

Pushed Off the Diving Board: Accelerated Tech Adoption in the Golden Age of the Late Adopter

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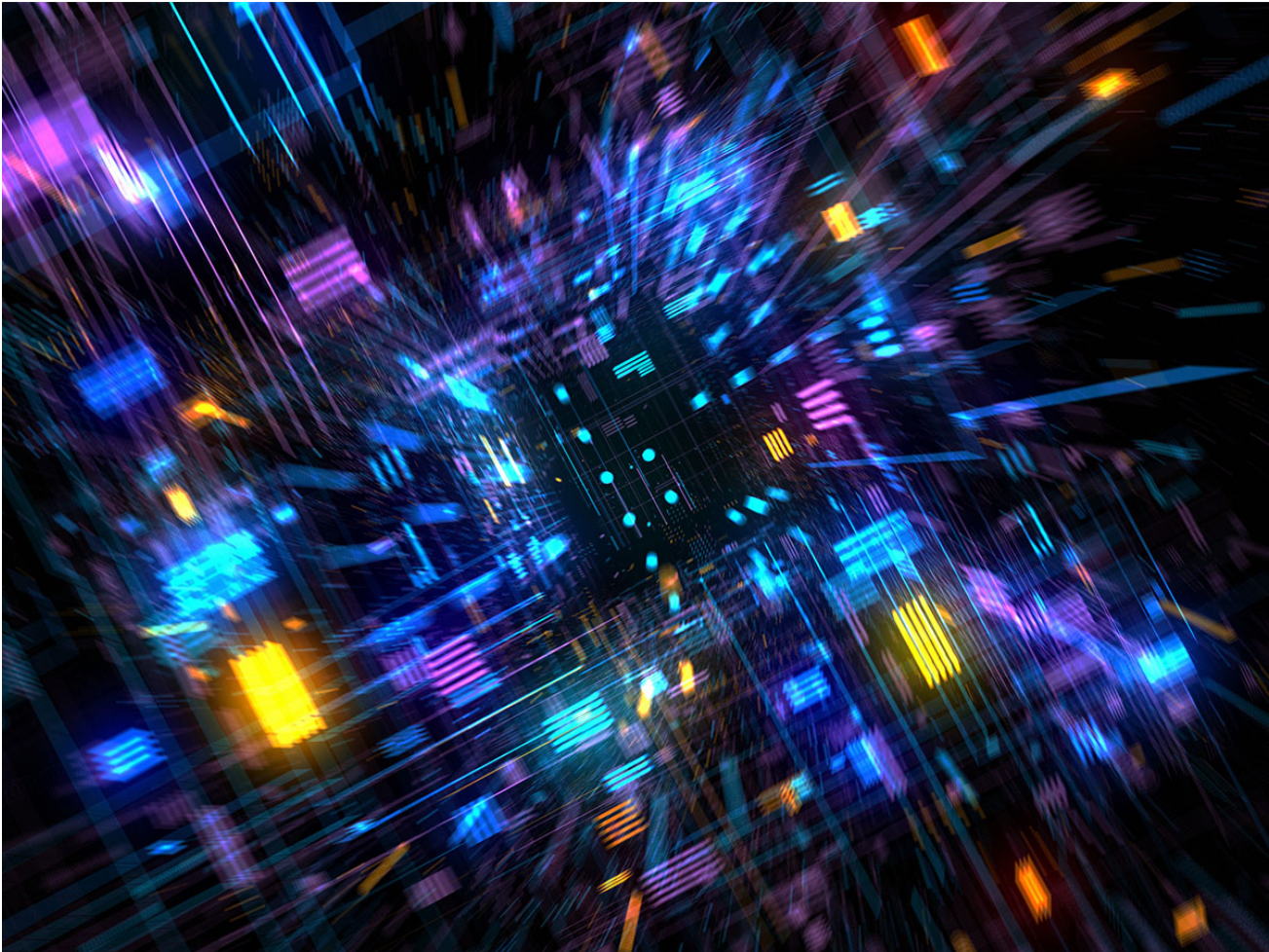


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Technology Acceleration and Innovation was listed as the #2 issue in the [2021-22 Top Ten Issues Affecting Real Estate[®] by The Counselors of Real Estate[®]](#).

Technology once again makes our Top Ten list but under different conditions and with more short-term implications. Constant themes like artificial intelligence (AI), machine learning (ML), the Internet of Things (IoT) and cybersecurity remain part of the landscape. They have moved from “new” to “how we do things now.” This year the news is not about new tech, but about our acceptance of it. Lockdown-driven changes in our work, in the economy, in social structures and in our personal behavior have pushed our reluctance aside. The acceleration and adoption of technology during the pandemic has impacted everything and real estate is no exception.

The question remains: what will stick? Real estate is long-lived and capital intensive. This article examines lasting and ephemeral change, and what it means for real estate.

How Is This Wave Different?

Change is hard, and technology change is especially so. It’s perceived as painful, expensive and risky. As such, adoption was driven by obvious rewards, like more customers or lower cost, and competitive pressure. The events of 2021 removed many typical hurdles to adoption by creating new pressures—“If I’m not online, I’m out of business” or “If I can’t do curbside, I can’t sell” or “I don’t want to work at home, but the office is closed.”

At the same time, new opportunities arose that led to record-obliterating capital investment. “If we can make online work, we can take over this entire market, forever.” “We never liked handing out menus anyway, and they’ve all got phones. Less printing, faster turnover.”

Behavioral changes such as reduced consumption and more online time forced reluctant users to learn modern tech behaviors like collaborative online work and, in doing things for themselves, resolving tech issues. Even the most office-bound “please start my PowerPoint” users were forced to self-sufficiency, or to a level of skill that permitted online support. Concerns about looking like a clown on a Zoom session led to trainings and visits to “YouTube University” to learn long-avoided techniques.

Big Trends

The result? We’ve adopted more tech in fourteen months than would normally happen in five years. So, which are the biggest changes?

We're adopting faster. We're adopting the same stuff as before, but more rapidly.

- Remote work: We saw a 2.5-3x increase during pandemic and a 2.7x increase in teleconferencing.[1](#)
- Shopping: Amazon profit more than tripled in Q1 2021 over Q1 2020.[2](#)
- Productivity Gains: Goods and services production as of May 2021 are at pre-pandemic levels, but with 8.2 million fewer workers.
- Tech Spending: Business spending on equipment rose 16.7% annualized in Q1 2021, double the rate of the overall economy.
- Cloud adoption: In a panic to put quarantined workers back in play, even the most reluctant companies found that the shortest path to work in remote worlds has been cloud migration.

We're more open-minded and adopting challenging new ideas.

- Cyborg work: Robot/human collaboration as seen in Amazon warehouses, where humans select from robot-stocked bins, and in self-checkout lanes. Amazon plans to add 75,000 more employees (to the 500,000 added since 2019) in fulfillment and logistics, driven in part by the 200,000 robots throughout its warehouses.
- Telemedicine: Patient visits via phone or webcam – 43% of health centers used telemedicine in 2019, compared to 95% during the Pandemic.
- Getting nearly everything delivered: Grocery delivery service Instacart recorded its first monthly profit in April 2020, up from monthly losses of \$25 million in 2019. It also added 300,000 shoppers in the first half of 2020, a threefold increase.
- Do-it-yourself medicine: Emerging test-yourself-at-home technologies for hearing (e.g., Lively) and vision (e.g., Eyeque) reflect new levels of acquiescence.

We care about different stuff. Shutdowns, shortages, interruptions and fear, combined with new opportunities, changes in demand, and changes in employment, have shifted our priorities in a big way.

- Reliability is now sexy: We've watched critical systems fail or flounder, including the postal service, the IRS, unemployment systems, the Suez Canal, and on-time delivery for the holidays. In response, corporations are shifting funding toward systems that create resilience and mitigate risk.
- Data visualization is mainstream: Once the darling of the e-suite, real-time graphing with drill-downs, custom filters, and ever-improving analysis, all tied to curated data sources, are relied upon by the general public in its effort to evaluate COVID risk, find vaccination services, and learn which businesses are still open.
- Availability over quality: Retail bankruptcies, restaurant staffing problems, panic buying and

shifts in open hours mean that we no longer hold out for the best choice. We'll take the one that's in stock right now, thank you. This is reflected in housing prices, in car rental, and even in willingness to buy off-brand toilet paper.

- Let's put some things out of their misery: The newly trained populace is moving away from time-honored staples like regional malls, toll booths, cash, and sales meetings. Land-line phone use is collapsing under the depth of a robocall flood.
- We've learned what we never liked: Waiting in line, waiting in lobbies, getting bad advice from salespeople, all-hands meetings, commuting, and flying everywhere for everything. When they all got scary, we learned how not to do them. And many will never return.
- We do things in the off hours: Eliminating commutes and in-person shopping shifts both work and shopping to different hours. Whole Foods and others hire for 4-6 AM and twilight shifts. Newly cloud-enabled companies depart from standard office hours. Formerly office-based companies shift to workflow tools and delivery-based management, rather than face-to-face time.

What's It Mean for the Real Estate Sector?

Lasting impact requires the creation of value. Mere response to a pandemic-driven anomaly is insufficient to make permanent shifts. Value creation will be driven by three things: risk management, generating trust, and increasing utilization.

The pandemic was a stress test, revealing vulnerabilities, appetites, and new and increased risks. We have been awakened to some familiar but nascent areas of importance, namely cybersecurity, supply chain and price instability. None of these are new concepts, but in a span of months if not weeks in some cases, we saw high profile hacks, shortages of resources like microchips, lumber and labor, and rising prices across the board.

- **Cybersecurity:** The opportunity created by pandemic-driven disruption was not lost on criminals. Specific to real estate, an analysis of 1,000 sites revealed that 47% of building systems were exposed to the open Internet, 49% had valid user credentials for former staff and contractors, and 81% did not have current backups. This was not pandemic driven, but criminals exploited such weaknesses to drive up the volume of attacks.
- **Supply chain:** The Suez Canal blockage was the most visible example of a supply chain built for speed and economy, with less resilience than we supposed. Changes in demand for computer chips, rental cars, lumber, metal, and even toilet paper triggered cascading effects in many markets as our inability to respond to these changes was revealed.
- **Price instability:** Home prices, lumber prices, metal prices, and the labor cost and availability became hard to predict, and they continue to affect the availability of cars, houses, buildings, food and equipment.

- **Shutdown containment:** Precise, detailed records of who was where, and when, can be the difference between shutting down an entire building, and identifying a small pocket of risk. ISO-certified manufacturers have long been aware of the value of data to minimize the impact of errors. The same applies to controlling infections.

In the absence of personal meetings, hands-on work, and retail browsing, technology has filled the void to create trust in key areas and finding new ways to build trust.

- **Environmental and lite safety information:** Fearful employees and customers need information from previously invisible systems concerning overall indoor air quality (IAQ), air exchange rates, water quality and safety, building occupancy, cleanliness, and touchless controls. This will further accelerate the IoT as new sensors, systems and analytics will be required to get the data, react manually and with AI, and communicate the data through dashboards, apps and digital signage.
- **Productivity measures:** Office managers moved to automated systems to measure productivity of offsite employees. Most studies reveal solid productivity so far during the remote work pendulum swing, but with possible reductions in innovation.
- **Career management:** HR and training teams face concerns from now-remote workers about their paths to promotion absent face time. This is counterbalanced by concerns about safety. Companies rush to adopt tools that measure effectiveness and show a path to promotion from one's laptop and kitchen table.
- **Privacy:** Social media exploitation of data, HIPAA and vaccine cards, smart speakers listening and tailoring advertisements, and endless tracking by smartphones and apps have led to a backlash. Meanwhile employers and educators install camera and tracking software to assure that users are really studying or working. This brings on political reactions such as General Data Protection Regulation (GDPR) in the EU and early legislation in Florida which allows citizens to sue social media for censorship.

The accelerated upgrade of connectivity, security, and hosted processes mean that utilization is being maximized and any place is now a potential workplace. This creates new pools of vacancy and pools of availability enabled by technology.

- **New vacancy:** Permanent assignments for underutilized workplaces were already old-fashioned and will cease to be acceptable. Fifty percent utilization was one thing, but 20% or lower will drive new waves of space assignments and un-assignments. This calls for tech to assign spaces, monitor cleaning, occupancy and life safety, and possibly the utilization of reservation systems for other resources such as parking even in suburban surface lots. Passive monitoring through cameras is replacing check-in systems as a means of identifying safe and available space.
- **Newly suitable space:** Think of it as part-time adaptive reuse. Emerging online catalogs of

available workspaces, such as www.workfrom.com, identify coffee shops, hotel lobbies, restaurants, bars, and coworking spaces with excess capacity, good internet and parking.

- Newly usable retail hours: Whole Foods leads in hiring early-bird and twilight “shoppers” to pick and pack orders as early as 4 AM, before stores unlock their doors. This reduces daytime traffic and increases volume.
- Putting the customer to work: Self-check-out, self-diagnosis, and self-reporting all drive workload and space need to the customer. If a phone app provides the menu, the payment, and status checking, retailers and restaurants can increase customer turnover in the same space.

What Tech Changes Will Persist?

Tech has moved to the front of the line. It now defines competitiveness in all classes of property. Yet not everything we embraced in the pandemic will remain front of mind.

Among changes we expect to endure are the following:

- System controls that permit shutdowns and decommissioning quickly, without damage;
- IoT-based systems that provide real-time information on safety matters to occupants, and not just to facility managers;
- Documented security of building systems, and their ability to withstand hackers, ransomware, and other malfeasance that interrupts operations;
- De-emphasis on investment in sexy features in favor of those that build resilience for occupiers;
- Sensors to identify real-time occupancy and to identify available space without making a reservation;
- Corporate portfolio management that includes non-traditional “you could work here” spaces in hotels, cafes, and other unusual spaces; and
- Demonstrated readiness for the next pandemic.

Pandemic-driven uncertainty is fading; we’re off the diving board and in the water. When we stop panicking, decision drivers change—from survival-based questions to those driven by optimization, by inflection points, and by moments where change can happen. Lease expirations, construction projects, mergers and dispositions will all include an aspect of tech-based pandemic response.

Other articles based on the Top Ten Issues will cover non-tech aspects of the “new normal”—mobility, cultural change, and shifts in how we make, deliver, and consume goods and services. At every shift toward this new normal, the big jump in tech adoption will shape the decision and enable that change. •

Endnotes

1. Brendan Ittelson. "A Story of Agility and Innovation: Findings from the Impact of Video Communications During COVID-19 Report." Zoom Blog, March 25, 2021. <https://blog.zoom.us/findings-from-the-impact-of-video-communications-during-covid-19-report/> (accessed June 25, 2021).
2. Caroline Donnelly. "Amazon posts profit and revenue growth as Q1 results highlight impact of Covid-19 on its business." ComputerWeekly.com, April 30, 2021. <https://www.computerweekly.com/news/252500029/Amazon-posts-profit-and-revenue-growth-as-Q1-results-highlight-impact-of-Covid-19-on-its-business> (accessed June 25, 2021).