Emerging Models in Residential Real Estate
or “How to Lose a Billion Dollars in Real Estate Tech”

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Introduction

I am fascinated by the opportunities in real estate tech. The process of buying and selling houses is complex and uncertain, with many opportunities in the market for improvement. Smart entrepreneurs and innovative companies around the world are launching new models fueled by massive amounts of venture capital. This paper covers the major trends that are shaping the industry and the major players gaining market share. The scope is global, because we all have a lot to learn from each other, no matter where we live.

This research paper has been guided by one core question: What are the new models gaining traction that are changing the way people buy and sell residential real estate? This paper focuses on the fastest moving, most influential trends in residential real estate tech across the globe during the last decade. It is a market scan that reports facts, highlights insights, and draws conclusions. It is meant to be representative, not comprehensive; it examines how the new models have evolved over time and which are more likely to achieve long-term profitability.

Many examples come from the US market because it is the epicenter of real estate tech disruption—driven by unprecedented amounts of venture capital. The comparative scale between the US and other markets is different, but the trends are the same. Disruption in real estate appears to follow similar paths globally.

This paper covers four key changes that have occurred since the early 2000s: the creation of real estate portals, the rise of iBuyers, the emergence of power buyers, and the development of power brokerages. These changes have been fueled by enormous amounts of venture capital, significantly accelerating the proliferation of these four new models. The paper concludes with a close examination of the key trends and key learnings from this researching, as follows:

• These new models have resulted in significant changes, but they also underscore how buying and selling a house is a unique—and very personal—process for consumers.
• With few exceptions, these new business models remain unprofitable.
• The result is an evolutionary process where these new models are increasingly focused on opportunities to monetize all aspects of the house purchase process (e.g., house search, mortgage, etc.).

Venture Capital and Residential Real Estate

The last decade has seen an exponential rise in disruption—measured by the inflow of venture capital and the rise of new models—in residential real estate.
The Role of Venture Capital

Disruption in residential real estate is being driven by unprecedented amounts of venture capital: about $50 billion since 2015, with nearly $20 billion invested in 2021 alone.¹ That capital is subsidizing the creation of new business models across the transaction spectrum, with many companies focused on new and improved models to find, buy, and sell houses.

The market opportunity is massive, measured in trillions of dollars in the US alone. The real estate transaction has not changed in decades; however, the smart application of technology has introduced a high level of opportunities for improvement and change.

The Psychology of Real Estate

The rise in new models in real estate has highlighted the unique nature of a real estate transaction from a psychological perspective. Although many new models are focused on new technology, human psychology remains critical to understanding the adoption (and rejection) of new models.

Loss aversion is the psychological concept that states that the pain from a loss outweighs the pleasure from a gain. As humans, we are risk averse and more inclined to make a decision to avoid a loss than to decide to risk a corresponding gain.

The cost of making a mistake is relatively low with high-frequency, low-value transactions. Trying a video streaming service, taking an Uber, or trying a new coffee shop are all relatively safe because of the low value and high frequency. Consumers are more likely to take the risk because the potential downside is so low. High-value, low-frequency transactions such as buying a car, choosing a university to attend, or getting brain surgery have a much higher potential downside of making a mistake. These transactions typically involve an “expert advisor” to hold the consumer’s hand through the process, serving as a sort of “decision insurance” for the consumer.

Transacting real estate is typically the largest, and least frequent, transaction a consumer will face. Loss aversion and minimizing the risk of making a mistake drive consumers to seek out expert guidance in real estate transactions. The costs of making a mistake are huge: not only are they financial, but mistakes can affect personal security, family, and schools. Loss aversion is one of the biggest reasons that consumers are slow to try new models from new or unknown brands in real estate. Human psychology leads the way in terms of limiting adoption of new technology. Many real estate tech disruptors are focusing on instantaneous transactions: enabling consumers to buy, sell, and finance a house with the click of a button. But it is not clear that consumers really want an instant home transaction.

Human psychology suggests that consumers prefer good things to take time. This concept, dubbed the ‘labor illusion” by Harvard researchers Ryan W. Buell and Michael I. Norton,² shows that perceived value increases with wait time—to a point. For many people, some things, like ordering a meal at a five-star restaurant, filing your taxes, or buying a home, should take time.

Thus, an instantaneous real estate transaction may be a solution in search of a problem. For consumers, it is more important for an expert advisor to guide consumers through the process, however long it may take. It is because of this consumer preference that human beings—in the form of real estate agents—remain a critical component in residential real estate.

The following sections show how the changing nature and scale of investment and innovation across residential real estate has reinforced the importance of real estate agents and reveal the different ways their roles have changed.

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**A History of Disruption**

**The Portals**

Investment and innovation in real estate tech started with the creation of new real estate portals between 2005 and 2015. These portals were where the vast majority of capital investment occurred, focused on improving the search experience for home buyers. In the US, these companies were Zillow, Trulia, realtor.com, and Redfin. They focused on making for-sale listings visible directly to consumers via the internet, instead of sales listings being the exclusive domain of real estate agents.

Real estate portals generate revenue by selling leads to agents. In the US market, buyers’ agents are compensated from the purchase of a property; for this reason, prospective buyers have a high value to real estate agents. This model began as “pay per lead” and has slowly evolved to provide more and more qualified leads to agents. Portal companies have attempted to diversify their revenue streams by expanding into mortgage and other ancillary services, but the vast majority of their revenue still comes from lead generation.

**The Rise of iBuyers**

Starting in 2016, investment started to shift into the disruptive new model of iBuying, focused on the sell side of the transaction. While the portals were positioned relatively far away from the transaction
iBuyers buy homes directly from sellers, turning the traditional home selling process on its head. The iBuyers offer a compelling customer proposition focused on speed, certainty, and simplicity. Instead of the uncertainty, hard work, and open houses required for a traditional sale, homeowners can instantly sell their home to an iBuyer.

The iBuyer movement is led by Opendoor, founded in 2014 and currently the world’s largest iBuyer. Opendoor buys homes directly from sellers, quickly spruces them up, and resells them on the open market. Opendoor launched in Phoenix in 2016. By 2018, Opendoor dominated the iBuyer segment with over 70 percent share of the market. That number has dropped as other big entrants, particularly Zillow, gained market share and expanded nationally. Opendoor is still the largest iBuyer—twice the size of Zillow, and four times as large as its next closest competitor.

iBuying is being driven by multi-billion-dollar organizations like Opendoor, not scrappy start-ups: this model requires access to huge amounts of capital and is very risky at low volumes. The largest US

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iBuyers are Opendoor, Offerpad and Redfin. Zillow launched an iBuyer business in 2018 and subsequently exited that business in late 2021 after failing to reach profitability and experiencing mounting financial losses.

By March 2019, Opendoor had raised over $1.3 billion in equity, $2.4 billion in debt, and was valued at close to $4 billion. In December 2020, Opendoor went public at a market cap of $14 billion.\(^4\)

In 2019, iBuyers accounted for nearly 60,000 transactions, 0.5 percent of the US market. That number has risen to over 110,000 transactions or 1.3 percent of the national market share in 2021.\(^5\) In some of the largest iBuyer markets, Phoenix and Atlanta, iBuyer market share is nearing 10 percent\(^6\).

\(^4\) Ibid.
The iBuyers target “turnkey,” single-family homes for purchase: ones that are easy to value, quick to fix up, and relatively painless to resell on the open market. Pre-pandemic, these were houses valued between $250k–$300k, the median US price point, which has subsequently risen due to record home price appreciation. The median iBuyer purchase price in 2021 is closer to $380,000, which is slightly higher than the national median purchase price of $374,000.8

Covid-19 materially affected iBuyers in 2020. Due to the uncertainty in the market, all iBuyers stopped purchasing new houses for several months (but continued to sell houses in their inventory). As a result, iBuyer transaction volumes dropped by about half for the entirety of 2020.

The iBuyers have a growing national presence, clustered in around three dozen markets. The top iBuyer markets, by purchase volume, are Phoenix, Atlanta, Texas, and North Carolina. These markets typically contain the most “turnkey,” single-family homes in the market with a high degree of sales activity. Homogeneous markets, with high pricing and sales predictability, are the sweet spot for iBuyers.

The iBuyers began expanding into the previously untouched Northeast market in early 2021, and Opendoor launched in San Francisco in February 2022. Its intent is to establish a national presence,

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7 Ibid.
even in markets that are more difficult to operate within, have more heterogeneous housing stock, and have higher price points.

**The iBuyer Business Model**

The iBuyers have three primary sources of revenue: service fees, home price appreciation, and ancillary services. Despite generating billions of dollars in revenue, iBuyers have historically been unprofitable (although this started to change in early 2022 due to rising home price appreciation).

The service fee, which has been as high as 7-10 percent, averages around 5 percent today—slightly lower than a typical real estate agent commission. The iBuyer’s goal is to make using its service no more expensive than a traditional agent-assisted sale (around a 5.5 percent commission).

The iBuyers benefit from home price appreciation during the time they possess the home (around 90 days). Typically, the gains are relatively small (3-5 percent) during that time, but surged to 10 percent during the fast-paced summer months of 2021.9

The iBuyers also attempt to attach ancillary services—including mortgage financing and title insurance—to the core transaction. They have all launched or acquired businesses to serve these segments, but have faced an uphill battle to successfully attach these ancillary services, especially mortgage financing, at scale. Their path to profitability, as outlined in IPO documents, revolves around being able to monetize more aspects of the transaction.

The top iBuyers operate high gross revenue businesses with negative profit margins. iBuying margins are usually thin, and often negative. The model is massively unprofitable: Opendoor has lost over $1 billion over the past four years, and Zillow lost over $1 billion during its 3.5 years as an iBuyer.10

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10 DelPrete, “The 2022 iBuyer Report.”
The iBuyer model is inherently risky because each company takes possession of homes on its balance sheet. These companies have thousands of homes—worth billions of dollars—on their balance sheets at any one time. A negative shift in value of these homes or a delay in being able to sell them impacts iBuyers financially on a massive scale. A case in point: In 2021 Zillow purchased too many houses for too high of a price in a fluid market where home price appreciation was starting to cool. Zillow was unable to sell these houses for more than it bought them, resulting in a loss of hundreds of millions of dollars.\(^{11}\) This led Zillow to shut down its entire iBuyer operation, Zillow Offers, in late 2021.\(^{12}\)

**Sales to Investors**

Another important aspect of the iBuyer model is that these companies sell many of their homes, around 20-25 percent,\(^{13}\) directly to institutional investors and single-family rental companies. The iBuyers purchase homes directly from homeowners, fix them up, and sell them to Wall Street investors without listing them on the market—in effect, taking housing inventory out of the market. This included around

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7,000 houses in 2021.\textsuperscript{14} While a small number compared to the overall number of transactions in the US market (over 5.5 million), it has a material effect on families trying to buy a house and upon communities where the iBuyers operate.

\textbf{The Future of iBuying}

The future of iBuying revolves around continued national expansion, reaching larger scale (buying 5,000 houses per month), and eventual profitability—which hinges on monetizing the entire transaction. In other words, for iBuyers it’s not about the house, it’s about the transaction.

In a slightly cooling market, the major iBuyers are still pushing ahead with national expansion and increasing purchase and sale volumes. Home price appreciation is slowing, forcing iBuyers to contend with smaller profit margins at scale, as it takes somewhat longer to resell each home purchased.

\textbf{Power Buyers}

Beginning in 2020, the investment focus shifted to power buyers, disruptive models focused on the buy side of the transaction. Companies like Homeward, Knock, Flyhomes, Ribbon, and Orchard have each raised hundreds of millions of investment dollars. Like iBuyers, they are intimately involved in real estate transactions, but they focus on home buyers instead of home sellers.

\textsuperscript{14} Ibid.
Power buyers offer products like cash offers, bridge financing, and trade-in programs to buyers. “Buy before you sell,” or the trade-in model, was the perfect product for the high-demand, low-supply real estate market of 2021. This model allows consumers to use power buyers’ cash to purchase their new home before selling their old home, move into their new home, and, with the help of the power buyer, sell their old home on the open market.

Two of the largest power buyers, Orchard and Homeward, each saw 150%+ growth in transactions in 2020, and over 300%+ into 2021. Clearly, the model is resonating with consumers, especially in the high-demand, low-supply market of 2021. As the market shifts in 2022, the value of power buyers is rising, with the “buy before you sell service” continuing to resonate with consumers.

Overall, power buyer transaction volumes are in the low thousands each and growing. Collectively, the power buyers likely served between 15,000 and 20,000 customers in 2021. While still relatively small, the growth rate in power buyer transaction volume reflects a strong product and market fit. And that growth is accelerating, partially driven by big fundraising rounds in 2020 and 2021.
The major power buyer markets overlap the major iBuyer markets: Phoenix, Atlanta, Texas, North Carolina, and Florida. Compared to the iBuyers business model, however, power buying is much less risky, has better unit economics, and is easier to scale nationally. There is also less of a risk when operating in a heterogeneous housing market like that in the Northeast.

Like iBuyers, the power buyers are attempting to attach mortgage products to their transactions. The financial products offered by power buyers, including cash offers and “buy before you sell,” result in especially high mortgage attach rates because the natural first step to either product is some sort of credit pre-approval.

When it comes to attaching mortgage, it appears that it is more effective to target buyers earlier in the process, rather than home sellers. Power buyers have mortgage attach rates of around 75 percent. This is in stark contrast to the major iBuyers, who have struggled to attach mortgages, with attach rates of 1-3 percent. Power buyers have a clear advantage because of their product/market fit.

From a technology perspective, power buyers are digitally integrating all aspects of the transaction, including mortgage and title. In fact, like many others in the space, power buyers are deploying technology to streamline the entire transaction. This includes features meant to appeal to home buyers, like an AI-powered home match, room comparisons, and tools for finding a dream home. The technology focuses on consumer empowerment and improving agent productivity.

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Power buyers generate revenue from the financing side of the operation, especially if a consumer gets a mortgage with the company’s in-house lending arm. They also generate brokerage revenue from the traditional sale of the “old” house in the trade in process.

The business model of the power buyers is varied. Some companies, like Homeward, keep the agent community happy by offering their services directly to agents across the industry. The service is meant to empower agents and keep them at the center of the transaction. Other power buyers, like Orchard, employ their own full-time agent workforces. Orchard does not work with any other agents, offering its services directly to consumers. Homeward is B2B (business-to-business); Orchard is a B2C (business-to-consumer) offering.

The B2B offering is easier to scale nationally, but there is less central command and control in this partnership model. The B2C offering offers more control, but it is slower and more expensive to scale. In the B2C model, the cost of customer acquisition is borne by the power buyer.

The shifting landscape is causing disruptors and incumbents to adjust their strategies. Increasingly, players must have a presence in all areas of the transaction, including iBuying and power buying solutions.

Zillow, in addition to its core search business, launched an iBuyer (sell-side) and acquired a mortgage company (buy-side). It is developing a presence in all parts of the transaction, on both the buy- and sell-side. As the leading real estate portal, Zillow is attempting to exploit its position to grow its revenue in services adjacent to the real estate transaction. In August 2022, Zillow announced a new partnership for iBuying with Opendoor: Zillow will bring the customers and Opendoor will fulfill the actual home transactions.

Traditional brokerages remain the closest to the transaction, but they have been forced to expand into offering new product offerings. Realogy, eXp, and other brokers have launched “instant offer” programs for customers. Discount broker Homie launched a “cash offer” program in July 2021. And many other progressive independent and small brokerages have launched their own branded iBuyer and Power Buyer programs.

To thrive in the future, all brokerages and agents will need to offer a variety of programs beyond the traditional list-and-sell model. As the disruptors raise and spend hundreds of millions of dollars on advertising—transforming the way American consumers purchase and sell homes—the demand for new ways to buy and sell houses will increase.
Tech-Enabled Brokerages

A new breed of real estate company began to emerge in the mid-2010s—the tech-enabled brokerage. These are companies with an oversized investment in and reliance on technology to power the brokerage operation and its agents. The business model, and reliance on agents to manage the transaction, remains the same as a traditional brokerage.

Compass

Compass, a self-styled tech-enabled brokerage, is one of the world’s fastest-growing real estate companies. Total transaction volumes, revenue, and agent count have grown exponentially over the past several years.

Compass’s growth has been fueled by massive amounts of venture capital, with over $1.5 billion raised since 2012. It is using that capital to grow market share by aggressively acquiring brokerages and recruiting highly productive agents.

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Compass’s strategy is, so far, unprofitable; the company has lost over $1.5 billion since 2016. The core economics of the business are no different than those of a traditional brokerage. The key differentiator is the massive amount of venture capital the company has at its disposal to grow market share while incurring massive losses. Unlike its mature competitors, Compass’s investors are not demanding a profitable business model (yet).

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Compass’s long-term path to profitability remains uncertain, but it will look much like that of its publicly-listed brokerage peers. It will need to achieve a greater national presence, more market share, and economies of scale. Profitability will need to come from increased revenue from agents (through lower commission-sharing splits and increased fees), attaching adjacent services like mortgage and title, and increasing agent productivity.

**eXp Realty**

eXp Realty, another tech-enabled brokerage founded in 2009, is a fast mover in the US brokerage space. eXp’s business model and growth are underpinned by three key pillars: high commission splits that are favorable for agents; a robust multi-level marketing (MLM) scheme to encourage grassroots recruitment efforts; and an online-only ecosystem, with no physical offices or branches, resulting in low overhead expenses.

eXp has grown its US market share even faster than Compass and Redfin. It is currently the third-largest broker by transaction count, followed closely by Compass and Redfin. But its success has not been achieved overnight; it has taken eXp Realty eleven years to reach this point in the top ten brokerages.

**Key Trends**

**The Evolving Role of Real Estate Agents**

In the US, the majority of homes are still sold with a real estate agent. New technologies and platforms have failed to have a material impact on the use of agents. Smart agents are embracing new, disruptive models and making them their own. Some independent brokerages are offering the same suite of disruptive services to customers and positioning themselves as the one-stop-shop for all buying and selling options.

Real estate is becoming more complex. The role of an expert advisor has never been more important. Agents are acting as unbiased expert advisors, helping consumers understand the myriad of new buying and selling options available. Agents are the ultimate “offer aggregator,” presenting offers from multiple companies to homeowners.

The brokerages and agents that win will be those that educate and empower consumers to make the choice which is right for them. Current and prospective homeowners still want someone to hold their hand; real estate agents will remain an important part of the home buying and selling processes. Even with the advent of technology that could, in theory, replace agents, consumers still
prefer to work with them. This is loss aversion at work; consumers want to work with an agent in order to reduce the chances of a potentially costly mistake when selling their house.

**Brokerage Growth**

Some of the largest companies disrupting the traditional real estate brokerage model are Compass, Redfin, Opendoor, Purplebricks, and eXp Realty. Each occupies a different part of the market, demonstrating that there is no “one size fits all” approach to disruption in residential real estate.

Each company offers a different value proposition to consumers and charges different fees, ranging from discount to premium. Compass and eXp offer a traditional listing fee of around 3 percent, while discount brokerage Redfin offers a 1.5 percent listing fee. Pre-pandemic, Opendoor was charging a 7 percent service fee, but has since dropped it to 5 percent (on par with a traditional agent). Purplebricks offers a discount fixed fee.

Consequently, each company fills a specific consumer niche, ranging from luxury to mid-market. The Compass proposition appeals to luxury buyers and sellers, while Redfin appeals to up-market homes. Opendoor, eXp, and Purplebricks appeal to mid-market buyers and sellers.

The growth trajectories of these five companies have also varied widely. Some, like Compass and eXp, have experienced rapid growth after a long period of stable growth, while others, like Purplebricks, have plateaued at market saturation. Each company’s growth velocity is closely tied to the amount of venture capital raised and the total size of the addressable market.
Collectively, Redfin and Compass doubled their market share to 3 percent of the US market in 2019 (and have increased their share since then). Much of that growth has been driven by Compass, which grew exponentially into 2019.

While all are leaders, each company is achieving success in its own way—although they are all influenced by common trends. The biggest models still look and feel like traditional real estate brokerages; there is little business model innovation around how they operate. The models are still pinned to agents and agent count. Technology does not sell houses; agents do.

Growing market share takes time and money. Having more of one means needing less of the other. The biggest disruptor across the industry appears to be a step-change in agent recruiting and compensation, as demonstrated by Compass and eXp. This change is the core of each company’s growth.

**Market Power**

Compass’s underlying strategy appears focused on exclusive content: listings only found on compass.com. Like video streaming platforms like Netflix, Disney+, and Apple TV that are developing exclusive content for each platform in an effort to lure subscribers, Compass is encouraging its agents to list properties exclusively on compass.com.

While this strategy is good for Compass (and to a lesser extent its agents) by attracting consumers directly to its platform, it has a strong potential to be bad for consumers. The value proposition for home buyers (which are the way that US real estate portals monetize their traffic) is quite clear: exclusive content not available anywhere else. In contrast, the value proposition of an exclusive, coming-soon listing for home sellers is less specific: it is meant to increase exposure, generate buzz, and deliver market insights. All to a smaller audience than what the national real estate portals deliver.

With regards to the seriousness of Compass’s program, the numbers paint a clear picture. According to compass.com, in September of 2020, Compass had over 17,000 listings nationally—with over 2,800 as exclusive content (either “coming soon” or “private exclusive”). These 2,800 listings (16 percent of Compass’s total inventory) were only available on compass.com or via a Compass agent; none were on Zillow.

And the percentage of listings exclusively on compass.com is increasing. As of February 2021, there were around 12,000 Compass listings nationally, with 2,800 (23%) “only on Compass.” Nearly a
quarter of Compass’s listings are exclusive content. In San Francisco, one of Compass’s biggest markets, 504 out of 913 total listings, a hefty 55 percent of listings, were exclusively on Compass.

The move towards exclusive content is about power. The organizations affecting this change are companies looking to grow revenues and maximize profits. The benefits of a potential shift in consumer attention will accrue to these for-profit companies at the expense of real estate agents and consumers. There may be a short-term benefit for real estate agents, by reducing their reliance on a national portal, but that reliance just shifts to a different company. And it is that company, and no one else, that becomes the distributor of consumer attention and leads to agents. The power remains with a company and not with an agent.

Ultimately, the consumer may be the biggest loser. The creation of new advertising channels, especially in markets outside of the US, means that homeowners will need to pay an additional fee to advertise on those new channels. And, in the words of Compass, if listings “never get listed on Zillow or Redfin,” millions of potential buyers may never see them, which could lead to less demand and a lower price for a property, a cost paid for by homeowners.

**Key Learnings**

Key takeaways in understanding new models of home sales fall into four categories, as seen below.

**Venture Capital**

Disruption in real estate is being driven by unprecedented amounts of venture capital. The influx of new models is creating more ways to buy and sell—and adding ecosystem complexity.

Many of the new, disruptive models are massively unprofitable. These companies are willing to lose billions to grow. For many new players in the market, it’s not about the house; it’s about the transaction. Many new models are attempting to reach profitability through a wider ecosystem play, generating revenue from adjacent transaction services. But it is still a difficult path forward, with low attach rates.

The biggest new models in real estate are well funded, and companies are willing to incur massive losses to build market share. The ability to sustain a lack of profitability gives them a new competitive advantage. The models with the most traction are using technology to automate processes and increase efficiency, not to replace people. Meanwhile, the traditional industry isn’t sitting still: smart agents and brokers are competing where they can win.
The Role of Agents

For the most part, growth in new brokerage models is still very much tied to agent count. Technology does not sell houses; agents do. Agents remain crucial, and central, to the real estate transaction. Competition between new brokerage models still revolves around agent recruiting and retention; therefore, it comes as no surprise that the biggest new models are those that have the most agents.

Consumer Behavior

Consumer psychology, particularly loss aversion, remains one of the largest obstacles to mass-market adoption. Consumers are hesitant to try something new when the downside of making a mistake is so large.

Future Trends

The industry is moving very slowly, but it’s never moved this fast. These new models have proven traction and growing consumer demand, but remain a small fraction of the overall market. Change will occur slowly; this is evolution, not revolution, and changing consumer behavior takes time.

In the end, the most successful models feature an intelligent combination of people and technology making the transaction faster and easier, and improving the overall experience of buying or selling a home.