

# Market Outlook Construction Forum

## Summary

*as of July 24, 2020*

### Presenters

- Richard Vermeulen, Lead Economist, Vermeulens
- John Schneider, Principal, Director of Interior Design, LORD AECK SARGENT, A KATERRA COMPANY

### Market Outlook

- price levels holding at March 2020 levels with 5 to 10 percent of bids coming in under budget
- employment and asset valuations rebound after monetary stimulus
- re-opening of regional and national economies depend on successful containment and contact tracing measures
- timelines indeterminate as numerous responses are in play

### Working from Home

- historical perspective shows fundamental societal shifts happening over shorter and shorter periods
- demographics of post war generations show high degree of adaptability
- surveys point to permanent change in need and desire for traditional or modern office environments
- medium term re-think aligns with lease terms and generational change
- work spaces will increasingly fall into office, home, and other typologies
- company spaces may scatter into various distributed locations

### Economic Impacts of Changing Work Environments

- multi-cellular space patterns and distributed infrastructure networks will be compared against centralized models
- personal transportation will be compared against mass transit paradigms
- integrated design techniques will be employed to measure wellness, ecology, and economy in a COVID ready world

### Future Agenda

- August 7, 2020
  - Stantec: Getting Back to Social



Since 1972



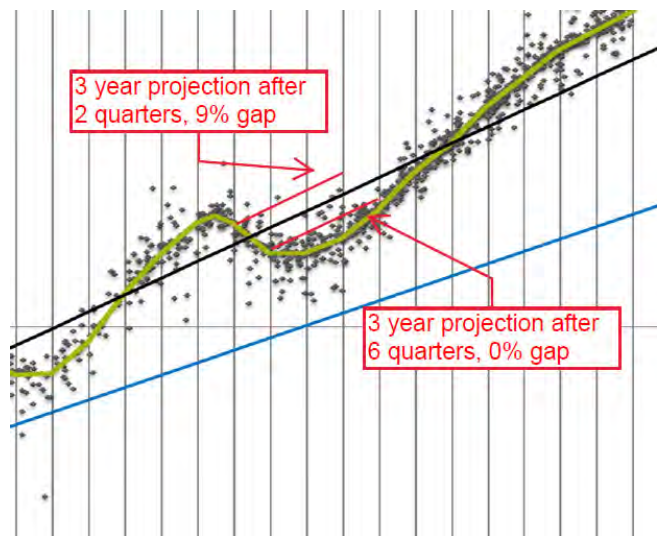
## Design & Construction Market Outlook

Richard Vermeulen – Co-CEO  
John Schneider – Principal Director of Interior Design  
Blair Tennant – Associate Principal

North America's Construction Economist  
[vermeulens.com](http://vermeulens.com)

Boston New York Toronto San Antonio Denver Los Angeles

## Macro to Micro – Great Recession

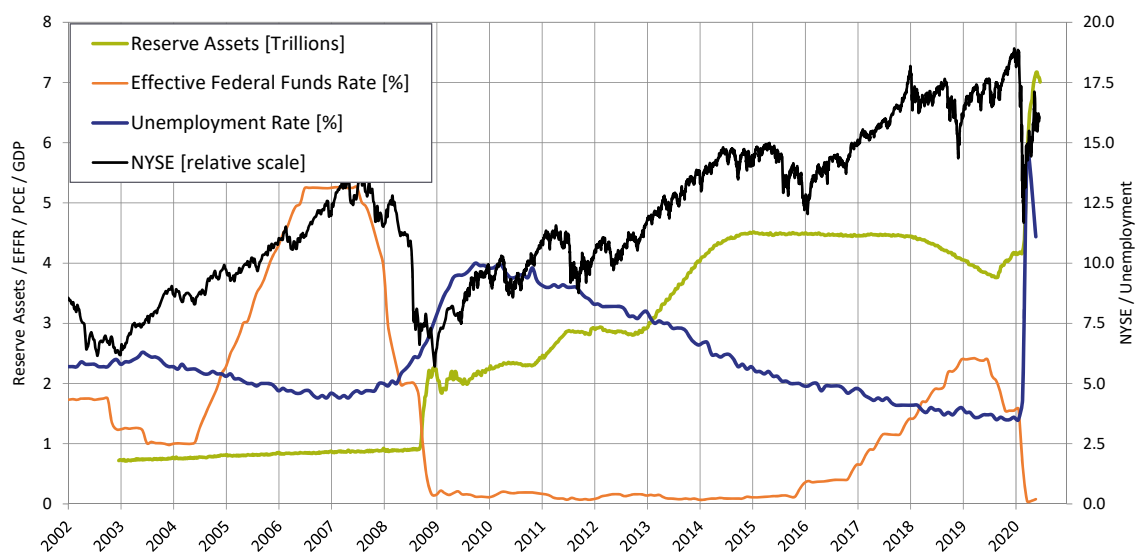


Amplitude and duration of price movements using previous downturn as guide  
Local market and specific job conditions indicated by outlier dots

## Macro to Micro - Escalation Position

- Reconciled escalation **rates maintained** at or past the Design Development stage
- **3%-4%** escalation below the line for **projects** with long time horizons
- Line item unit rates will be **held at March 2020 values** until bid data is substantial
- **No reliable data** or history on how long or deep this downturn will be
- Potential **offsetting cost increase** for COVID measures and construction efficiency
- Vermeulens **bid data** show rates stable or declining depending on project size
- Consider **design add alternates** in the 10% of cost range

## Macro to Micro – Fed Watch



Fed actions green and orange lines, fed indicators black and blue

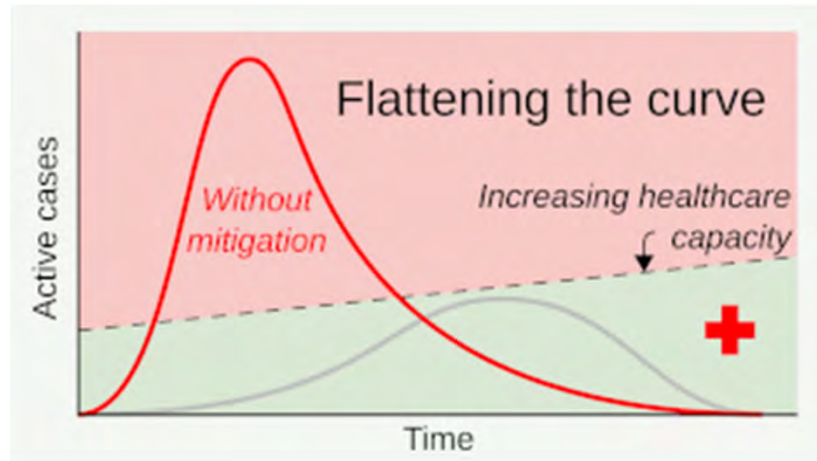
Financial indicators pointed to last recession, though we did not anticipate authorities allowing collapse of banks

Coming out we had steps of stimulus and price, goldilocks scenario

## Year-Over-Year Construction Labor Growth



Construction employment is being established regionally in the short to medium term.

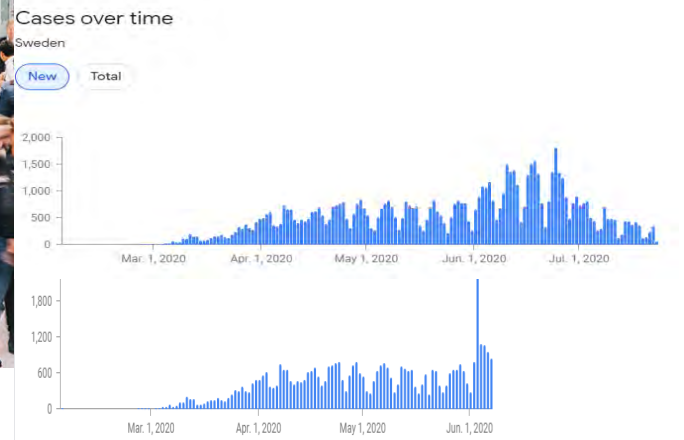


Big question what is length of time measure – weeks or months make a huge difference

## Macro to Micro – Herd Immunity?



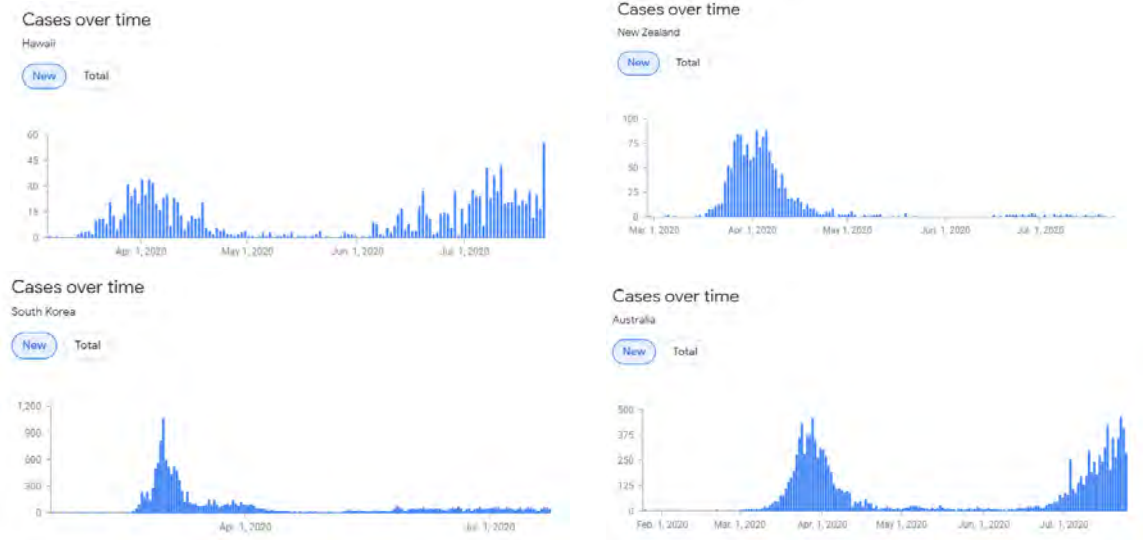
antibodies were only found in 6.1 per cent of the samples collected nationwide in the week ending May 24



Most flattening models seem to imply that eventually everyone will be exposed until a herd immunity threshold is achieved – perhaps 70 to 90% of population. At current rate of exposure this could take many months



## Macro to Micro – Containment Sawtooth?



New Zealand and south Korea continue to show containment after initial lockdown. Contact tracing and containment measures swift and strict. A sawtooth pattern emerges with regional and local outbreaks.

## Macro to Micro – Macro Flattening vs Micro Containment

### United States

Confirmed: **2,064,092** Recovered: **621,646** Deaths: **115,487**

Updated less than 1 hour ago • Source: [WHO](#)

### United States

Confirmed: **3,048,072** Recovered: **918,298** Deaths: **133,322**

Updated less than 1 hour ago • Source: [Kissable](#)

### Cases

Location	Confirmed ↓	New cases (last 60 days)	Cases per 1 million people	Recovered	Deaths
Worldwide	11,797,213		1,517	6,415,379	543,595
United States	3,048,072		9,249	918,298	133,322
New York	402,928		20,661	71,040	31,934
California	287,766		7,636	No data	6,563
Texas	219,164		7,913	109,485	2,816
Florida	213,766		11,218	No data	3,840

Confirmed: **3,970,671** Recovered: **1,163,861** Deaths: **144,173**

Updated less than 1 hour ago • Source: [Wikipedia](#)

### Cases

Location	Confirmed ↓	New cases (last 60 days)	Cases per 1 million people	Recovered	Deaths
Worldwide	14,951,347		1,923	8,467,751	616,550
United States	3,970,671		12,049	1,163,861	144,173
New York	412,889		21,172	72,302	32,218
California	410,366		10,890	No data	7,883
Florida	369,826		19,406	No data	5,205
Texas	355,594		12,840	186,529	4,319
New Jersey	179,230		20,318	31,781	15,737
Illinois	165,534		12,863	No data	7,521
Arizona	148,730		22,943	18,863	2,918
Georgia	135,865		13,842	No data	3,186

Cases have doubled in the last 4 weeks, deaths have risen 25%.

Greater testing has confirmed the mortality rate is much lower than initial figures, 5.6% to 3.6%.

Other factors – greater protection for most vulnerable, better care, remaining population statistically fitter.

## Macro to Micro - Job Creation

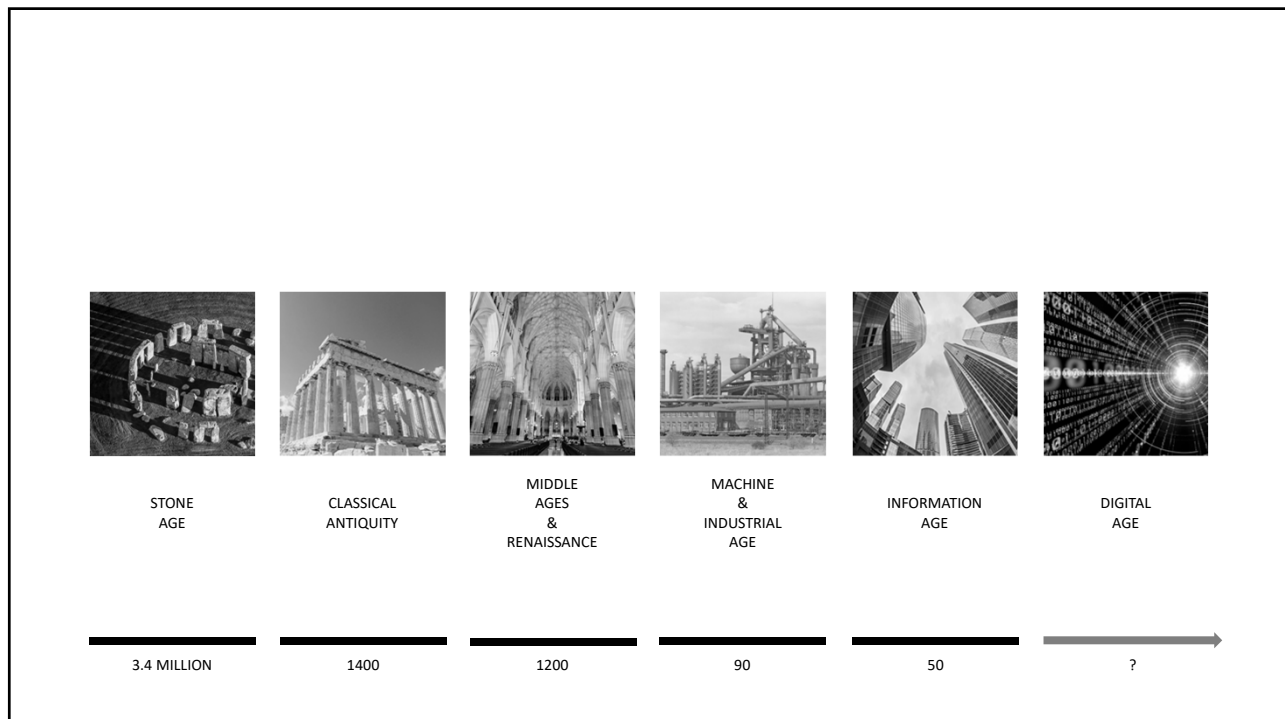
US Employment (millions)							
	Jan-08	Feb-10	Feb-10 to Feb-20	Feb-20	Apr-20	Jun-20	Feb-20 to Jun-20
Total nonfarm	138.4	129.7	22.7	152.4	130.4	137.8	-14.6
Total private	116.0	107.3	22.4	129.7	108.6	116.5	-13.2
Goods-producing	21.9	17.6	3.6	21.2	18.7	19.9	-1.3
Mining & logging	0.7	0.7	0.0	0.7	0.7	0.6	-0.1
Construction	7.5	5.5	2.1	7.6	6.6	7.2	-0.4
Manufacturing	13.7	11.5	1.4	12.9	11.5	12.1	-0.8
Private service-providing	94.1	89.6	18.9	108.5	89.9	96.6	-11.9
Trade, transportation, and utilities	26.7	24.5	3.3	27.8	24.5	25.7	-2.1
Business	29.3	27.0	6.3	33.3	30.4	30.9	-2.4
Education and health services	19.0	19.8	4.8	24.6	21.8	22.8	-1.8
Leisure and hospitality	13.5	12.9	4.0	16.9	8.6	12.0	-4.9
Other services	5.5	5.3	0.6	5.9	4.6	5.2	-0.7
Government	22.4	22.5	0.2	22.7	21.8	21.3	-1.4

Office jobs across all sectors will be aggregated to obtain global economic impacts as we head into the digital/work flex world.

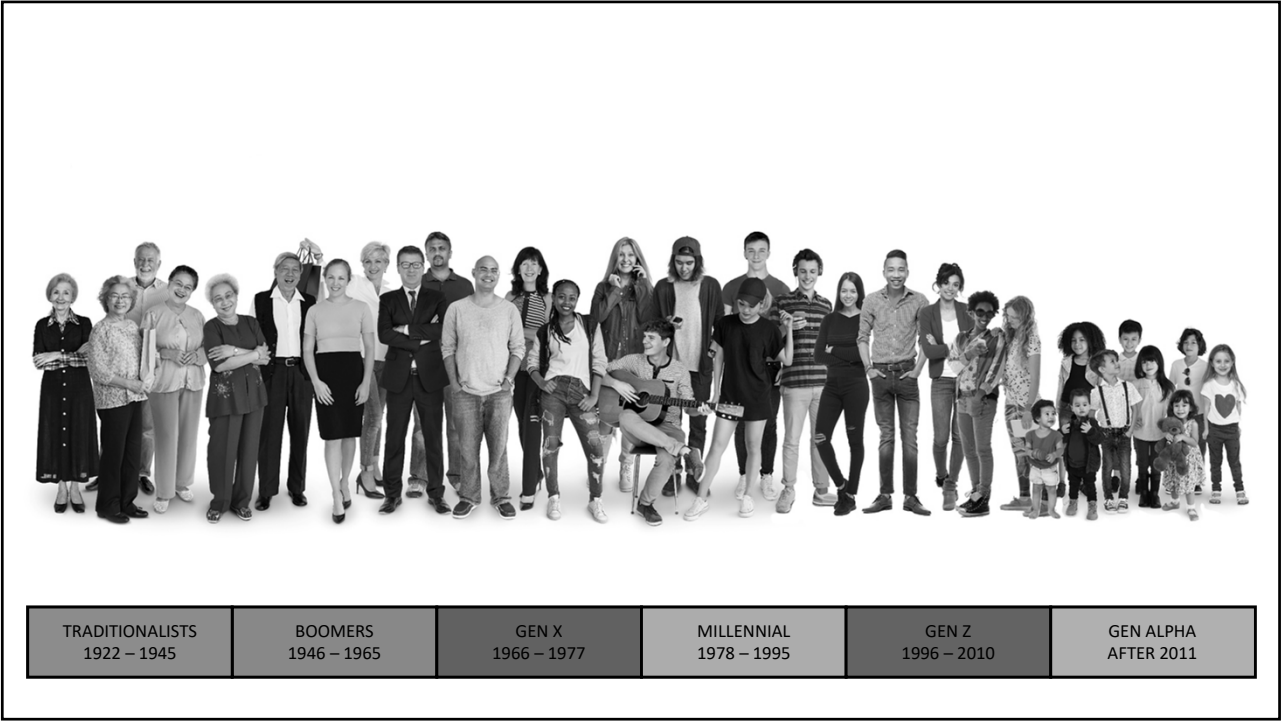
Macro to Micro -



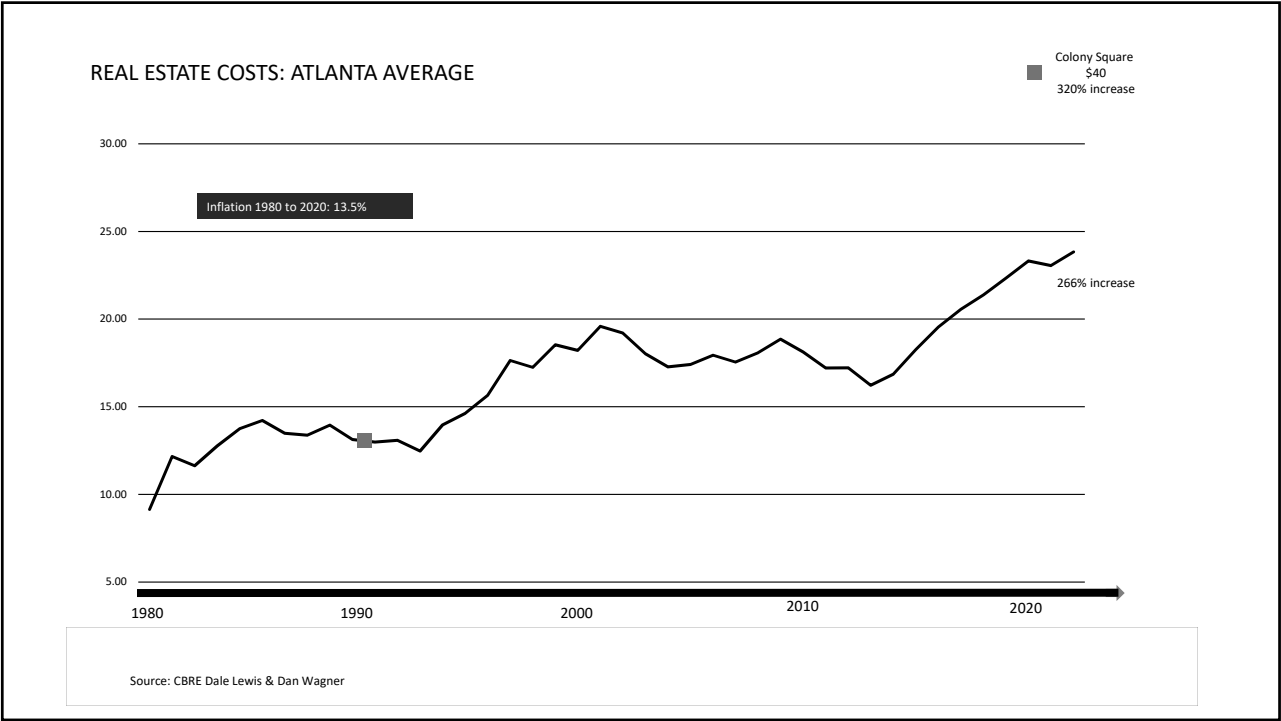
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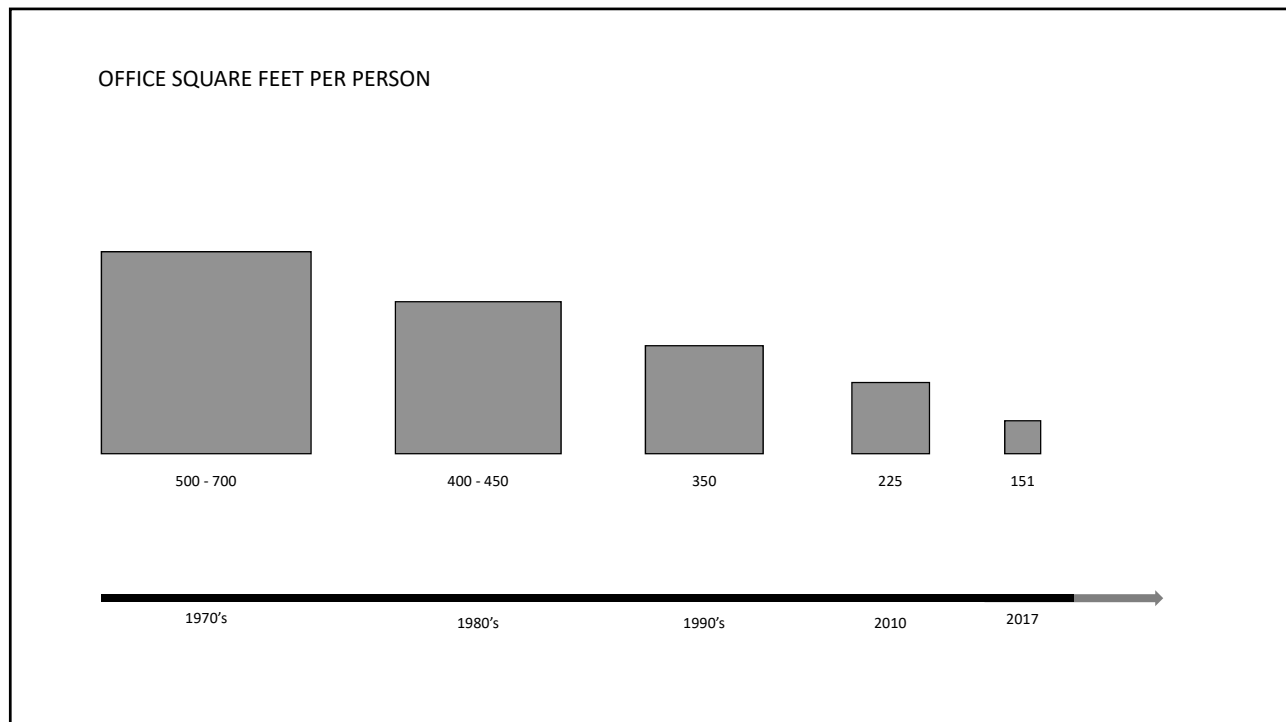
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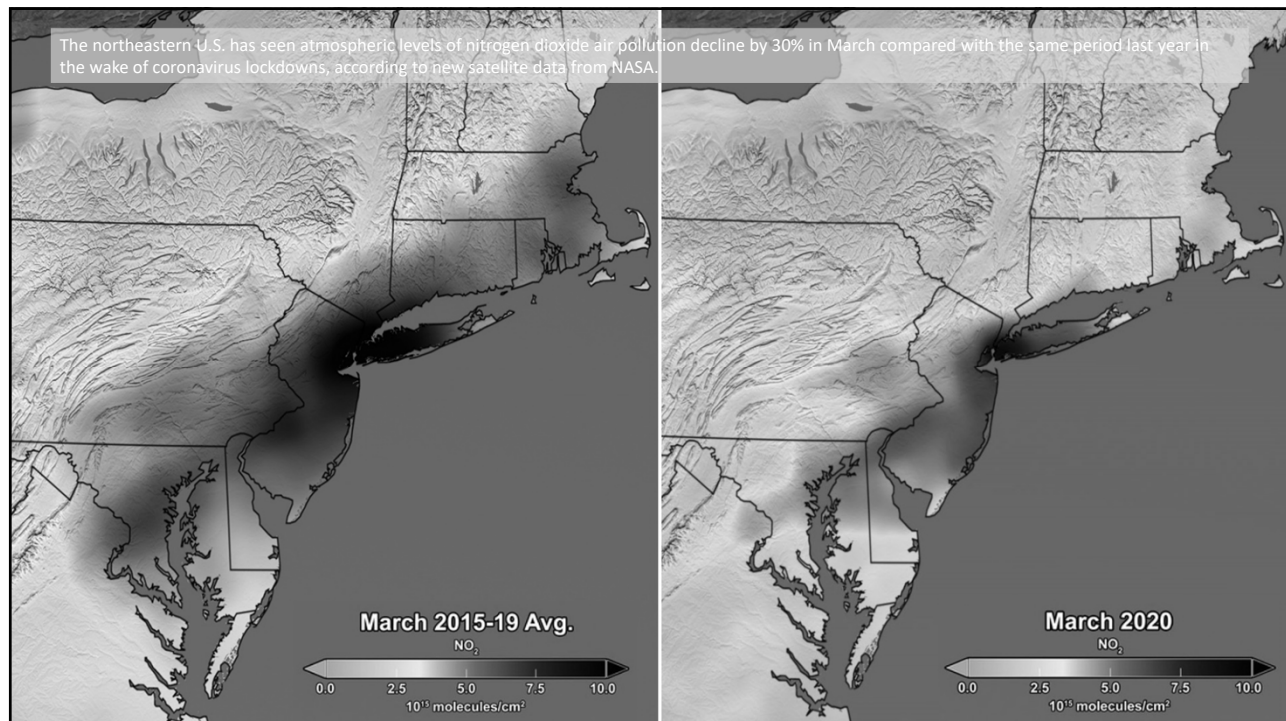
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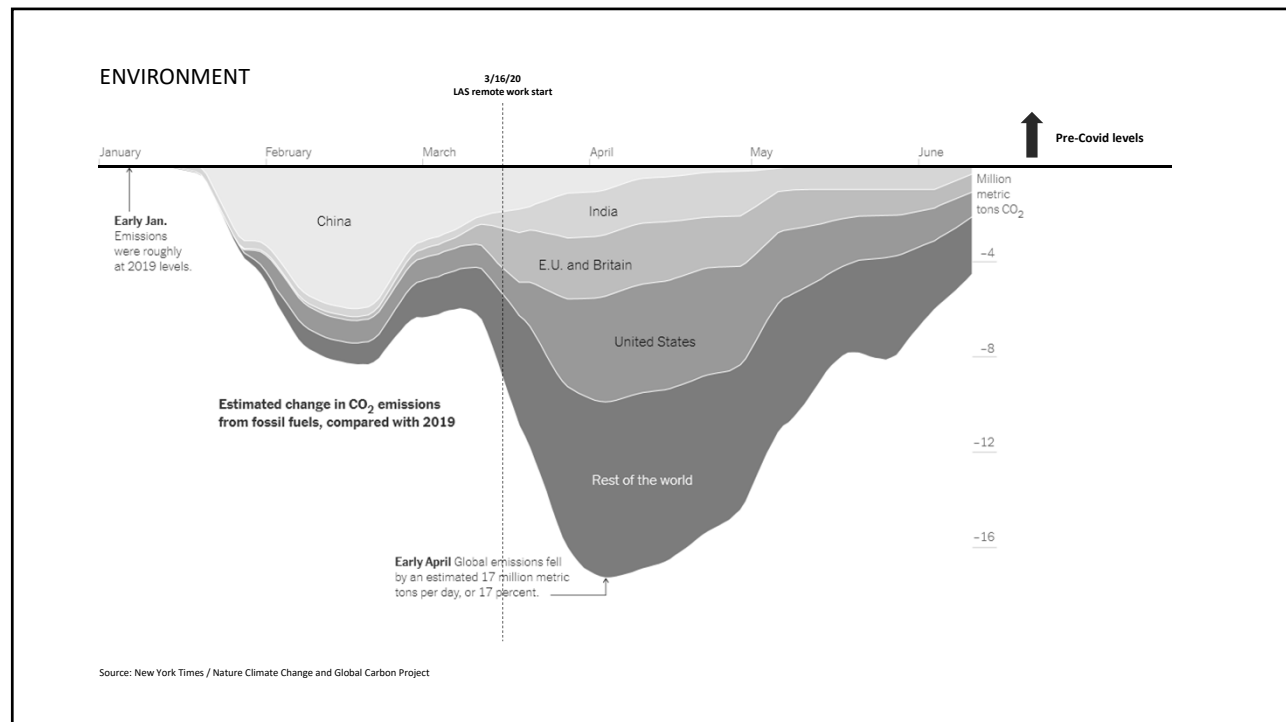
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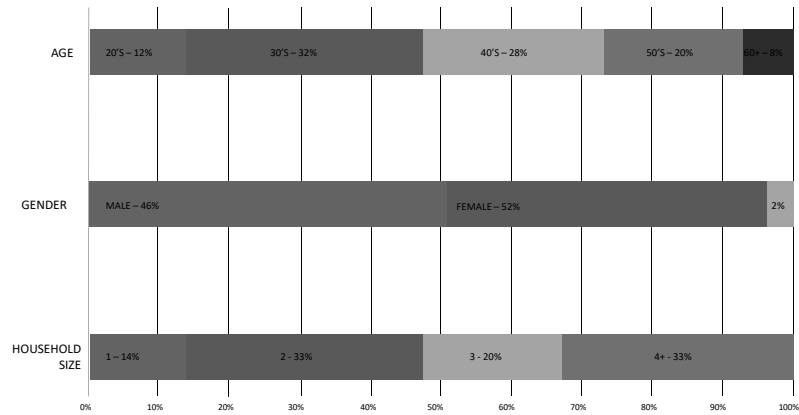
### SURVEY RESULTS

Responses:	208 (LAS – 72; Katerra – 33)
Industries:	Architecture, interior design, engineering, law, real estate, medical, IT, insurance, aerospace, education, retail, furniture, consumer products
Places:	Arizona, California, Colorado, DC, Florida, Georgia, Illinois, Kentucky, Massachusetts, Michigan, Missouri, North Carolina, Ohio, Texas, Tennessee, Virginia, Washington, Australia, India, England, Saudi Arabia, Canada

8



### SURVEY RESULTS: DEMOGRAPHICS



9

### SURVEY RESULTS

WHAT DO YOU LIKE MOST ABOUT WORKING FROM HOME?		WHAT DO YOU LIKE LEAST ABOUT WORKING FROM HOME?	
84%	Not having to commute	74%	Feeling disconnected from the office culture
54%	Flexible work hours / schedule	69%	Hard to "switch off"
37%	Fresh air – easy access to outdoors	54%	Access to equipment
33%	Easier to concentrate / more productive	22%	Lack of dedicated home office
29%	Casual dress / loungewear	20%	Harder to concentrate

10

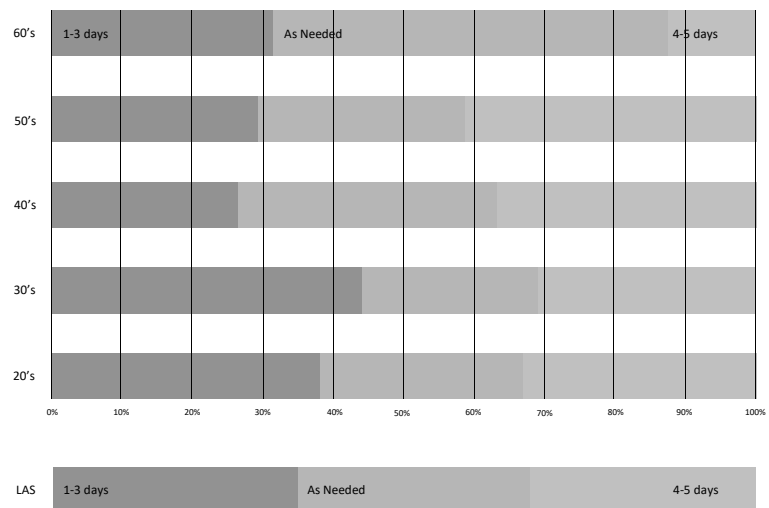
## SURVEY RESULTS

WHAT DO MISS MOST ABOUT BEING IN YOUR OFFICE?		WHAT DO YOU WANT YOUR COMPANY TO PROVIDE AT HOME?	
67%	Interaction with my team	64%	Computer / laptop
60%	Interaction with other people	46%	Ergonomic Chair
44%	Getting out of the house / change of scenery	43%	High Speed Internet
38%	Access to equipment	29%	Printer
19%	Ability to concentrate / greater productivity	10%	Desk

11

## SURVEY RESULTS

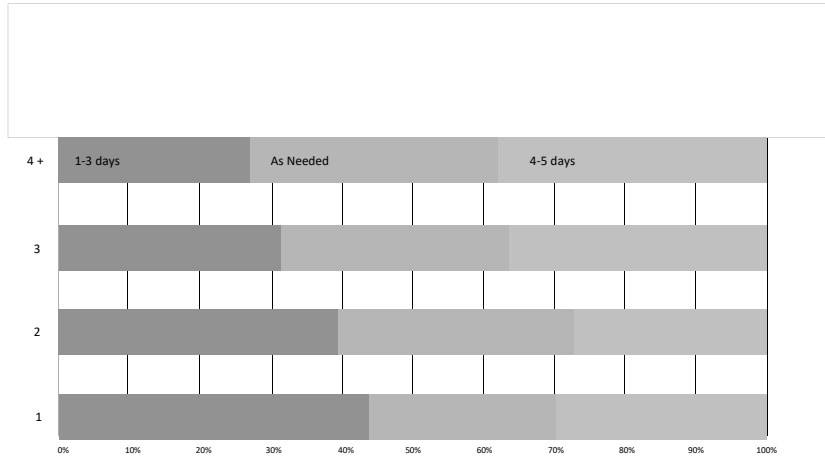
When the pandemic is over, how many days per week do you want to spend in your office? (By Age)



12

## SURVEY RESULTS

When the pandemic is over, how many days per week do you want to spend in your office? (By Number in Household)



13

## POSSIBILITIES

**Humans tend to overreact to the short-term ramifications of change but underestimate its long-term effects**

**Change happens slowly**

**Resisting change means getting left behind**

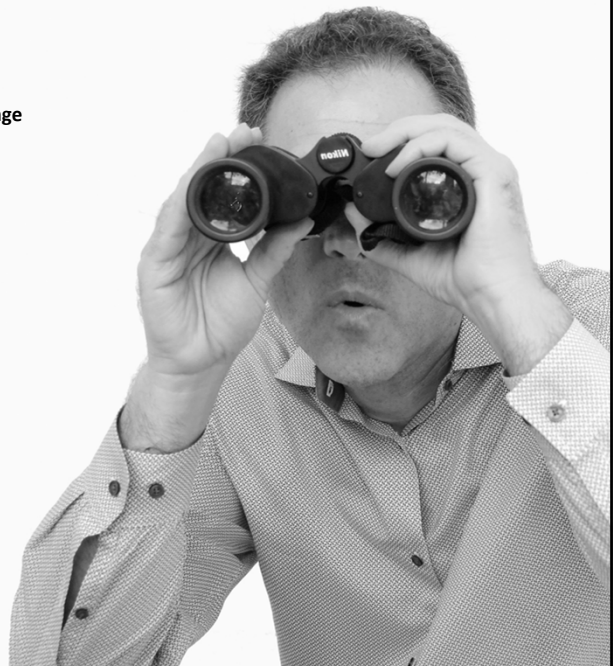
**Personal, business and practice area/department implications**

**One size does NOT fit all**

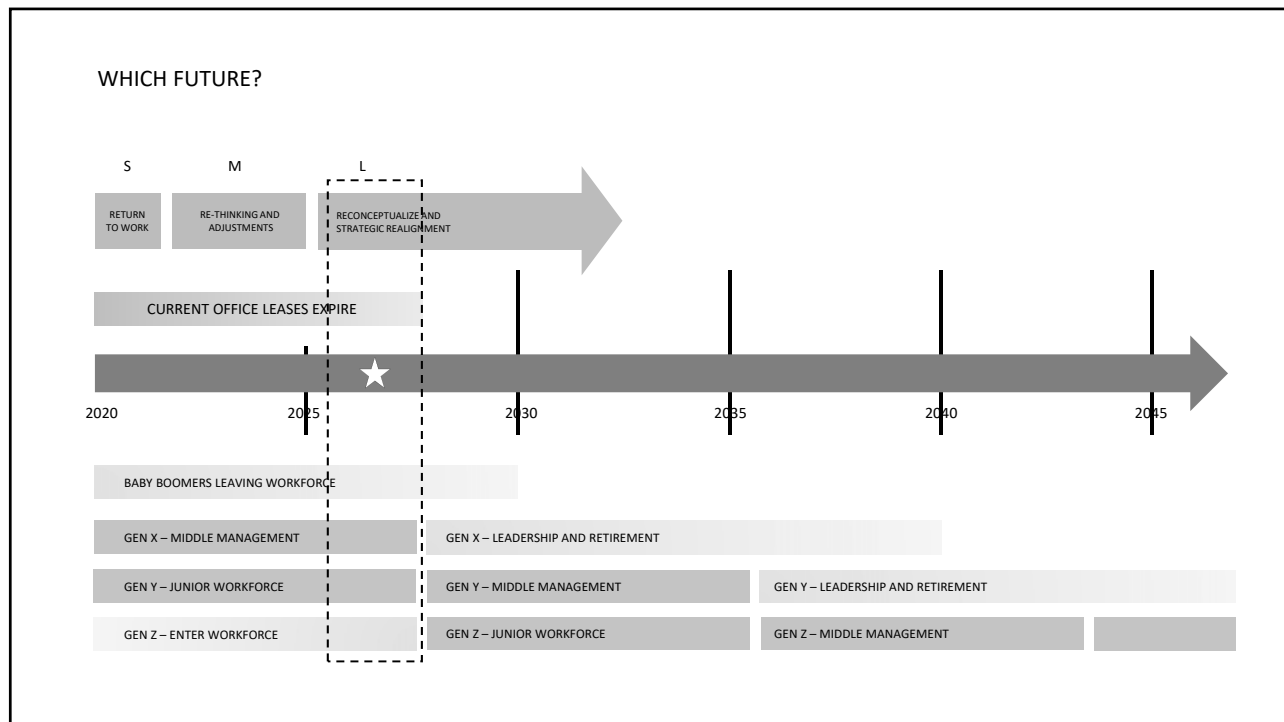
**Navigate policy and legal issues**

**The fine print**

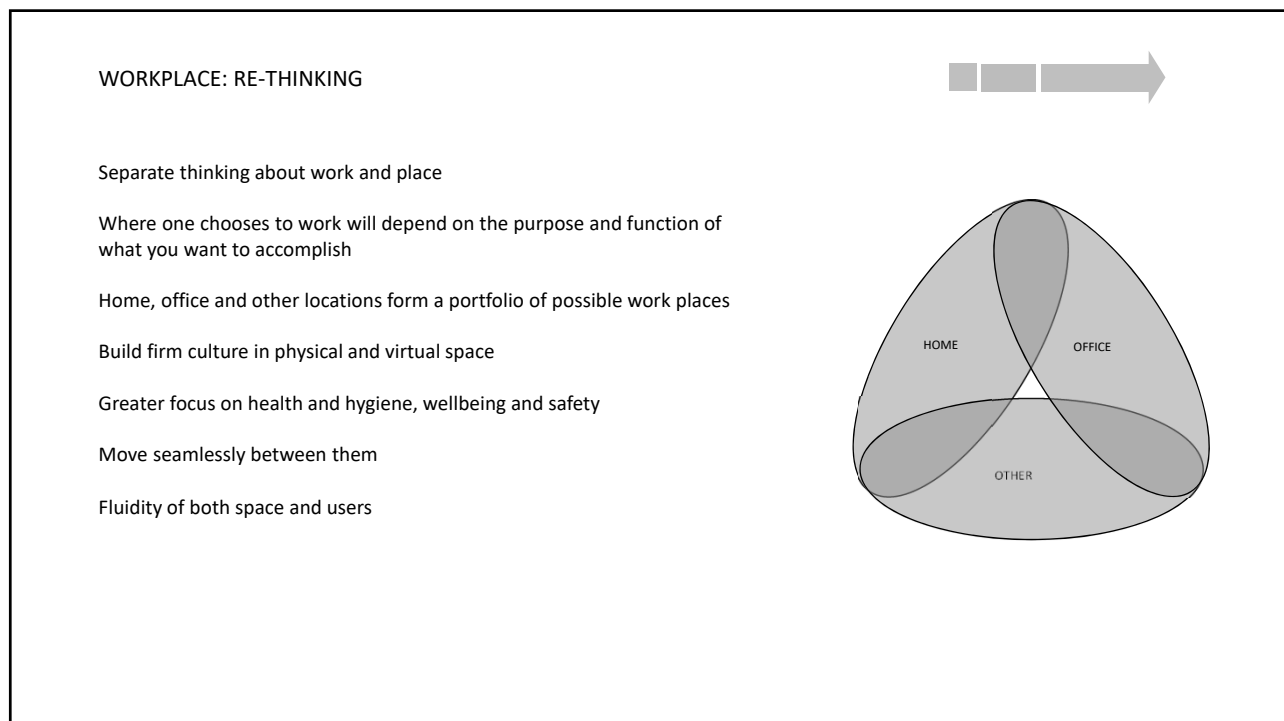
**Keep an open mind!**



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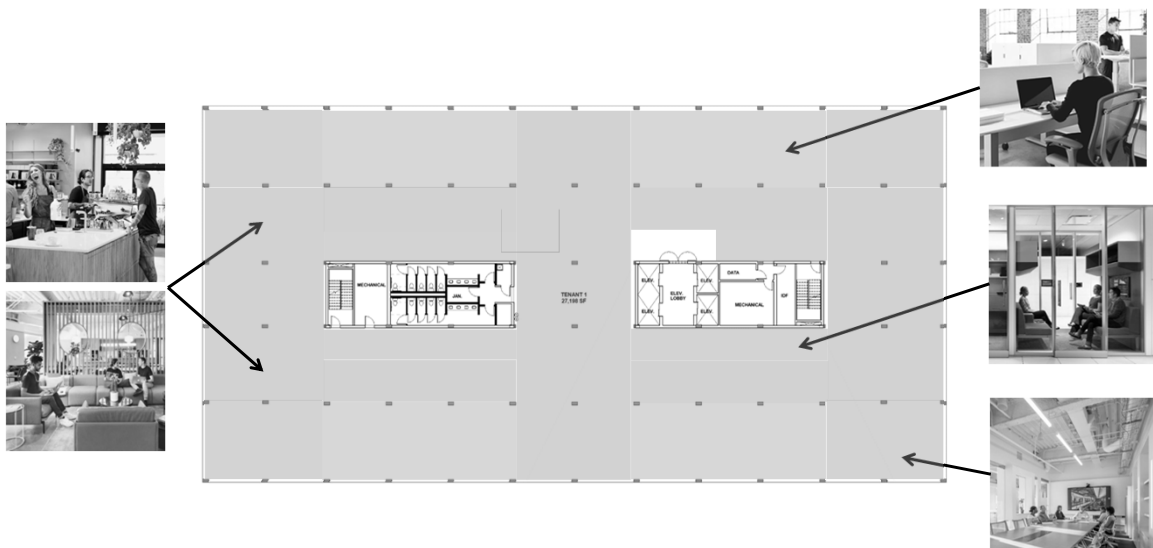
## WORKPLACE: RE-THINKING



ACTIVITIES	OFFICE	HOME	OTHER
FOCUS			
COLLABORATE		m	
SOCIALIZE			
REFRESH			
LEARN			
ACCESS: EQUIPMENT			
ACCESS: LIBRARY		m	m
ACCESS: OUTDOORS			

17

## WORKPLACE: ALLOCATION



Katerra CLT Office Building Prototype Floorplan

18

## WORKPLACE: STRATEGIC REDEFINITION



Decentralize offices to reduce commute times and provide greater access

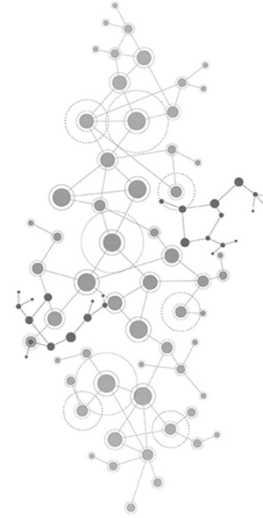
Utilize external facilities and services

Companies will compete for talent through flexibility and job function in addition to cool office space

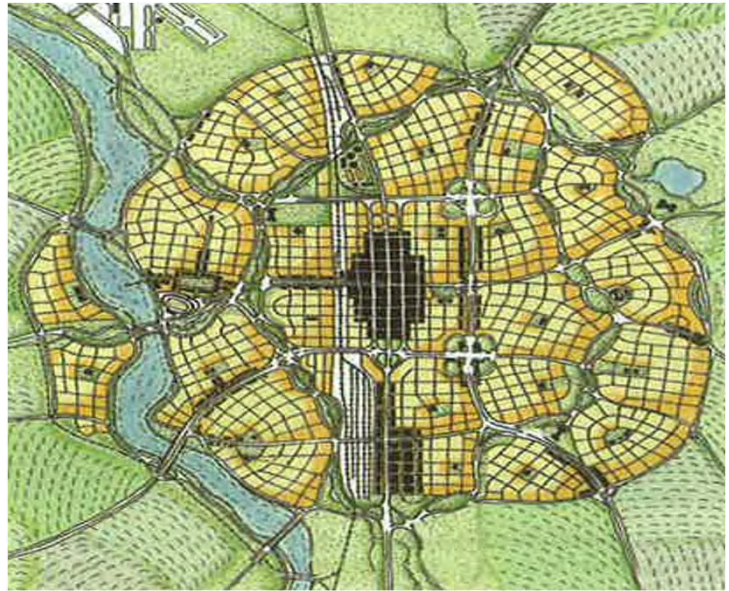
No longer blend commercial and residential design – “resimercial” – differentiate to bring value and meaning to each

Shifts in hiring, team organization, HR policies, compensation structure and benefits will change nature of work

Residential design to accommodate increase in home based work

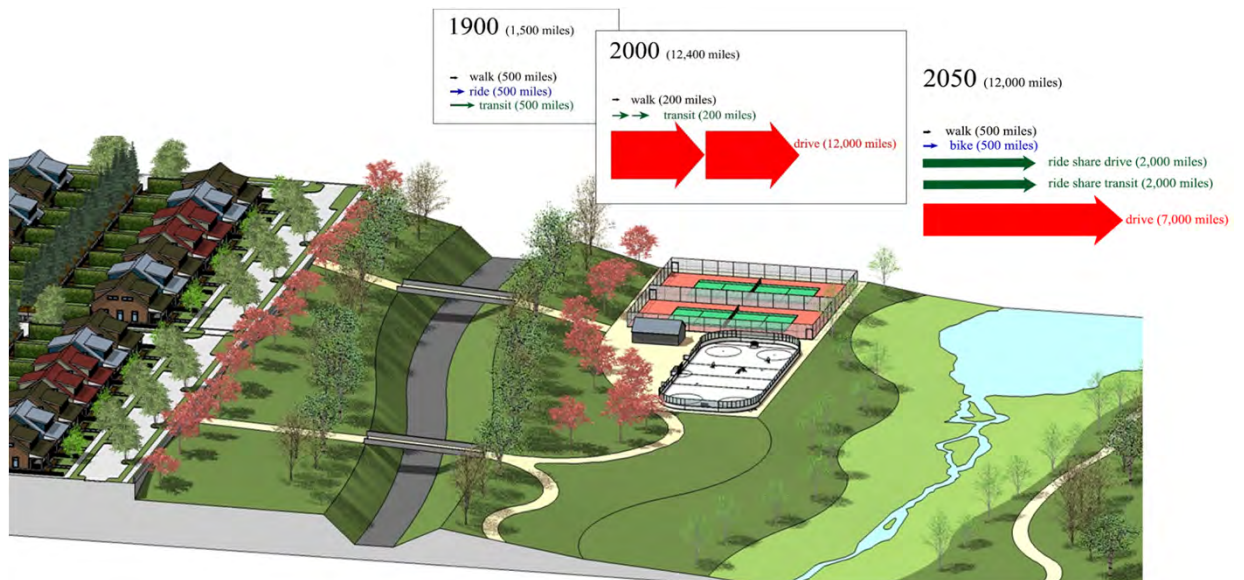


**Green at No Cost  
Integrated Design**



Cellular form in the built environment.

## Macro to Micro – Green Infrastructure Access and Mobility



Green infrastructure includes parks, recreation, water management, light and ultralight transportation, ready access.



## Macro to Micro – Covid Ready Transportation

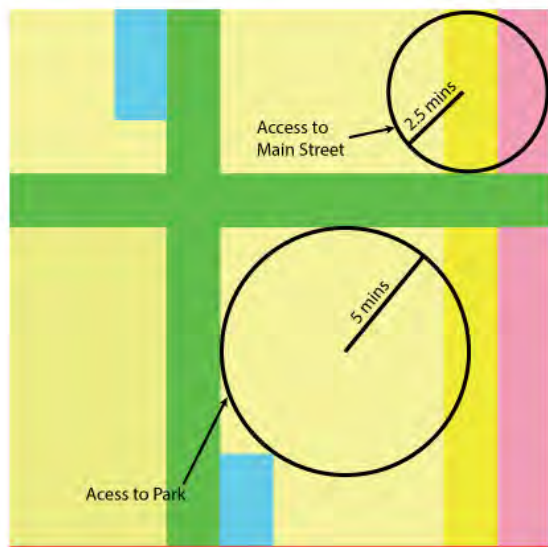


Light, ultralight, and rideshare management.

## Macro to Micro – 19<sup>th</sup> and 21<sup>st</sup> Century Networks

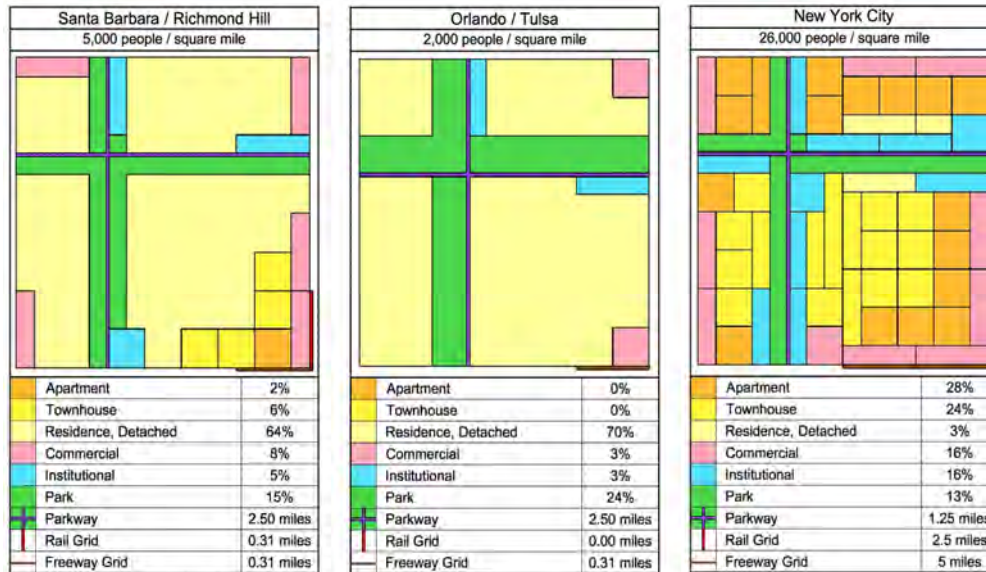


Distributed transportation networks versus radial/central business mass transit.



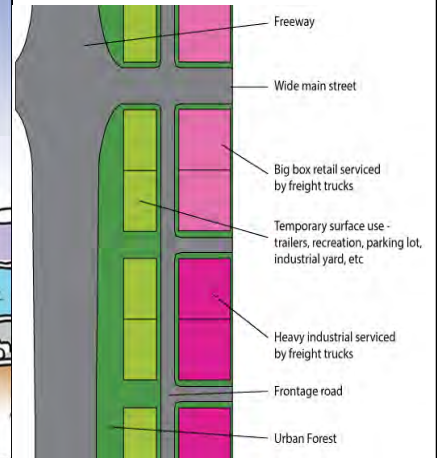
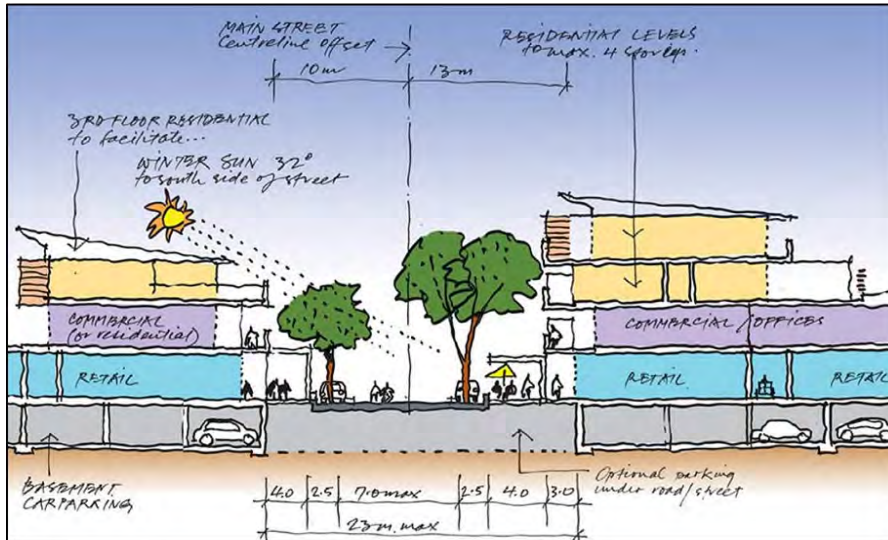
Pre COVID paradigms idealized high density central cores removed from green spaces.

## Macro to Micro – Planning Framework Adaptability



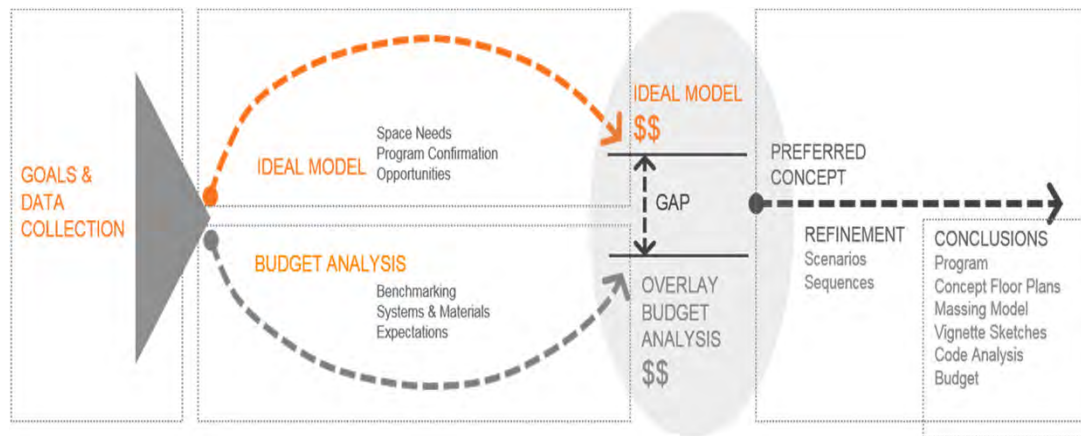
Low cost/high efficiency built environment.

## Macro to Micro – Live Work Mixed Use



Decentralized work environments align along traditional mixed use main street networks and freight/intercity freeway networks.

## Macro to Micro – Cost Models and Integrated Design



Cost models iterate variety of concept plans that work toward preferred solutions.



## Macro to Micro – Mission Vision Values

### Five Steps Total Benefit Analysis

#### % - Benefit

- 0% - Externalized Cost Capture
- 0% - Improved Access Park/Institutional
- 0% - Improved Privacy
- 0% - Natural and Human Diversity
- 0% - Recyclable/Renewable Energy/Materials
- 0% - Improved Access to Employment, Shopping, Social
- 0% - Greater Choice & Speed of Mobility
- 0% - Reduced Land Cost
- 0% - Reduced Tax, Regulations, Subsidies

#### 0% Total Benefit per Step

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#### 0% TOTAL COMPOUNDED BENEFIT

Green Infrastructure  
Access Ability  
Macro Mobility  
Right Size Building  
Sprawl On


Integrated design sets major parameters and measures benefits and savings for ecology, wellness, and economy.

## Macro to Micro – Work and Work Travel Post COVID?

- Work from home increases 1 day per week globally
- Work from home increases 2 days per week for workers in central business districts
- Office space shrinks 25% globally due to hoteling
- Rush hours distribute across 7 to 7 spectrum for central business districts
- Offices become poly nuclear 20% utilizing share space
- Intercity business travel decreases 20%
- Interstate business travel decreases 30%
- Home delivery increases 25%
- Pre-order and pickup increases 25%
- Mass transit funding collapses
- Rideshare shifts to trusted networks
- Mass gatherings become segmented

The data collection phase over the medium term establishes space needs, program, and opportunities.





Macro to Micro -