PUFR·N

Euroopa Liit
Euroopa
Regionaalarengu Ford

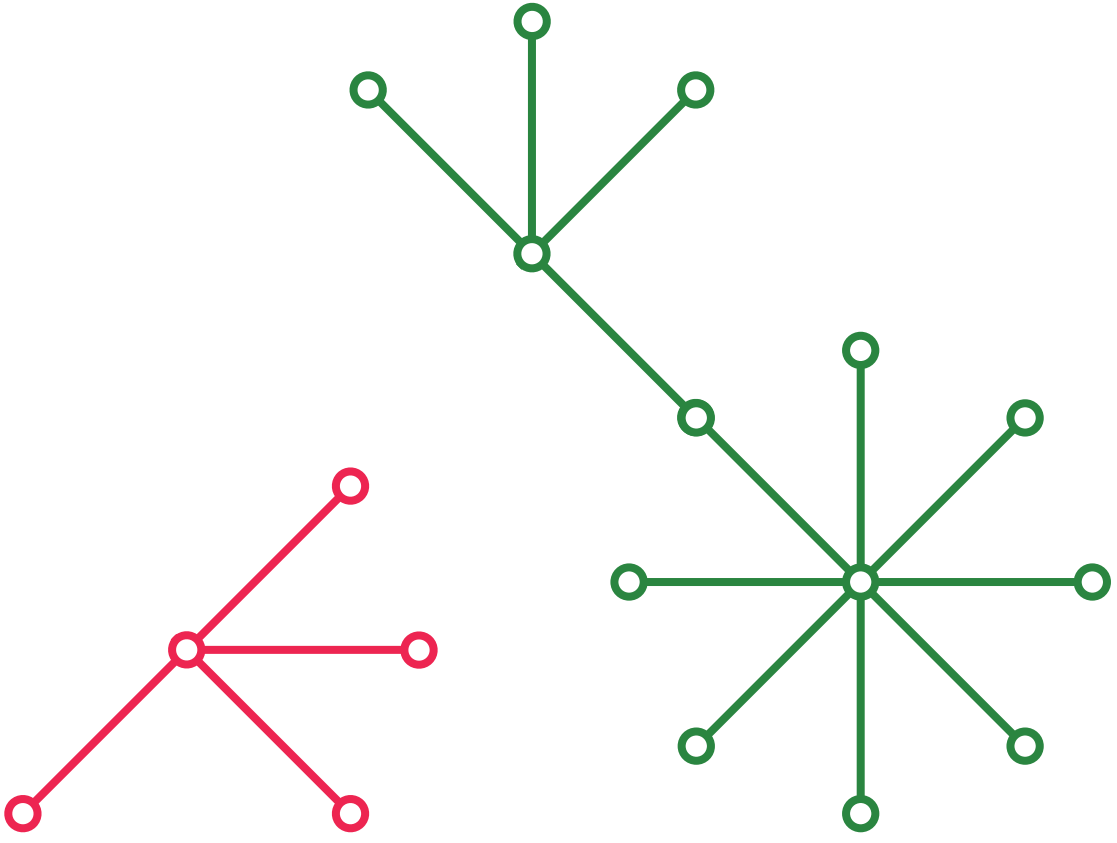
Eesti tuleviku heaks

1. Steigereiland 1.0

2. Status quo

3. Upfrnt

4. Steigereiland 2.0



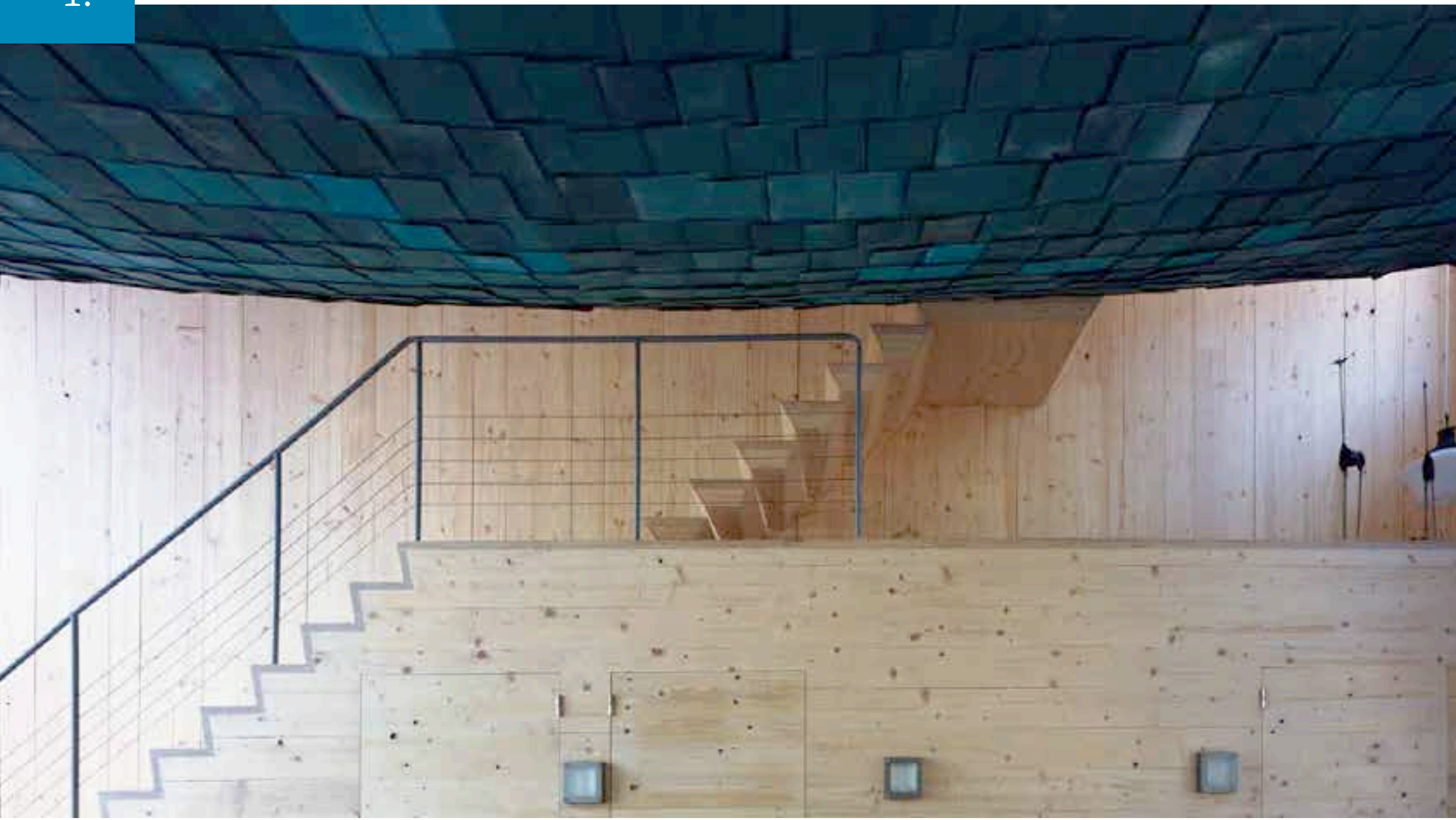
5. The next generation

1. Steigereiland 1.0

1.

1.

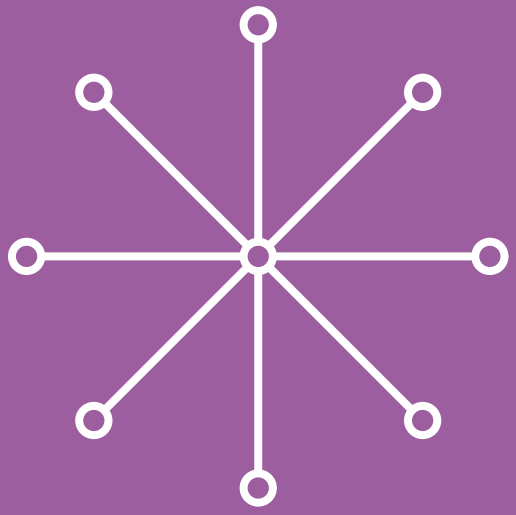
1.



1.

Architecture = builded environment

2. . Status quo



use of our earth

2.

1 ha. 1 ha.

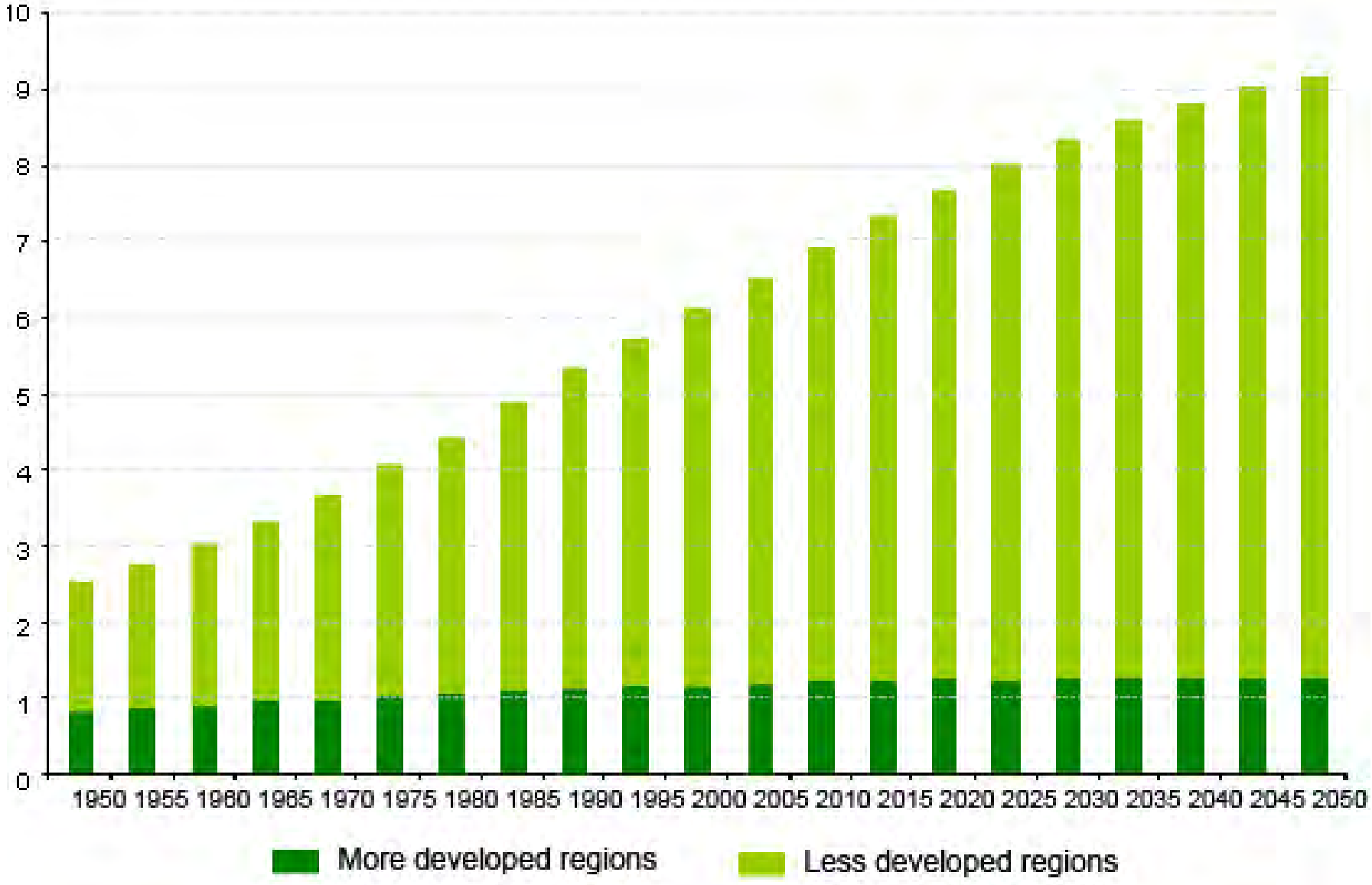
available: 11,9 biljoen gha

neccesary :18 biljoen gha

2.

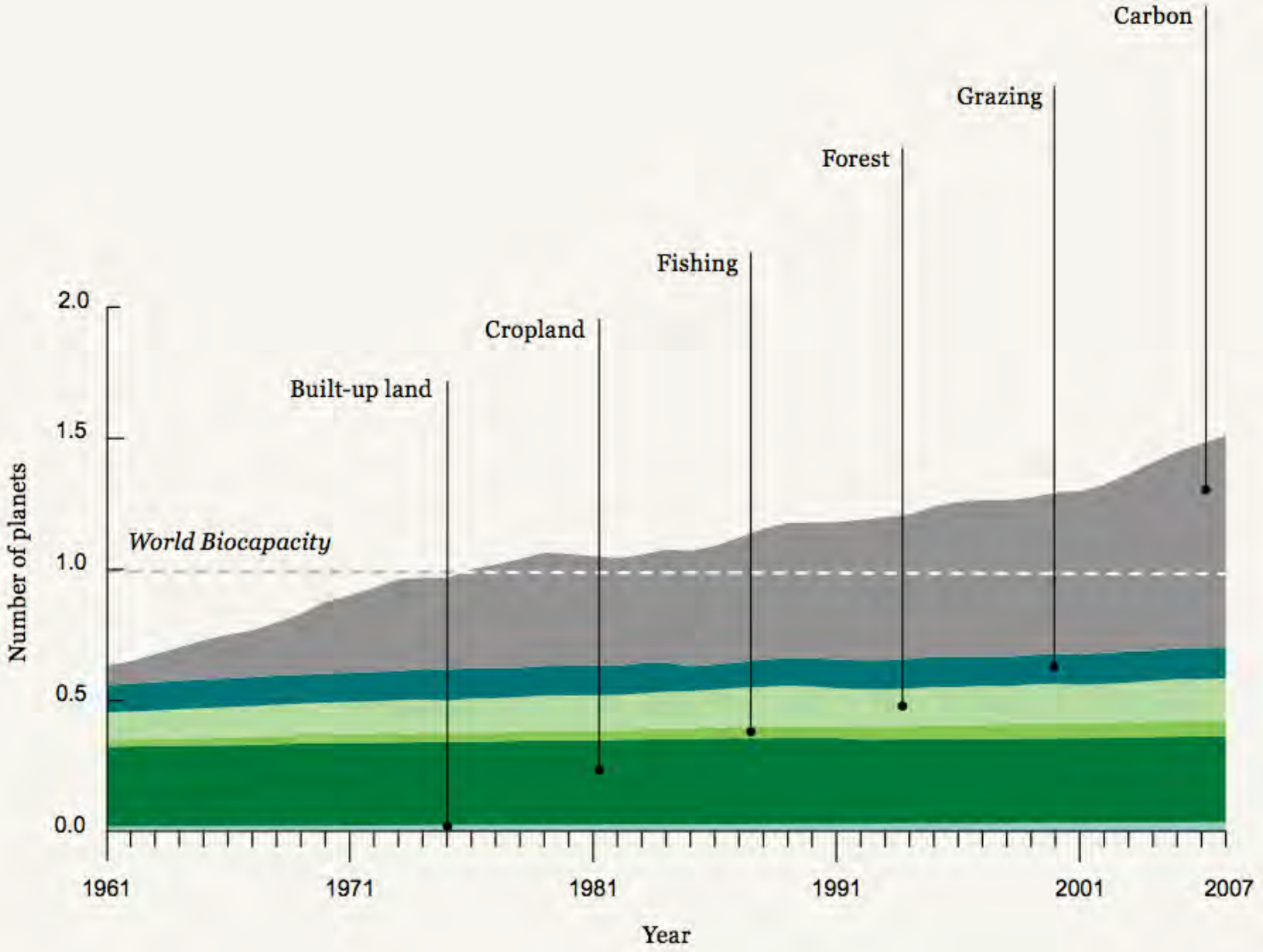
world population

2.



Growth Ecofootprint

2.



Growth Economy

2.

1 ha. 1 ha. 1 ha. 1 ha. 1 ha. 1 ha.

2.

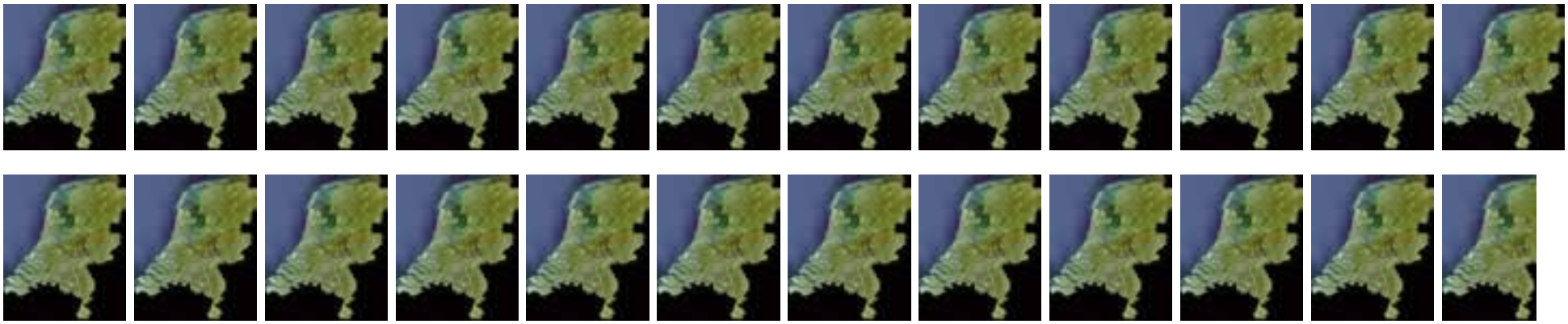
6 gha. / inhabitant NL

NL 4.152 .800 ha.

16,4 mill inhabitants (2007)

98.400.000 gha. neccesary

23,7 x NL

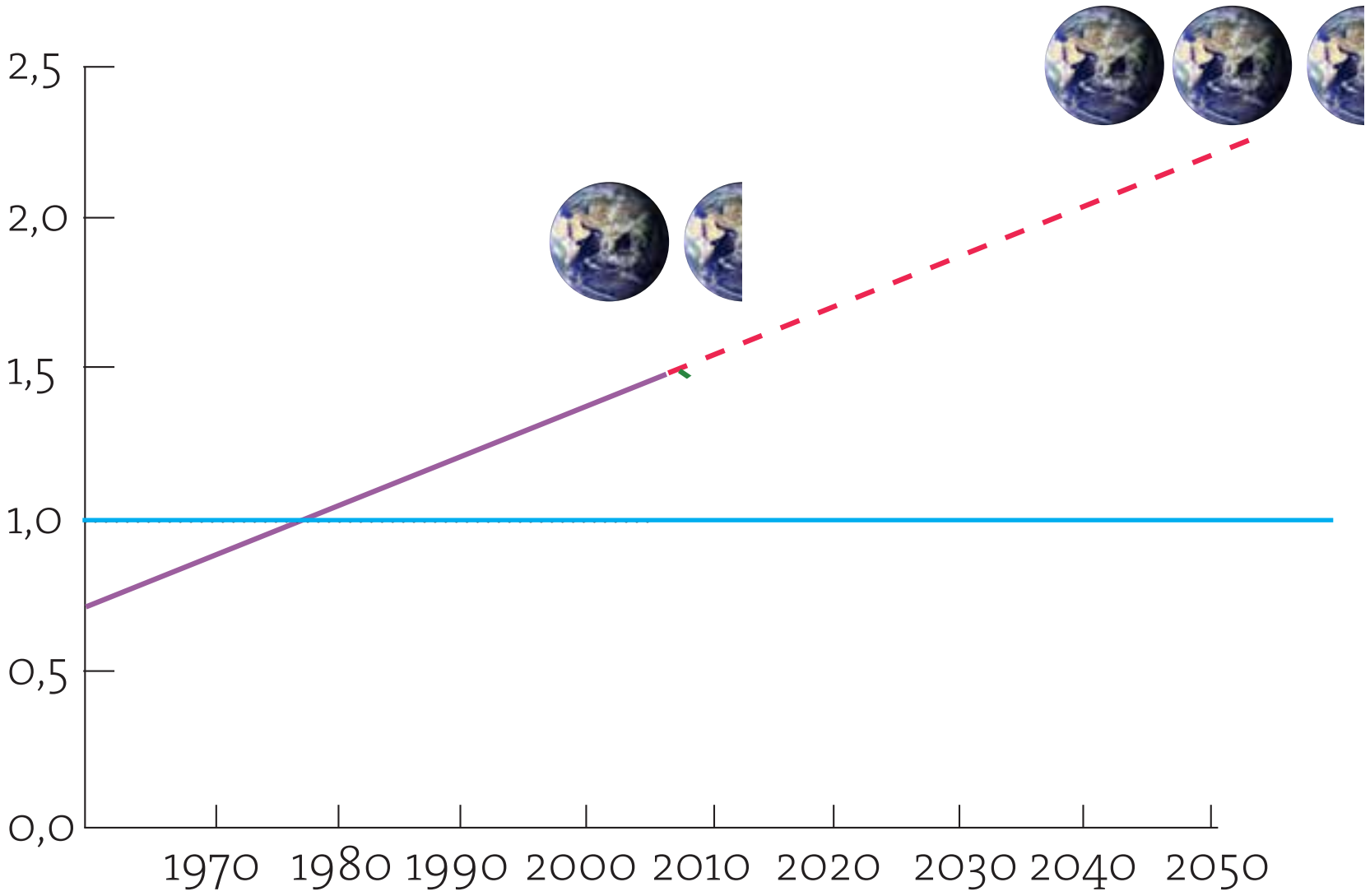


1 ha. 1 ha. 1 ha. 1 ha. 1 ha. 1 ha.

2.

global eco footprint

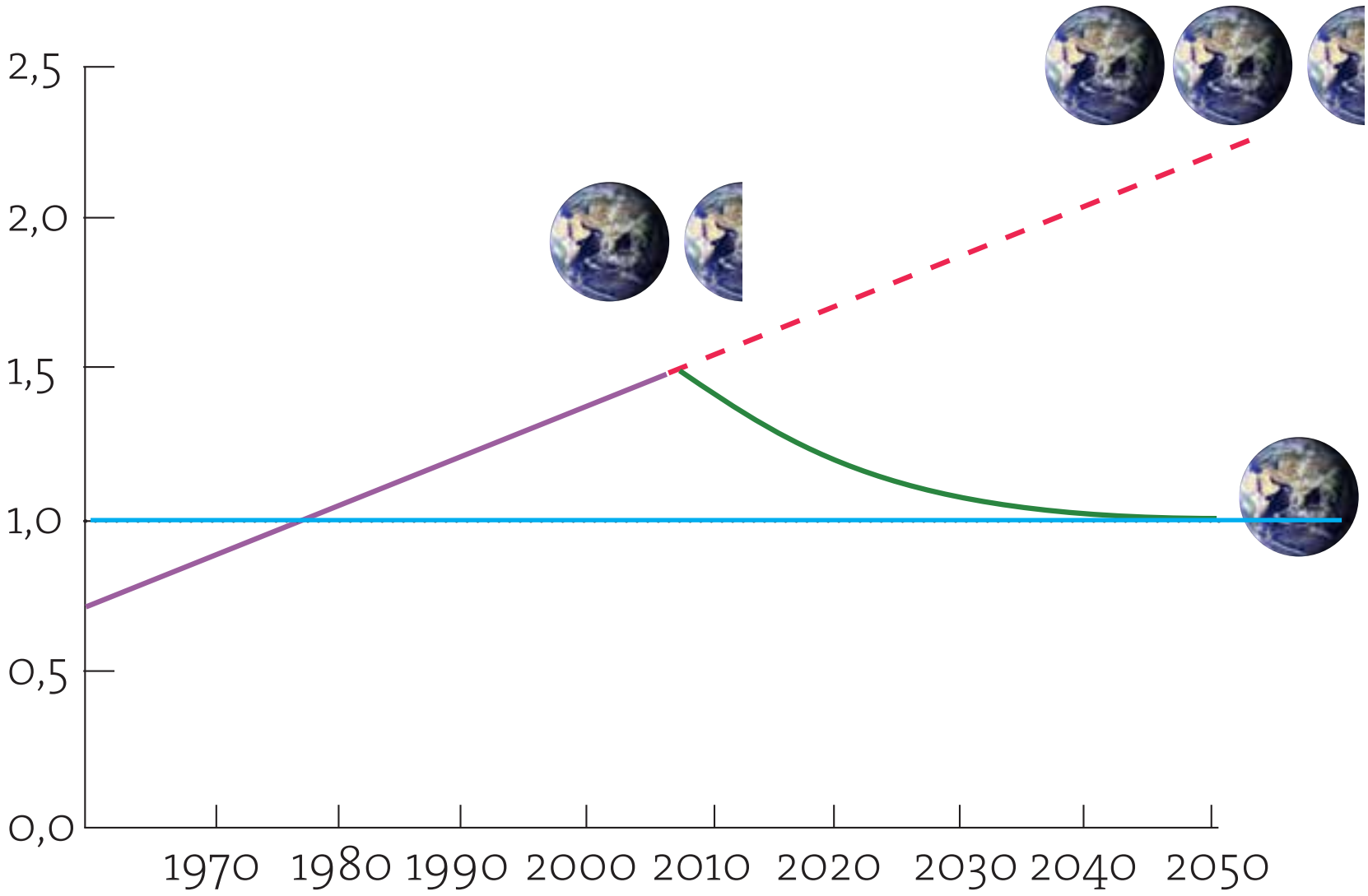
2.



www.footprintnetwork.org

global eco footprint

2.



www.footprintnetwork.org

economy, ecology & morality

compete

2.

less terrible

less bad

improve within field of problem

economy, ecology & morality

compete

2.

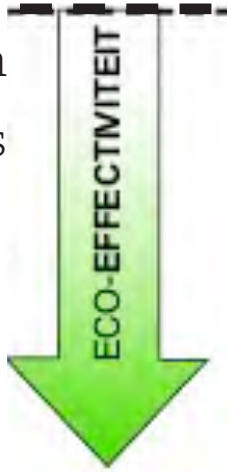
less terrible

less bad

improve within field of problem

solve ouside field of problem

inter-generative solutions



economy, ecology & morality

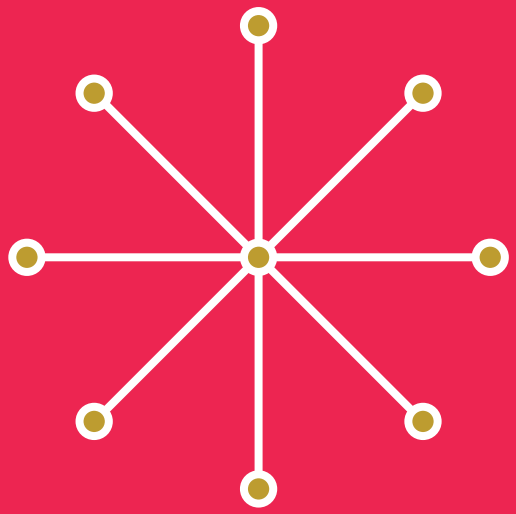
strenghten each other

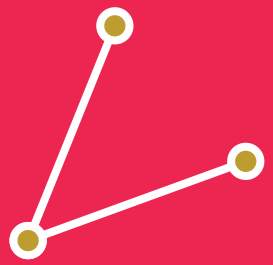
2.

impuls response

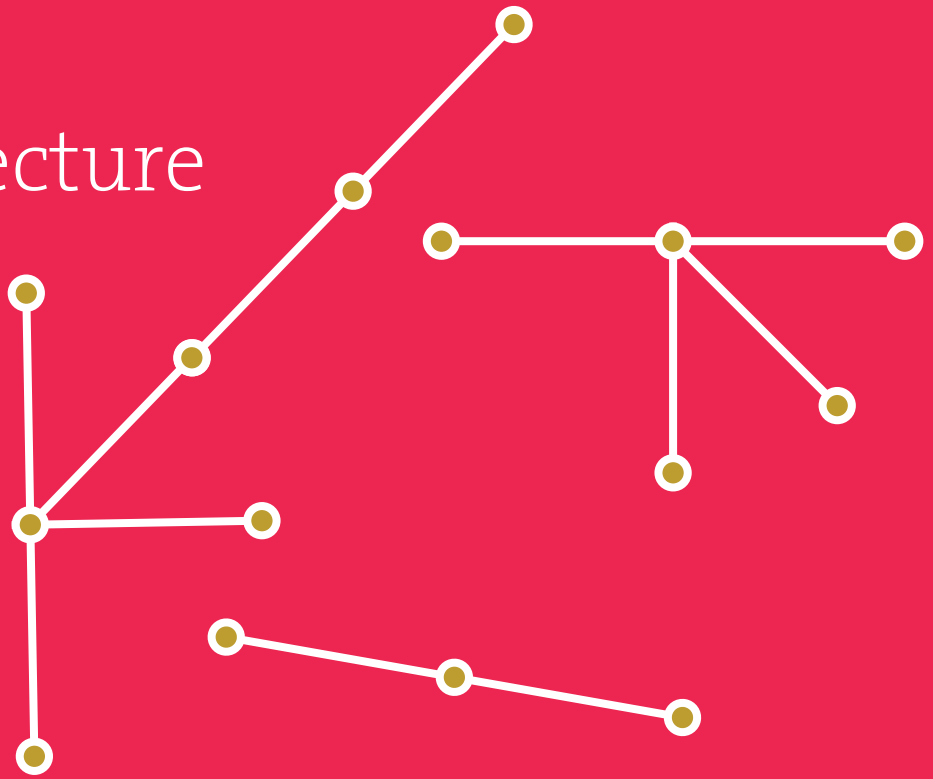
2.

impuls choice response

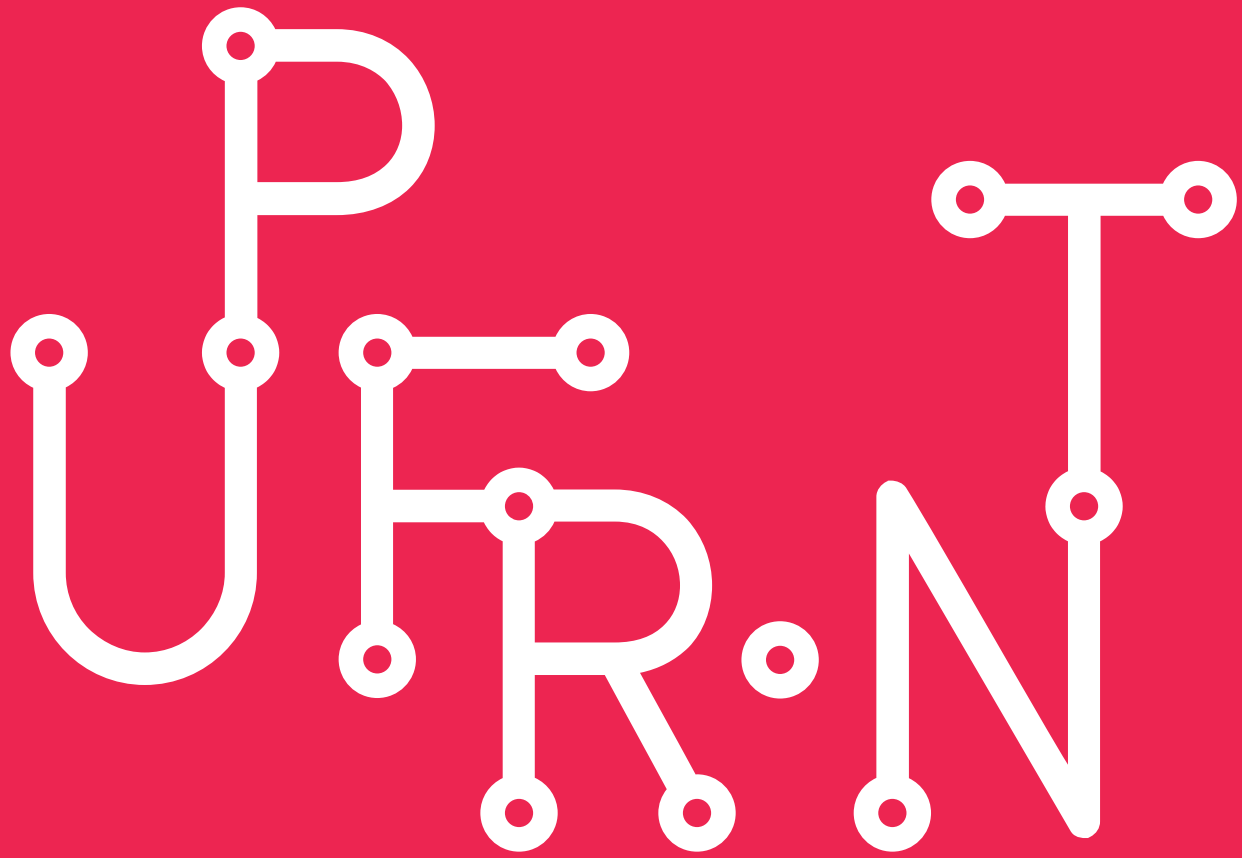




3· The up-movement in architecture

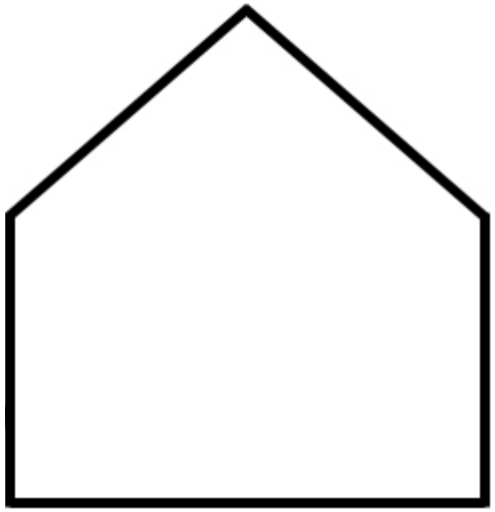


3.



needs and waste

3.



energy → heat
cold
electricity
gas

light → (day)light

air → fresh air

drink water → drinkwater

rain water → flushwater

food →

heat
cold

heat

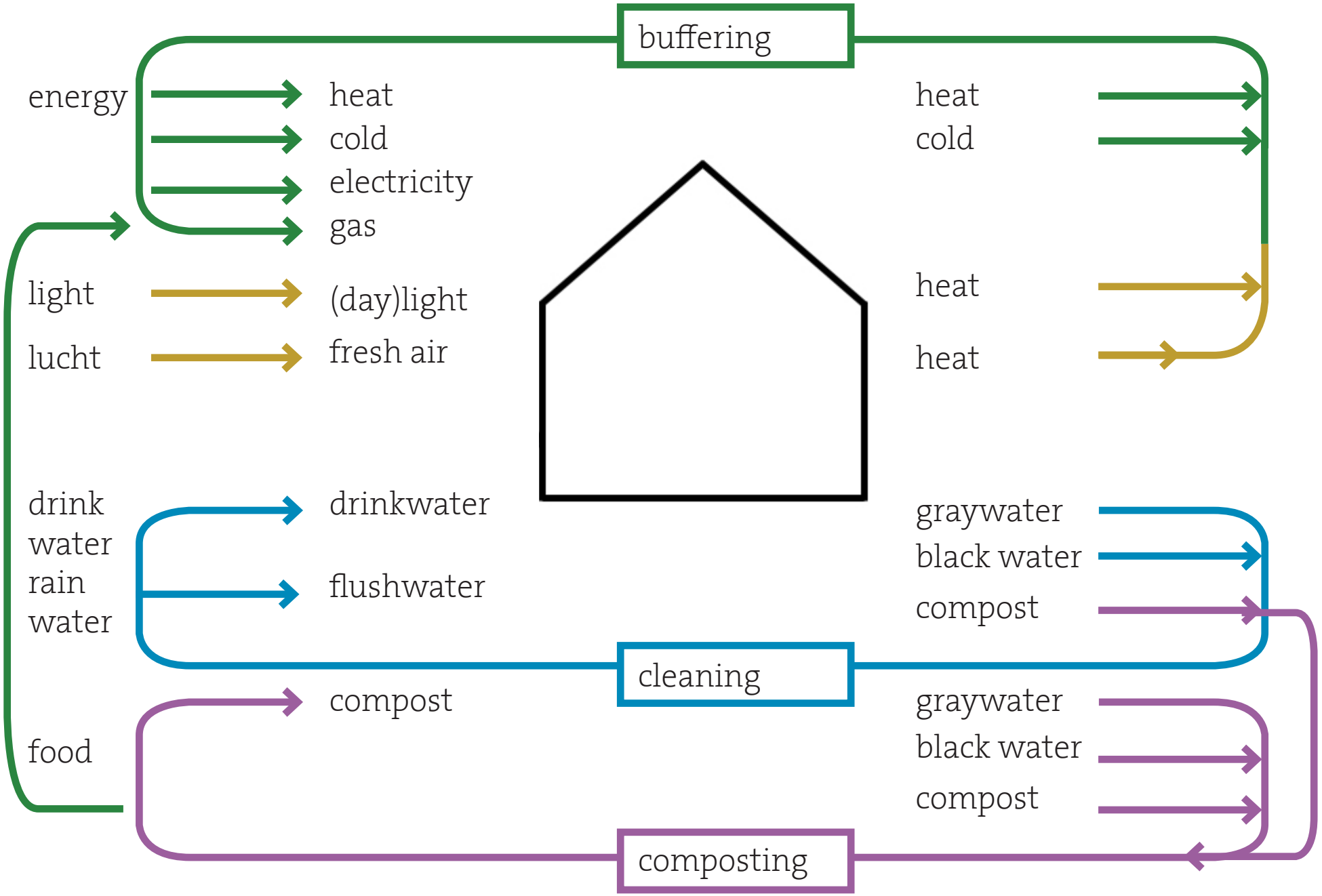
heat

graywater
black water
compost

graywater
black water
compost

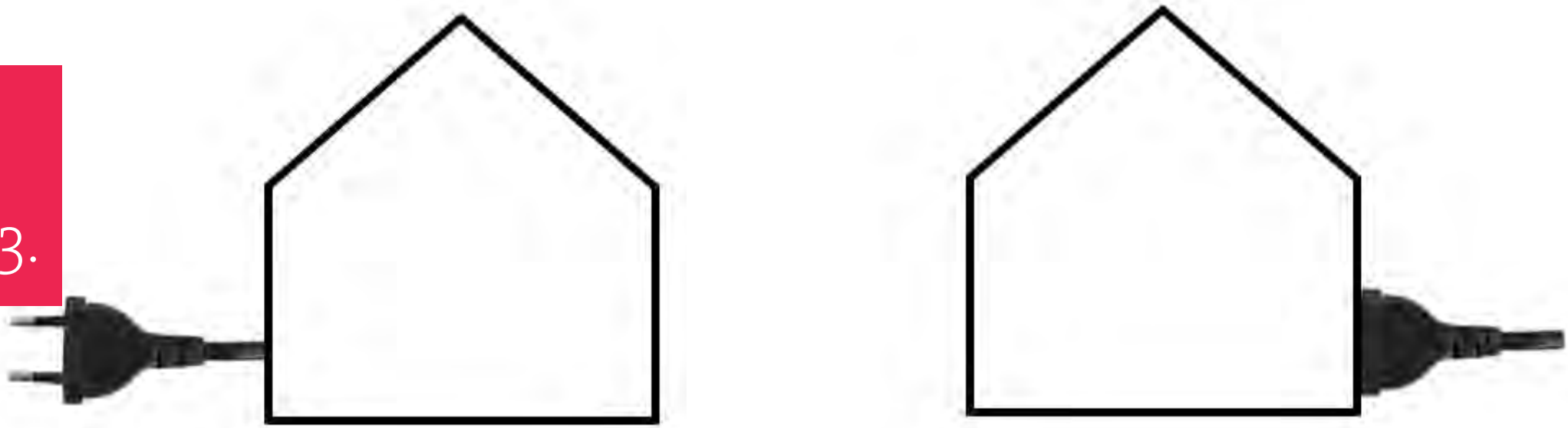
closing circles

3.



Ambition energy delivery

3.



business as usual

investment + energy

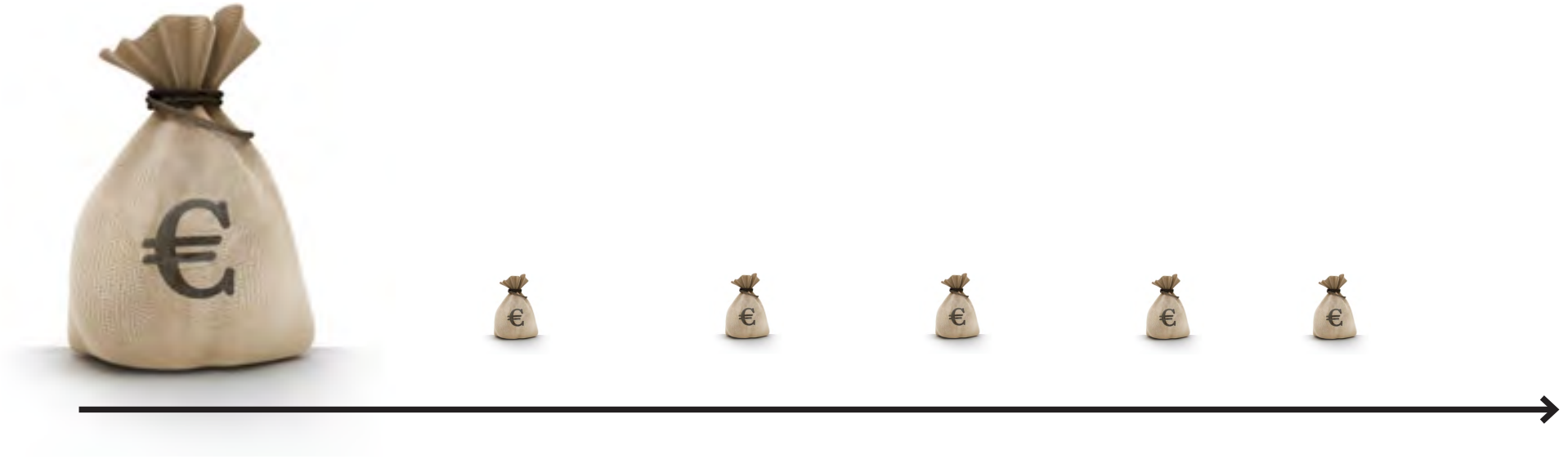
today

20jr.

3.

passive

investment + energy



today

20jr.

3.

investment

+ shadowcosts

today

20jr.

3.

investment

+ shadowcosts

today

20jr.

3.

4. Steigereiland 2.0

cradle 2 cradle

passive

energy neutral

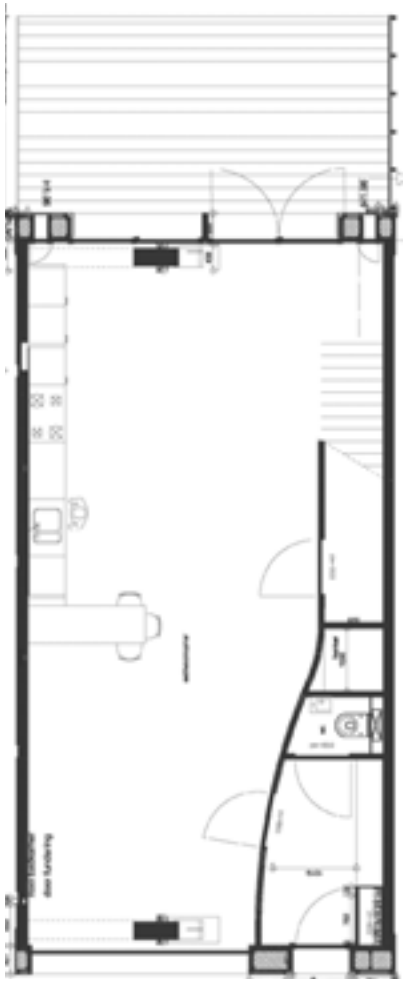
spacial:

- proportion (1m longer)
- different floors
- different views

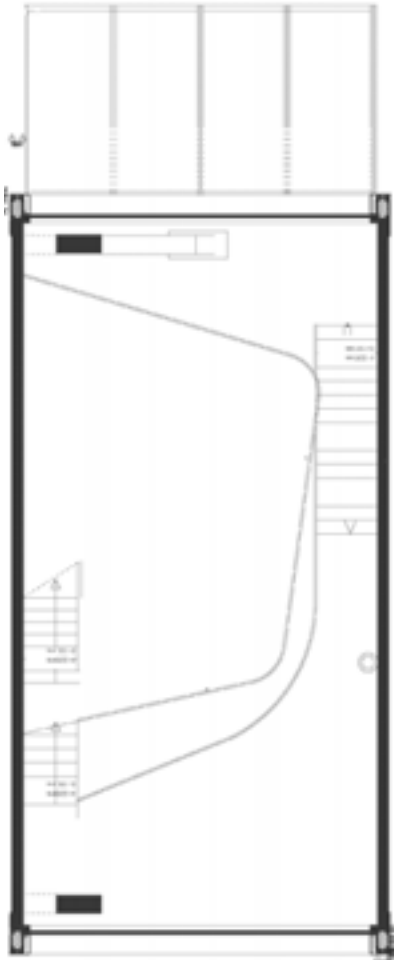
technical:

- better insulation
- reusable materials / flexibel
- passive cooling (ventilation / pcm)
- efficient ventilation / heating
- sustainable tapwater heating
- energy use compensation

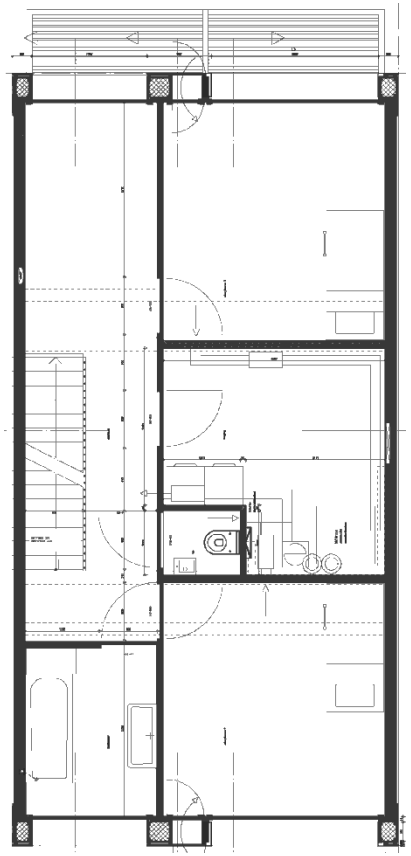
4.



ground floor



1st floor



2nd floor

3rd floor

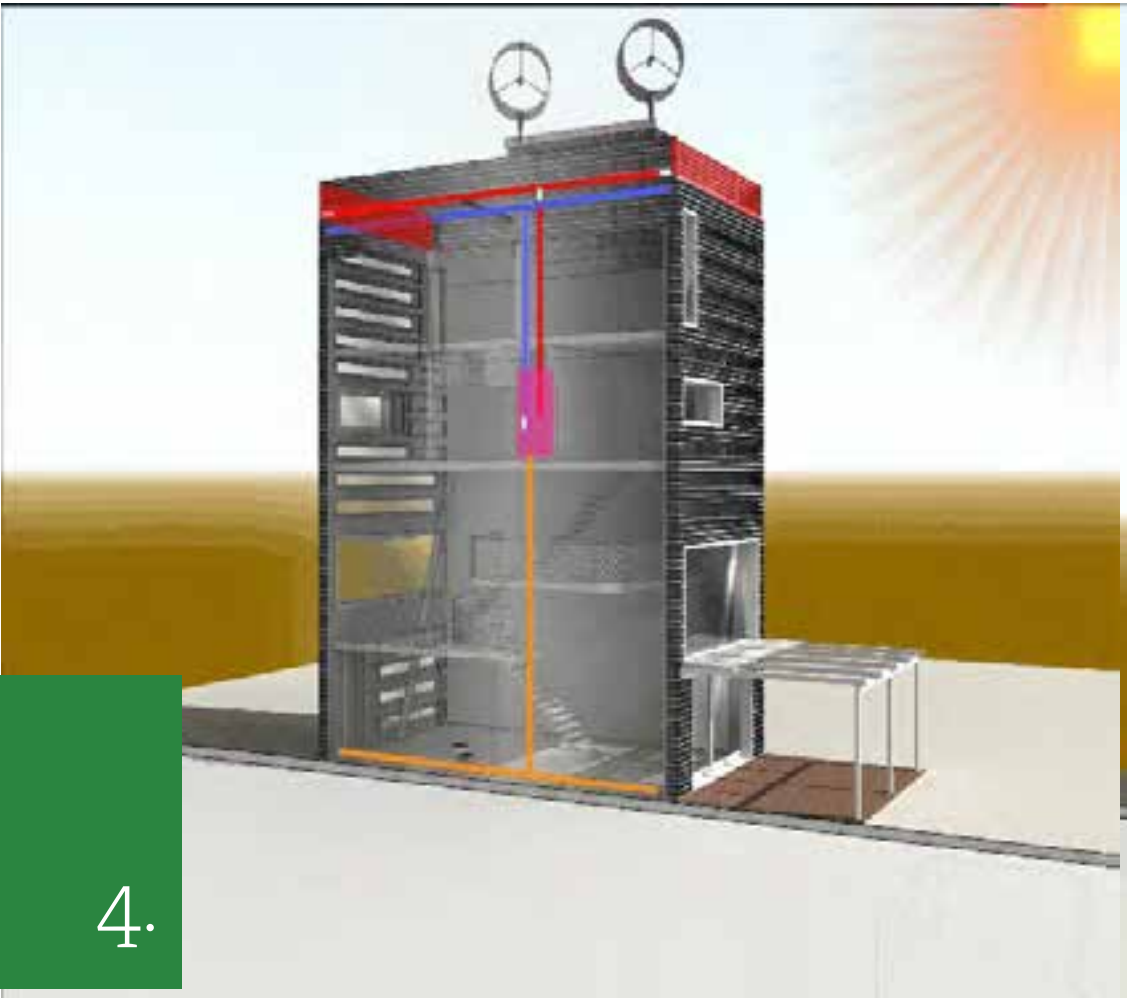
4.

4.

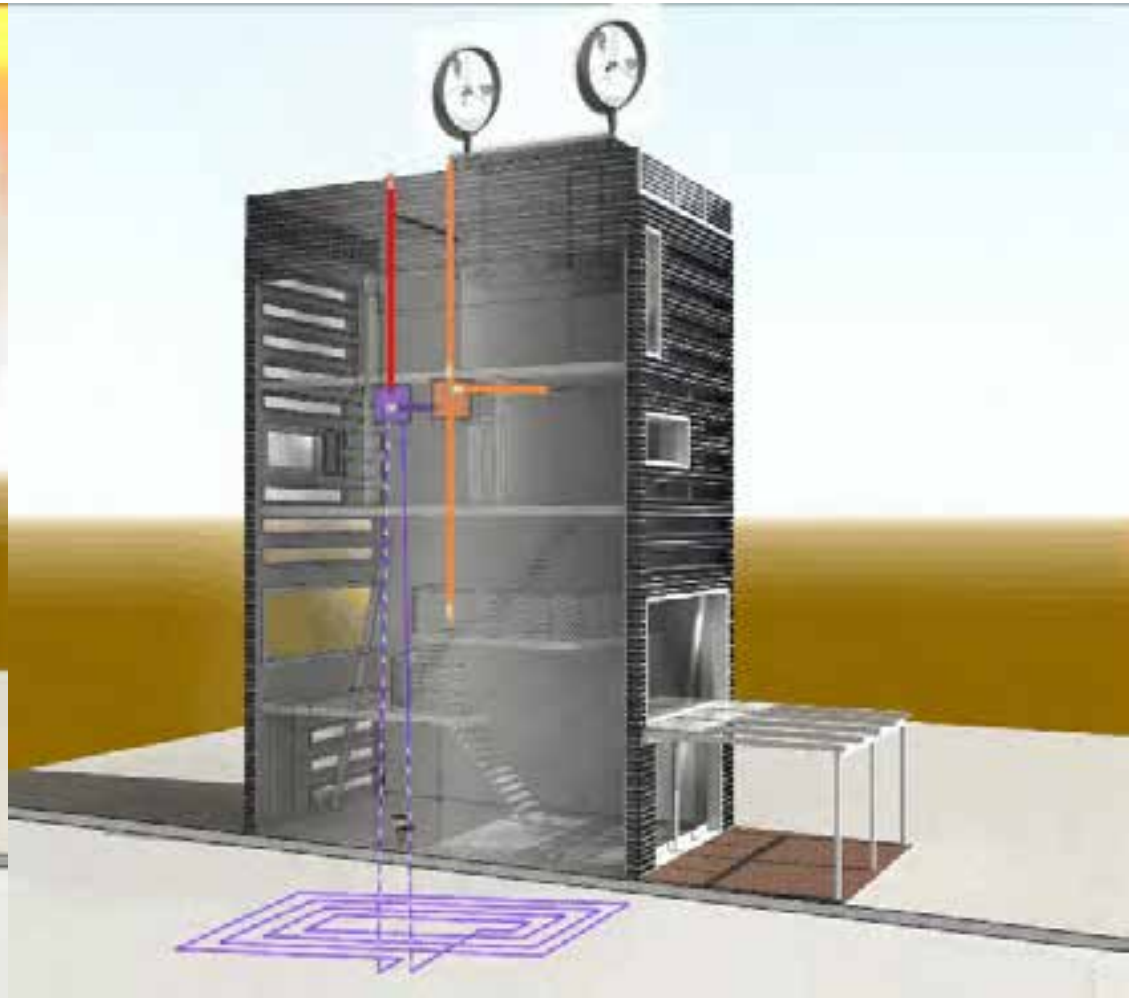
passive sunheating

day-night ventilation

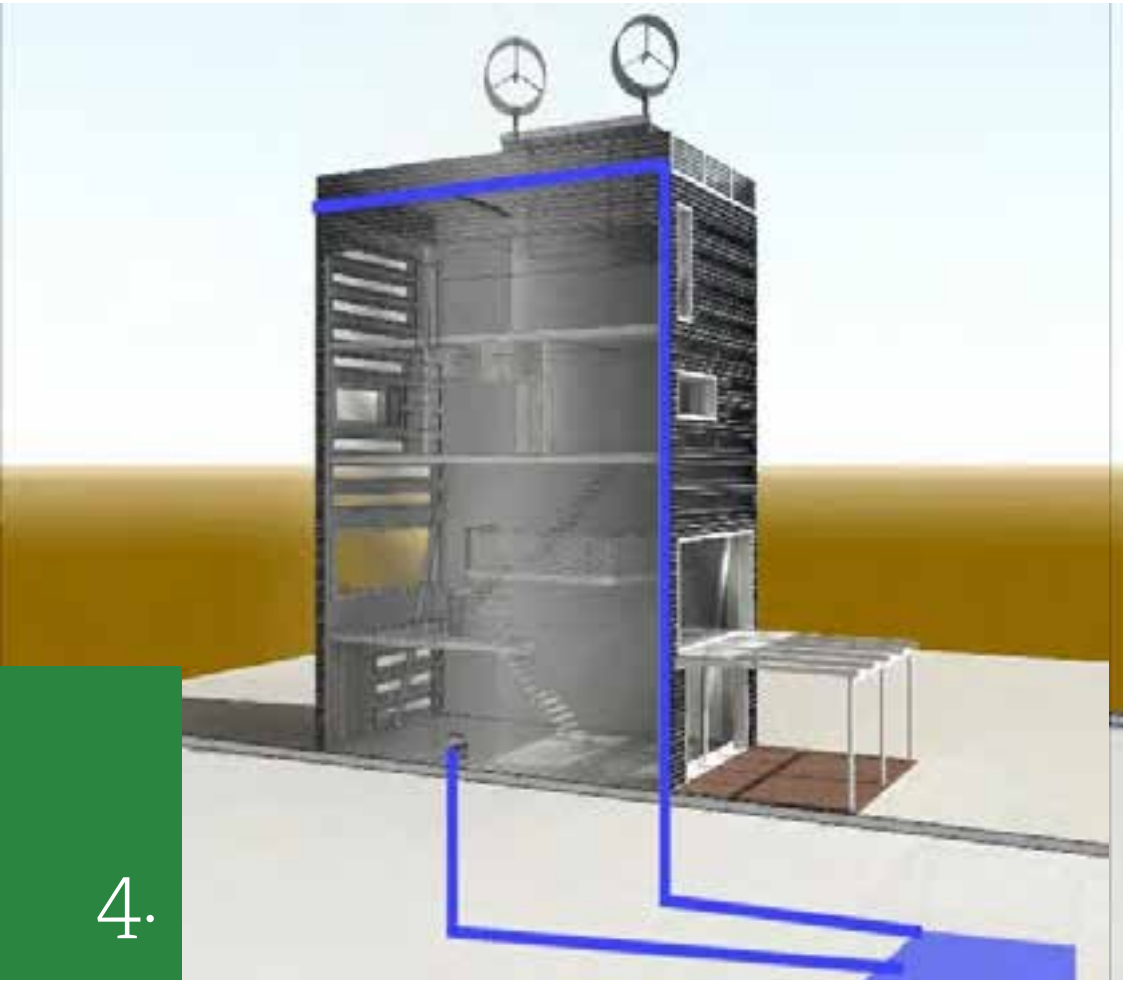
4.



active sunheating



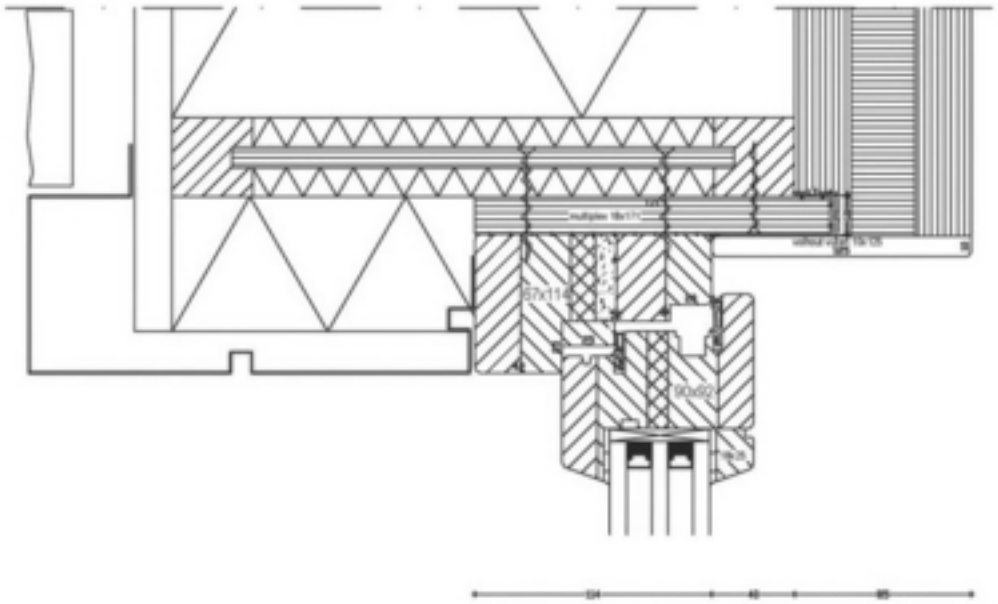
heat-exchange



4.

re-use of rainwater

4.



B3

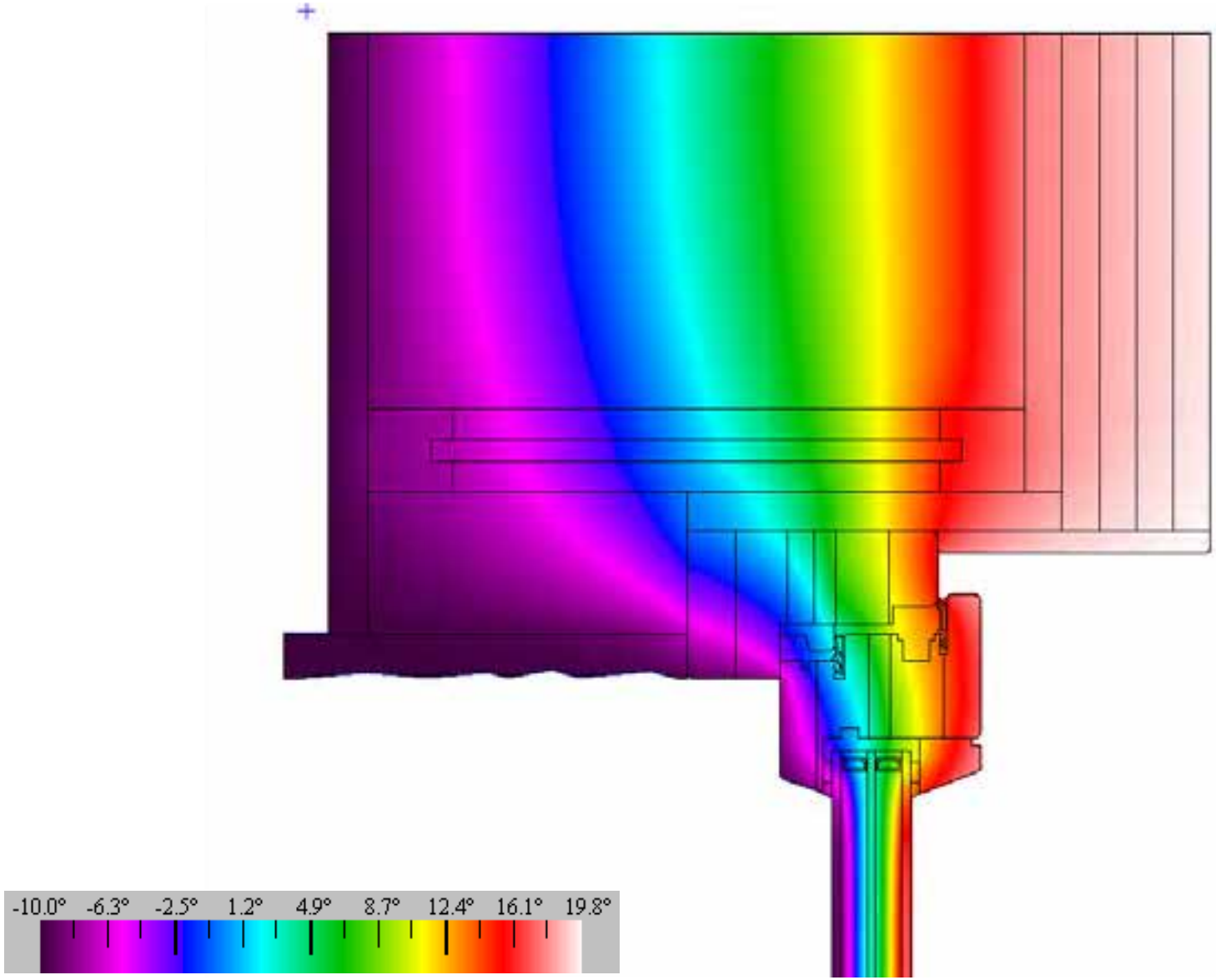
	Pieter Weijnen & Renske Felsena	datum	19-12-2008
	Details		
	Woning Steigereiland		
		tekenaar	Eric Scheerenberg

Timmerfabriek OVERBEEK bv.

9015

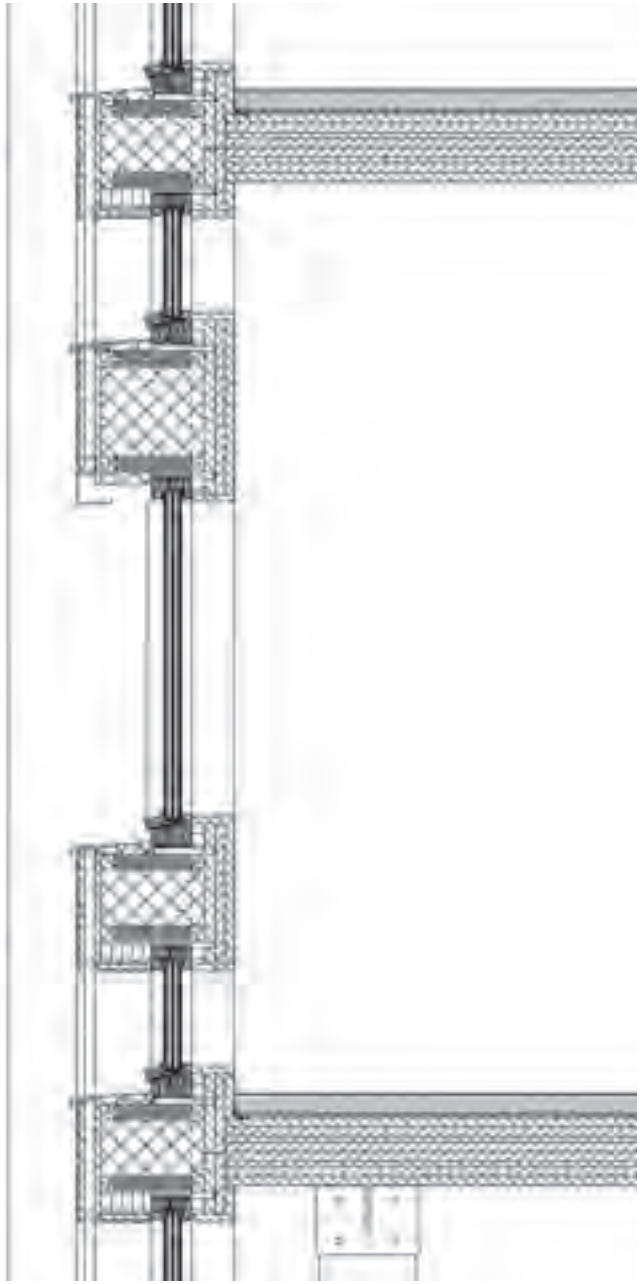
1.3

4.



4.

4.



use of wood
walls: Lenotech
facades: leno-kerto,
FinnJoist with
insulation
floors: Lenotech
cladding: charred larch

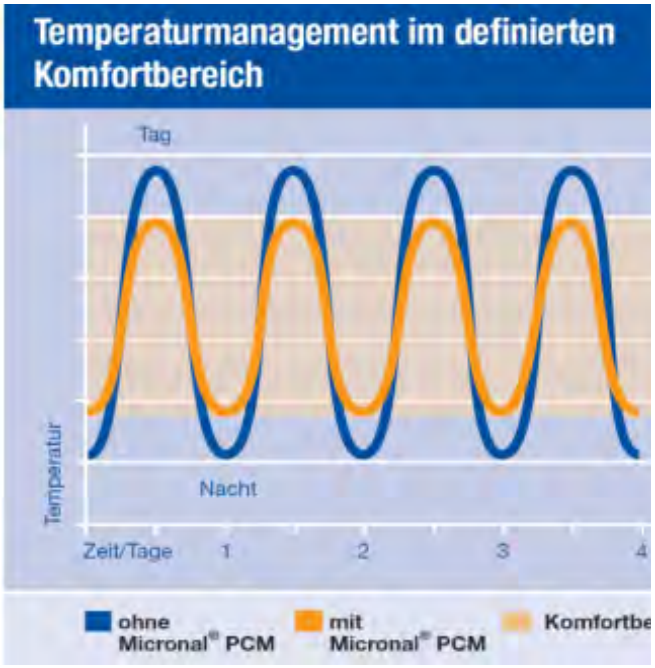
storage CO_2
less primair energy
light material,
handleable

4.

Insulation : woodfiber

organic insulation material
- temperature balancing effect
lambda = 39 mW/m²K
open damp diffusion

use in facades (30 cm)

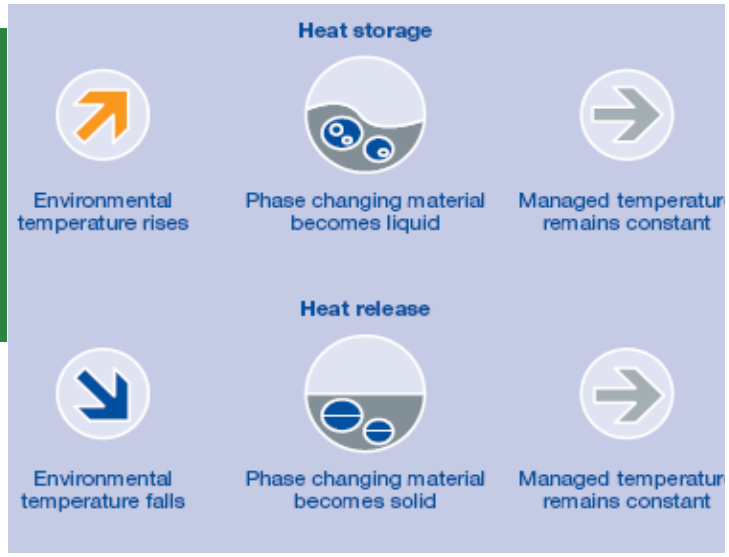


Lebast

Limestuc with PCM (Phase Changing Material)

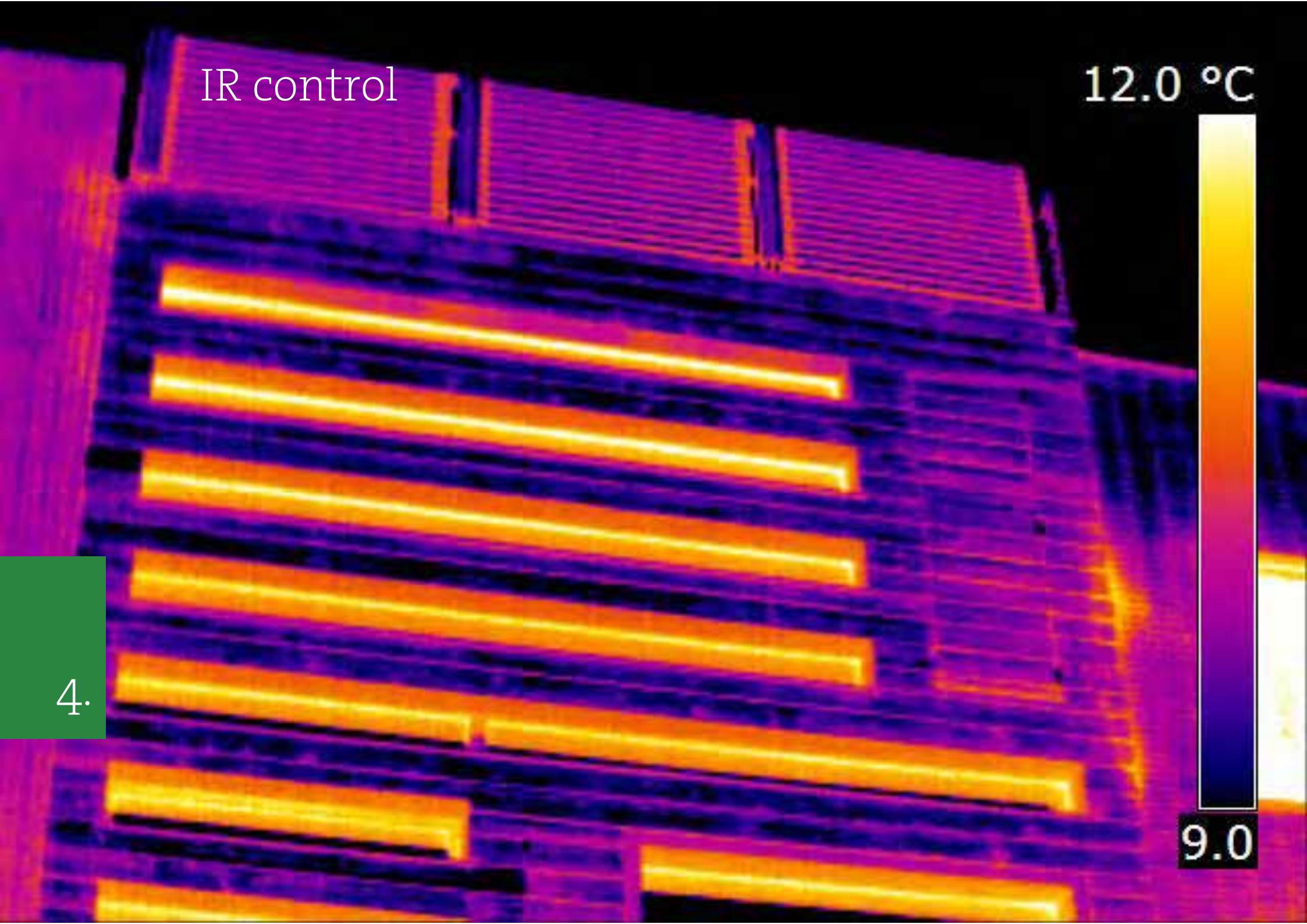
based on parrafine
melts by 21 degrees celcius
accumulates heat
mixed in limestone panels
used on highest floor

4.



Blower door test

4.



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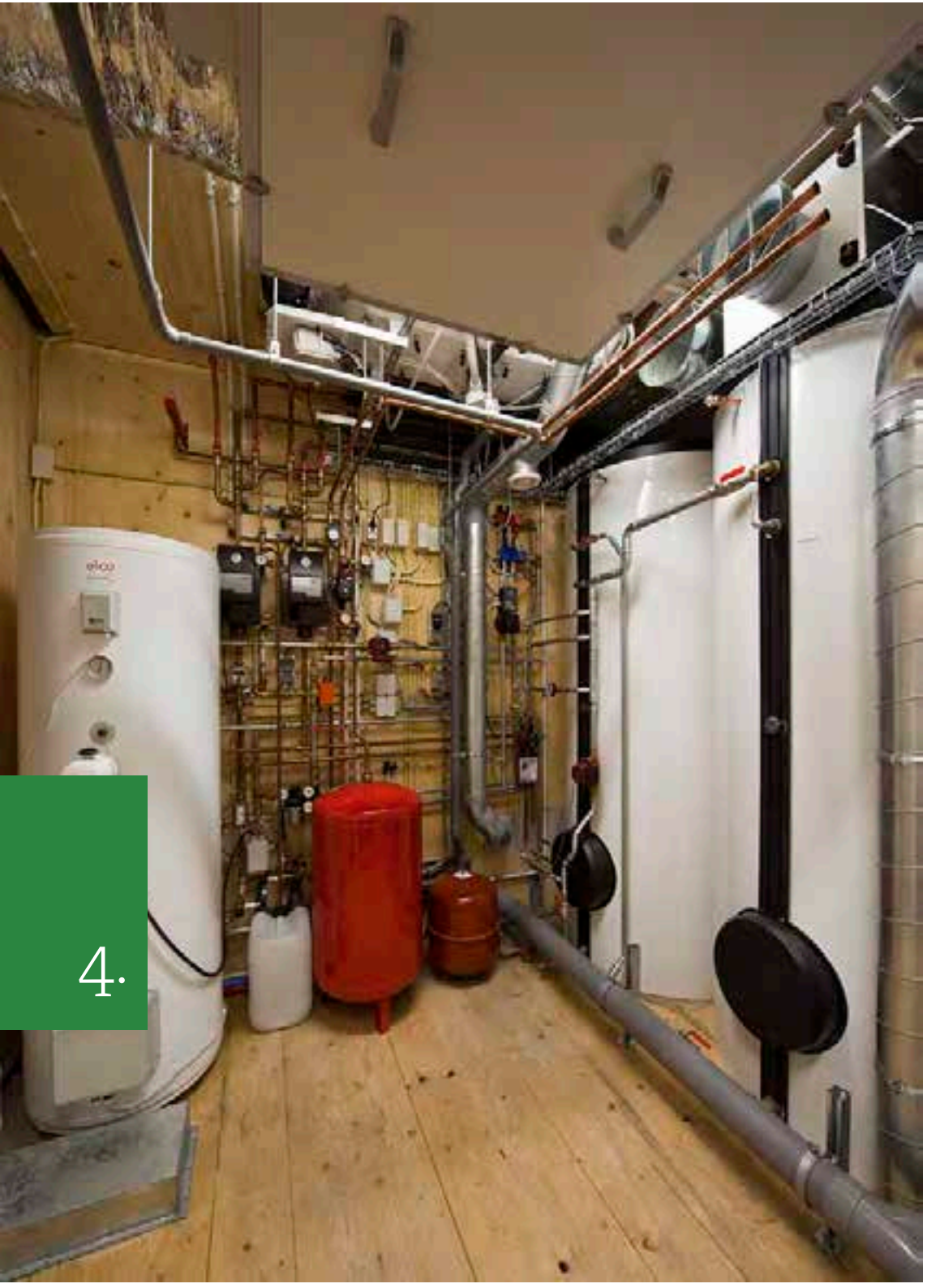
4.



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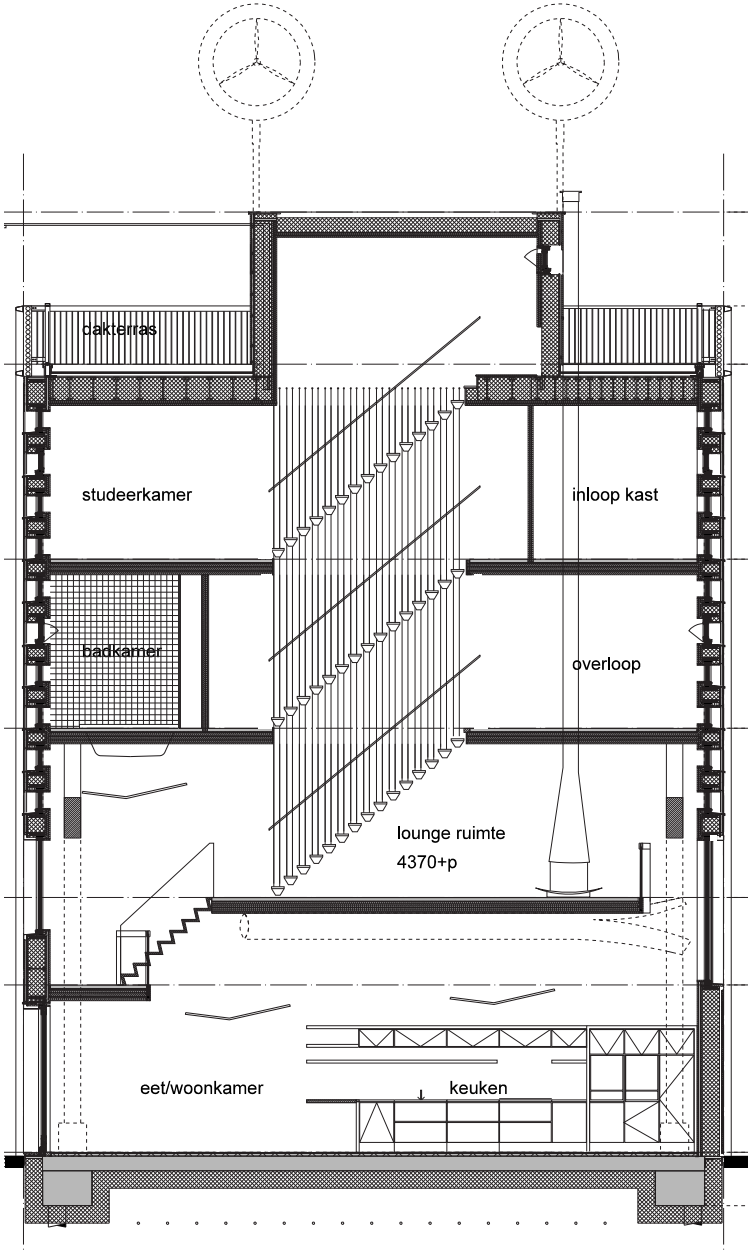
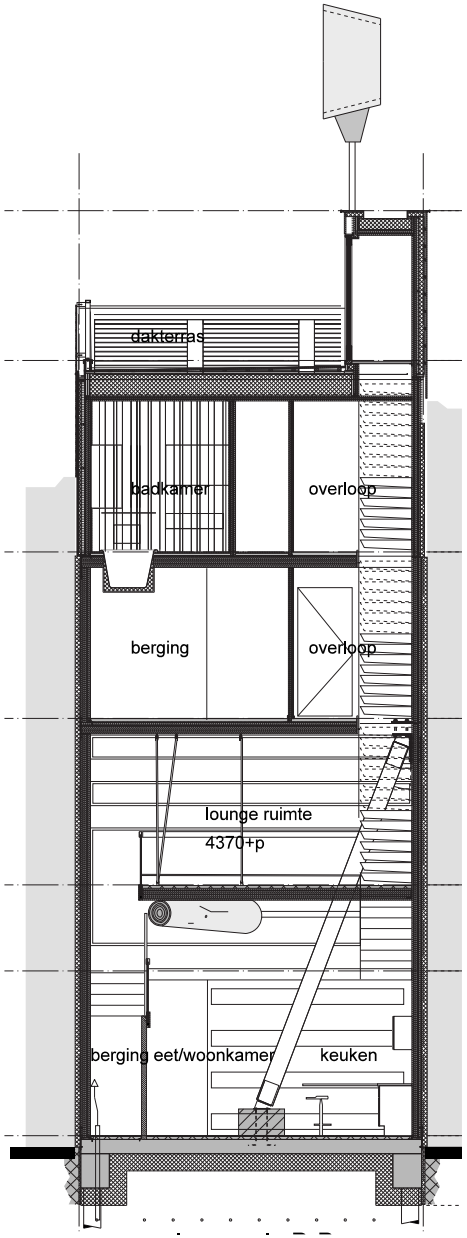
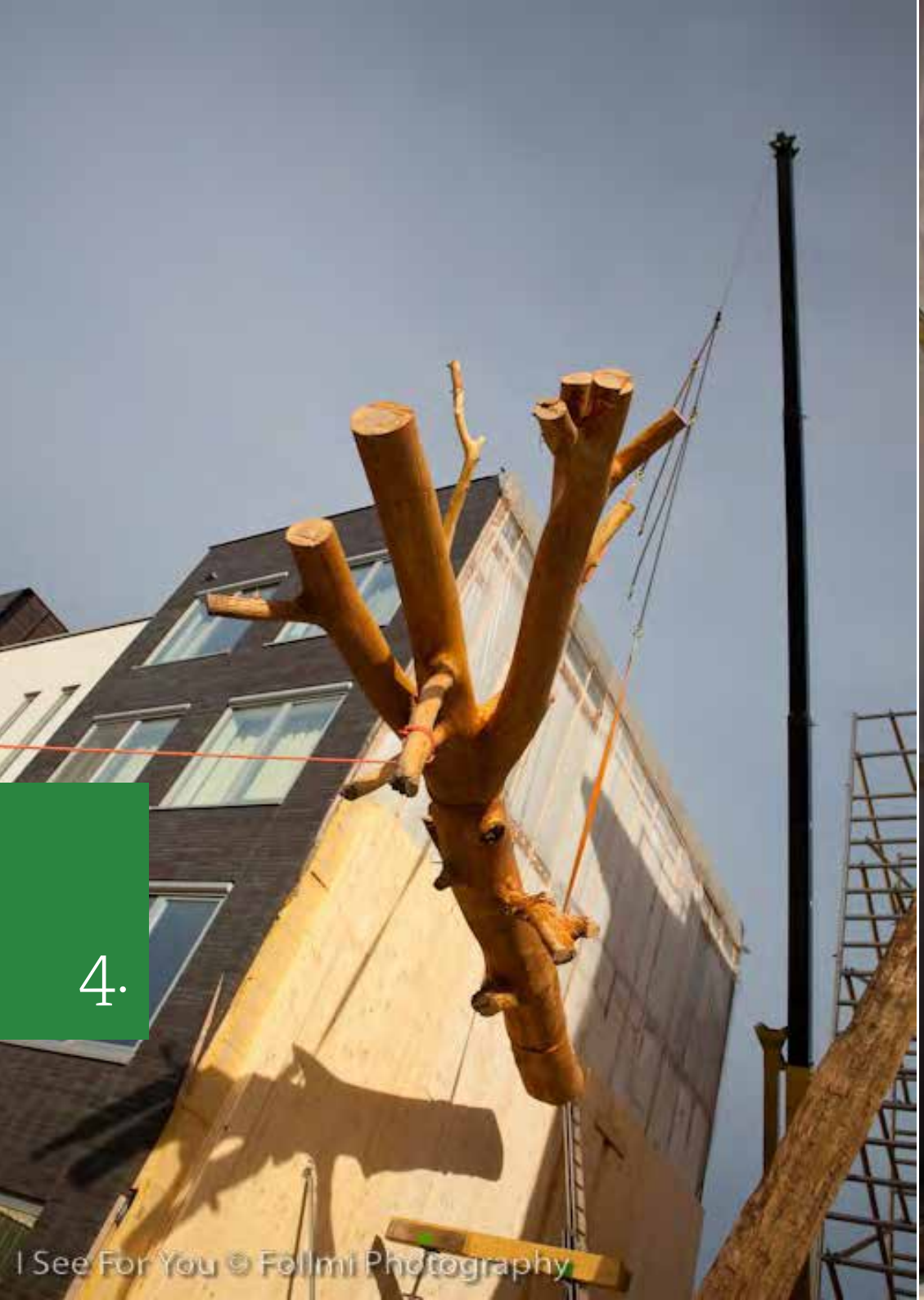
4.


dakterras
studeerkamer
inloop kast
badkamer
overloop
lounge ruimte
4370+p
eet/woonkamer
keuken


dakterras
badkamer
overloop
berging
overloop
lounge ruimte
4370+p
berging eet/woonkamer
keuken

4.

4.


4.
I See For You © Follmi Photography


I See For You © Follmi Photography

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I See For You © FolImi Photography

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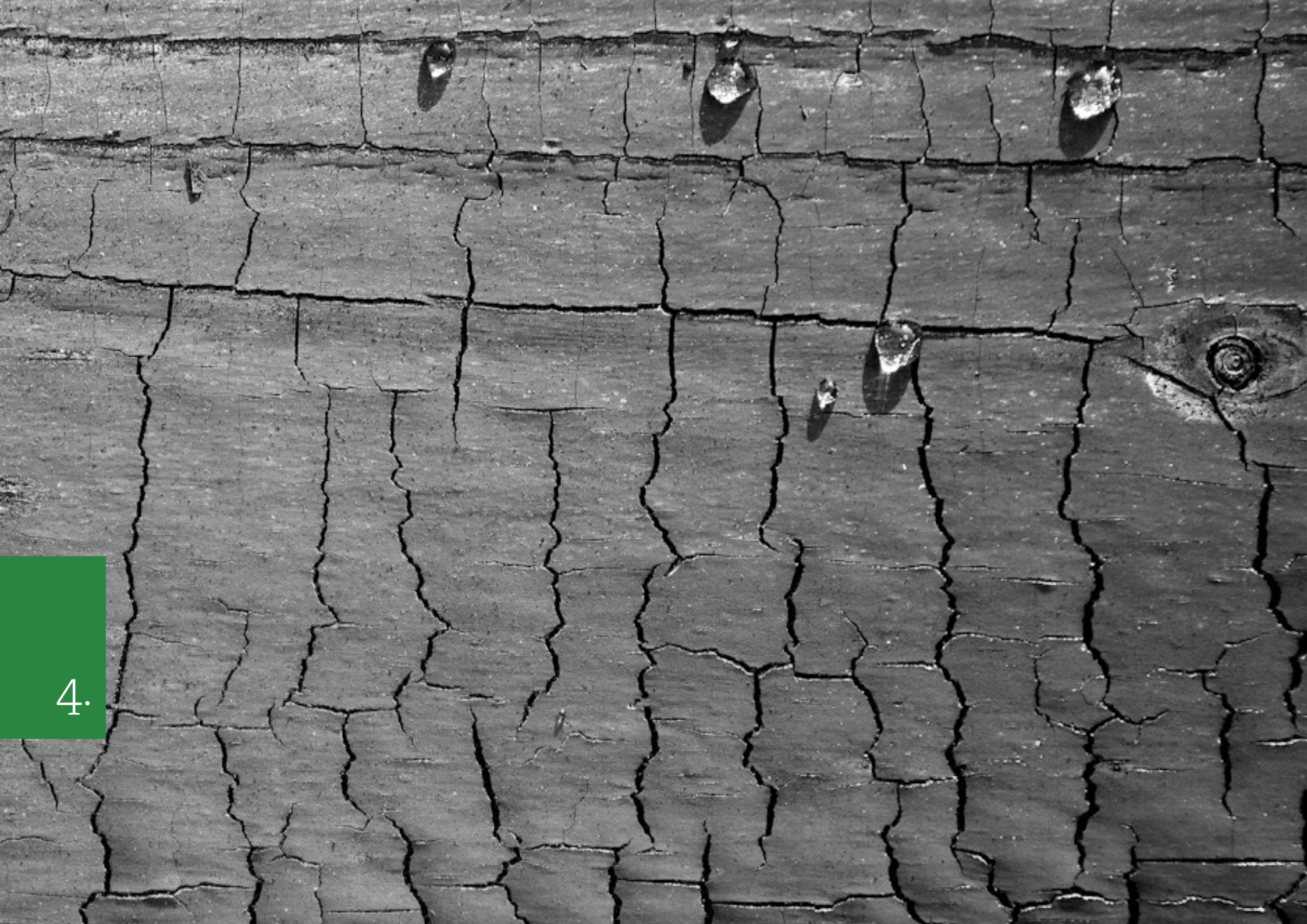

4.

Terunobe Fujimori

4.

4.


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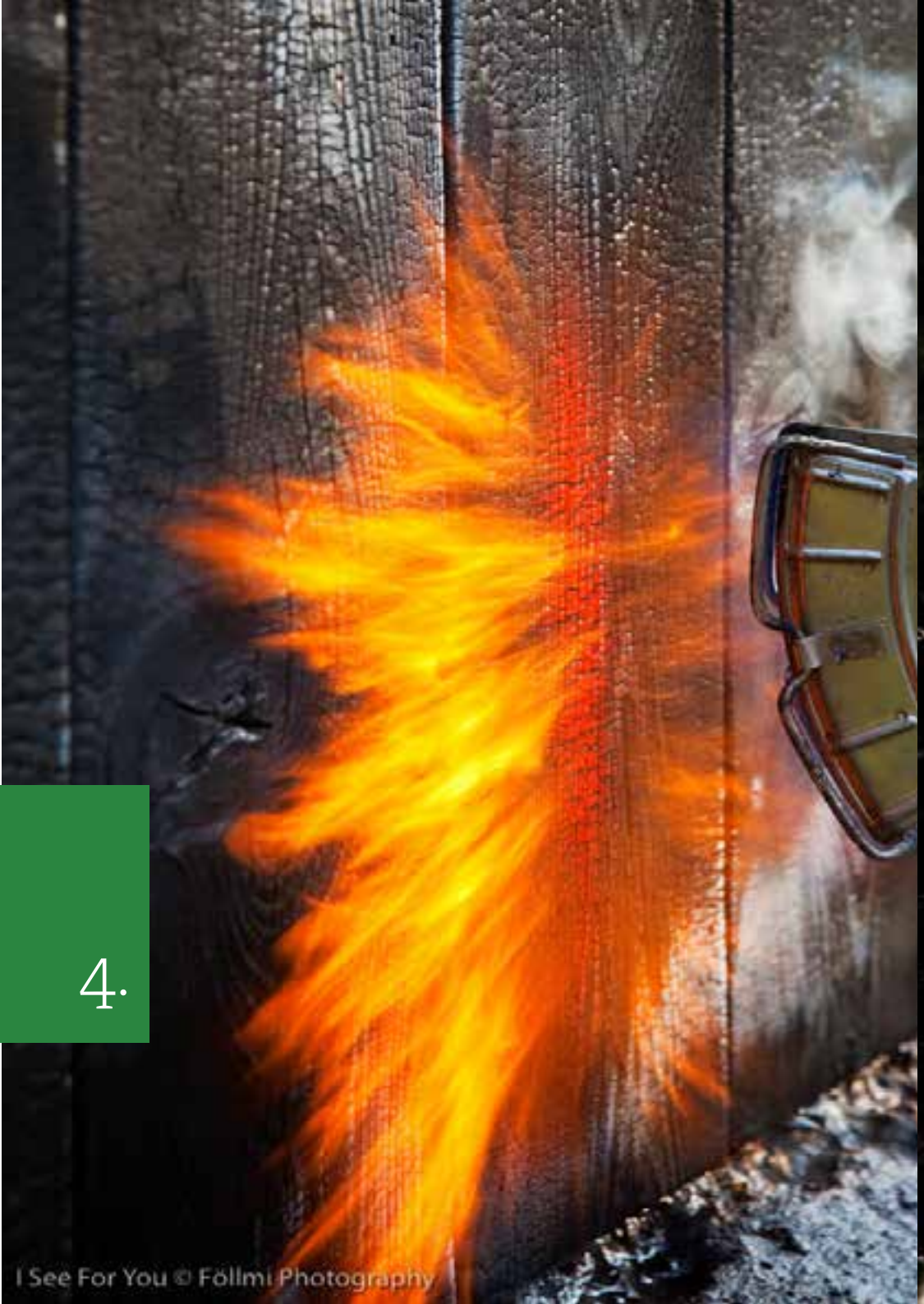
I See For You © Föllmi Photography

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I See For You © Föllmi Photography

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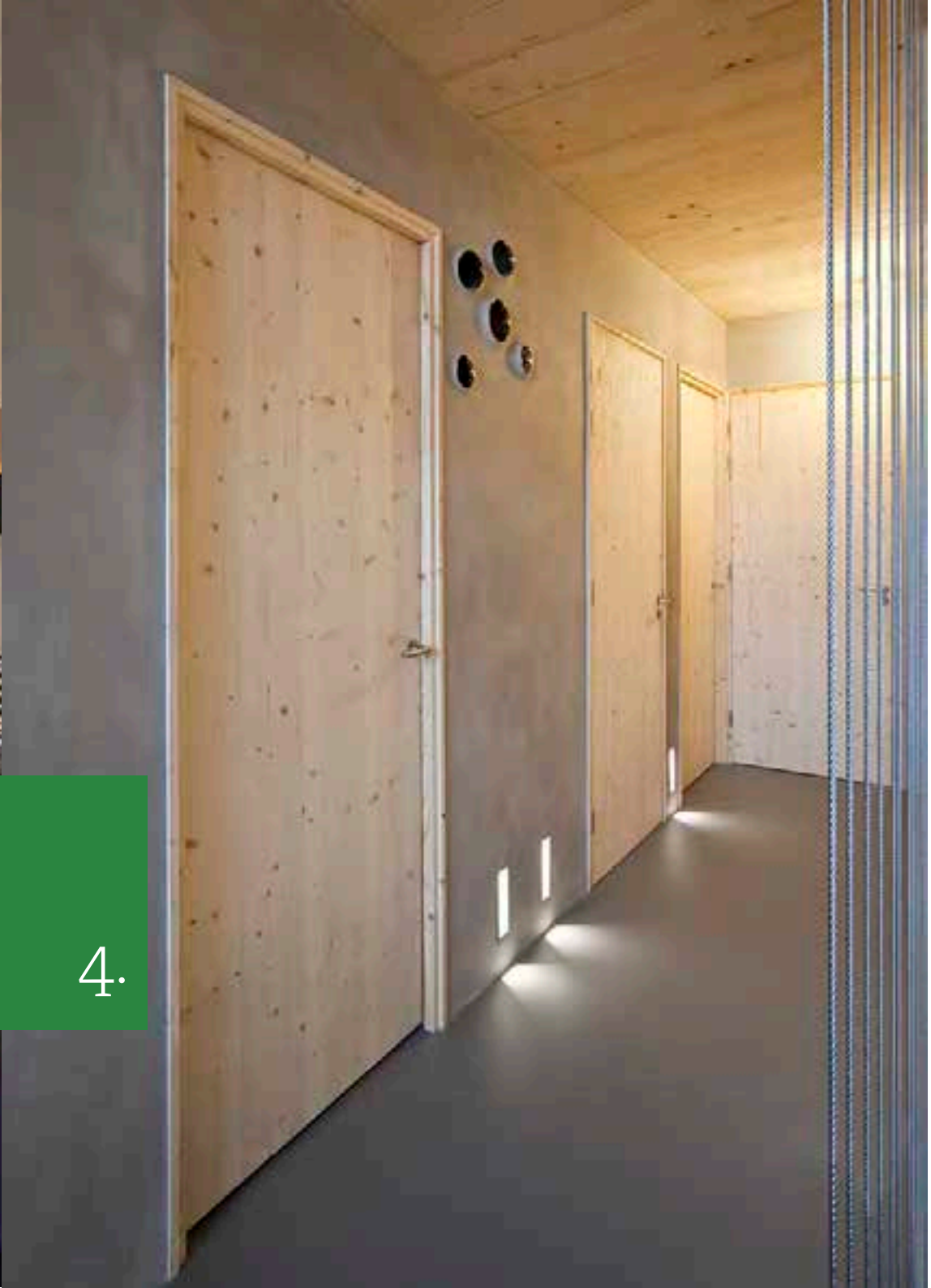

4.

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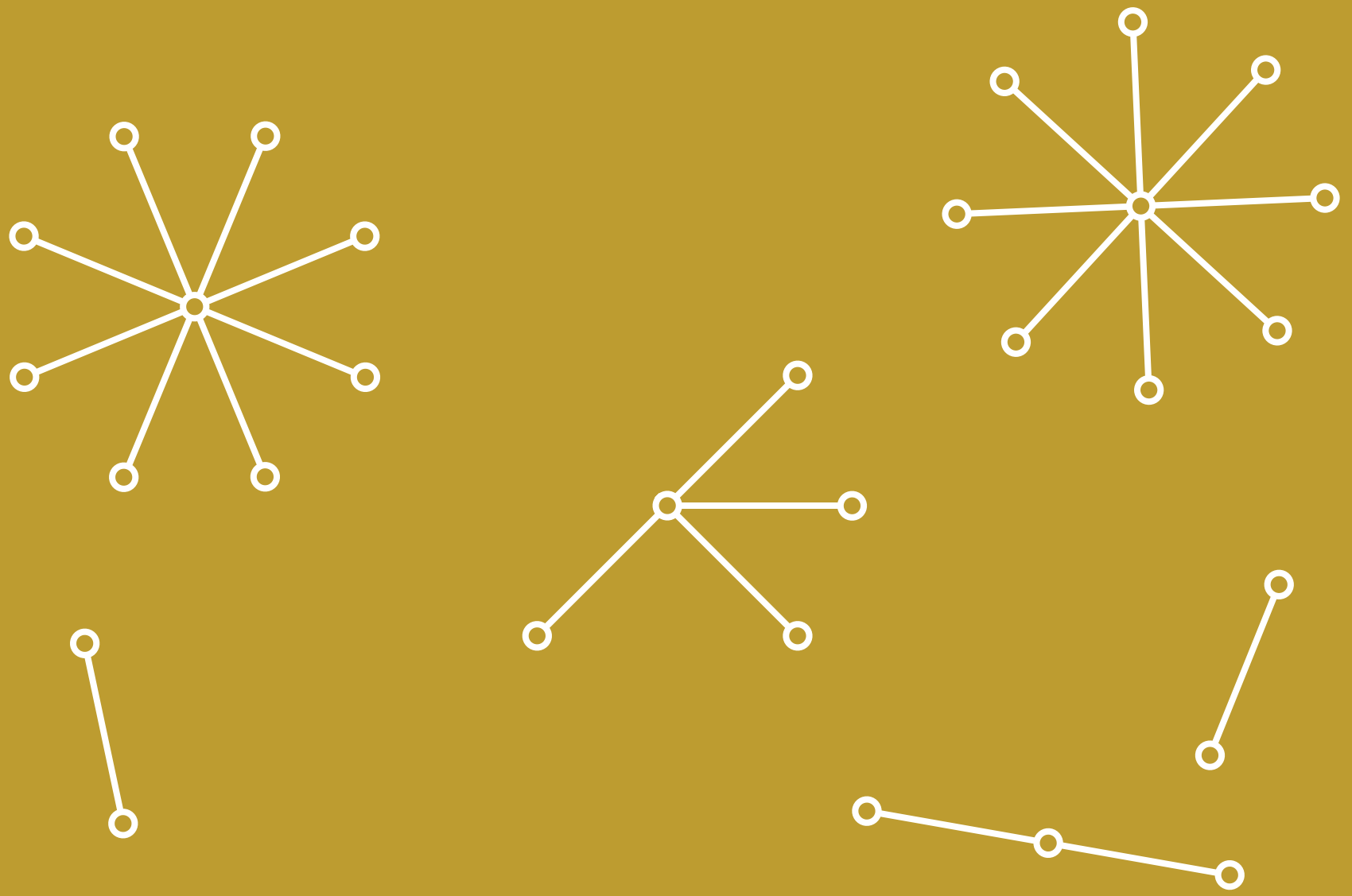
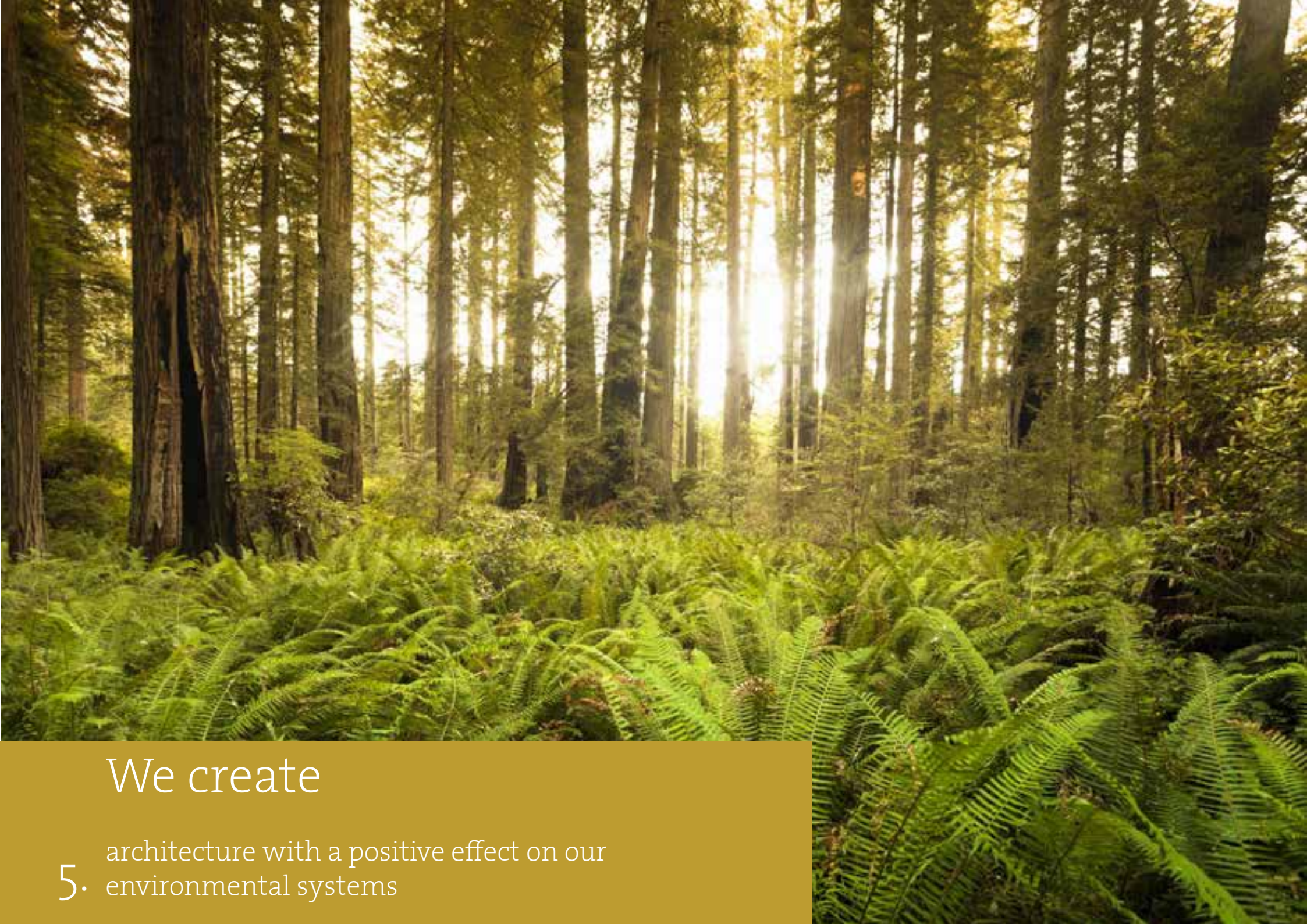


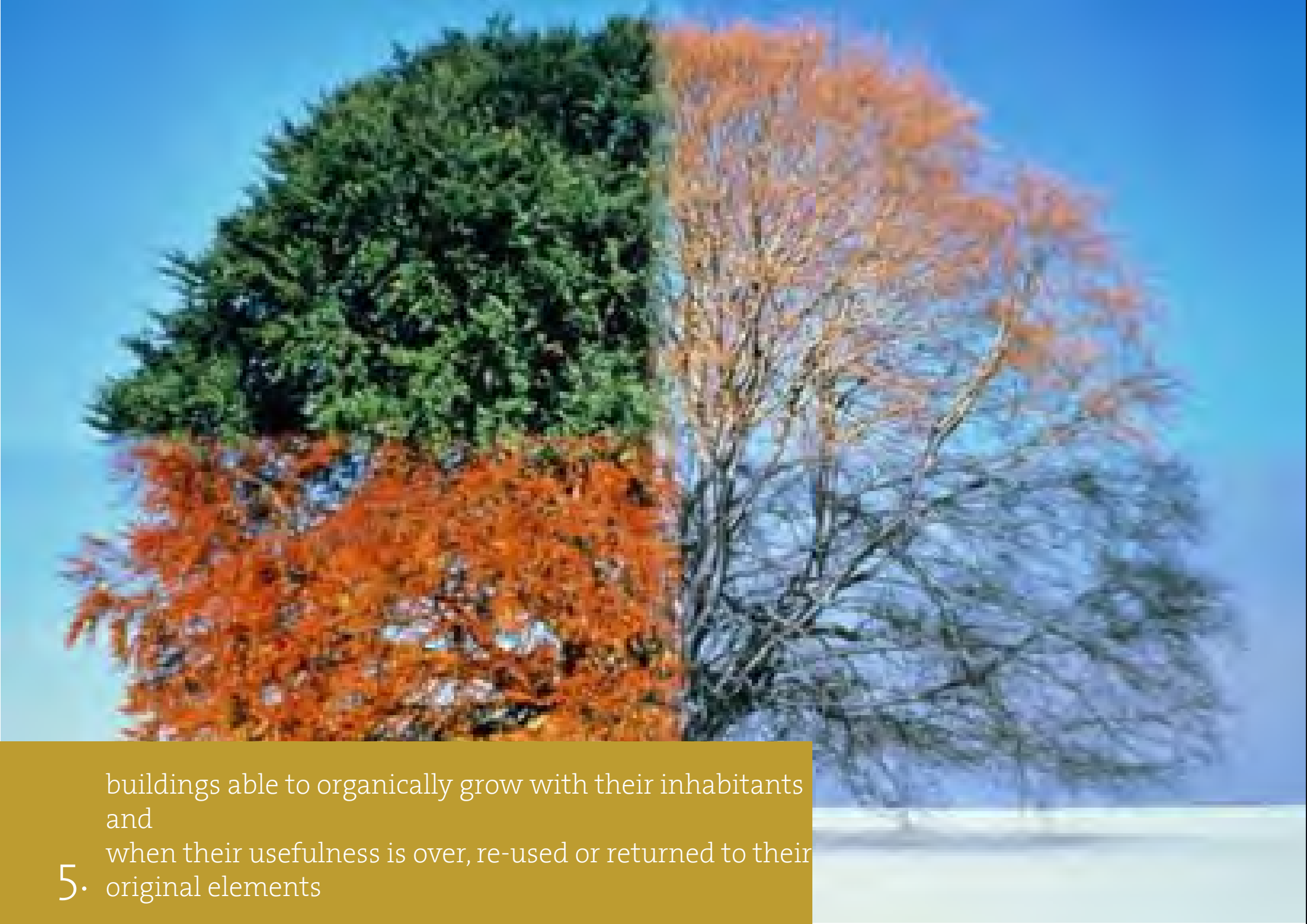
5. next generation



We create

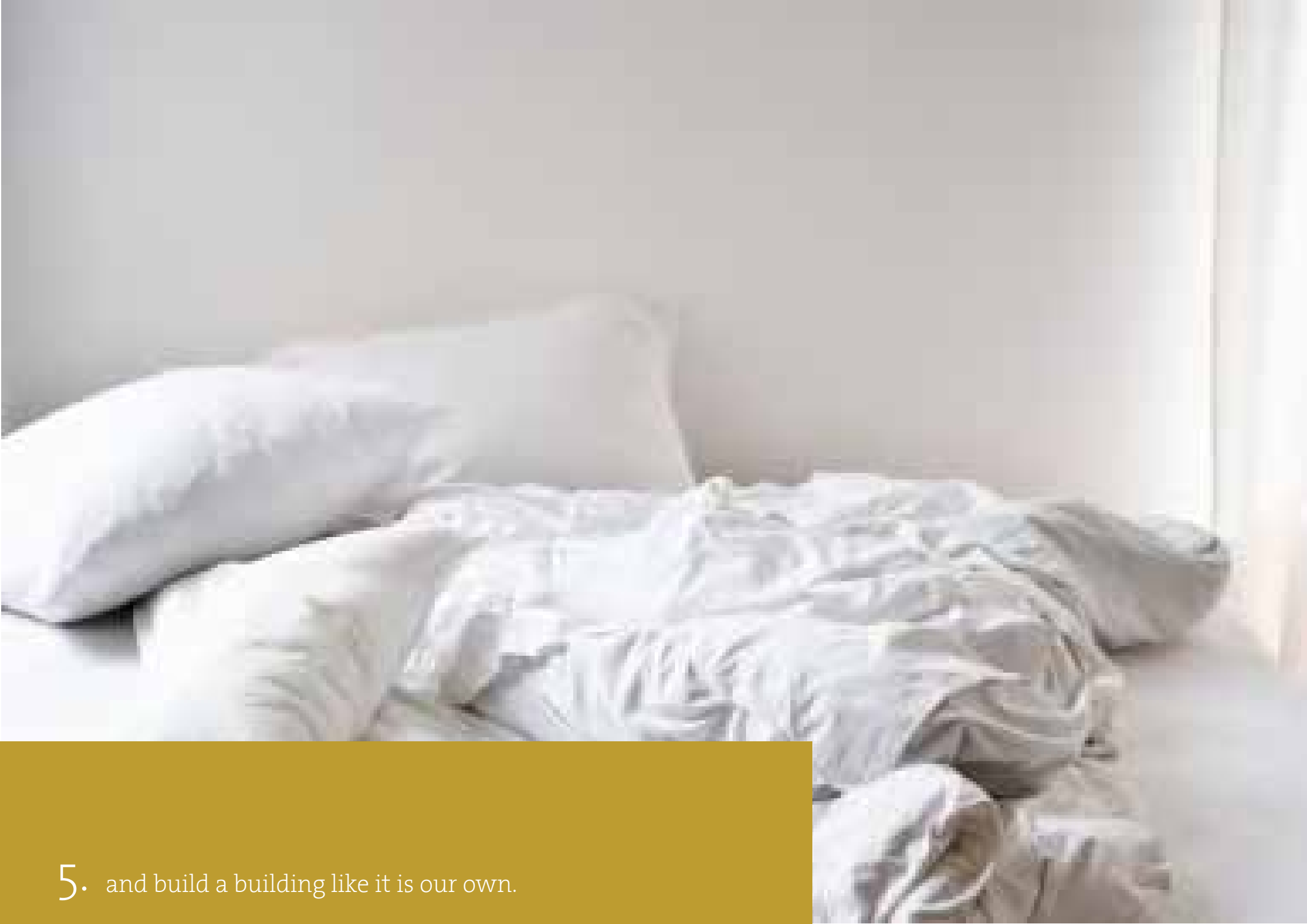
5. architecture with a positive effect on our environmental systems

5· societal value with inspired, up-sustainable beauty, healthy and diverse architecture



5. buildings able to organically grow with their inhabitants and
when their usefulness is over, re-used or returned to their original elements

5· to deliver well-being to the world.



5. and build a building like it is our own.


THIS USED TO BE
MY HOUSE
PFRN