

# PRE/POST-OCCUPANCY EVALUATIONS

MSBA Round Table

MARCH 11, 2018

PERKINS+WILL

PERKINS+WILL



## P/POE /

### A Critical Step

In an era of rapidly changing technology, when schools want high-performance buildings and spaces that support students, the pre- and post-occupancy evaluation (P/POE) is a valuable tool. P/POEs allow us to determine the success of design decisions and also offer insights on how best to use spaces.

## P/POE /

A Critical Step

A successful POE is one that begins with a pre-occupancy evaluation to establish a baseline and shared understanding of what works and what does not in an existing system.

## P/POE /

### A Critical Step

“In order for the [POE] data that you’re collecting to give you valid results, you have to first measure the problem you’re solving, then design to solve that problem, and finally see if you have solved it. That’s why [at our firm] we call it a PPOE instead of a POE.”

-Janice Barnes, PHD, LEED® AP BD+C Principal / Global Resilience Director - *Why Your Firm Should Embrace the Post-Occupancy Review*, Architect Magazine

# PROCESS /



## DEFINING P/POE /

A systematic investigation of building performance + human needs against performance criteria after a space has been occupied.

### BUILDING

POE is the process of evaluating buildings in a systematic and rigorous manner after they have been built and occupied for some time.

*Preiser et al. (1988)*

### HUMAN

POE is an appraisal of the degree to which a designed setting satisfies and supports explicit and implicit human needs and values of those for whom a building is designed.

*Friedman et al. (1978, p.20),*

## WHAT ARE WE MEASURING? /



Engagement &  
Satisfaction



Building  
Performance



Productivity



Design  
Effectiveness



Technology



Utilization



Well-being



**WHAT DID WE  
MISS?  
WHAT CAN WE  
IMPROVE?**

## MULTI-METHOD APPROACH /



Performance  
Analysis



Site  
Observations



Survey



Interviews  
(Formal & Informal)



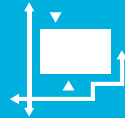
Attendance  
Data



Focus Groups



Utilization Study



Plan Analysis

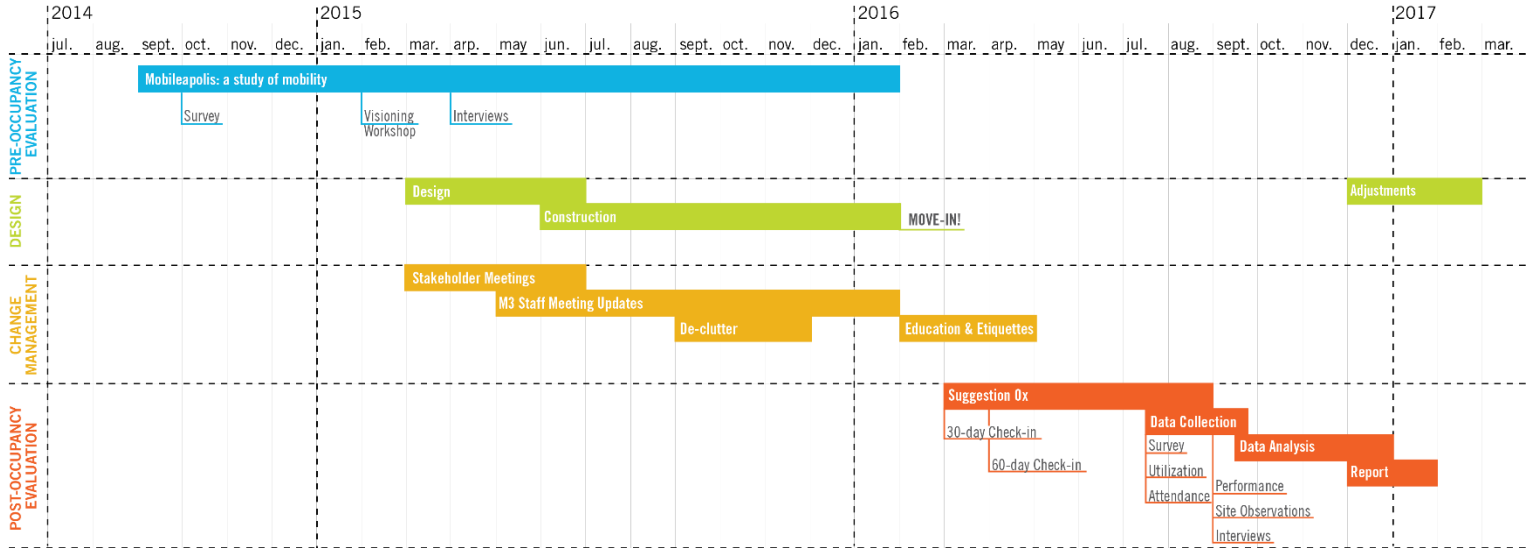


New Data  
Collection Tactics



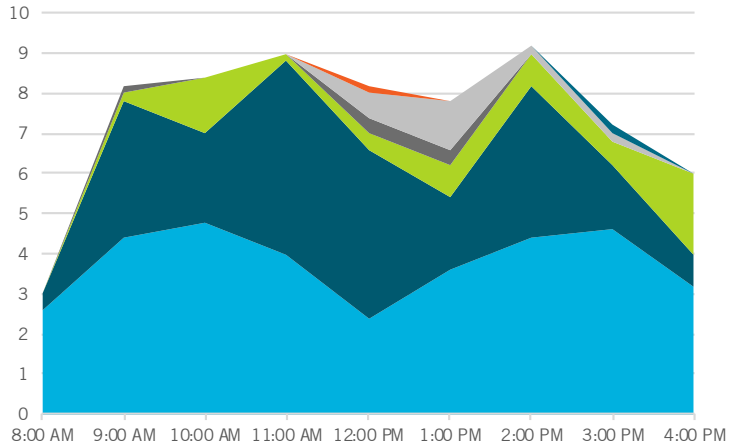
# P/POE Case Study

# Project Timeline



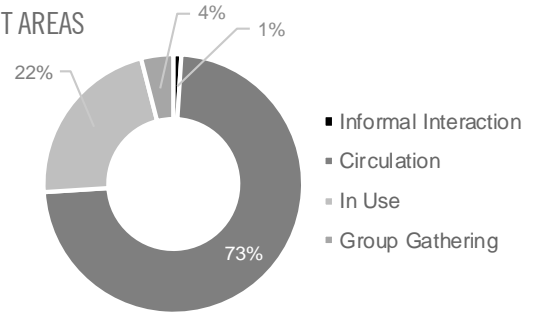
# MEETING & BREAKOUT SPACES

### AVG. ACTIVITIES OBSERVED THROUGHOUT THE DAY

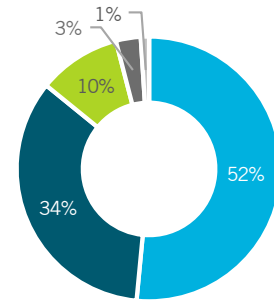


- Conference Call
- Video Conference
- Dining
- Presentation
- Project
- Meeting
- Private Use

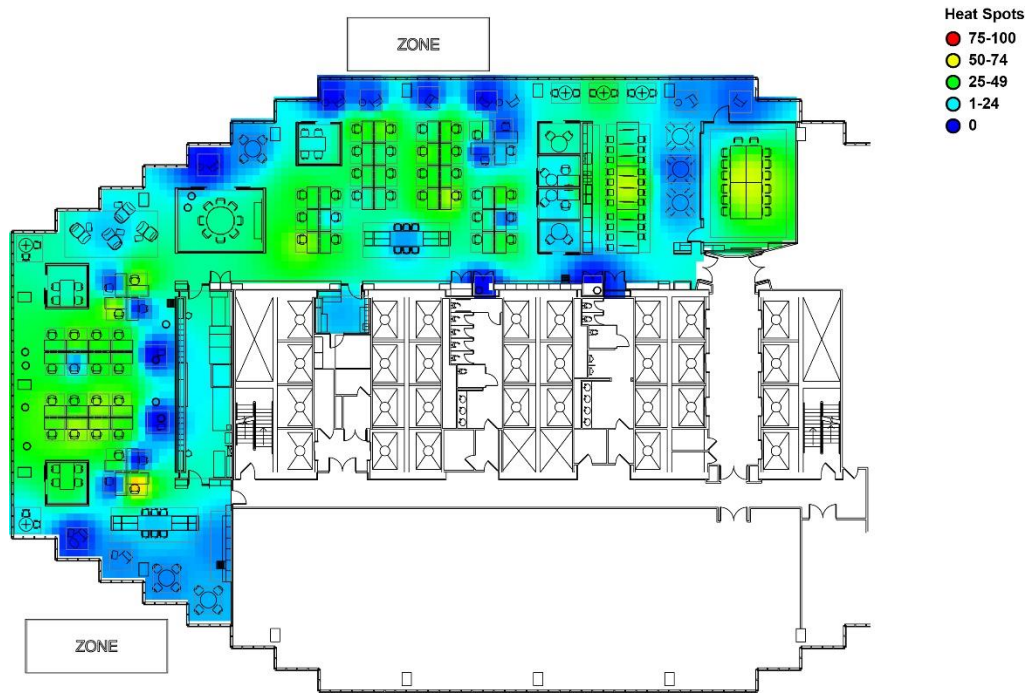
### ACTIVITY TYPES SUPPORT AREAS



### ACTIVITY TYPES MEETING & BREAKOUT



# HEAT MAPS



# SITE OBSERVATIONS

## Crystal Court Side

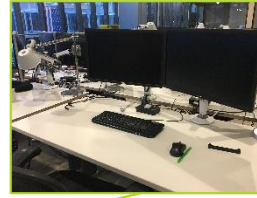
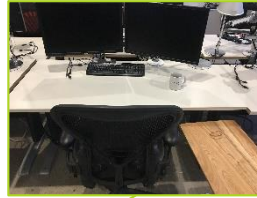
### KEY

Project Material/Storage

Supplies Left on Work Surface

Informal Interaction & Collaboration

Adapted Work Environment



A mouse and coffee mug left on desks from previous day indicating that they are in use.



Adapting the workstation to preferred setup by moving the monitors so only one is in use.



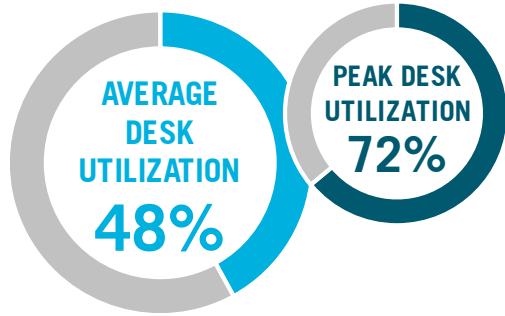
Project materials piling up on shelf.



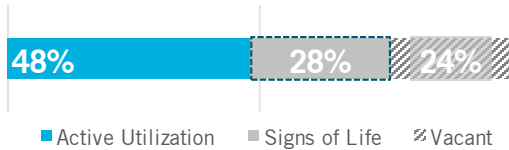
Project tables being used for storage.

# KEY FINDINGS

## WORKSTATION UTILIZATION

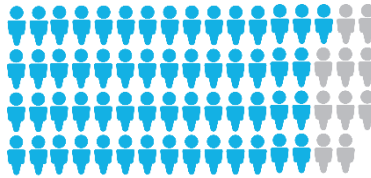


## WORKSTATION ACTIVE UTILIZATION



GENERAL NOTES: Predominately laptop with monitor based activity at workstations and frequent private use in meeting rooms. In general, workstations have a significant percentage of signs of life meaning people are leaving supplies at workstations while in meetings or working in other locations.

## ATTENDANCE



On average,

# 85%

of employees are in the office on a given day

## MEETING AND BREAKOUT UTILIZATION

THE MOST COMMON NUMBER OF PEOPLE IN A MEETING SPACE IS **ONE**

83% OF ALL MEETINGS CONSIST OF

# THREE

PEOPLE OR FEWER

# 0%

AVG PHONE ROOM UTILIZATION

# 23%

AVG FOCUS ROOM UTILIZATION

# 27%

AVG HUDDLE ROOM UTILIZATION

# 35%

AVG PROJECT + NICOLLET UTILIZATION

# 71%

AVG CRYSTAL COURT UTILIZATION

# P/POE Moving Past Status Quo

## WHERE ARE ALL THE POEs? /

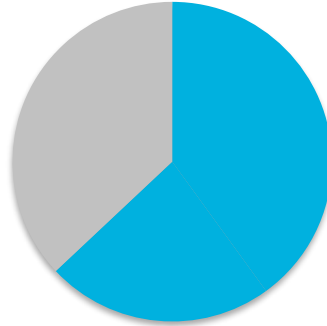
SURVEY TO  
A&D SUSTAIN-  
ABLE DESIGN  
LEADERSHIP  
NETWORK IN  
JULY 2014



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# 29

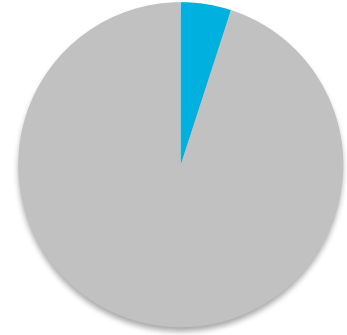
OF 60 FIRMS  
RESPONDED



## DESIRE

WOULD LIKE TO CONDUCT  
POEs ON **75% OR MORE** OF  
THEIR PROJECTS

AND



## REALITY

WERE SUCCESSFUL IN  
IMPLEMENTING POEs ON  
**LESS THAN 5%** OF PROJECTS  
IN THE PAST YEAR



## WHERE ARE ALL THE POEs? /

Survey to A&D  
Sustainable Design  
Leadership Network in  
July 2014



**The most frequent reason given was the lack of time and the cost required to produce meaningful results.**

### **Additional concerns included:**

- Designer and client liability concerns
- Client privacy concerns
- Lack of client demand/challenges communicating value
- Lack of timely responses from the client/user
- Client desire to control or limit employee feedback
- Limited site access
- Unsuitability for certain program types (such as retail)
- Timing of POE (since this typically occurs after project closeout)
- Lower priority of non-billable or research tasks
- Defining scope and aligning expectations
- Design team awareness and/or experience
- Fear of loss of funding

## THE FUTURE /

# BIG DATA

is being generated by everything around us at all times. Big data is arriving from multiple sources at an alarming velocity, volume and variety.

Each of us is now a walking data generator.

<https://hbr.org/2012/10/big-data-the-management-revolution>



# ENGAGE, MEASURE, ANALYZE //

## BADGE DATA ANALYSIS



On average, 6655 Peachtree employees are in the office

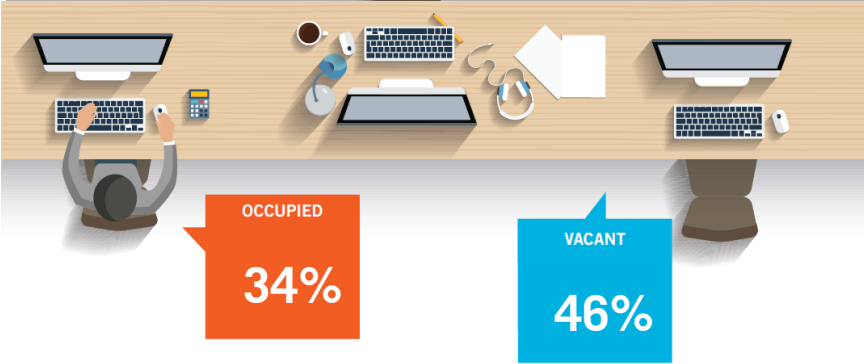
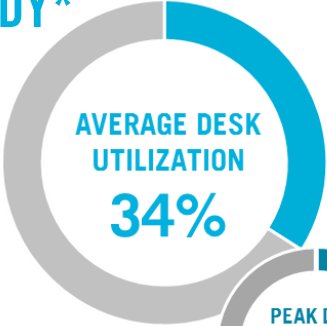
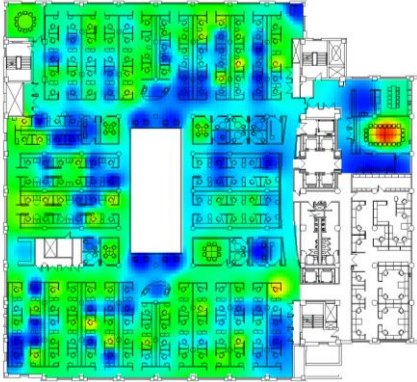
**55%**  
of the time.

On average, 6655 Peachtree Dunwoody employees are in the office Monday - Thursday

**2.2** days

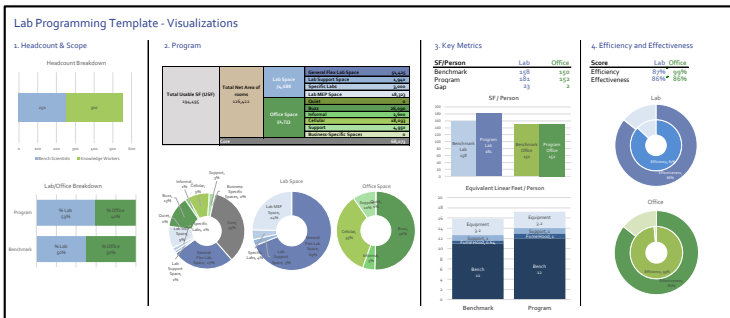


## SPACE UTILIZATION STUDY\*

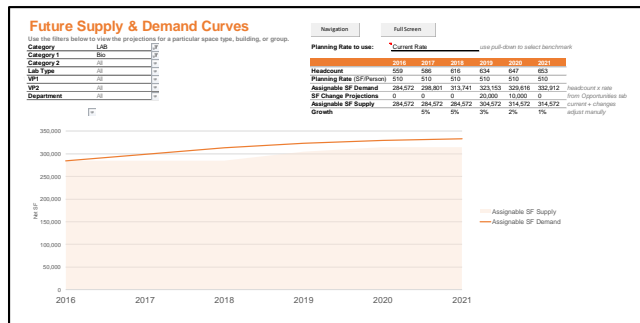


# HQ MASTER PLAN //

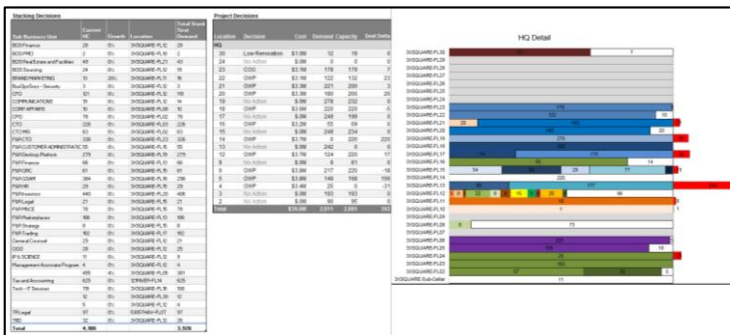
## SPACE PROGRAMMING



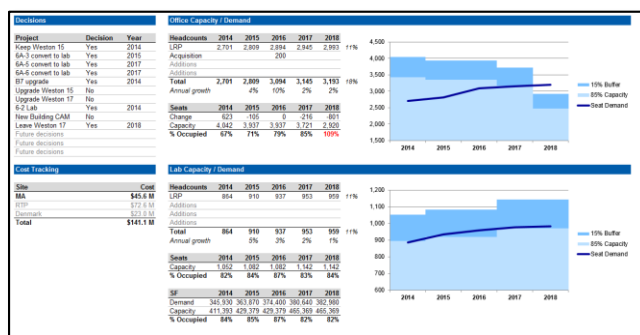
## CAPACITY / DEMAND



## STACKING



## COST MODEL



## THE VALUE OF P/POE

- Maximizes value of the investment made in the projects
- Apply lessons learned to improved project design and processes, resulting in cost savings
- Uncover trends in design and process
- Measure the effects of variations made to processes and projects over time
- Support productivity, engagement, health, and well-being
- Create/confirm space standards
- Document lessons learned to inform future projects



# QUESTIONS /