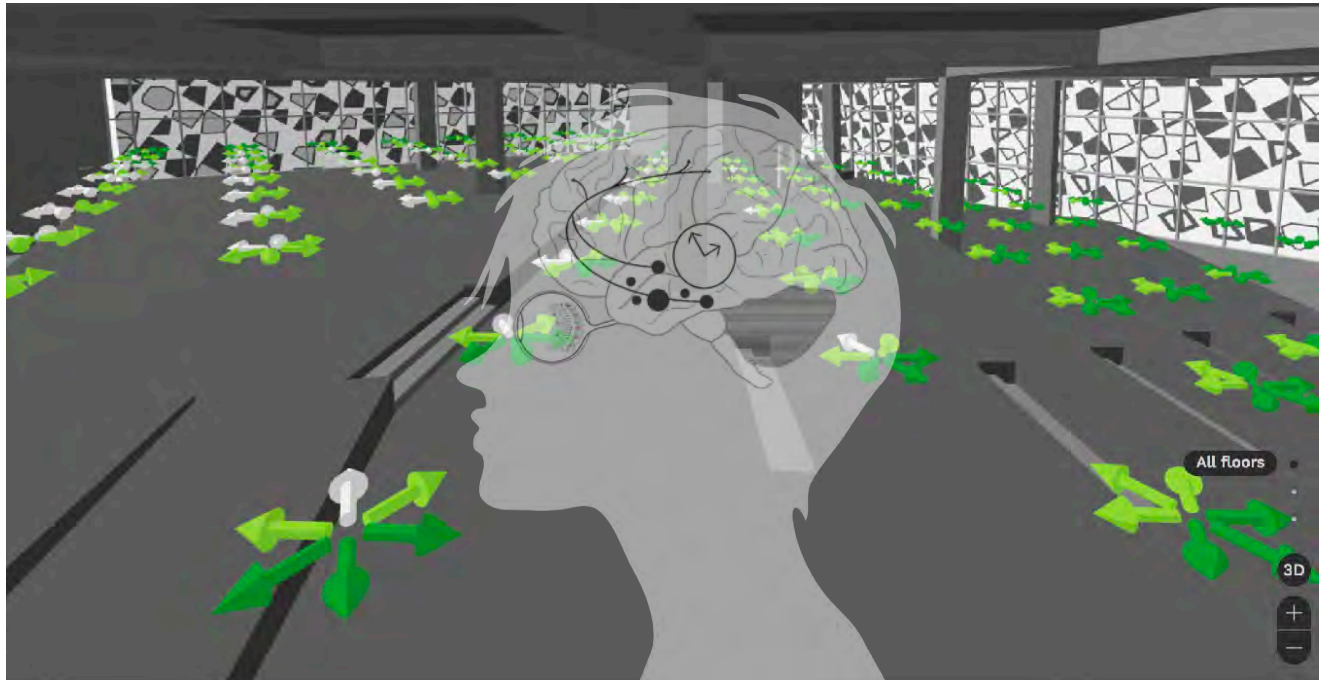
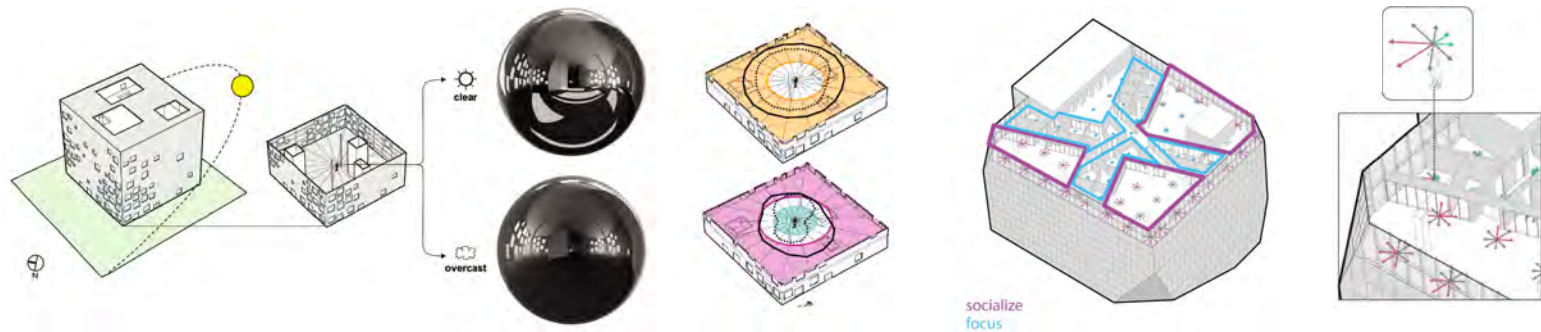


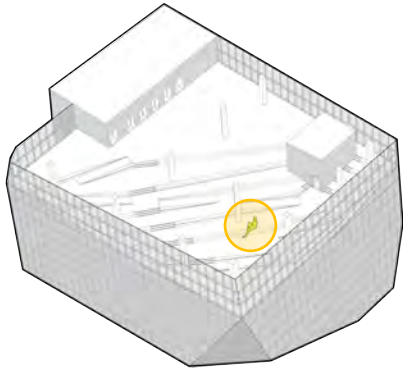
TAKING THE OCCUPANT'S WELL-BEING INTO CONSIDERATION WHEN DESIGNING



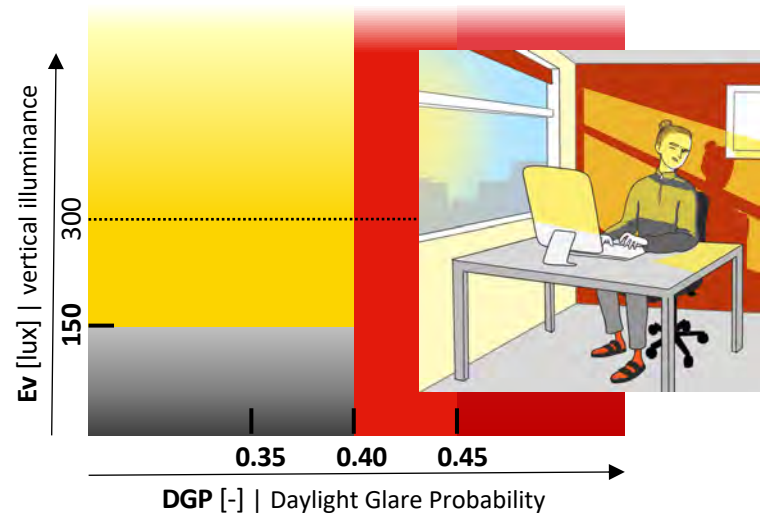
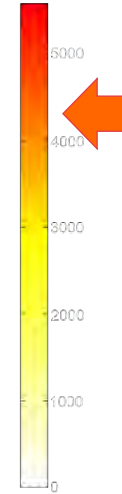
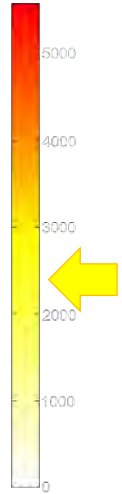
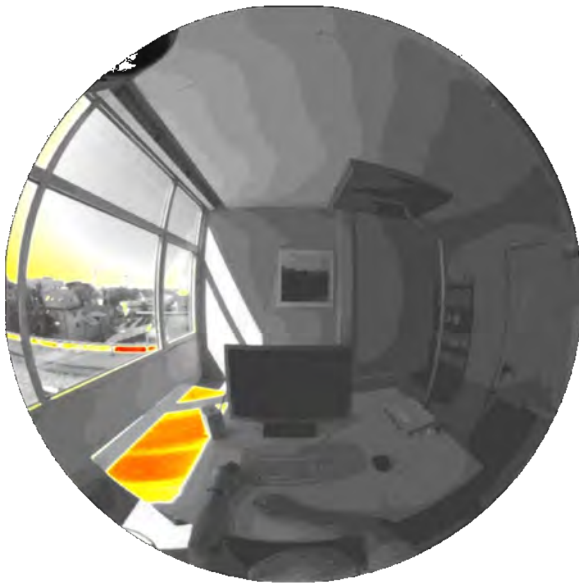
DAYLIGHT AS A DYNAMIC AND SENSORIAL EXPERIENCE



Ryerson Student Learning Center
Toronto | Snøhetta & Zeidler Partnership



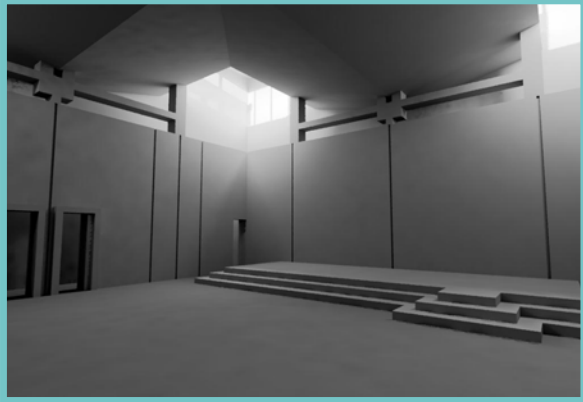
COMFORT



EMOTION



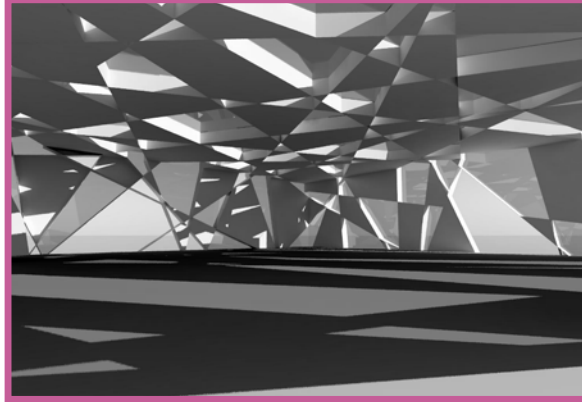
calming?



first unitarian church



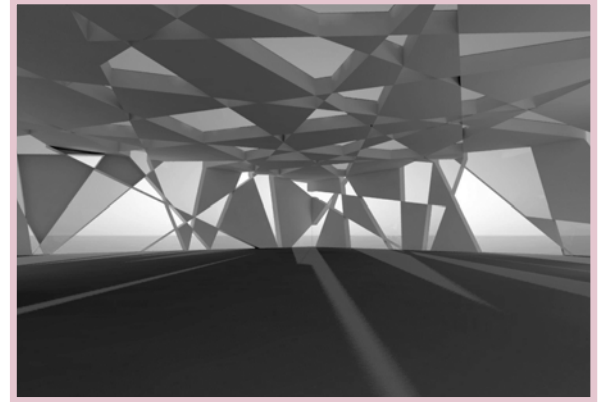
exciting?



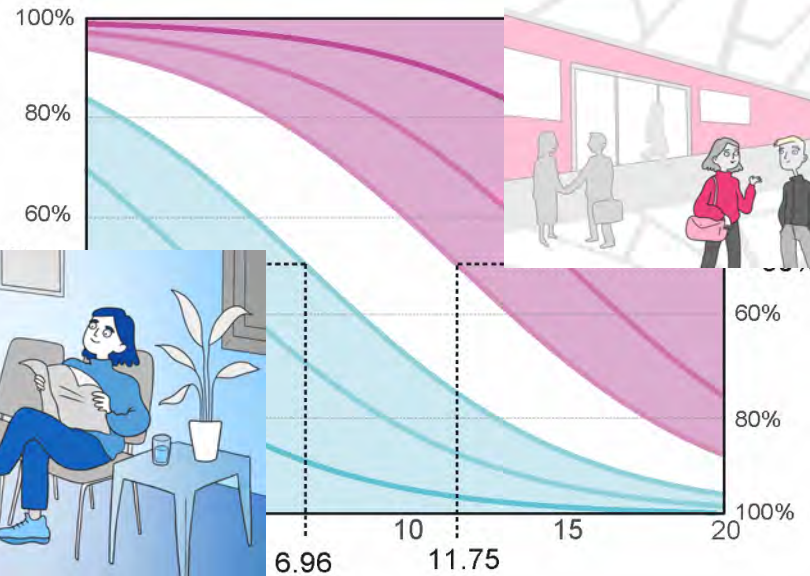
serpentine pavilion



less exciting?



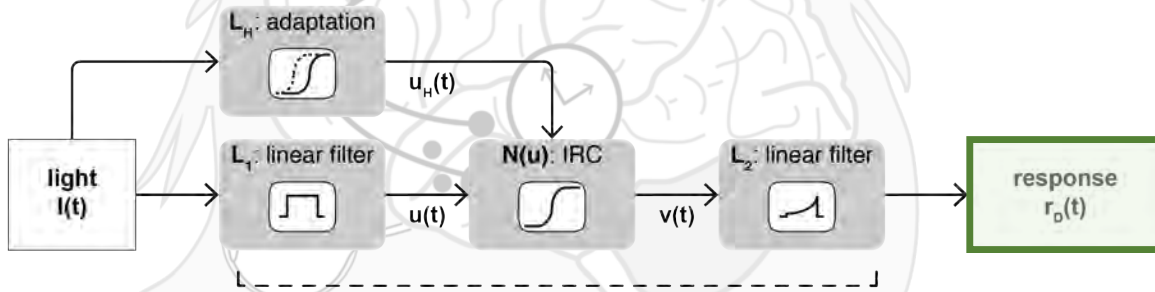
- calming threshold
- calming < 6.96
- 6.96 ≤ neutral ≤ 11.75
- exciting > 11.75
- exciting threshold



VITALITY




INPUT





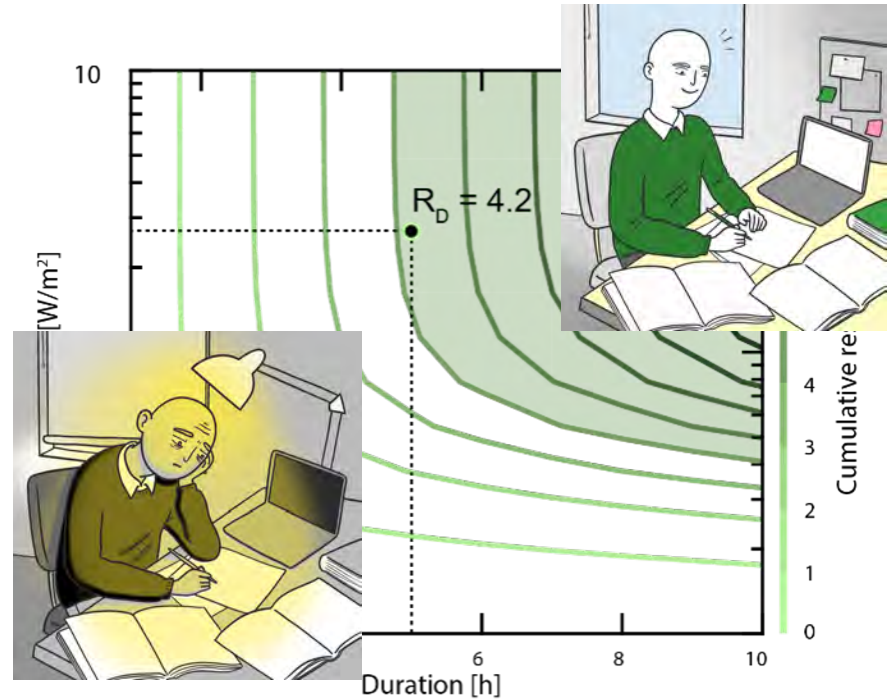
OUTPUT



DYNAMIC BEHAVIOR

-  intensity thresholds
-  spectral sensitivity
-  temporal integration
-  intensity adaptation

-  dose achieved < 4.2
-  Non-visual health potential $R_D > 4.2$



INTERACTIVE VISUALIZATION

Vitality Emotion Comfort

+ More Info

DATE

SKY CONDITIONS

FLOORS

PROGRAM USE

< Feb 4 >

☀ Clear ☁ Overcast

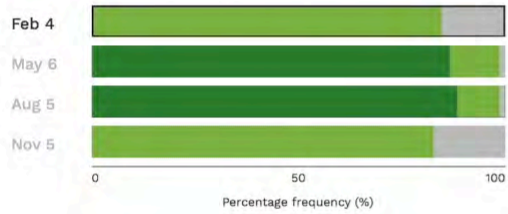
1st floor 4th floor

circulation maximum_focus medium_focus minimum_focus minimum focus medium focus maximum

Vitality

Vitality describes the non-visual potential of daylight to impact alertness as it accumulates over time. [Read more](#)

- insufficient daily dose ($nVR_D < 4.2$) 16%
- intermediate daily dose ($4.2 \leq nVR_D \leq 8.4$) 84%
- recommended daily dose ($nVR_D > 8.4$) 0%



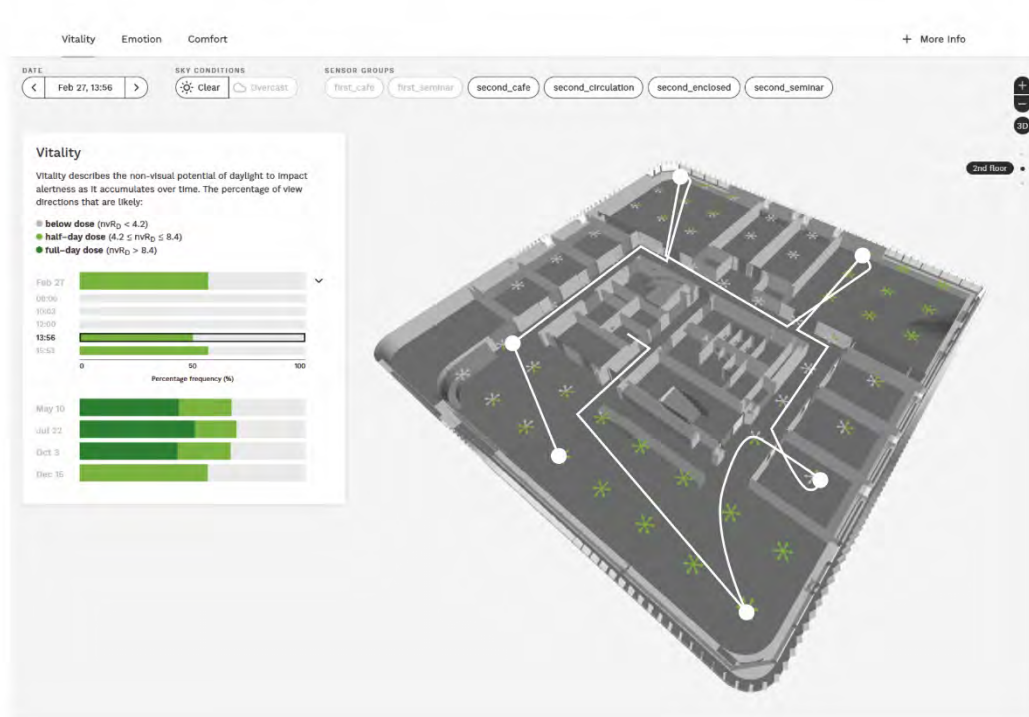
3XN | DENMARK

Schuco Headquarters

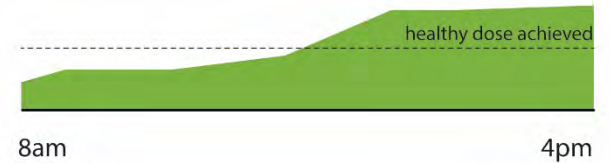
FUTURE DEVELOPMENTS

spatio-temporal population analytics

from building performance to **occupant performance** in buildings...



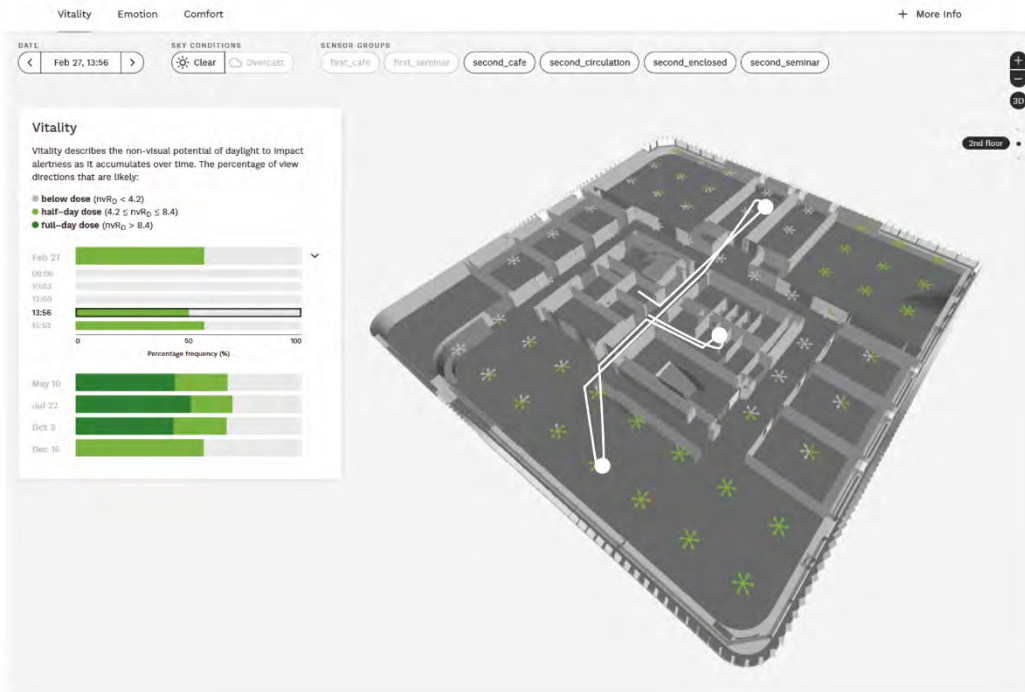
grad student



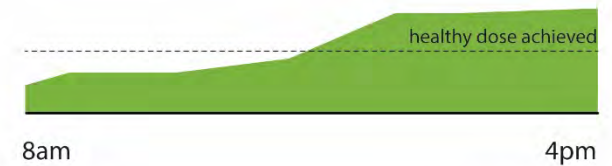
FUTURE DEVELOPMENTS

spatio-temporal population analytics

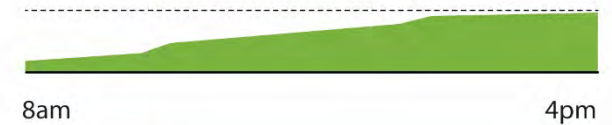
from building performance to **occupant performance** in buildings...



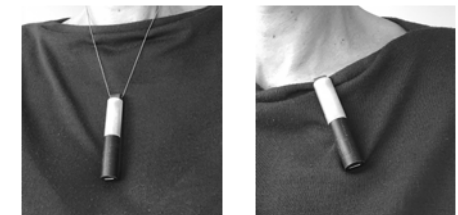
grad student



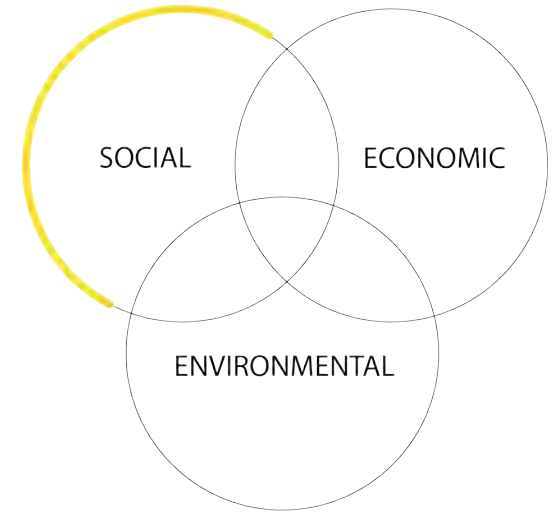
assistant professor



... with in-situ monitoring using **wearable** technology



REVISITING SUSTAINABILITY...



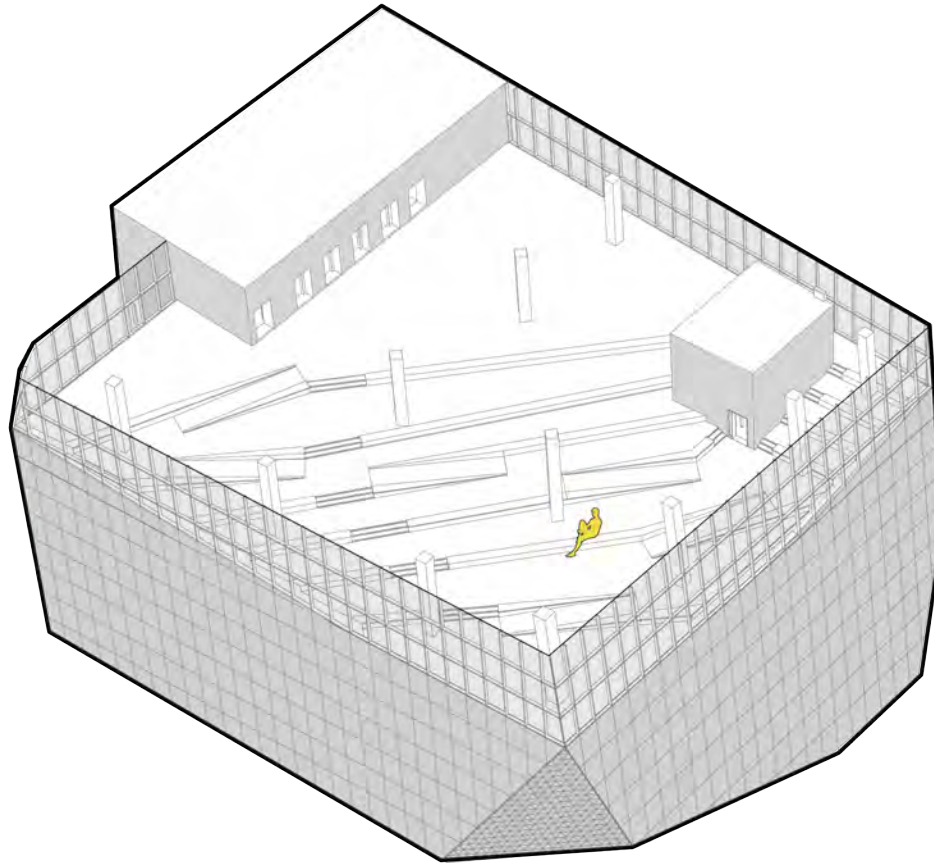
EMOTION



HEALTH



COMFORT



REVISITING SUSTAINABILITY...

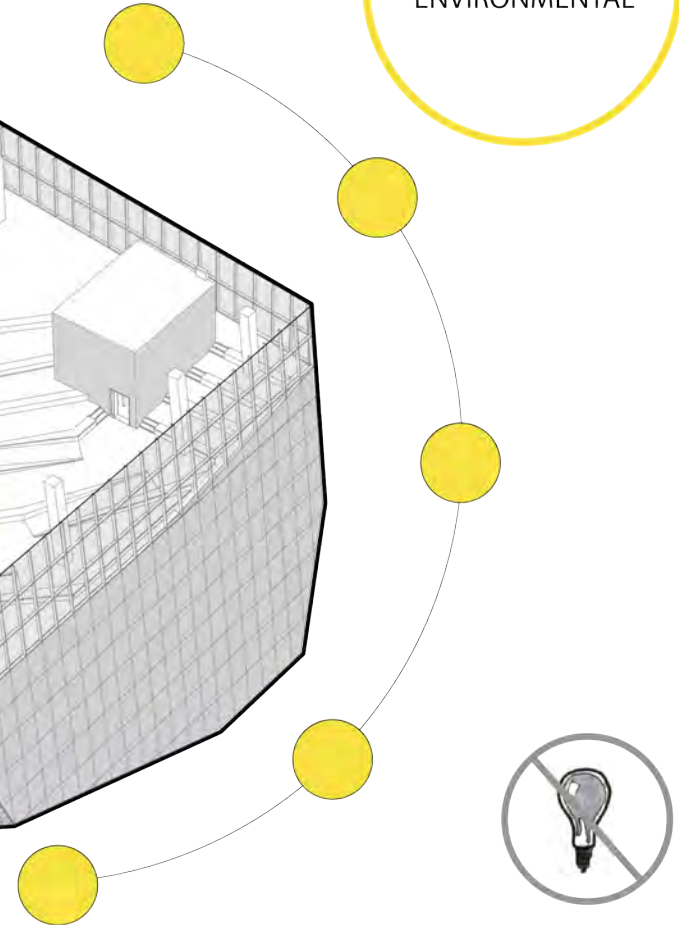
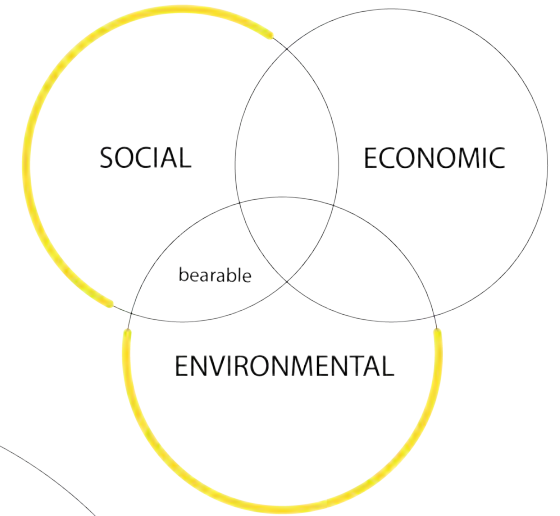
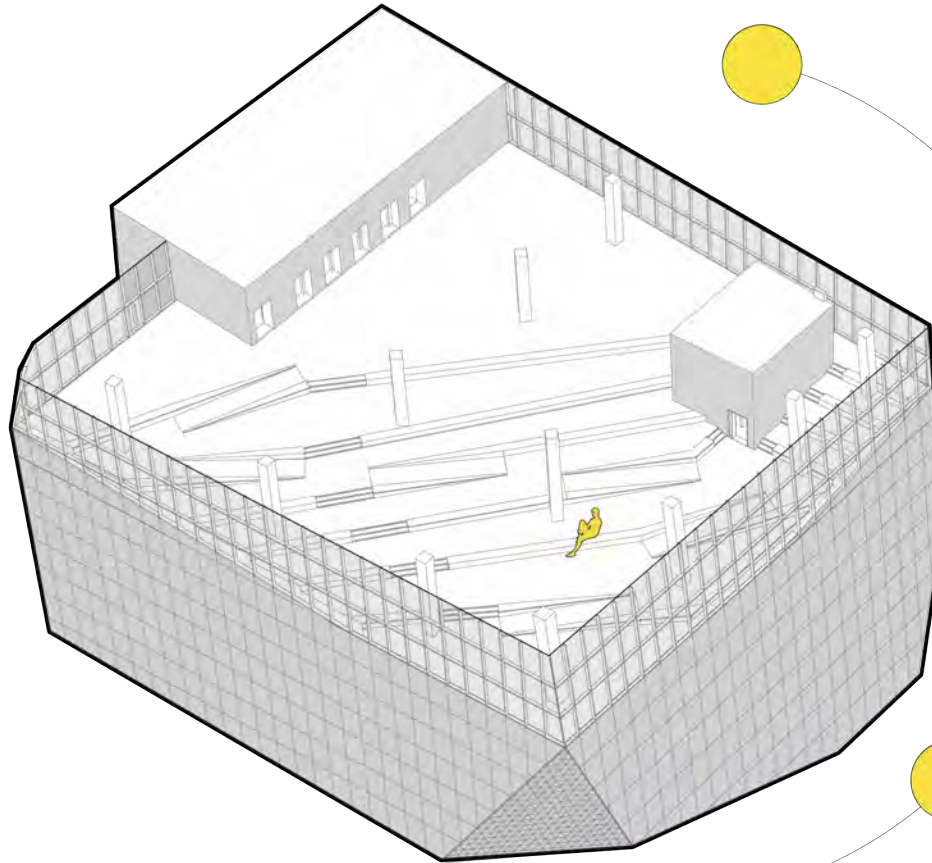
EMOTION



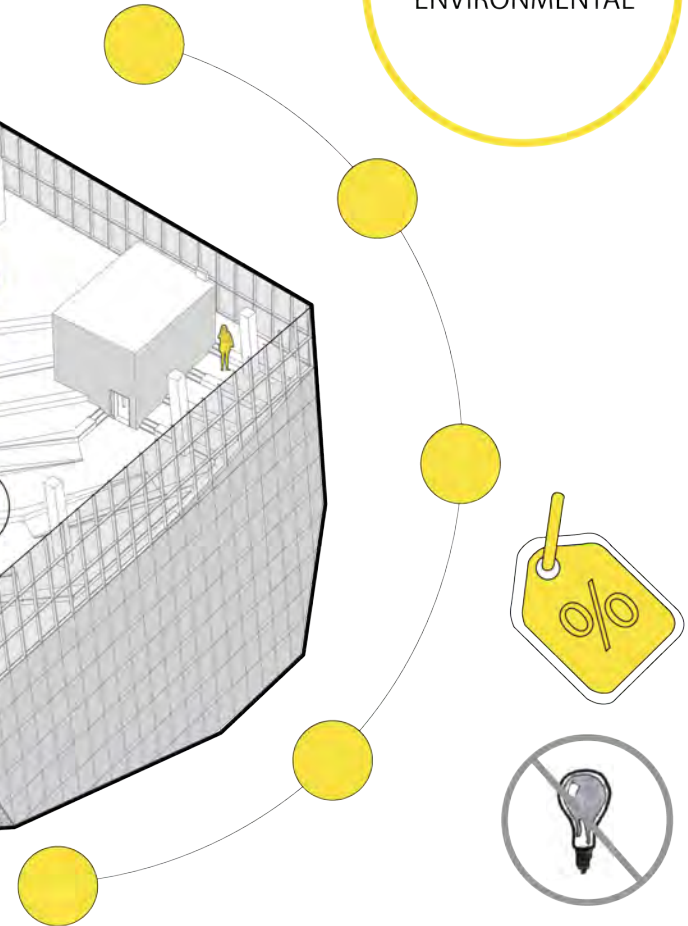
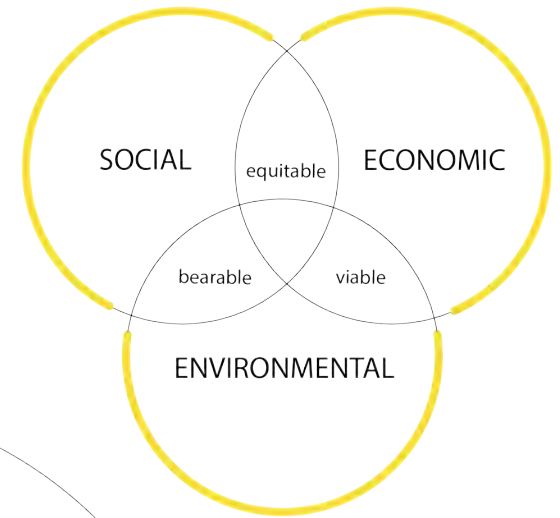
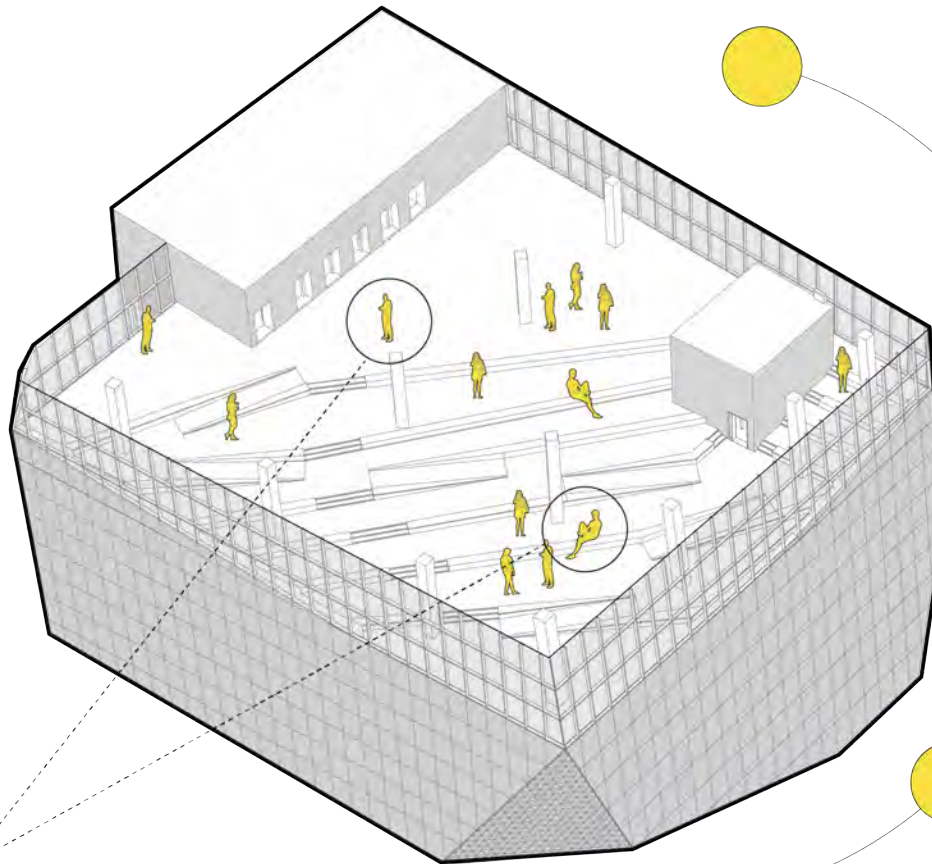
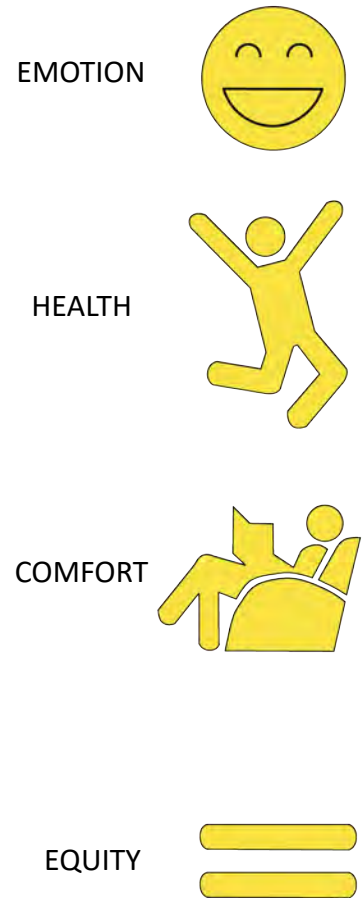
HEALTH



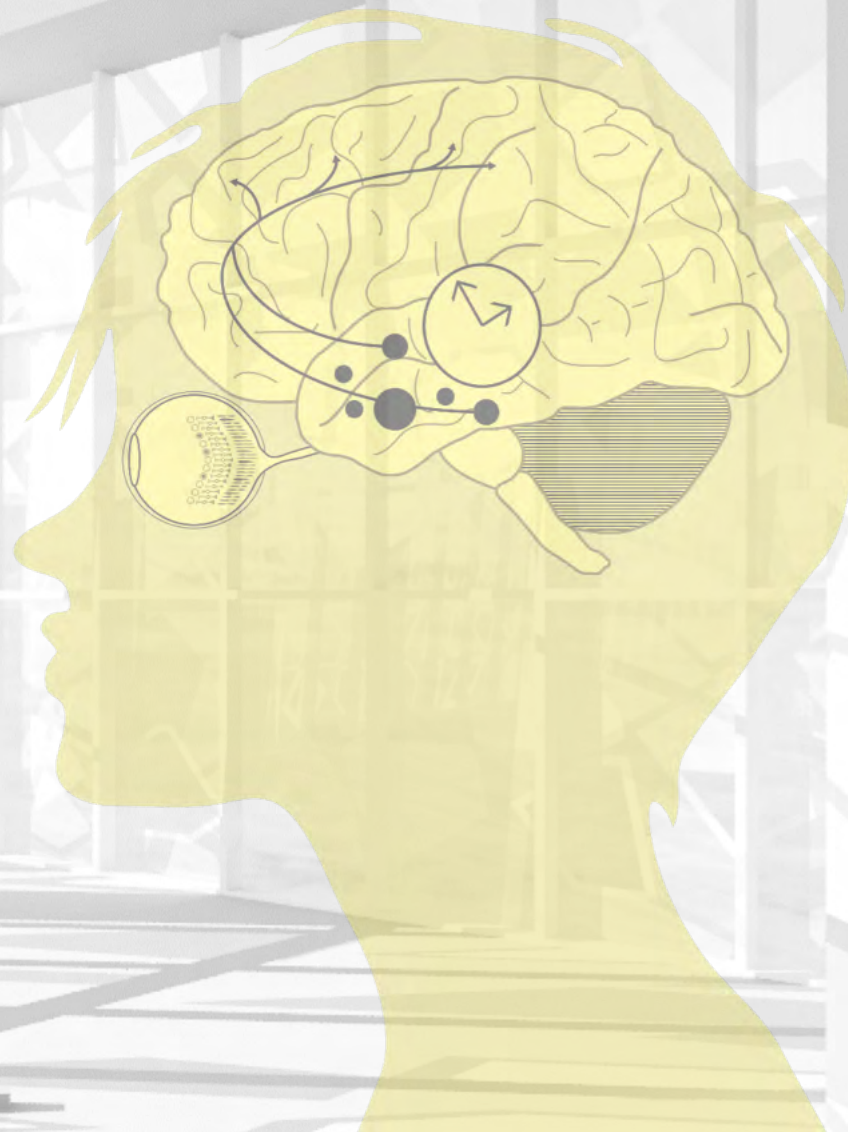
COMFORT



REVISITING SUSTAINABILITY...



... BY TAKING THE **OCCUPANT'S** PERSPECTIVE



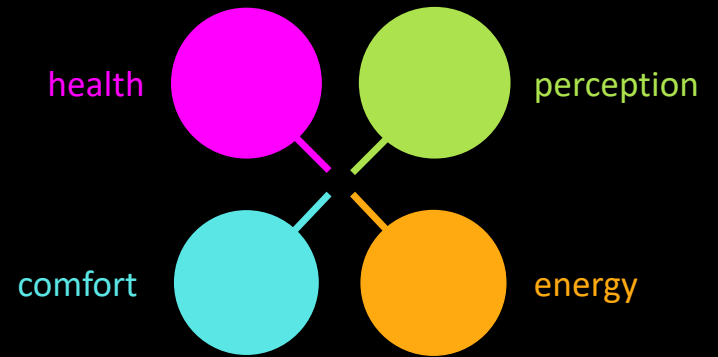
EPFL - LIPID | Laboratory of Integrated Performance in Design



Prof. Marilyne Andersen
Head of LIPID



Dr. Jan Wienold
Senior Scientist



LIPID Alumni



LIPID PhDs and PostDocs



LIPID Alumni

