

Digital Disruption in Commercial Real Estate

SHIFTING PARADIGMS & A HEIGHTENED PACE OF
OBSOLESCENCE

How We Live: At Home

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This article is the first in a series discussing the disruptors that are remaking commercial real estate and will impact how we live, work, play, invest and build.

Rather than thinking about technology as a defensive, isolated disruption of commercial real estate, we need to contemplate technology in the context of a disruptive framework and consider how technology and accelerated change will impact the built environment. Being strategic and applying the research will prove key in evaluating the demand for real estate, the impact of technological change, and potential sources of disruption to how we live.

How We Live

We live in a digital world regularly disrupted with the emergence of evermore clever, complex technologies. Rapid changes in consumer demand, reflected by demographics and the ready accessibility of technological innovations, are requiring constant connectivity in conflict with the demand for work-life balance. Whether or not we are aware of it, artificial intelligence (AI), in particular, is transforming how we live in tangible ways. We engage with technology throughout each day and are becoming more reliant on it. As AI enables computer systems to perform tasks that once required human intelligence, our visual perception is now changing, we are using speech recognition and instant language translation, we're enhancing our neural techniques to learn and create, and are experiencing actual AI decision-making and overall intelligent automation, often in real time.

At Home

Imagine a future where, each morning, a programmed alarm clock awakens you while breakfast cooks itself. A biometric shirt monitors your heart rate and blood pressure. Another device tracks your respiration and other body processes. Upon leaving the comfort and convenience of your smart house, the lights turn off automatically, room temperatures adjust and the alarm resets. When you enter your keyless self-driving car, perhaps an autonomous electric vehicle, a quick brain scan serves as your password. Then the virtual "Smart Assistant" automatically reports on the weather, air quality, traffic pattern conditions and best route to travel. You are transported to your office, and your vehicle returns when you need it, on demand. Alternatively, a quick shuttle to your Hyperloop train, a mode of passenger (or freight) transportation, takes you to your workplace, hundreds of miles away, at a warp speed of 700 mph in less than 30 minutes.

This scenario is closer than people realize. Many of the basic elements described above are already in place or are being tested. We are in a period of radical change as emerging technology is compelling real estate companies to adapt to consumers who are living and working very differently from just a decade ago. At home, in the workplace and on the road, the Internet of Things (IoT) is driving new networks that will make day-to-day living faster, easier, more connected and collaborative. IoT is the interconnection via the Internet of computing devices embedded in everyday objects, enabling them to send and receive data. Real estate owners are being challenged to bet right and invest in this dynamic, changing built environment and technology-enabled model.



The enhanced ability to control our environments at a micro-level at home will make urban living more convenient, more sustainable, and potentially healthier. Smart devices such as Google Home and Amazon Echo, already staples in many homes, will become even more sophisticated and ubiquitous as data gathering intensifies and artificial intelligence and machine learning increase computational power. At the same time, we face data security, privacy, and a host of legal and regulatory issues with the information aggregated, individually, collectively and societally.

The use of cloud-computing connected devices and massive algorithms that recognize patterns in the data are enabling virtual "Smart Assistants" to "imagine" and plan our days, recognize our faces, pay our bills, play our music and much more as they curate and learn from our personal preferences. While many devices now connect to thermostats to help control the environment, IoT and massive data will enable linked appliances, kitchen technology and even cutlery to revolutionize both home and restaurant cooking. "Smart" refrigerators are already tracking consumption, curating our food preferences, and managing grocery shopping.

Produce is coming from tiered, floating hydroponic farms. Scientists at Binghamton University have discovered that identification based on the way the brain responds to certain words is now replacing the need for passwords¹ so that to enter your smart home you no longer have to punch a code, access is literally handled in your head.

Even the elderly, who are far less tech savvy than younger generations, are seeing their lives changed by technology, as connected apps, wearable technology and in-home systems are helping Baby Boomers age at home. Monitoring systems such as QuietCare and WellAware are being installed in assisted living communities. These systems set off alarms when unusual activity occurs or there is a lack of activity. Other advanced systems track vital signs.² Not only are robotics and AI assisting with elder care, they are guiding surgeries and performing complex medical tasks. Interactive robotics are transforming medical procedures, leveraging the expertise of top surgeons to treat patients worldwide. As assisted living and specialized healthcare facilities are incorporating technology to make life easier and safer for this demographic age group, digital apps are driving (and tracking) millennials and centennials to remain healthier longer.

Looking to the Future

How does the real estate industry adjust and how do operators rise to the challenge of digital change and its impact on the human experience? On a basic level, multifamily buildings will incorporate smart home systems to accommodate day-to-day living. Even as the senior population continues to increase, fewer nursing homes may be needed as the elder population opts for assisted living facilities and fully integrated smart homes. Suburban projects will become more accessible as traffic congestion eases and drivers become passengers with tech taking the wheel. The shifting paradigm and digital disruption in commercial real estate are forcing a heightened need to embrace technologies that will drive economic growth, support social and business interaction, and attract best-in-class occupiers. The challenge will be in selecting and investing in technologies that raise the bar in the commercial property built environment. We must embrace technologies and digital opportunities or face obsolescence.

ABOUT THE AUTHOR:

Linda J. Isaacson has long been recognized as a compelling and an authoritative voice in the real estate industry. [READ FULL BIO ▶](#)

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1. Inside Staff, "Brain's reaction to certain words could replace passwords," <https://www.binghamton.edu/inside/index.php/inside/story/brains-reaction-to-certain-words-could-replace-passwords> (June 22, 2015).

2. Jeff Anderson, "Has High-Tech Senior Living Changed the Way We Age?" <https://www.aplaceformom.com/blog/04-23-2013has-high-tech-senior-living-changed-aging/> (April 23, 2013).

