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Where's the Next Technological Revolution?

COMMERCIAL

By Steve Weikal


REAL ESTATE

The last 48 months have seen an unprecedented surge of activity by technology start-ups focused specifically on commercial real estate. While residential real estate was disrupted by new software and business models developed during the dot-com boom 15 years ago, commercial real estate is now undergoing a transformation resulting from the latest wave of technological innovation.

Often referred to as Web 2.0, this wave includes faster and cheaper coding platforms, easy-to-use apps, user-generated content, and the explosion of social media. Add the exponential increase of computing power in handheld devices, ubiquitous connectivity, and an increasingly tech savvy workforce, and the industry is poised for extraordinary change.

FinTech (financial technology) emerged as the term for new start-ups using technology to disrupt the finance industry. In a similar fashion, the wave of technology start-ups focused on real estate are gaining a name as they gain momentum: RE Tech, CRE Tech, or, in the case of Europe, PropTech. And like Fintech, the term refers to recent ventures funded by friends and family, angel investors or, increasingly, traditional venture capital (VC). VC funding of RE Tech start-ups grew steadily from $186 million in 2011 to an estimated $1.86 billion in 2016, according to VC data provider CB Insights. While this amount is modest compared to overall tech funding by VCs, the amount and growth rate targeting RE Tech reflects a dramatic increase in commitment by venture investors.

Researchers at the MIT Real Estate Innovation Lab have identified more than 1,600 RE Tech start-ups worldwide. These companies can be divided into categories, each pursuing various pain points and inefficiencies in the industry. Examples of such groups include:

Visualizers: These firms help better visualize markets for more informed locational decision making, with various graphic overlays to better understand demographics, zoning, transportation, traffic patterns and business incentives. Companies such as Create and UrbanSim are like ESRI on steroids, merging immense amounts of public and private data to graphically represent the urban environment, while tools such as ZoomProspector, StateBook and PiinPoint are designed specifically for site selection.

Listing services: A number of new firms provide an alternative to CoStar and Loopnet. General listing services such as TheSquaredFoot, RealMassive, and Xceligent continue to expand their U.S. coverage, while specialized services such as NewDirt, which operates like Match.com between multi-site brands and landlords, are being launched to solve problems unique to certain segments of the market.

Deal Analysis: Taking advantage of large data sets, numerous tools are entering the market to provide faster, more accurate deal analysis. Companies such as Reonomy and CrediFi unlock previously inaccessible property level data, including true ownership structure, tenant stacking plans, and capital structure, shrinking property analysis from days or hours to just minutes. (RE)meter and Megalytics use public and private data to model tenant, landlord, and owner credit risk in ways never before possible. AdvancedREI is working to make mortgage portfolios more transparent, and GetLucro provides optimization tools for asset portfolios, contributing to real estate capital market efficiency.

Workflow: Brokerages and owners of large real estate portfolios now have modern platforms available to better manage their businesses, with more centralized data collection and availability, rich visual interfaces, business analytics tools, and deal flow. Once fierce competitors, enterprise solutions VTS and Hightower recently merged, and will continue to expand their U.S. and global footprint. LeasePipeline focuses expressly on lease deal flow management, while ProposalNet is designed for tenant reps specifically. DealPath does the same for asset acquisitions and sales teams.

Throughout hundreds of young, innovative, disruptive RE Tech start-ups, two broad themes emerge:

Theme 1: It's All About the Data

Data (big, small, or specialized) doesn't necessarily equate with knowledge or guarantee smart decisions. As Google head Eric Schmidt explains, "There were five exabytes (a billion billion bytes!) of information created between the dawn of civilization through 2003, but that much information is now created every 2 days." Yet, a recent IDC/EMC study reports that "less than 0.5 percent of all data is ever analyzed and used." Numerous RE Tech start-ups have stepped in to solve this problem and profit from the opportunity.

Data is being unlocked, gathered, and manipulated in ways never seen before. Governments at all levels now make vast sets of public data available to citizens and businesses—and it's usually free, which encourages start-up formation. For example, Create, UrbanSim, and others in the visualizer category rely heavily on public data sources to graphically represent zoning, transit routes, and demographics. Some tools, such as (RE)meter and ZoomProspector, also rely on third-party data, while others such as Reonomy and Magalytics, process public and private data to create their own unique proprietary resources.

Companies are beginning to recognize the value of their own internal data sources to complex decision-making, and relying on start-ups like VTS and Hightower to better visualize, manipulate, and understand the significant volumes of data generated on a daily basis at large brokerage firms. Add to this various public and third party data, and a firm's business decision-making moves to an entirely new level.

In a novel twist on traditional data gathering, new technology also enables information to be collected directly from the public. Perhaps the best example of crowd-sourcing data for real estate is Compstak, which allows brokers to anonymously trade lease comps. After entering lease data into the Compstak database about a recent deal in Building A, a broker can then search the database and view lease data entered by another broker on a deal in Building B or any other building. Crowd-sourcing

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data from popular apps such as Waze and Uber also suggests intriguing possibilities. A pilot project by Trampoline Systems used, among other sources, Twitter data to identify "hotspots" of activity in London to infer the next new "hot" neighborhoods — certainly valuable information for those in real estate.

Theme 2: Sharing as a Business Model

As people become increasingly comfortable with the idea of sharing places, things, and services with strangers, various "sharing" models are emerging in real estate. What Airbnb has done for lodging and Uber has done for transportation, RE Tech companies like Pivot Desk, Liquidspace, and WeWork are doing for commercial space.

Sharing models for real estate take two different forms: those that own or control the asset, and those that don't. Car sharing company Zipcar, for example, owns its cars, while ride sharing company Uber does not. Likewise, companies like WeWork and other co-working spaces carry the lease, while Pivot Desk and Liquidspace merely enable users to book someone else's vacant desks and empty office meeting rooms on a temporary basis; sometimes for just an hour.

Sharing is occurring in other real estate product types, as well. Flexe offers temporary pallet space in warehouses, Clutter aggregates unused self-storage space, Storefront is a market for temporary pop-up stores in vacant retail space, and Spacious offers empty tables in New York restaurants to small work groups, during the slow afternoon hours between lunch and dinner. All of these applications, and others like them, provide novel new real estate business models by merging on-demand technology with the sharing economy.

A larger trend is at play, however. Dennis Frenchman, a professor at the MIT Center for Real Estate and MIT Department of Urban Studies and Planning, refers to it as "Real Estate Fracking:" the process of breaking asset use into smaller pieces and reassembling them in new ways that have higher utilization and thus increased value. In the same way that Zipcar increases average personal vehicle utilization from 5 percent to 35 percent by selling its cars by the hour to multiple users, WeWork parcels out smaller subleases (licenses), charging as much as three times the dollar-per-square-foot leased rate, according to MIT's Real Estate Innovation Lab. Likewise, Liquidspace, PivotDesk, Flexe, and the others increase utilization rates, decrease transactional friction, and unlock the value of unused space.

Other technologies are coming into play to support this move towards sharing. This fracking of real estate may become even easier, with adoption of Blockchain and fully digital legal documents. Blockchain is the technical infrastructure that underlies digital currencies like Bitcoin and Ethereum, with an encrypted, distributed, and immutable general ledger that eliminates the need for third-party authentication. One start-up in the Blockchain space called Securency is currently testing a method of stripping the leases out of a building and securitizing them for trade in the financial markets, thereby unlocking the value of the future cash-flows. Under this model, Blockchain will provide the necessary authentication and ongoing transparency necessary for creating a liquid market in leases and lease portfolios.

More, Better, Faster, and Cheaper

What, then, does RE Tech mean for the real estate business? In the months and years to come, expect more, better, faster, and cheaper: much more data, exciting new tools and applications, with greater transparency and less transactional friction, at lower cost. Low- or no-margin activities will be increasingly automated, allowing real estate professionals to focus on higher margin, advisory services requiring unique skills and knowledge. Importantly, the convergence of sharing and on-demand platforms with commercial real estate will feed the real estate "fracking" trend, moving users away from long term commitments toward more flexible, shorter term obligations to match their temporary needs. In fact, we may be entering an era of REaaS, or real estate as a service.