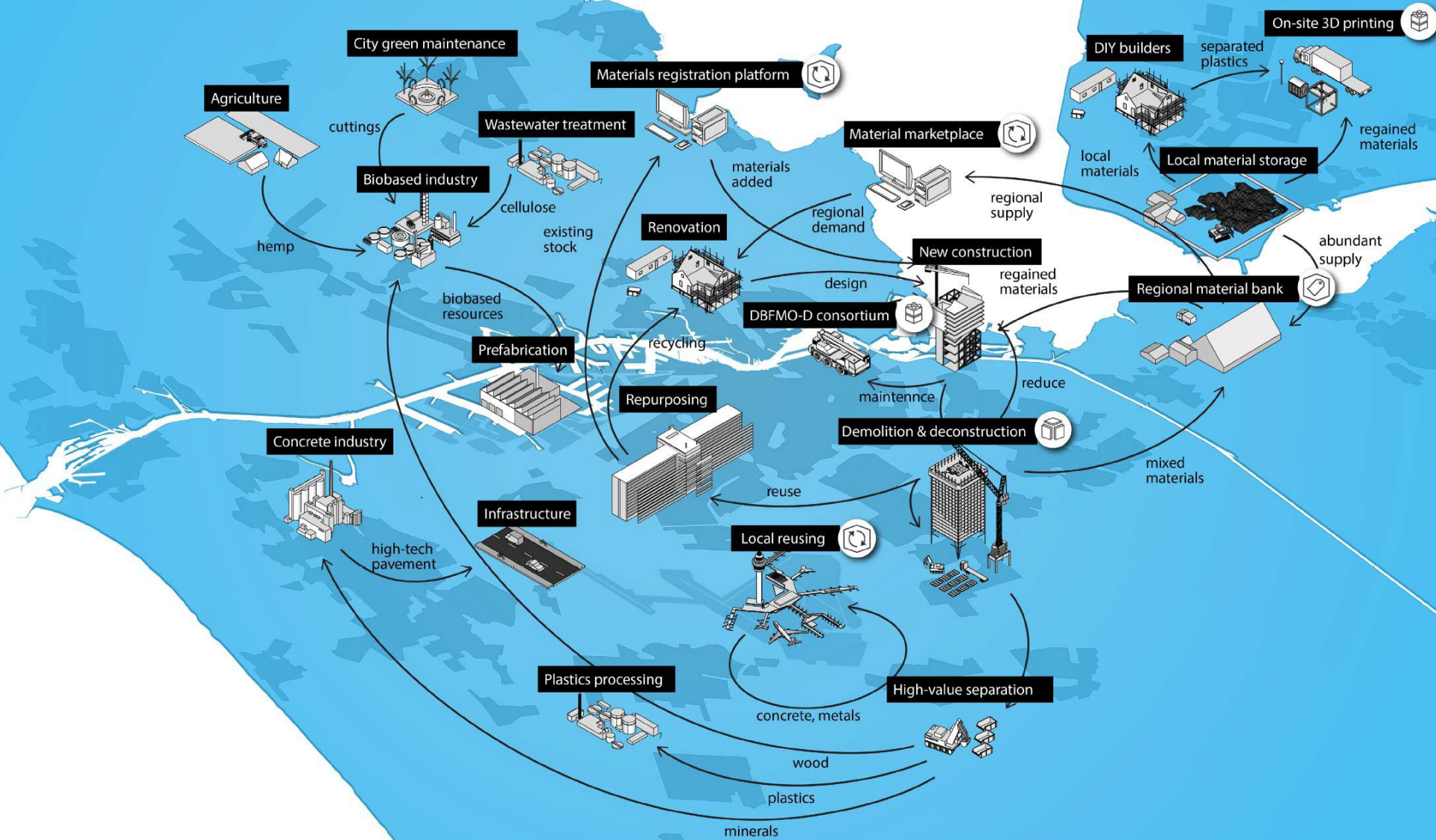
Otras iniciativas del DEAL

—

Bibliografía & referencias

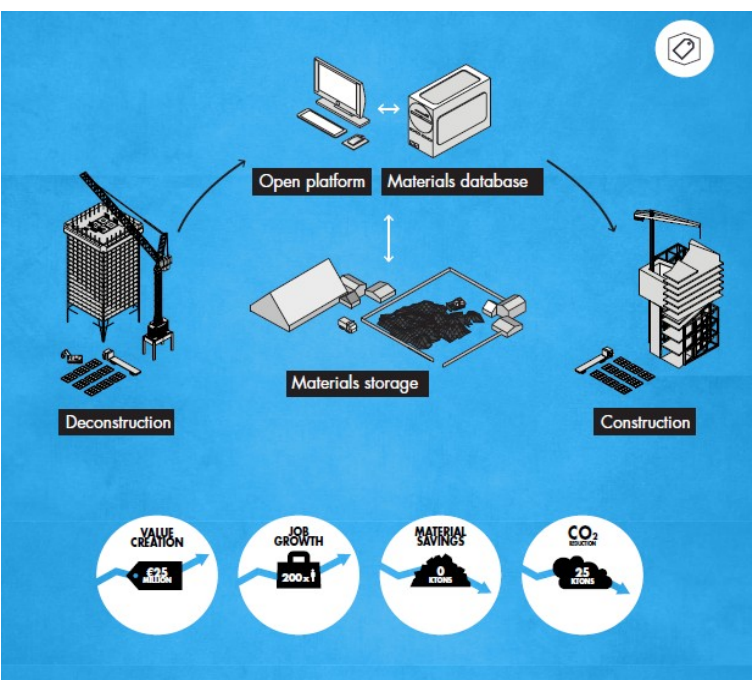
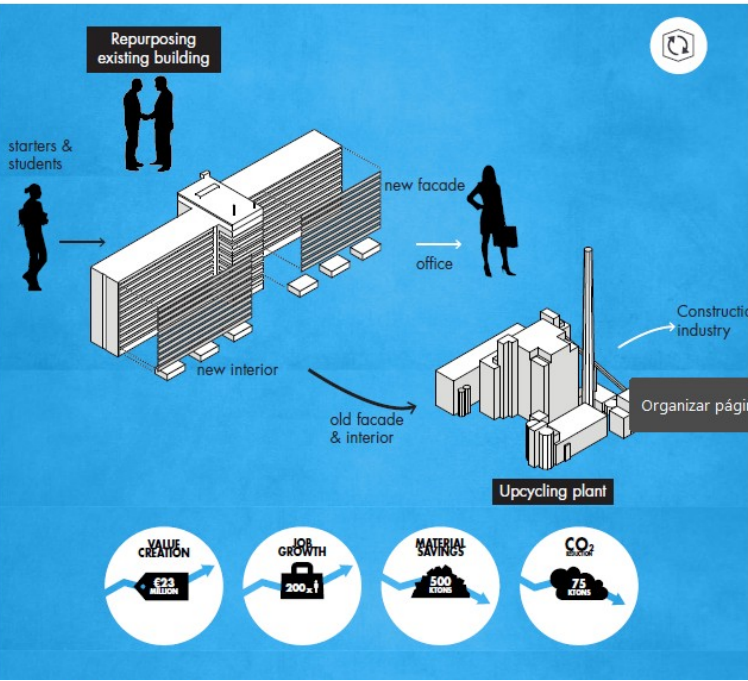
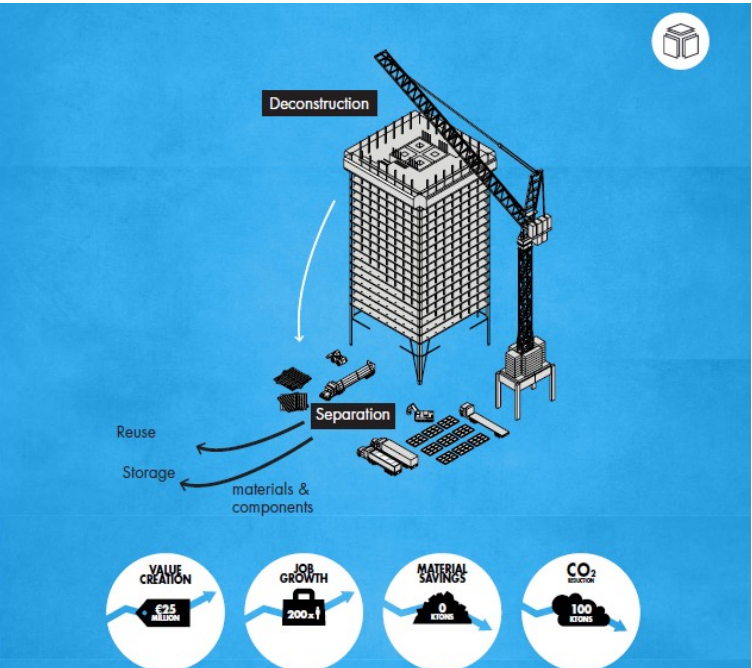
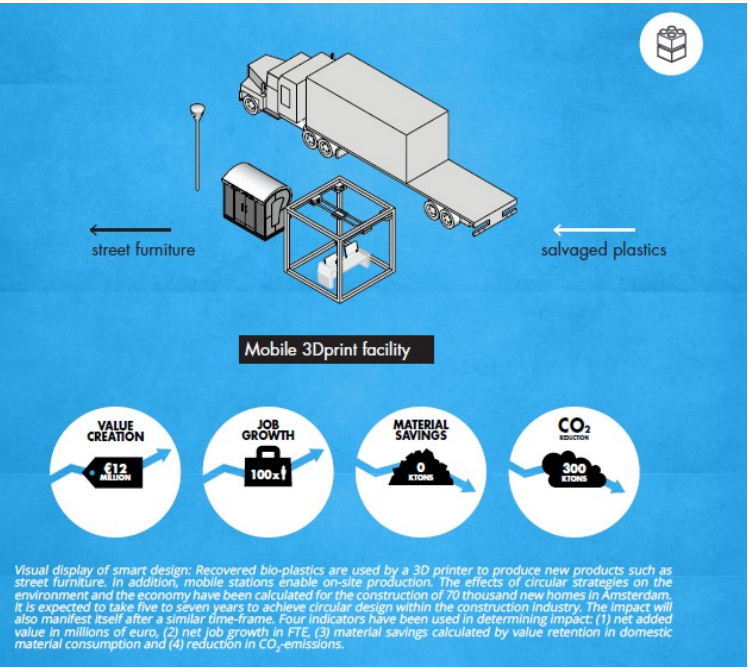
Créditos

Circular Amsterdam











Flows in Amsterdam. Vision of a circular construction chain. Circular Amsterdam. 2016

Circular Amsterdam









Circular Amsterdam

STRATEGY	TECHNOLOGY	MARKET	LAWS & REGULATION	CULTURE
 SMART DESIGN				
 DISMANTLING & SEPARATION				
 HIGH-VALUE REUSE				
 MARKETPLACE & RESOURCE BANK				

This table indicates how high the barrier to a circular economy is for each of the strategies. (Source: Insights from interviews, literature ((Acceleratio, 2015; EMF, 2015) and assessment of the research team.)

SMALL BARRIER	MODERATE BARRIER	LARGE BARRIER
---------------	------------------	---------------

Strategy	Barriers	Description
		There are limited opportunities in making 3D-printed buildings or components comply with current building regulations. The Building Act contains no guidelines enforcing cooperation between developers and the city, its current residents and future residents in developing a flexible design plan (National Government, 2011).
		Modular homes are, in most cases, only acceptable for social housing. These are difficult to finance because the income of the tenant is modest compared to that of tenants of more expensive types of housing (Tempohousing, 2015).
		Financing is difficult and it can be more expensive to implement new systems or sustainable materials. This approach requires a shift from cost-oriented thinking to a life-cycle approach (Buildings, 2009)

Amsterdam City Doughnut



Presentation of Amsterdam City Doughnut. DEAL, 2019.

Amsterdam City Doughnut

Las medidas concretas son los aproximadamente 200 proyectos incluidos en el programa de implementación, que abarcan desde la recogida de restos de pintura de látex hasta la introducción de pasaportes de materiales que permitan mantener un registro detallado de la composición de los edificios para que se puedan reutilizar más fácilmente sus elementos constitutivos. A largo plazo, queremos que esta iniciativa tenga carácter obligatorio para todo el sector de la construcción. Endurecemos constantemente los requisitos de sostenibilidad para los edificios y recomendamos materiales sostenibles y circulares, como la madera.

El énfasis en la producción, el consumo y la reelaboración a nivel regional creará puestos de trabajo —un aspecto muy importante a la hora de lidiar con la recesión— y aportará más resiliencia a la economía.

Entrevista a la concejala municipal Marieke van Doorninck – Green European Journal.

WHAT WOULD IT MEAN FOR AMSTERDAM TO THRIVE WITHIN ITS NATURAL HABITAT?

WATER PROVISIONING

HOW NATURE DOES IT
Coastal dunes purify water as it infiltrates and filters through the sand.

TO WORK LIKE NATURE
Amsterdam is supporting the Sand Motor project which promotes dune development on the city's surrounding coastlines.¹³

CITY TARGET

CITY SNAPSHOT
Renewable water resources make up only 12% of city supply.¹⁴

AIR QUALITY REGULATION

HOW NATURE DOES IT
Leaves can capture ultrafine air-pollutant particles and are also able to absorb gaseous pollutants.

TO WORK LIKE NATURE
Amsterdam is experimenting with strategically placed green walls to absorb pollutants in hotspots such as road corridors and intersections.

CITY TARGET

CITY SNAPSHOT
In 2015, the European Environmental Agency linked nearly 12,000 premature deaths in the Netherlands to air quality issues.¹⁷

TEMPERATURE REGULATION

HOW NATURE DOES IT
Forests regulate rainfall and cool local air temperatures through a process of evapotranspiration.

TO WORK LIKE NATURE
Amsterdam could reduce heat island effect by increasing urban green infrastructure.

CITY TARGET

Increase the use of green space as green infrastructure.¹⁸

CITY SNAPSHOT

At present, temperatures in Amsterdam can be up to 5°C warmer than surrounding areas due to urban heat island effect.^{18,19}

ENERGY HARVESTING

HOW NATURE DOES IT
Through photosynthesis, plants turn sunlight into energy.

TO WORK LIKE NATURE
Amsterdam is using wind turbines and photovoltaics to generate renewable energy.

CITY TARGET

Utilize two thirds of all solar energy potential (1000 MW) by 2040 – enough to power 450,000 households.^{21,22}

CITY SNAPSHOT

In 2018, renewable energy sources accounted for 7.4% of total Dutch energy consumption – up from 6.6% the previous year.²⁰

CARBON SEQUESTRATION

HOW NATURE DOES IT
Land-based and sea-based plants absorb and store CO₂, as do phytoplankton in the ocean.²⁴

TO WORK LIKE NATURE
Amsterdam could set goals for sequestering and storing carbon in land- and sea-based plants.

CITY TARGET

Reduce the city's total CO₂ emissions to 55% below 1990 levels by 2030, and to 90% below by 2050.²⁵

CITY SNAPSHOT

Dutch greenhouse gas emissions fell by 2.2% in 2018, contributing to a total reduction of 14.5% below 1990 levels.^{24,26}

BIODIVERSITY SUPPORT

HOW NATURE DOES IT
Forests provide protective locations for nests and dens, as well as structures to support plant growth.²⁸

TO WORK LIKE NATURE
Amsterdam is promoting and tracking sedum, grass and herb roofs, as well as rooftop gardens.

CITY TARGET

Make Amsterdam a city for people, plants and animals, with green spaces in all neighbourhoods, and well-kept parks and forests.²⁷

CITY SNAPSHOT

In 2018, Amsterdam had at least 200 green roofs, with a total surface area of approximately 120,000 m².^{29,30}

EROSION PROTECTION

HOW NATURE DOES IT
Marine plants and molluscs, such as oysters, slow down waves and reduce their power to erode the shore.³¹

TO WORK LIKE NATURE
Amsterdam could create oyster substrates to support a reef barrier and bolster erosion protection.

CITY TARGET

CITY SNAPSHOT
In the Netherlands, 12 million m³ of sand is replenished annually, but 20 million m³ would be needed to keep pace with rising sea levels.^{32,33}

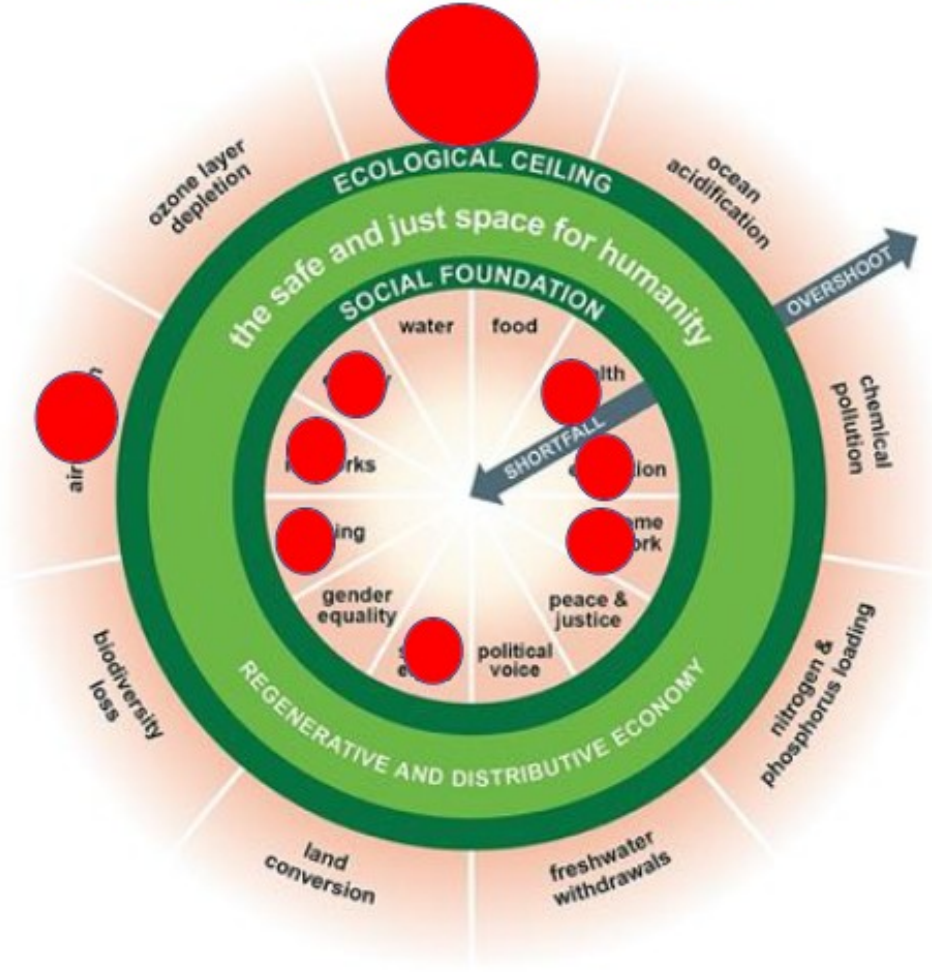
Amsterdam City Doughnut

Slimme gordijnen voor een lekker warm huis!

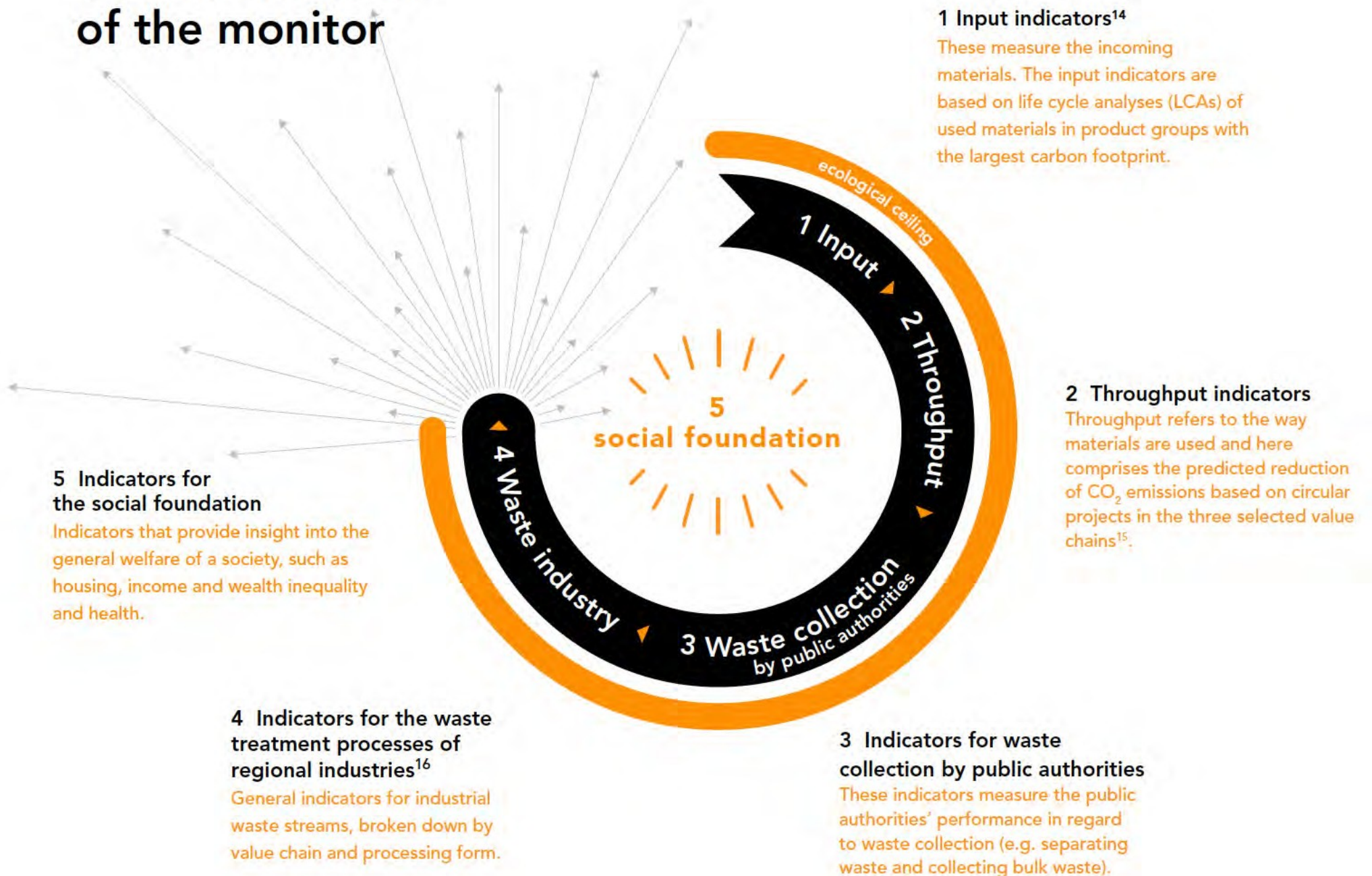


GaasperdamsGroenGas.nl

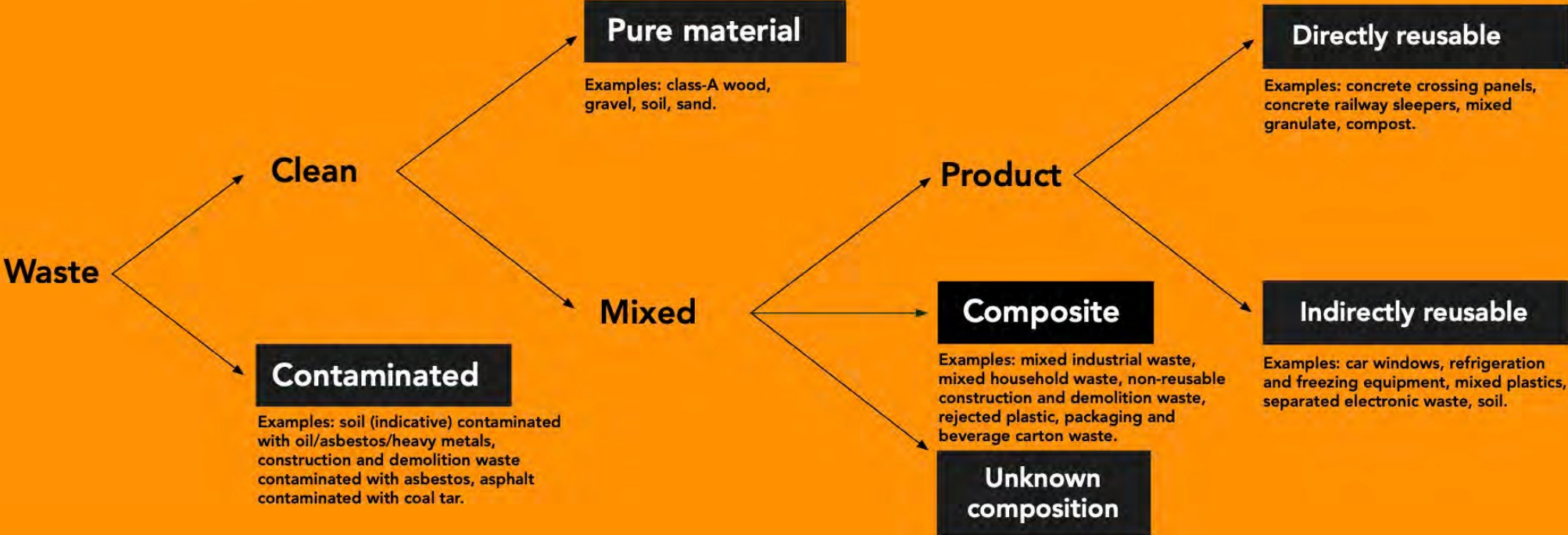
Deal with 2 Partners



The five sections of the monitor

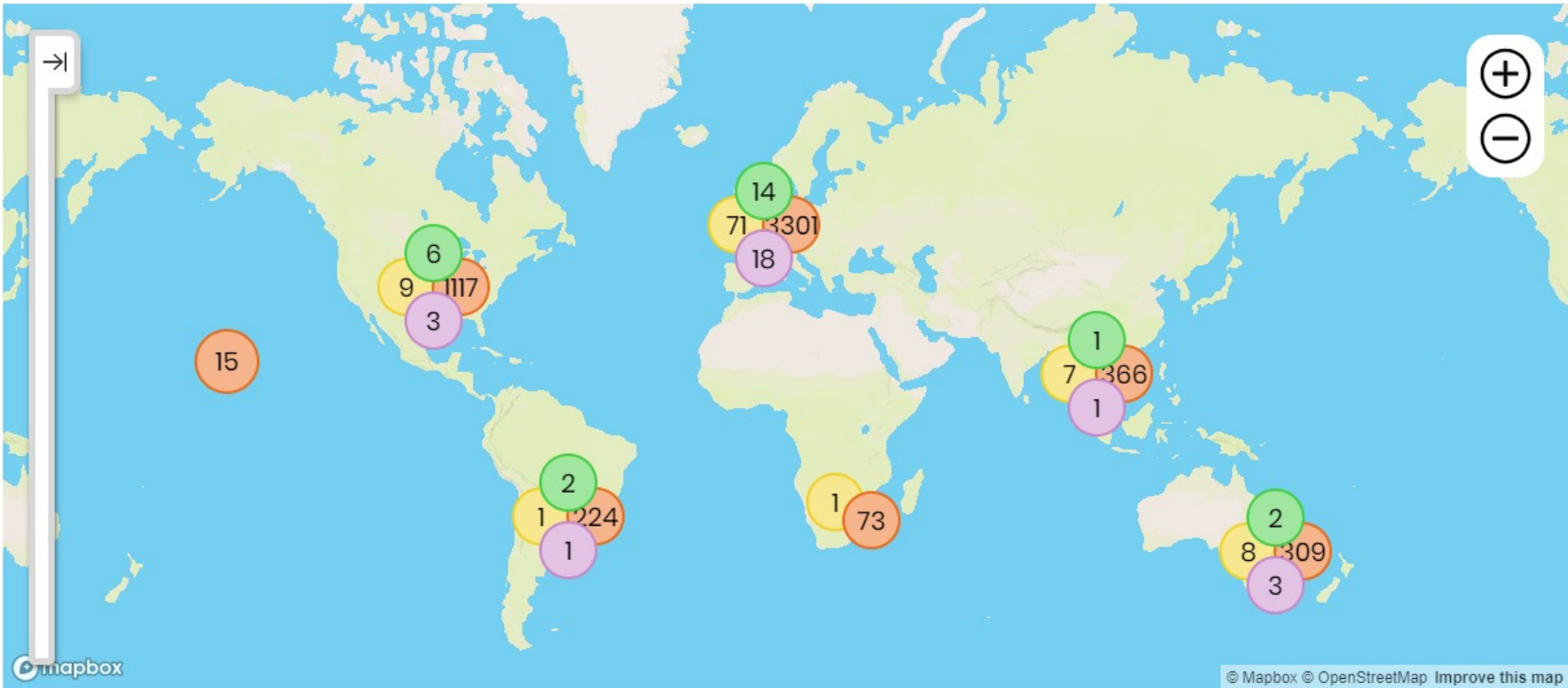


Classification method for waste



Classification method for waste. From Doughnut to Monitor. Juan Carlos Goilo, 2021.

Other DEAL projects.



Algunas referencias usadas

Raworth, Kate (2017). Economía Rosquilla. 7 maneras de pensar la economía del siglo XXI. Barcelona: Paidós.

Raworth, Kate (2020). The Amsterdam City Doughnut. A tool for transformative action. Amsterdam. Fuente: DEAL

Van Doorninck, Marieke & Schouten, Socrates (2022). El «modelo dónut» para que la ciudad de ámsterdam sea más justa y verde. Fuente: Green European Journal.

Enlaces:

Amsterdam Circular.

https://assets.website-files.com/5d26d80e8836af2d12ed1269/5ede5a03e4cd056426b86d8b_20152115%20-%20Amsterdam%20scan%20-%20report%20EN%20web%20sing le%20page%20-%20297x210mm.pdf

Amsterdam City Doughnut

<https://doughnuteconomics.org/amsterdam-portrait.pdf>

First DEAL projects in Amsterdam.

<https://gaasperdamsgroengas.nl/wp-content/uploads/2020/11/Doughnut-Deals-as-an-inspiration-for-DEAL.pdf>

From Doughnut to Monitor.

https://ec.europa.eu/jrc/communities/sites/jrccties/files/juancarlosgoilo_amsterdam_city_science_initiative_ce_workshop_hamburg.pdf