

# Decarbonizing NYC Offices: Implementing Forward-Thinking Fit-Outs

**be**  
**ex**

building  
energy  
exchange



# Decarbonizing NYC Offices: Implementing Forward-Thinking Fit-Outs

## Opening Remarks:

Richard Yancey, Executive Director, Building Energy Exchange

## Presentations by:

Bryan Hadick, Director, CodeGreen Sustainability

Jack Jenkins, Director of Energy and Sustainability, Robert Derector Associates

## Moderator:

Katie Schwamb, Director, Educational Resources, Building Energy Exchange

## Panelists:

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Jack Jenkins, Director of Energy and Sustainability, Robert Derector Associates

Zachary Steinberg, Senior Vice President of Policy, Policy and Planning, REBNY

## When:

September 17, 2024 · 9–10:30am

## Where:

31 Chambers Street · New York, NY

## Credits:

1.5 AIA LU

## Project Partners



# High-Performance Fitouts:

## *REBNY Office Case Study*

Building Energy Exchange / NYSERDA

September 2024



# CODEGREEN

Sustainability experts leading real estate portfolios to a carbon-free future.



>700

ENERGY STAR  
Labels Awarded



>2M SF

WELL & Fitwel  
Certified Space



>1B SF

LEED BD+C, ID+C, &  
O+M Certified Space



>8M SF

New Construction  
Commissioning



CODEGREEN



# What is High-Performance?



*'High Performance'* can mean something different for each project, but should always involve:

- Planning for goals, targets, & strategies
- Integrating early and throughout
- Executing solutions
- Verifying achievements



REBNY

New York, New York

HAS FULFILLED THE REQUIREMENTS OF THE LEED GREEN BUILDING RATING SYSTEM CERTIFICATION ESTABLISHED  
BY THE U.S. GREEN BUILDING COUNCIL AND VERIFIED BY GREEN BUSINESS CERTIFICATION INC.

LEED v4

INTERIOR DESIGN AND CONSTRUCTION: COMMERCIAL INTERIORS

PLATINUM

April 2024

A handwritten signature in black ink, reading "Peter Templeton".

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PETER TEMPLETON, PRESIDENT & CEO  
U.S. GREEN BUILDING COUNCIL & GREEN BUSINESS CERTIFICATION INC.

# REBNY Office Fitout

570 Lexington Ave, NYC (GE Building) - 18,711 square-feet - LEED v4 ID+C: CI Platinum

## Key Performance Outcomes

### Operational Carbon

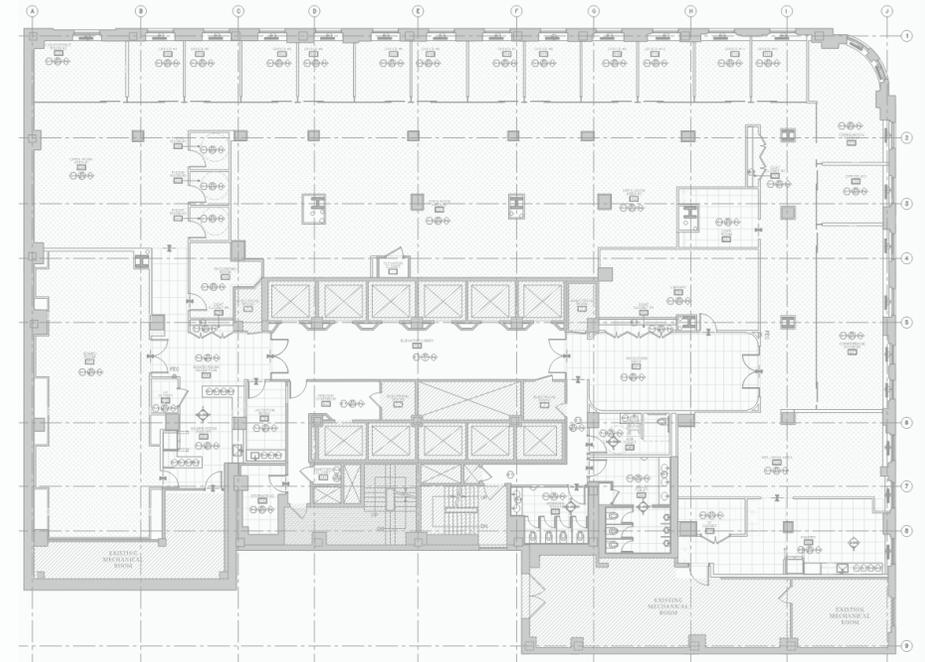
- 100% electric systems
- 20% energy cost savings (v. ASHRAE 90.1-2010)
- 47% indoor water use reduction (v. EPA baseline)

### Embodied Carbon

- 66% floor/ceiling area is demountable for flexible reuse
- 27% materials cost has responsible sourcing attributes

### Other Emissions Sources

- 99 WalkScore & no on-site parking
- 71% construction waste diverted; design for recycling
- 100% Low-GWP refrigerants



# REBNY Office Fitout

*Energy Strategies*

570 Lexington Ave, NYC (GE Building) - 18,711 square-feet - LEED v4 ID+C: CI Platinum



## 1. Goals & Targets

- Account for base building systems
- Target system performance levels
- EUI, GHG, Cost Savings
- Define baseline



## 3. Fundamental Commissioning

- Verify systems are installed, calibrated, and performing according to OPR, BOD, and CDs



## 2. Modeling-enabled Design

- Energy conservation measures (ECMs)
- Systems selection
- Ventilation rate optimization
- Lighting power density
- Equipment & fixture specifications



## 4. Enhanced Commissioning

- Submittal reviews
- Systems manual integration
- Operator training
- Seasonal testing
- 10-month operations review
- Ongoing Cx plan

# REBNY Office Fitout

*Human Strategies*

570 Lexington Ave, NYC (GE Building) - 18,711 square-feet - LEED v4 ID+C: CI Platinum



## Healthy Environment

- OA ventilation rates
- MERV-13 filters
- Low-VOC materials
- Ingredient inventories for human health
- Construction IAQ management
- Pre-occupancy IAQ testing



## Comfort & Controllability

- Acoustical design
- Thermal comfort & controls
- Lighting quality & controls
- Ergonomic, adjustable furnishings
- Daylight & Views

# Thank You!



**Bryan Hadick**

LEED AP, CPHC

Director, CodeGreen

[bhadick@codegreensolutions.com](mailto:bhadick@codegreensolutions.com)

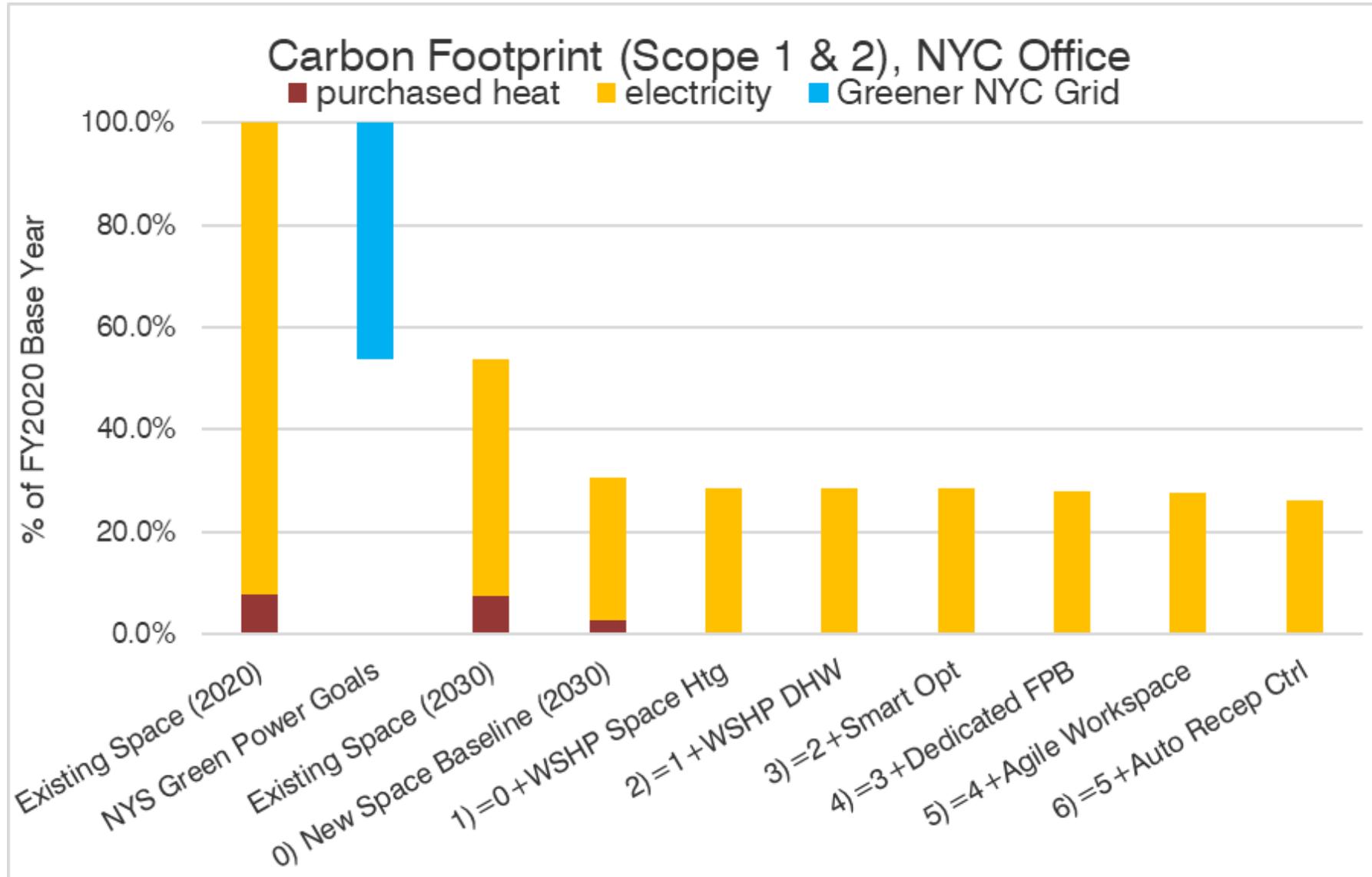




# DECARBONIZING OFFICE FIT-OUTS

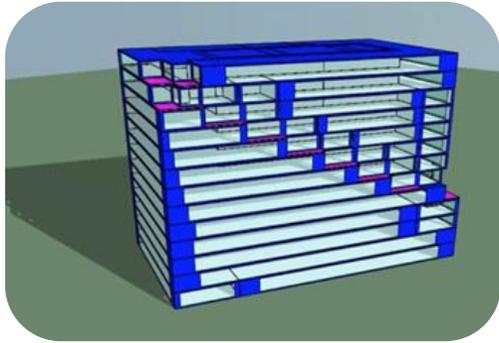
BEEX / NYSERDA Forward Thinking Fit-Outs Event, September 17, 2024

# PATH TO A NET ZERO CARBON TENANT SPACE

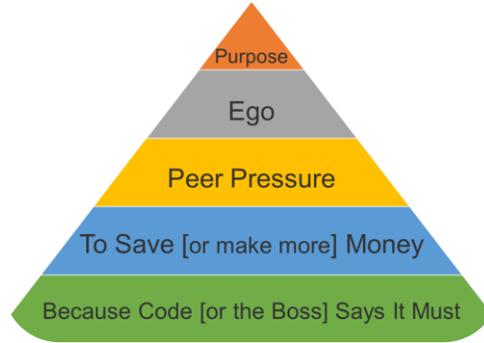


# GETTING TO NET ZERO

## IN FORWARD THINKING TENANT FIT-OUTS



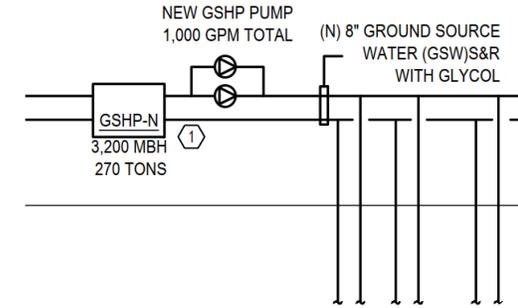
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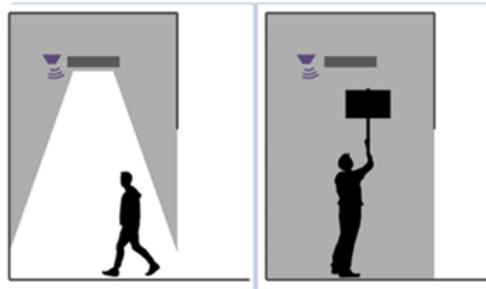
2. UNDERSTAND YOUR MOTIVATION



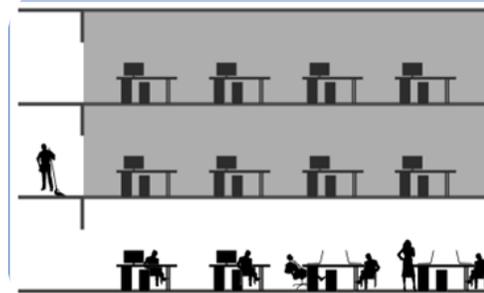
3. SET CLEAR GOALS



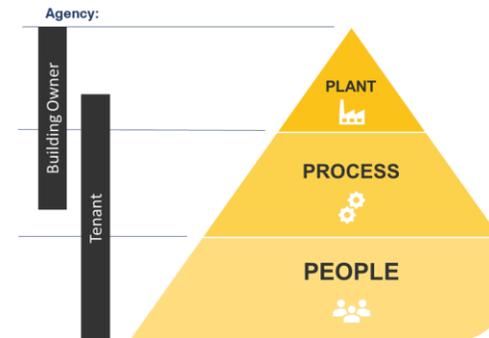
4. DEVELOP PROJECT-SPECIFIC OPPORTUNITIES



5. DESIGN FOR REAL LIFE



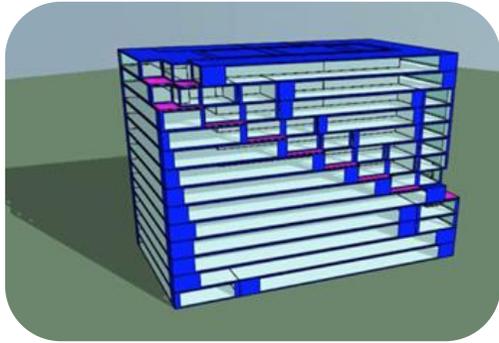
6. DESIGN FOR OPTIMIZATION



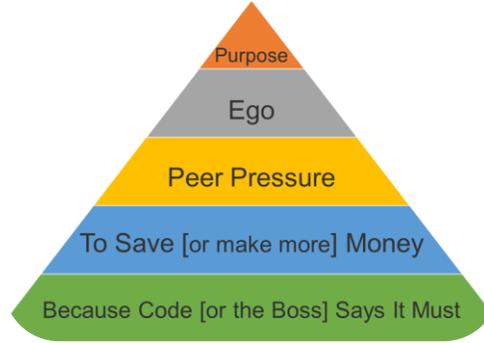
7. COLLABORATE

# GETTING TO NET ZERO

## IN FORWARD THINKING TENANT FIT-OUTS



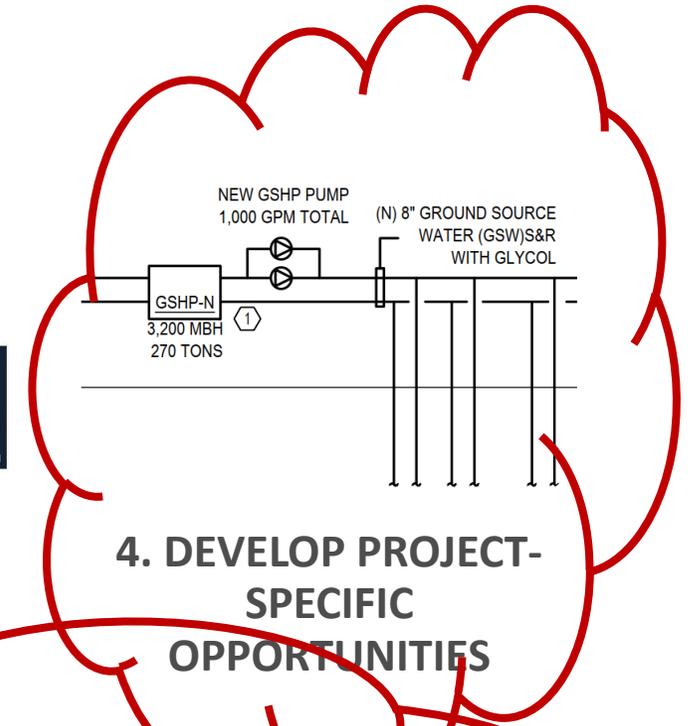
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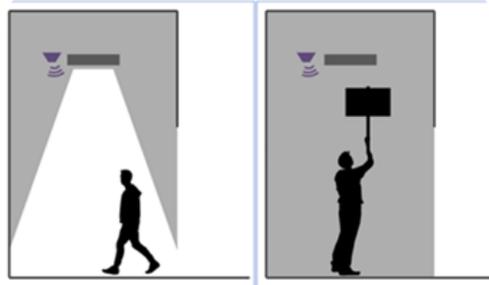
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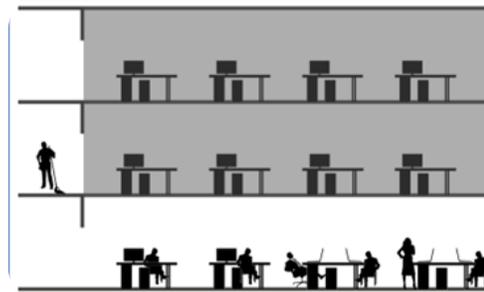
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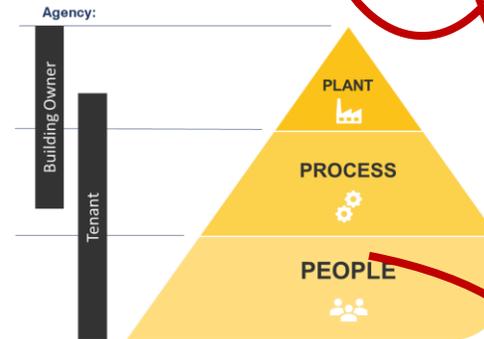
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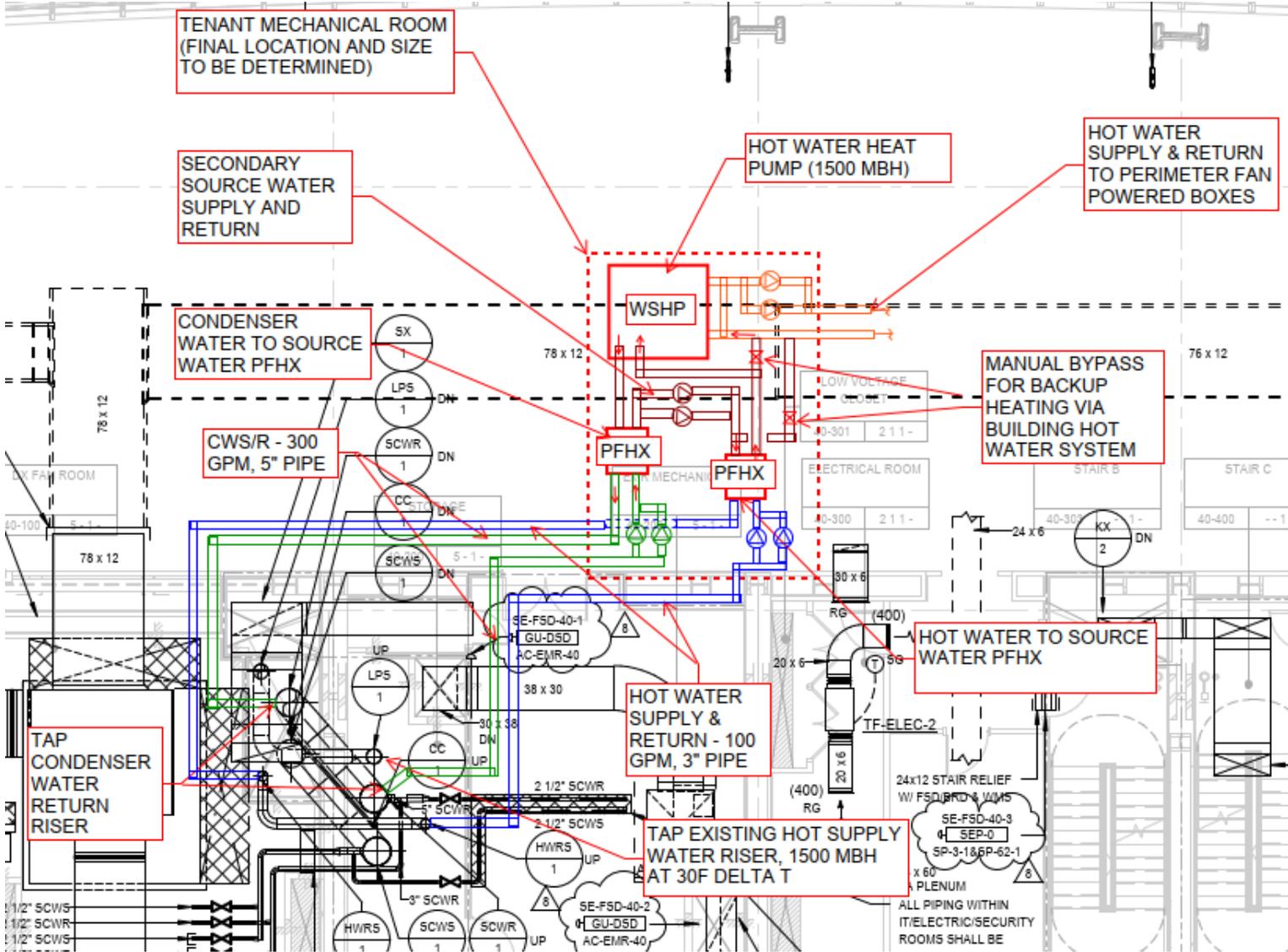


7. COLLABORATE

## 4. Project Specific Opportunities

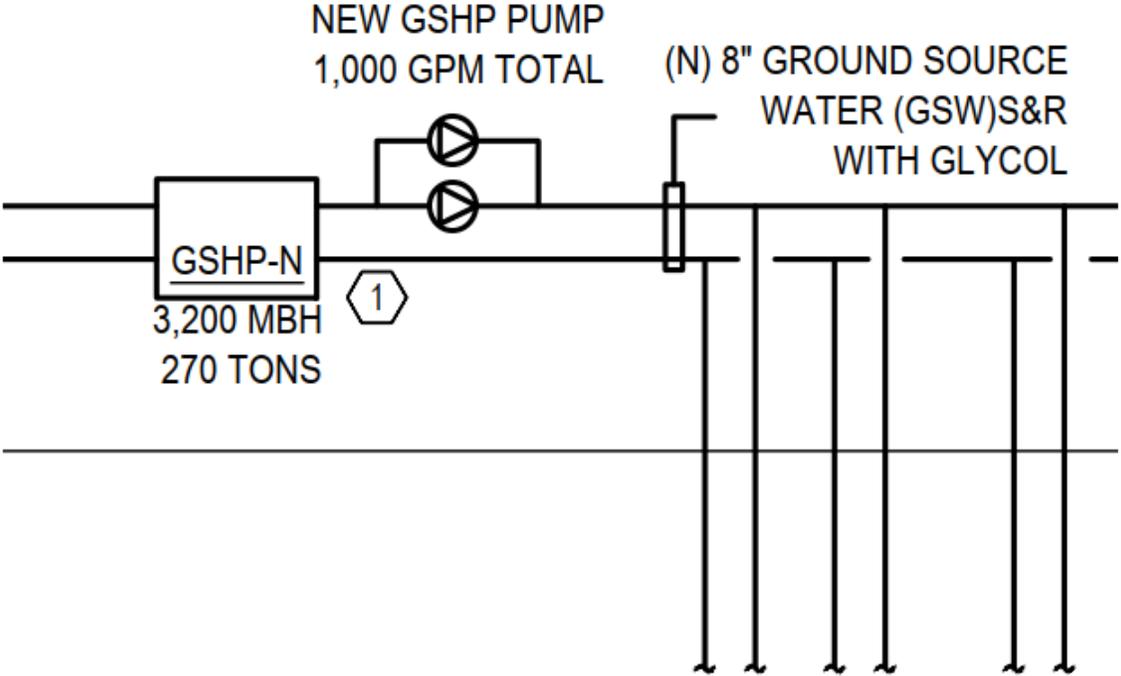
# HEAT RECOVERY HEAT PUMP – FOR TENANT SPACE HEATING

DECARBONIZING TENANT HEATING BY RECOVERY & REUSE OF WASTE HEAT FROM BUILDING CONDENSER WATER



# GROUND SOURCE HEAT PUMP – TENANT HEATING / COOLING

DRILL VERTICAL BORE-FIELD BELOW TENANT PARKING LOT

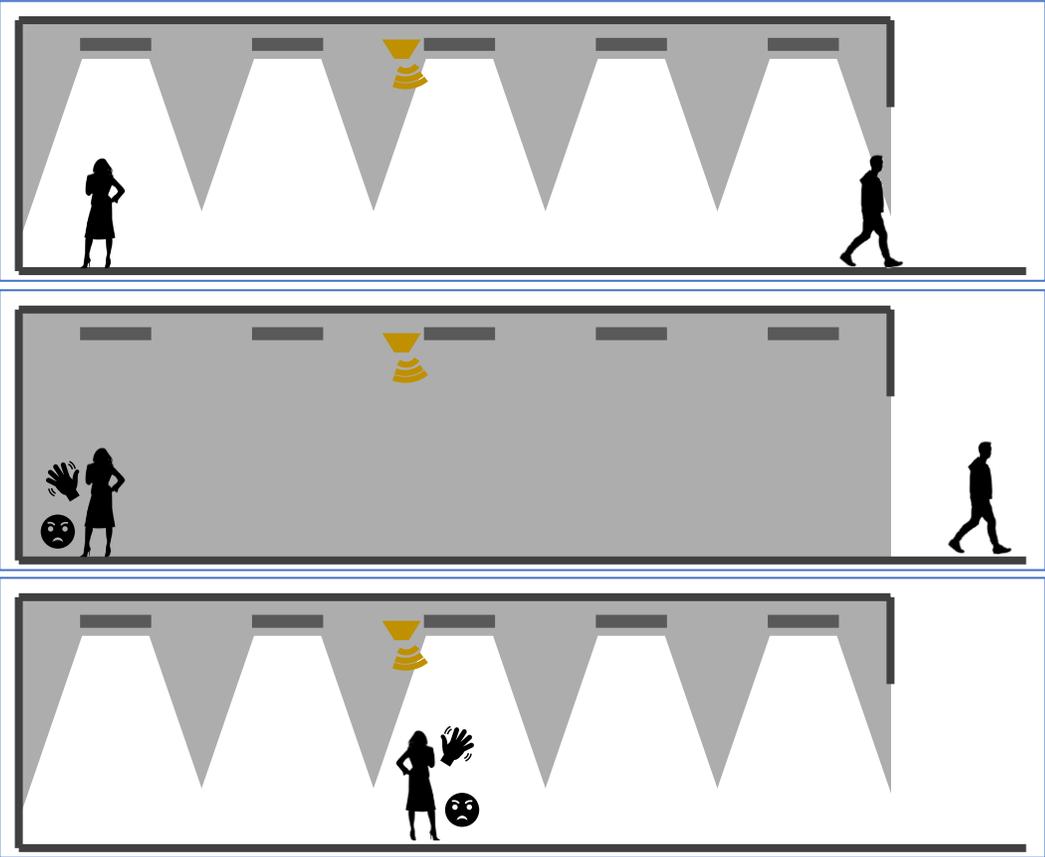


## 5. Design For Real Life



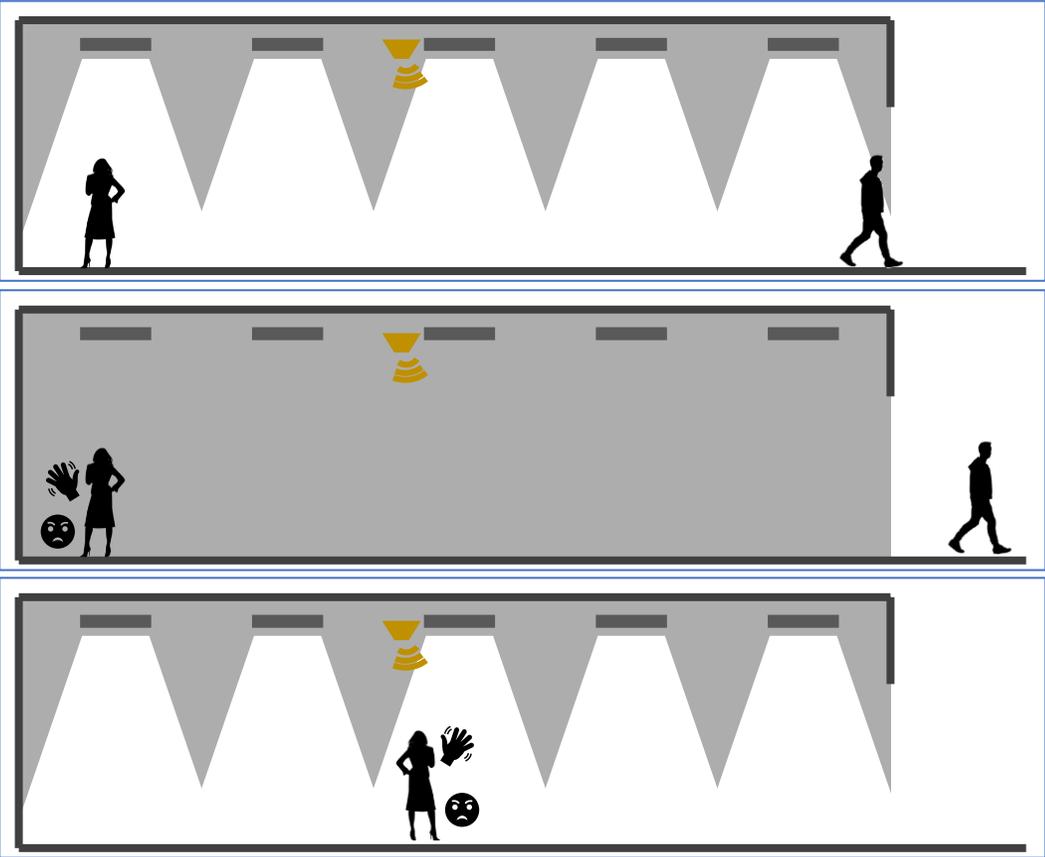
# DESIGN FOR REAL LIFE

## DESIGN FOR CODE MINIMUM



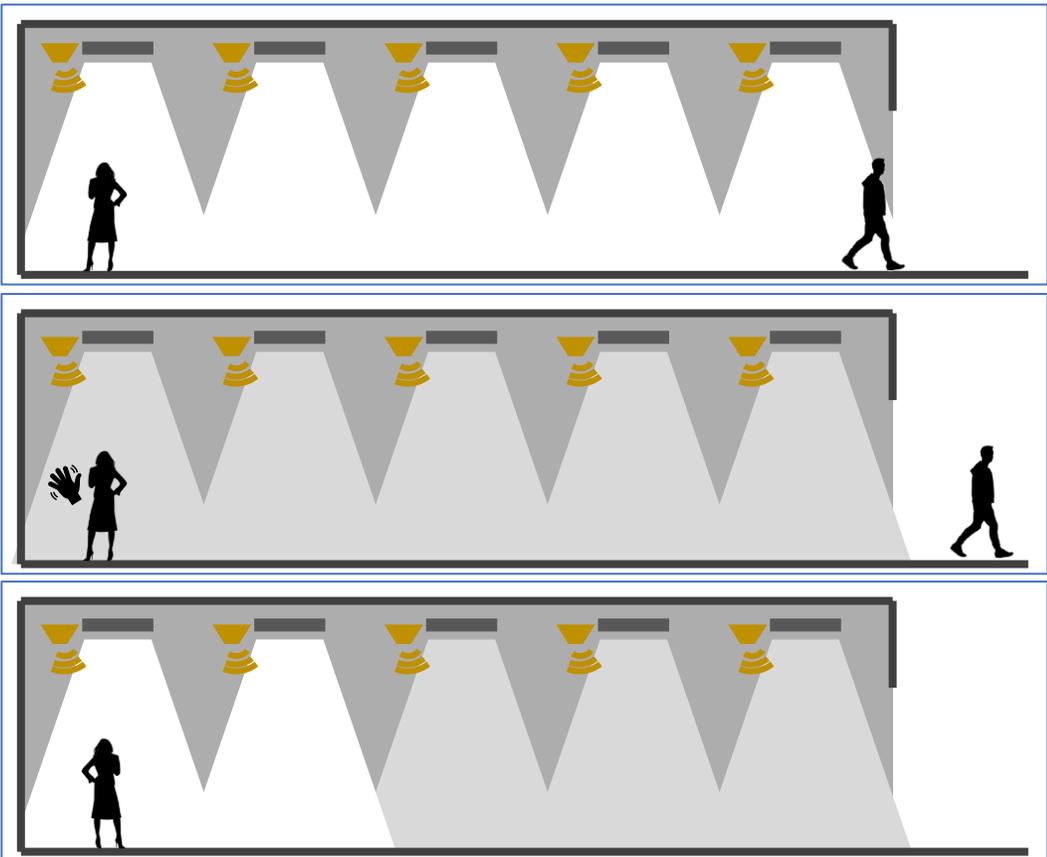
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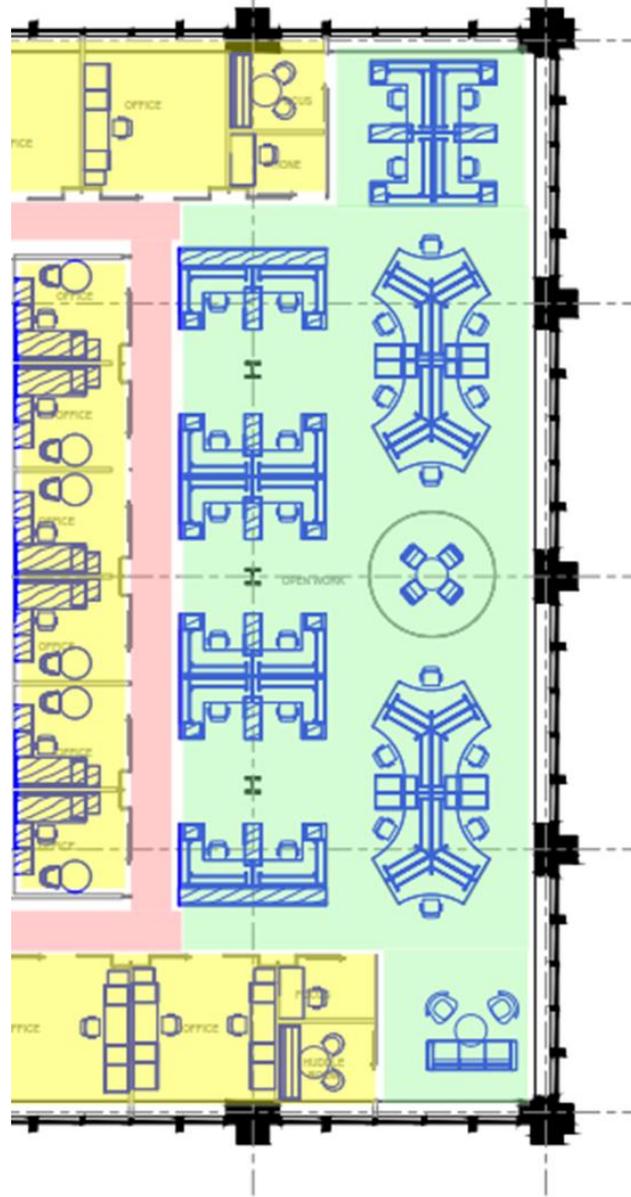
VS

## DESIGN FOR REAL LIFE

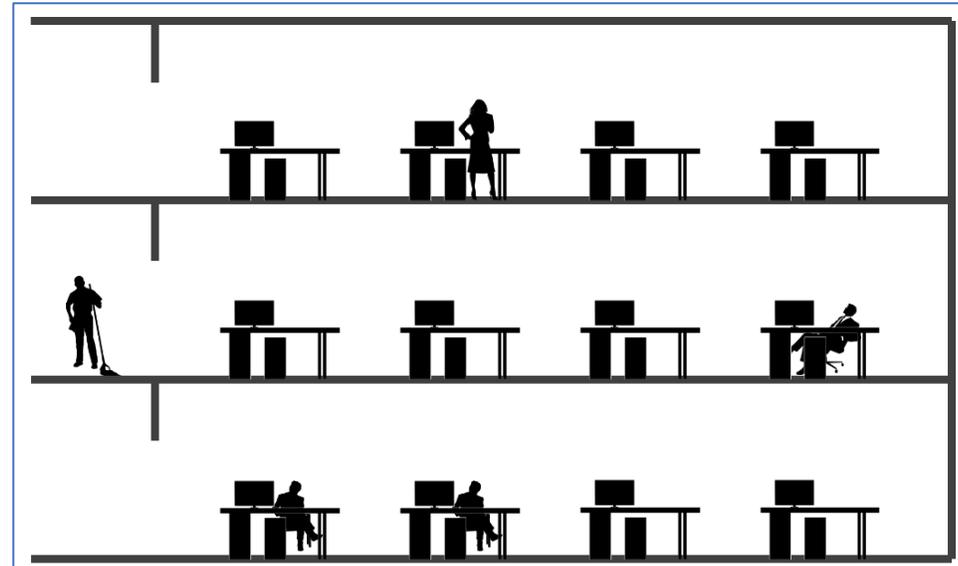


## 6. Design For Optimization

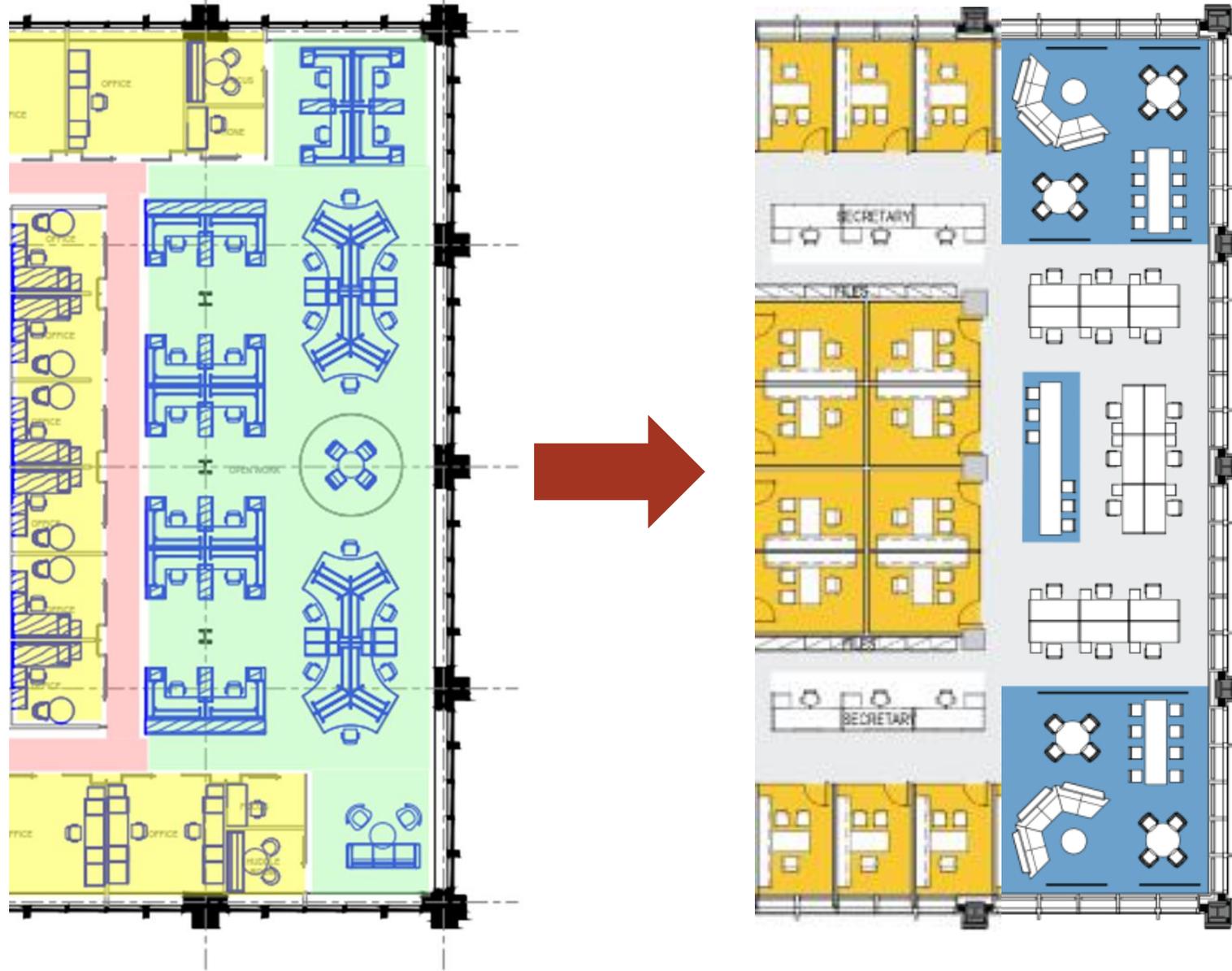




Individual workstations...

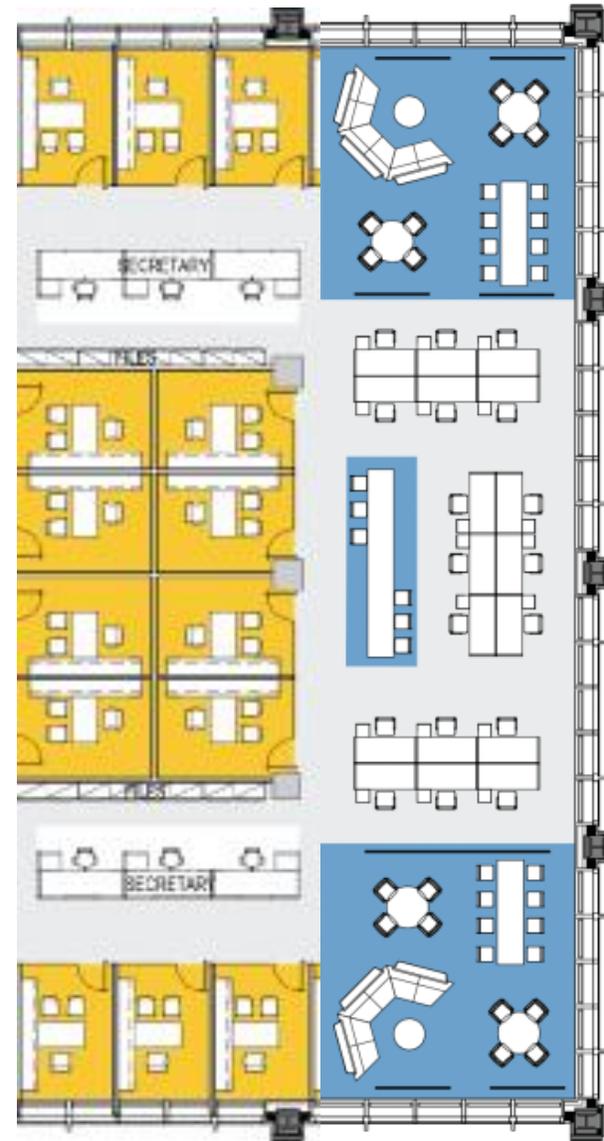
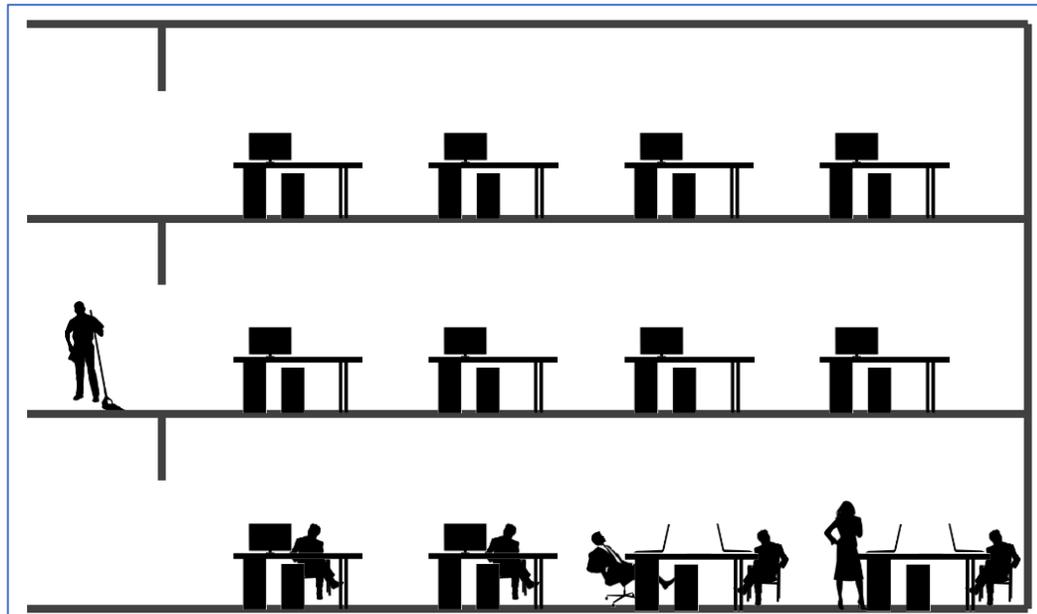


... systems stay on for people working late or in on low occupancy days

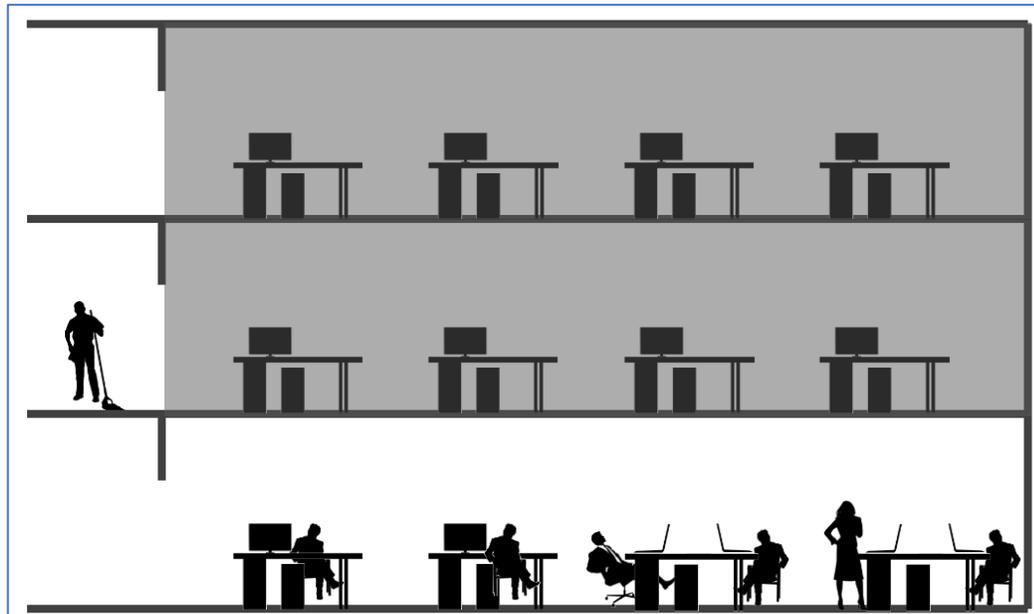


Flexible workspace in prime areas

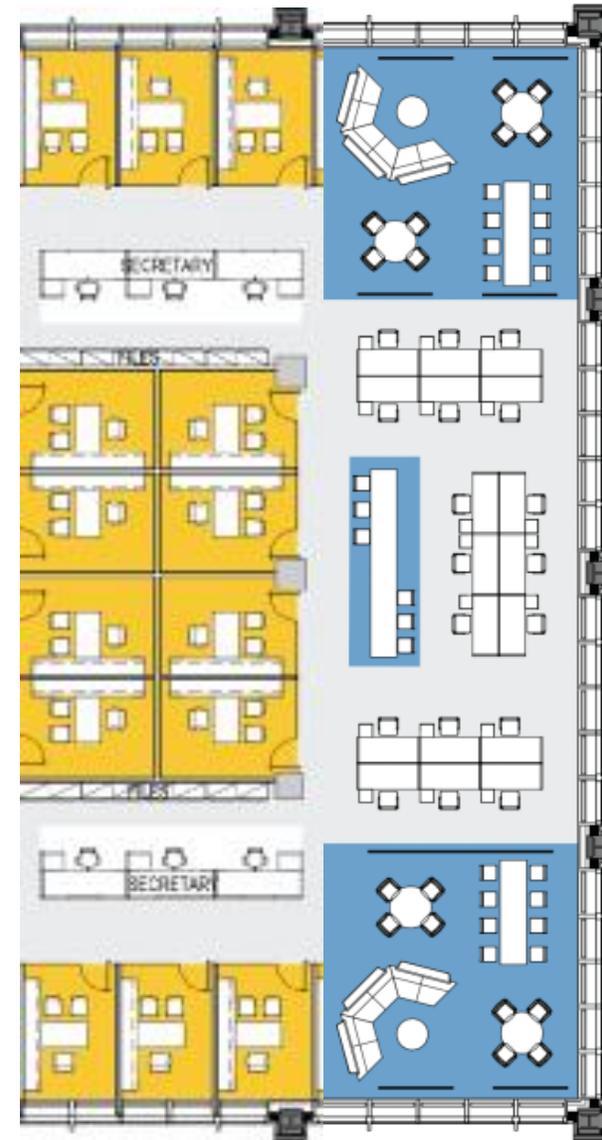
Designate space for use on low occupancy days &/or after hours



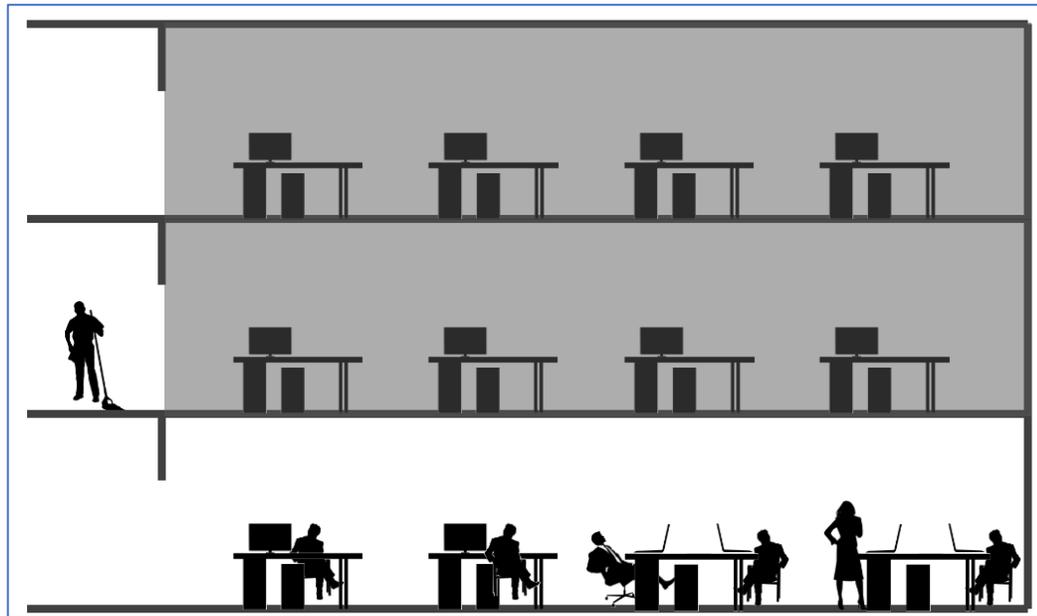
Designate space for use on low occupancy days &/or after hours



... turn-off other space

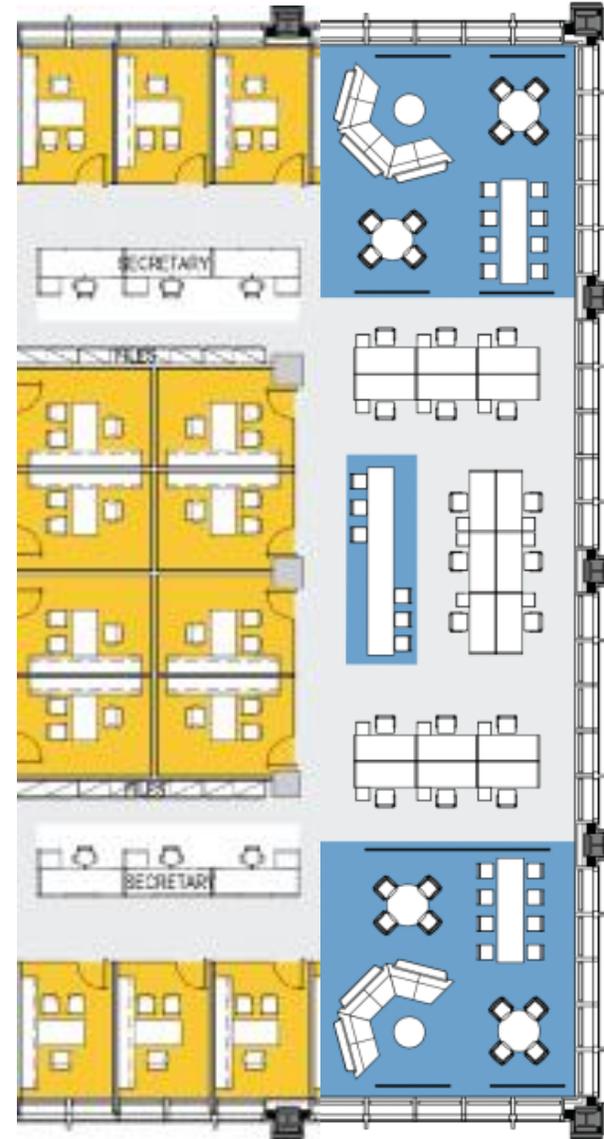


Designate space for use on low occupancy days &/or after hours



... turn-off other space

... and collaborate with building to reduce HVAC use and costs



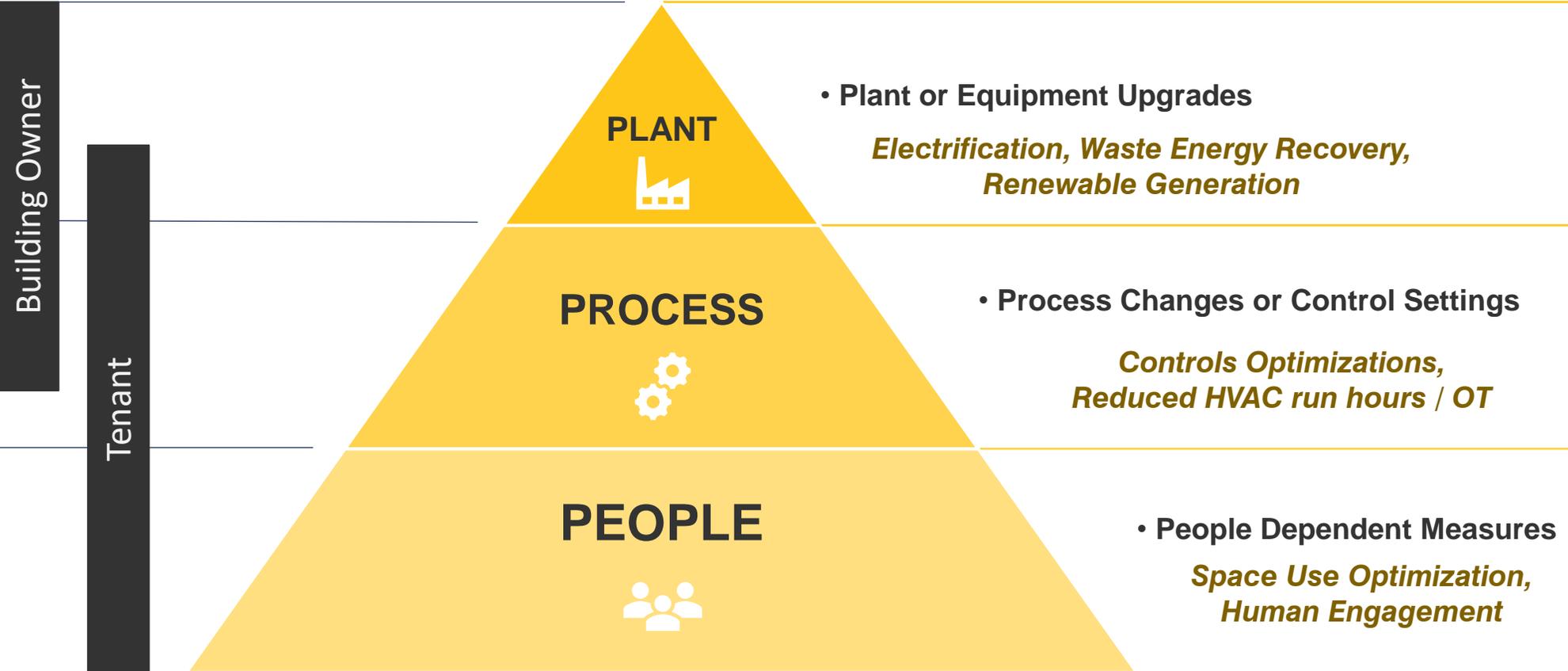
## 7. Collaborate



# COLLABORATE - TO MAKE ALL CARBON SAVINGS AVAILABLE

ENABLE OPTIMIZED HVAC HOURS, REMOVE SPLIT INCENTIVES FROM LEASE, ALLOW SPACE FOR TENANT EQUIPMENT

## WHO HAS AGENCY:

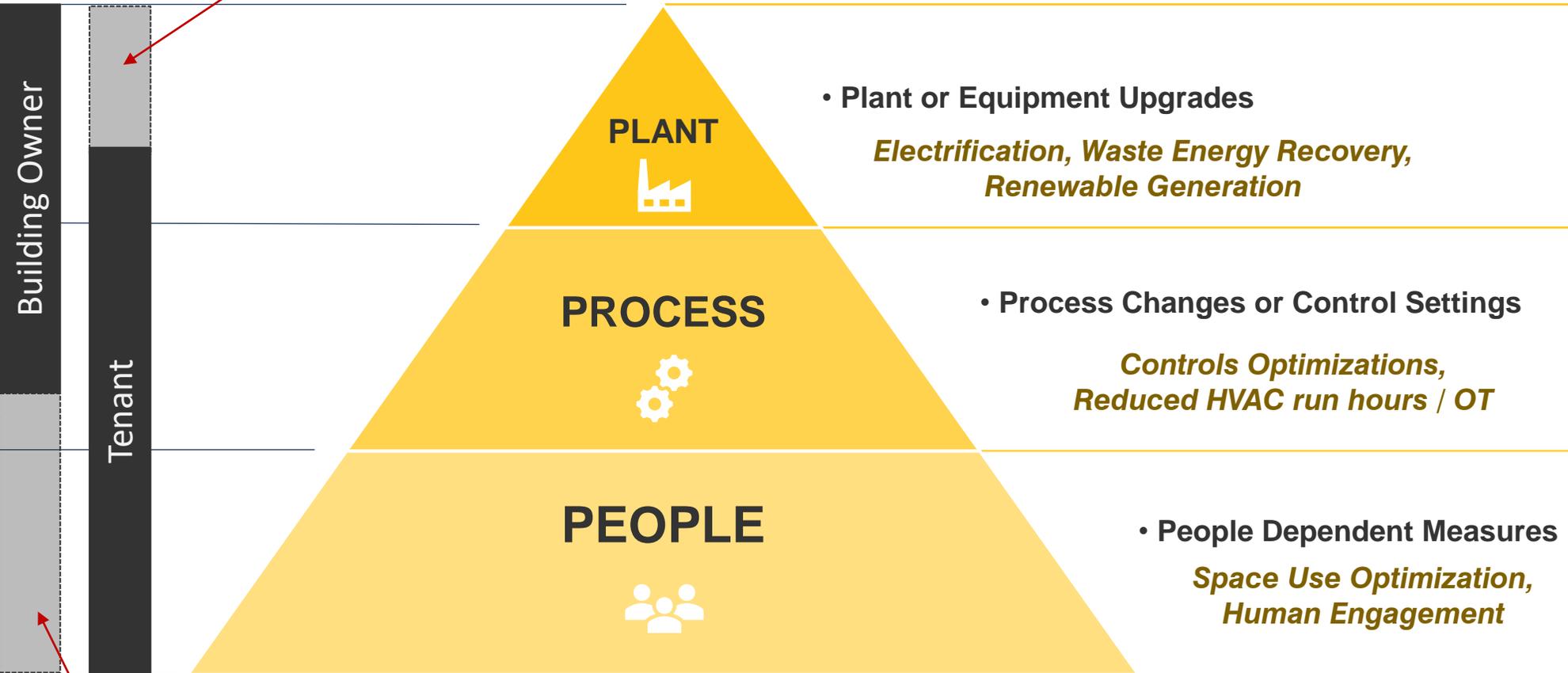


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ENABLE OPTIMIZED HVAC HOURS, REMOVE SPLIT INCENTIVES FROM LEASE, ALLOW SPACE FOR TENANT EQUIPMENT

WHO HAS AGENCY:

i.e. Building allows tenant to install own Solar PV and space heating heat pump systems

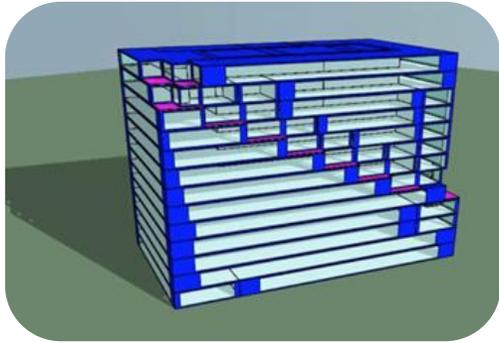


i.e. on low occupancy Fridays Tenant only opens 2 of its 8 floors, and work with building to enable reduced HVAC to the Tenant's other floors

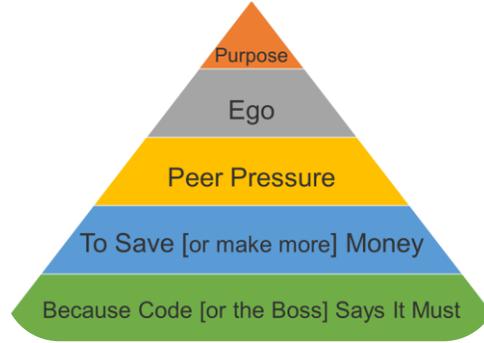
# SUMMARY - Getting to Net Zero

# GETTING TO NET ZERO

## IN FORWARD THINKING TENANT FIT-OUTS



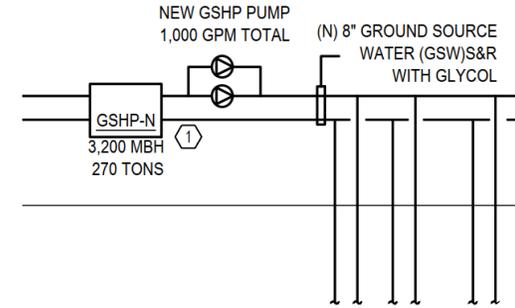
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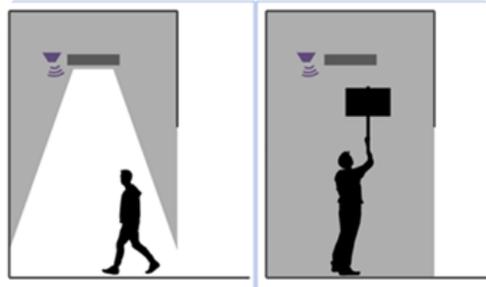
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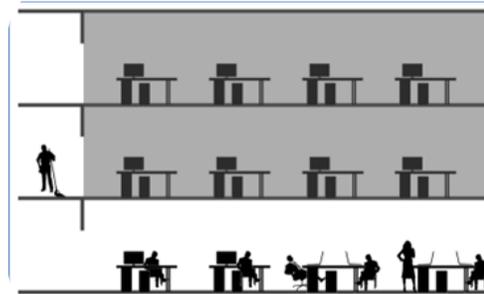
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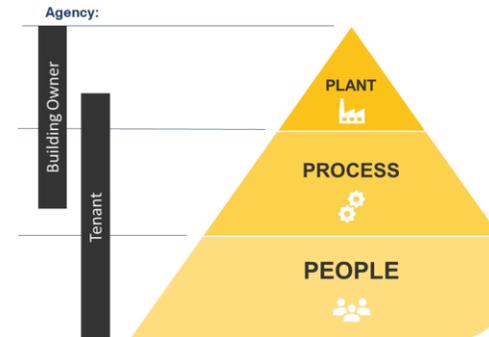
4. DEVELOP PROJECT-SPECIFIC OPPORTUNITIES



5. DESIGN FOR REAL LIFE



6. DESIGN FOR OPTIMIZATION



7. COLLABORATE

# Robert Derector Energy & Sustainability (RDE)



**Jack Jenkins, LFA, CEA, LEED AP BD+C**  
**Director of Energy & Sustainability**  
**Robert Derector: Energy & Sustainability (RDE)**

jenkins@derector.com  
917-576-7947



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[www.be-exchange.org/decarbonizing-new-york-city-offices-project](http://www.be-exchange.org/decarbonizing-new-york-city-offices-project)

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