

# DOES SPACE MATTER?

A new measurement for the effectiveness of workplaces: using Organisational Network Analysis (ONA) to measure connectedness, networks and strength of relationships



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## The Networks Formed at Work

With whom do you collaborate or brainstorm new ideas?



Who do you go to for advice about the future?

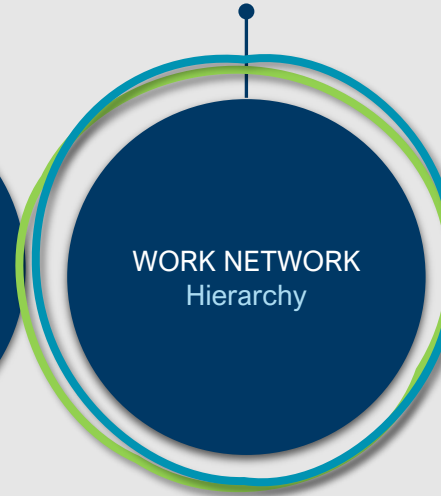


To whom do you turn for expertise or advice?



Who do you work with to improve existing processes or methods?

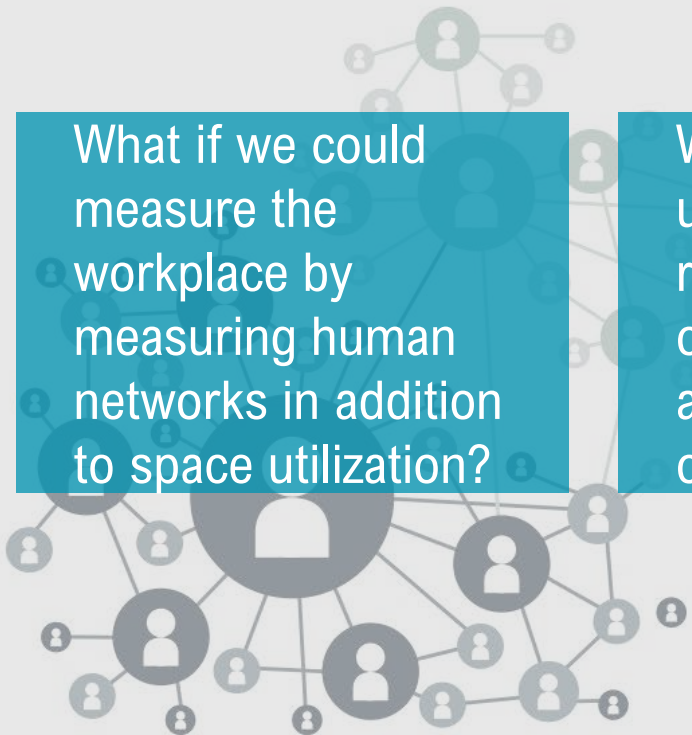
With whom do you exchange information as part of your daily routines?



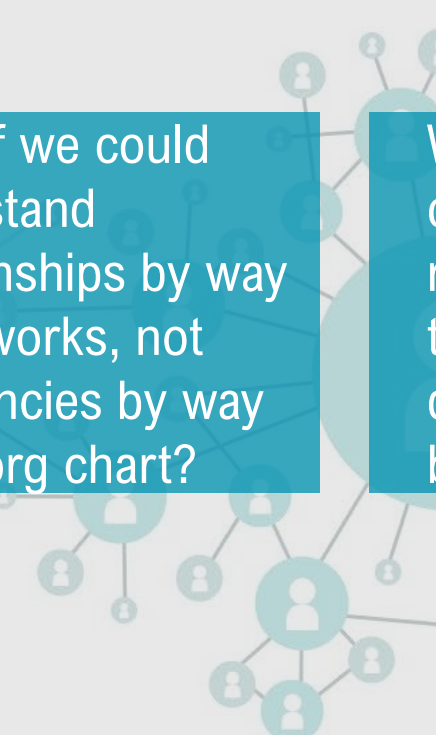
With whom do you “check in” inside and outside the office to find out what is going on?

“If organisational network analysis measures relationships within organisations, and our job as workplace specialists is to design **high performance workspaces to increase collaboration;**

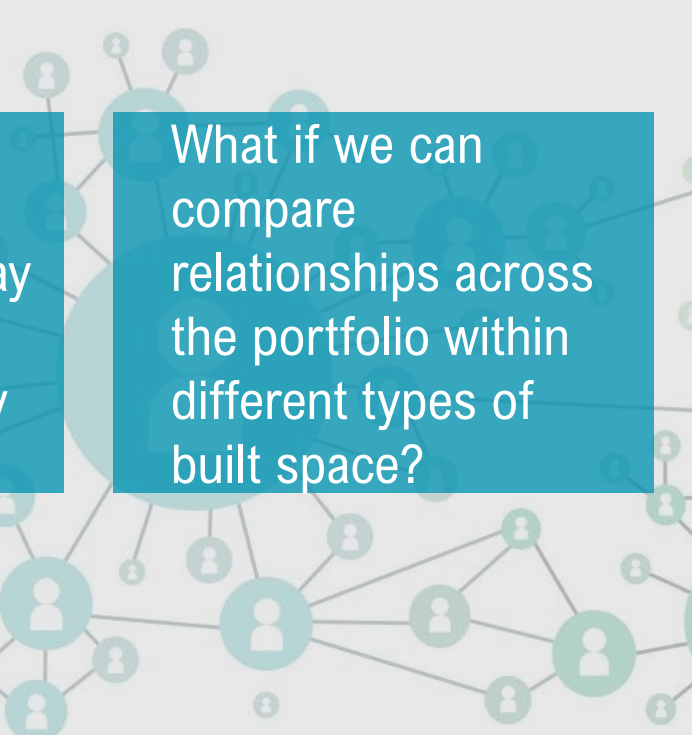
**What is the impact of workplace characteristics on organisational networks?”**



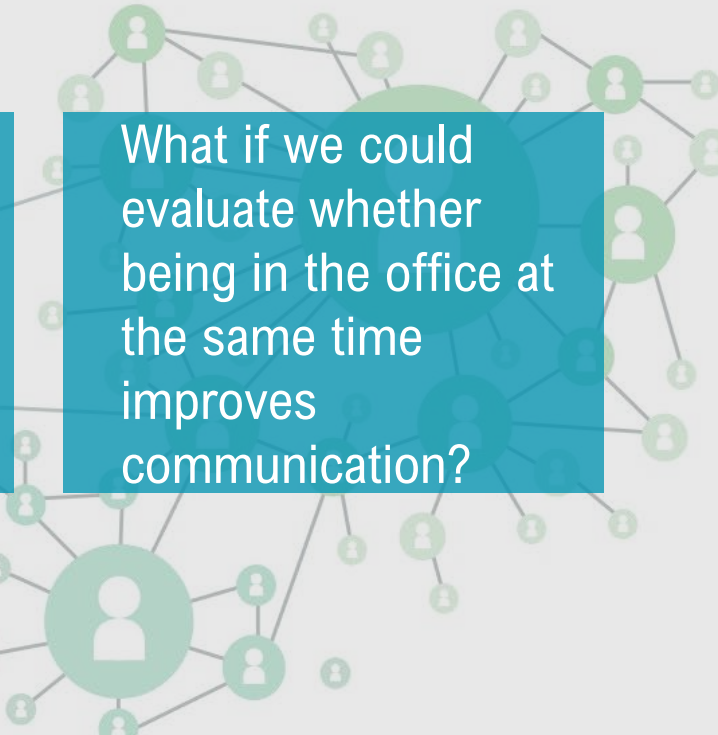
What if we could measure the workplace by measuring human networks in addition to space utilization?



What if we could understand relationships by way of networks, not adjacencies by way of an org chart?



What if we can compare relationships across the portfolio within different types of built space?



What if we could evaluate whether being in the office at the same time improves communication?

## What Did We Want To Achieve?



### PHASE ONE – 2019:

Explore the **influence of spatial design** on organisational networks and employee experience

- Traditional vs open plan office
- Quality/age of fit-out
- Employee experience
- Communication patterns



### PHASE TWO – 2020:

Presented a new challenge – the impact of **remote working** on organisational networks

- Global review (18,000 employees)
- Inclusion of: wellbeing, leadership/management influence and onboarding



### PHASE THREE – 2021:

New York **case study**

- Single office review (196 employees)
- Focus on cluster vs departmental co-location

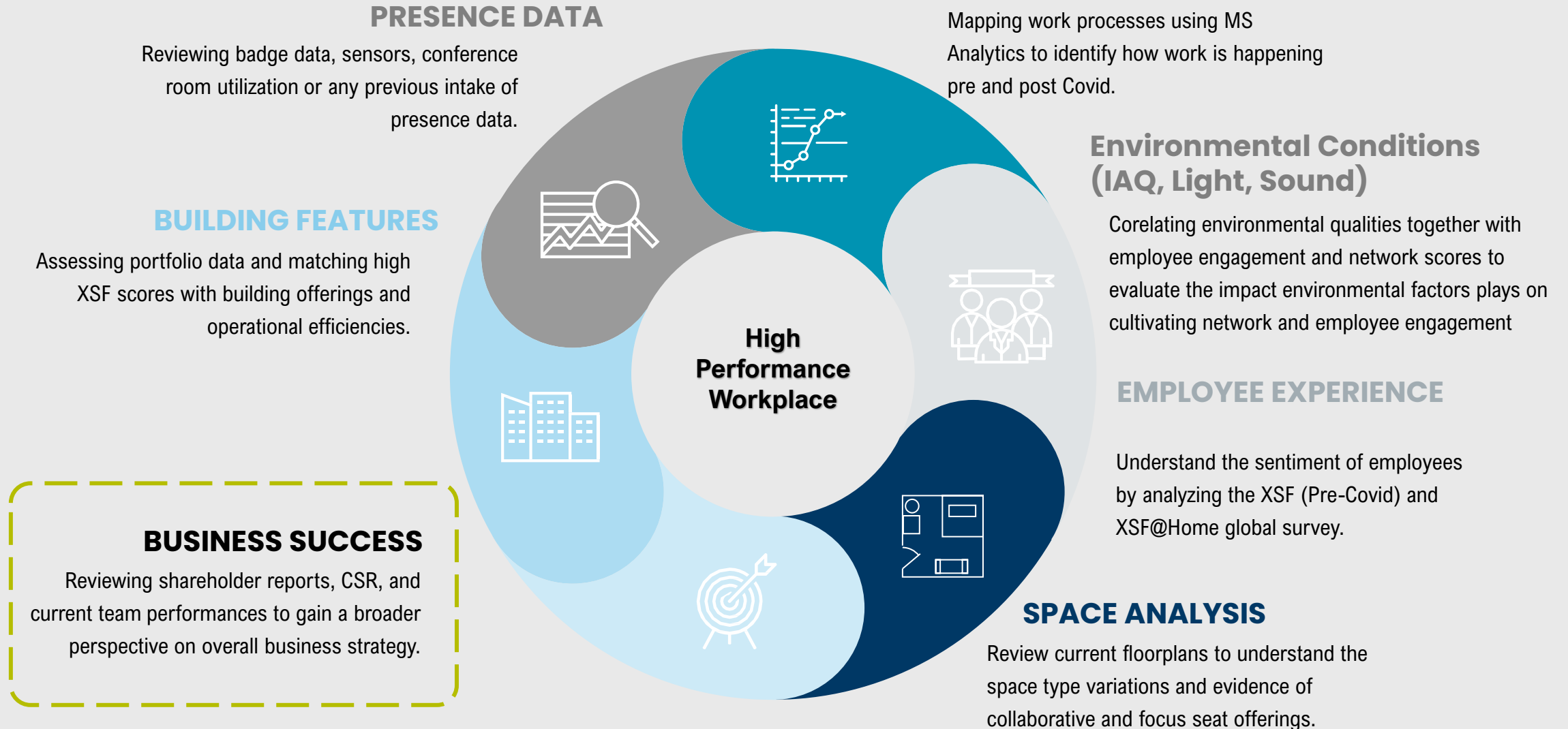


### PHASE FOUR - 2022 PLANNED: 2.0 replication, **Netherlands**

- Control for location i.e. in or out of office (building access passes)
- Workplace quality rating
- Employee experience, demographics (XSF and HR master data)
- Metadata (Microsoft master data)

# Phase One: Explore The Influence Of Spatial Design On ONA

## What Is The Total Architecture Of Data Inclusion?



## What Is The Role Of XSF And ONA

	Phase one XSF and space design
Building access	
Building features	✓
Business Success	
Organisational Network Analysis	
Employee experience	✓
Space analysis	✓



### Allocate XSF themes to design features:

- Focus – *Private offices*
- Team – *Open plan seating*
- Renew – *Wellbeing spaces*
- Bond – *Pantry and informal spaces*
- Learn – *Unique spaces*

## SPACE TYPES

Private Offices  
Workstations  
Touchdown Seats

Unique Spaces  
Multipurpose  
Pantry



Open Meeting  
Reception Seats  
Pantry Seats

Huddle Room  
Focus Room  
Phone Room  
Wellness Room

Small Conference  
Medium Conference  
Large Conference  
Executive Conference

## What Were The Findings From The Analysis Of Influence Of Spatial Design On ONA

### KEY HIGHLIGHTS:

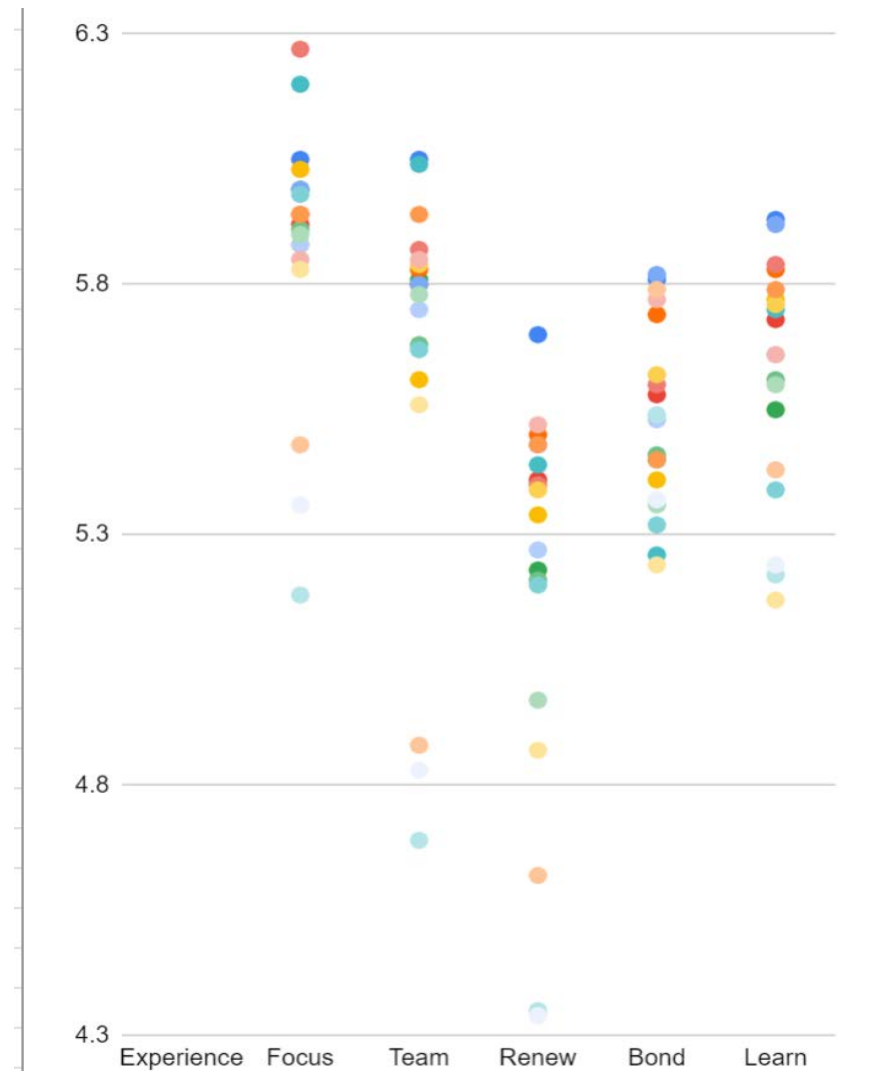
- Office portfolio largely designed for 'focus'
- Opportunities to improve 'renew' design interventions
- Significant outliers for improvement opportunity for outliers
- ... and much to learn from top performers

### HOWEVER:

- Importance of organisational network needs to be considered
- Highest scoring office in employee engagement, despite poorer scoring workplace attributes
- Whereas, office X has some great workplace attributes, but poor employee engagement scores

### What is the impact of organisational network on these factors?

- Does proximity to team/individual and the culture that they create offset good design?





## Why We Needed To Pivot

- No ONA assimilation to phase one completed
- Now needed to consider not only workplace features, but also place; home or office
- Wellbeing by-product of ONA became more important than knowledge flow

"All the News That's Fit to Print"

# The New York Times

Late Edition  
Today, plenty of sunshine, chilly, high 36. Tonight, increasing cloudiness, low 29. Tomorrow, intervals of snow and rain, little to no accumulation, high 41. Weather map, Page 30.

VOL. CLXX ... No. 58,976 © 2021 The New York Times Company NEW YORK, SUNDAY, FEBRUARY 21, 2021 \$6.00

## The Toll: America Approaches Half a Million Covid Deaths

Feb. 29, 2020: first report of a U.S. death, in Washington State

Each dot represents one death from Covid-19 in the U.S.

55 days later, 50,000 deaths had been reported.

### U.S. VIRUS DEATHS NEARING 500,000 IN JUST ONE YEAR

MORE THAN IN 3 WARS

Empty Spaces in Cities, Towns, Restaurants, Homes and Hearts

By JULIE BOSMAN  
CHICAGO — A nation numbed by misery and loss is confronting a number that still has the power

APRIL 24 51,360

### Garland Faces Resurgent Peril Of Extremism

Oklahoma City Attack Shaped His Views

By MARK LEIBOVICH  
WASHINGTON — Judge Merrick B. Garland always made a point of wearing a coat and tie when he surveyed the wreckage at the site of the 1995 Oklahoma City bombing, the worst domestic terrorist attack in American history.

This article is by Christopher Flavelle, Brad Plumer and Hiroko

### STORMS EXPOSING A NATION PRIMED FOR CATASTROPHE

CLIMATE CHANGE WRATH

Unprepared for Threats Facing Power Grids, Water and Roads

### Eat me!

Is ultra-processed food making us ill?

# The Guardian

## UK prepares for more coronavirus cases after first London diagnosis

Cabinet ministers face reshuffle

LIVE DOWNING STREET

BBC

BBC NEWS BREAKING  
Coronavirus Downing St briefing  
Boris Johnson chaired Cobra meeting this afternoon  
Follow @BBCNews @BBCBreaking Watch us live on BBC iPlayer 16:53

## What Did We Find Within The Global Population?

### Inclusion of ONA

- Track and monitored 12 month of metadata (Jan 2020 – Jan 2021)
- Included 12 months historical data (Jan 2019 – Jan 2020)
- Evaluated per:
  - Country
  - Office
  - Department

### Summarised findings into the following categories:

- Collaboration, meeting quality, & wellness
- Rising work/life imbalance
- Impact of low 1:1 Manager & employee time
- Network development as a critical future study area
- Onboarding and impact of staff tenure

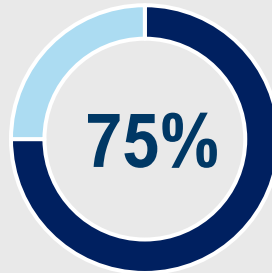
### Summary of ONA statistical analysis:

- Eigenvector centrality – **Influence**
- Betweenness centrality – **Control/distribution**
- Closeness centrality – **Speed of distribution**
- Degree centrality – **Popularity and centrality**
  
- Latent analysis - **Cluster analysis**
- Regression analysis – **Contributing drivers**

## Are employees as productive as they feel when collaborating and if so, does this productivity come at a cost to wellness?

- 75% of employees reported the ability to collaborate productively in Q4 2020.
- At the same time, WPA reveals a reduction in collaboration hours and an increase in low quality meetings (e.g., multi-tasking, redundancy, conflicting meetings).
- Employees also reported a reduction in Wellbeing, Work/Life Balance, and Time Away from Work over 2020.
- If employee perception of productivity is accurate, the strain of remaining productive in lower quality collaboration conditions (i.e., less time collaborating and lower quality meetings) may be contributing to decreases in employee wellness.

Q2 and Q4 2020 XSF



Of Employees Report Productive Collaboration

At the same time

Q1 to Q4 2020 WPA

20% Decrease Collaboration Hours

35% Increase Low Quality Meetings

## If Perception of Productivity is Accurate, Does it Come with a Cost to Wellness

Q2 and Q4 2020 XSF

29% Decrease Sense of Wellbeing

16% Decrease Work/Life Balance

15% Decrease Time Away From Work

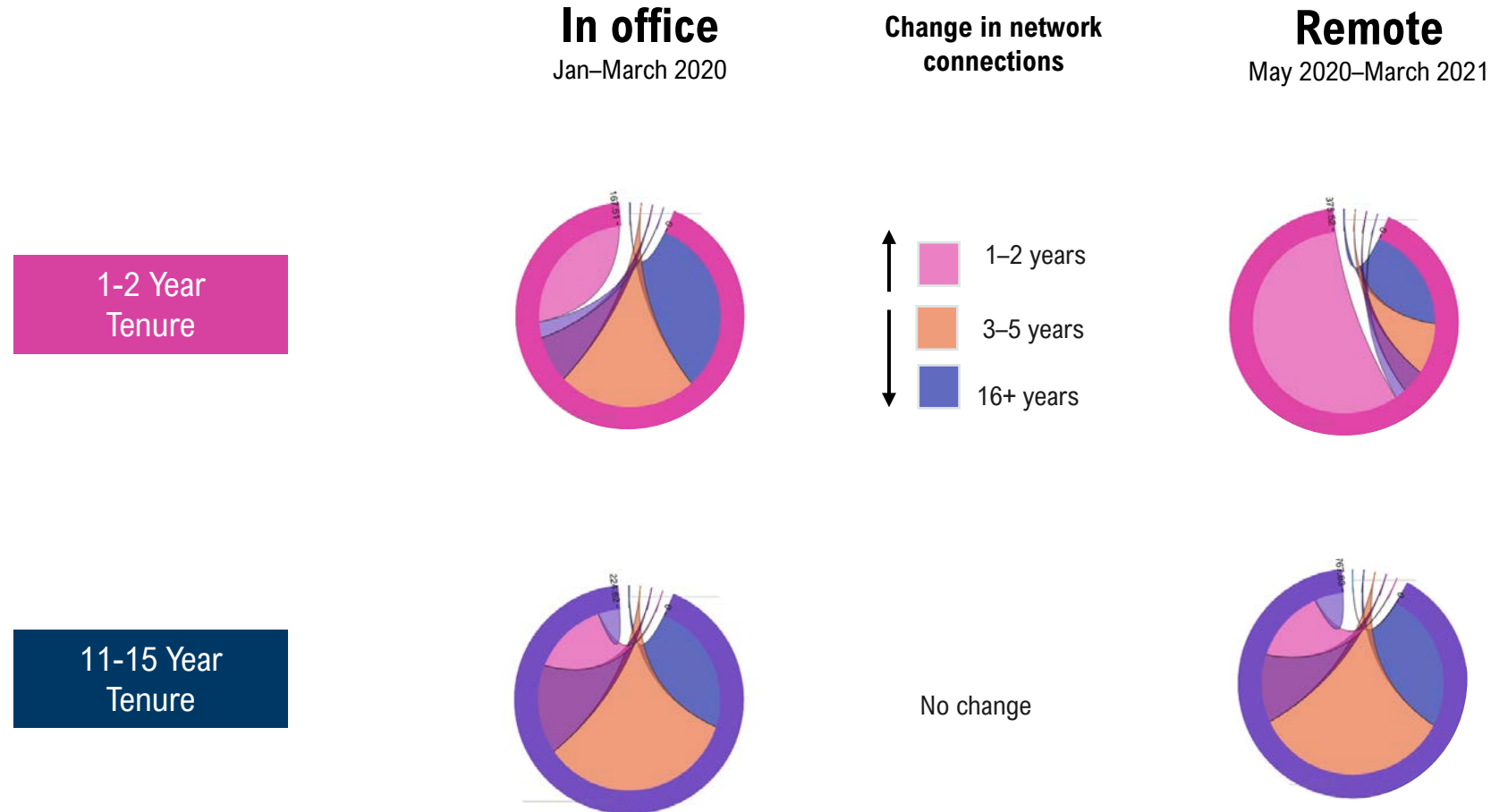
# Our Findings – New York Case Study

## What Did We Find Within Our New York Population?

		CLUSTER (Average)	DEPARTMENT (Average)	
Eigenvector	Score	0,044	0,040	Organizing in Clusters could provide <b>c.10% more influence over the network.</b>  <i>Good/bad? Diversity? For which department?</i>
	% difference			
Betweenness	Score	0,024	0,020	Organizing in Clusters could provide <b>c.17% more connectedness across the business</b>  <i>Key driver for cross-collaboration. However, negative effects of gossip? Harder to control?</i>
	% difference	16,7%		
Closeness	Score	6,530	6,314	Organizing in Clusters could provide <b>c.3% more speed in disseminating information across the business</b>  <i>Key driver for collaboration, bonding and organisational cohesion/culture. However, negative harder to control top-down?</i>
	% difference	3,3%		
Degree	Score	0,262	0,246	Organizing in Clusters could provide <b>c.6% more connectedness to influential employees (leadership, managers, knowledge holders) across the business</b>  <i>Key driver for flattening organisational hierarchy, access to learning, development and visibility. However, is culturally context dependent – Netherlands vs Japanese sociocultural hierarchy values</i>
	% difference	6,3%		

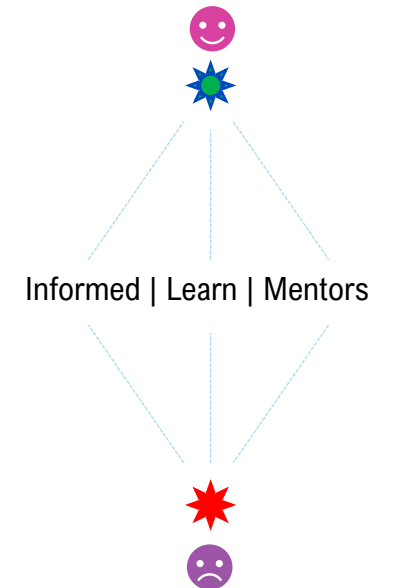
# The Impact Of Tenure On Network Connections

What Is The Impact Of Tenure On Organizational Networks When Working From Home?



## Experience per SF Survey

Top 2 Tenure groups results



## So, What Did We Learn?

What if we could measure the workplace by **measuring human networks** in addition to **space utilization**?

- Could provide rich data from which to reimagine office design, hybrid working and organisational management to enhance connectedness, collaboration and improved business performance

What if we could understand relationships by way of networks (**clusters**), not an **org chart**?

- Some benefits may exist to co-locate teams in natural clusters vs departments
- Ability to 'optimise' the network
- However, for whom? Do all teams perform the same?

What if we can compare relationships across the portfolio within different types of built space?

- Negative correlation between office design and employee experience
- Leadership-effect may off-set workplace design and hybrid impact on teams
- Need to evaluate in the context of network findings

What if we could evaluate whether being in the office at the same time improves communication?

- Tenure seems to play a role, although this was during first wave pandemic – what does this say now?
- Impact of other psychosocial factors (i.e., loneliness, lack of learning and development, economics)

## What Do We Plan To Do In A Phase Four Replication?

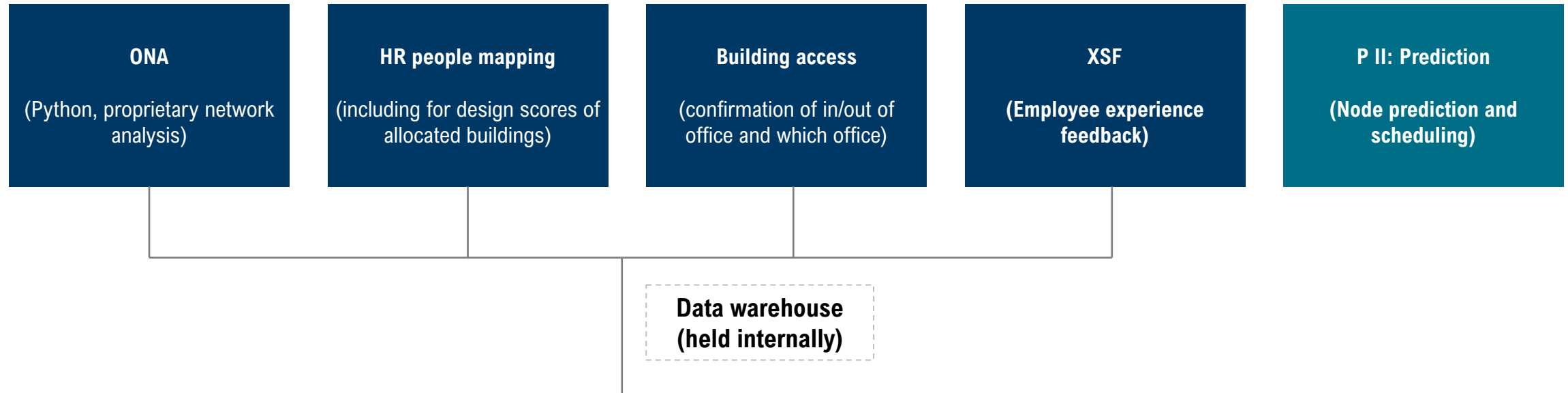
	Phase one XSF and space design	Phase two Global ONA	Phase three NYC	Phase four Controlled sample
Building access			🕒	✓
Building features	✓		🕒	✓
Business Success				✓
Organisational Network Analysis		✓	🕒	✓
Employee experience	✓		🕒	✓
Space analysis	✓		🕒	✓

**Phase four: design a controlled study to incorporate the entire methodology across Company X's Dutch business**

### Summary of objectives for Phase 4 replication:

- ONA did not represent a stable business environment (during COVID)
- Did not align all 5 datasets across same time period – can only directionally compare
- Statistics run through 3<sup>rd</sup> party algorithm – focus on proprietary statistical model development
- No replication validity

## What Do We Want To Achieve In The Netherlands



### TARGET AGGREGATED INSIGHTS AND HYPOTHESIS:

1. What is the impact on organisational networks if you collocate/organize in natural clusters vs departments?
2. What is the impact on organisational networks when teams work always in the office, always out of the office and a hybrid mix in-between?
3. What is the impact of workplace design features on organisational networks – can office design really influence employee connectivity, engagement and collaboration?
4. What is the link between location, workplace design, organisational networks and employee experience? i.e., does office design/proximity to organisational influencers/leadership influence employee experience
5. PII: Can we build a model based on employee metadata that could predict/recommend a schedule for employees to be in the office at the same time to maximise the effects of the organisational network (eigenvector, betweenness, degree, closeness centrality)?