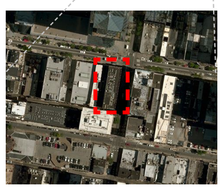
The Respective Systems for A Room in Philly

Center City of Philadelphia

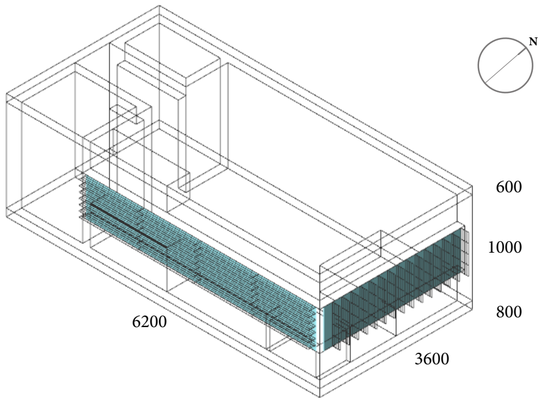


Target Site Building

City: Philadelphia, PA

Latitude: 39.8683

Longitude: -75.2311



LOUVER SYSTEM INFORMATION

East Vertical

Number of Louvers: **15**

Depth of Louvers: **20cm**

Angle of Louvers: **0**

South Horizontal

Number of Louvers: **7**

Depth of Louvers: **20cm**

Angle of Louvers: **0**

CHANGED CONSTRUCTION PARAMETERS

ASHRAE 90.1-2010 (R-Value)
Wall: ExtWall STeelframe Climatezone Alt-Res 2-6 (**2.60**)
Window: ExtWindow NonMetal Climate zone 4 (**0.44**)
Floor: ExtRoof Iead Climatezone 2-8 (**3.53**)
Floor: AtticeFloor Climatezone 2-7 (**6.33**)

ENVIRONMENTAL PARAMETERS

Building Program: **Midrise APT**

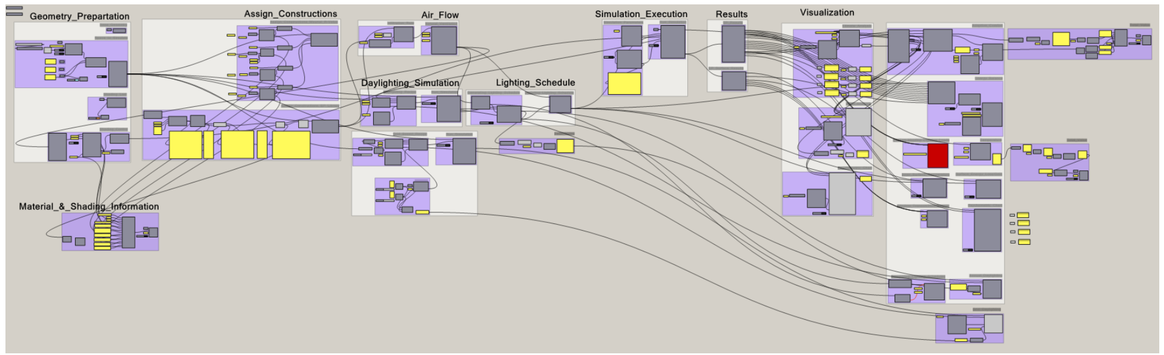
Infiltration Rate per Area: **0.000667** m3/s-m2

Number of People per Area: **0.041332** = 1 person / 24.2 m2

Ventilation Type: **Window Natural Ventilation**

Minimum Indoor Temperature for Natural Ventilation: **20 C**

Maximum Outdoor Temperature for Natural Ventilation: **28 C**



SEQUENCE OF THE SIMULATION

Step 1. Prepare Geometry for the simulations

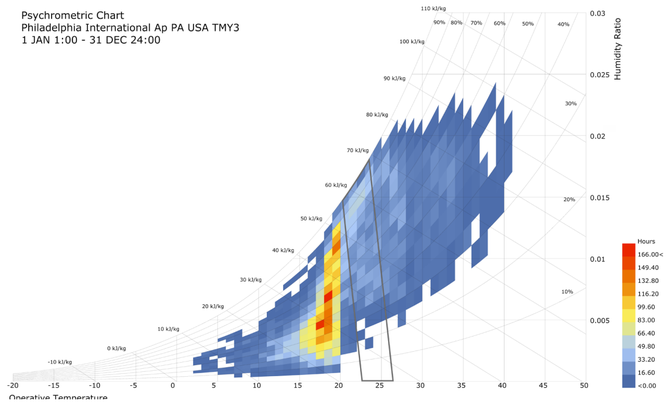
Assign Construction Properties of the Geometry

Apply Air Flow Properties And the Effect of Daylighting

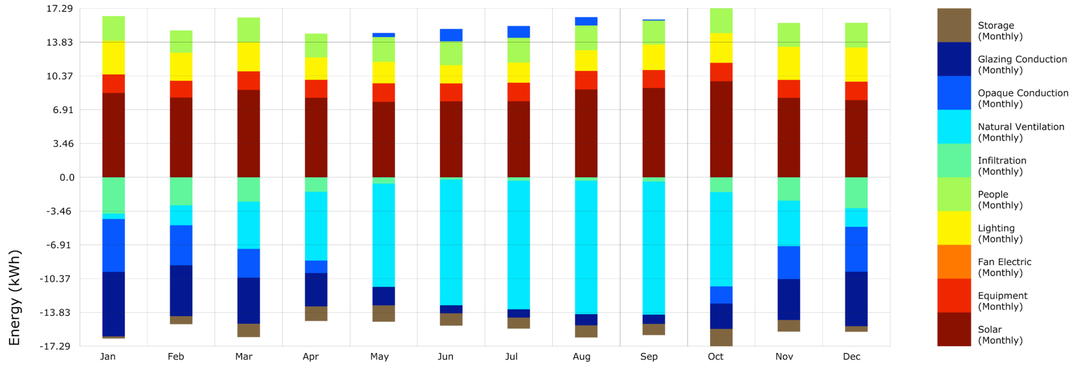
Step 2. Execute Simulations

Step 3. Post Process with Proper Visualization Methods

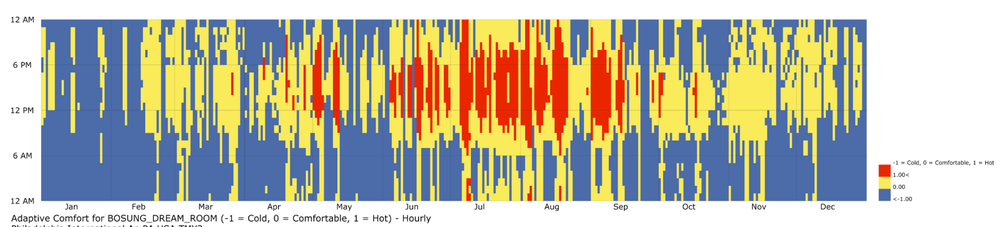
PERFORMANCE OF THE FINAL DESIGN



Psychometric Chart

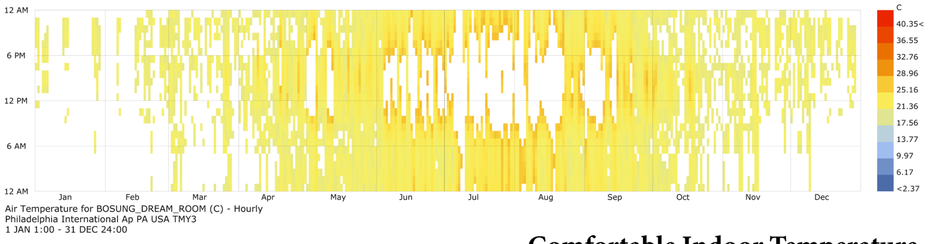


Energy Balance



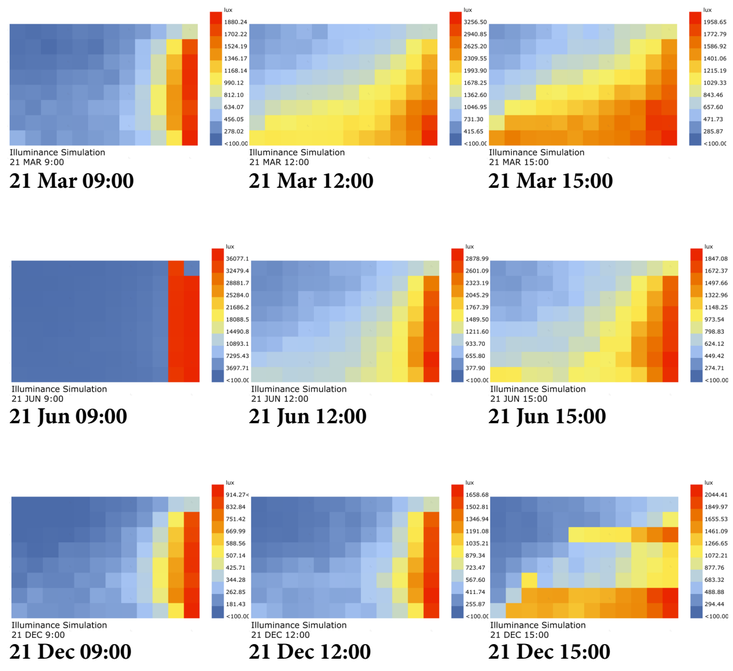
Adaptive Comfort

Annual Total Comfortable Time: 39 %
Percent of Hot: 9 %
Percent of Cold: 52 %



Percentage of Temperature between 18 and 26: 54%

Comfortable Indoor Temperature



Daylight