

An overhead view of a meeting around a wooden table. Five people are visible, mostly from the chest down or hands. One person in a light blue sweater points at a document on a clipboard. Another person in a light blue shirt has their hand on a laptop. A third person in a red patterned sweater holds a tablet. A fourth person in a plaid shirt points at a large sheet of paper. A fifth person in an orange sweater is also present. The table has a laptop, a tablet, a clipboard with a document featuring charts and graphs, a large sheet of paper, and several glasses of water.

# Project 4 Million

Innovation Incubator May 2020  
by Greg Gardiner

Perkins&Will

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Data driven design is at the forefront of effective workplace performance. Perkins and Will have collected over **4 million observations** on how people utilise office space. we centralised and analysed this data, the following report outlines the findings.

# 1. Introduction

# Overview

For decades Perkins and Will has been analyzing workplace performance, understanding how organizations utilise their space, how they work, collaborate and socialize. The amount of data gathered through observational studies (Space Utilization Studies – SUS) stands at over 4 million observations, 54,000 workstations, spanning 15 countries and 21 business sectors.

This study is the results of centralizing that data into one database, identifying key utilization trends and provides answers to the some of the following questions:

- Have workplaces become more efficient in terms of workstation utilisation?
- How do big workplaces compare to small?
- How do business sectors compare?
- How do countries compare?
- How can workplaces become more efficient?
- What is the potential impact of increased levels of working from home on utilisation?

This study also forms the basis with which all future project can be benchmarked against, ultimately helping workplaces to be more effective.

# 4,639,799

Observations

## 54,376

workstations

## 87

Workplaces

## 3,744

meeting Rooms

## 6,111

breakout settings

## 15

countries

## 21

sectors



# Executive Summary

## 1. Workplaces have become less efficient in terms of workstation utilisation over the past 5 years

Workstation utilisation over the past 5 years has shown a drop of 7%, however occupancy (people physically at desks) dropped by only 2% suggesting the amount people are temporarily away from their desks has actually fallen. This is contrary to the belief workplaces are becoming more agile and mobile. Whilst a further investigation into this cause will be needed it is clear occupancy has fallen slightly, suggesting people are spending more time out of the office potentially adopting more remote working.

## 2. Desk utilisation at peak is low with Firms on average only achieving 60% utilisation

The study revealed the average workplace only achieved 60% utilisation during peak times, this an estimated wastage of around £3.1m\* per annum in total real estate costs (rents, rates, FM etc). But can organisations simply have 40% less desks? Whilst it is theoretically possible, a peak utilisation of 100% would see many employees struggling to find workstations during these peaks and would require a comprehensive agile desk sharing strategy.

## 3. Bigger workplaces have lower and more predictable utilisation levels

The study has also revealed small workplaces of less than 250 workstations showed a huge variation in average utilisation ranging from 20% up to 95%, whilst bigger workplaces of over 1,500 start to become far more predictable, ranging from 40% to 70%. The reason for this being a smaller group of people have a higher probability of all being in or out of the office at any given time, whilst a larger group the contrary is true.

## 4. Meeting room provision does not match demand

The study shows the average meeting was only 3 persons, whilst the average room size was 8 seats. Furthermore the average utilisation for the rooms was low with only 40% of rooms occupied at any one time. Just to give some context, the costs of having meeting rooms for the average firm in our study is over £1m per annum in total office costs\*. Companies therefore should realigned their provision with demand and adopt room booking system in order to become more efficient.

## 5. There is a lack of individual private/focus space

29% of all meetings observed in the study was by a single person, suggesting that there is not adequate dedicated facilities and people are taking meeting rooms. Providing individual space for focused quiet working and somewhere to take a call is essentially and is typically one of the most asked for things in surveys.

## 6. Breakout space is rarely used (17% utilised)

Breakout space, which includes most of the other non desk/meeting room space, was on average only 17% utilised. If we exclude canteens, office meeting tables and waiting areas (which is not typically regarded as Breakout) this rises to 20%. Still quite low as this is typically desirable space for employees. Perhaps the spaces that are provided are not aligned to employee needs. Soft seating for example was only utilised 13% of the time.

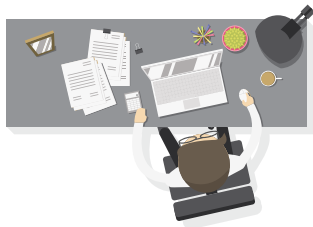
## 7. Working from home 2 days a week would see average utilisation drop to 32%

By retrospectively simulating work from home strategies into 3 recent observational studies, it showed if all staff had worked from home 1 day a week (evenly staggered throughout the week) utilisation would drop by 11%, whilst 2 days would increase 2 fold to 22%, or the equivalent of over £1m in total real estate costs\*. With future WFH practices predicted to be significantly higher as a result of COVID19 will companies seek to reduce real estate or retain the same and respect social distancing?



# Glossary of Terms

## Occupied / Occupancy



+

=

**Utilisation**

## Signs of Life



## Occupied / Occupancy

Also referred to as 'Active Utilisation', the sum of all workstations or facility types that are physically occupied by a person or people divided by the totally number of observations

## Signs of Life

A workstation where an individual is not physically at their workstation however there is evidence that they are temporarily away such as computer on, coat on back of chair, cup of coffee

## Vacant / Unoccupied

A workstation or facility that is observed as clearly not in use showing no signs of recent occupation.

## Utilisation

Is the total number of '**occupied**' plus '**signs of life**' divided by the total observations for the same period, given as a percentage.

Within this study Signs of Life was not recorded for Meeting rooms as this rarely happens and is a negligible number.

## Peak Utilisation

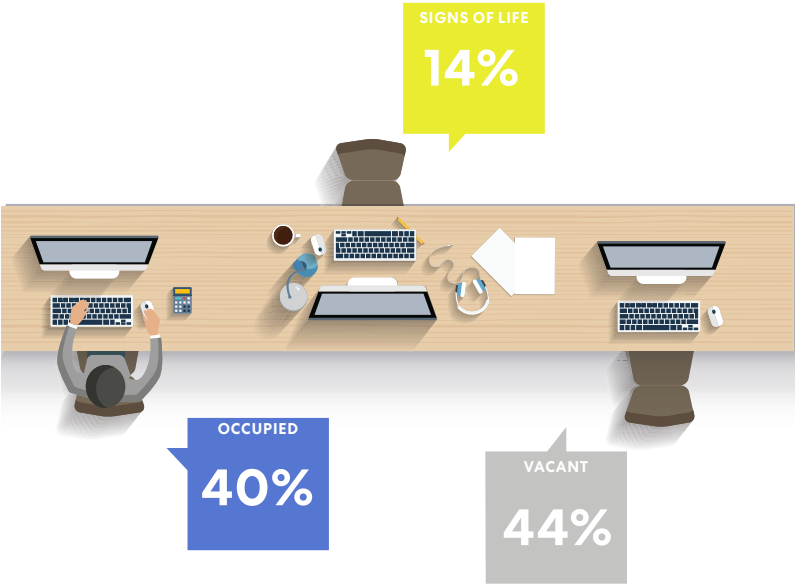
Is the maximum utilisation at any given time e.g: on Tuesday at 11pm a maximum of 70 workstation were utilised out of a possible 100 - 70% Peak Utilisation

## 2. Workstation

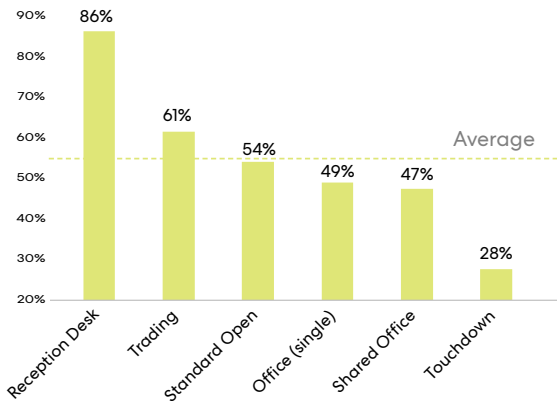
# Workstation Summary

## Average Utilisation

The overall average workstation utilisation across the study was 54%, with signs of life (where they were temporarily away) making up 14% of this.



### Workstation Typologies



54%

Workstation Utilisation

40%

Occupied (a person physically at desk)

14%

Signs of Life

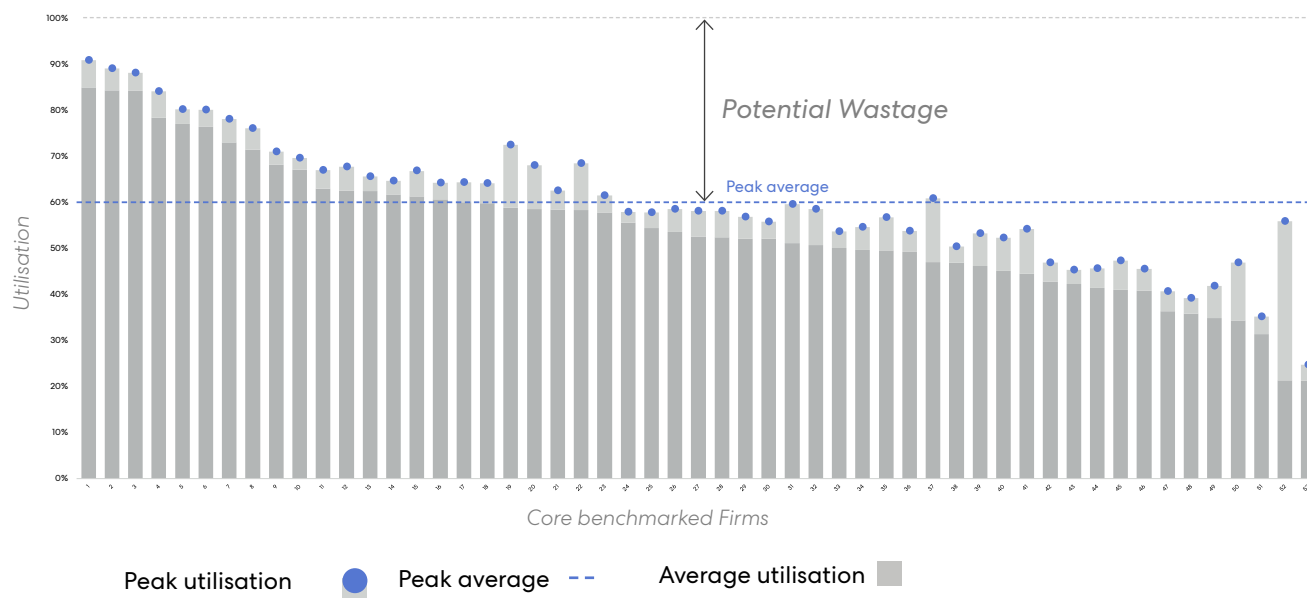
44%

Vacant



# Peak Workstation Utilisation

The study revealed the average workplace only achieved 60% utilisation during peak times, this an estimated wastage of around £3.1m\* per annum in total real estate costs (rents, rates, FM etc). But can organisations simply have 40% less desks?



## 60%

Average peak utilisation

## 250

Average vacant desks at peak

## 625

Average workstations per organisation

## £3.1m (\$3.8m)

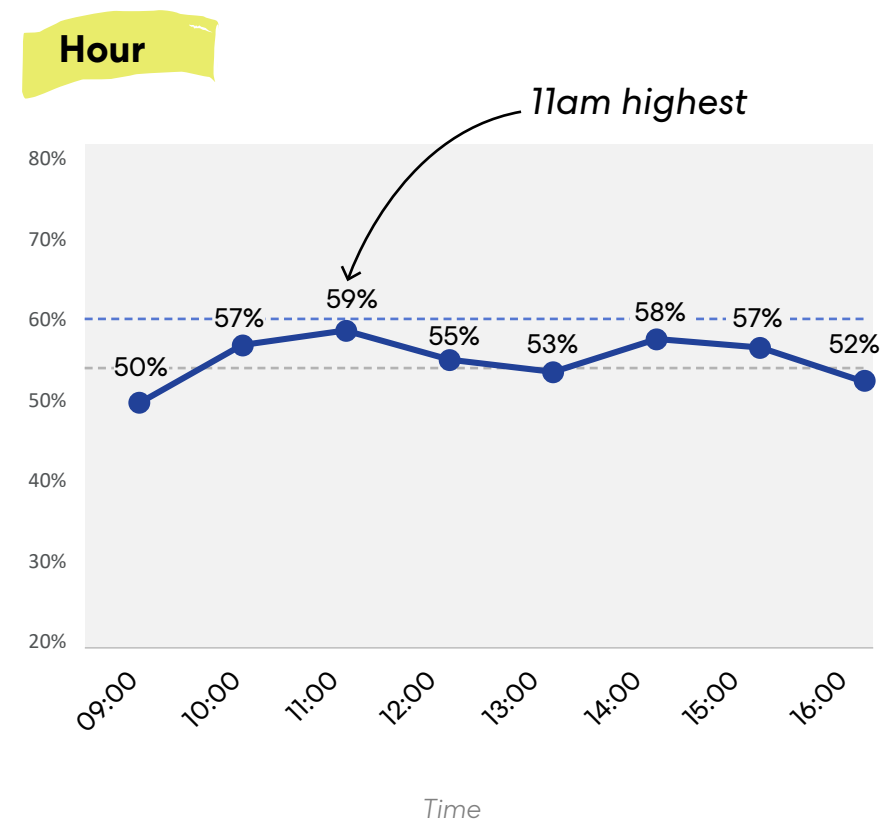
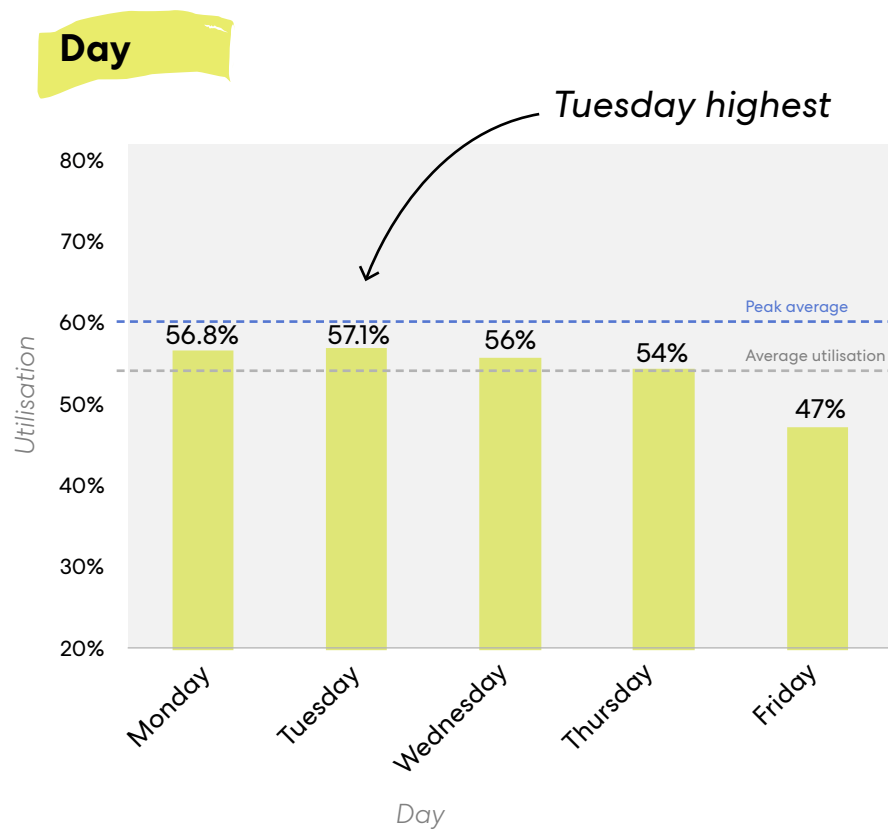
Average potential wastage per organisation per annum\*

\* The average total cost of a workstation in London City is £12,493 per annum , includes rents, rates, annualised costs, FM, Mgmt fees - Total Office Cost Survey 2019

# Daily & Hourly

## Utilisation by Day & Hour

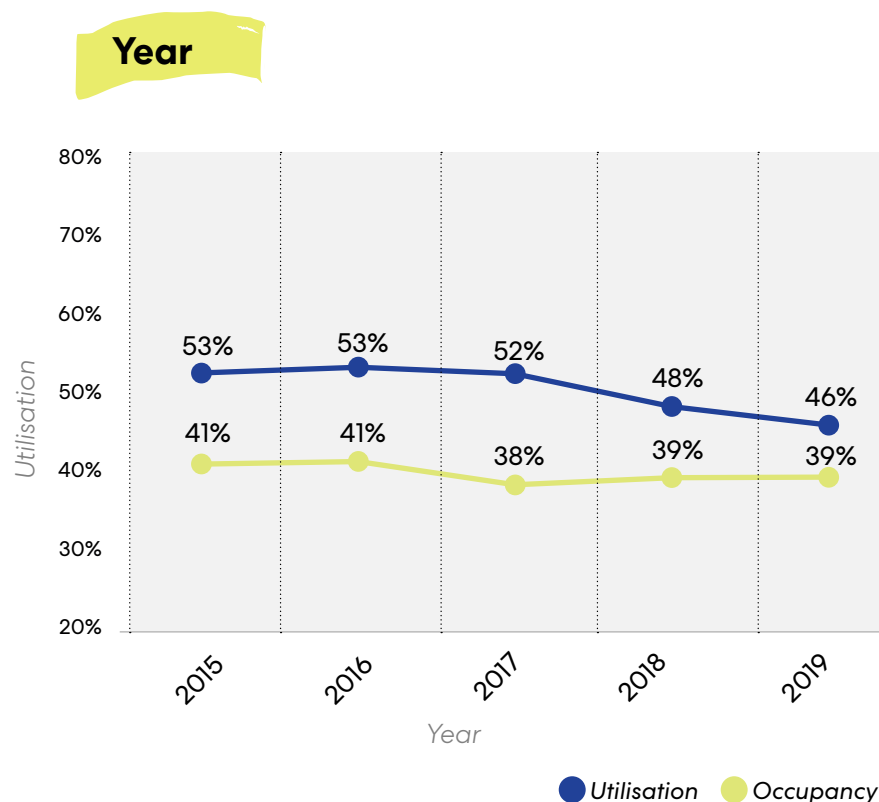
Analysis by day reveals Tuesday to have the highest workstation utilisation, 10% higher than the lowest Friday, which typically is the highest day of absenteeism due to annual leave and working from home. The results by hour shows 11am to be the busiest time at desk which was 9% higher than the lowest 9am.



# Yearly

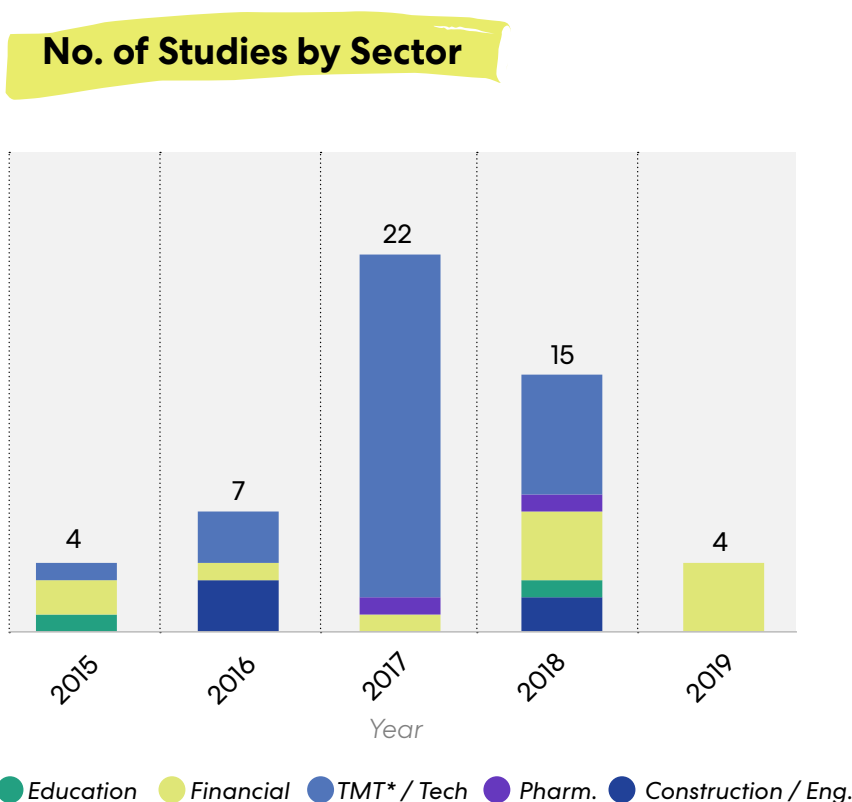
## Utilisation by Year

Workstation utilisation over the past 5 years has shown a drop of 7%, however occupancy (people physically at desks) dropped by only 2% suggesting the amount people are temporarily away from their desks has actually fallen. This is contrary to the belief workplaces are becoming more agile and mobile. Whilst a further investigation into this cause will be needed it is clear occupancy has fallen slightly, suggesting people are spending more time out of the office potentially adopting more remote working.



Includes PW (52) and Non-PW projects (143)

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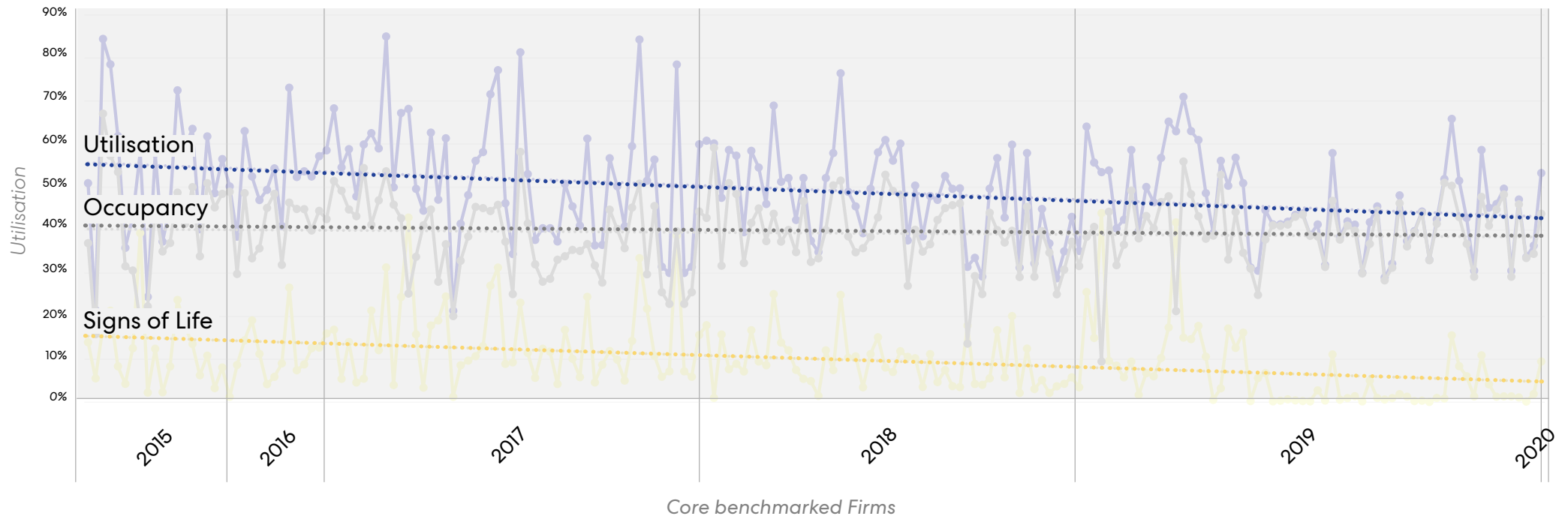


\*TMT - Technology, Media and Telecoms

# Yearly

The below chart shows a detailed breakdown of utilisation over the past 5 years. As you can see that whilst there is slight downward trend the results are fairly sporadic, which could be as result of a number of factors such as sector and size.

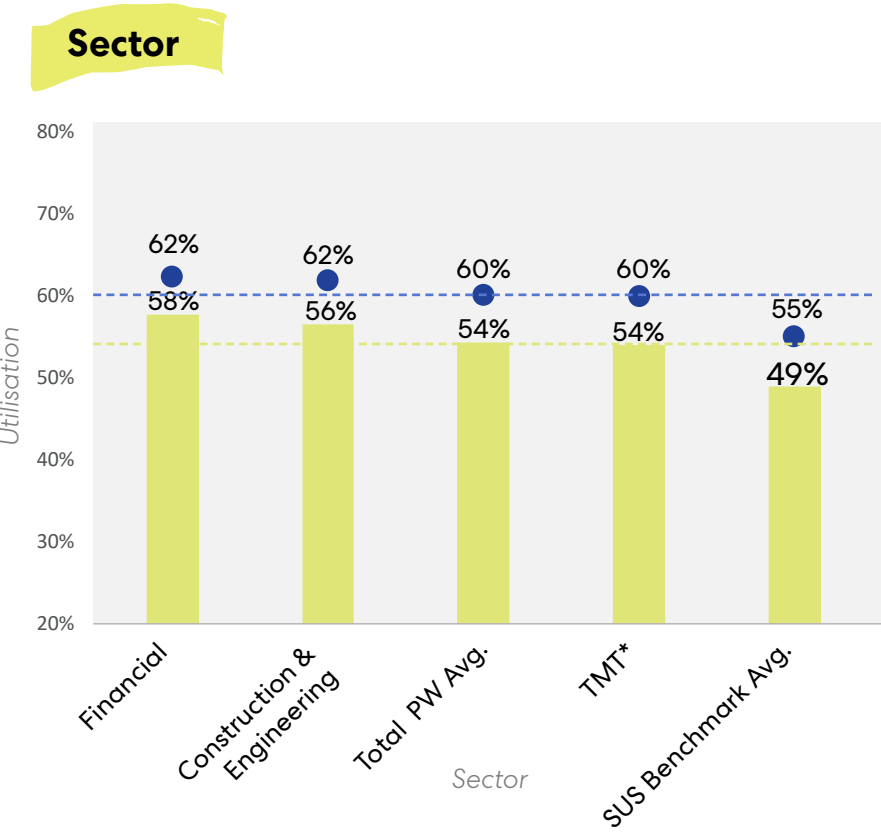
## Utilisation by Year



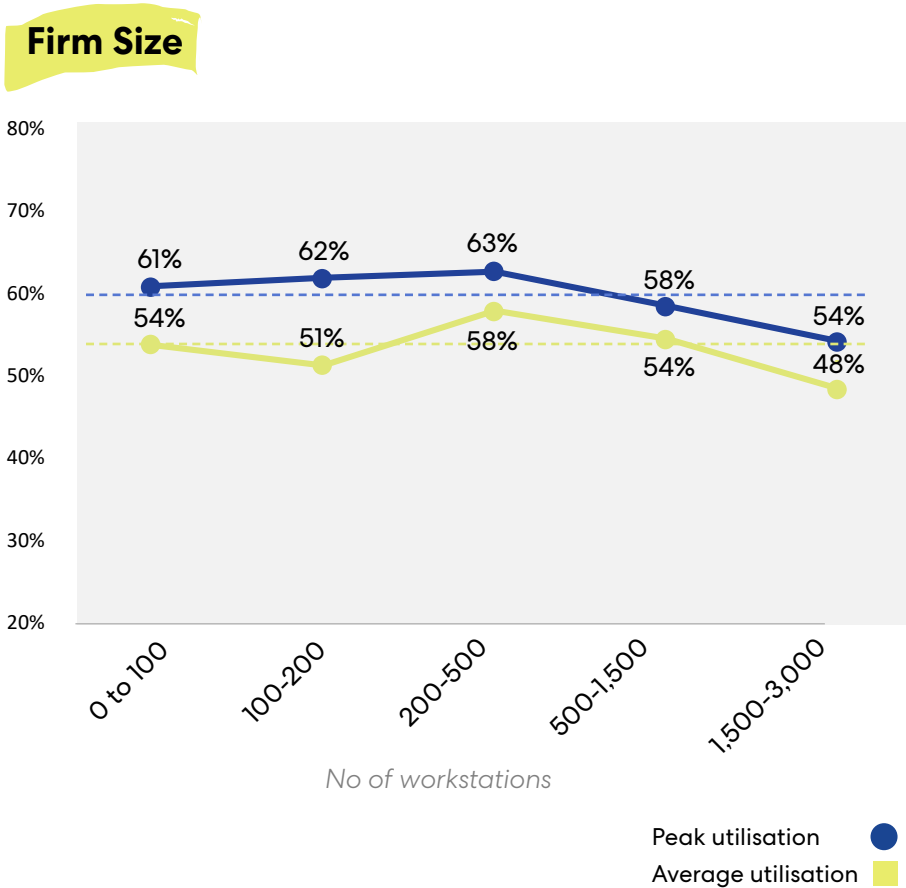
Includes PW (52) and Non-PW projects (143)

# Sector & Firm Size

Workstation utilisation by sector shows Financial companies to have the highest utilisation (58%), with Tech companies 4% lower on 54%. This suggests Tech companies either spend more time out of the office or the provision of desks is more generous with a higher proportion of spare/swing desks. Firm Size shows workplaces of up to 500 workstations were similar only varying by 2%, however above 500 there is a clear drop in utilisation.



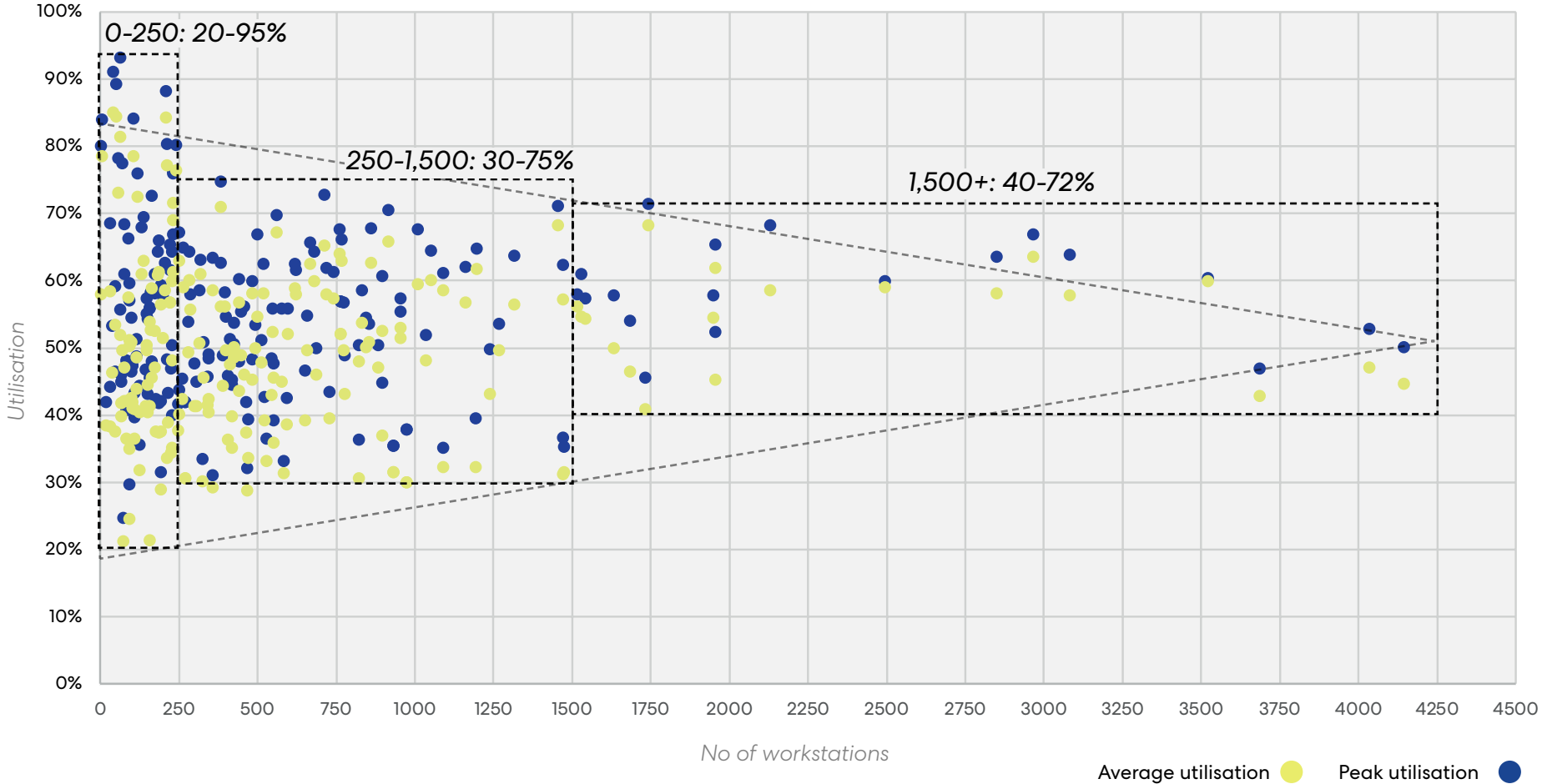
\*TMT - Technology, Media and Telecoms



# Firm Size Trend

Companies below 250 workstations have a more variable average and maximum utilisation trend. The larger the Firm the easier to predict utilisation. Companies above 250 workstation did not exceed 70% average utilisation and 75% peak utilisation

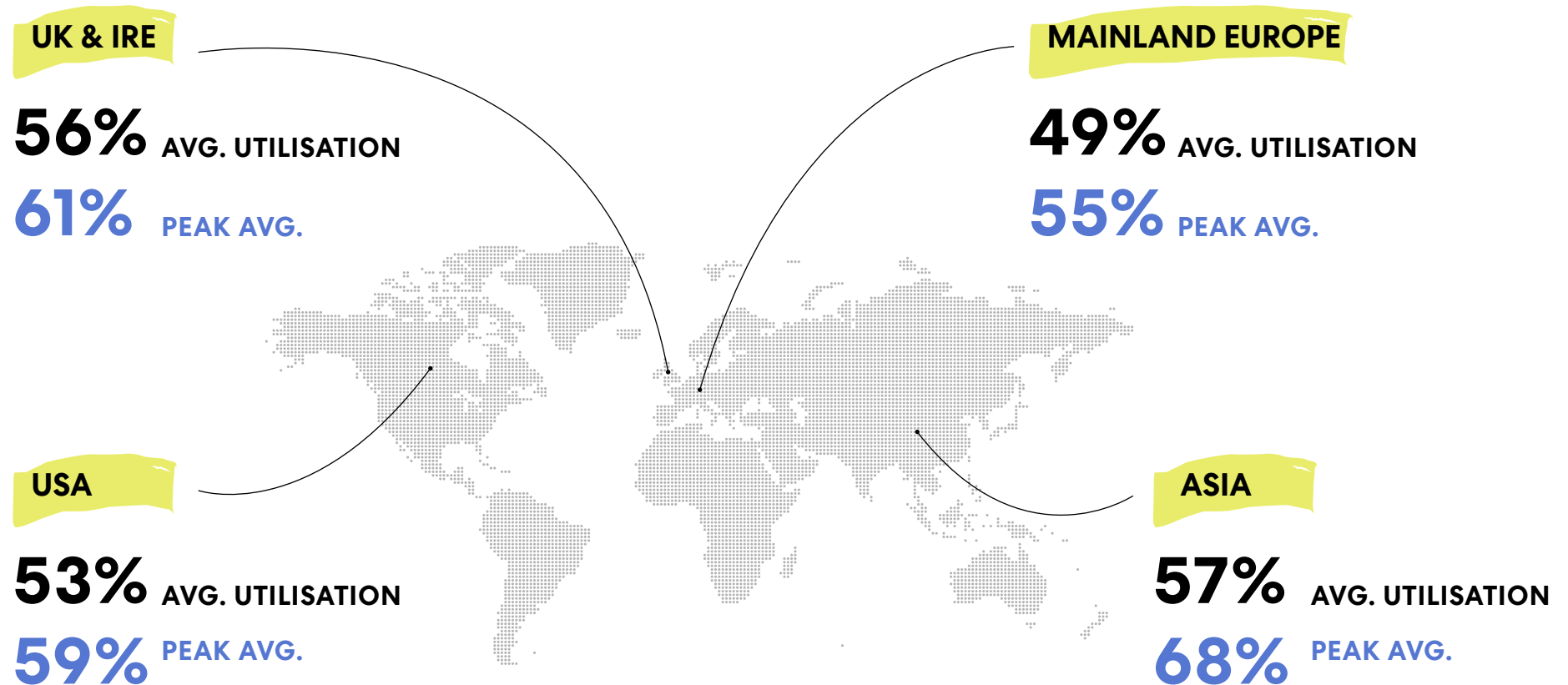
## Firm Size



# Geographical Location

## Workstation Utilisation by location

As anticipated Asian workplaces reported the highest levels of workstation utilisation of 57%, whilst Mainland Europe was on average 8% lower with 49%.



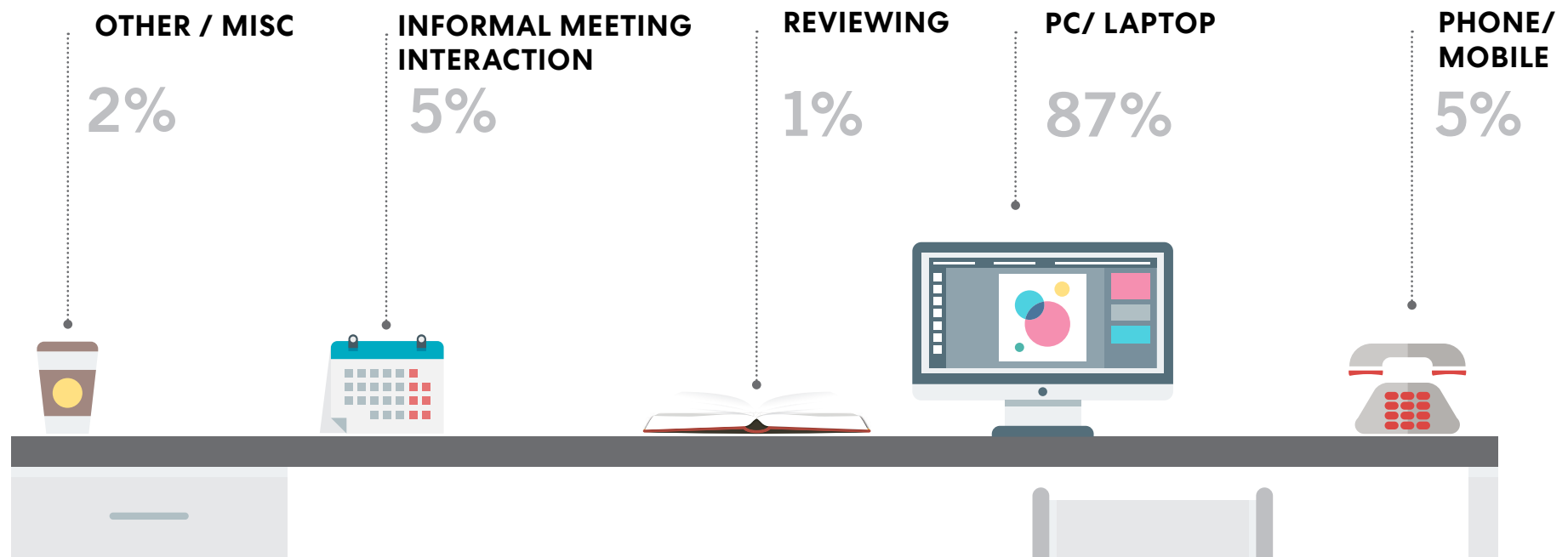


# Activities

## At Desk Activities

Not surprisingly the study shows the majority of activities people undertook whilst at their desks was working on PC or Laptop (87%).

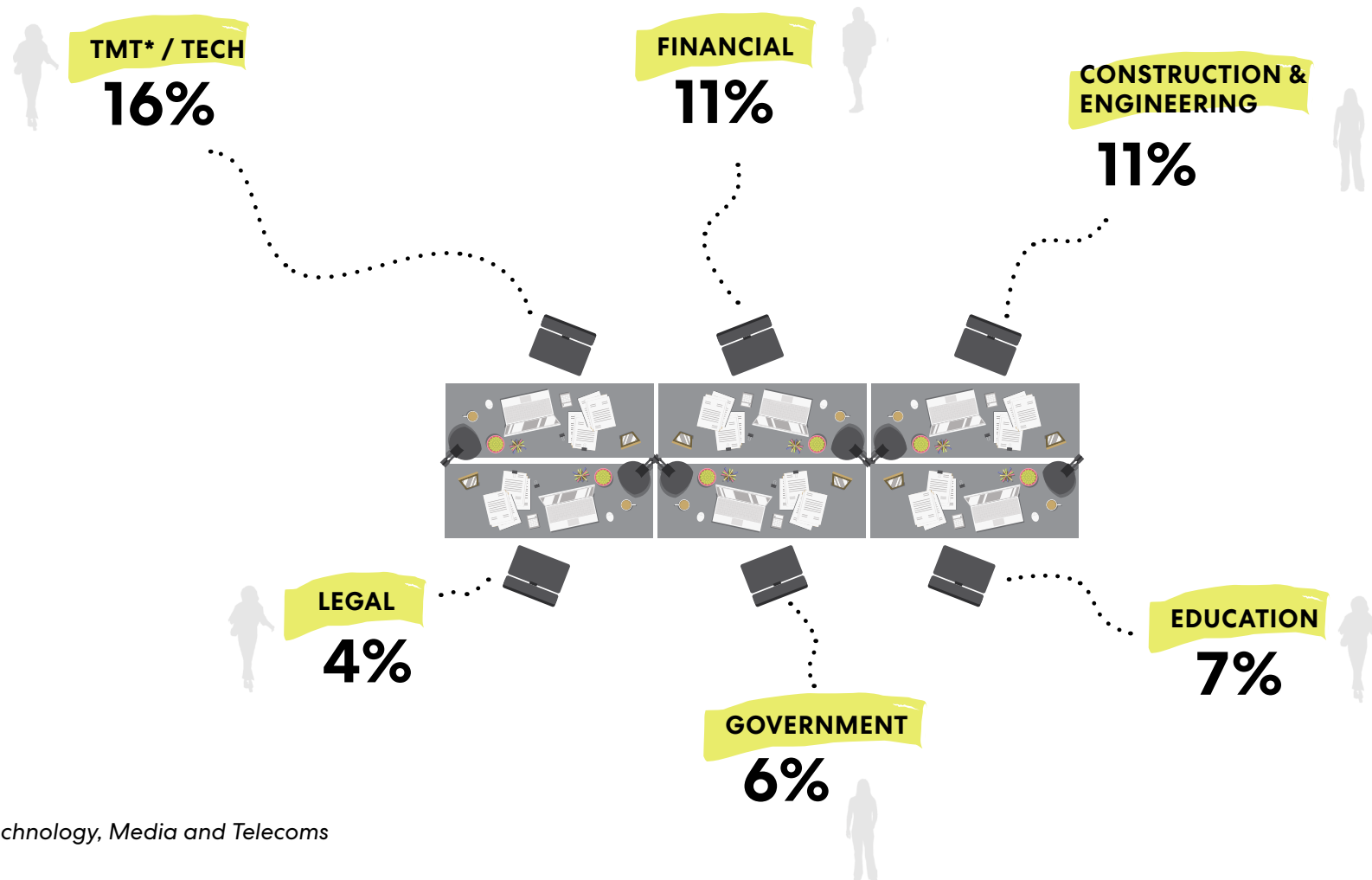
### Activities at Desk



# Internal Mobility by Sector

## Workstations observed as being Signs of Life (temporarily vacant)

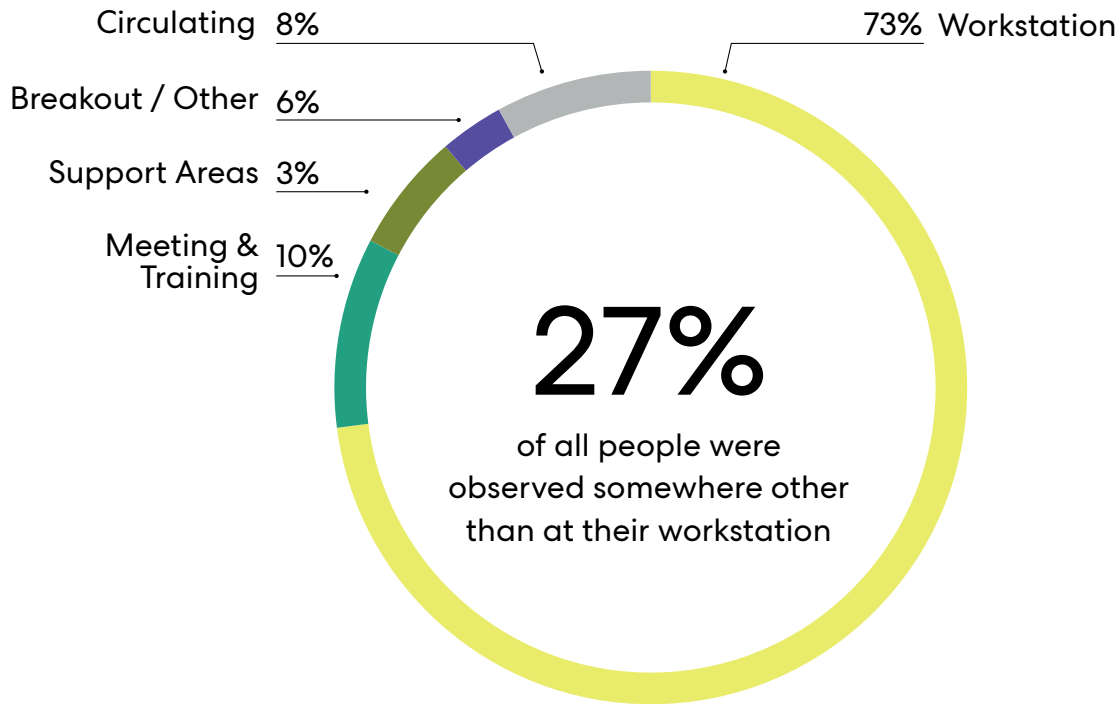
Tech companies as expected are the biggest movers, spending 16% of their time temporarily away from their desk, whilst Legal was the most sedentary sector spending only 4% of their time away.



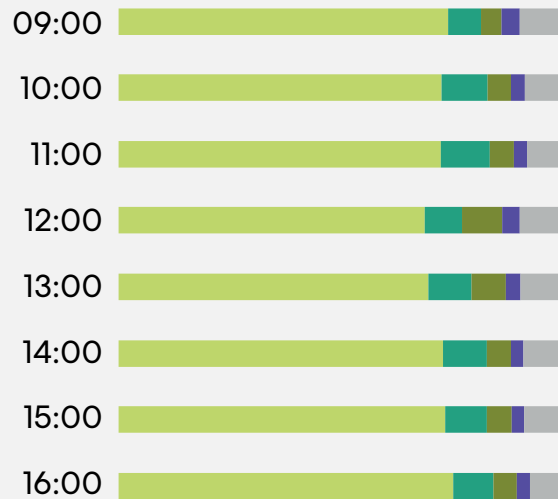
TMT - Technology, Media and Telecoms

# Observed People by Facility Type

The below chart shows where all people in the study were observed, it's interesting to note 27% of the time people are somewhere other at their desks and spend as much as 8% of their time circulating.



## Hourly Breakdown:



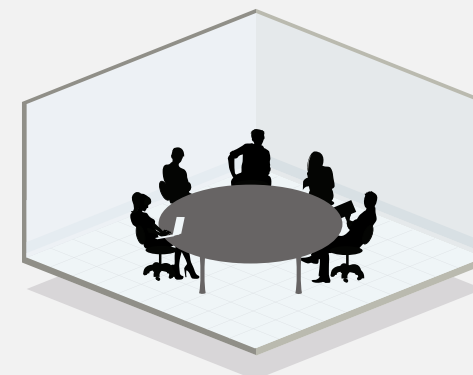
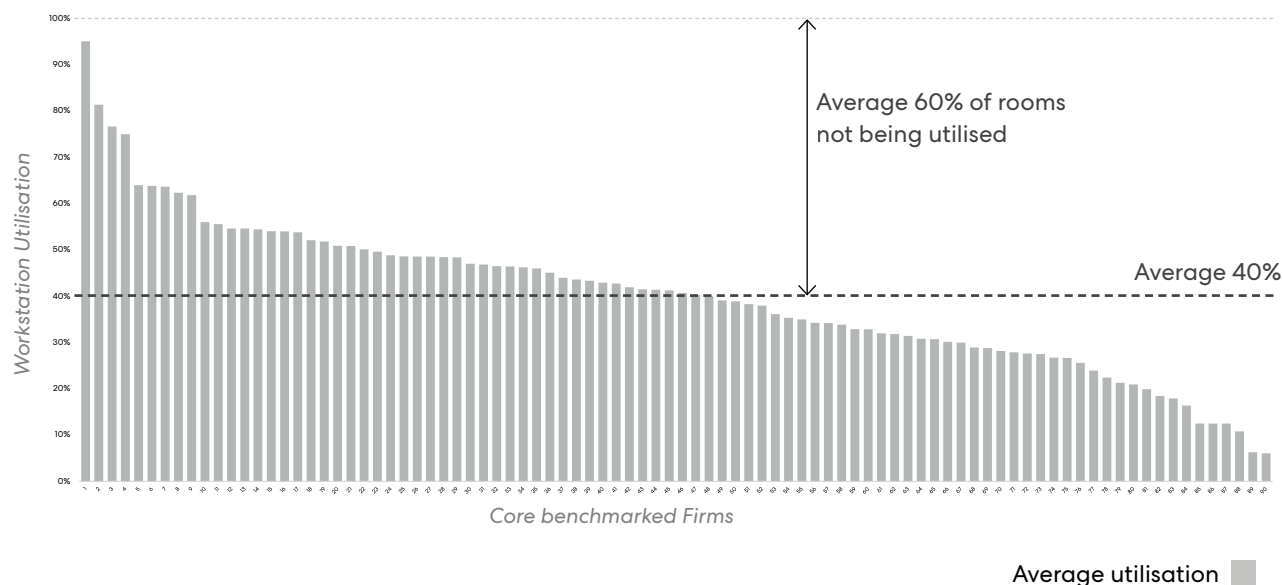
**1,038,906**

**People Observed**

# 3. Meeting & Breakout

# Meeting Room Utilisation

The study shows the average meeting size was only 3 persons, whilst the average room size was 8 seats. Furthermore average utilisation for the rooms was low with only 40% of rooms occupied at any one time. Just to give some context the estimated costs of having meeting rooms for the average firm in our study is just over £1m per annum in total office costs\*.



## 40%

Average room utilisation

## 3.1 person

Average meeting size

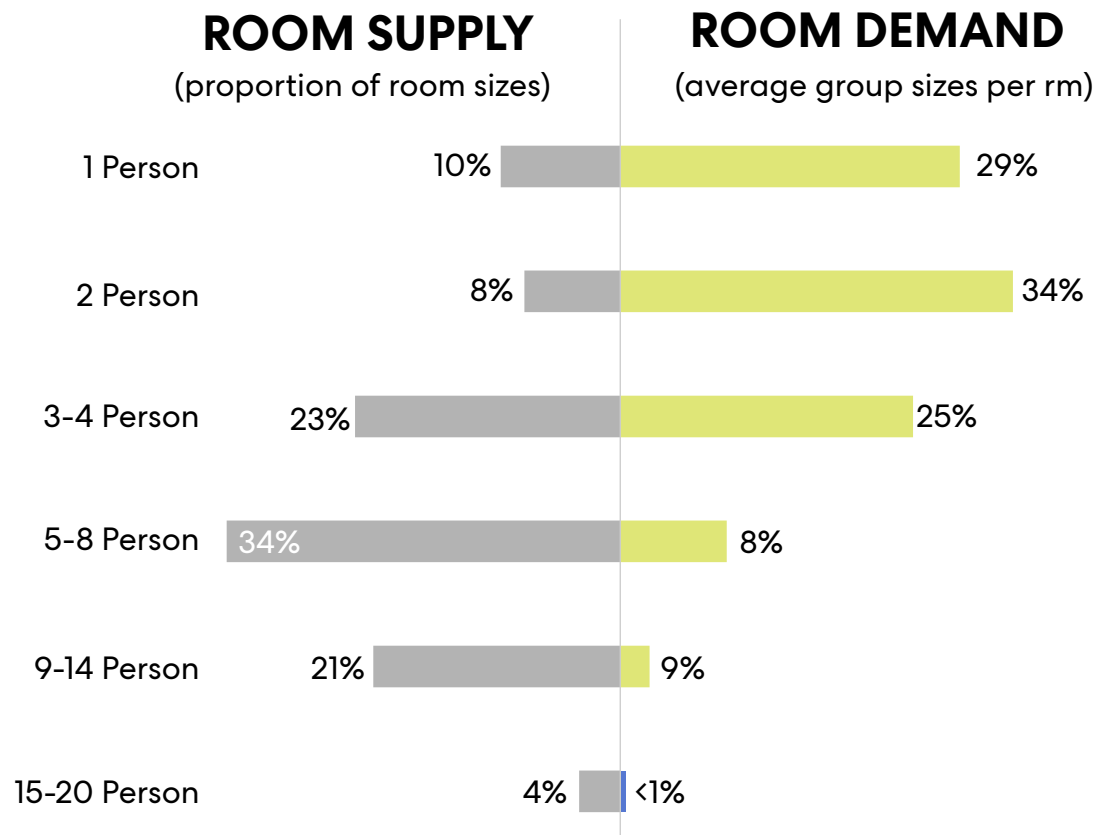
## 8.3 seats

Average room size

# Meeting Rooms

## Supply & Demand

The below chart shows the clear delta between supply (actual meeting room provision) and demand (average number of persons in meetings). It's important to note that the demand data is the average number of people per individual room and may not capture the full extent of large meetings occurring but still is an accurate indicator.



# 40%

Average utilisation

# 3.1 person

Average meeting size

# 8.3 seats

Average available rm size (seats)

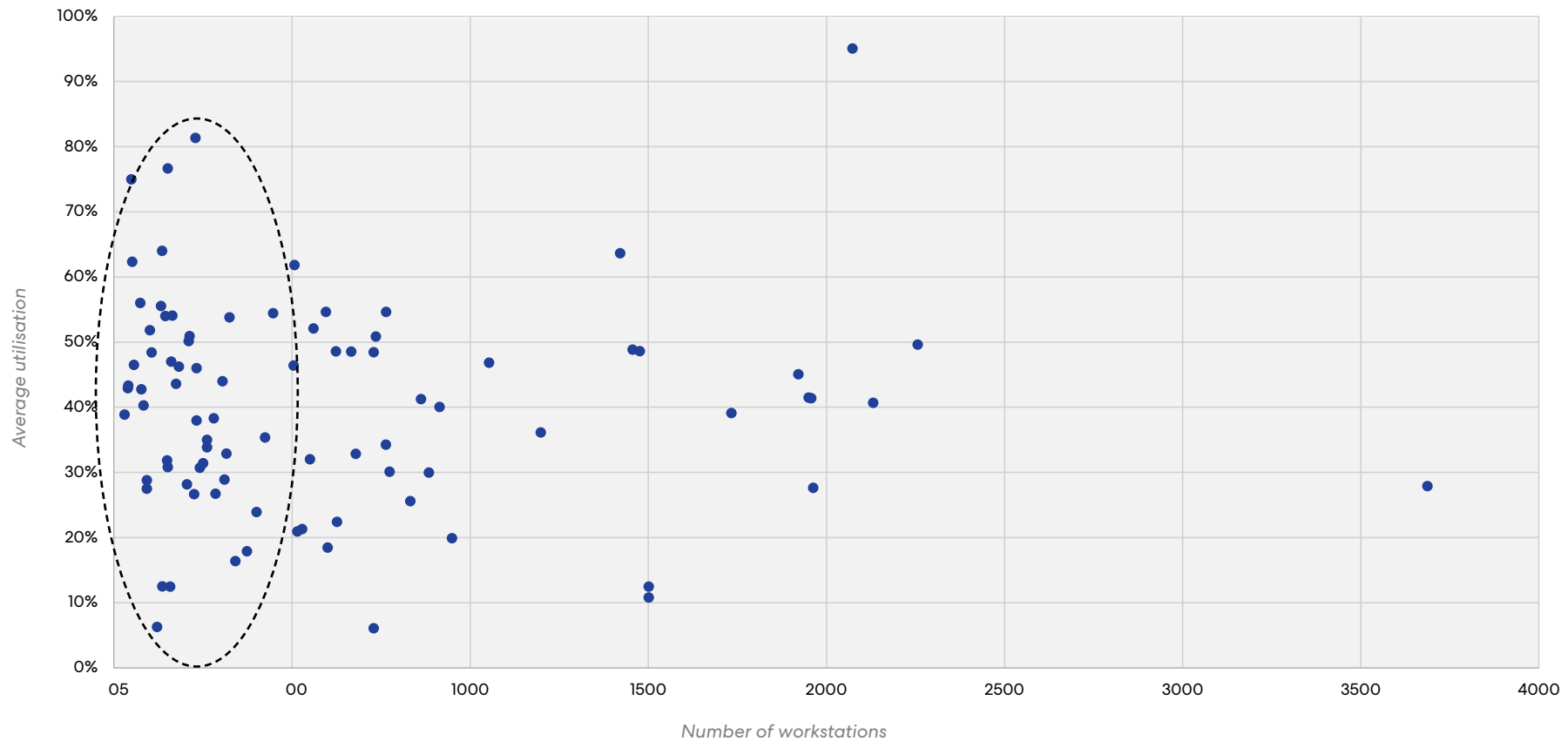
# 29%

Single Person Usage

# Firm Size Meeting Room Trend

## Utilisation by Firm Size

Meeting utilisation by firm size shows workplaces below 250 workstation tend to have a more variable average utilisation trend, however there is no clear trend for larger companies, with some showing both high and low meeting room utilisation, which is due to the fact meeting room provision is widely variable between workplaces.

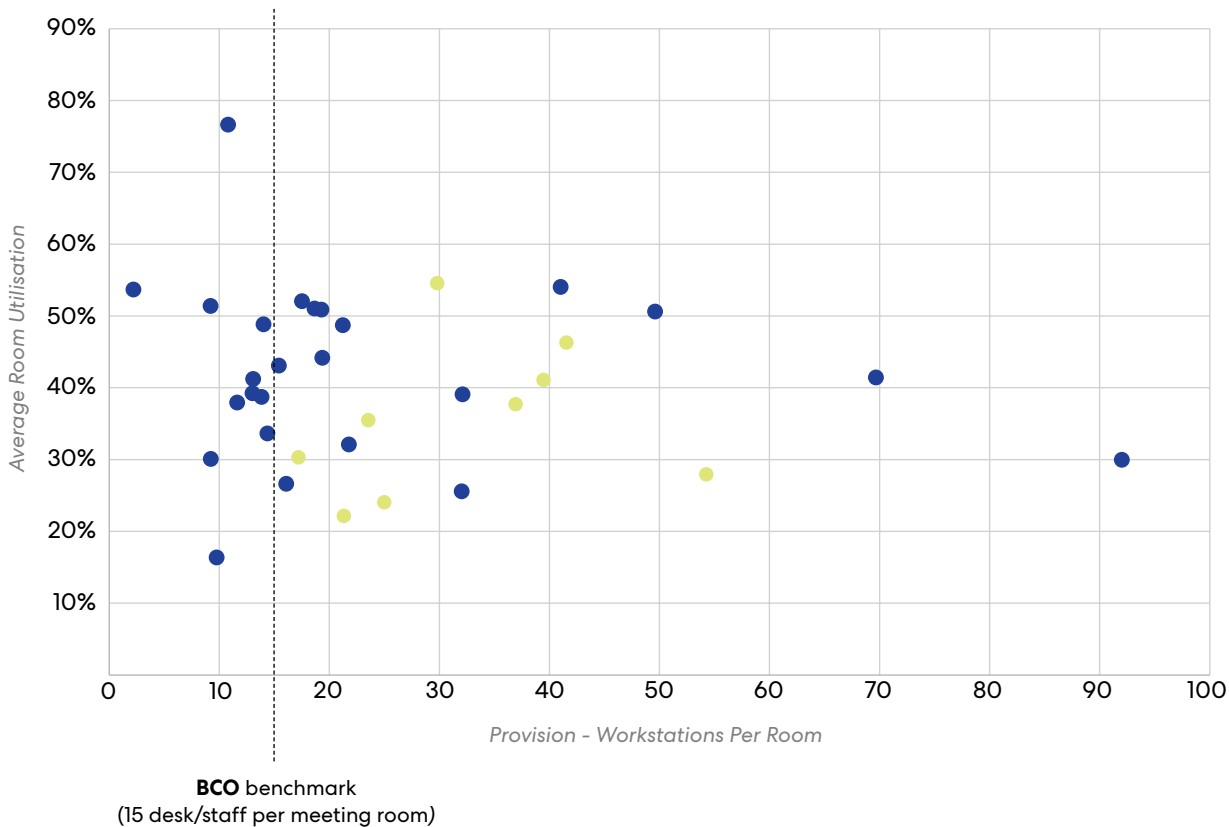




# Meeting Rooms

## TMT vs Finance

The below chart and statistics show the difference between Tech/TMT\* and Financial companies. To summaries, Tech companies have a higher provision of rooms per person, utilise them more, have smaller meetings and single person occupancy accounts for 36% of all meetings, 10% higher than Financial.



\*TMT - Technology, Media and Telecoms

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● Tech (TMT) ● Financial

**42%**

**37%**

Average utilisation

**2.9**

**3.2**

Average persons per meeting

**7.5**

**8.7**

Average seats per room

**23**

**29**

Workstations per room

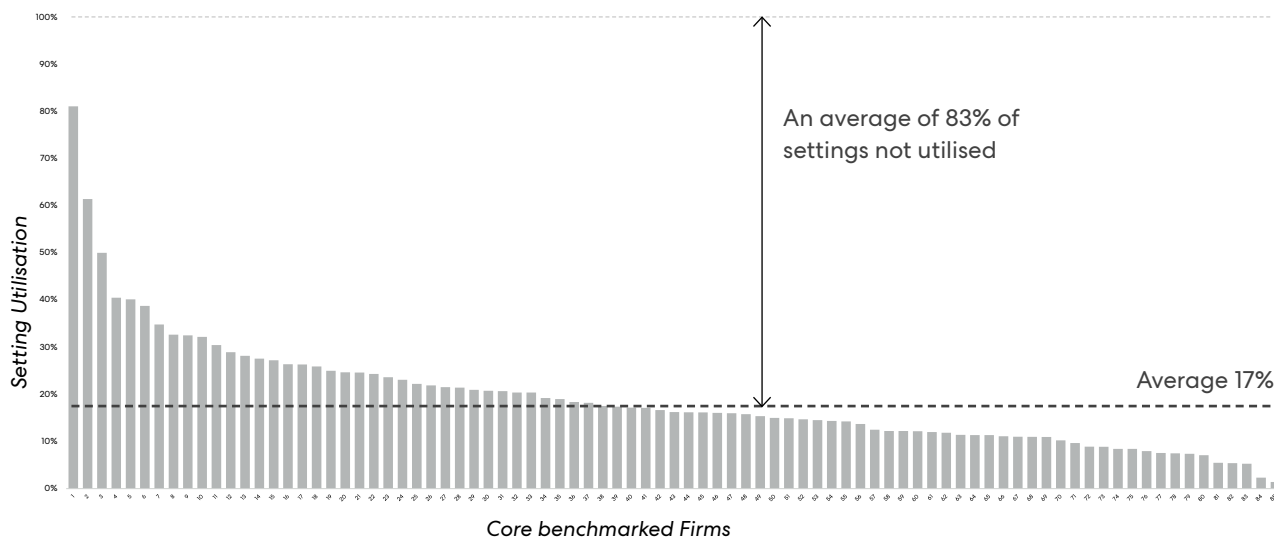
**36%**

**26%**

Single Person Usage

# Breakout Space

Breakout space, which includes most of the other non-desk/meeting room space, was on average only 17% utilised. If we exclude canteens, office meeting tables and waiting areas (which is not typically regarded as Breakout) this rises to 20%. However this is still quite low as is typically desirable space for employees.



\* Peak Utilisation could not be extracted at time of report



## 17%

Average setting utilisation

## 2.0 person

Average group size

## 3.6 seats

Average setting size

Average utilisation ■

# 4. Working from Home

# Working from Home Impact

By retrospectively simulating work from home strategies into 3 recent observational studies, it showed if all staff had worked from home 1 day a week (evenly staggered throughout the week) utilisation would drop by 11%, whilst 2 days would increase 2 fold to 22%, or the equivalent of over £1m in total real estate costs\*. With future WFH practices predicted to be significantly higher as a result of COVID19 will companies seek to reduce real estate or retain the same and respect social distancing?

## 1 Day a week WFH Staggered Schedule

Person #	Monday	Tuesday	Wednesday	Thursday	Friday
Group 1.	WFH	In Office	In Office	In Office	In Office
Group 2.	In Office	WFH	In Office	In Office	In Office
Group 3.	In Office	In Office	WFH	In Office	In Office
Group 4.	In Office	In Office	In Office	WFH	In Office
Group 5.	In Office	In Office	In Office	In Office	WFH
Desk Needed	4	4	4	4	4

Average depreciation of desk utilisation\*:

**Average: -11%**  
**Peak: -12%**

## 2 Day a week WFH Staggered Schedule

Person #	Monday	Tuesday	Wednesday	Thursday	Friday
Group 1.	WFH	In Office	In Office	WFH	In Office
Group 2.	In Office	WFH	In Office	In Office	WFH
Group 3.	WFH	In Office	WFH	In Office	In Office
Group 4.	In Office	WFH	In Office	WFH	In Office
Group 5.	In Office	In Office	WFH	In Office	WFH
Desk Needed	3	3	3	3	3

Average depreciation of desk utilisation\*:

**Average: -22%**  
**Peak: -25%**

\* Please see PW case studies for further information

**Question:** Why is 1 day WFH not a 20% (1/5) reduction?

**Answer:** Some people would have already been out of the office/ WFH/away from their desk, therefore it is less than 20%.

# Case Study 1 - SUS WFH Scenario Modeling

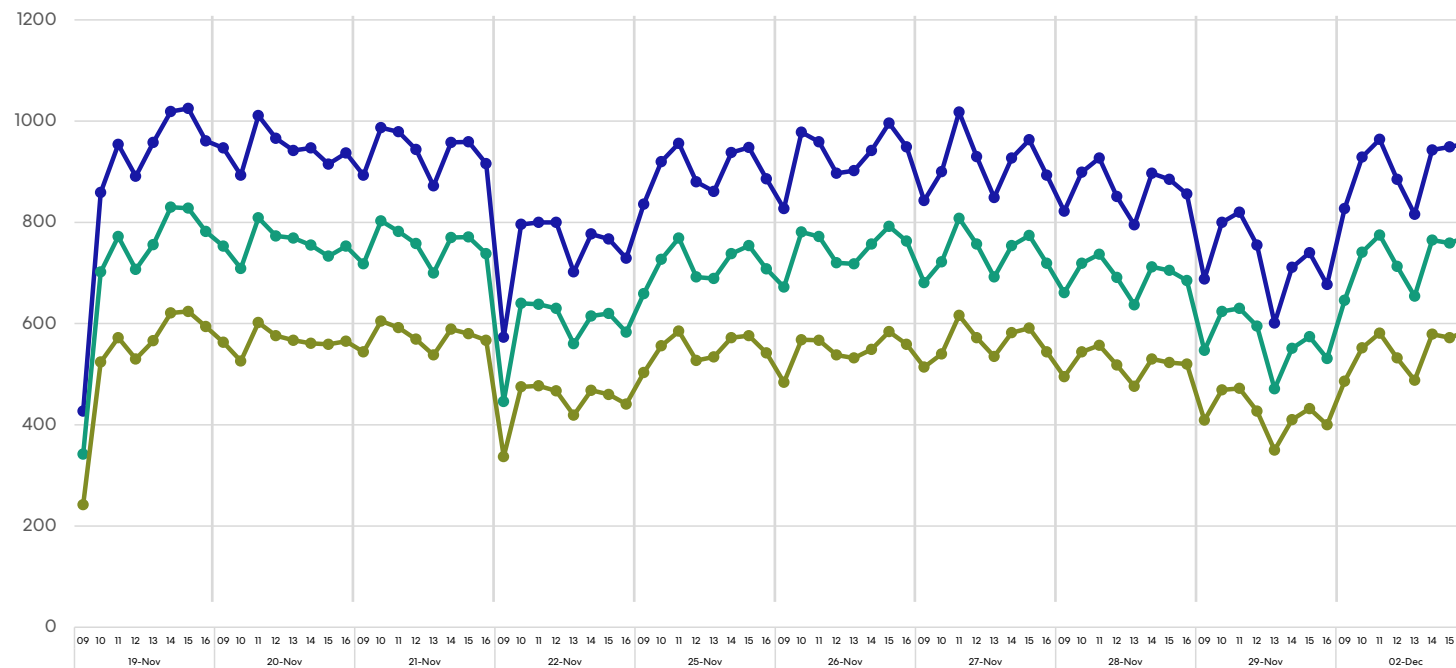
Location: London Canary Wharf

Sector: Finance

Total Desks: 1,958

Vacant / Non Allocated Desk: 223 (11%)

Existing WFH: low levels of WFH



## Observed Desk Utilisation

Average Utilisation: **45%**

Peak Utilisation: **52%**



## 1 day per week WFH per person\*

Average Utilisation: **36% (-9%)**

Peak Utilisation: **42% (-10%)**



## 2 days per week WFH per person\*

Average Utilisation: **27% (-18%)**

Peak Utilisation: **32% (-20%)**

Method: All allocated desks split into 5 equal random groups, each group allocated a different WFH day (Mon-Friday), all recorded SUS observations for the corresponding day is change to vacant. Utilisation includes signs of life (temporarily away)

# Case Study 2 - SUS WFH Scenario Modeling

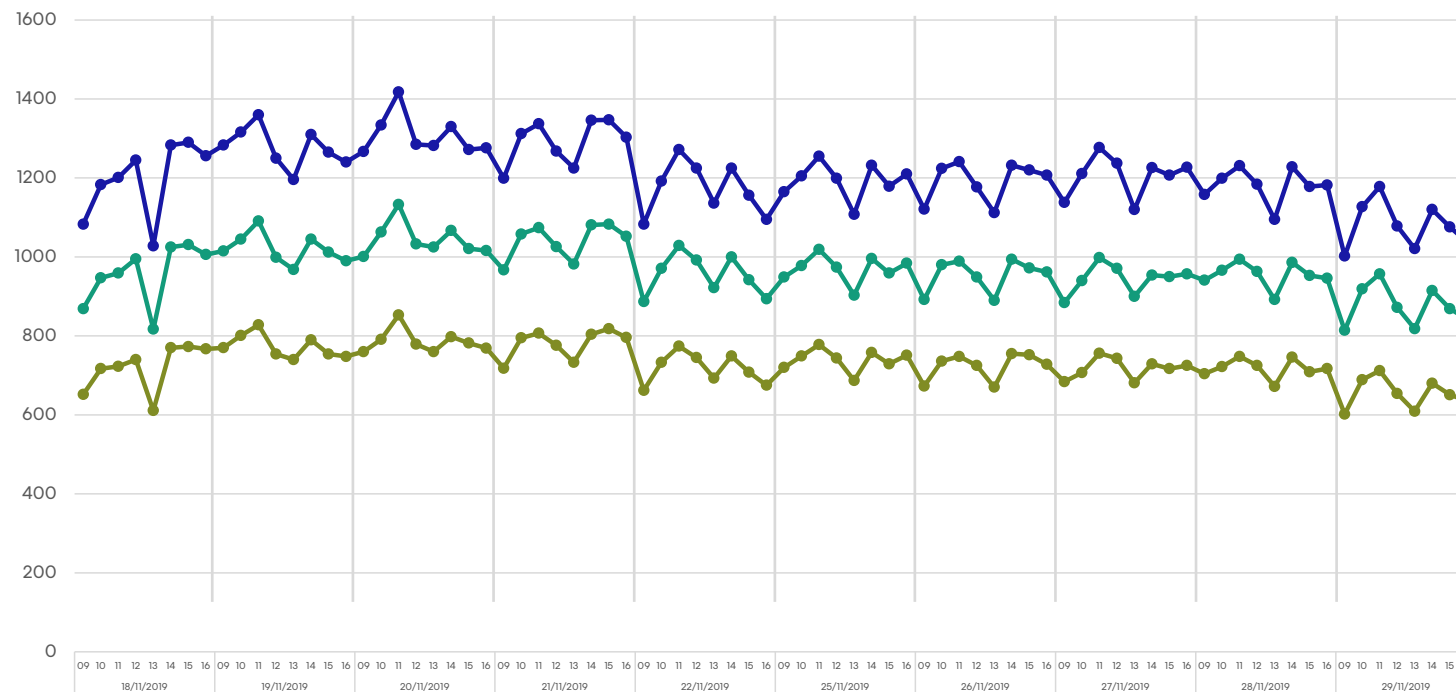
Location: Dublin

Sector: Professional Services

Total Desks: 2,131

Vacant / Non Allocated Desk: 26 (1%)

Existing WFH: unknown



## Observed Desk Utilisation

Average Utilisation: **59%**

Peak Utilisation: **67%**



## 1 day per week WFH per person\*

Average Utilisation: **47% (-12%)**

Peak Utilisation: **53% (-14%)**



## 2 days per week WFH per person\*

Average Utilisation: **36% (-23%)**

Peak Utilisation: **40% (-27%)**

Method: All allocated desks split into 5 equal random groups, each group allocated a different WFH day (Mon-Friday), all recorded SUS observations for the corresponding day is change to vacant. Utilisation includes signs of life (temporarily away)

# Case Study 3 - SUS WFH Scenario Modeling

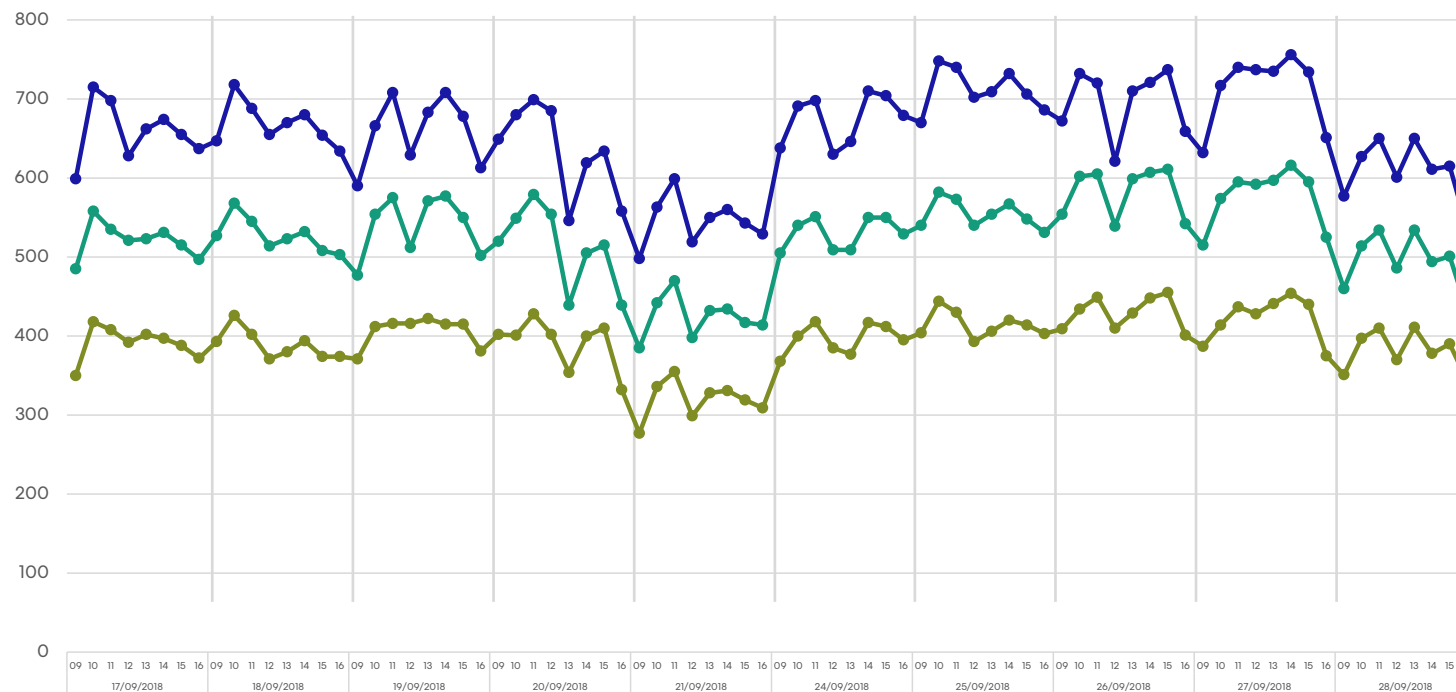
Location: London City

Sector: Finance

Total Desks: 1,053

Vacant / Non Allocated Desk: 4 (>1%)

Existing WFH: unknown



## Observed Desk Utilisation

Average Utilisation: **62%**

Peak Utilisation: **72%**



## 1 day per week WFH per person\*

Average Utilisation: **50% (-12%)**

Peak Utilisation: **58% (-14%)**



## 2 days per week WFH per person\*

Average Utilisation: **37% (-25%)**

Peak Utilisation: **43% (-29%)**

Method: All allocated desks split into 5 equal random groups, each group allocated a different WFH day (Mon-Friday), all recorded SUS observations for the corresponding day is change to vacant. Utilisation includes signs of life (temporarily away)



