# WORK OF THE FUTURE:

## Land use planning in a post-pandemic world

By Eric Aderneck

**Summary**

Employment, economic, and transportation matters are interconnected and reciprocally influence land use planning. The preceding two decades have seen many different changes on these fronts, with some trends accelerated and others reversed by the COVID-19 pandemic over the past two years.

Cities have great concentrations of people living, working, and moving within close proximity. Yet, during the pandemic, the very features that make cities vibrant and desirable can also increase risks of contagion, leading some residents to avoid urban areas. This article examines how the impact of these shocks and stresses may play out for land use planning and city development.

**Sommaire**

Les questions liées à l'emploi, à l'économie et aux transports sont interconnectées et influencent réciproquement l'aménagement du territoire. Les deux dernières décennies ont été marquées par de nombreux changements sur ces fronts, certaines tendances ayant été accélérées et d'autres, inversées par la pandémie de COVID-19 au cours des deux dernières années.

Les villes présentent de grandes concentrations de personnes qui vivent, travaillent et se déplacent à proximité les unes des autres. Pourtant, pendant la pandémie, les caractéristiques mêmes qui rendent les villes dynamiques et désirables peuvent également augmenter les risques de contagion, ce qui conduit certains habitants à éviter les zones urbaines. Cet article examine comment l'impact de ces chocs et de ce stress peut se répercuter sur l'aménagement du territoire et le développement des villes.

## Trends/impacts

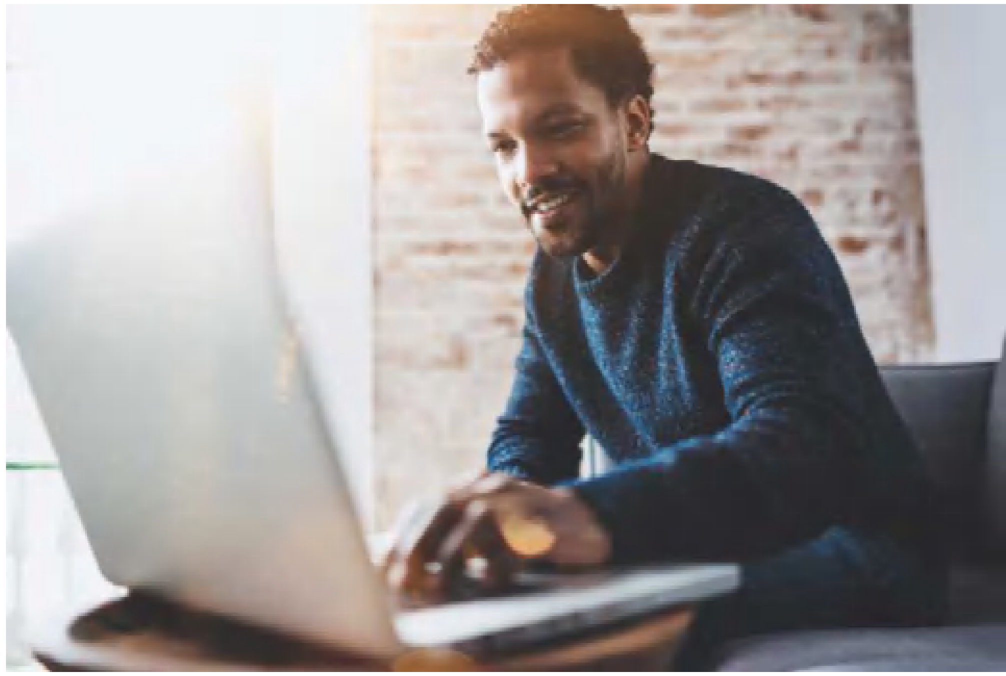
Earlier trends towards more experiential retail categories, including through revitalized commercial spaces, were suddenly disrupted and reassessed with the outbreak of COVID-19. Yet consumers still want to buy, driving a rapid acceleration in online sales and e-commerce distribution. The new trend from services to goods is driving a decline in retail traffic and a need for more industrial floorspace, with associated implications for workers.

In some sectors, working from home is not possible, such as 'blue collar' manufacturing and other industries that require physical presence. Furthermore, with the disruption to supply chains, we are seeing a shift from just-in-time to just-in-case inventory and from off-shoring to re-shoring production, plus rapid growth of e-commerce.

This has resulted in extremely strong demand for industrial space. In land-constrained regions like Metro Vancouver, industrial developers are increasingly designing buildings to be more efficient, including the creation of multi-level structures, some with employment space on upper floors, that can significantly increase the floor area ratio.

Meanwhile, 'white collar' office jobs have gone home. The pre-COVID-19 trend saw an ever-increasing density of employees in office space, down from 250+ sq ft per employee to 150 sq ft or less, depending on the sector. As noted by commercial real estate specialists, that trend was driven in large part by the need to manage real estate footprint costs, and the desire to create more efficient office designs, such as open concepts. This meant the presence of more employees in a given amount of floor area, increasing the demand on building facilities (i.e., washrooms, elevators, amenities, etc.) and the need to reconsider how parking provisions are calculated. With COVID-19, people quickly learned to work from home, video-conferencing software replacing commuting time, and kitchen-table desks (possibly shared with their children's homework) replacing corporate boardrooms.

This may be the materialization of predictions by past futurists, who foretold of widespread tele-working and paperless offices (along with reduced work hours and a growing leisure economy). But visions of flying drones and autonomous vehicles may be further off on the horizon. What this means for land use planning is the matter at hand.



## Contemplating trends that are still evolving

The following are some questions and thoughts exploring which reactions to COVID-19 may be temporary shifts in response to a crisis and which will be permanent, transformative changes (or some degree in between) by sector:

- **Retail** – Will existing retail space be vacant for an extended period, and new mixed-use developments adjust the amount and design of the commercial components? Will consumers flock back to the mall for shops and services (with a focus on health and well-being) that cannot be substituted by online experiences and delivery of goods, or turn online shopping into a permanent arrangement?
- **Industrial** – How will developers and tenants respond to a limited supply of industrial land and strong demand for industrial space, particularly for e-commerce distribution? Will this accelerate the trend of industrial densification in urban locations, with needed adjustments in business operations to adjust to multi-level buildings and freight elevators?
- **Office** – Will we be back to the full office soon like some commercial landlords hope? Or will we continue to work from home for at least part of the week, using a 'hotel' desk, with associated reductions in office space and commute times?
- **Residential** – Will 'les travailleurs à domicile' who want more space as their home becomes their office, and as their office becomes their home, seek larger housing units? Will housing demand shift from apartments in the city centre to houses in the suburbs?
- **Travel** – Will people shun public transit and crowds for fear of communicable diseases, replaced with staying at home, driving cars, biking, and walking? Does that mean the need for more infrastructure in the form of sidewalks and bike lanes rather than buses and trains, and more truck routes for goods movement and curbside facilities for e-commerce deliveries, with offsetting congestion and environmental impacts?
- **Community** – Will spending more time close to home give residents a better appreciation of their local amenities, furthering the well-reported concept of 15-minute neighbourhoods? Does that mean more demand for local shops, sidewalk patios, outdoor activities, urban parks, and lower demand for

large assembly venues and tourism-related facilities?

- **Technology** – With a worker shortage in some sectors, increasing labour costs, and advancements in technology and artificial intelligence, will there be a further trend towards automation and robotics? What does that mean for business operations, building designs, parking, transportation, skills training, and employment?
- **Jobs** – How will the profile of the economy and work continue to change, including ongoing shifting from traditional industries and jobs to new ones such as the knowledge sectors and related occupations (e.g., digital, media, software, design, life sciences, green tech)? How will this impact the number and type of jobs, the associated needed workspaces, built forms, location of businesses, transportation patterns, and compatibility of land uses?

### Possible responses to these trends

We arrive at possible answers and ideas, some which may include certain unknowns. The scale and durability of these impacts require appropriate consideration of context and nuance. Some implications from the 'great experiment' will be fleeting, while others will provide lasting lessons for city-building.

Given the accelerated changes in activities that take place on them, adjustments in land uses should be contemplated. It is important to modernize zoning bylaw provisions, remembering that zoning was initially created to separate conflicting land uses (industrial and residential). With people now working at home / living at work, and changes in the impacts of businesses and the preferences of residents, there may be opportunities to mix or combine some new uses in different ways, while still separating and protecting traditional uses.

In terms of transportation, with the decline of transit ridership, efforts should encourage a shift in mode share away from cars and towards biking and walking. Yet there is also space needed for goods movement, given the growing e-commerce delivery system.

For the growing creative economy sector, while remote working and online connecting reduces commute times, it creates a disconnect in terms of collaboration, problem solving, and social interaction. Meanwhile, some industrial tasks are becoming more automated, requiring fewer workers. On the other hand, online sales are no substitute for in-person services and bricks-and-mortar shopping experiences.

The workplace of the future, considering both the type of work and how and where it's done, needs to be safe and desirable in order to retain and attract employees, leveraging the advantages of modern technology while recognizing the value of traditional physical and psychological separation of work and home. The ability to work anywhere or anytime should not become a requisite to work everywhere and all the time – progress is a hybrid of the best rather than a Chimera of the worst.

### Conclusion

While forecasts have a tendency to be inaccurate, especially during times of turmoil, it is still possible to provide some advice for planners. Despite the shock of COVID-19 and the resulting stress to the workplace, the fundamental principles and objectives of good land use planning are still sound. Nonetheless, how they are applied will evolve. We still want to build complete communities, with an appropriate mix for compatible uses (while directing incompatible uses to other areas), a variety of spaces for working and for living, an efficient transportation system, and a responsive labour market that is prepared for the work of the future.

The work of planners continues.

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