



A COVID-19 Virtual Ideation Experience

Space Utilization & Metrics

Team Number: 11

Executive Summary

The pandemic has accelerated the prioritization of wellness and safety in corporate offices AND increased utilization of technology to enable (knowledge) workers to be productive from anywhere in the world. We addressed four topics across the changing landscape of Space Utilization and Metrics:

TOPIC #1 – How will the Corporate Office be used going forward

TOPIC #2 – Impact to Workplace: Space Type Use and Area Distribution

TOPIC #3 – How will leasing strategies and use of flexible space change

TOPIC #4 – Impact to Ongoing Opex and Capex

As companies look to maximize both health and productivity of their employees we expect the following key trends to emerge:

- Identify **employee connectedness to the physical office** based on job role with a gradual return prioritized by need
- **Greater focus on “we” space** and collaboration rather than “I” space
- **Reduced amount of total occupied space** through greater adoption of virtual work (up to 25%)
- **Hub (corporate) & Spoke (flex space) model** to increase cost flexibility and employee productivity
- **Shorter lease terms** (1-3 years) and/or higher tenant improvement allowances
- **Operating expenses and capital expenses will increase** on a per square foot basis which companies will seek to mitigate through greater adoption of virtual work and corresponding reductions to retained space



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TOPIC #1 – How will the Corporate Office be used going forward?

Through dozens of senior leadership surveys and interviews, employees were categorized into one of three categories based on their functions:

- Building Critical
- Office Optimal
- Virtual Primary

Each of the occupancy models inform other critical workstreams such as entryway logistics, vertical circulation, community space and office circulation paths. These models assist with building safely towards a steady state.

The model was based on a crawl-walk-run approach which looked at short-term occupancy at 1% and then a slow ramp up to 5%. 5% was deemed a pilot approach where protocols could be tweaked, building up to a longer-term model scaling up to 40% until ultimately 100%. Other considerations being implemented are floor plan graphics, communications and wayfinding which take into effect the physical distancing.

Back to Building Occupancy Modeling

	Building A	Building B	Building C	Building D
	Owned	Owned	Multi-Tenant 10 Floors Leased	Multi-Tenant 5 Floors Leased

Building Essential Personnel (1%)

(FMs, Security, Janitorial, others as required critical to Building Operations)

Approved Onsite	50	40	5	2
Current Virtual	5,000	4,000	1,000	500
Percent	0.01	0.005	0.005	0.005

Office Optimal (5%)

(Productivity enhanced by being in proximity to functional areas in building)

Approved Onsite	275	200	5	2
Current Virtual	4,775	4,000	1,000	500
Percent	0.05	0.05	0.005	0.005



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Transitioning to the new normal

The return to the office will be staggered. The key challenge is balancing the amount of real estate needed against employee demand.

Pre-Covid Office

- **Most employees worked in the office;** working from home was an occasional change to the normal.
- **Desk hoteling was via free-addressing** with workspaces designed for either permanently assigned desks or for mobile workers who turned up and found somewhere to sit.
- **1.2 employees per desk** was the accepted ratio for non-assigned workspaces.

5% Pilot with Slow Ramp-up

- **To start, 80-90% remain working from home** due to commuting challenges and reduced desk availability coupled with protocol testing. **Pilot** will determine ramp up to follow.
- **Whole-day desk reservations may be required** to manage cleaning protocols. Apps developed to assist.
- **3 employees per usable desk** the new ratio due to increased space per desk; Tracking will be imperative for contact tracing.

The New Normal

- **Flexible working** with employees choosing where to work as the new accepted standard.
- **Reduced** use of open benching and team tables.
- **Collaboration and client meetings** become the main reason for coming to the office.
- **Significant reduction in real estate** to provide cost reduction and meet reduced employee demand.
- **Workspace reservation** required when visiting the office



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TOPIC #2 – Impact to Workplace: Redefining the Business Value of Place

- As organizations leverage new perspectives on distributed work models as an opportunity to **redefine the purpose of place**, key performance indicators will shift from space-centric to human-centric measures.
- An agile learning mindset will be required to **re-align future space distribution with the evolving nature of work** and the potential for virtual and physical placemaking to influence behavior and culture.
- The business value of place may be prioritized for **in-person optimal** or **on-site essential activities** across a range of business functions.
- Evolving physical wellness protocols and flexibility for future adaptation will require **active and continuous learning cycles**.



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TOPIC #2 – Impact to Workplace: Space Type Use and Area Distribution

Primary purpose of physical place is a corporate Hub where organizational culture, brand expression, enterprise connection, innovation and co-creation happen. Enhanced value for client and employee experience and influences of wellness protocols may increase hospitality offerings impacting the distribution of space types as follows:

Amenity Spaces (Lobbies, Primary circulation elevators/stairs, Food Service, Conference, Training, etc)

Increase proportionately due to more generous guidelines for employee and visitor entry, delineation of circulation between key functions, and increase in demand due to primary focus on client-facing innovation spaces.

Community Spaces (Hub, variety of co-creation spaces- 6 people or more (scheduled)

Increase in quantity and scale of coffee/refreshment hubs driven by hospitality models as well as greater variety of co-creation space attributes for user adaptability, virtual interface enhancements, and more generous physical space protocols.

Group Spaces (Variety of collaboration spaces 1 – 4 people ad hoc use)

Proportionate reduction in quantity based on individual workseat ratio in a variety of space typologies to support 1-4 person impromptu calls or collaboration.

Individual Spaces (Variety of individual settings for 1 person)

Reduction in quantity of individual workseats and increase in daily occupant sharing ratio, as well as shift in variety of individual workseat types appropriate for identified activities and percent of time in use.



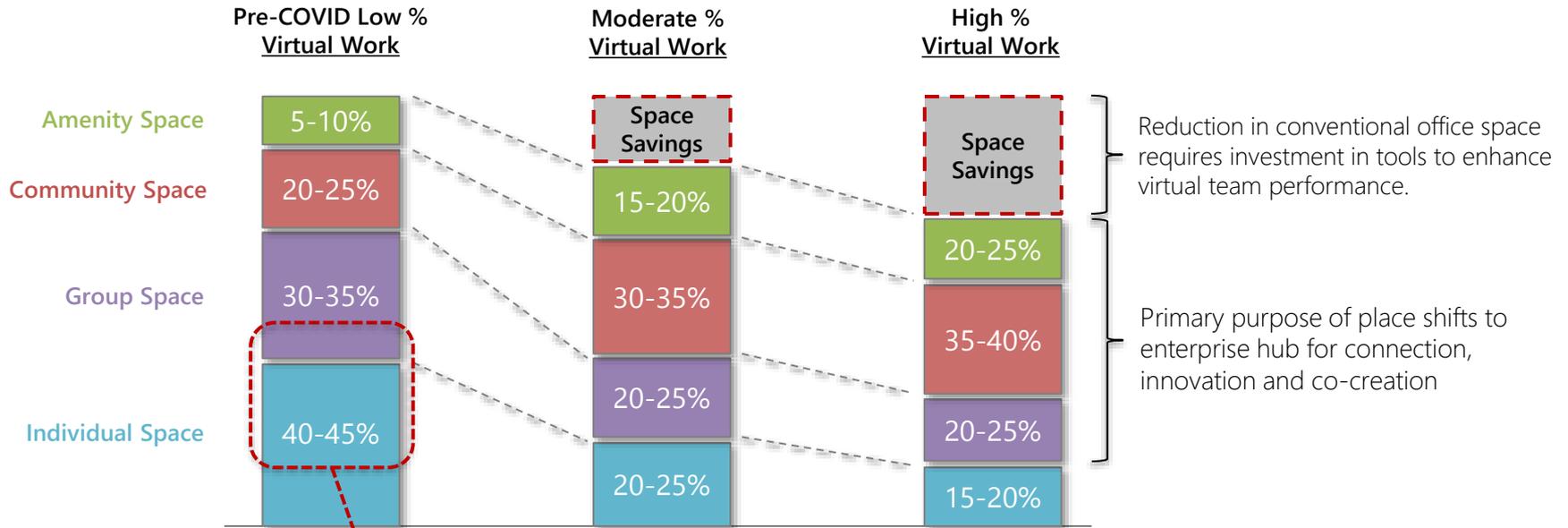
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TOPIC #2 – Impact to Workplace: Comprehensive Portfolio Opportunities

The opportunity to leverage distributed work models is dependent on an organization’s **criteria for the business value of place** and represented by the percentage of **work activities identified for virtual versus physical space**.



Adoption of distributed work models reduces quantity of individual workseats and corresponding ratio of group space types



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TOPIC #3 – How will leasing strategies and use of flexible space change

Leasing Strategies

- Majority are renegotiating current real estate portfolio to reduce costs now/near-term
- Some are taking advantage of market corrections to blend and extend and/or right-size
- Reevaluating programming needs and taking less space (WFH has been successful with the right technology)
- Shorter lease terms to provide more flexibility
- Virtual tours will increase to leverage market due to travel restrictions (personal travel choices)
- Post COVID-19 will provide more focus on employee safety and wellbeing, janitorial cleaning specs, building tenant mixes (do you want to be in a building with medical end users?)
- End-to-end delivery process will take longer

Flexible/Coworking Space

- There will still be a need for flexible work spaces (will it increase or decrease?)
- Organizations may continue with a hub and spoke model with smaller satellite locations shifting to more co-working options
- New work-from-near-home (WFNH) model for employees to enjoy shorter commutes and less density environments
- Shift from leasing coworking spaces to bringing similar flexible workplace concepts in-house



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TOPIC #4 – Impact to Ongoing Opex – psf costs rise but overall SF reduces to offset

There will be multiple factors in the post-pandemic world driving ongoing Opex costs up and limited factors reducing them. The cost to operate corporate facilities will increase from the range of programs and specifications needed to create healthier workplaces. Corporations will also increase spending to enable more sustained remote work capabilities and reduce their dependence on physical place. With the increase to remote work will come pressure to reduce the total amount of space required to offset many if not all of these added costs. The higher cost per SF for a healthier workplace will need to be offset with less space overall.

Factors Increasing Ongoing Opex

Support employee health and wellness

- + Conduct temperature screenings at every entrance
- + Increased frequency and depth of cleaning/sterilization
- + More sanitation supplies for (masks, gloves, wipes)
- + Add programs for physical and mental well-being

Building Operating Costs

- + More fresh air recirculation and better humidification control

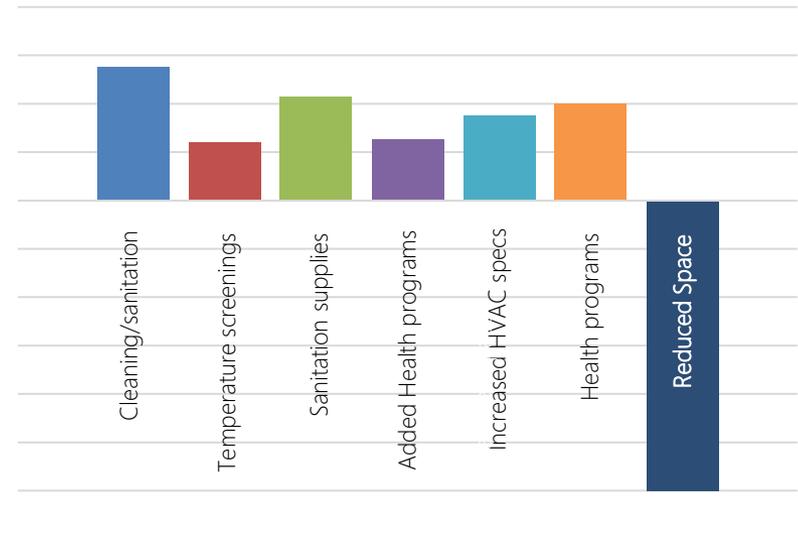
Support more Remote work

- + Purchase PC, printers, office equipment and connectivity to improve business resiliency for more remote workers

Factors Reducing Ongoing Opex

- Reduced total space with greater remote work – rent, property taxes, operating expenses, etc.

Ongoing Opex Cost Trends





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TOPIC #4 – Impact to Capital Cost – Capital costs will increase unless offset by reduced space

We see construction costs rising overall both in the short- and long-term, with increases to process and sanitation protocols driving costs up 10-35% (primarily through added construction time) and through higher cost office specifications to create a safer and healthier workplace. These increases will only be partially offset by more competitive non-union labor rates and fuel prices in the short run. Companies may be able to further offset these net increases by reducing the amount of space needed to support a given work group with the adoption of more extensive remote work policies.

Factors Increasing Capital Costs			Factors Decreasing Capital Costs				
More expensive workplace specifications	Higher Construction Costs		Lower Construction Costs	Reduced Space Required			
Add sensors and no-touch technology for greater automation and hands-free operation <ul style="list-style-type: none"> Doors, lighting, elevators, security systems Audio/visual equipment capability in more spaces Height-adjustable tables, task lights 	Construction productivity hit Physical distancing and sanitation protocols reducing productivity and lengthening construction time		More competitive non-union labor rates Greater use of modular construction over time	Reduced total space with greater remote work <ul style="list-style-type: none"> Fewer training/customer spaces Less office space with more extensive remote work policies 			
Higher hygienic standards <ul style="list-style-type: none"> HVAC system upgrades (filtration, humidification) Added hand washing locations (kitchens/breakrooms) UV light installations in common areas 	Higher hygienic standards <ul style="list-style-type: none"> PPE, N95 masks, gloves Larger changing areas, temp field offices Safety Compliance Officer 		Fuel costs (transportation and some products with high petroleum content)				
Potential Increases to \$/SF		Potential Increases to \$/SF	Potential Decreases to \$/SF	Amount of Space Reduction required to offset increased Capital costs			
Conservative	+ 5%	X	+ 5%	X	- 2%	X	- 8%
	+ 10%	X	+ 10%	X	- 5%	X	- 13%
	+ 15%	X	+ 20%	X	- 10%	X	- 20%
Aggressive	+ 20%	X	+ 25%	X	- 10%	X	- 26%