

A photograph of a modern building's exterior. The facade features a grid of large, multi-colored windows in shades of blue, grey, and brown. A prominent curved glass section is visible on the right side. The sky is clear and blue.

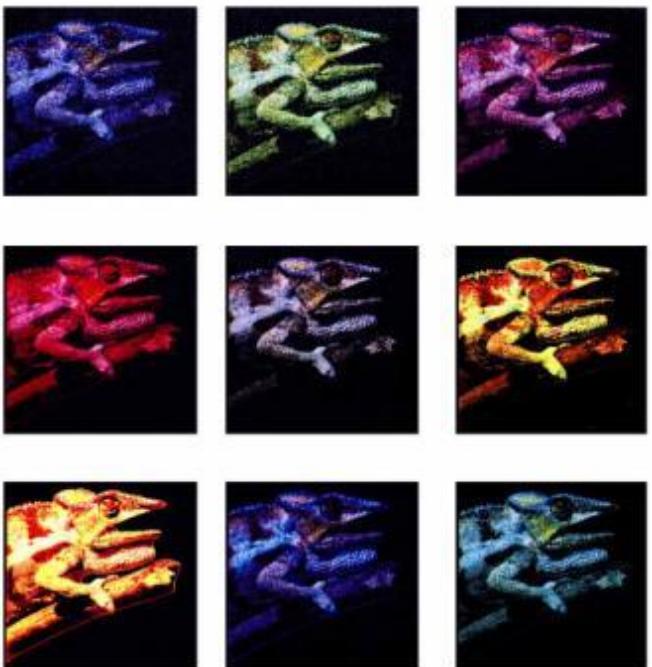
Duurzaam Gebouwd - Seminar Gezonde Gebouwen Unilever Foods Innovation Centre - Noud Paes



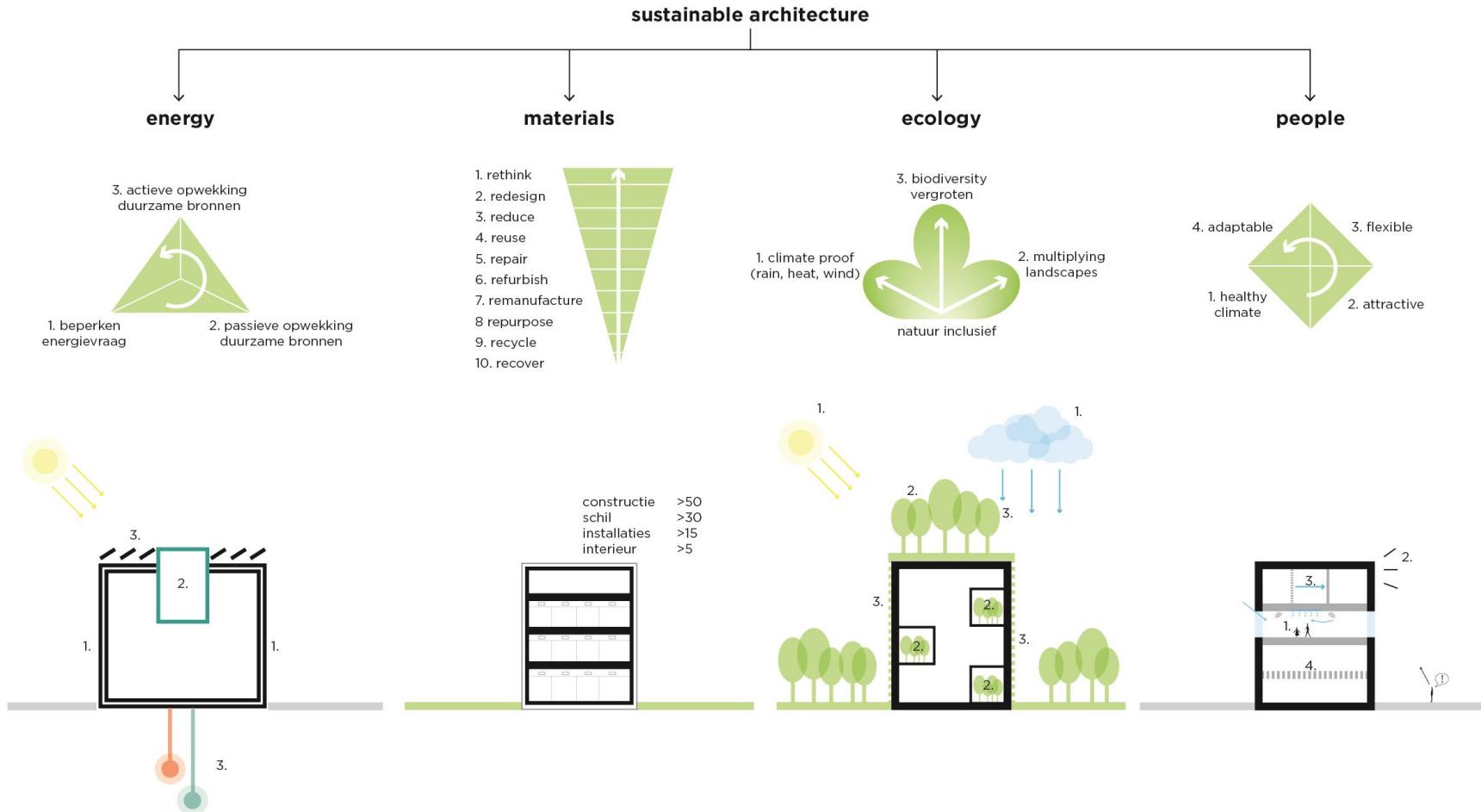
PAUL DE RUITER ARCHITECTS

THE CHAMELEON SKIN

IN RELATION TO ARCHITECTURE, TECHNOLOGY AND NATURE



DISSERTATION BY IR.PAUL DE RUITER









**Unilever
Global Foods Innovation Centre**

Wageningen University & Research

D&B: Dura Vermeer

40.850 m²

labs, offices, experience, restaurant,
pilot plant, parking

Delivery: mid 2019

BREEAM Outstanding

Team: Dura Vermeer, Paul de Ruiter Architects, DWA,
Fokkema & Partners, DGMR, Lucassen Constructies,
Hollander Techniek





FOODS INNOVATION CENTRE



Sustainable Sourcing

Healthy Products

From Farm to Fork



Sustainable Sourcing

Search for Future Foods

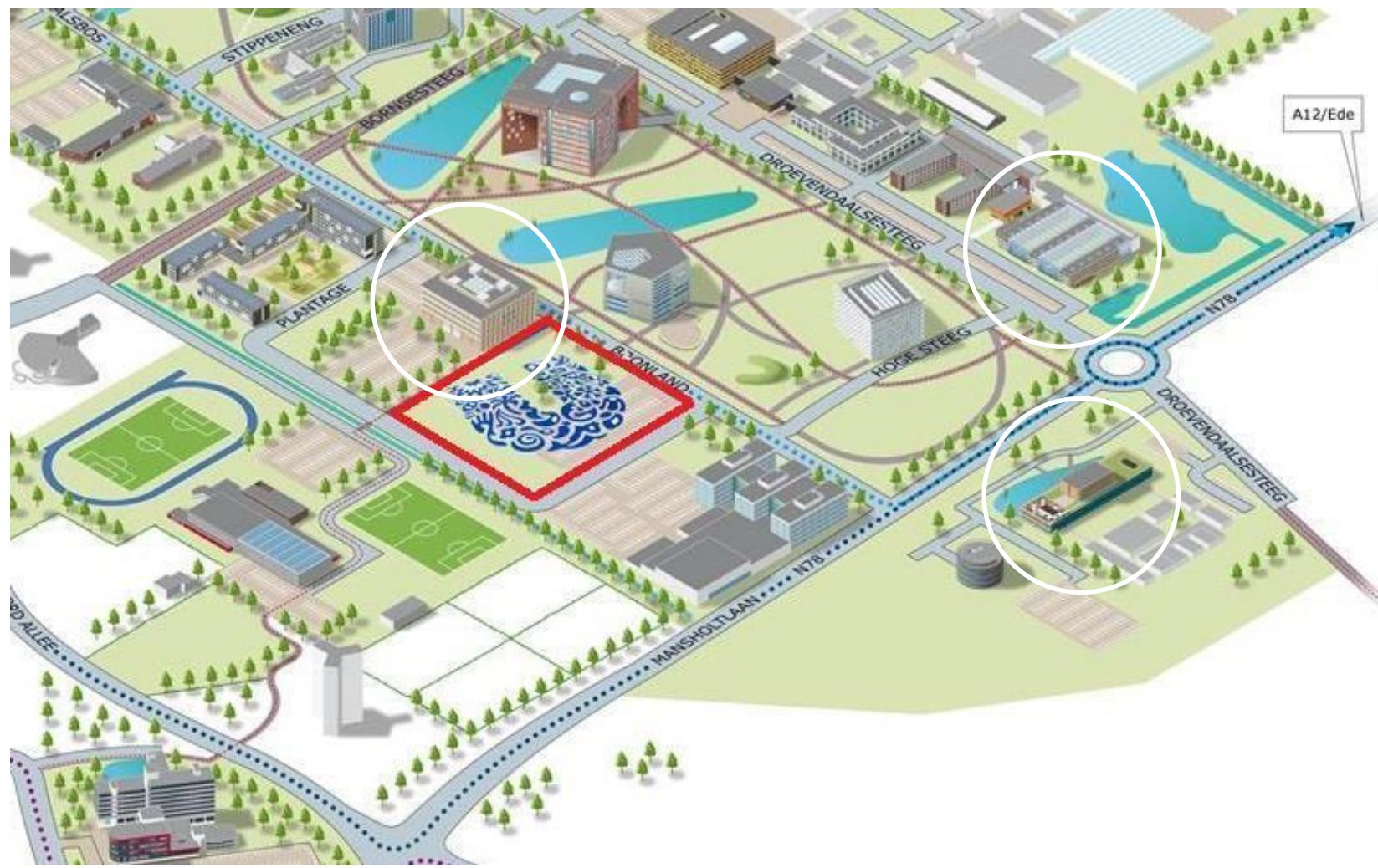
Healthy Products

From Farm to Fork

FOODS INNOVATION CENTRE

An inspiring place where Food Innovators – researchers / developers and marketeers – can meet and work together towards a healthy and sustainable world.





Wageningen University & Research – locatie FiC

TO WAGENINGEN CENTRE



The Strip

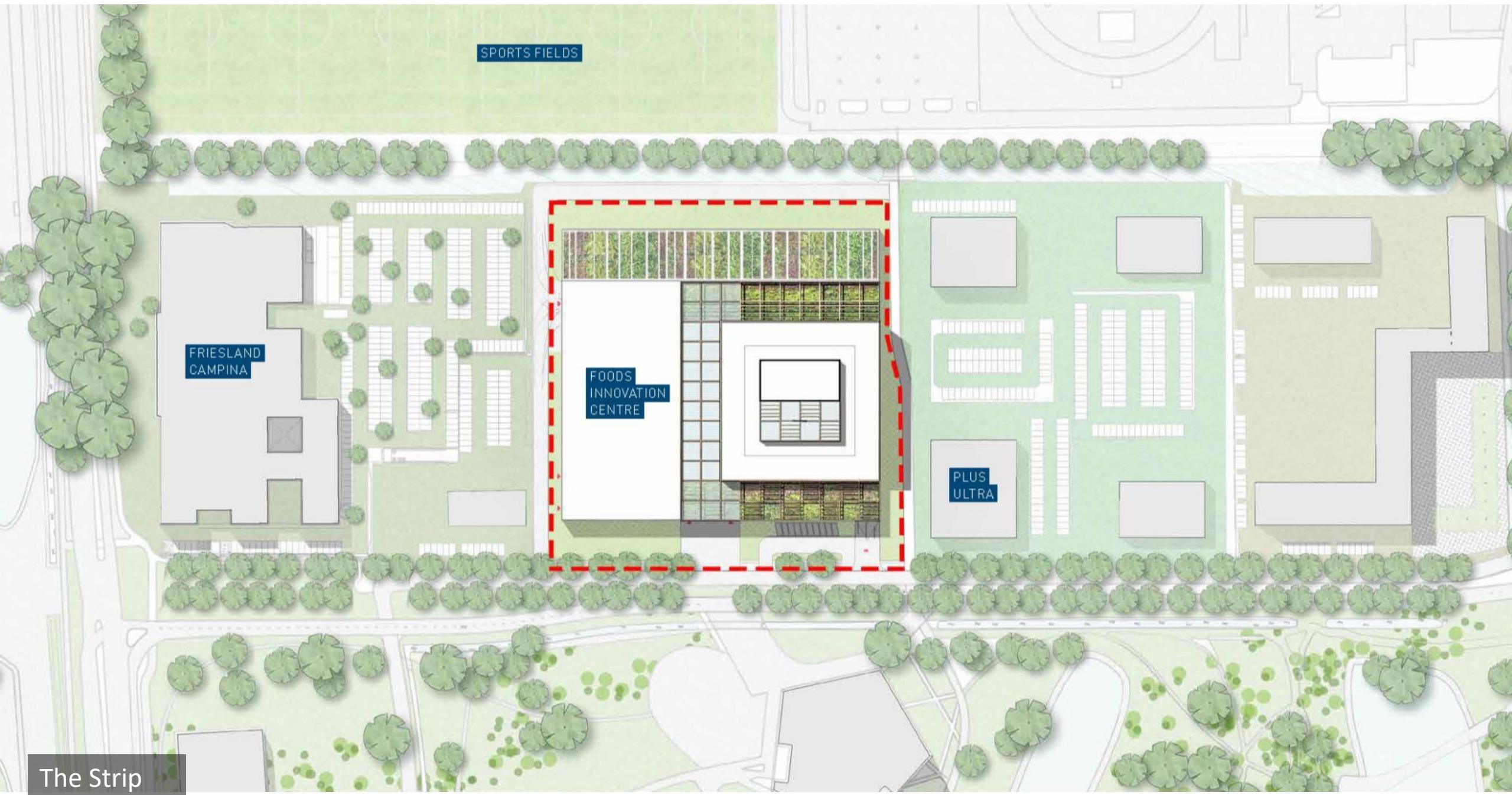


TASTE TESTING GARDENS



WELCOMMING, GREEN ENTRANCE





The Strip



Connectief gebouw in het hart van de Campus



Connectief gebouw in het hart van de Campus

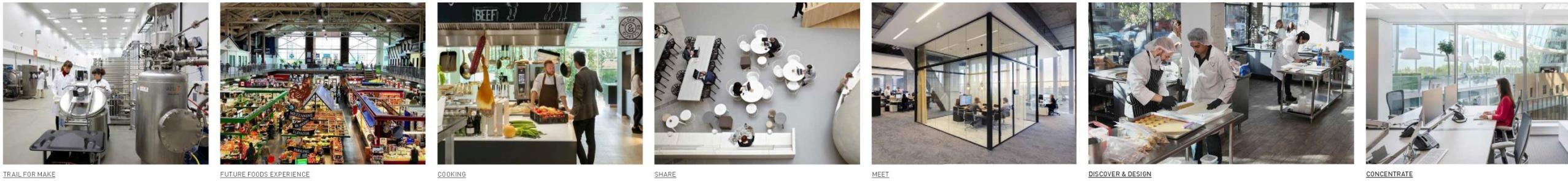


Unilever

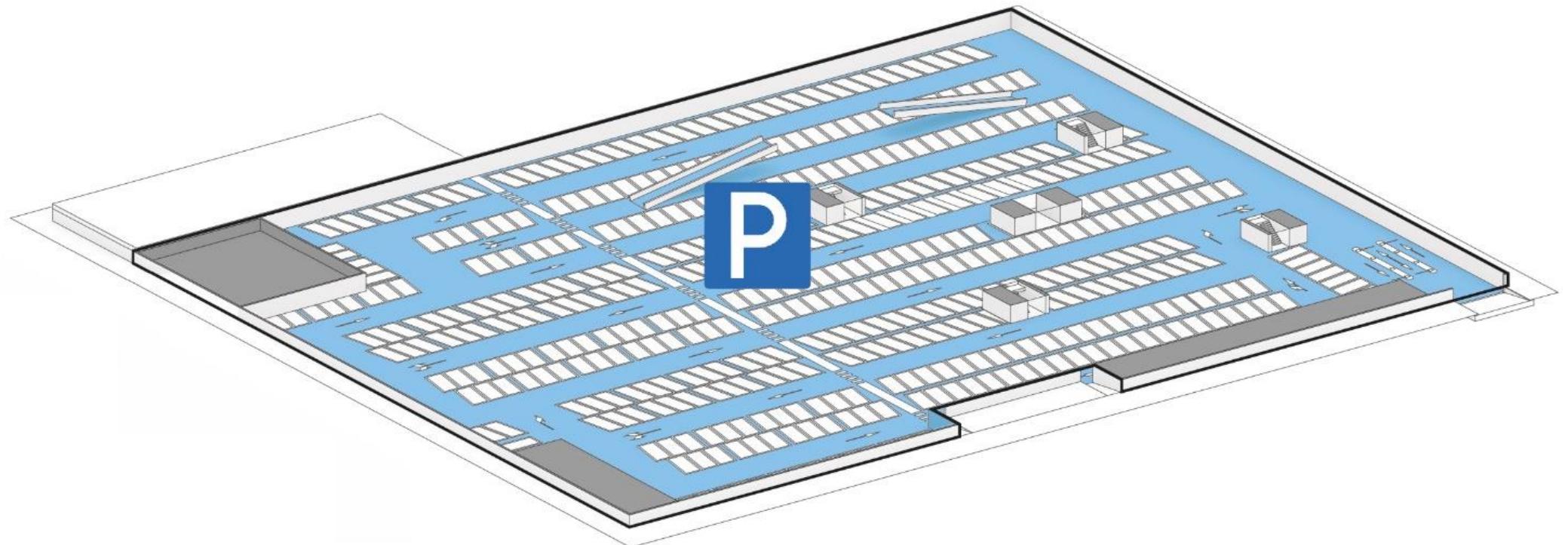


Building Lay-out

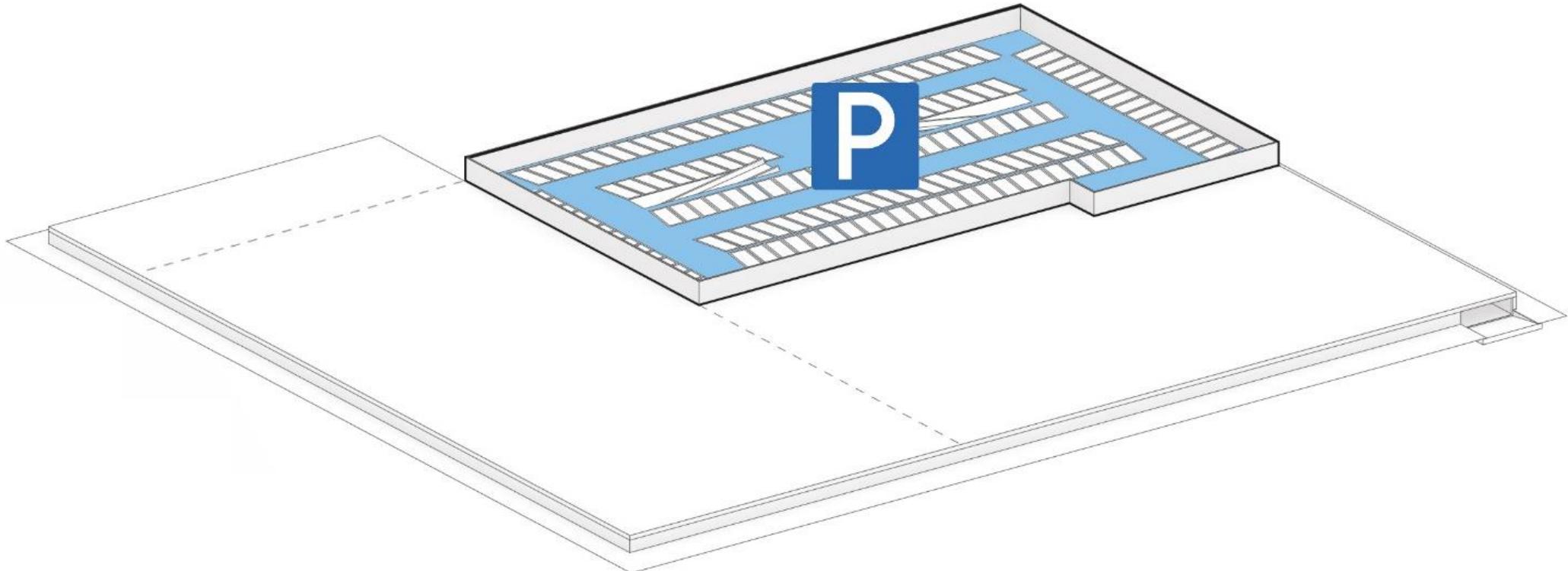




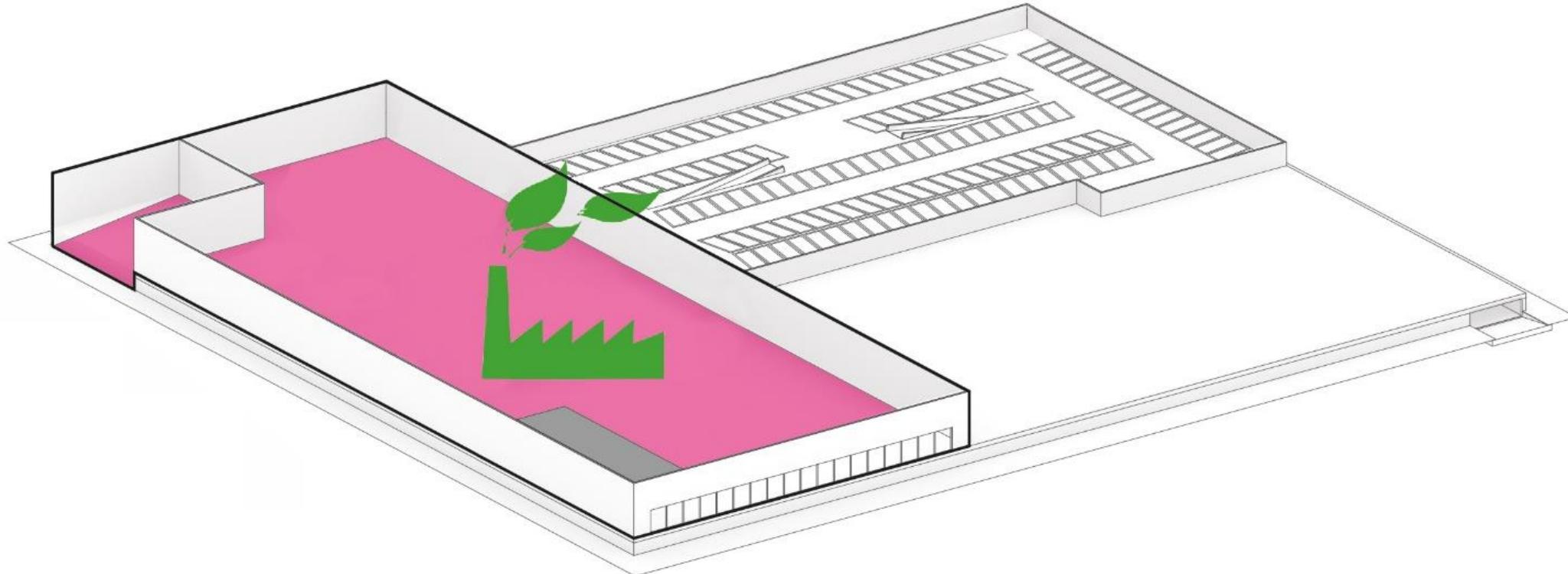
Program



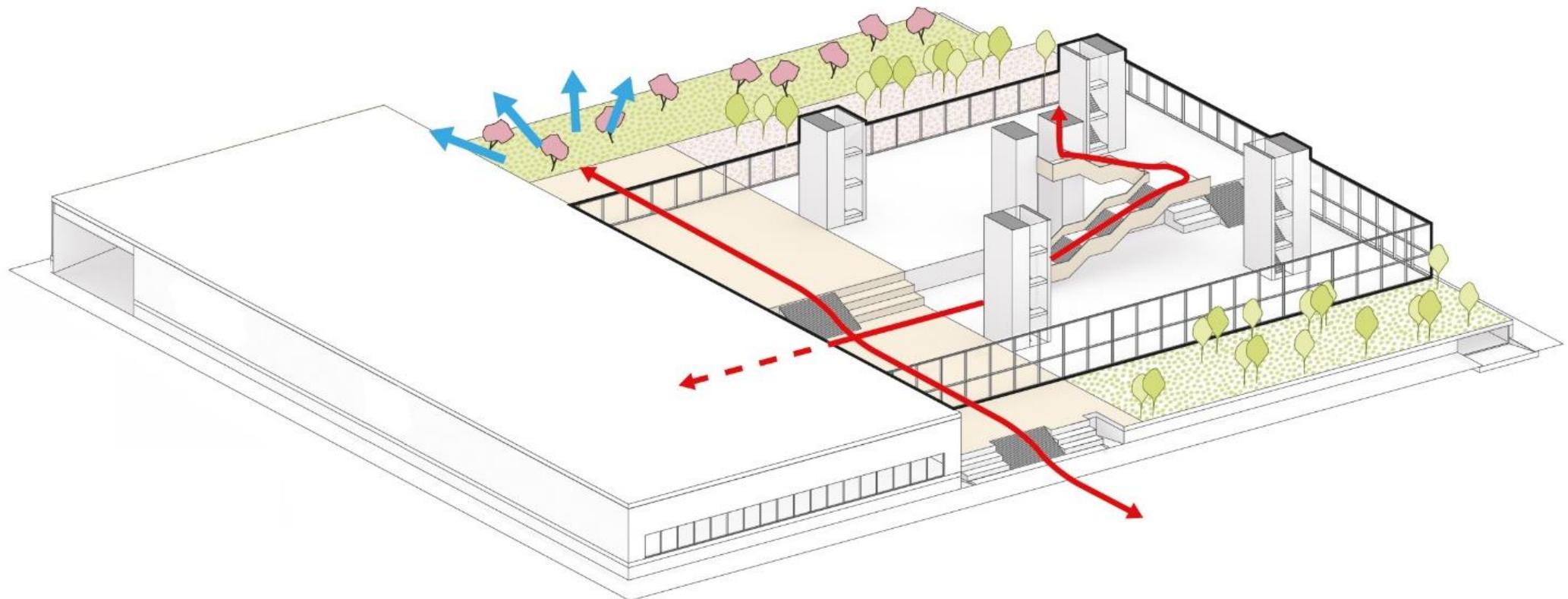
-1: semi-sunken Parking Garage & Bicycle storage



0: Parking Garage



0: Pilot Plant



0 & 1: Future Foods Experience



Unilever



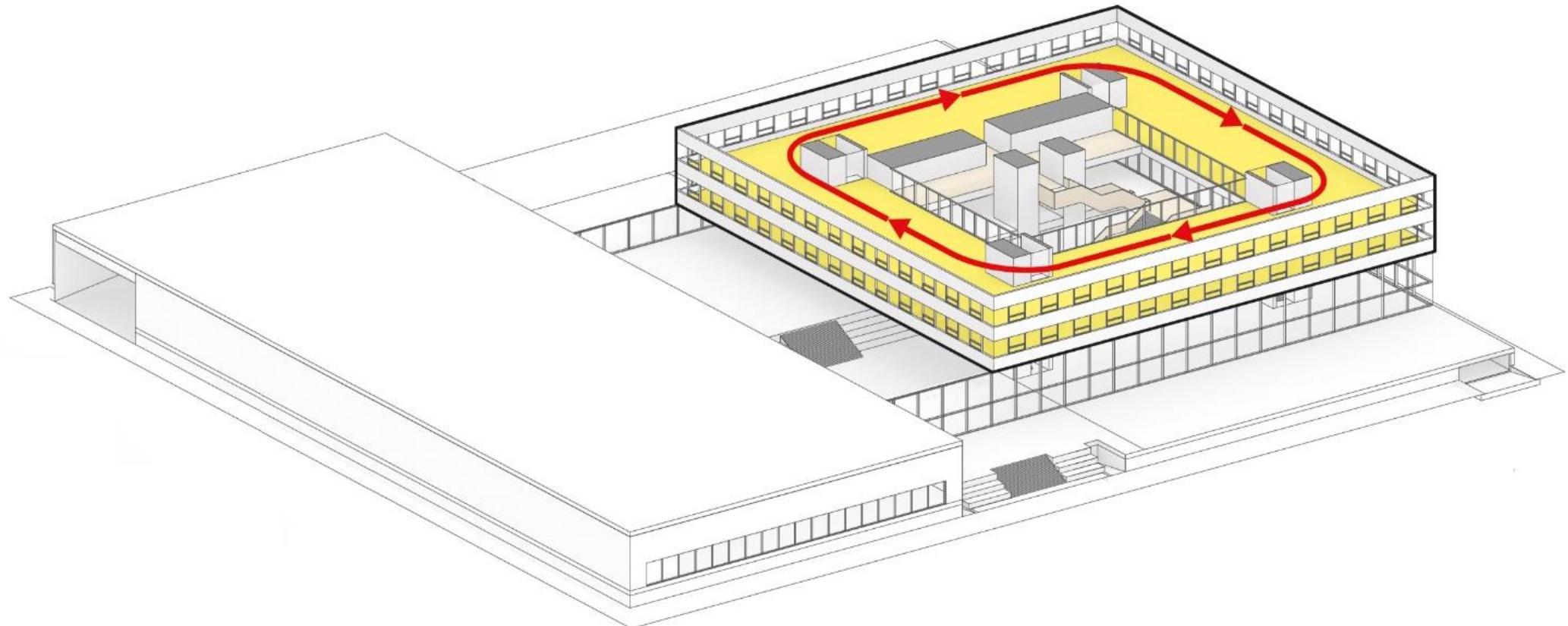
TEABAR

HELLMANN'S

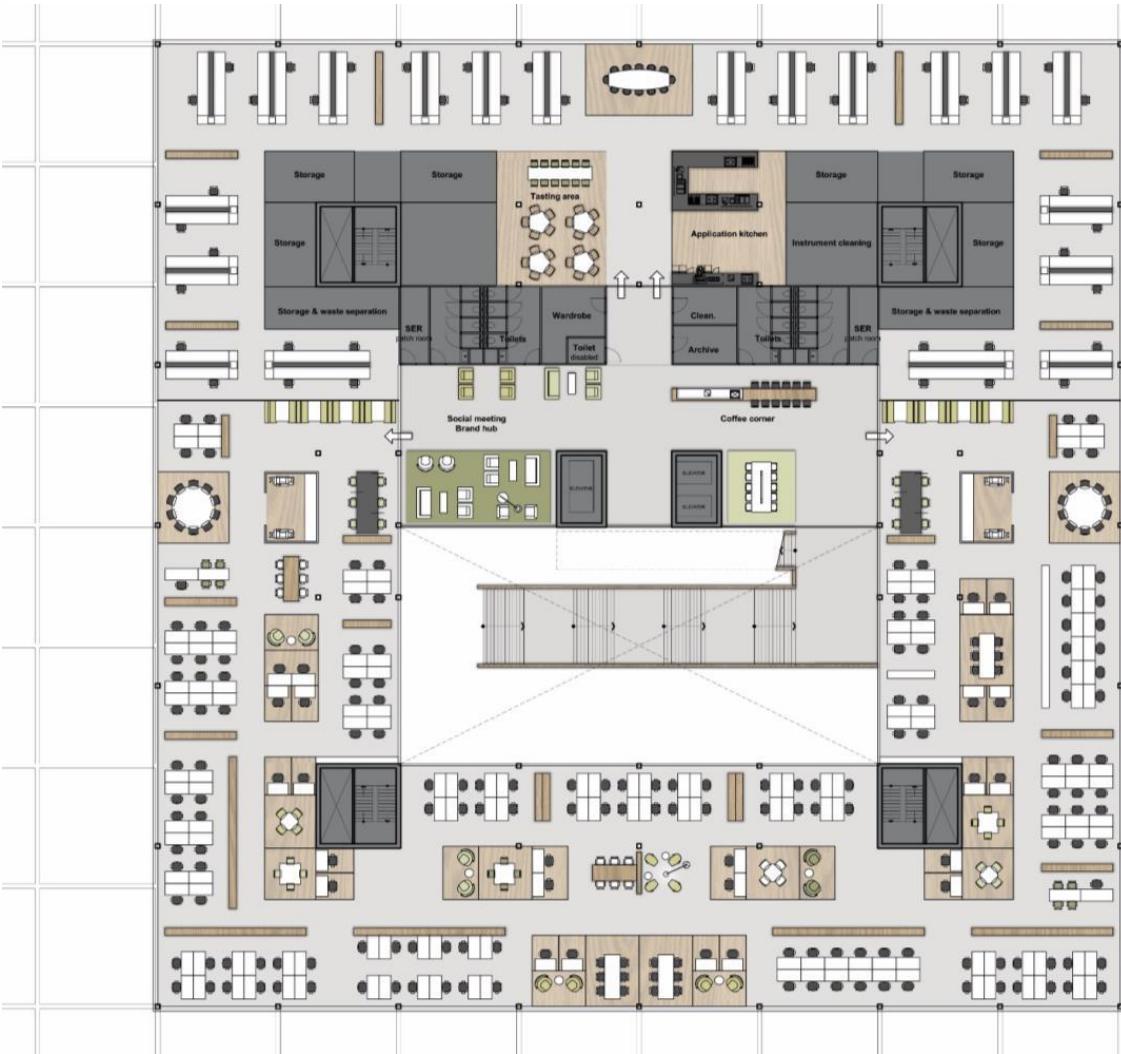
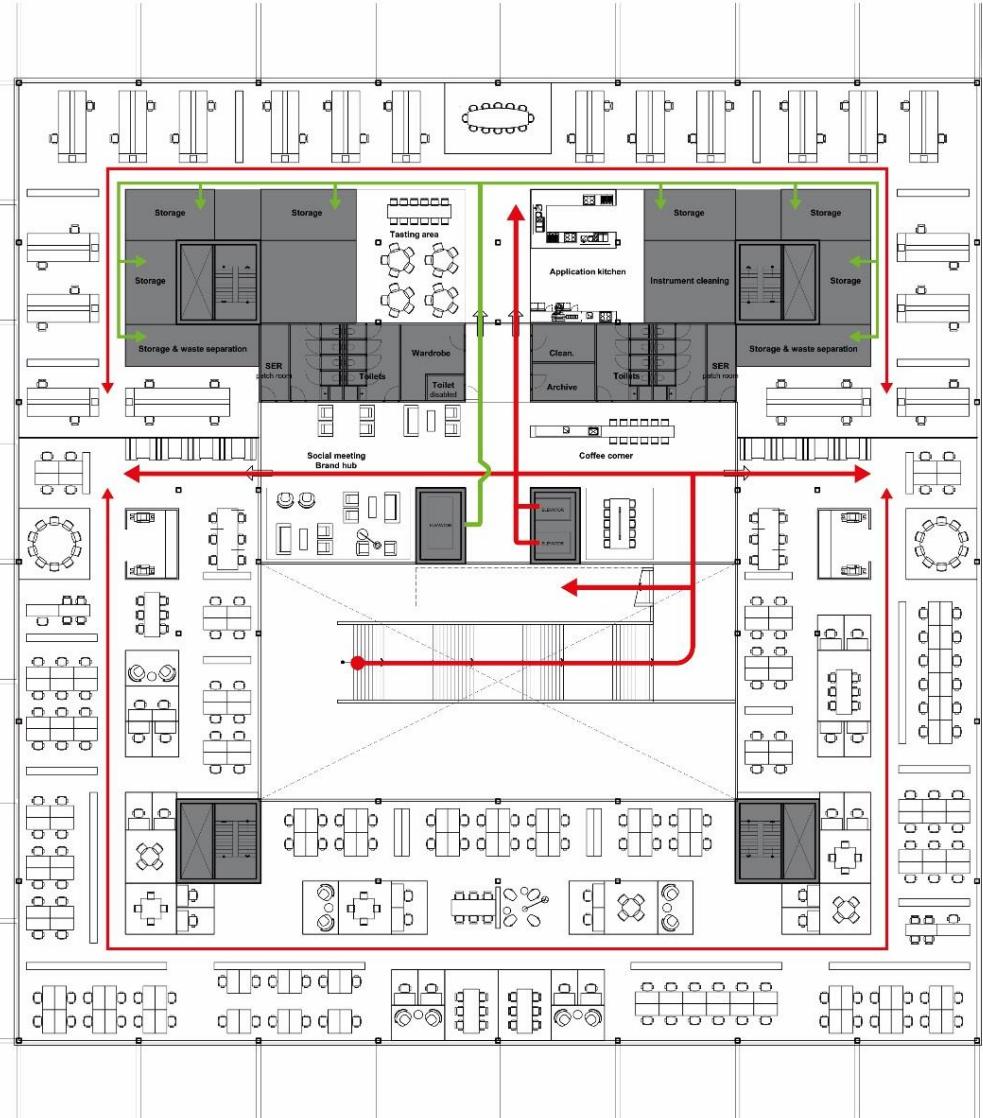
Calvé





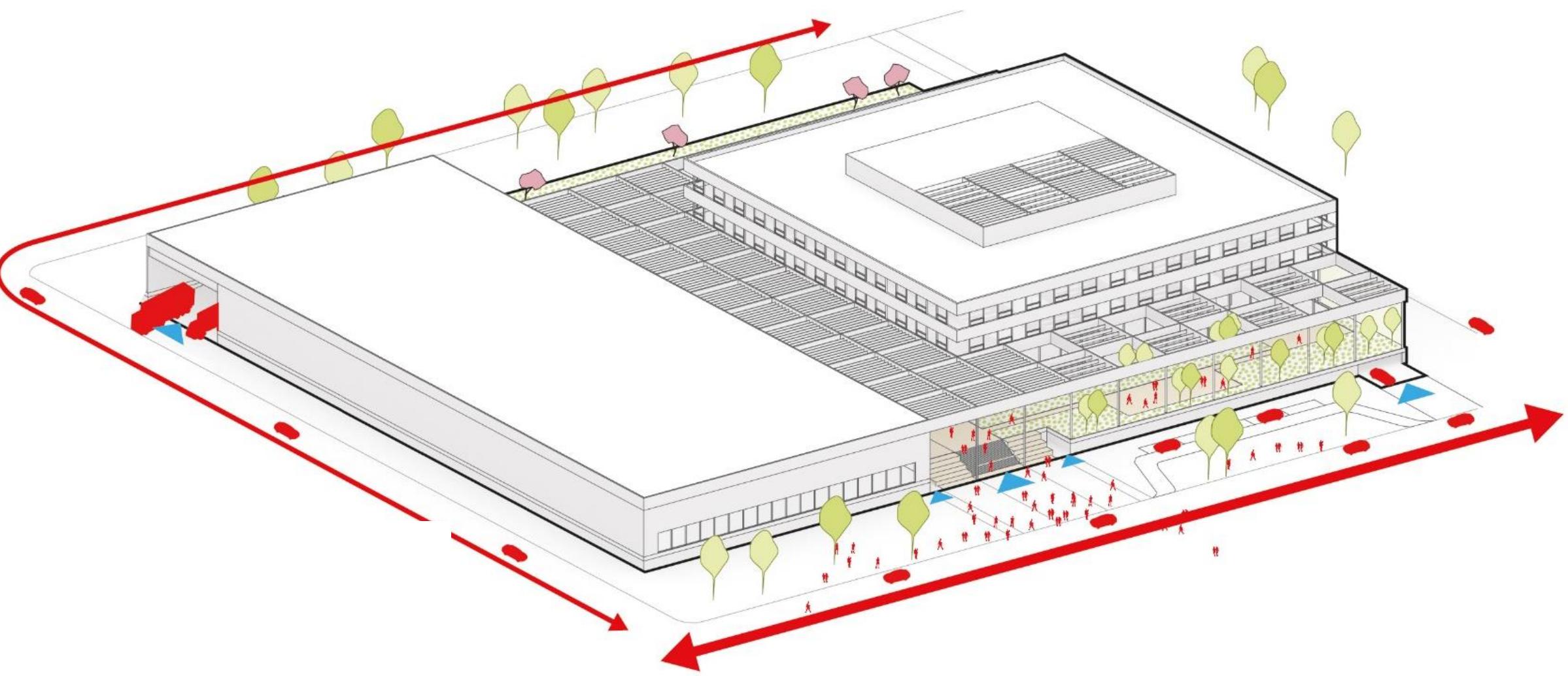


2 & 3: Labs and Offices

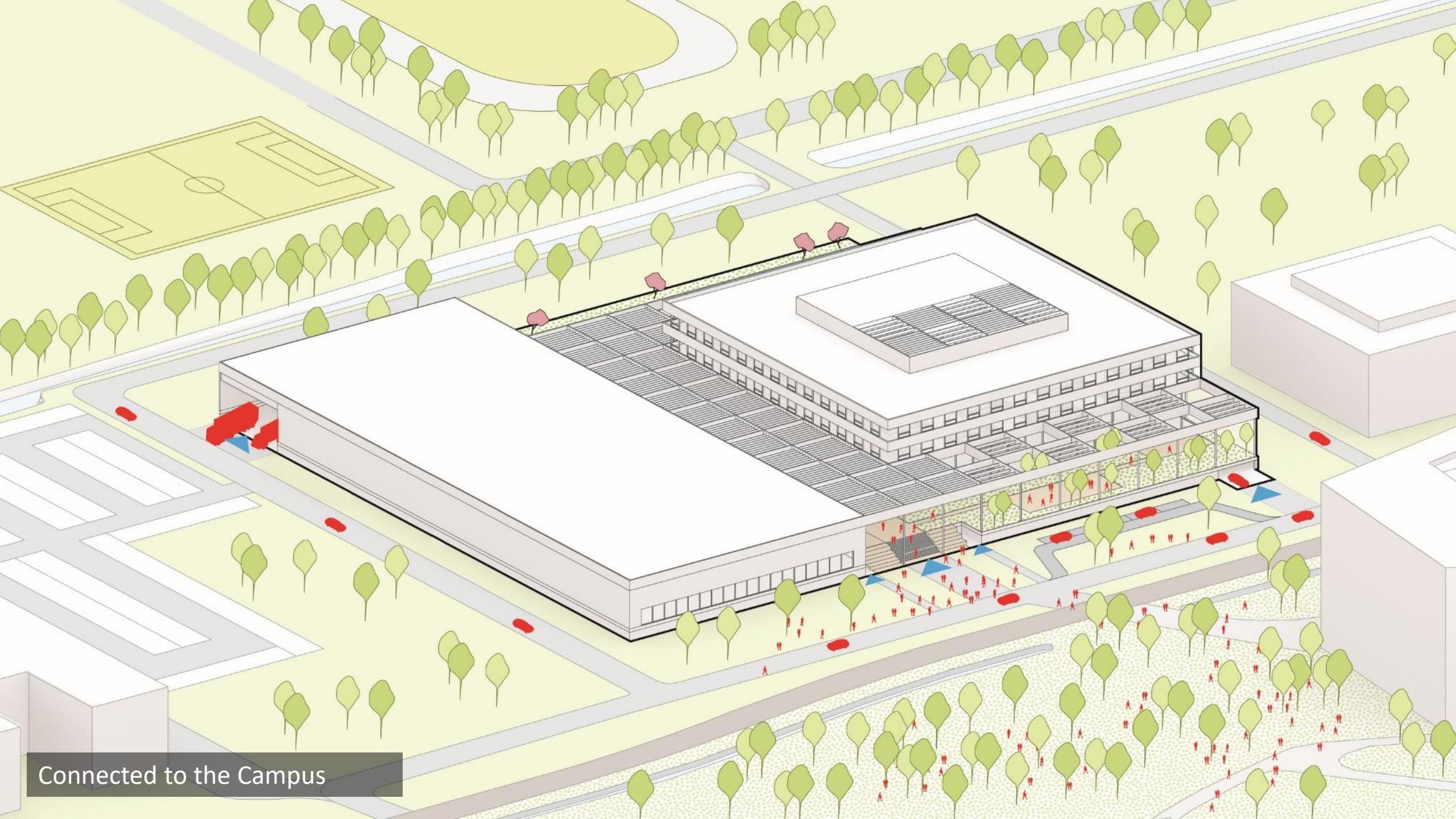


Flows & Flexible Lab/Office Floors





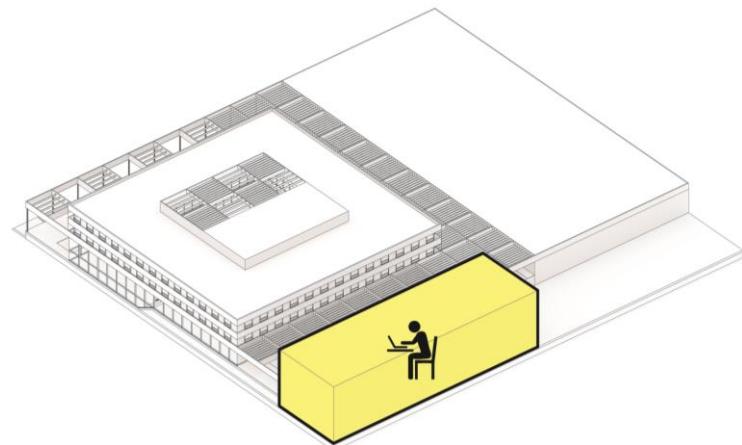
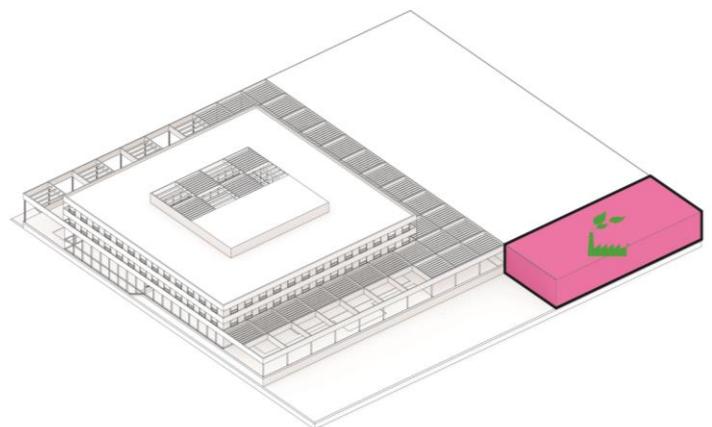
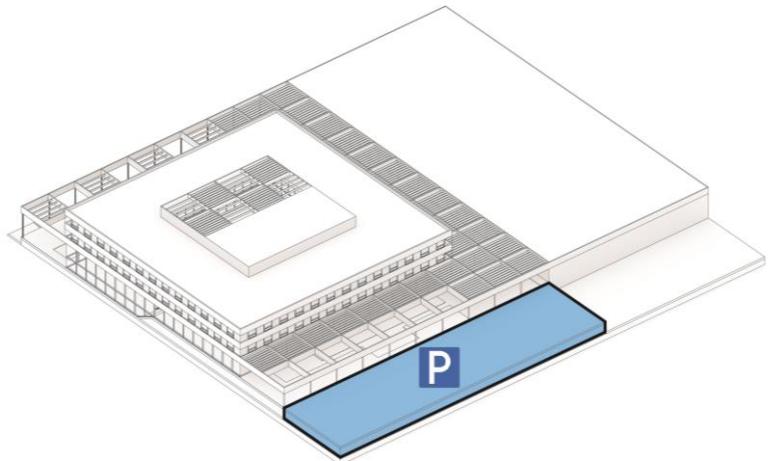
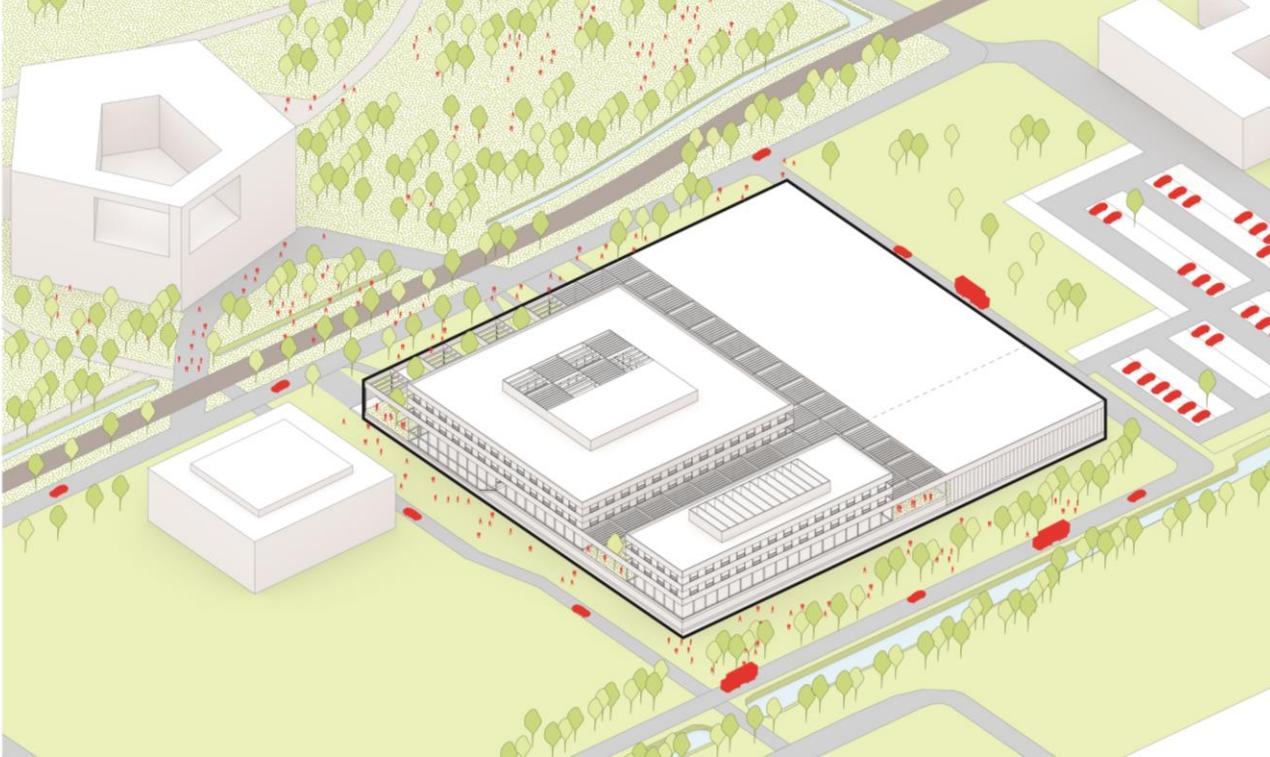
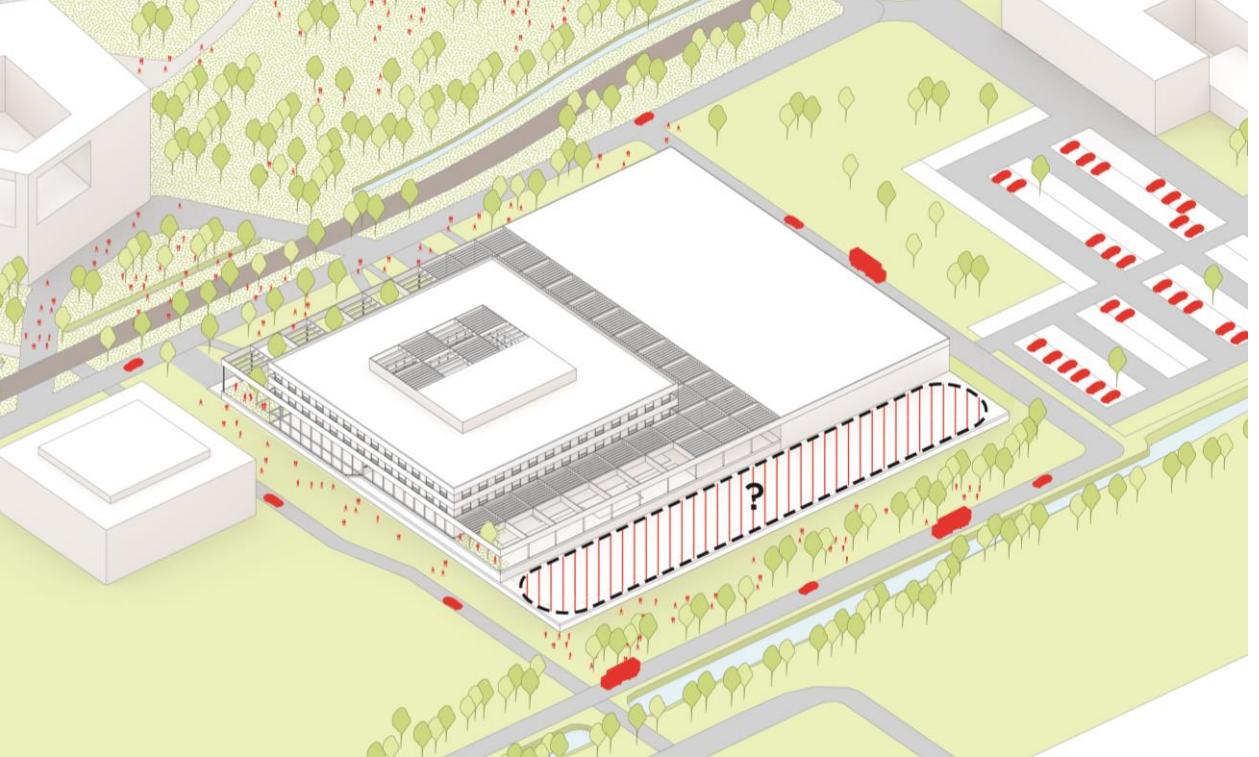
Logistics & Entrances



Connected to the Campus







Future Proof

Sustainable & Healthy



Fluor, Hoofddorp: BREEAM Excellent

HUMAN VALUES



WATER & GREEN IN BUILDINGS



FITNESS & MOTION

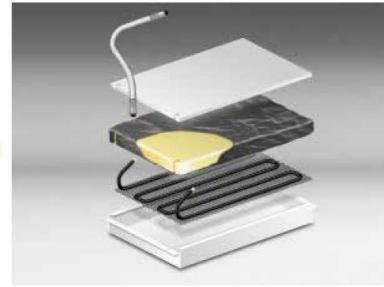


NOURISHMENT & HEALTHY FOODS

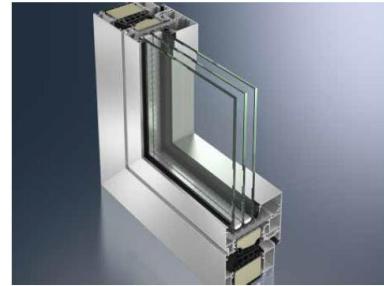
TECHNICAL QUALITY



SOLAR PANELS



CLIMATE CEILINGS



EXELLENT INSULATION

BREEAM OUTSTANDING

BREEAM® NL

| BREEAM-Score | | | | | |
|-------------------------|---------|-------------|------|--------|-------------|
| TOTAAL | | | | | |
| Categorie | Behaald | Max. punten | % | Weging | Score |
| Management | 16,0 | 16,0 | 100% | 12,0% | 12,00% |
| Gezondheid en comfort | 14,0 | 15,8 | 90% | 15,0% | 13,48% |
| Energie | 28,7 | 28,7 | 100% | 19,0% | 19,00% |
| Transport | 12,0 | 12,0 | 100% | 8,0% | 8,00% |
| Water | 8,0 | 8,0 | 100% | 6,0% | 6,00% |
| Materialen | 12,0 | 17,0 | 71% | 12,5% | 8,82% |
| Afval | 7,0 | 7,0 | 100% | 7,5% | 7,50% |
| Landgebruik en ecologie | 8,0 | 11,0 | 73% | 10,0% | 7,27% |
| Vervuiling | 10,0 | 12,0 | 83% | 10,0% | 8,33% |
| Innovatie | 5 | 10 | 50% | 10,0% | 5,00% |
| | 115,7 | 127,6 | | | 95,41% |
| RESULTAAT | | | | | Outstanding |
| | | | | | ★ ★ ★ ★ ★ |

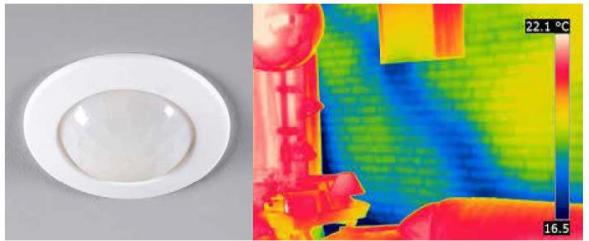
Controle verplichte credits: Akkoord

| | |
|-------------------|-----------|
| 0% Geen resultaat | ★ |
| 30% Pass | ★ ★ |
| 45% Good | ★ ★ ★ |
| 55% Very good | ★ ★ ★ ★ |
| 70% Excellent | ★ ★ ★ ★ ★ |
| 85% Outstanding | ★ ★ ★ ★ ★ |

INNOVATION CREDITS

INNOVATIONS THAT ARE:

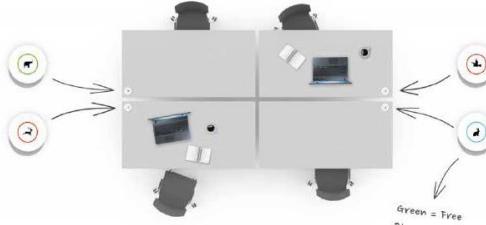
- PRODUCING ENERGY
- IMPROVING HEALTH
- AN INSPIRATION TO PEOPLE
- VISUAL
- WORLD CLASS
- SETTING THE NEXT LEVEL



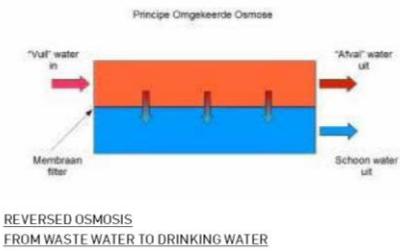
THERMOGRAPHIC SENSOR IN THE LOWERED CEILING



BIOGAS INSTALLATION



SMART WORKPLACE SENSORS TO IMPROVE VITALITY



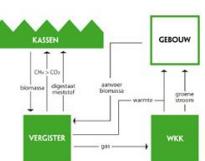
REVERSED OSMOSIS FROM WASTE WATER TO DRINKING WATER



WORKPLACE MANAGEMENT BASED ON SMART DATA



CLOSING THE LOOPS BY USE OF GREENHOUSE



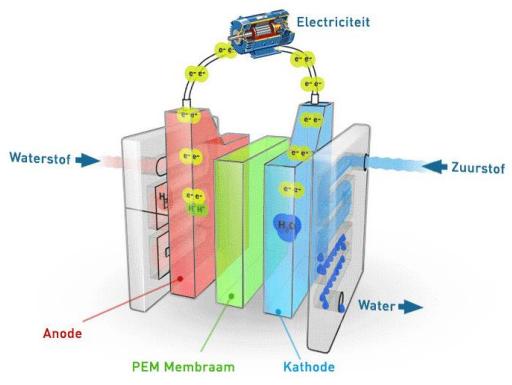
RE-USE OF ENERGY OUT OF WASTE WATER



TESLA POWERPACK



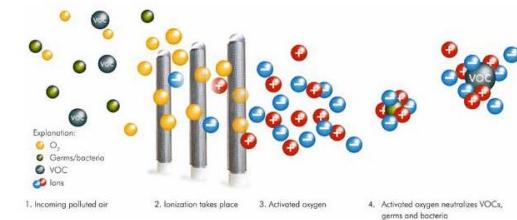
REFURBISHED TECHNICAL INSTALLATIONS



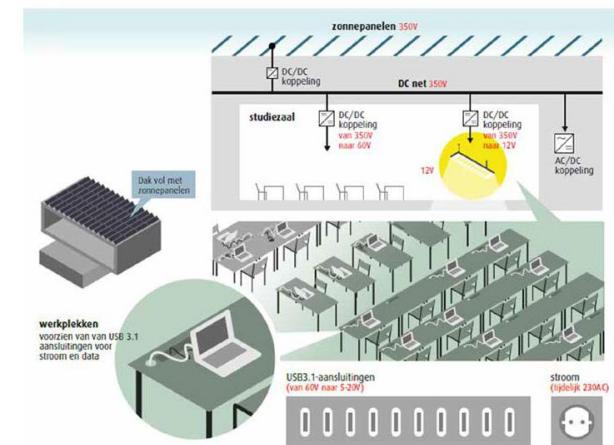
HYDROGEN FUEL CELLS



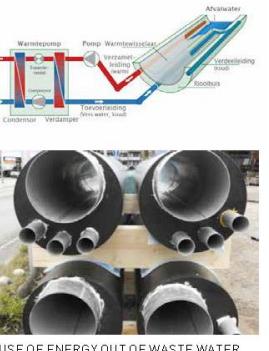
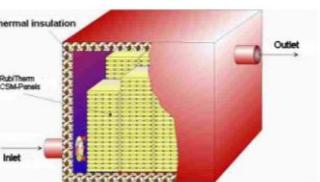
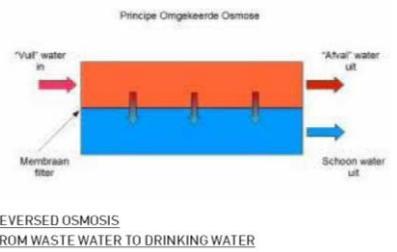
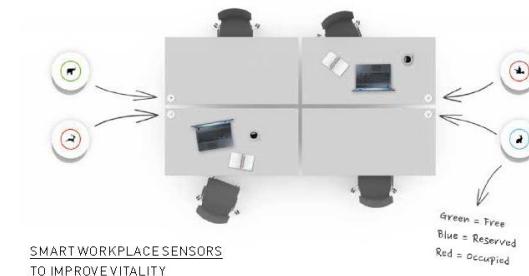
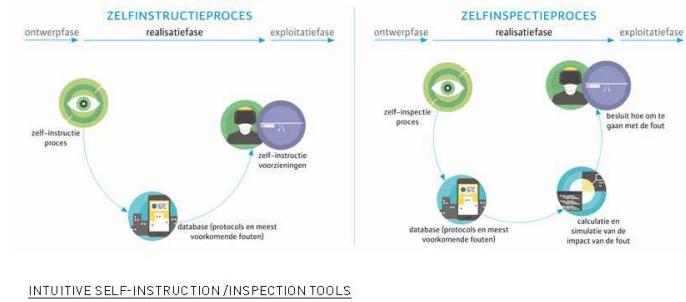
INTUITIVE SELF-INSTRUCTION/INSPECTION TOOLS



CLEANING VENTILATION AIR BY IONISATION



ENERGY EFFICIENT DC-NET



KASSEN

GEBOUW

VERGISTER

WKK

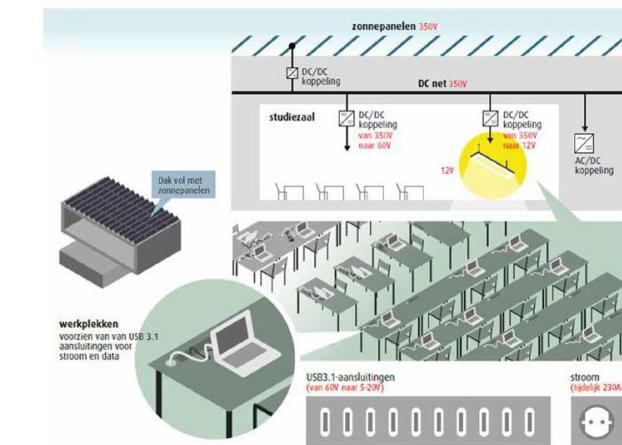
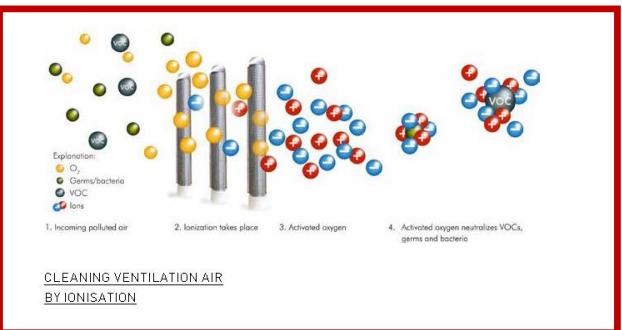
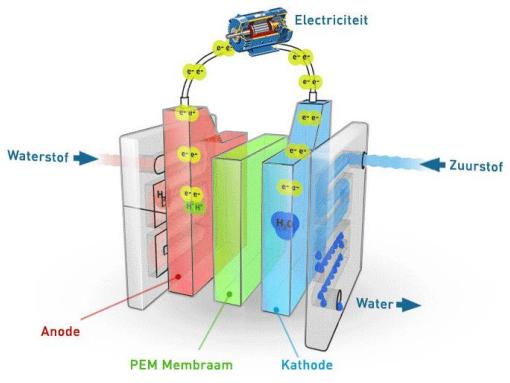
biomassa

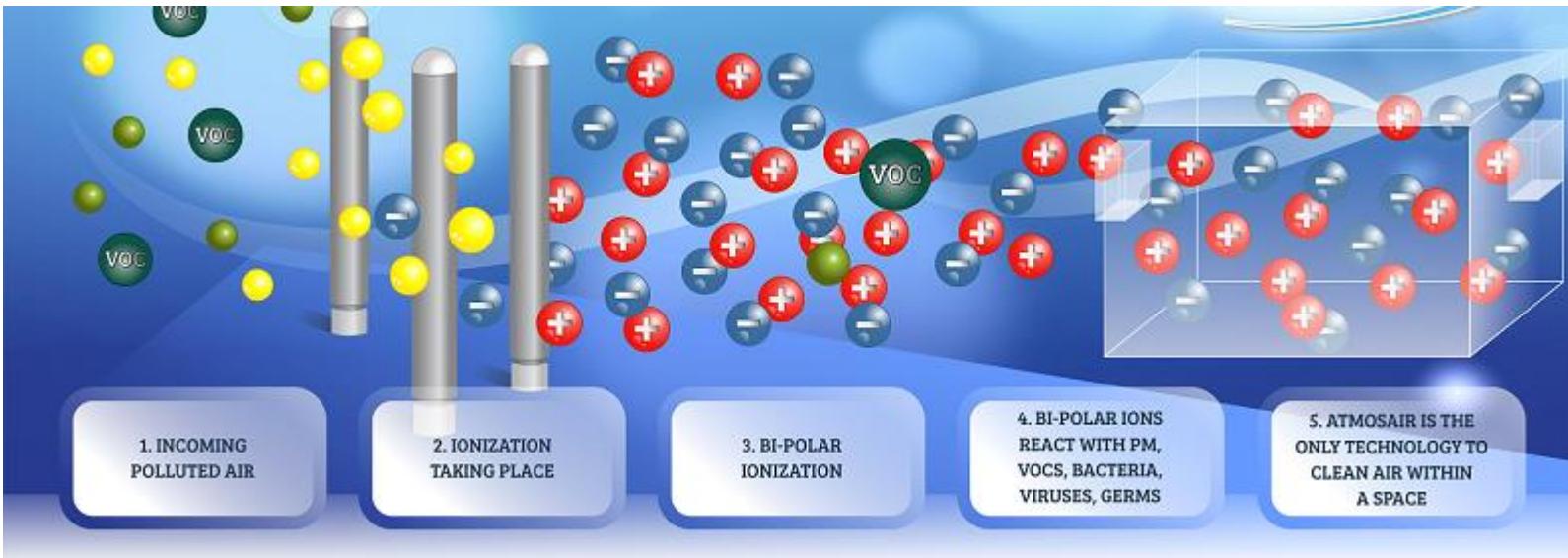
CH + CO₂

saneer biomassa

warmte

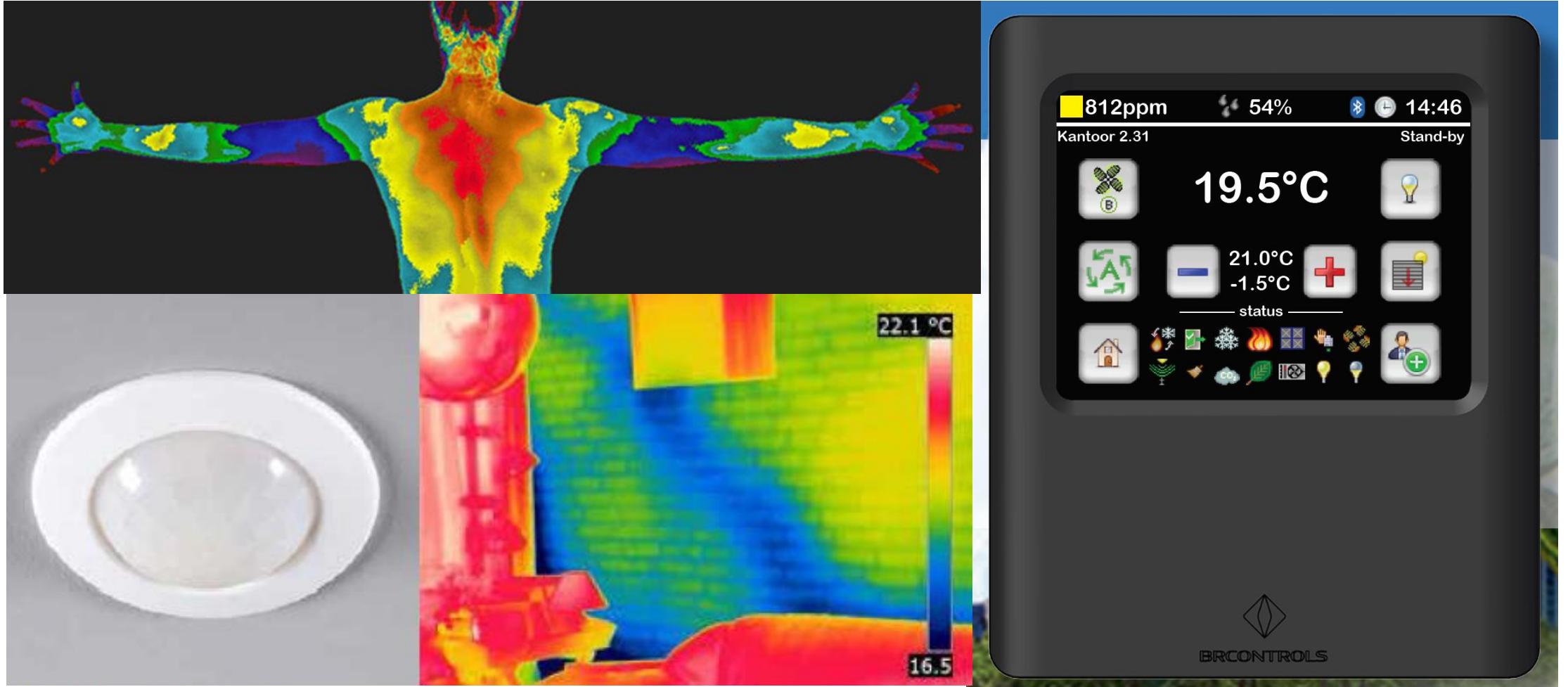
grootte





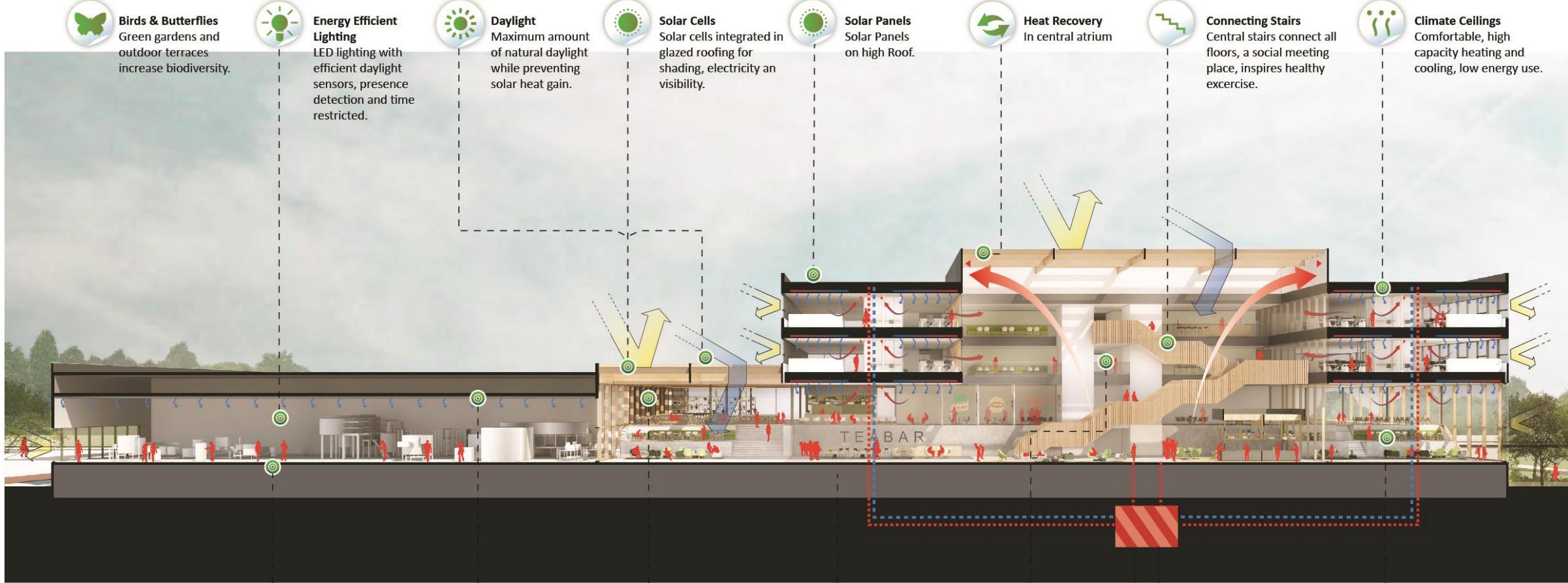
| Proposed innovations | Technical feasibility for Unilever | Structural work | Systems-related | Impact on sustainability | Degree of innovation (innovation credit for BREEAM) | Financial impact |
|---|---|-----------------|------------------|-------------------------------------|---|--|
| Ionisation: Purification of ambient air. | ++ Techniques are available and have been researched | - | Addition in AHUs | + Focus on healthy and clean air | + | +/- The extra investment will be recouped during operation based on TCO |

Cleaning ventilation air by ionisation



| Proposed innovations | Technical feasibility for Unilever | Structural work | Systems-related | Impact on sustainability | Degree of innovation (innovation credit for BREEAM) | Financial impact |
|--|---|-----------------|-----------------|--------------------------|---|---|
| Multi-sensor system for thermographic measurement in the room | ++ Techniques are available and have been researched | - | Yes | +++ | + | +/- Additional investment will be recouped during operation based on TCO |

Thermographic Sensing to Personalize Comfort



BREEAM Outstanding 91,23 %



Unilever



1 Queen Anne's Gate, UK

Ratten 4, Sweden

Rhyl New School, UK

1-9 Seymour Street, UK

Scherpenhuizen B.V.,
Netherlands

Unilever Food Innovation Center, Netherlands



Unilever's centre on the Wageningen University campus will strengthen the company's ability to develop cutting edge sustainable food innovations in collaboration. The centre's design has been rated BREEAM Outstanding and focuses on the themes of: health, flexibility, energy usage, and material efficiency and circularity. It houses a pilot plant or mini-factory, a food and customer experience area, offices and laboratories, and is intended to be inspiring, sustainable and practical as well as facilitating innovative ways of collaborating.

[Vote for Unilever Food Innovation Center, Netherlands](#)

Tianjin Shangdong,
Jinmao Palace, China

Turyn Office, Poland

University College London
Hospital Phase 4 Inpatient
Hospital and Proton Beam
Therapy Centre, UKUnilever Food Innovation
Center, NetherlandsUniversal Music Group UK
HQ

P

D

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PAUL DE RUITER ARCHITECTS