Research Report

# UBC Real Estate Club

## Mid-Year 2021 Market Trends

*Educating, Inspiring, and Connecting students to the real estate industry of Vancouver*

# Real Estate Market Trends and Outlook

## I. THE FUTURE OF OFFICE

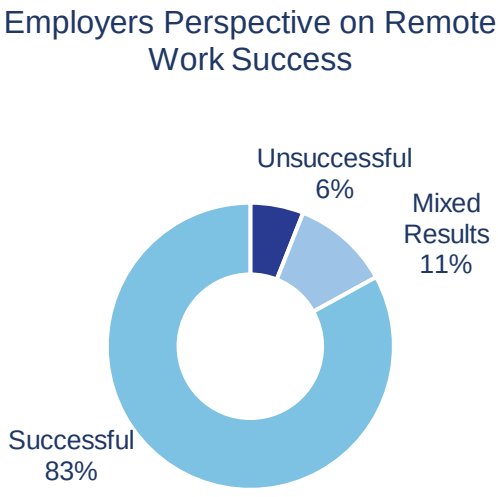
### *The Traditional Role of the Office*

We have historically viewed the office as a critical place for productivity, culture, and talent acquisition. Employers preferred this arrangement as it facilitated the quick exchange of information and ideas between teams and departments while allowing management to monitor employee productivity throughout the day. Employees benefit as well; the office space allows for increased collaboration on critical team projects, increased sense of workplace culture, and building purpose. The latter idea of purpose is essential to *goal contagion* – a phenomenon in which observing the actions of other people, leads one to adopt their same goals. When people feel connected to the overall mission of the organization, it improves overall satisfaction with their work.

### *The Pandemic*

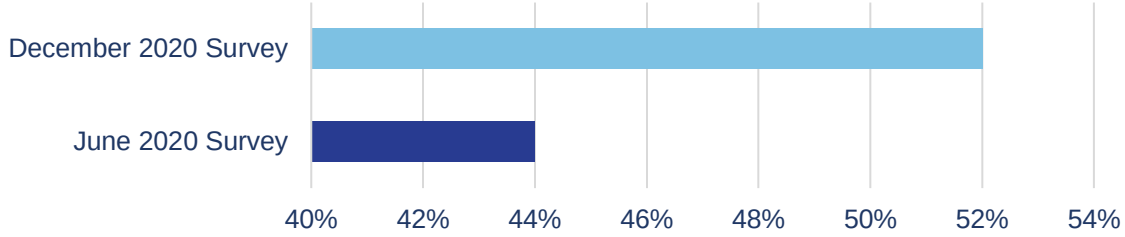
Before COVID-19, less than 25% of employee's worked from home. As of April 2020, that number has spiked to 62%. Remote-work-hesitant-executives were forced to adopt work-from-home practices that accelerated the adoption of a fully virtual platform for employees to perform their every-day tasks. Despite the initial investment required of a virtual work environment, the costs of developing a structure for employees to work remotely and the costs of adopting the technology into the company, have already been paid.

Through their two-year work-from-home experience, executives and employees alike, now see the benefits of remote work. According to a market survey as of January 2021, 83% of employers have positive attitudes towards remote work (up 10% from 73% in June 2020), and 52% say that a prolonged work-from-home period improved productivity (up from 44% in June 2020). Although the work-from-home period has been successful in increasing productivity, company leaders firmly believe that office space is necessary. More than 65% of executives believe the office is critical in improving employee productivity, employee collaboration and enabling company culture. Employees will need to compromise with employers to negotiate allocated work-from-home time.



Finding a universally agreed upon allocation for remote versus in-person days per week will be difficult because of the nature of different jobs. For example, it makes sense for employees working in the technology industry to find remote work more productive as you can finish all your work-from-home and save time on commuting. However, for industries that are client facing such as consulting, hospitality and retail, work-from-home is not an option. The survey reflects our findings as there is no consensus for the optimal balance of workdays in the office. Currently, the most agreed upon statistic is 29% of executives believing that three days in the office is optimal. For these reasons, we expect WFH to be negotiated on a more case-by-case or company policy basis.

Employers Perspective on Employee Productivity Over Time

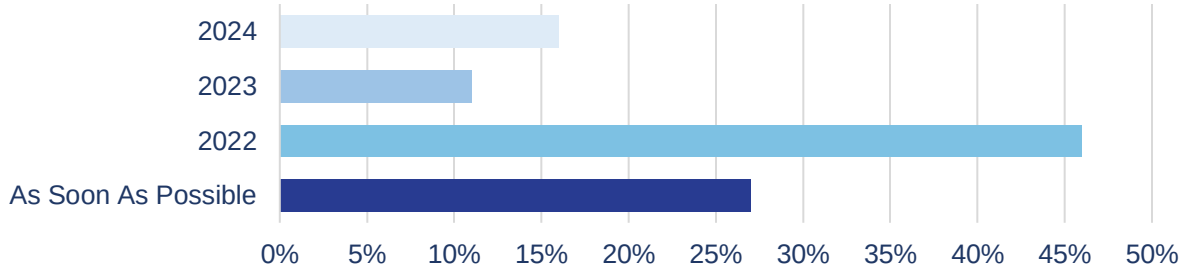



### *Policy Effect on Supply and Demand of Office Space*

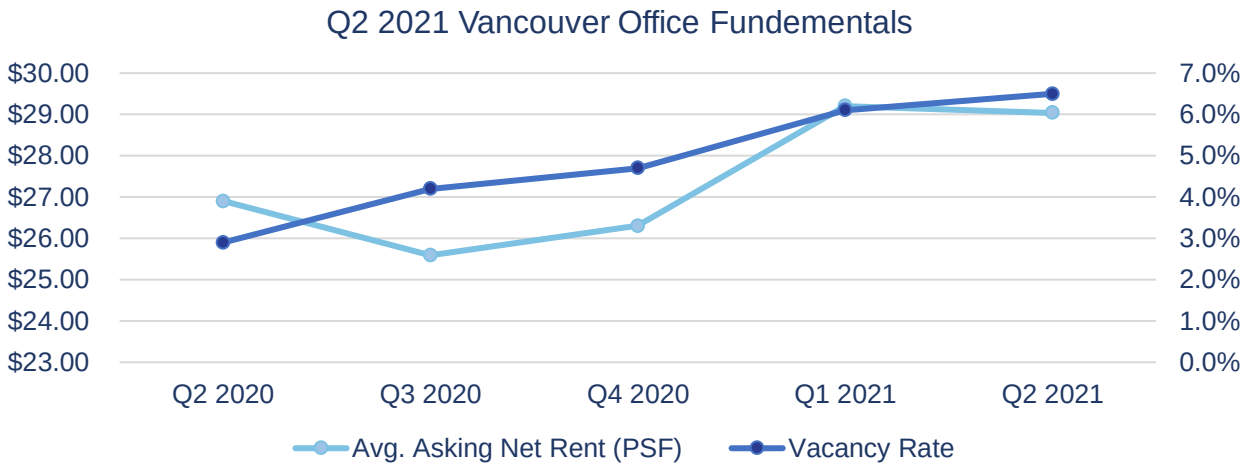
With the COVID-19 pandemic continuing to have an impact on everyday life, there is still much uncertainty with the future of office space. Most organizations have recognized that there is going to be a shift in the way that work is going to get done as we have learnt over the past year and a half that employees can be productive working outside of the office. Despite a more optimistic outlook regarding the need for office space, many organizations are still looking to decrease the amount of space that they are currently leasing. There are many alternatives that will cater to the shifting demands of employees such as:

- Flexible office spaces that are shared by all tenants within the building, consisting of bookable board rooms, co-working spaces, and short-term leases of turnkey space
- Abandoning big city headquarters for suburban campuses and satellite offices
- Permanent remote working

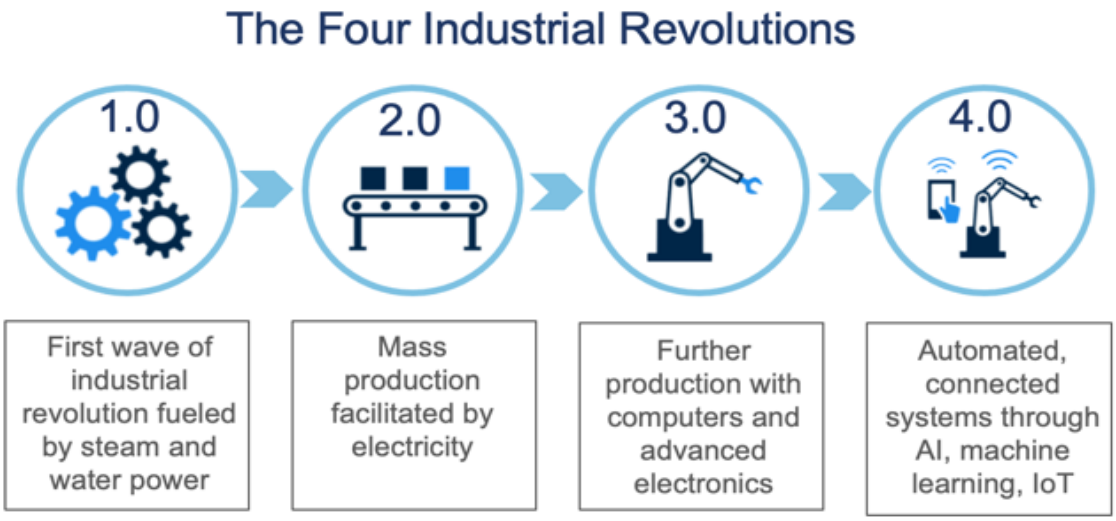
Timeline For Tenants Who Plan to Reduce Office Space



In Q2 2021, The Greater Vancouver Area saw an increase in office vacancy to 6.5%, up 360 basis points from a year ago. However, high-quality office space remains in strong demand as AAA and Class A space sits at 2.0% and 5.7% respectively. Numerous broker reports throughout the past year have shown that office vacancy is set to increase around 5.7% nationally, from current levels, over the next few years. This is also a very conservative estimate as it does not account for new construction or economic growth, and the market may take longer to fully absorb the shock of the changing work environment. Now, as the pandemic prolongs further, there is still lots of uncertainly regarding the general sentiment on office space. But nonetheless, vacancy rates will continue to rise while leases expire, and many companies will be moving out for good.



# II. THE AUTOMATION OF INDUSTRIAL




### *The Four Industrial Revolutions*

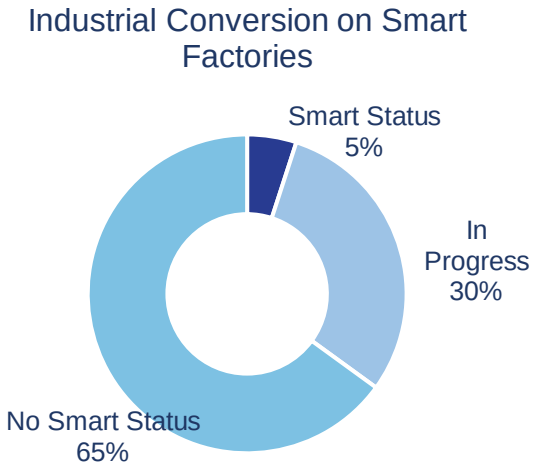
Throughout history, technological and operational advancements have been one of the key mechanisms in shaping the present world. From the invention of paper to the powers of the internet, these discoveries are what make humans an unparalleled species

### *Industry 4.0*

In the 18th century, steam power revolutionized industries to such a great extent that it became known as “Industry 1.0”. The introduction of electrical power and computers followed, leading to “Industry 2.0” and “Industry 3.0” respectively. Today, industries are riding a new wave, “Industry 4.0”, characterized by Robotic Process Automation (RPA) systems, Internet of Things (IoT), machine learning, and other cutting-edge technologies that are starting to turn from concepts into reality. In the pursuit of efficiency and effectiveness, these moving elements work together to create a well-connected system of communication and operations fueled by big data and computing capabilities to help make key decisions.

Smart factories are one of the real-world applications and perhaps the epitome of it. Research consistently demonstrates how “Industry 4.0” is allowing manufacturers to maximize production, quality, and safety while minimizing cost and waste. For example, autonomous processes allow for the elimination of human errors, connectivity in systems promote inventory efficiency, and sophisticated sensors help optimize quality control. A 2020 market report found that 86% of manufacturers believe that smart factories will be the main driver for industrial real estate competition by 2025. This means that although real world applications have shown great potential, there are still barriers to overcome

## *Current Implication of Industrial*




## *Automation*

Accelerated e-commerce adoption and higher inventory levels have the potential to generate 400 million SF of logistics real estate demand each year. Fortunately, real estate is no exception to the adoption of inter-connectivity and new age technology. Real estate's adoption of AI and robotics is essential in meeting the needs of the modern-day consumer. New smart industrial buildings will be constructed to meet the needs of the consumer, while older buildings may require retrofitting solutions to improve their efficiency.

The increase of e-commerce, accelerated by COVID-19, has pushed the average consumer to expect deliveries within 4.5 days in 2021, compared to 5.5 days in 2012. Thus, highlighting the importance of industrial productivity. Higher output and increased productivity have been two of the biggest reasons for justifying the use of automation. The range of automated technologies are improving throughput at distribution and fulfillment centers and increasing their potential value. Automated storage and retrieval systems (ASRS) are increasingly common, and they can be tailored to fit in both large and small buildings. These automation technologies can help industrial tenants store, retrieve, pick-and-pack goods at a faster pace, while utilizing vertical space more efficiently.

Automation lifts the investment performance of logistics assets: automation leads to increased investment within facilities, which in turn incentivizes customers to sign longer leases. The top energy users – which are largely automation adopters – sign leases that are on average more than 50% longer than the average logistics occupier.

## *Risks and Barriers*

### *Displacement of Workers:*

One of the major risks, despite the overall benefits achieved from automation, is displacement of workers from their jobs. In many cases, the worker whose job has been taken over by a machine undergoes a period of emotional stress. In addition to displacement from work, the worker may be displaced geographically. In such situations, workers would be discouraged to adapt to increased automation due to the risk of them losing their jobs which would create a significant barrier while entering the industry. Furthermore, skilled labor to operate automation technologies are currently in short supply and will be needed to keep automation equipment operational.

### *High Capital Expenditure:*

*Automation* equipment comes with promised benefits as well as increased costs. To adapt, companies must budget accordingly to make room for the high capital expenditure

required. An automated system can cost millions of dollars to design, fabricate, install, and maintain. Additionally, a higher level of maintenance is needed relative to a manually operated machine. In addition to the high capital expenditures associated with automation, the surge of interest in automation technologies has led to long wait lists and substantial lead times.

***Automation Increases the Revenue Generating Potential of Logistics Space****:*

*According* to research conducted by Prologis sensitivity model, automation's impact on productivity can lead to slower growth in real estate demand per year. Greater productivity can help offset a lack of available space, most notably in infill locations with vacancy rates of less than 1%. Significant investments from both tenants and landlords for fixed automation are likely to translate to higher retention rates. Additionally, increased site productivity ensures that tenants are less likely to relocate to accommodate for growth.

A variety of new automated technologies are significantly changing the output at distribution centers and increasing the value, such as the Automated and Storage Retrieval Systems (ASRS) which assist in making monotonous activities more efficient as well as faster which makes these systems cost effective. Such automation systems would provide workers to focus on creative problem solving and other tasks which cannot be easily automated rather than the belief that the human workforce would be completely replaced by technology.

These innovative technologies and building concepts are only a few years away from being adopted – and the impact will send shockwaves throughout the industrial asset class. Undoubtedly, technological advancements and increased demand for automated distribution centers will change how developers, investors, architects, and engineers approach industrial real estate.