

VIPA Sustainability criteria

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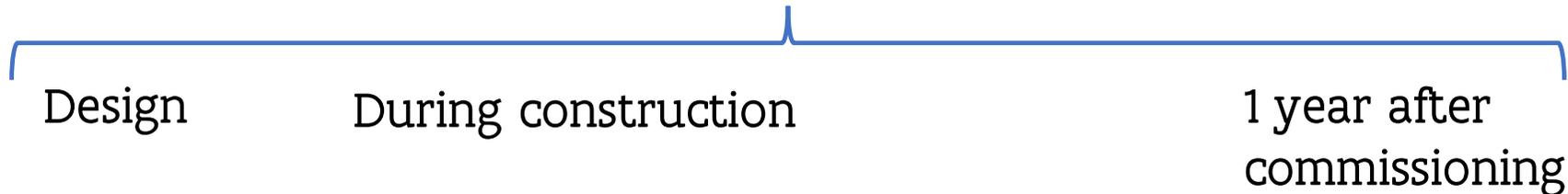
Joost Declercq, KULEuven

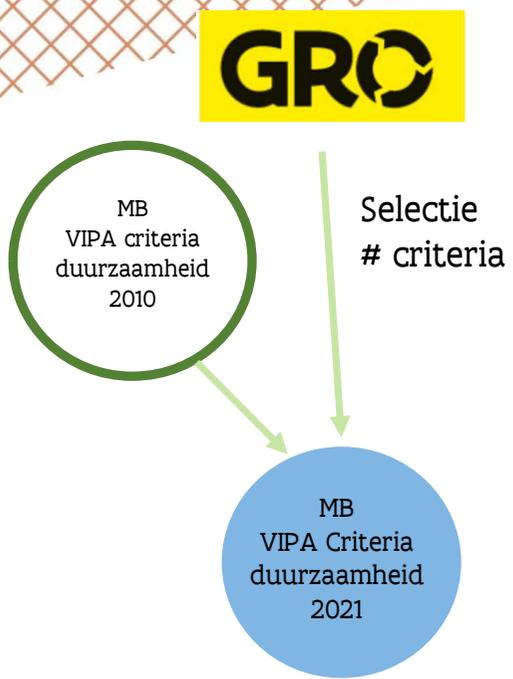
2. Sustainability criteria ~ funding



- Functional advice +
- Building technical advice +
- Financial advice +

← Sustainability criteria





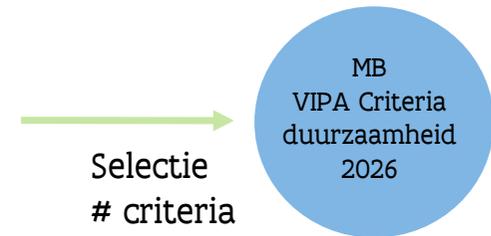
STAP 1



STAP 2



STAP 3



STAP 4

2. Sustainability criteria

2003 = criteria for ecological building

2010 = VIPA sustainability criteria

2021 = VIPA sustainability criteria

With care-specific topics and specifications

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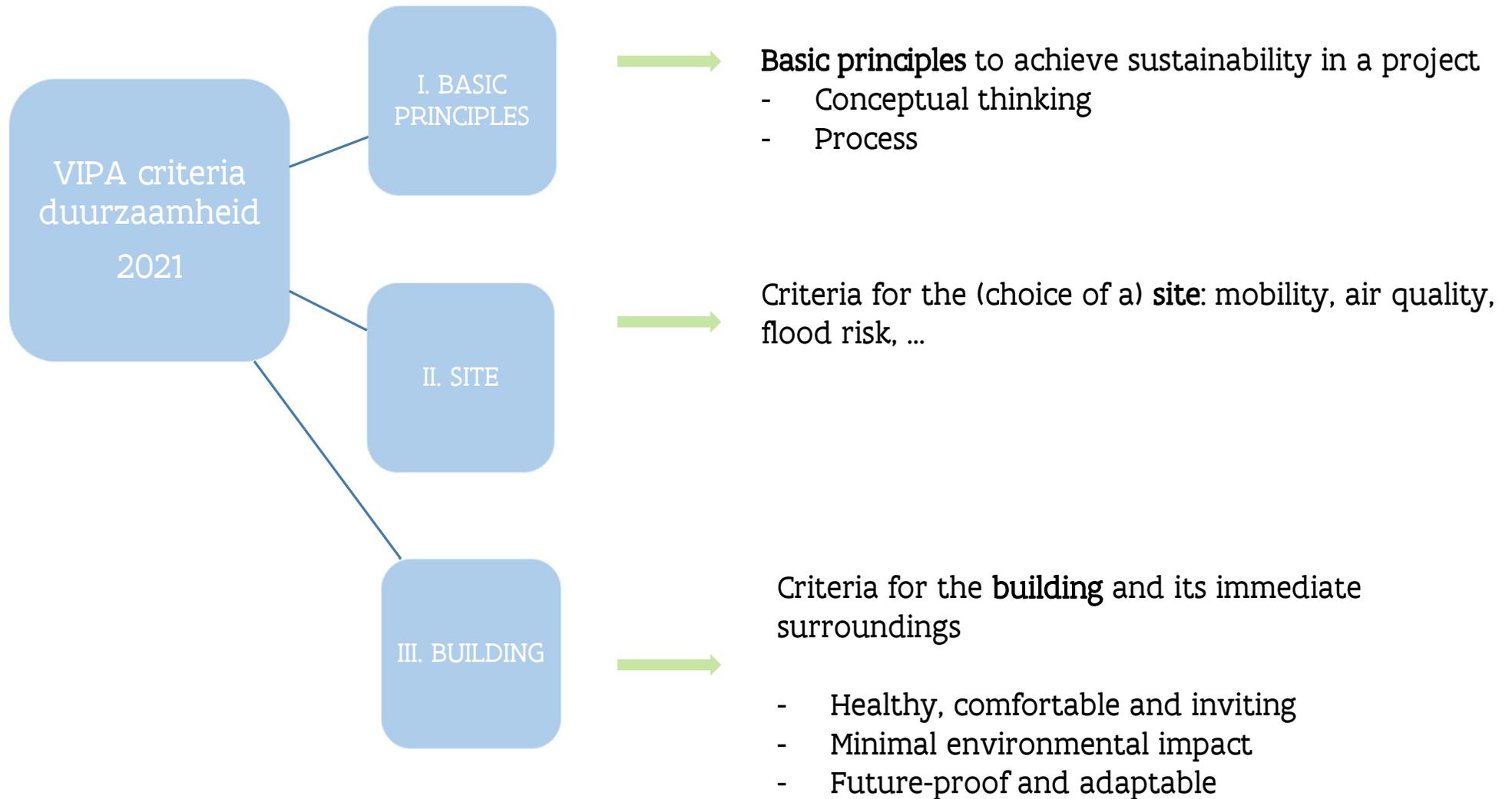
2026 = VIPA sustainability criteria

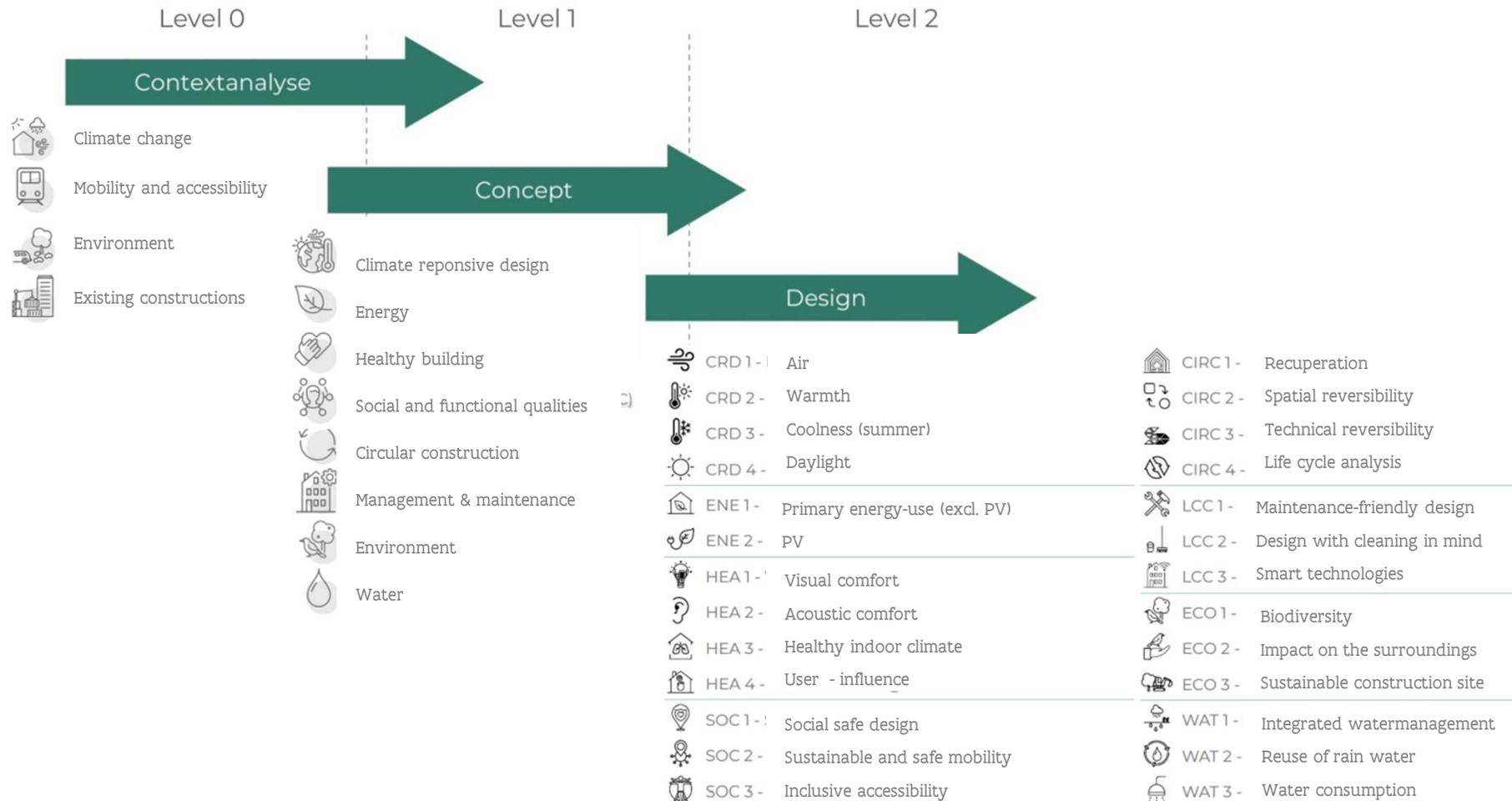
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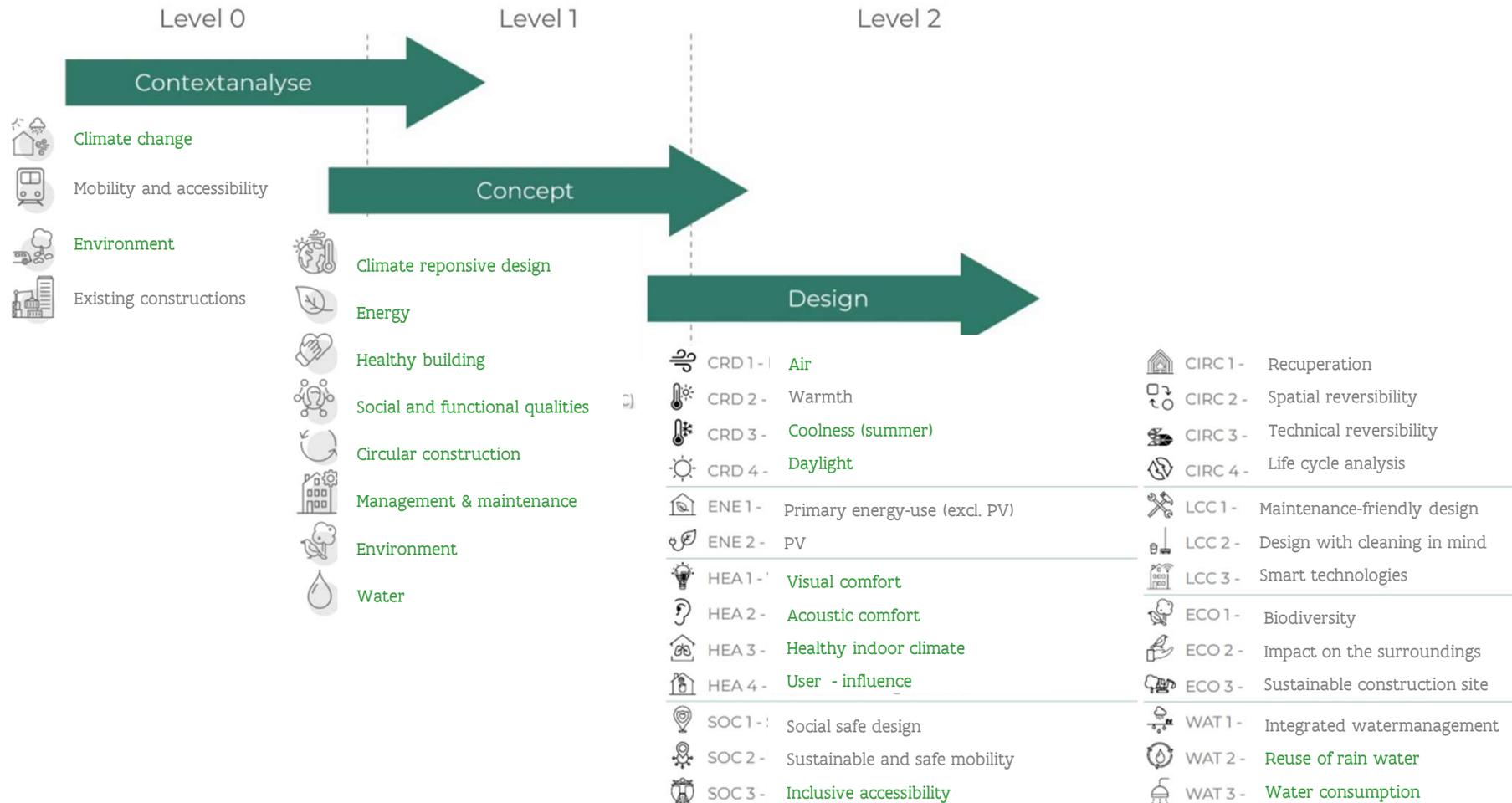


THE WELL BUILDING STANDARD™
SEVEN CONCEPTS FOR HEALTHIER BUILDINGS

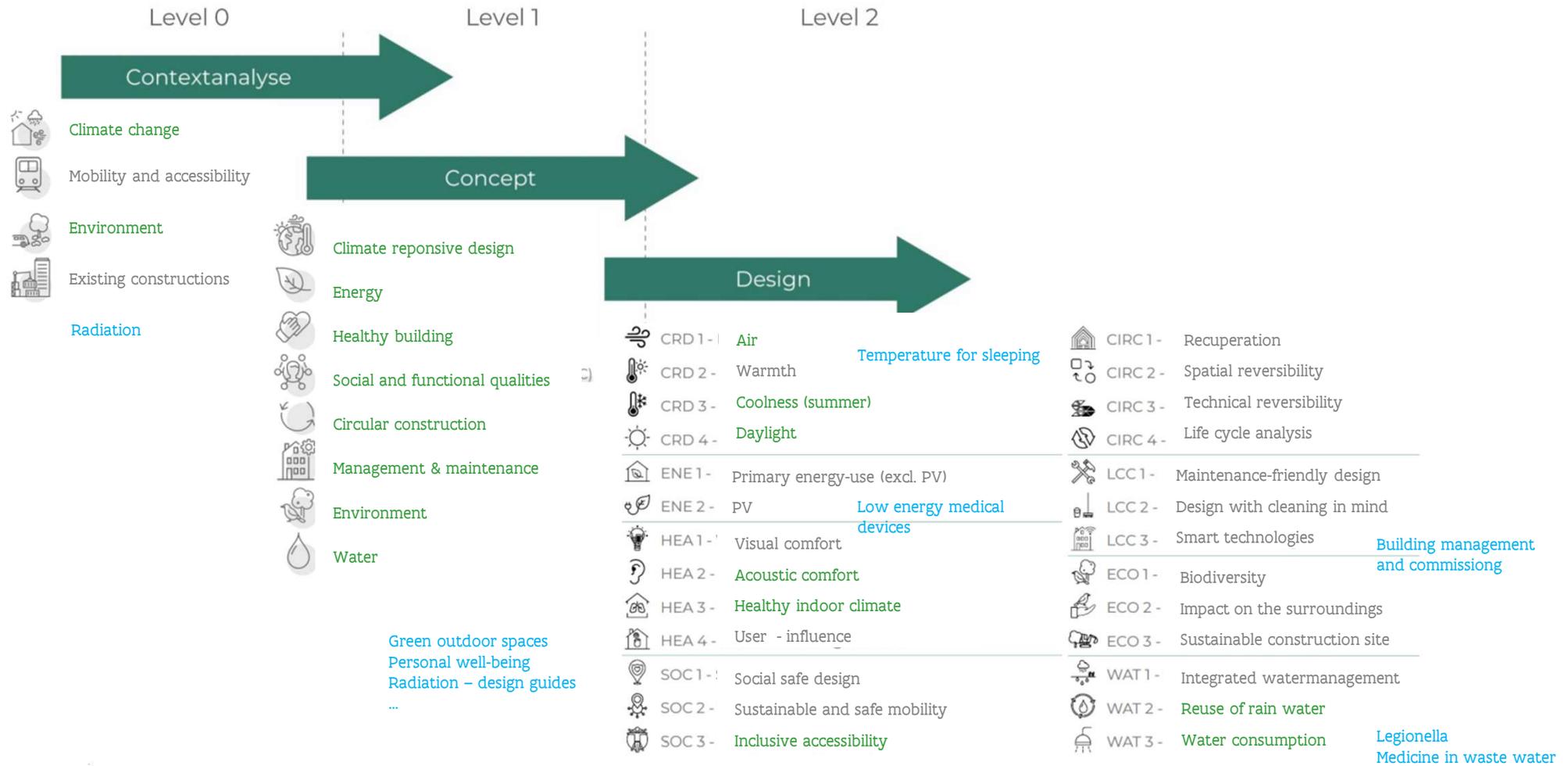








CARE SPECIFICATIONS



Background information

► Background information

→ health-orientated frameworks:

× WELL, BREEAM, DGNB, LEED

→ health-orientated guidelines:

× national: Advice High Health Council, ...

× international: Health Technical Memorandum (HTM), ...

× normative guidelines: EN 16798, EN 17073, ...

→ health-orientated advisory studies:

× national: Quality Manual ventilation, ...

× internal: EVZ Rapport Onderzoek Eisen Binnenklimaat Langdurige Zorg (NL)

→ academic literature:

× with preference for large literature reviews and meta-analysis

What is added/changed?

► Focus on health/healthcare sector relevant criteria

→ new criteria:

× cfr above

→ light criteria/methods:

× summercomfort

× daylight

× acoustics

→ extended criteria:

× temperature for sleep

× types of health recovery

× fixed RH bands

→ health critical spaces

× more strict demands

→ fighting myths:

× comfort models

× humidification

× temperature bands

× ...

What were the selection criteria for new/extended criteria?

► Focus on health/healthcare sector relevant criteria

→ new criteria:

× cfr above

→ light criteria/methods:

× summercomfort

× daylight

× acoustics

→ extended criteria:

× temperature band for qualitative sleep

× types of AHU heat recovery

× fixed RH bands for certain needs

× ...

→ health critical spaces

× more strict demands

→ fighting myths:

× comfort models

× humidification

× temperature bands

× ...

What reference did we use to select new criteria?

CARE SPECIFICATIONS

- ▶ **Focus on health/healthcare sector relevant criteria**
- ▶ **Robust scientific proven**
 - impact is proven through direct causal connection to known and documented physiological processes
 - impact is assumed to be proven through 'evidence based' statistical correlation
 - × many studies have a too small dataset
 - × many studies are not reproduced
 - × many studies underestimate the bias
 - × many studies are based on outdated methodologies

- impact is presumed, but not proven
 - × a lot of wishful thinking
 - × some are based on gutfeeling
- => these were not considered

Robust scientific proven

CARE SPECIFICATIONS

- ▶ impact is proven through direct causal connection to known and documented physiological processes

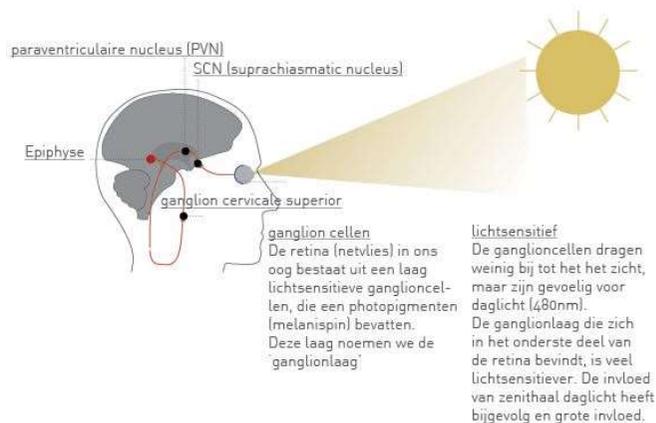
Stressors	Coping mechanisms	Diseases
	Anti-stress mechanism	Depression
Acoustical quality	Circadian rhythm	Obesity
Indoor air quality	Endocrine disruption	Diabetes
Lighting quality	Oxidative stress	Chronic respiratory diseases
Thermal quality	Inflammation, irritation	Cardiovascular diseases
	Cell changes, Cell death	Cancers

Source : Bluysens P.M., The need to go beyond the comfort-based dose-related indicators in our IEQ-guidelines. Building and Environment 283, 2025.

Robust scientific proven

CARE SPECIFICATIONS

- ▶ impact is proven through direct causal connection to known and documented physiological processes

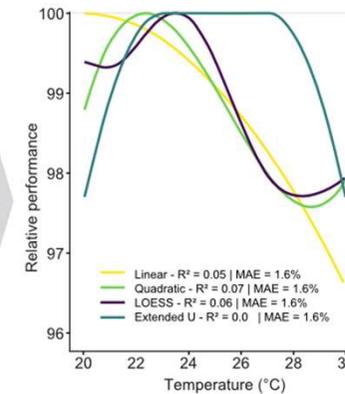
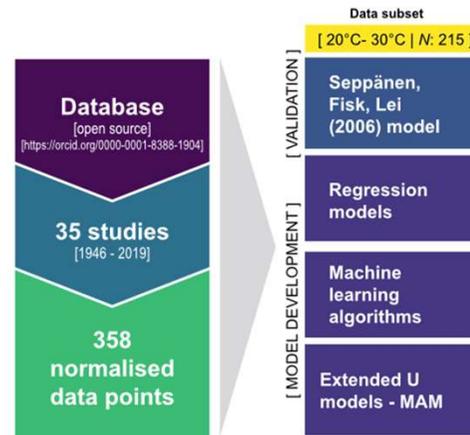
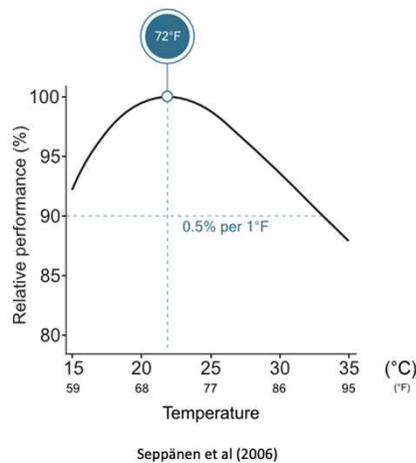


Robust scientific proven

CARE SPECIFICATIONS

- ▶ **impact is proven through ‘evidence based’ statistical correlation**

→ how it can go wrong...



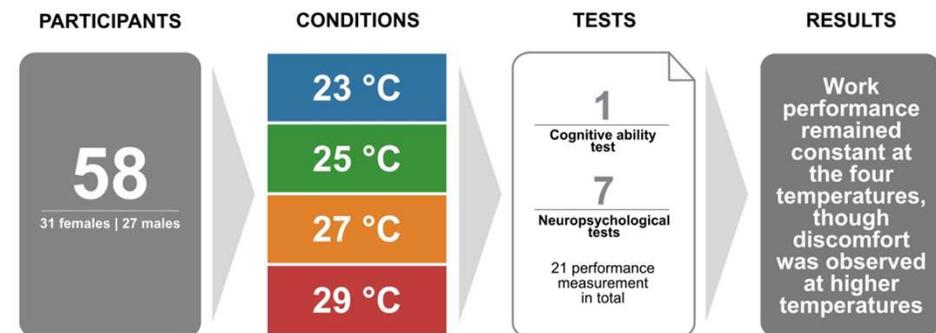
When aggregating data from different studies, we could not find a relationship between temperature and office work performance

Robust scientific proven

CARE SPECIFICATIONS

- ▶ **impact is proven through ‘evidence based’ statistical correlation**

→ how it can go wrong...



Do Typical Indoor Air Temperatures Affect Work Performance? No



Stefano Schiavon ✓
Professor at UC Berkeley



8 augustus 2024

Pragmatic integration

► how to integrate climate-related criteria in a sustainability framework?

→ Upfront risk assessment (Level 0)

- × draught risk
- × flooding risk
- × overheating risk

→ Detailed assessment (Level 2)

- × summercomfort
- × qualitative green outdoor spaces
- × biodiversity
- × water treatment
- × embodied carbon
- ×

Pragmatic integration

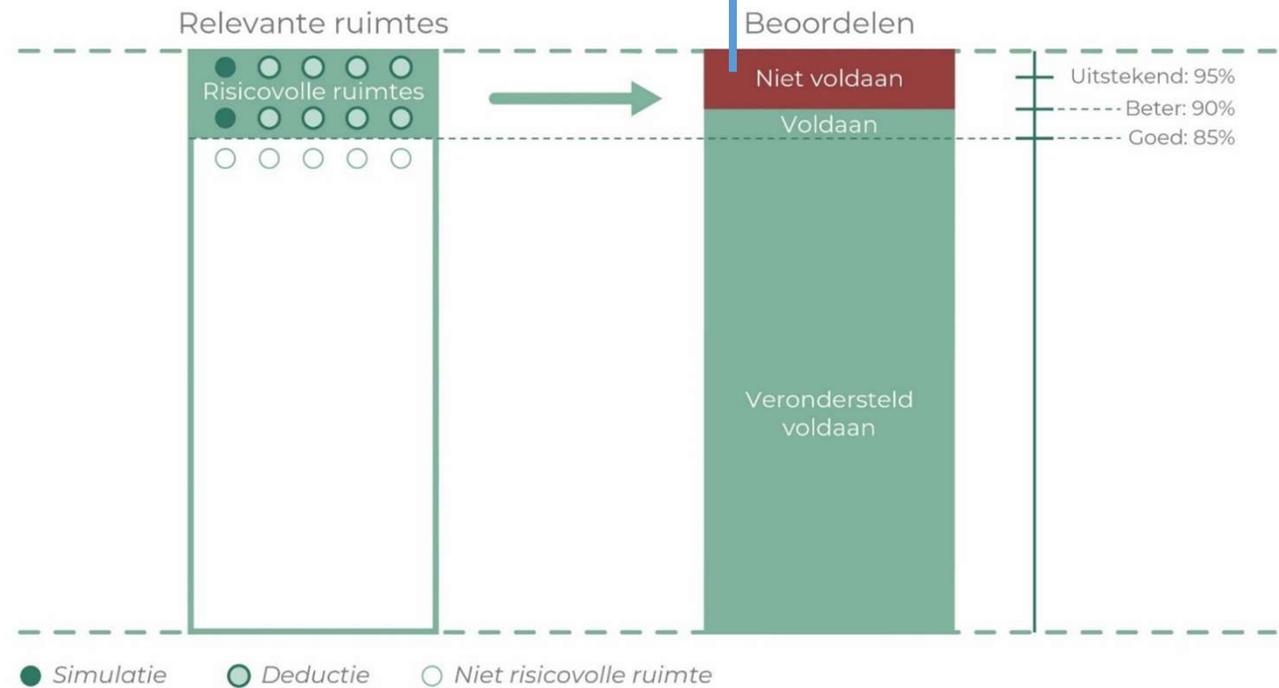
CARE SPECIFICATIONS

addition of 'health-critical spaces' which always need to comply

► **how to cope with verification load?**

→ simplification of evaluation

risk: some crucial spaces might not comply



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