

EXIE – SUREAL

X_iH_2



Winter Warm and Summer Cool

Jan Palmaers
CEO Exie

Historie

- Established in 2019
- Located in Flanders , Belgium

VISION :

- To equip every building with ecological & sustainable insulation material

Core Business :

- Production of 100 % natural and sustainable insulation material based on
 - Hemp and Straw mix

Core Values :

- Zero Carbon / Recycling/ Natural products / Local production/Sustainability/Healthy environment

Ambition :

- Being market leader in the production of CaNaDry & Exie Fiber
- International expansion by licensing our production procedures

EXIE

experts in healthy houses



EXIE

experts in healthy houses

Producers of 100% Natural
insulation material based on :

HENNEP



STRAW - MIX



EXIE , Experts in Healthy Houses

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CaNaDry- License

X_iH₂

A hemp insulation technology available to license
for your business or market today

We offer efficient, **cost-effective** natural **CaNaDry** hemp insulation technology, a sustainable and proven alternative to traditional insulation materials.



Exie **CaNaDry** hemp-based building solutions are user-friendly, healthy and economical, with uncompromising quality for today's environmentally conscious commercial and home building projects.

Simple, clean, healthy, economical, sustainable and efficient.

CaNaDry- License

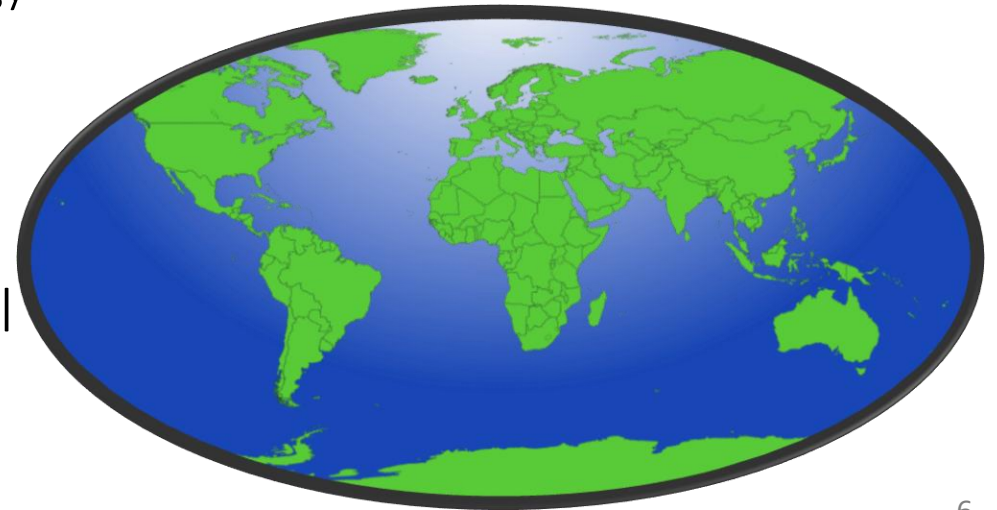
Set-up

Local production of CaNaDry all over the world

- Production under license
 - Local hemp production > no unnecessary transportation
 - Local CaNaDry production > with EXIE technology
 - Local end customer
 - Circular economy

Result :

- Sustainable production of insulation material
- Job creation
- Low CO2 footprint



Hemplime

a key ingredient
in **CaNaDry**

EXIE

experts in healthy houses

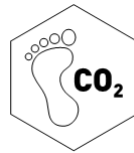
Advantages of Hemplime

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Ecological

Hemplime consists of renewable raw materials and qualifies as a low-energy and sustainable construction material. The shives are in most cases, residual waste of other production purposes. It is recyclable and does not leave any harmful substances at the end of life cycle.



Carbon Negative

Hemp excels at the absorption of CO₂ : the plant absorbs more CO₂ than it emits during its cultivation and the production process. Moreover, thanks to the continuing carbonation process the hemp-lime keeps absorbing CO₂ after its processing and installation.



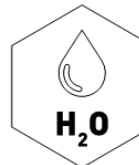
Efficient

Hemplime is an excellent thermal insulator. Contrary to the more traditional insulating materials, hemp-lime ensures continual temperature and moisture regulation and has higher heat storage capacities. It takes four times longer for heat to penetrate the hemp-lime material.



Acoustic insulation

Hemplime provides excellent acoustic insulation as vibrations and sound waves are absorbed.



Moisture Regulation

Hemplime functions as a moisture regulator. In case of high interior moisture levels, the hemp-lime will absorb the excess moisture and release them once the moisture levels are low. No condensation problems and a comfortable interior climate are guaranteed.



Healthy

Hemplime contains no chemicals against fire or vermin as Hemp is naturally fire and vermin resistant. It has no emission of harmful chemicals so that a healthy interior climate can be guaranteed. We create active breathing houses without any plastics in it.

What is the CaNaDry mix?



HEMP

Industrial Hemp Hurd and Fiber are used for the production of the hemp-lime.



HYDRATED
LIME

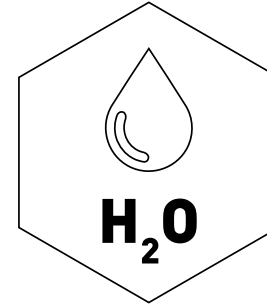
Hydrated Lime makes the hemp harden and turn into a solid block by absorbing the carbon dioxide (CO₂) from its environment.



ADDITIVE

Exie key additives consist solely of natural minerals and do not contain any preservatives or cement.

The additives increase the **CaNaDry**'s adhesive strength and accelerates its hardening process. Used in the correct combination and proportion, the additive renders the hydrated lime hydraulic without affecting its unique properties. The lime maintains its thin structure and thus its moisture-regulating capabilities.



WATER



CaNaDry

The carbonation process begins at the start of the hemplime production and continues for years. All the while, the lime absorbs the CO₂ from its environment, purifying the outdoor air as well. As a result, the material has an excellent CO₂ balance.

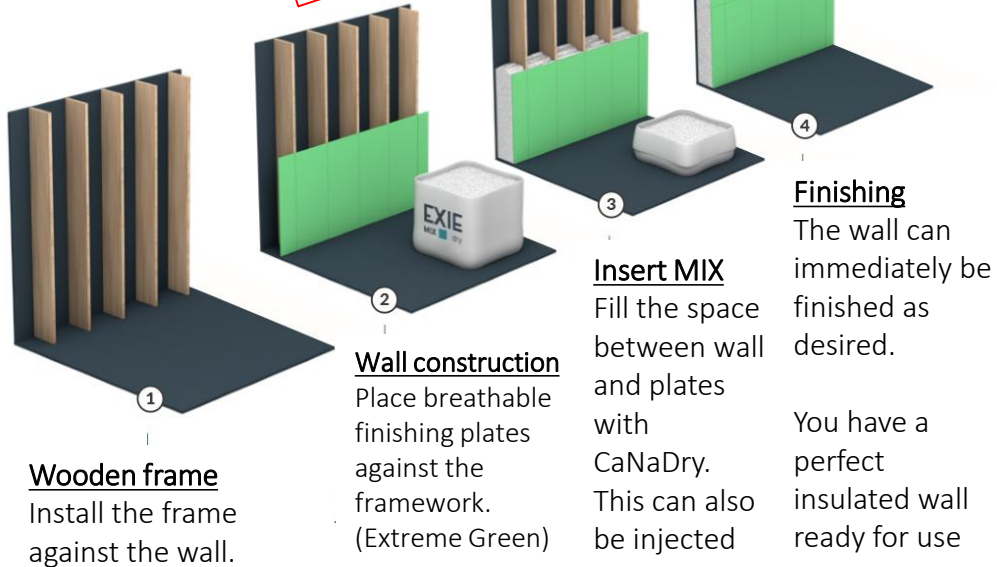
Exie Insulation – The CaNaDry mix and system

Ideal for renovation and new construction

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EXIE
MIX ■ CaNaDry

PATENTED



Lambda-Value (thermal resistance): 0,054 W/m²K

Available in:

- Bulk
- Big Bags
- 120-80L bags













Comparison CaNaDry vs. Wet Hemp lime

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MIX ■ CaNaDry

**Traditional
Wet Hemp Lime**

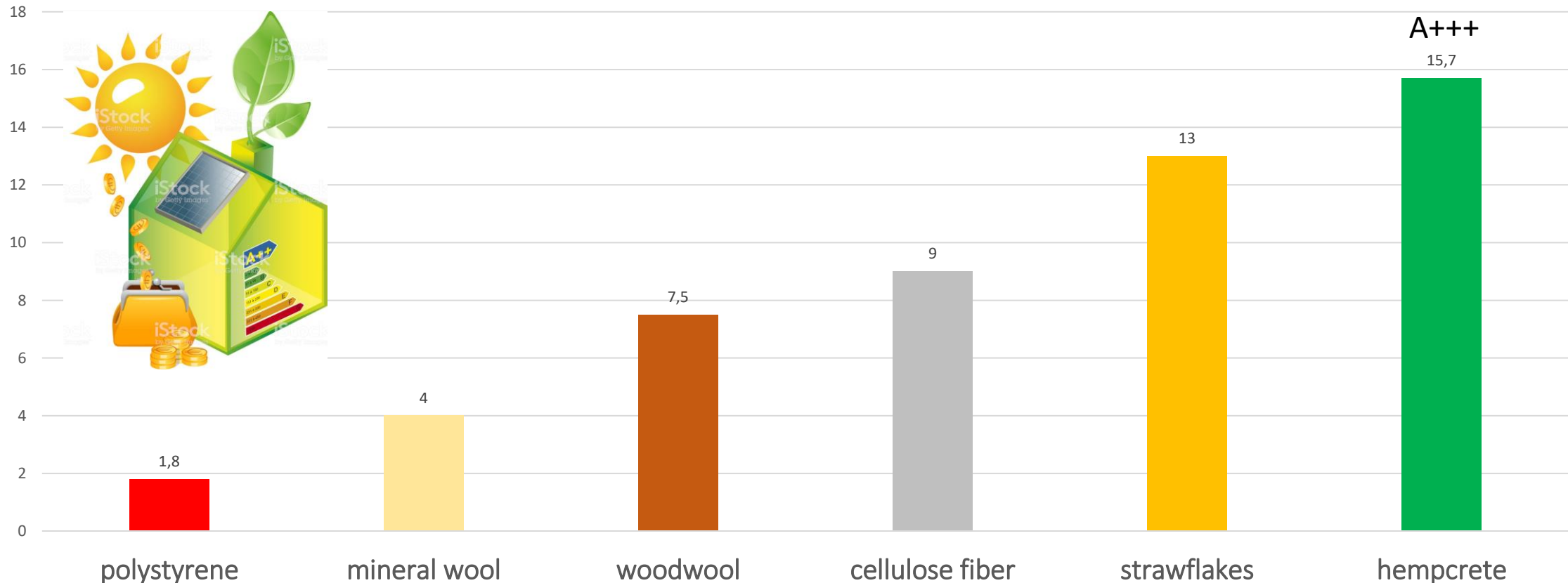
Lime / M ³		60 kg	120 kg
Water/ M ³		100L	140L
Weight/ M ³		150 kg	450 kg
Construction time / M ²		30 min	2h
Construction method		Manual and injected	Manual
Drying time / M ²		1h in factory	3 months on site
Shrinkage & molt risk		No	Yes
Production		Continuous	On demand
Storage		6 months	2 days
Production cost & capex		Prod. Cost -25% & less machinery needed	High

Hours of fasheshift — How many hours does it take before the heat/Sun is through a wall or roof ?

$X_i H_2$

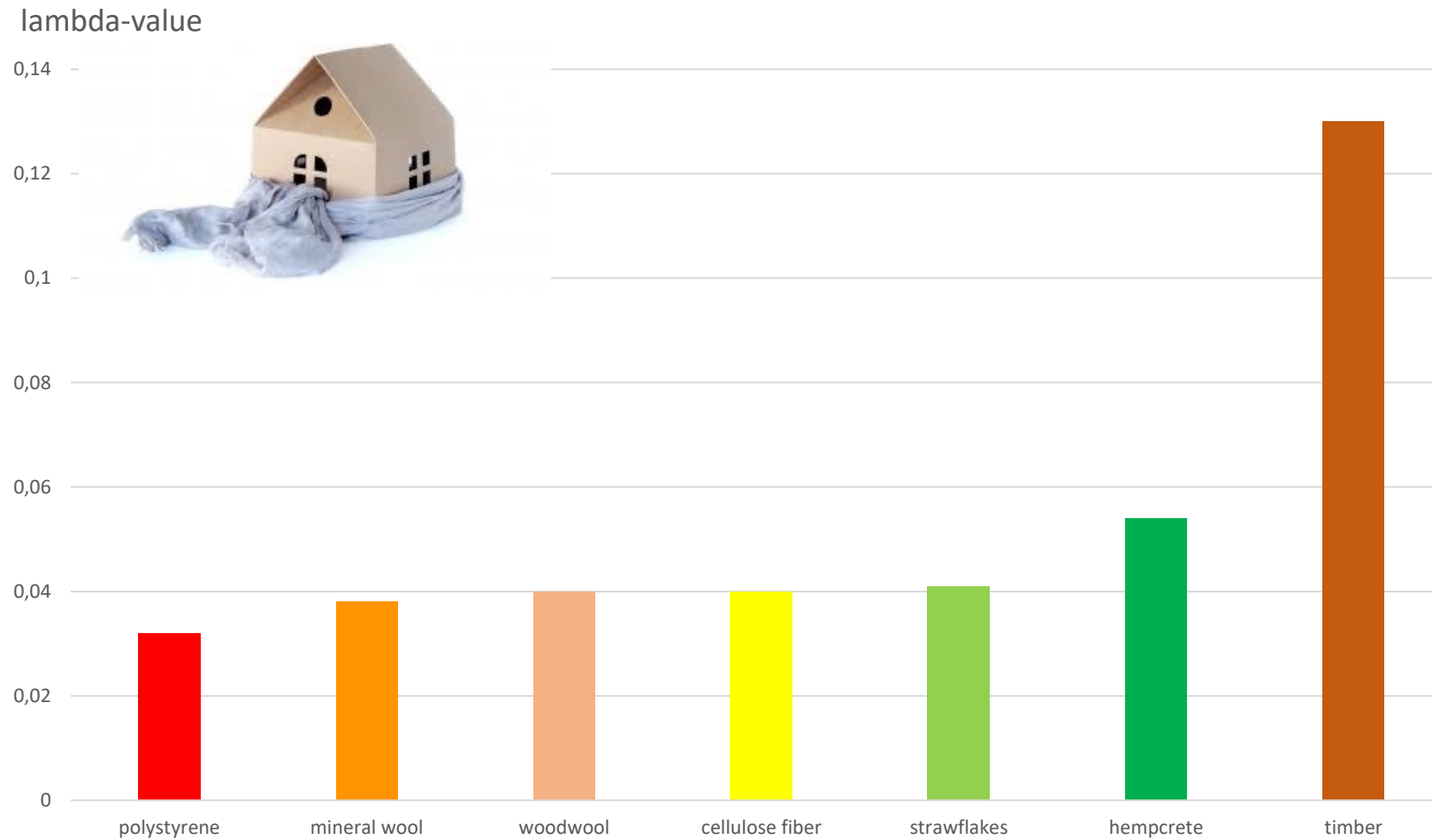
- By a thickness of 24 cm

Hours



Lambda-Value W/mK

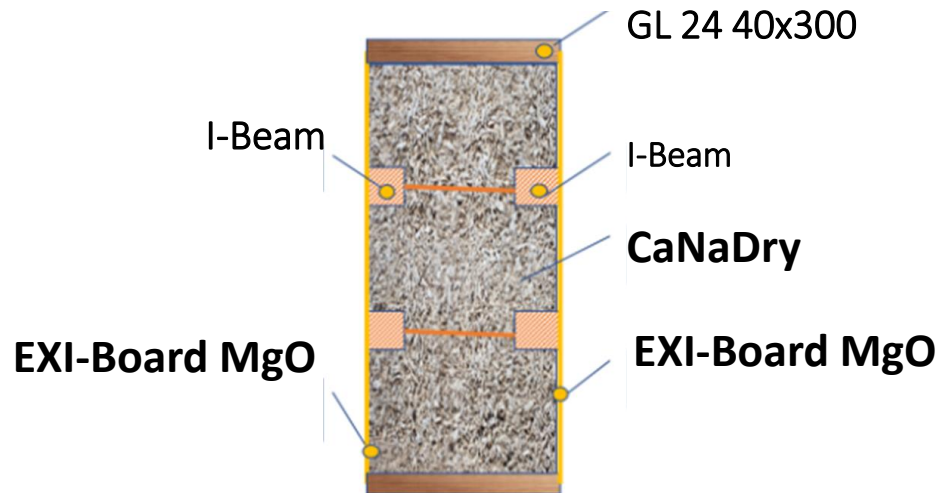
$X_i H_2$



Building with Exie CaNaDry

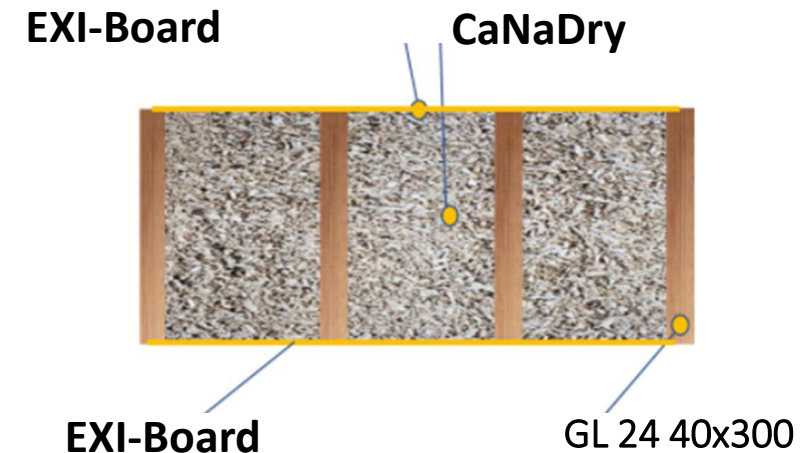
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WALLS



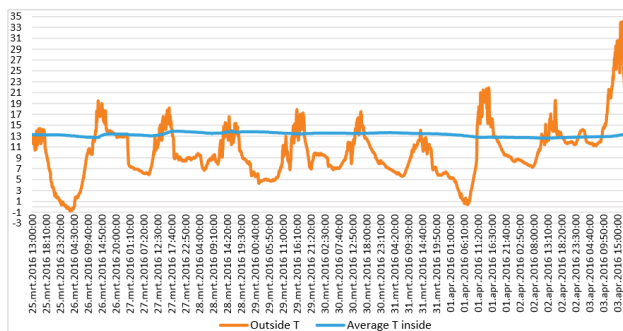
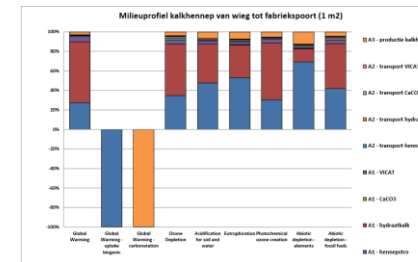
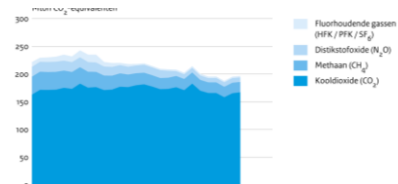
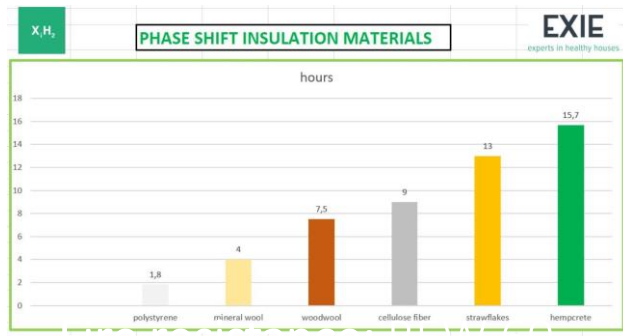
U-Value (thermal resistance): 0,19 W/m²K

ROOF



U-Value (thermal resistance): 0,19 W/m²K

With CaNaDry, our partners deliver solid prefabricated hemp lime walls that can be installed on any building site in just a few days. Using these walls, you quickly and efficiently construct a waterproof and windproof building which is also a 100% ecological.



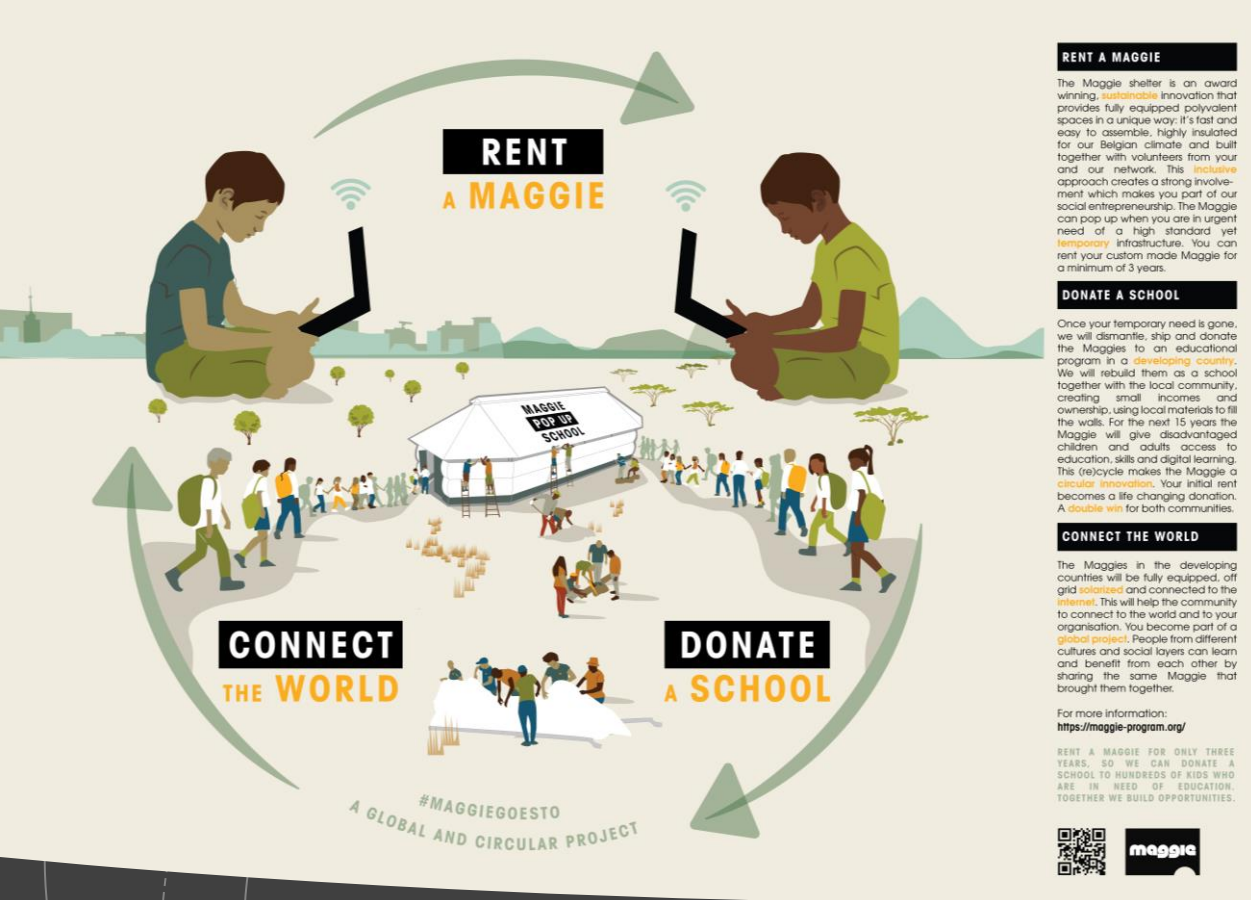
Certifications matter

Heatbuffering : Relationship between internal & external climate





Some Recent Impressions ...



- Maggie Shelters :
- Circulair , Modulair,



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Thank you for your attention

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