



PRESENT



A COVID-19 Virtual Ideation Experience

Team Topic and Number: Autonomous Workplace; Team: Academic

Team sponsor/chapter (if applicable):

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What do we mean by automating the workplace?

Automation in the Workplace, and how the COVID-19 situation will impact the Workplace, can be considered from two interdependent perspectives:

1. Automating Work, and
2. Automating the Built Environment.

The discussion that follows focuses on one asset type, Offices, but can be applied to other assets; and, includes a Global perspective. An overall theme in this new reality is to reset and restate the goal of having or needing an office environment and next, designing solutions from there: in short, re-defining the “why”?

Automating the Work

The trend of automating Office work has been increasing even prior to COVID-19. The general approach included “cheaper, faster, better” from mundane/repetitive tasks, to AI document readers, and up to strategic analysis, across all areas of business. As Real Estate professionals, we see such automation in our own practice in areas of AI Lease Abstraction, big data and visualization in site selection/strategy, and in data collection (enhanced BMS).

Real Estate professionals already have tools available to improve efficiency such as AVM's, lease and contract abstraction, virtual inspections, cost applications (e.g. roof costs from aerials), with the main issue seen as the cost for mainstream implementation.

Forecasts for and the future of automating work include the reality that has quickly accelerated: employees have developed an independent contractor mentality in many ways, and as such desire a strong voice in decision-making on their roles. This effect is also seen in the technology itself, starting with each employee owning a cell phone; to a potentially new trend of an employee providing all their own technology and work environment (home office). As Managers, it will be important to focus on:

- Elevating, educating and repurposing employees displaced by technology into more strategic and value-add roles. Examples include: The office manager in charge of employee distancing, IT departments built into business structure and not outsourced, reduction and restructure of HR departments into remote roles
- Elimination of 5x/week onsite requirements
- Rotation of employees who need to come into the office
- Office design to reduce cross-contamination or physical interaction
- Office cleaning maintenance procedures implemented and communicated to the employees

With these new trends come both benefits and drawbacks to the employer and employees.

Benefits

- Traffic, commute time, flexible work schedules
- Creation of new job sectors (technicians, HR roles focusing on mental health issues)
- Automation of manual work increasing productivity; shorter meeting times, less absenteeism

Drawbacks

- Possible mass-layoffs/eradication of certain sections of work
- Disrupted culture at work
- Harder opportunities for collaboration across teams

Automating the Built Environment

Today, the workplace centers on an open concept design with no thought to separate employees by six feet. Team collaboration is encouraged, and spaces are designed to promote interaction in common areas. Cubicles were eliminated and replaced with open desks to provide a more team focused approach. With statistics stating that we spend 90% in the built environments, office design needed to address daylighting, air quality, biophilic design, thermal comfort and ergonomics to name a few.

Prior to COVID-19, automation was emerging in the built environment. Systems that could automate temperature, air flow and lighting were designed to help the employees with daily tasks and reducing the energy consumption of the building. Technology has streamlined manual tasks and increased productivity and lead times. Tele-conferencing has provided participation in meetings when it was not possible to be physically present.

Forecasts and future of automating the built environment will include analyzing ways to maximize both productivity and employee satisfaction. The building manager (or a position in some similar capacity) will need to promote the measures that are being taken to address the health and wellness of the occupants and communicate them to provide assurances.

The building environment will need to be adjusted due to automation of the Work, then so will the way we interact as a team, department, company. All necessary interactions that must take place in order to complete a task will require procedures to minimize physical contact. Interactions that are required may need to have employee consent to ensure safety. Interactions will need to be meaningful, and in such a way that is efficient and productive as to avoid prolonged exposure. Will virtual meetings still continue even if the employees are in the office due to large numbers in small spaces?

The office organizations may need to be restructured. Teams may be working flexible schedules and the workplace needs to be ready. Teams may work in shifts: one morning and one afternoon with a period in between dedicated to cleaning the area. Work may need to be dispersed to allow more personal space when being in the office is required. Areas may be dedicated to activity-based processes. In essence, the workplace will not be filled to capacity at any one time to prevent the spread of the unseen enemy.

Trends have been heading towards new worksite organization and technology has already played a huge role in automating the way real estate is conducted. Emerging technologies such as Zoom, Docusign, Google Teams, and Dropbox have already been standardized across the industry that many large-scale companies have their own proprietary systems.

These additions to the workforce will require capital expenditures, increased training and an increase to the technology budget to allow for employees to work remotely while not in the office.

A key forecast in office automation is extrapolating the Internet of Things considering the “If this then that” application. Today, IFTTT can link home and personal systems for example, to track your Uber driver, turn on the porch light when it arrives, have your Nest cam notify your Roomba to vacuum after you leave in the Uber. In the office, imagine using real time usage data by employees of conference rooms, restrooms, cafeteria and workspaces: adjusting HVAC and cleaning routines would be simple. The next level would be to integrate HVAC filters to monitor contaminants, employee temperature/health, and adjust social distancing in real time via smartphone notifications.

Further Forecasts and Future of Automating the Built environment include:

- Creating social interactions in a virtual way
- Home office ergonomics concerns and company-provided seating
- Touchless interaction with all fixture, doors
- Transparent data to all employees regarding building safety and sanitation, via BMS sensors and procedure compliance

Potential Barriers

There also exist potential barriers that exist in rural parts of the US and worldwide in particular in lesser developed countries that are not technologically secure or ready to adapt to the new normal. The first issue is cost but an even higher barrier is the ability to lay the infrastructure needed to meet the new demands. Unreliable utility services and internet connections, inadequate space for a home-office, lack of technological options, and the lack of a technologically trained population.

The automation will affect different industries at different levels. The move to the automated home office cannot be the only solution. The production, shipping and distribution channels will need to address these issues using automation. The benefits may be increased production times, refocused and reskilled workforce but the drawbacks will include cost and potential job loss to name a few.

Conclusion

Automating the workplace is to redefine the current system/workflow and to put in place new ideas that address COVID-19 issues from a local, regional, and global perspective. When forecasting we must look at our options in a way that both maximizes productivity and employee satisfaction. We need to ask how this is done concurrently as one is mutually beneficial to the other. In the face of a danger we cannot see, focusing on employee

satisfaction and productivity promotes trust, so it is to the safety of all within an office setting that the ideas for autonomous work should be implemented.

Office space is not going away. Real Estate revolves around the culture of networking, so the idea that “working from home” is the ultimate solution is not a viable one. Office organizations can take ideas from the open workplace, or activity-based flexible offices and create virtual social interactions mimicking the same collaborative methods while also allowing a personally created enclosed space (i.e. where they feel comfortable to work and be safe from the invisible enemy). This most likely will be a new expense for businesses, providing the means for the home office, which will in turn create more incentive to lower turnover rates, create employee satisfaction, and hire “the right person”.