


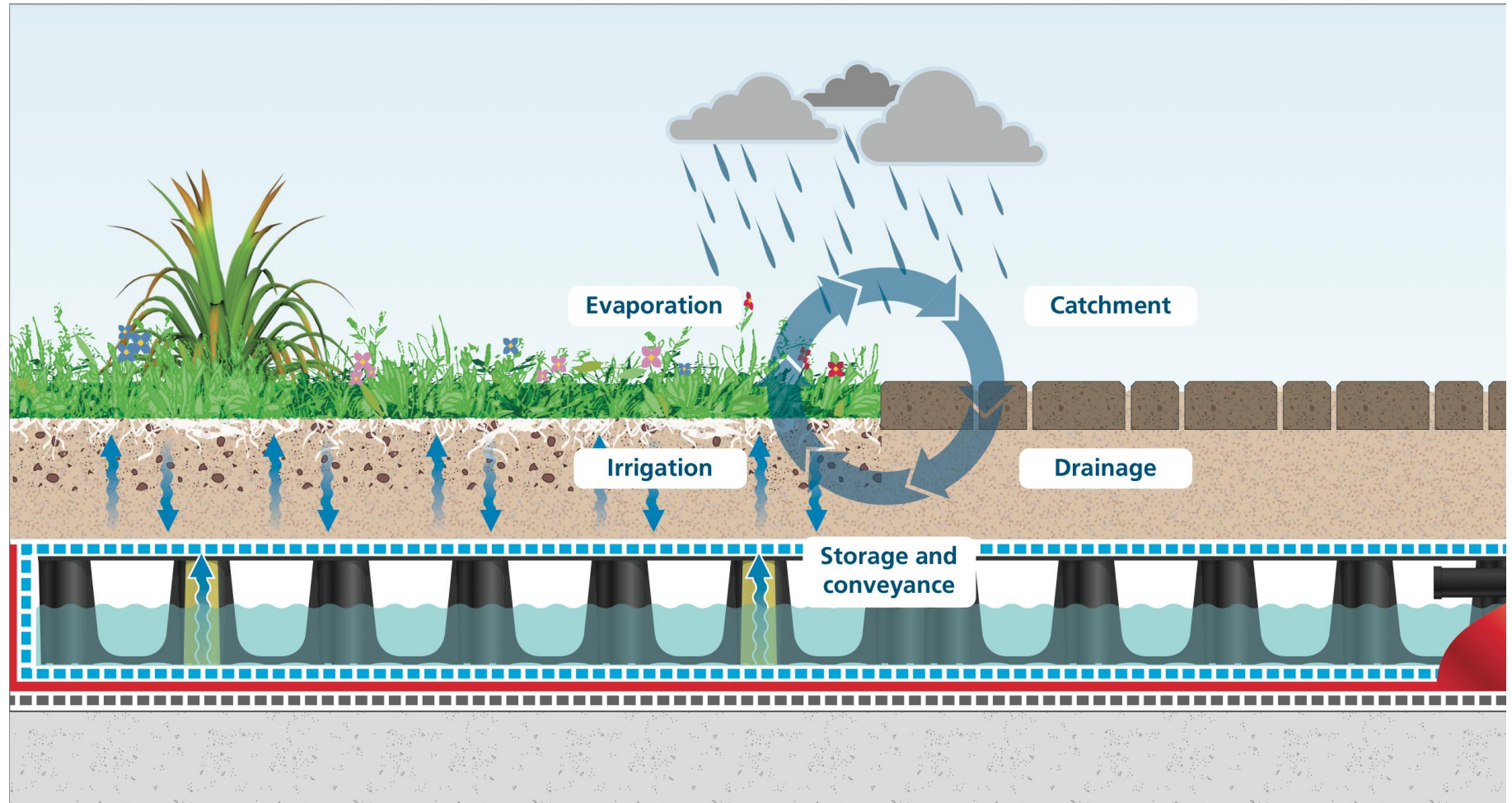


Green-blue roofs and the VU Polderdak

Ralph Lasage, with courtesy to: the metropolder company

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- Concept of the polderdak
 - VU campus
 - Student research at VU roofs

Concept of “polderdak” or “polderroof”



The Polderroof



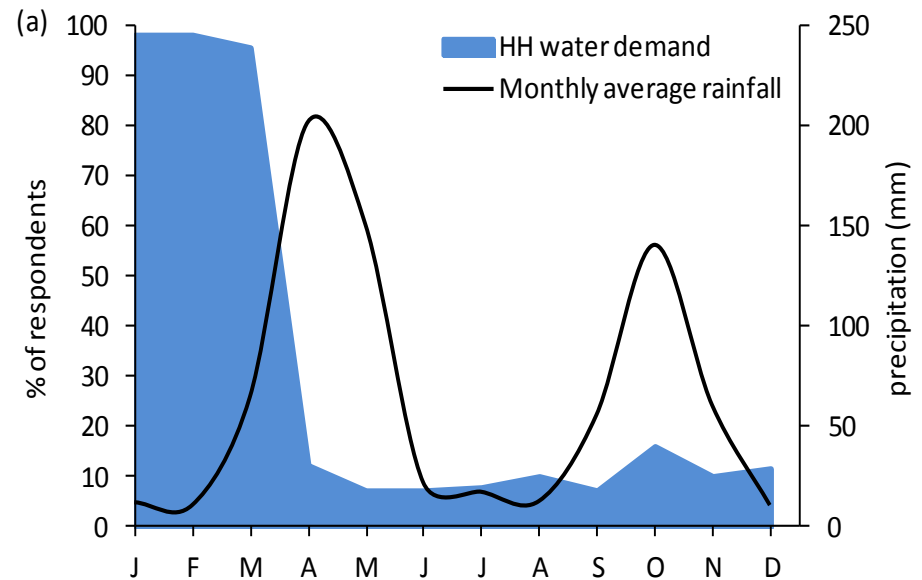
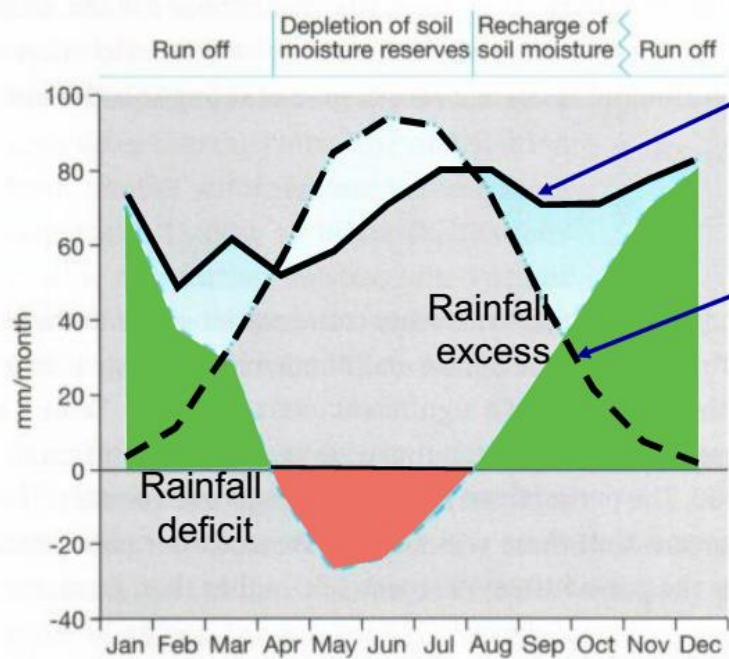
The Polderroof



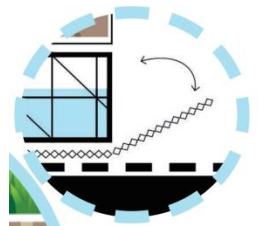
The Polderroof



Water demand and water availability



Different types of green roofs



**OPTIONEEL
REGELSYSTEEM**



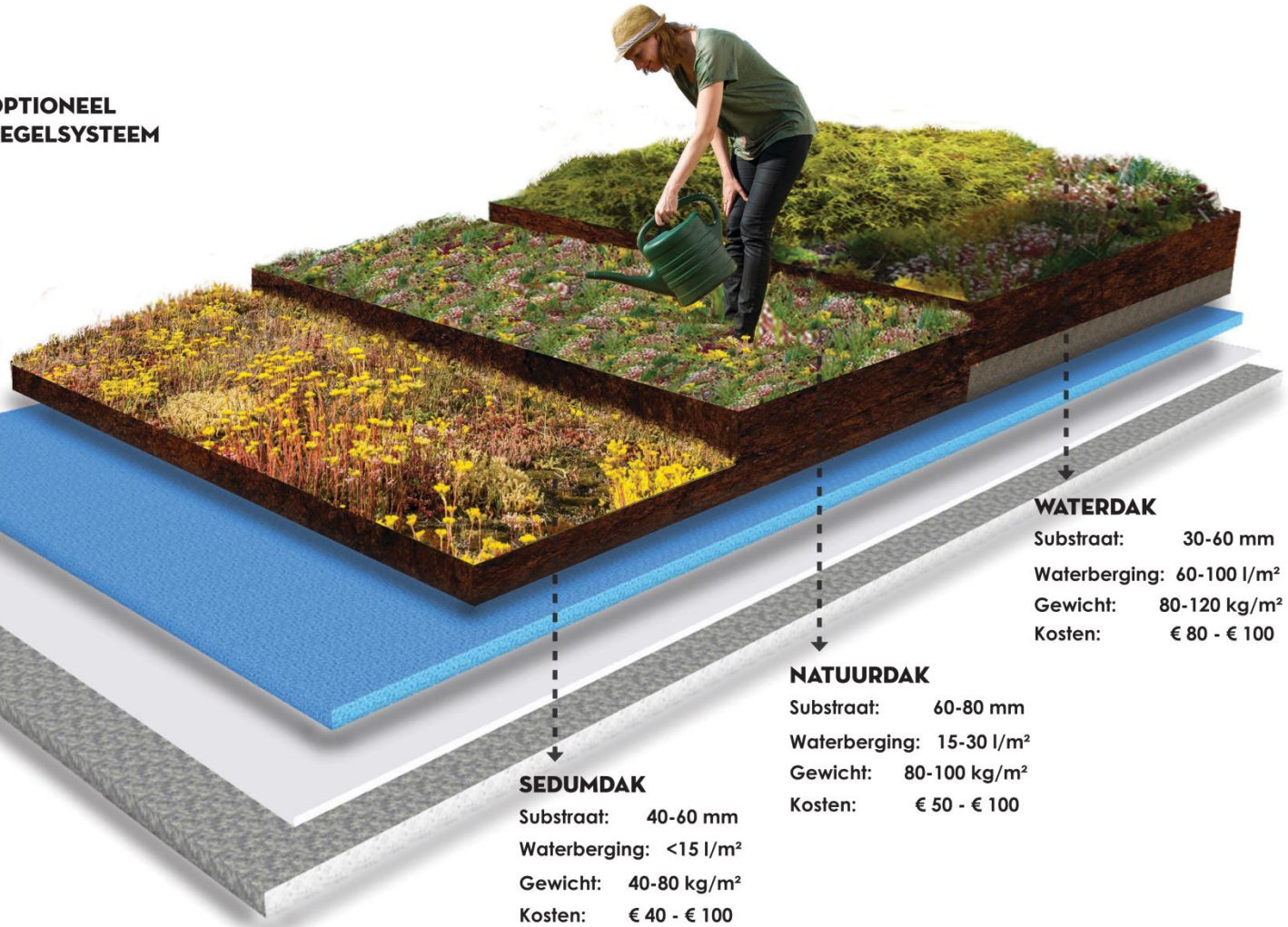
BUFFERSYSTEEM

ND DAK



DRAINAGELAAG

K



Monitoring and management



RAINFALL



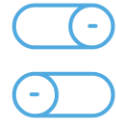
EVAPORATION



WATER LEVEL



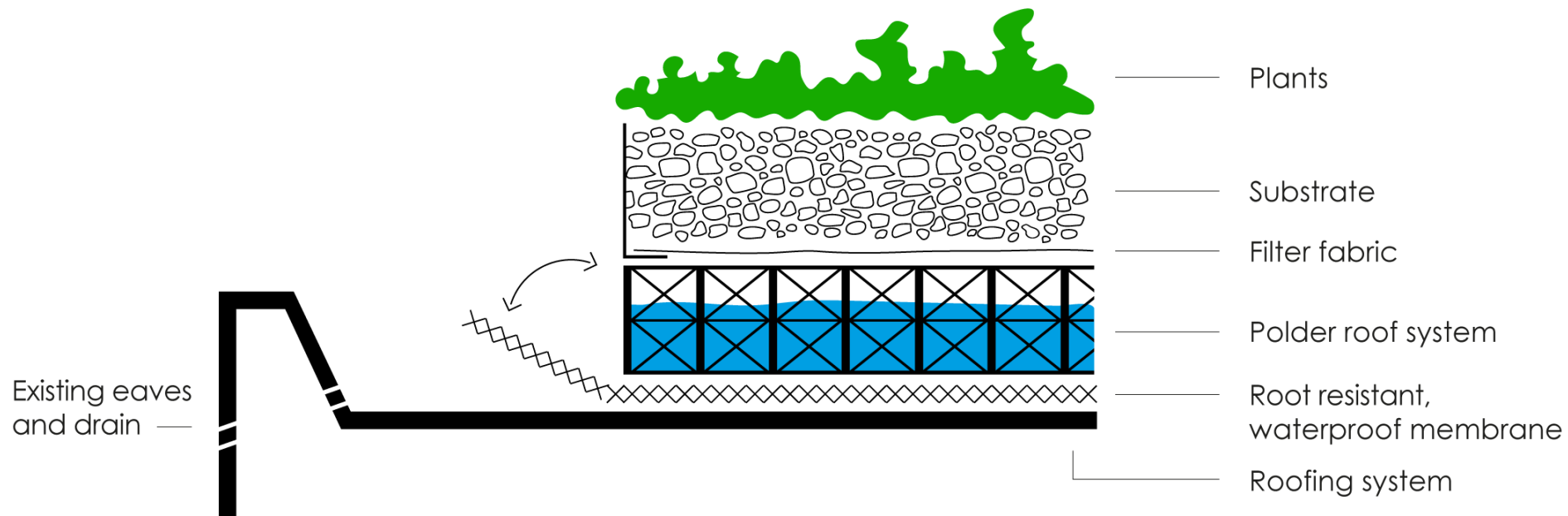
TEMPERATURE



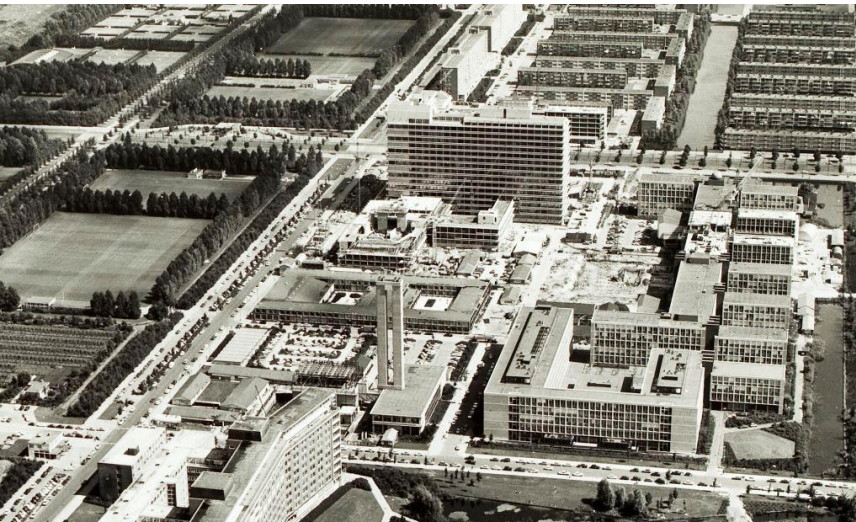
SWITCHING SCENARIO'S

Monitoring

Details polderroof



Challenges at the VU



Challenges at the VU

- More buildings, reducing infiltration capacity
- Waternet obligated VU to take measures for water



Plans for the campus

- Polderroof at the Aula and at the new building “schoolwerktuinen”
- Aim to use these for teaching and research



Some questions on the polderroof





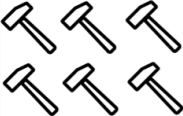

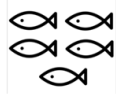
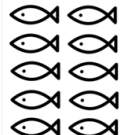






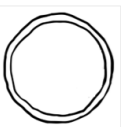
- How does it affect discharge after intense rainfall?
- How much does the air temperature above the roof change when it is installed?
- What would be the effect if the whole Zuidas has smart polderroofs? Or the whole of Amsterdam?
- How much does the insulation of the roof improve?

Some questions on the polderroof

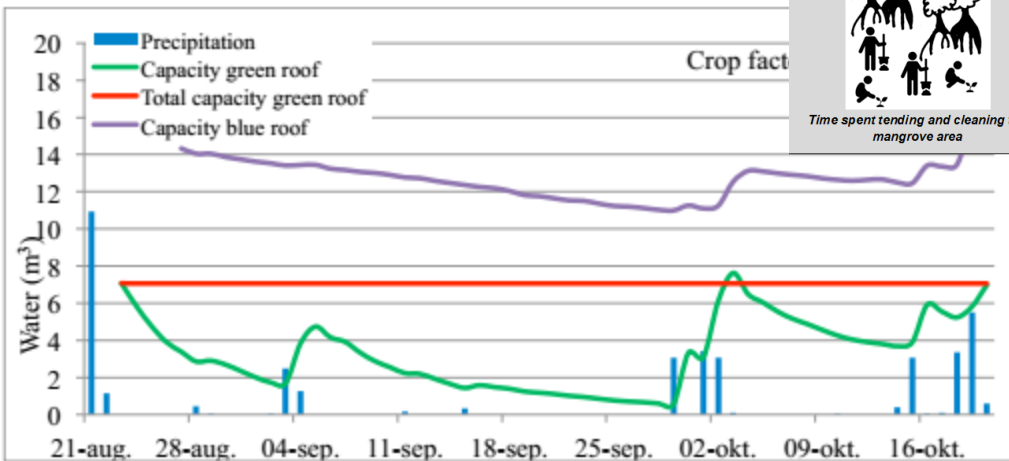
- Is the biodiversity different from a “normal” green roof?
- Who decides on the management of the water on private roofs?
- Do people enjoy these roofs, and if yes, what is their willingness to pay for it?
- If external benefits occur, how can these be linked to the person / organisation that makes the investment?
- ...

Examples of student research

Choice experiments

Attribute	Low level	Medium level	High level	Do nothing
 Protection from storms and floods	 Repairs 2 times less	 Repairs 3 times less	 Repairs 4 times less	 No change in repairs
 Abundance of seafood	 +5% change	 +10% change	 +15% change	 No change
 Time spent tending and cleaning the mangrove area	 5 hours	 10 hours	 15 hours	 0 hours

Modelling



+ Join The Pipe

+ Meatless Monday

+ Food Waste

+ Waste Separation

+ Reduce Packaging Waste

+ E-waste

+ One or Two will do

+ Green Campus

+ Green Travelling

+ BYOM (Bring Your Own Mug)



Thank you for your attention

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