Proptech: Changing the Way Real Estate Is Done

As the "internet of things" (IoT), the "cloud," mobile devices and, more recently, 5G have expanded the potential for innovation, market attention has turned toward new applications for the untapped market of technology for the real estate industry. The question for both real estate and technology companies is not only which business activities could make use of new generations of technology, but also where industry-specific applications would be most impactful.

This report focuses solely on the experience of real estate companies—the end users of proptech. While technology is increasingly interconnected within every organization, the experiences to date—and plans for the future—often differ by business area. The report provides the experiences of the survey respondent companies, as well as the insights and observations of one-on-one interviews, by business area.

In addition to providing a structure for thinking about technologies for real estate companies, a key goal of the research was to answer the question, "What aspects of technology that affects real estate have proved to be the most innovative and impactful, or brought about the most change to date, even as the number and nature of property technologies continue to evolve?"

The survey and interviews spotlight a real estate industry that has more than begun the process of moving far past traditional approaches. Technology is now viewed as the way to remain competitive in every business product, service and operation. And even more so, as a means to challenge the status quo and lead market change. As one company said, "We are increasing our [adoption] capacity in order to be ahead of the curve and lead the transformation in the real estate sector."

Key Findings

Proptech changes the business of real estate.

- Proptech, which refers to the full range of technologies applicable to the business of real estate, has become essential to companies to maintain a competitive market position.

- Proactive real estate companies are adopting property technologies in all business areas—fundamental management and financial streams, design and construction, leasing/tenant relations, as well as newer areas of data analytics, health/wellness, and climate risk assessment and mitigation.

  The vast majority of companies are already experiencing the powerful impact of technologies adopted over the last few years: across 11 business areas, 80 percent of companies noted positive impacts on operations and services, and 70 percent have experienced positive impacts on each of decision-making and finances.[1]

- Beyond the power of individual technologies, companies are also experiencing the "snowball effect" of multiple technologies. For example, customer-facing technologies that enhance the customer experience from first touchpoint to tenant retention altogether lead to greater profitability. This effect is "what we strive for with the technologies we adopt."

- The expanding capabilities of technology platforms to communicate with other platforms are further unlocking the power of technology and supporting companies' own capacity to develop innovative business solutions.

- There is a growing understanding that appropriate asset-level technologies may differ widely throughout a portfolio given the numerous differences in assets themselves and their market, as well as the various stakeholders within a real estate asset.

- Interest is shifting dramatically to data analytics and overarching systems that unlock the power of data from all platforms and sources within a company, as well as from external data sources. Whereas data analytics, as a business area, was among the least-common business areas indicated by survey respondents, it is second only to project management as the focus for the next three years (or foreseeable future). "We say data is the crude oil of our business" succinctly sums up current thinking.

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[1] *Finances* refers to cost savings, cost-reward analysis, and/or achievement of financial goals.

Beyond the enormous capacity to expand a company's efficiency and effectiveness via data analytics technologies that tie all systems together, a hallmark of many companies is the accessibility of the data by everyone across all business units, so that the platform is the system "we push the business through."

- The most proactive companies are pursuing multiple business strategies to stay ahead of change and innovation made possible by technology, and to identify and access optimal technological solutions as they become available or to encourage new solutions. These strategies include direct investment in technology companies, investment in venture capital firms and/or venture capital funds, as well as technology development in-house.

- The COVID-19 pandemic accelerated demand for technologies that support tenant engagement, the touchless experience, noted above, and health and wellness factors. Many companies had previously adopted such technologies but have accelerated the exploration of new tools and new partnerships.

- The pace of recent proptech adoption will continue in all business areas in the next several years, with a strong mix of investment in new technology and expansion or improvement of recently adopted technologies.

Proptech addresses environmental and social impacts.

- Pressing environmental and health issues are the focus of relatively new business areas—climate risk assessment, climate mitigation/decarbonization, and health/wellness—closely tied to technology as indicated by being among the business areas with the highest recent technology adoption rates. Interest in these issues, as business areas, is growing as more companies are shifting their technology plans for the next few years to these areas.

- The challenges of climate mitigation and resilience also are becoming an integral consideration, to varying degrees, when companies are making technology investments in all other business areas. Investors are increasingly expecting owners to have an understanding of potential exposure to physical climate risks such as sea-level rise, extreme heat and wildfires, as well as transition risks such as policy changes. Technology investments in other business areas enable progress in addressing these issues, such as building-level resilience design measures or property management strategies.

- Data analytic technologies combined with communication technologies are making possible daily information about companies' ongoing environmental, social and governance (ESG) and wellness efforts that directly affect customers. This includes real-time data on a building's environmental and wellness metrics (such as air and water quality) and allows for internal monitoring as well.

- Construction technology (contech), particularly cloud-based technologies that connect key platforms and enable off-site construction, is increasingly viewed as having game-changing potential to deliver deeply affordable units without public subsidies.