

Session 9: Supportive work environments

Sustainable Wellbeing HOK

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Daylight

Optimising the quantity and quality of daylight while minimizing unwanted glare and overheating

Visual Connectivity

Connecting occupants at multiple levels and functions increasing a sense of belonging

Clean Air

Minimizing indoor air pollution and ensuring optimal indoor air quality

Beauty and Design

Designing stimulating spaces that positively impact the mood and comfort levels of occupants

Biophilla

Creating an environment that nurtures the innate human-nature connection

Breakout Areas

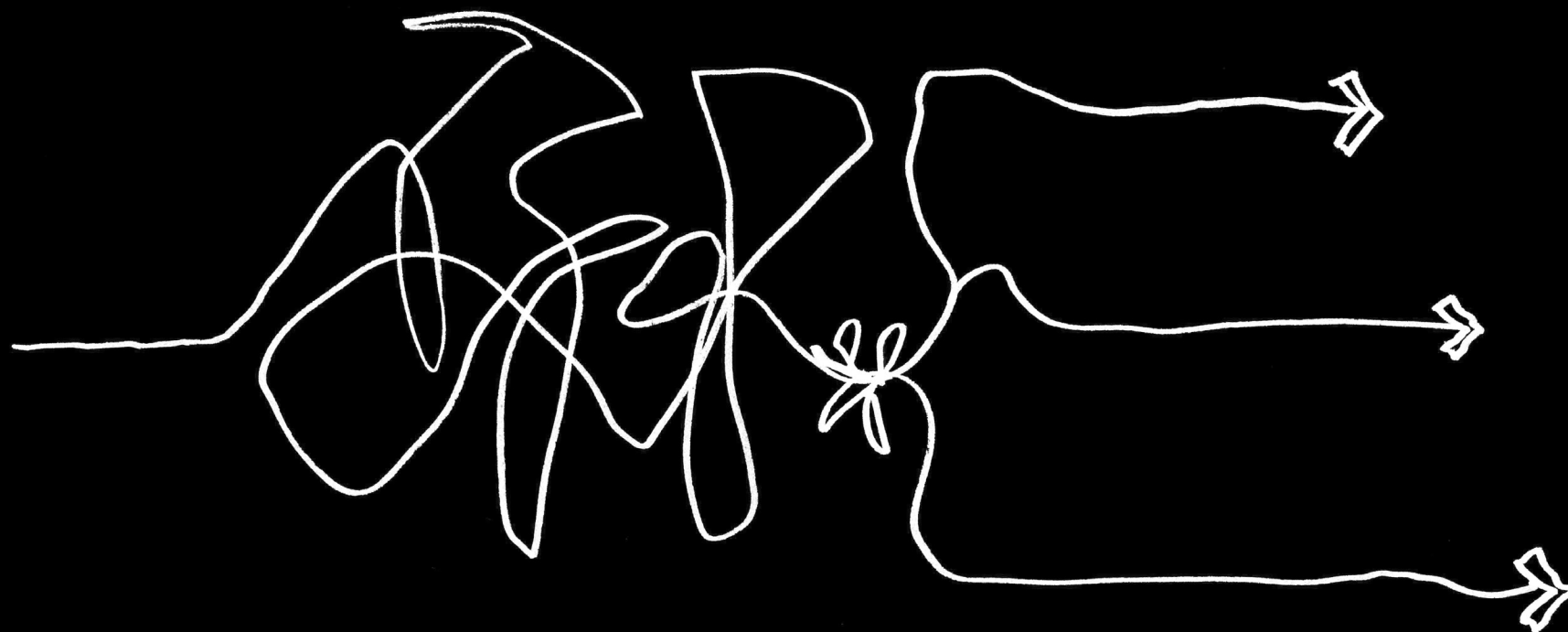
Informal multi-functional areas that encourage and support interactive and collaborative learning

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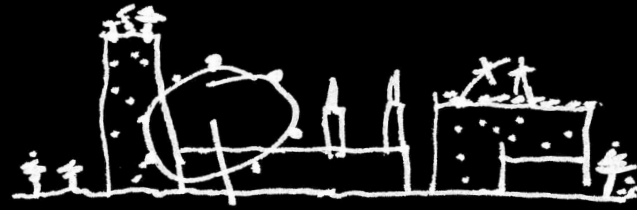
Interior Fitness Circulation

Promoting physical activity by providing opportunities for an active lifestyle



Design process

Environmental



QUALITATIVE
(Layout/Look & feel)

QUANTITATIVE
(IEQ)



Social (Perceptual)

Perceived H&W
Happiness & Satisfaction
Security
Relationships

Economic

National Level: Decreased public health cost
Organisational: Increased asset value
Individual: Productivity

Holistic approach



Psychologists

The integration of mind, body, spirit and environment (Ardell, 1977)

- complex
- Develops overtime
- Multidimensional
- Subjective



Philosophers

Individually and collectively
Happiness
Beauty



Real Estate Investors

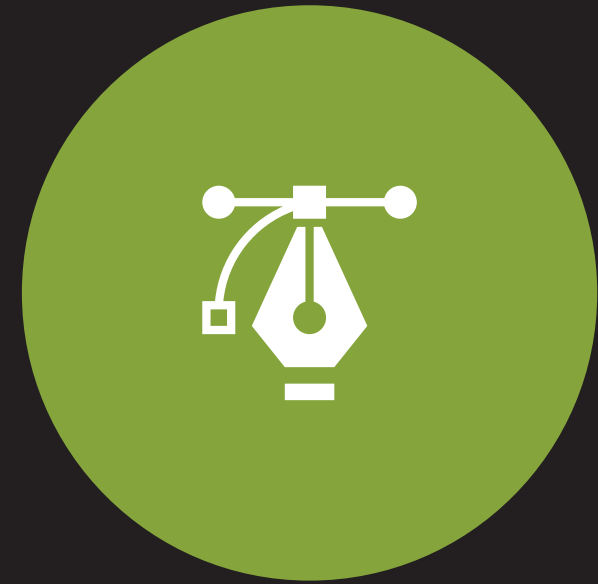
The H&W sector worth \$118.6 billion with the fastest growing rate of 19% since 2013

90% spend 90% of their time indoors
Human cost, i.e. salary, represents 90% of the overall expenditure, energy and building operational cost account for only 10% of an average organisation



WHO

30% of new and renovated buildings worldwide are unhealthy and people suffer Sick Building Syndrome (SBS)



Designers

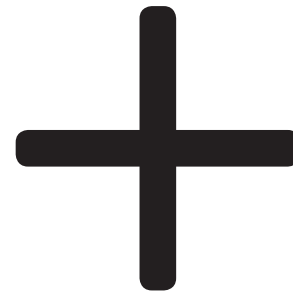
Big knowledge and engagement gap

Only 54% of designer think their clients desire H&W strategies, which 73% of building owners state that their healthier buildings lease faster than conventional one



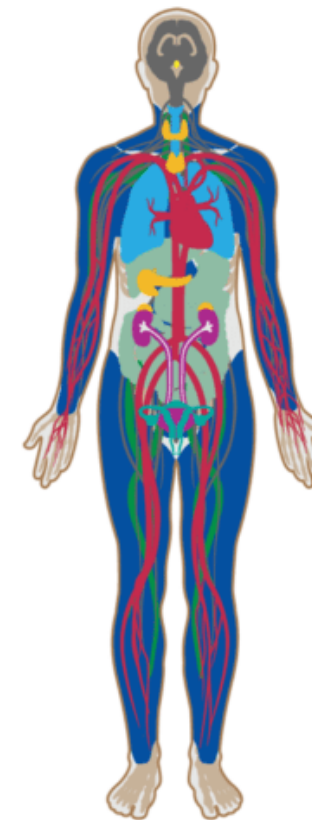
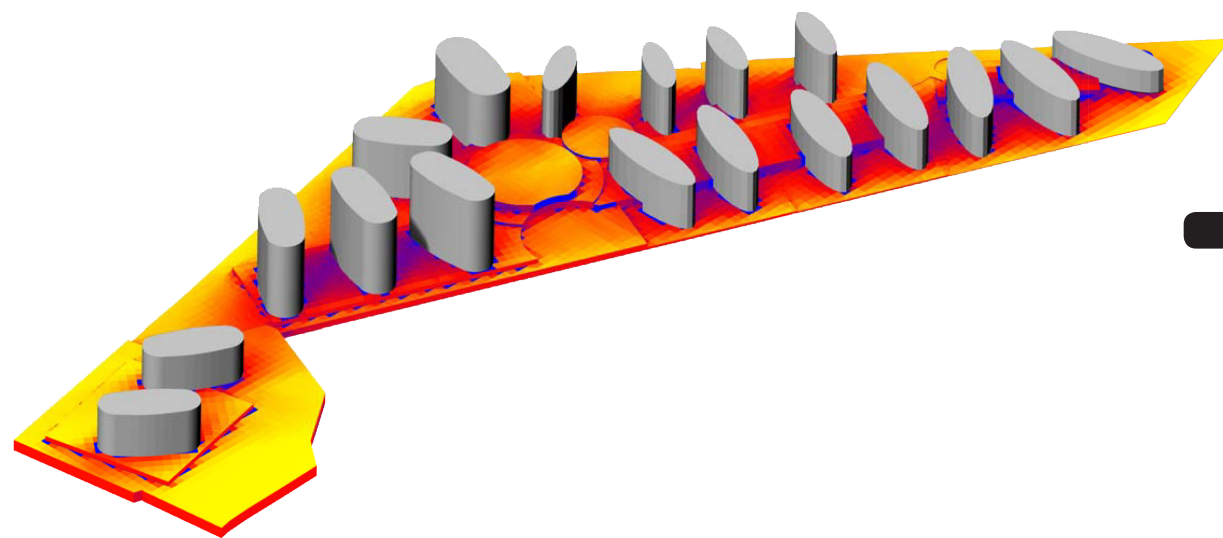
Planet

(Minimising environmental impact)



People

(Enhancing Wellness + Circular economy)



- Cardiovascular
- Digestive
- Endocrine
- Immune
- Integumentary
- Muscular
- Nervous
- Reproductive
- Respiratory
- Skeletal
- Urinary

25% less solar stress on building
façades (on ave.)

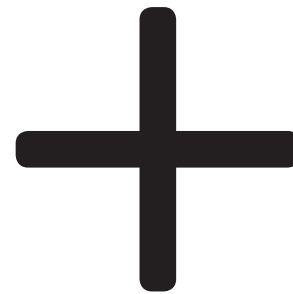
100% Shaded outdoor walking
zones (self shading + greenery+ pavilions)

Connectivity

Walkability

Biophilic Design

Adaptability



Sustainable Wellbeing



Working Well: Being Well Design as a Catalyst

Factor in better lighting and access to daylighting & views.

Utilise products that enhance thermal comfort.

Enhance acoustical comfort.

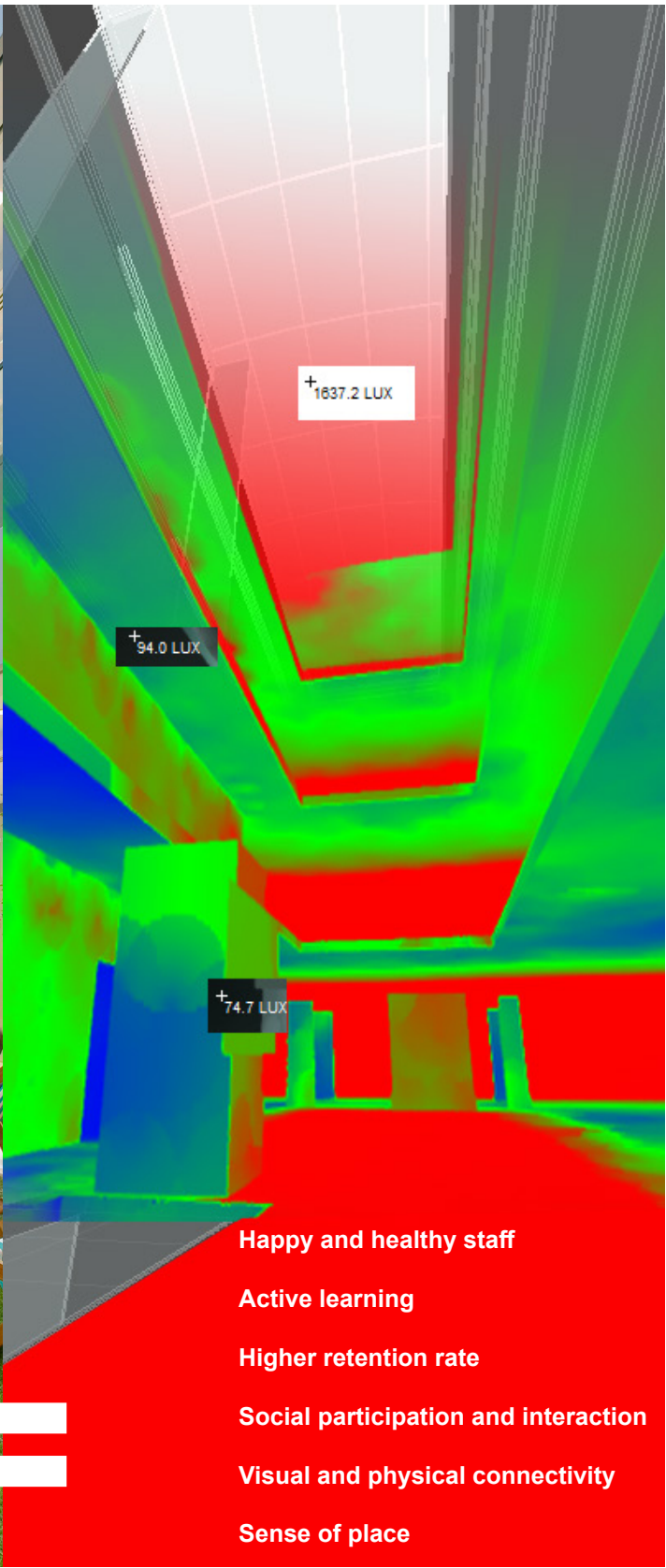
Design spaces that promote social interaction.

Provide enhanced air-quality products.

Create spaces that enhance mood.

Healthy eating

Embrace biophilic design.



Performance Gap
(Predict VS actual)

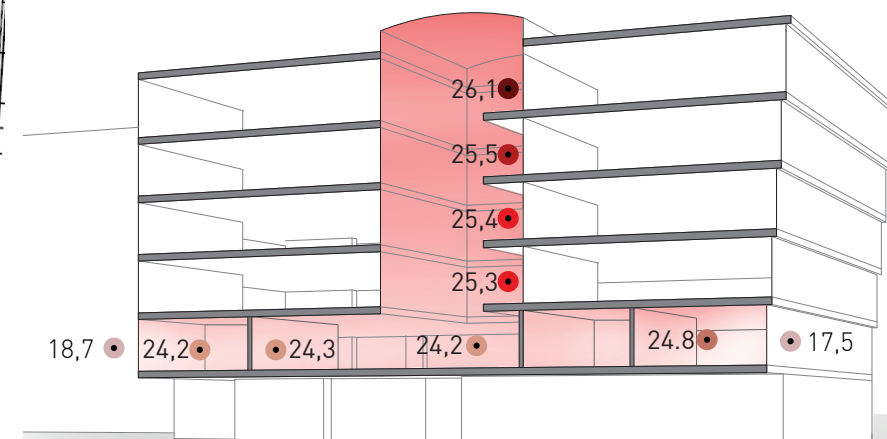
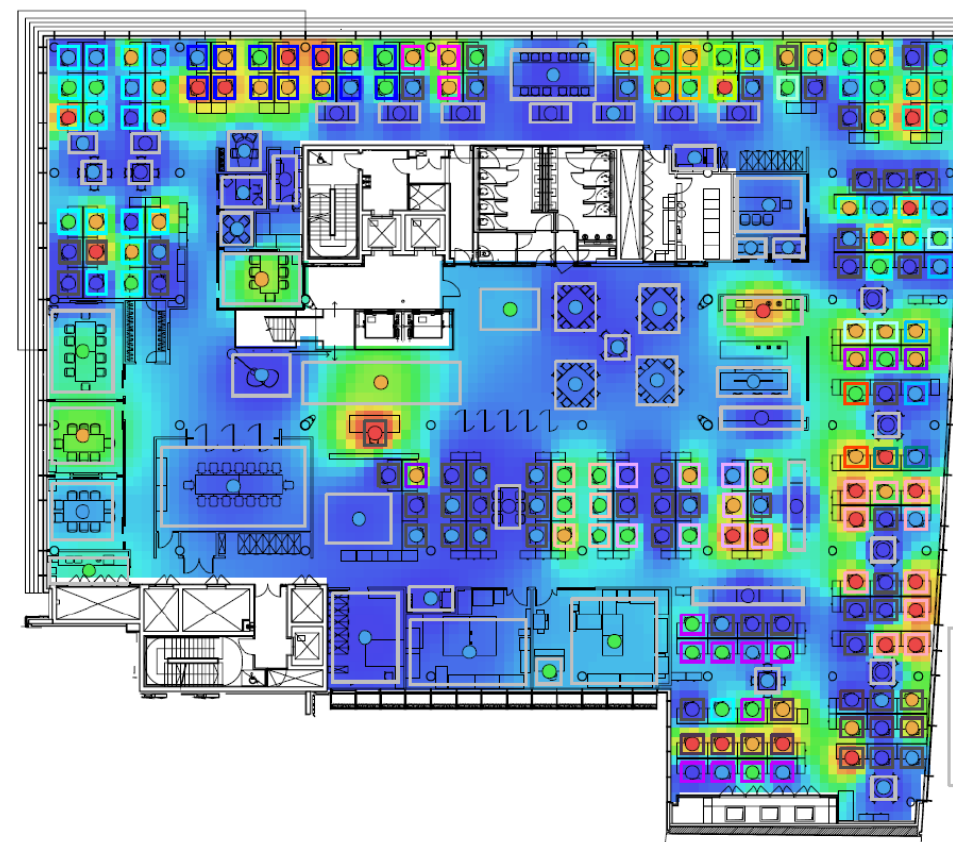
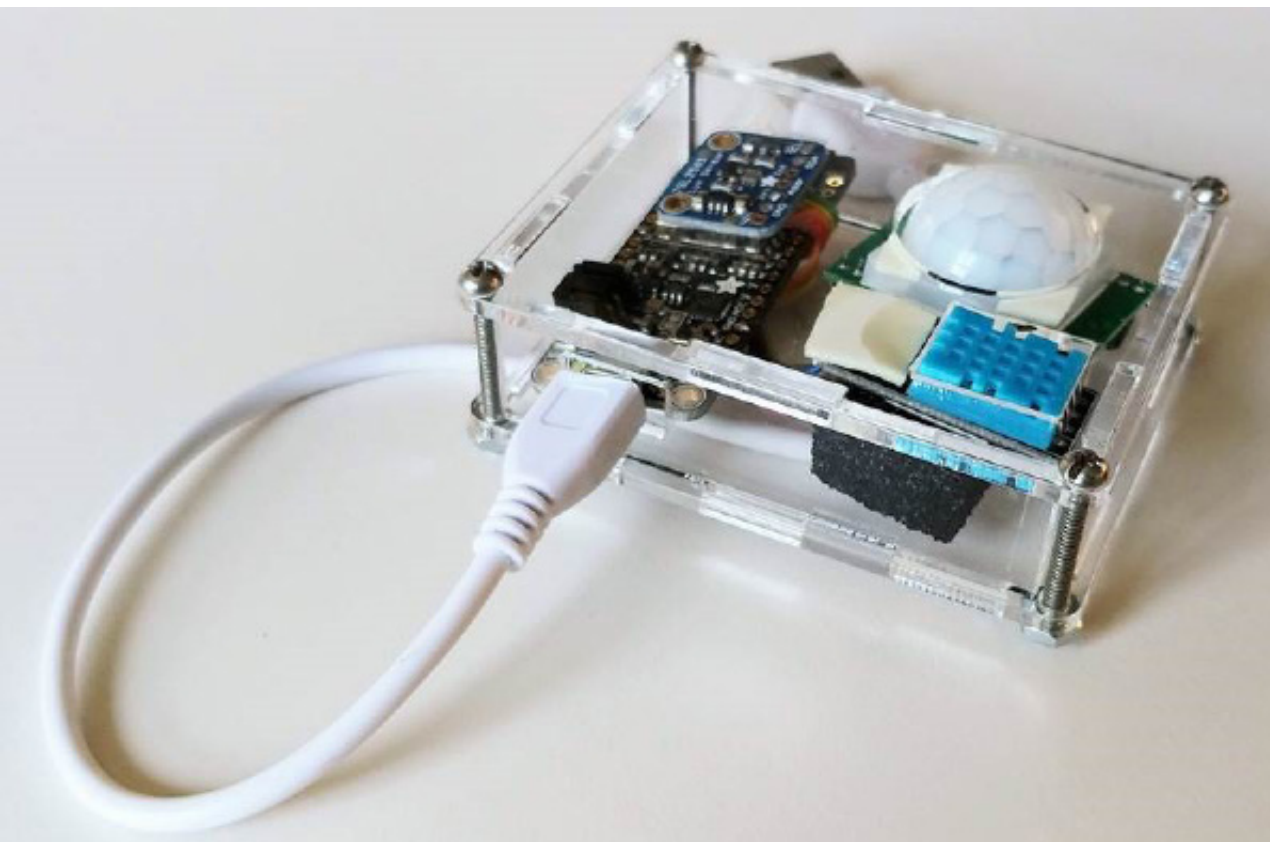
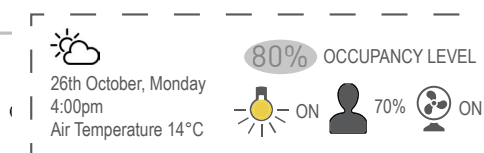
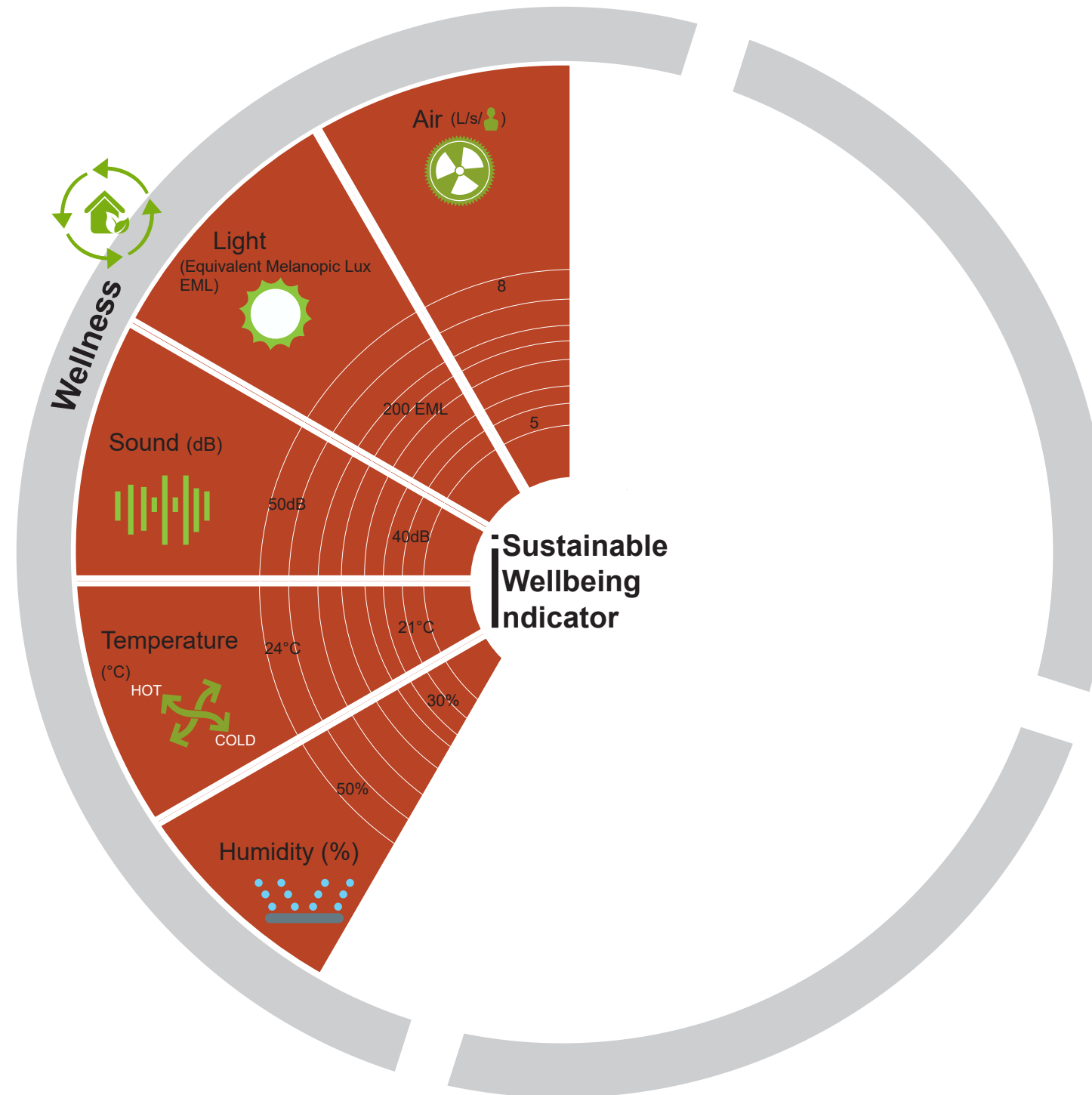


Figure 38: Spot measurements, temperature (weekday)



Measuring Wellbeing = IEQ + Energy Consumption + Perceived Satisfaction



Welless Level (Comfort)



Figure 35: CO2 levels 16.11.15 (weekday)

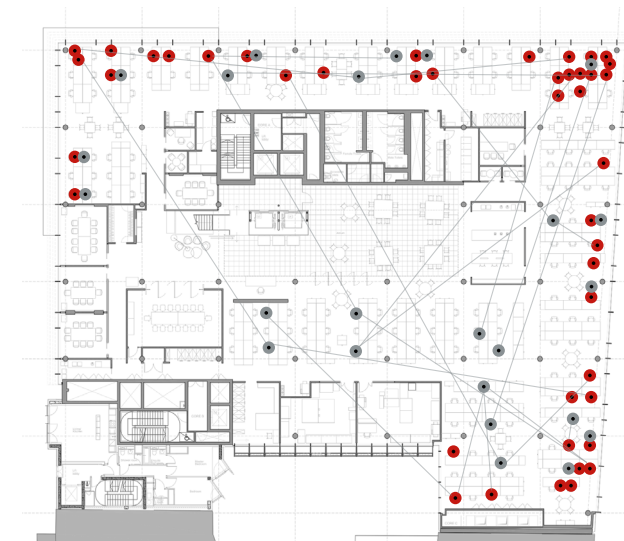
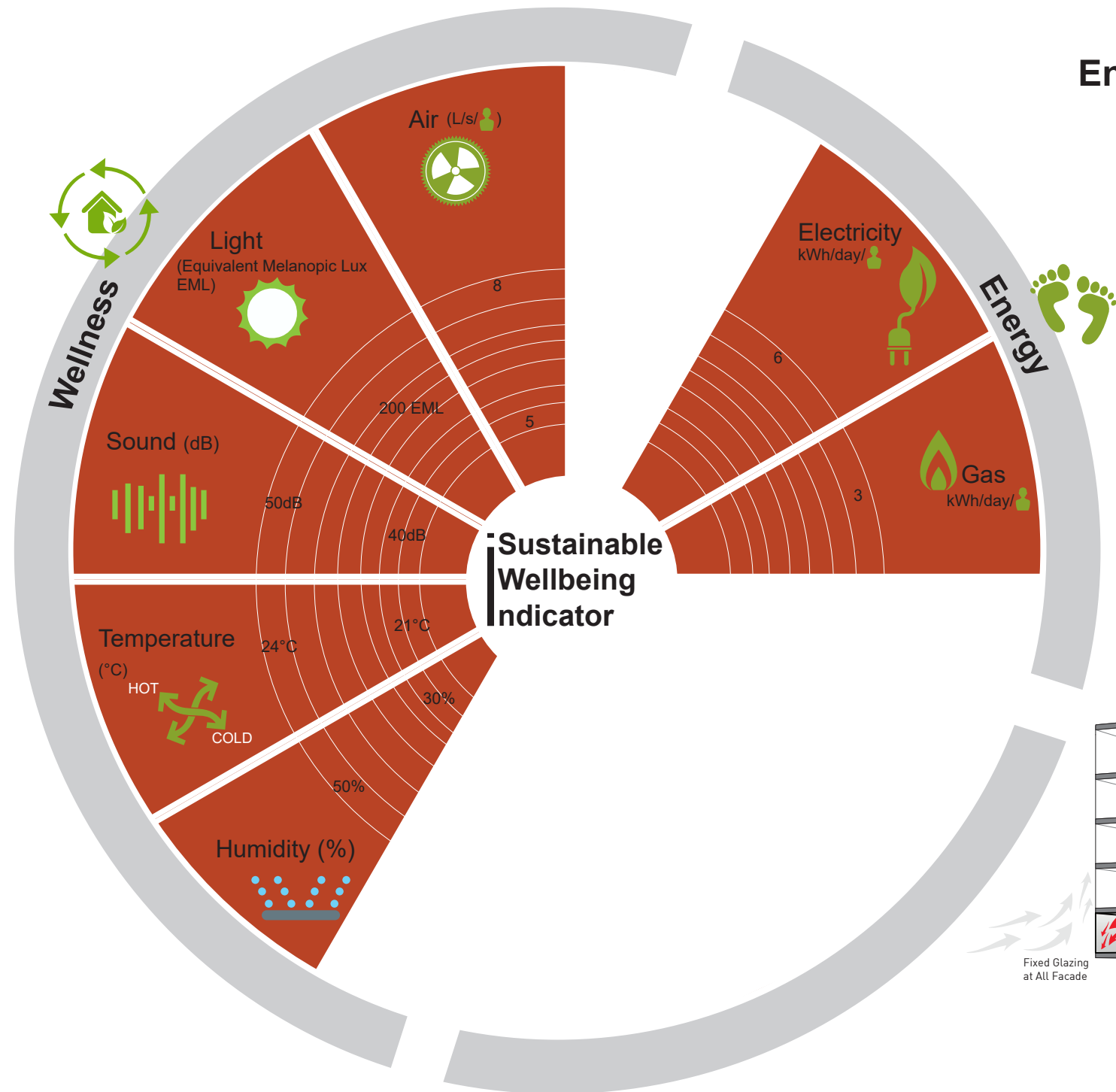


Figure 33: Questionnaire question: Where do you sit? Where would you like to sit?

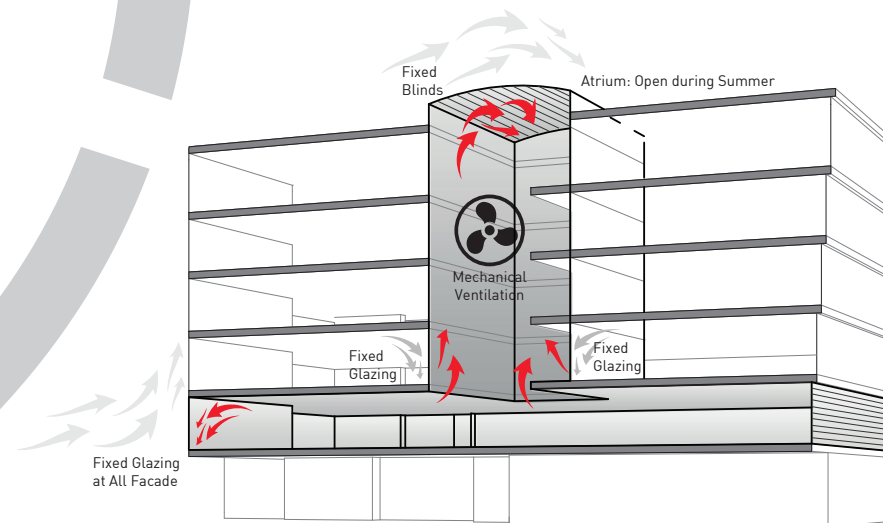
Less desirable More desirable

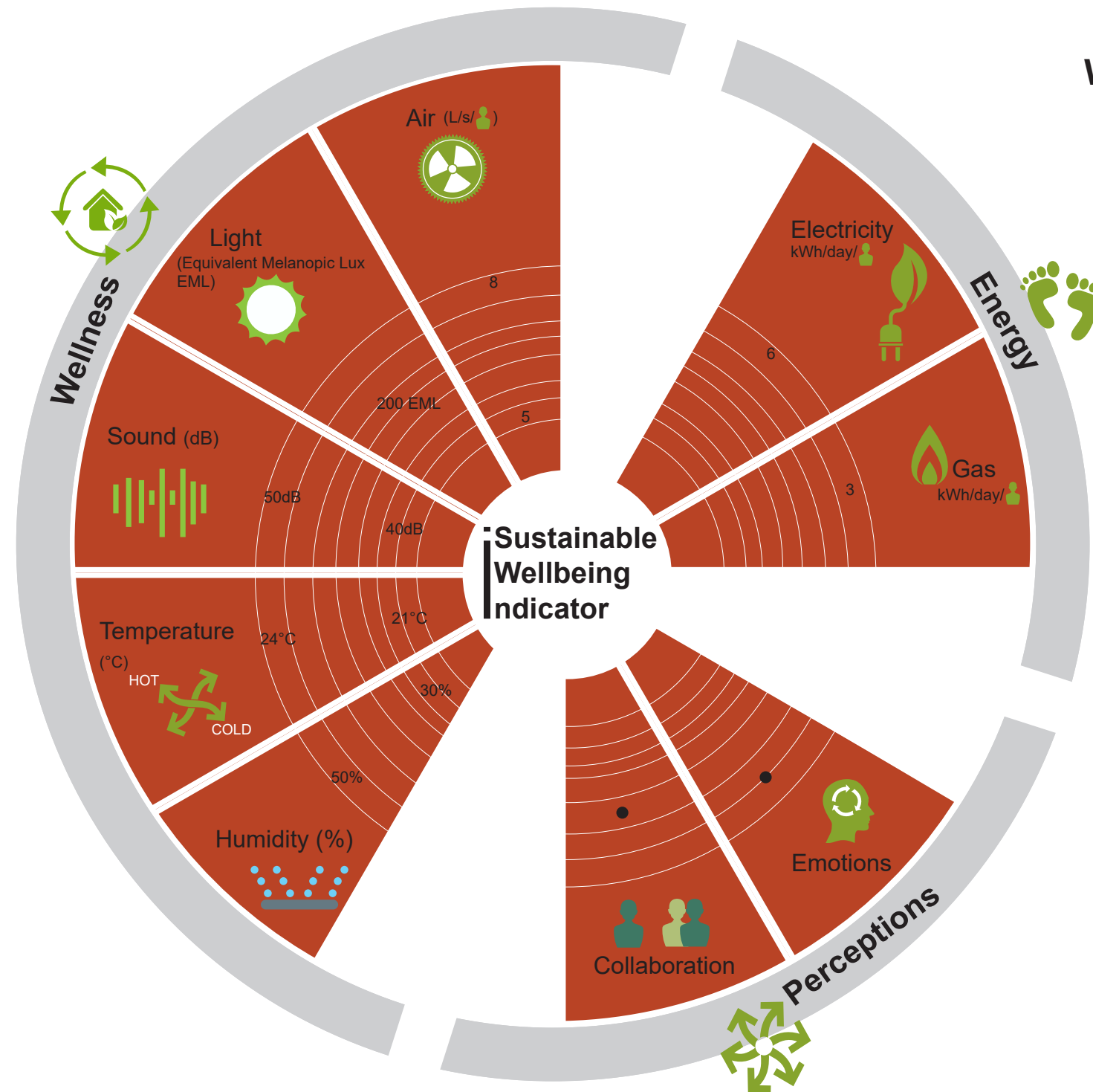


Energy Level (Env. Sustainability)

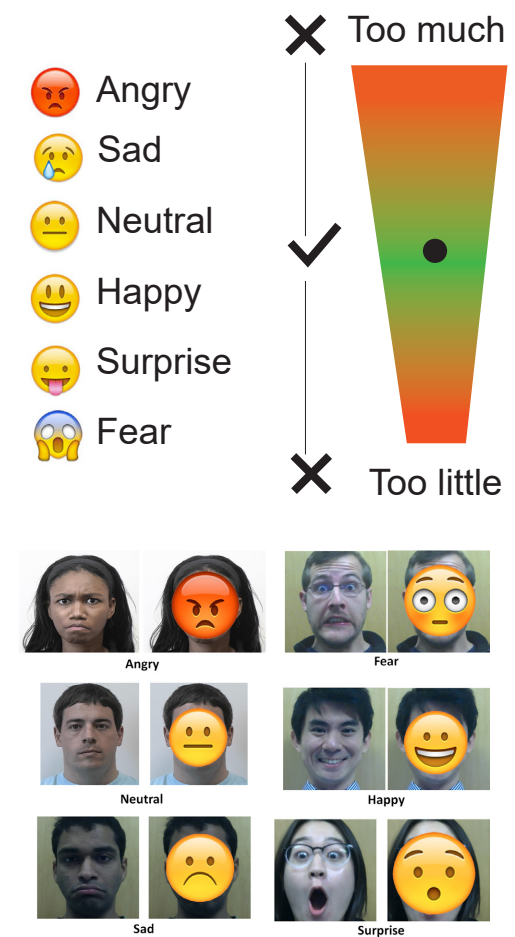


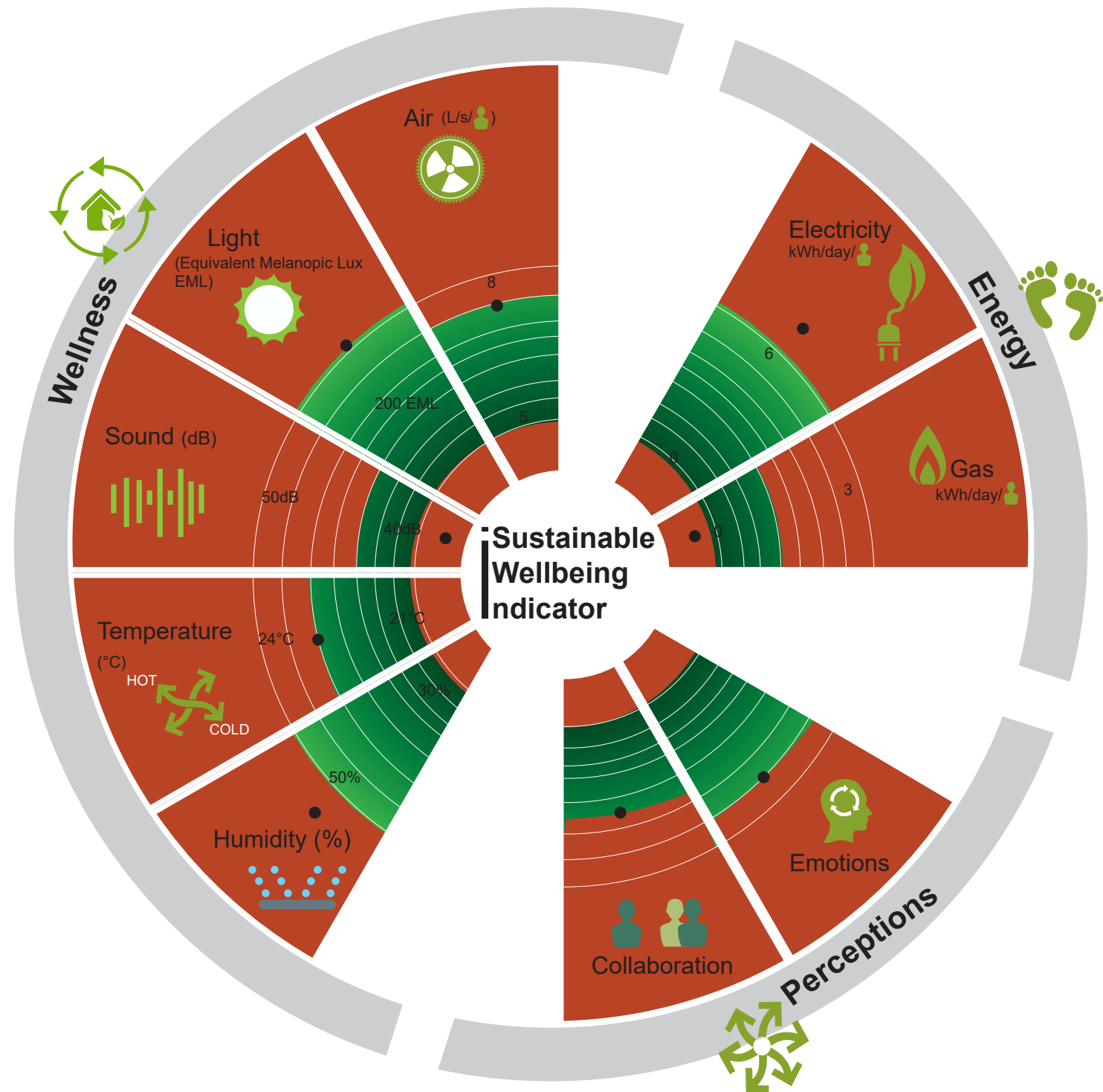
kWh /day / person



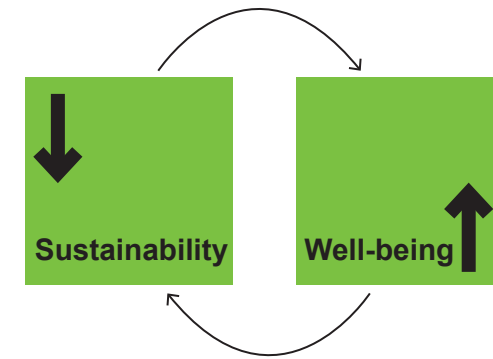


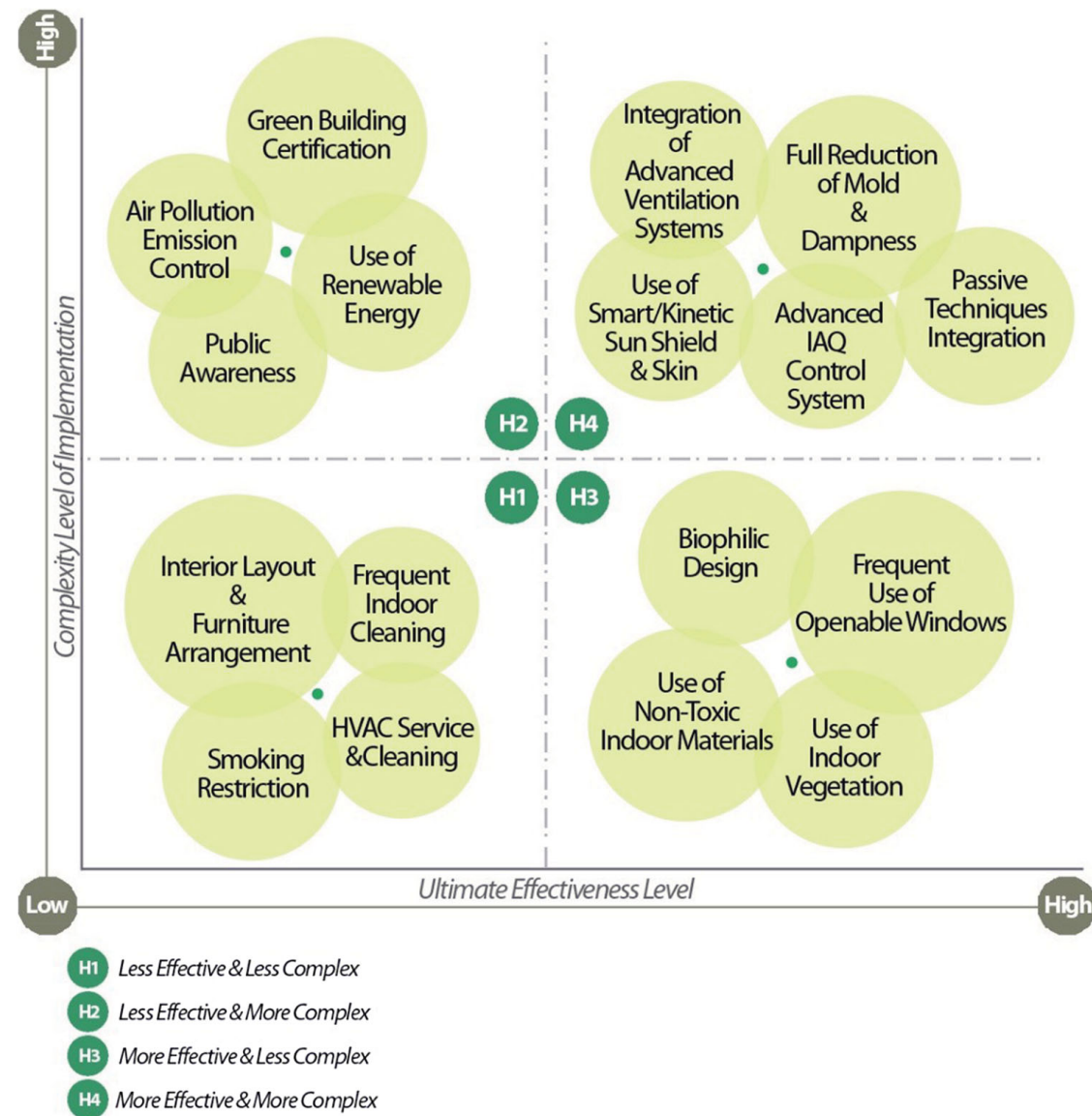
Wellbeing Level (Perceptions)





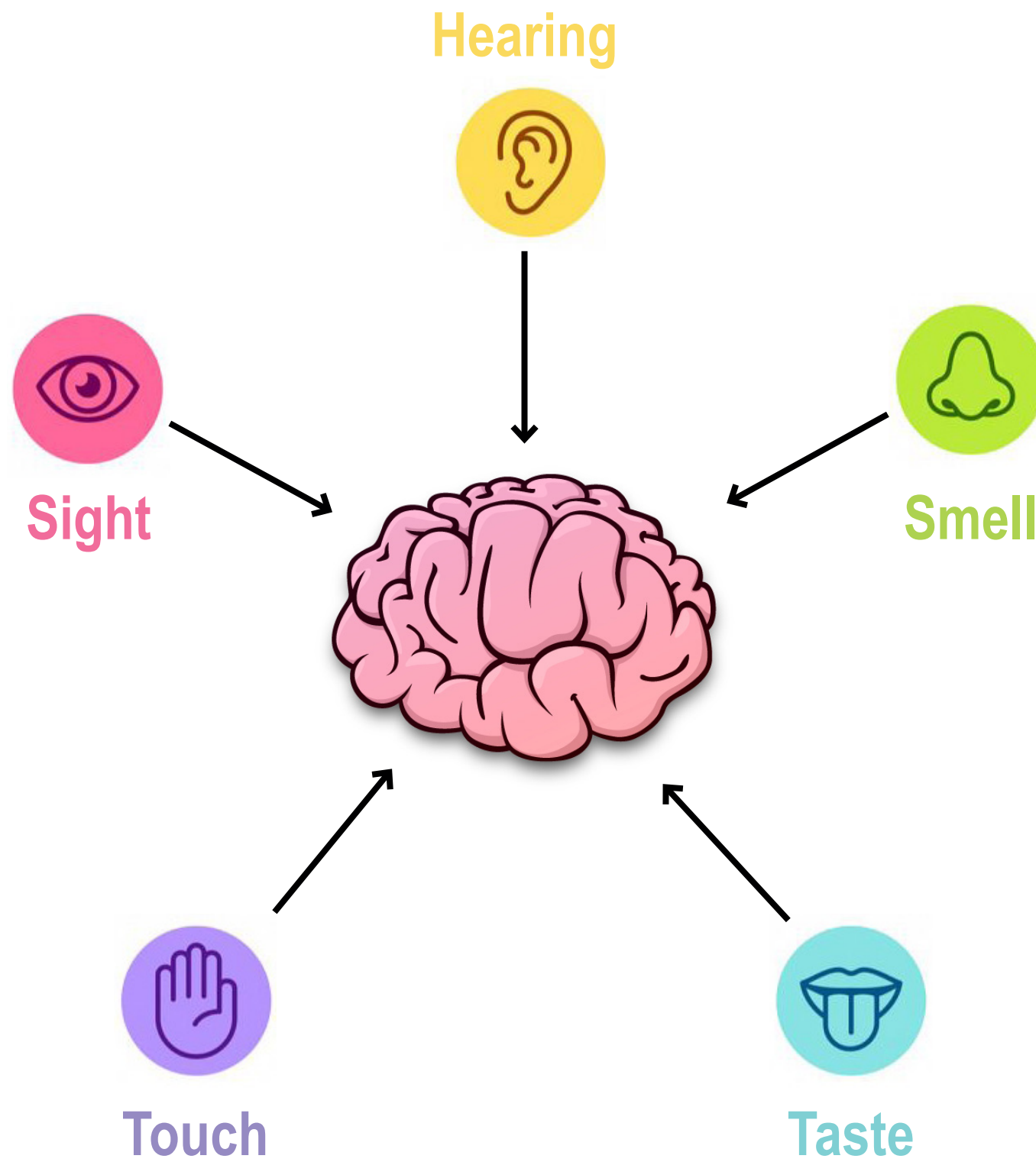
Sustainable Wellbeing

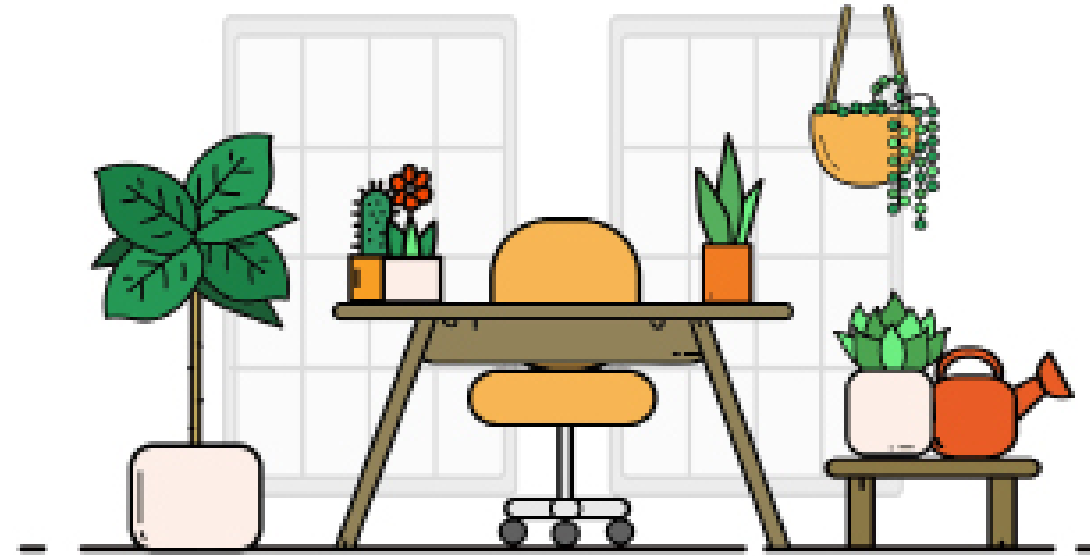






OFFICE





Energy

1%



Productivity

8%



Wellbeing

13%