

How roofs can contribute to water circularity in cities in different climate zones

by Friso Klapwijk & Marc-Georg Pater



12 k
Employees



66
Production sites
in 38 countries

80+
Countries served
across 4 continents

Advance life around the world



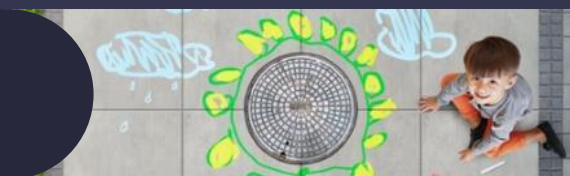
Safe and efficient water supply

Because today about **30%** of all water pumped through pipe systems is lost due to leakages.



Better sanitation and hygiene

Because approximately **50%** of the people in the developing world live without improved sanitation



Better building performance

Because around **40%** of all the energy is consumed in buildings



Climate resilient cities

Because we are experiencing **30%** heavier rainfall due to climate change, and in parallel have long dry periods with too little water and heat stress







**Flood
Prevention**



**Reduce Heat
Stress**



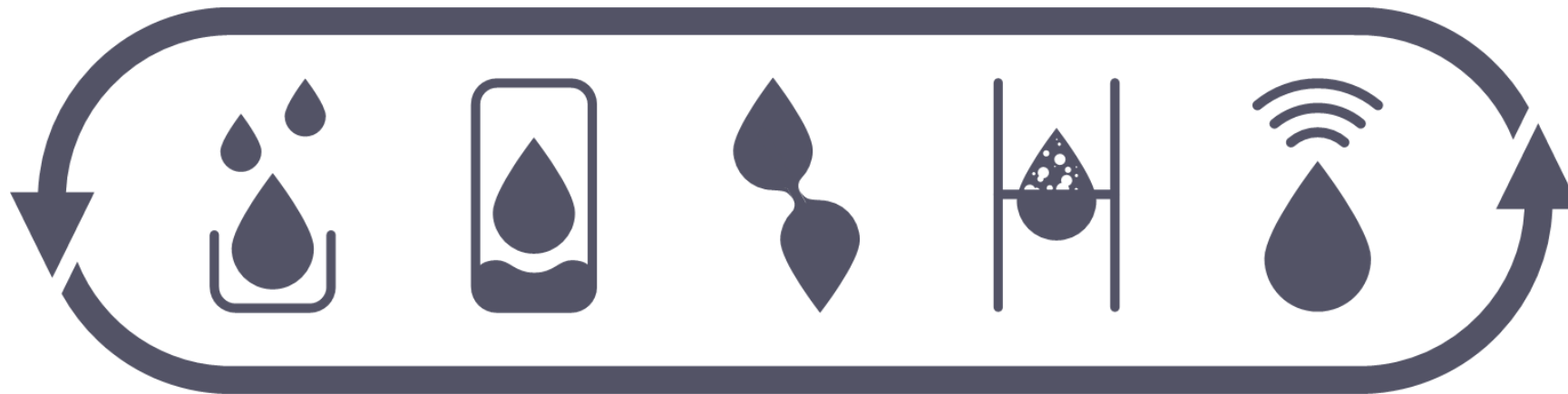
**Reduce
Dehydration**



Water Reuse



**Increase
Biodiversity**



CATCH

COLLECT

CONNECT

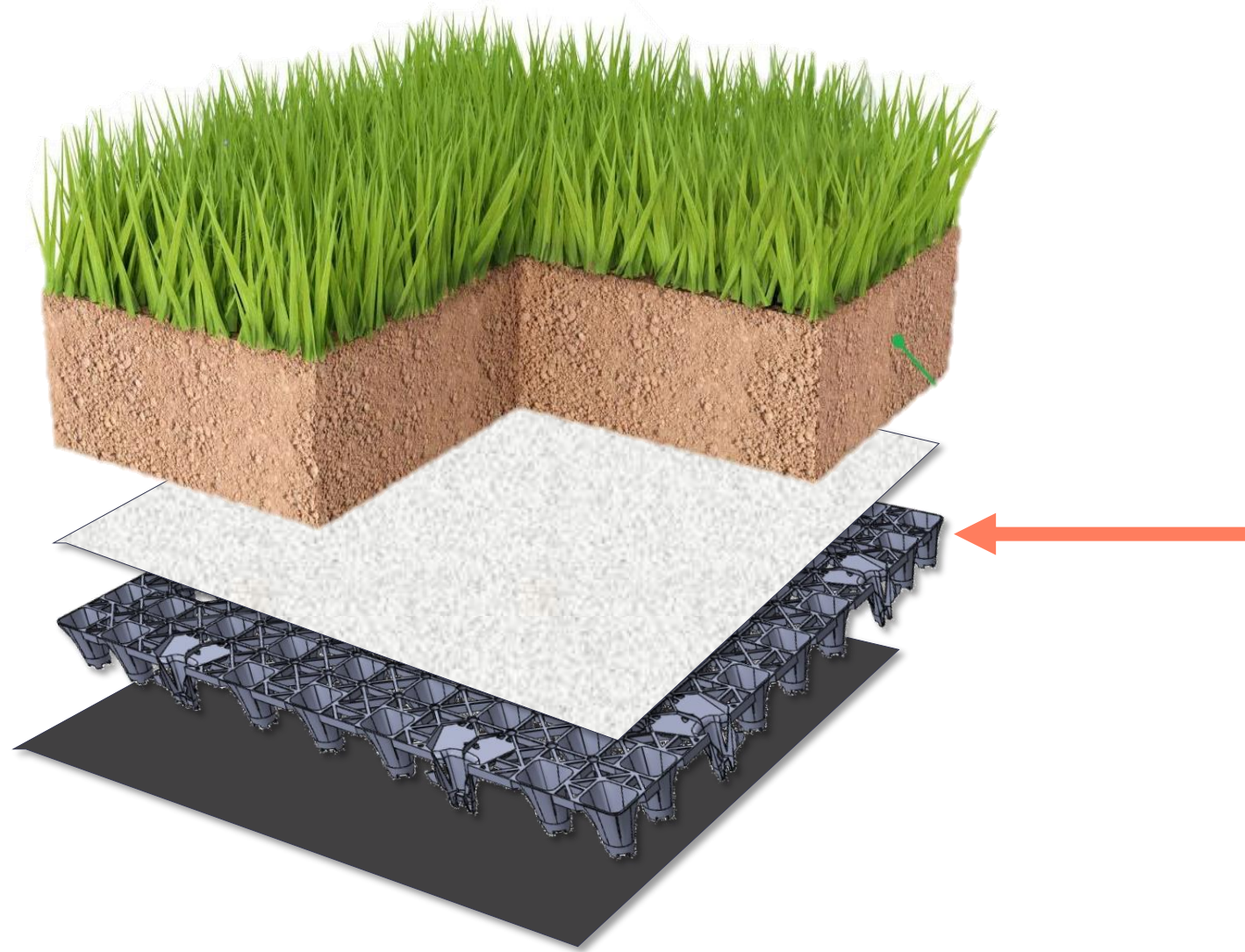
CLEAN

CONTROL

Smart Monitoring & Control

It's all nothing without data.

Green → **Blue Green** → **Smart Blue Green**



Green → **Blue Green** → **Smart Blue Green**



Water Retention



Controlled Outlet



Live Data



Control

Introducing the

Greener. Bluer. PolderRoof.

Take your green roof to the next level
with the power of smart
blue-green roof solutions.













Smart monitoring



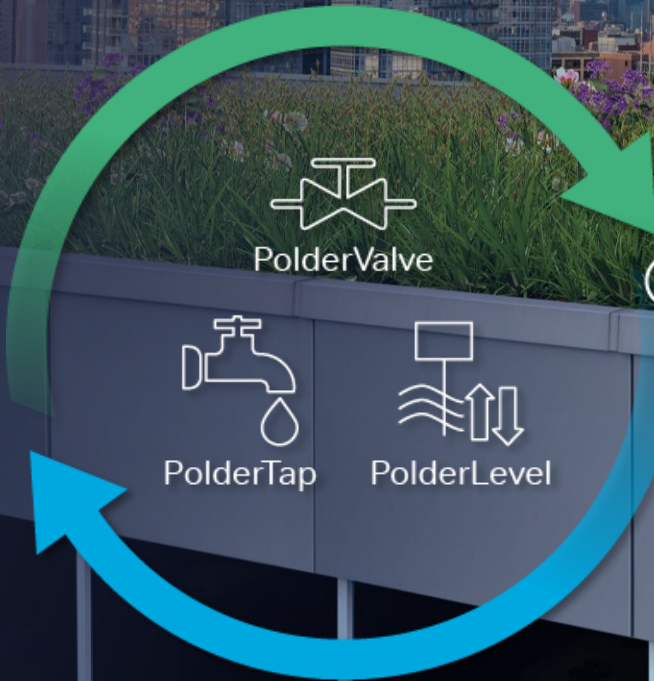
PolderValve



PolderTap



PolderLevel



Retention. Control. Data.

The PolderRoof





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Hydrological benefits.



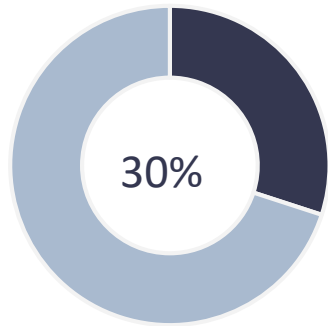
Thermal
benefits.



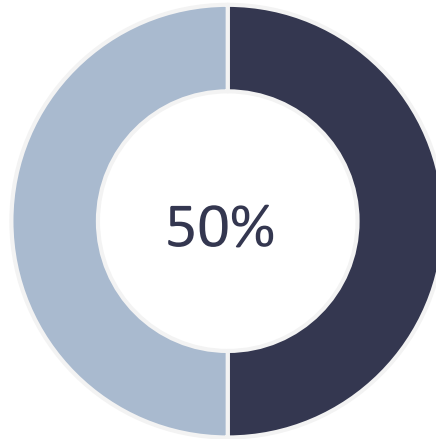
Environmental
benefits.

Hydrological Benefits

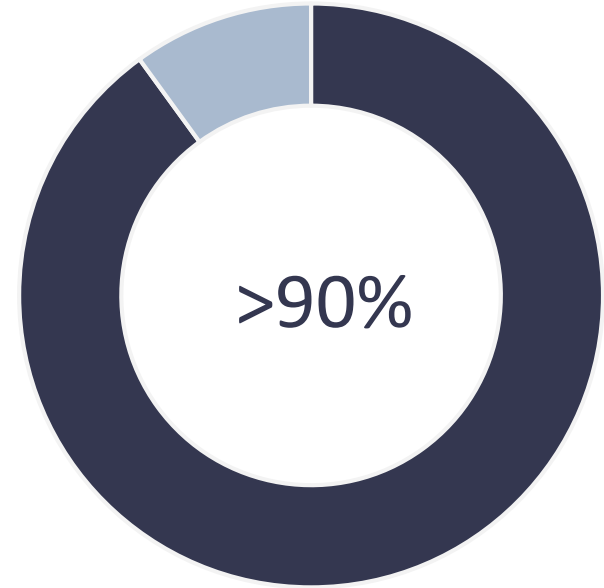
Retention rate: best in class!



green roof



blue-green roof



PolderRoof

The number of days with dry-out events is strongly reduced when adding precipitation storage.

Circel et al, 2018

 vestolit

alphagary

 wavin

 NETAFIM™

 dura·line

koura

 orbia
Advancing life together

Potential evapotranspiration on a hot summer day:

Traditional Greenroof

30%



Wavin PolderRoof

70%





Hydrological benefits.



Thermal benefits.



Environmental benefits.

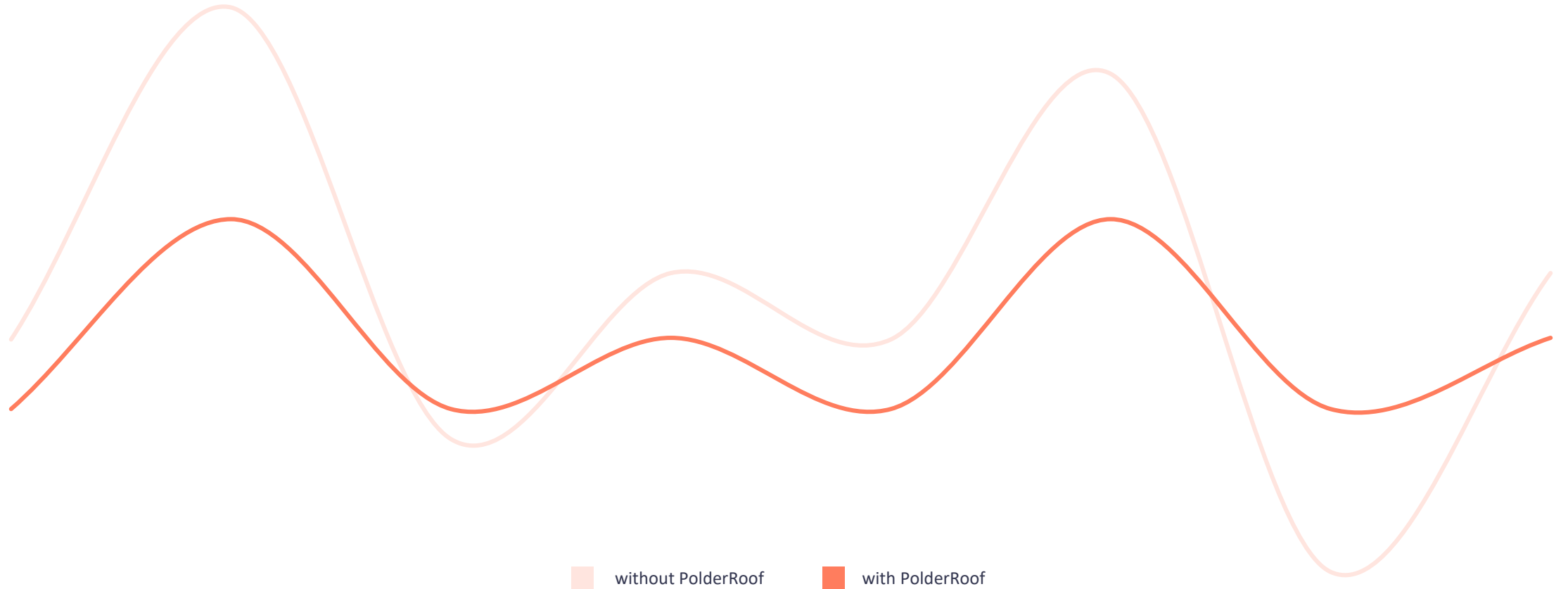
Thermal Benefits:

- A** Being on the roof.
- B** For the roofing material.
- C** Being indoors.



Thermal Benefits

Flattening the temperature extremes



Quelle: Cristiano, 2022 / Vulperhorst, 2021

Wavin PolderRoof in summer time

Compared to a black roof, the temperature difference is up to

-6°

being on
the roof,

-17°

for the roofing material,

-2.5°

being
indoors.



Hydrological benefits.



Thermal benefits.



Environmental benefits.



V vestolit

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wavin

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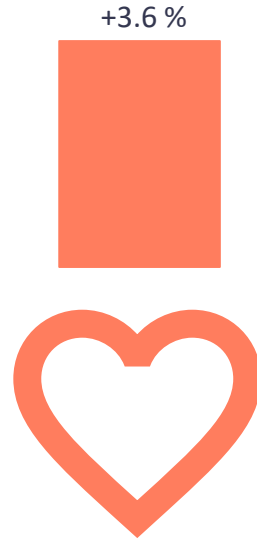
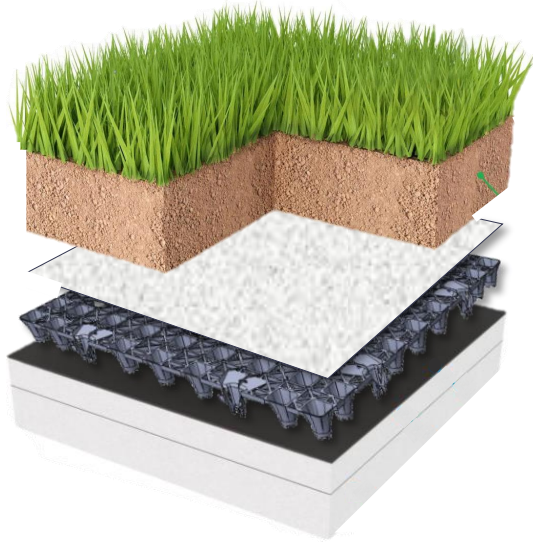
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Environmental Benefits.

Is it an either-or question?









Let's build climate resilient cities. Together.

What are we waiting for?

wavin

Q&A

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