

OFFICE SPACE EVOLUTION: FROM HISTORICAL TO COWORKING

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Abstract— This research study examines the development of office spaces from ancient Roman culture to the contemporary working environment for millennials. Working environments are influenced by people's sociocultural and technological advancements over time, either directly or indirectly. Technology is essential to the development of workplace environments. Major historical events like World War II also influence the pattern shift in office layouts. Modern materials are produced as a result of industrialization, which directly influences office layouts.

Keywords—Office space, Coworking area, layouts, Hybrid work models.

I. INTRODUCTION

Work has always been a significant factor in how a social structure is defined for any particular era in human history. It has been suggested that our fundamental identity as people is formed by our job. It is important for us to examine each era because it is oddly connected to a certain economic activity that had an impact on how people organised their activities like education, production, etc., and it also has an impact on the built environment. The Information Age encompasses us. Today, the majority of our effort is focused on producing knowledge and figuring out effective ways to transfer it and share it. Our contemporary one, which is fueled by the development of the internet and a global capitalist economy, is the environment of limitless connections where the majority of agents communicate and relate to one another on an endless network. The results of this study demonstrate how, over time, technological advancement and changes in the workplace coexist.

II. HISTORY OF WORKING SPACE

A. Roman office spaces

Roman Latin's officium is a phrase that loosely translates to "bureau," "human staff," or "formal position." The phrase "The Office of the Prime Minister," for instance, refers to the individuals working there rather than any particular location or structure. As evidenced by the Pantheon in Rome's contemporary business centre, the Romans had a special talent for solely employing time-tested architectural approaches that encouraged structure and order for dealing with central governmental operations. The first purpose-built office structure was The Old Admiralty (Ripley Building), which was constructed in 1726. Throughout the 1770s, many of the Royal Navy's minor offices were merged into Somerset House, which was the first purpose-built office block. innovations, like 4D

visuals. Due to all of this, virtual reality is now a tool for connecting individuals from various locations and is not only a science fiction idea where one may get lost in a magical world.

B. The Taylorist Office

The Taylorist office aimed to greatly increase productivity in industries that weren't necessary dependent on manufacturing or physical labour. The Taylorist office, created by Frederick Winslow Taylor, the father of scientific management and a supporter of the Efficiency Movement, attempted to replicate the factory assembly line of the time by assigning simple, repetitive manual tasks to clerks, executives and associates of law and accounting firms, insurance companies and governmental agencies in order to maintain a constant workflow. Other aspects of the Taylorist office layout included increasing the number of desks and employees per space and making it simpler for managers and supervisors to inspect employees. Senior managers still had their own offices, of course.

C. The Taylorist Office

During the first 30 years of the 20th century, several European nations witnessed a growth in tiny skyscrapers and Taylorist offices that echoed the skyscrapers of Chicago and New York. Concrete office buildings with continuous ribbon windows above head height were created by architects like Mies van der Rohe to let in light but prevent employees from seeing out from their desks. There are numerous examples of unbuilt projects, however they lacked financial support at the time due to the depression brought on by the 1929 Wall Street Crash and the common wartime economics.

D. Open plan office

Construction technology continued to progress as the 1950s got under way, thanks to the use of contemporary materials like steel and glass. The international modern movement's slick, clinical architecture was accepted as the new emblem of corporate commerce. The widespread use of more modern air conditioning systems and fluorescent lighting meant that these new high-rise structures seldom ever needed to be ventilated by opening windows or exposed to natural light. With these technical advancements, the corporate office became totally isolated from the outside world in the 1950s. It also made it possible for floors to be broader and more open, allowing for the placement of employees almost everywhere. This recipe became popular all over the world.

E. The cubicle farm

The cubicle farm is an example of 1960s' Action Office carried to its most apocalyptic extreme. It developed as a result of the fact that human resources departments, supervisors, senior managers, and directors were more concerned with their company's profitability than with the welfare of their employees. The cubicle farm is a historical lesson that further demonstrates how any excellent idea may be tainted by someone who cares more about efficiency or economics than they do about people. It demonstrated that most corporations were not interested in providing their employees with independent work environments. Instead, Action Office II and its several duplicates were utilised to squeeze as many people as possible into as little space as fast and inexpensively as possible. Materials like glass and steel. The international modern movement's slick, clinical architecture was accepted as the new emblem of corporate commerce. The widespread use of more modern air conditioning systems and fluorescent lighting meant that these new high-rise structures seldom ever needed to be ventilated by opening windows or exposed to natural light. With these technical advancements, the corporate office became totally isolated from the outside world in the 1950s. It also made it possible for floors to be broader and more open, allowing for the placement of employees almost everywhere. This recipe became popular all over the world.

F. Activity based working

The one-size-fits-all idea that all staff members may work in fundamentally different ways, on entirely separate tasks, in the same place is one of the primary complaints of the outdated open plan office designs, whether they be Taylorist or informal. While this promotes cooperation and openness, it also causes unneeded stress for people who want seclusion, specially designed specialised equipment, or simply a quiet place to ponder. Without having to worry about congestion or disturbances from one working style to another, collaborative, innovative, and mobile projects may be completed in modern, responsive environments that are open yet separate. According to the activity-based working paradigm, employees can select from a variety of logistically distinct workplaces to best fit their unique needs.

G. Workspace 3.0

The big home-working experiment has produced results. Working 3.0. The office of the future will need fewer workstations and more flexible work environments if individuals can work efficiently from home. The workplace is viewed as a destination, a collaborative, interactive, and sociable centre that draws influence from hotel lobbies and other hospitality facilities yet has designated area for quiet, focused work. This is activity-based working at its best. Depending on the tasks they need to do, people decide whether to work from home or in a certain area of the office. People's choice of technology is also flexible when given the freedom to pick where they work. Bring your own device (BYOD) is a well-known phenomena that is supported by Choose Your Own Device (CYOD), in which a company offers numerous pre-approved options so that staff members

may select the best laptop, smartphone, or tablet. On the one hand, it gives workers of all levels some control over the technology they use, some personalization, a better work-life balance, and the resulting higher workplace wellness and productivity.

their own workstation, open conference areas with whiteboards, IT suites, or casual places with coffee and snacks, depending on their specific needs at the moment. glass and steel. The international modern movement's slick, clinical architecture was accepted as the new emblem of corporate commerce. These new high-rise structures had less need for natural light or ventilation because of the widespread use of more sophisticated air conditioning and fluorescent lighting.

III. HYBRID WORK MODEL

A. Hot desk

A hot desk is a type of organisational workplace where workstations are utilised on an as-needed basis by various users at various times. Usually, the goal is to reduce the amount of space needed for real estate and to maximise space efficiency. Assigned seats have been noted to be abandoned by several organisations in recent years in order to provide workers greater autonomy and maximise available space. It has been noted that many businesses have plans in place to provide some amount of unassigned seating in their workplaces.

B. Hub and Spoke

The hub-and-spoke structure allows for a central "hub" where people may congregate while simultaneously giving them the option to operate from remote "spokes." Any location where a person may be productive, not just a traditional workplace, can be a spoke. A coffee shop or a satellite office may fall under this category. Because employees may travel to an office closer to their home if they wish to work from an office setup, this gives them more freedom. Additionally, it provides businesses access to a larger talent pool, enabling them to enter previously untapped areas. A hot desk is a sort of workplace where workstations are used as needed by different users at different times. Typically, the aim is to lessen the space required to maximise space efficiency and use real estate. In an effort to give employees more autonomy and make the most of the space at their disposal, numerous businesses have been noticed to have discontinued assigning seats in recent years. Many companies have plans in place to offer some unassigned seats in their offices, it has been observed.

C. Co-working spaces

Shared resources including tools, services, and facilities define coworking spaces. The expense of maintaining an office may be divided among members by sharing infrastructure, but coworking spaces provide more benefits than just cost savings. Workers from various backgrounds might gather in community centres, hubs for cooperation, and social places called coworking spaces to exchange knowledge and consider novel concepts. Larger businesses are now using coworking spaces as a method to reduce their idle office space, relocate

from their conventional headquarters, and adopt a more flexible working style.

IV. HYBRID WORK MODEL OFFICE

A. Microsoft

Microsoft, a major player in technology, has already determined that more people will work from home during a pandemic. Microsoft has said that when the epidemic is over, "most positions will stay distant less than 50% of the time with manager consent... According to The Verge, employees who want to work from home permanently would have access to flexible "touchdown space" at Microsoft's headquarters rather than allotted office space.

B. Intel

Sandra Rivera, Executive VP and Chief People Officer for Intel Corporation, said in a recent article for People Matters that "our top priority remains the same: protecting the health and well-being of employees while keeping the business operating to deliver for our customers. We have had to be nimble and adjust to the unprecedented nature of the pandemic. According to Rivera, the COVID-19 epidemic has accelerated the demand for businesses to be more adaptable and provide hybrid work solutions. According to her, the safety and wellbeing of our personnel are our top priorities.

C. Google

Between May and July, the proportion of workers who claimed they would never need to come back to the office in order to accomplish their jobs successfully decreased by half, from 20% to 10%. Sundar Pichai, CEO of Google, is further quoted in the Silicon Valley Business Journal story as adding, "I see the future as undoubtedly being more flexible. When it comes to solving difficult issues or creating something new, we genuinely think that coming together in person and feeling a sense of community is crucial, Pichai told TIME. We don't anticipate that changing, therefore we don't believe that the future is completely improbable or anything.

D. Molzi

Employees will be encouraged by Molzi to participate in socially remote meetings and teamwork "if they feel comfortable" and when legal restrictions permit. The office will operate similarly to a WeWork-style communal workplace, where "teams can organise their in-office days within their business units, and also continue to enjoy part-time remote working," according to Molzi CEO Chris Mole. Close offices are resurfacing as a result of vaccinations, but having one no longer requires everyone to spend all of their time there.

E. Facebook

Facebook stated many of its employees will use a "hybrid" style of remote and in-person office work, going in for onsite trainings, important meetings, and culture-building onsite events, according to a report in VOX. Why does this matter?

According to Zuckerberg, Facebook will recruit more remote workers. He continues by saying that switching to hybrid work is not being done to save costs. According to the VOX report, Zuckerberg added, "It's really unknown what the economics of this will look like, or how much this is going to cost." "I don't think that's the main reason why this should be done," the speaker said. "It's possible that if this is done efficiently, it may be possible to save some capital."

V. CONCLUSION

The evolution of various conventions is directly tied to the dynamism of the work patterns that are now being used. The changes we are presently seeing in the nature of labour are at least as significant, far-reaching, and permanent as the effects of the Industrial Revolution had on the Industrial Society, the Industrial landscape, and the Industrial economy two centuries ago. The evolution of various conventions is directly tied to the dynamism of the work patterns that are now being used. The changes in the nature of labour that we are presently witnessing are at least as sweeping, profound, and permanent as the effects of the Industrial Revolution on the Industrial Society, the Industrial Economy, and the Industrial Environment two centuries ago. Millennials live and work in a different environment appropriate for the working patterns of millennials. Therefore, by taking these factors into account, the design may meet the needs of coming generations of millennials. from the previous lifestyle and working habits; pandemic work-from-home techniques have changed how individuals work, requiring a shift in the environment and design of the office. Because people may work from anywhere, flexible working arrangements have taken the role of the traditional office structure. The additional advantage is the ability to stroll to work. Therefore, the new period necessitates modern solutions that are suitable for millennials' working habits. Therefore, by considering these elements, the design may satisfy the requirements of next generations of millennials.

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