



The FTC/DOJ Workshop
Current State of Real Estate Data
June 2018

The following document provides an update on the current status of data availability in the real estate industry. In the past several years, the breadth and depth of data available to real estate professionals, technology companies and consumers has been enhanced greatly. The real estate industry constantly strives to draw the appropriate balance between open data access versus data quality and reliability.

This paper is designed to provide an update on the proactive work that has been completed to enable brokers, both traditional and non-traditional, technology companies, online portals, mobile apps. and Multiple Listing Service Providers (MLSs) to help the public make more well-informed decisions about buying and selling homes.

Data Access 101

Today there are a multitude of ways for qualified real estate professionals and the technology companies that support them to share comprehensive, accurate, legally-compliant and up to date information. Cooperating Brokers, in alignment with the National Association of REALTORS® and MLSs, have been highly focused on creating policy that protects the best interest of consumers by providing a multitude of ways for consumers to educate themselves to make a sound buying and selling decision.

What is a Multiple Listing Service (MLS)?

The Multiple Listing Service or MLS as they are commonly referred to are the center points of data collection and distribution in real estate today. As of the date of publishing this document, there are 643 MLSs across the United States. Each of the MLS organizations allow real estate professionals to set up new property listings in the MLS system.

Every MLS organization provides MLS software to its members and participants. The MLS system is the technology platform used to fuel real estate data to be used by real estate agents and brokers as well as consumer property search websites, technology companies, and market analytics software. In addition to setting up a repository of property for sale – called an active listing – MLS systems also include methods for consumers to watch the market by setting their search criteria and then receiving updates regularly at the cadence they have selected (e.g. real-time, daily, weekly, monthly). The MLS system is also providing tools such as comparative market analysis, reporting, setting up home showings and a host of other tools and additionally connected data sources.

Each of the MLS organizations also enable local real estate professionals to conduct transactions with one another by publishing offers of cooperation and compensation.

Most MLS organizations fuel the real estate data displayed on over 10,000 consumer property search websites that often include active, pending and sold properties along with related information available from public records and many other sources of information.

In addition to the core MLS system, many MLSs also offer other ways for members and real estate agents to work more efficiently with consumers. Many MLS organizations offer online forms and online transaction processing solutions. Many also make it easy for agents to set up property tours with Showing Appointment software.

Still others offer the ability to process earnest money checks online which helps speeds up the transaction and protects the consumer against lost checks, insufficient funds etc. If a transaction falls apart, online earnest money collection also helps the consumer receive their refund more quickly.

The role of the MLS in providing highly accurate, actionable real estate information

The multiple listing service works directly with agents and brokers to facilitate the collection, curation and distribution of real estate information.

Agents and brokers proactively work with homeowners and apartment owners to secure the ability to sell or lease their properties. Once a real estate agent secures a property for sale as a listing or rental agreement through a contract, they go to work to collect all of the relevant information about the property. This work is completed by reviewing public records, interviewing the owner, and touring and photographing the home. Once this due diligence is complete, a new listing is entered into the MLS system. There are hundreds of required and optional data fields that must be completed to accurately describe the property listing.

The rules and regulations behind the data fields are carefully defined to ensure that the data being shared follows all local, state and national regulations.

MLSs prioritize compliance with HUD rules, and closely monitor the status of the sale of a property so consumers know the current status of every property they are viewing. Many MLSs now allow “coming soon” listings to provide consumers with access even before a home is available for sale.

Once the listing is submitted many MLSs submit the listing into an automated data checking product to review the accuracy of the information in terms of location, missing photos, regulatory compliance, claims/disclosure, ADA compliance and several other factors. If the software finds an issue, the agent is notified immediately so that the data can be cleansed. One of the main goals of an MLS organization is to

curate the most accurate, timely and comprehensive information it can so consumers can be fully informed with only the most relevant and valuable information.

Every MLS in the country has personnel dedicated ensuring that the data is as accurate as possible. WAV Group estimates that there are at least **1000** data quality control personnel throughout the industry dedicated to real estate data quality.

Some MLSs impose fines for those that do not comply with all rules and regulations. All MLSs proactively clean their MLS databases regularly. MLSs take the job of providing the most accurate database they can VERY seriously. That's one of the main reasons consumers give brokers and MLSs credit for having the most accurate data. MLSs primary goal is to create the most accurate data to ensure consumers have access to the most valuable information.

How does MLS data get leveraged?

Active real estate professionals leverage the software provided by MLS organizations to conduct market analysis, set up new listings, prepare comparative market analysis documents, build reports and provide their prospects and clients with the ability to see all active, pending and sold listings that meet their search criteria.

The MLS organizations facilitate data access for technology companies supporting brokerages, third party sites e.g. Zillow, Homes.com, Trulia, Realtor.com etc. and brokers to be used by for public display. In the past several years, the majority of MLS organizations have entered into direct distribution agreement with the largest property search portals, namely Zillow, Trulia, Realtor.com and Homes.com.

Smaller online search portals obtain property listing data through a variety of other sources like ListHub, Spark, Trestle, RE Data Vault, and Bridge Interactive described later in the report. Brokerages may also use direct

feeds from their franchise organization or directly from their website vendor to hydrate portals with on-market and sold listing information.

Advertising properties on portals is not a core or basic service of the MLS, but an optional service made available to brokerage firms to provide a service in ensuring portability of accurate and reliable property information.

MLS organizations provide data in a standardized manner that is used to fuel broker websites as a core MLS service offering through IDX, VOW and complete data feeds used by brokers for analysis. IDX (Internet Data Exchange) data can include active, pending and sold feeds in all states, except for states with non-disclosure rules. The VOW (Virtual Office Website) data feeds allow a consumer to register to receive even deeper property history.

VOWs have been in place for over 10 years. The industry stated recently its intention to continue to offer VOW feeds even though the DOJ mandate to offer this type of data expires in 2018.

Who qualifies to gain access to real estate data?

There are several types of organizations and individuals that can qualify to gain access to accurate, comprehensive and timely real estate information. Access is NOT determined by business model, size of company, market scope or any other type of discriminator.

1. Real Estate Brokers – Traditional and Non-Traditional

Real estate brokers in good standing with their local MLS qualify to receive real estate information, including the data they are most interested in – active, pending and sold properties. They apply to their local MLS and then the MLS is required to have approval of their data feed request in 5 business days or less according to NAR MLS IDX Policy mandates.

There is NO distinction about the type of business model that the brokerage operates under related to data access approval.

Any brokerage that holds an active license in good standing in the state in which it is requesting data is eligible to receive real estate information.

Franchise organizations operating nationwide websites can also access local real estate data to fuel consumer engagement and education on those websites.

2. Real Estate Agents

In most markets, real estate agents can also receive a data feed via a three-way agreement between their broker, MLS and themselves. The brokerage is the fiduciary custodian of agent usages of MLS data as required by MLS policy, Association of REALTORS® policy, and state Department of Real Estate laws and policies.

3. Technology Companies supporting Agents and Brokers

Technology companies that provide services to agents and brokers have access to comprehensive, accurate and timely real estate data. They apply to the MLS with a simple form also signed by the broker that is requesting data access. Technology companies must be authorized by the broker since the brokerage is the participant in the MLS and the fiduciary of the data authorized for use by the real estate agent and vendor.

4. Consumer-Facing Real Estate Sites

Many consumer-facing real estate sites also receive direct data feeds from MLSs via data agreements that are in place. If a consumer-facing site does not want to gain individual MLS access they can go to companies like ListHub and obtain access to nationwide real estate data from hundreds of MLSs nationwide in one feed.

Data access is also readily available for those that provide mobile and audio-based applications in addition to websites. In 2017, NAR approved the ability for audio-based search on in-home devices like Amazon's Alexa, Microsoft Cortana and Google Home devices.

5. Market Analytics Companies

Banks, REITS and other institutions also can gain access to real estate data by partnering with companies like [Realtors Property Resource®](#) or [CoreLogic](#).

Companies that provide market analytics to educate consumers about real estate market trends can also gain access to real estate from MLS organizations. [Companies](#) like [Terradatum](#), [Trendgraphix](#), [CloudCMA](#) and many [others](#) access real estate information to provide market snapshots. Market snapshots which real estate professionals are able to provide to consumers in Comparative Market Analysis, Blogging articles, public facing websites, and through many other mediums.

The mechanics of gaining access to real estate data

Access to real estate data can be achieved in several ways:

1. MLS Access

If a company is looking for access in one or several MLS markets they can apply to each of the local MLS organizations and submit a simple [application](#) for data access. Some data feeds are provided free of charge while some markets charge an access/maintenance fee. MLSs are required to approve the feed within 5 business days according to NAR MLS IDX Policy.

2. Listing Syndication

Once a property listing is created inside of an MLS it can be published on more than 150 sites via syndication networks like ListHub so that it can be available for consumers to view on websites/mobile apps nationwide.

ListHub is the leading platform nationwide for listing management, serving more than 60,000 brokerage firms, and synchronizing listing information from over 600 MLS data sources with more than 150+ publisher websites. The sites included in the ListHub [network](#) provide consumers with access to Freddie Mac Homes, property search, rental information and many other types of information for both domestic and international property search portals.

3. Listing Distribution

There are several companies that provide access to hundreds of MLS markets via an API or RETS (Real Estate Transaction Specification) method, both of which are standardized methods adopted by hundreds of MLSs and technology companies. These organizations also provide a centralized method for gaining approvals for usage of local MLS data feeds to make it faster and easier for start-ups, technology companies and brokers to get data access to multiple markets.

There are organizations who provide real estate data that is compliant to the latest standardized data format and methods of access developed by a collection of engaged industry volunteers at the [Real Estate Standards Organization](#) (RESO). RESO is a non-profit 501c(6) membership based open source standards organization that maintains the standardized methods and formats for distributing and accessing real estate data including the RESO Data Dictionary, the RESO Web API, and the RESO RETS standards. These industry wide adopted standards simplify access and encourage innovation to real estate data for new companies to engineer their solutions with the latest technological techniques for distribution of data. Over 750 companies actively participate today in the development and adoption of RESO open source standards including

MLSs, brokerages and technology companies. MLSs are required to adopt and implement RESO standards for accessing their real estate data through NAR MLS Policy mandates.

Here are the key benefits that programs like [Trestle from CoreLogic](#), [Bridge Interactive from Zillow](#) Group and [Wolfnet](#) provide to companies of all sizes looking to leverage real estate data with standards.

- **Highly available API**
Top-tier cloud infrastructure scales to meet site traffic demands.
- **No listings database**
Remove the burden and cost of maintaining huge databases.
- **Normalized data**
Avoid mapping multiple data sets.
- **Agent validation**
Provide integrated agent authentication and single sign-on access.
- **Simplified licensing**
Reach out to data providers in a consistent way.

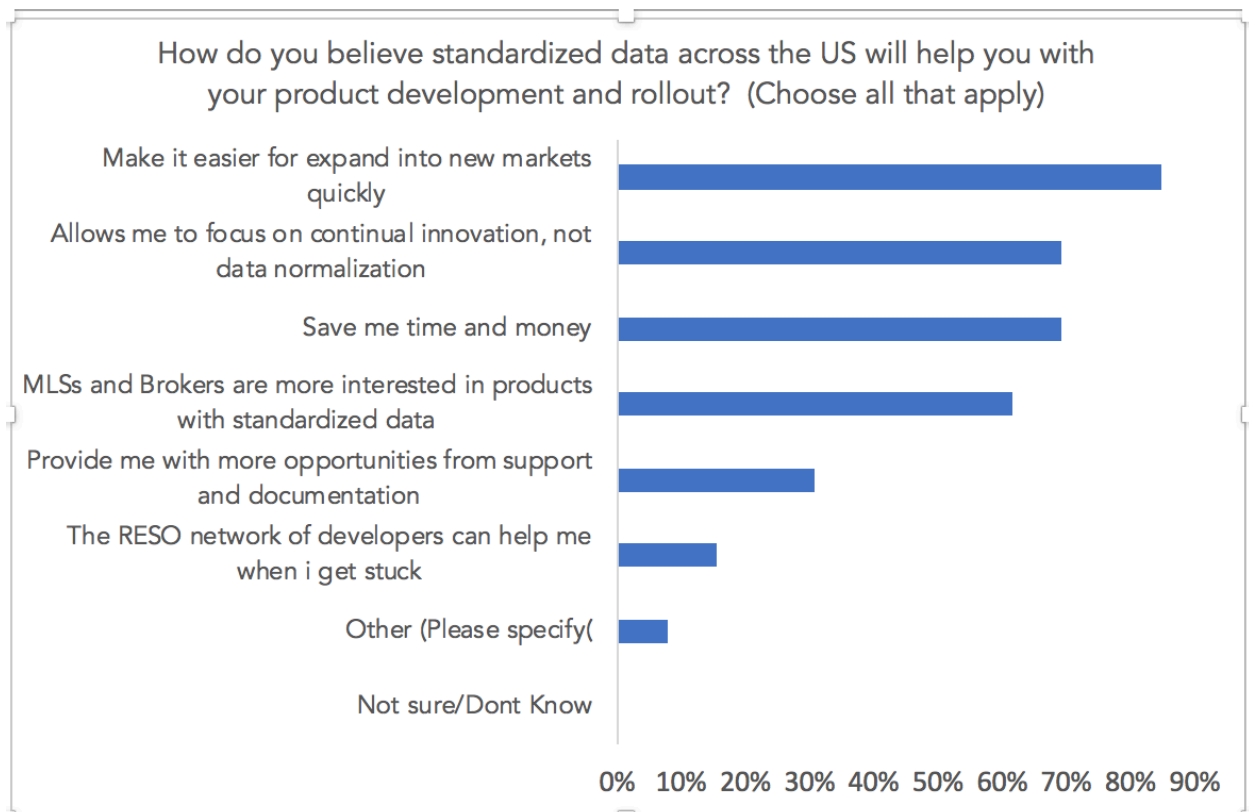
4. FREE Reference Server

If a company is building a new software tool that requires real estate information, they can get access to FREE sample MLS data on RESO certified platforms to test the viability of their application with actual MLS data. Since early 2017, technology companies have had access to a reference server delivered via a [partnership](#) with the Austin Board of REALTORS®, CoreLogic and the Real Estate Standards Organization and now that access has been also expanded through an additional partnership with Austin Board of REALTORS®, Zillow Group and the Real Estate Standards Organization.

This free access is available to any organization or any size intending to test the data for any type of applications. Today, there are over 500 companies that are leveraging this valuable resource and the numbers continue to increase.

There was a survey completed recently by RESO to measure the perceived effectiveness of this free data resource. The results were very encouraging. The data is being used to test blockchain, client relationship management, transaction management, websites, search portals, mobile apps, marketing technologies and many other types of technologies.

According to a survey conducted by RESO in 2018, 85% of the respondents believe that having FREE standardized data access is going to make it easier for them to expand into new markets. 69% believe the industry's effort to standardize data will allow them to focus on continual innovation, not data normalization.



Speed of gaining access to real estate data

The industry has worked hard in the past several years to simplify and speed up the process of gaining access to MLS data. In addition to the aggregated data sources mentioned above, MLS Policy outlined by the National Association of REALTORS® now requires MLSs to provide approvals to application in 5 days or less. In May 2017, NAR enacted the following policy:

Requests for IDX feeds/downloads must be acted on by the MLS within five (5) business days from receipt, barring extenuating circumstances related to an individual's qualification for MLS Participation, and review of the participant's and vendor's use of the IDX information consistent with the MLS rules, in which case an estimated time of approval or denial must be issued. (Amended 05/17)

What data types/fields are available today?

Today, due to the hard work of the Real Estate Standards Organization, there are over 3,000 fields and values available in a standardized format while also allowing access to additional localized fields in each individual MLS. These fields include everything from bedrooms and baths to home energy efficiency information, saved search sharing options and many, many others.

Real estate information is collected which allows brokerages and tech companies to display active, pending, sold, pre-foreclosure, foreclosure, rentals, light commercial and commercial property types.

Today over 96% of MLSs across the country have been certified on the RESO Data Dictionary which provides technology companies with a standardized way to aggregate data across the country. Interested

parties can go to [RESO.org](https://www.reso.org) and click on the [RESO DD 1.6 Wiki](#) and learn all about the fields available and how to leverage the standard.

How does the industry ensure that the data is suited to help protect the best interests of homeowners as well as home buyers and sellers?

The real estate industry dedicates thousands of man-hours every year to ensure that the real estate data being used by consumers is as accurate, timely and comprehensive as possible.

The policies driving data accuracy evolve frequently. Today MLSs are required to provide refreshed data every 12 hours. Most MLSs are now providing data that is refreshed every 15 minutes or less. Greatly exceeding the policy set by the industry and with the RESO Web API standard, many MLSs now allow for real-time real estate data access.

Technology companies can update their data nearly in real-time in most cases now. The freshness of real estate information is especially important now since many markets have very little inventory available. Consumers in the hunt for a new home value the timeliness of the information fed to them from the real estate industry.

In all cases, the MLS supports the brokerage who has obtained the authorization by the seller under the listing agreement to market the home. Neither brokers nor MLSs may market property that is not covered by a contract with the seller.

Overview of existing and emerging consumer-facing platforms for accessing listings information

Today, there are more than 10,000 websites available that provide consumers with property information, market stats, rentals, buying/selling tips, mortgage tips and many other topics. [Hitwise](#), one of the nation's leading sources of measuring online traffic and engagement monitors the

consumer engagement on 20 million websites and 500 million searches monthly.

In April, 2018 alone, there were 870,916,990 consumers visits to real estate websites from nearly 50 million consumers according to Hitwise. Hitwise data also demonstrates that almost 1% of all Internet traffic is related to real estate. The real estate industry, by opening up its data for public consumption, has allowed consumers to conduct their own research on real estate trends, neighborhoods and lifestyle information, and properties on thousands of websites of their own choosing.

In just the top 50 real estate websites and mobile apps, the real estate industry provides consumer information and education on properties for sale and lease, foreclosures, auction properties, preparing your home for sale, pricing your home right and many, many other topics. These sites are available free via websites and mobile apps. They are delivered to consumers from franchises, brokers, third parties, multiple listing services, builders, HUD, and other sources. The data is deep and rich with many of these sites. Listing Detail pages include satellite views, parcel maps, walkability, school ratings, virtual reality tours, mortgage calculators, values of similar homes and even Artificial Intelligence (AI) based smart search.

Hitwise Ranking – April, 2018

Rank	Website	Unique Users
1	www.zillow.com	26,012,100
2	www.realtor.com	12,609,100
3	www.trulia.com	9,711,500
4	www.redfin.com	6,028,800

5	www.hotpads.com	1,690,770
6	www.homes.com	1,804,740
7	www.remax.com	1,866,220
8	www.estatesales.net	807,944
9	www.movoto.com	1,635,940
10	www.coldwellbankerhomes.com	1,312,520
11	www.har.com	618,610
12	www.coldwellbanker.com	966,193
13	www.century21.com	941,807
14	www.estately.com	828,965
15	homes.trovit.com	687,424
16	www.auction.com	643,747
17	www.biggerpockets.com	622,253
18	www.kw.com	554,989
19	www.realtytrac.com	641,361
20	www.curbed.com	601,032
21	www.zumper.com	449,406
22	www.landandfarm.com	405,763
23	www.propertyshark.com	538,651
24	www.weichert.com	415,198

25	www.point2homes.com	410,198
26	www.ziprealty.com	301,021
27	www.dickpritchettrealestate.com	54,708
28	www.landwatch.com	484,052
29	www.neighborhoodscout.com	460,156
30	www.propertypanorama.com	452,152
31	www.areavibes.com	402,186
32	www.landsofamerica.com	257,409
33	www.newhomesource.com	366,894
34	www.on-site.com	312,945
35	www.berkshirehathawayhs.com	315,981
36	www.homefinder.com	284,087
37	www.hubzu.com	154,624
38	www.realtynow.com	311,258
39	homemetry.com	346,987
40	www.hudhomestore.com	190,896
41	www.homepath.com	164,736
42	www.rehold.com	289,203
43	www.tollbrothers.com	203,535
44	www.xome.com	164,952

45	www.realtystore.com	183,286
46	www.rightmove.co.uk	124,768
47	www.housinglist.com	169,046
48	www.pulte.com	132,856
49	www.kbhome.com	107,257
50	www.bhgre.com	118,910

Broker Public Portal with Homesnap



Progressive leaders from top brokerages and MLSs came together with the sole intention of creating an ad-free, objective source solution to provide consumers with unfettered access to active and off-market properties nationwide. This solution was called Brokers Public Portal.

The Broker Public Portal partnered with Homesnap, a venture-backed, highly rated consumer facing app and website provider. The Homesnap app streamlines consumer access to connect directly with a local agent.

Every real estate professional in a participating MLS has the opportunity to invite their sphere of customers and prospects to the program to provide interested consumers with THE most timely, accurate and up to date information available.

Through the Broker Public Portal initiative, over 20,000,000 real estate consumers have been invited to download the application and connect with an agent if they so desire. Consumers can easily ask an agent a

question via a messaging system to be sure they have ready access to the network of local real estate professionals that are best prepared to address their local questions and issues regarding real estate. Nearly 1 million requests for more information were sent from consumers to agents through the platform. Over 20 million consumers visited Homesnap in 2017.

Today, 145 MLSs covering over 200 markets and serving 875,000 real estate professionals are offering Homesnap to their members, creating a nationwide footprint of comprehensive, timely and accurate real estate information for consumers.

Broker Platforms

Independent and franchise brokerages provide access to data in local, regional and nationwide sites. There are hundreds of website providers that enable the consumer to see active, pending, and sold listings on broker websites. Nearly every broker in America today highlights the entire market's inventory on their sites. Here's an [example](#) of how that data is displayed for properties in the DC area.

Some brokers also provide a VOW (Virtual Office Website) solution which allows a consumer to register and then receive even deeper real estate insights. In the example shown below, Wolfnet Technologies a leading provider of VOW's is powering a website for Century 21 Hometown in California. Consumers are invited to unlock additional data by completing a simple registration form.

There are [hundreds](#) of technology providers that fuel brokers' ability to share information with consumers. Each of these companies has developed relationships with MLSs and can provide ready access to real estate information for any type of broker that requests it.

For sale \$1079000
1780 Calle Pacifico, Arroyo Grande, CA 93420

4 2 1 **2487 sqft**

Virtual Tour

805-931-7111
mobile: 805-441-1964
Contact Me

Access Price History, Days on Market, & More!
Unlock exclusive data! ▶

14 Days On Site | 2 Views | 0 Favorites | 0 Shares

Upstream RE

[UpstreamRE](#), an industry initiative led by a collaboration between brokers, franchises and the National Association of REALTORS® is developing yet another method for brokers, tech companies and online search portals to have access to real estate data. This initiative is creating a single source of entry for real estate data that can be shared with hundreds or even thousands of technology companies.

Each broker inputs a listing either directly into UpstreamRE or their local MLS. Then the broker designates which technology providers they would like to receive their data. UpstreamRE provisions API data access to the company. Once the program goes live it will create an entirely new way for tech companies to secure data from brokers directly.

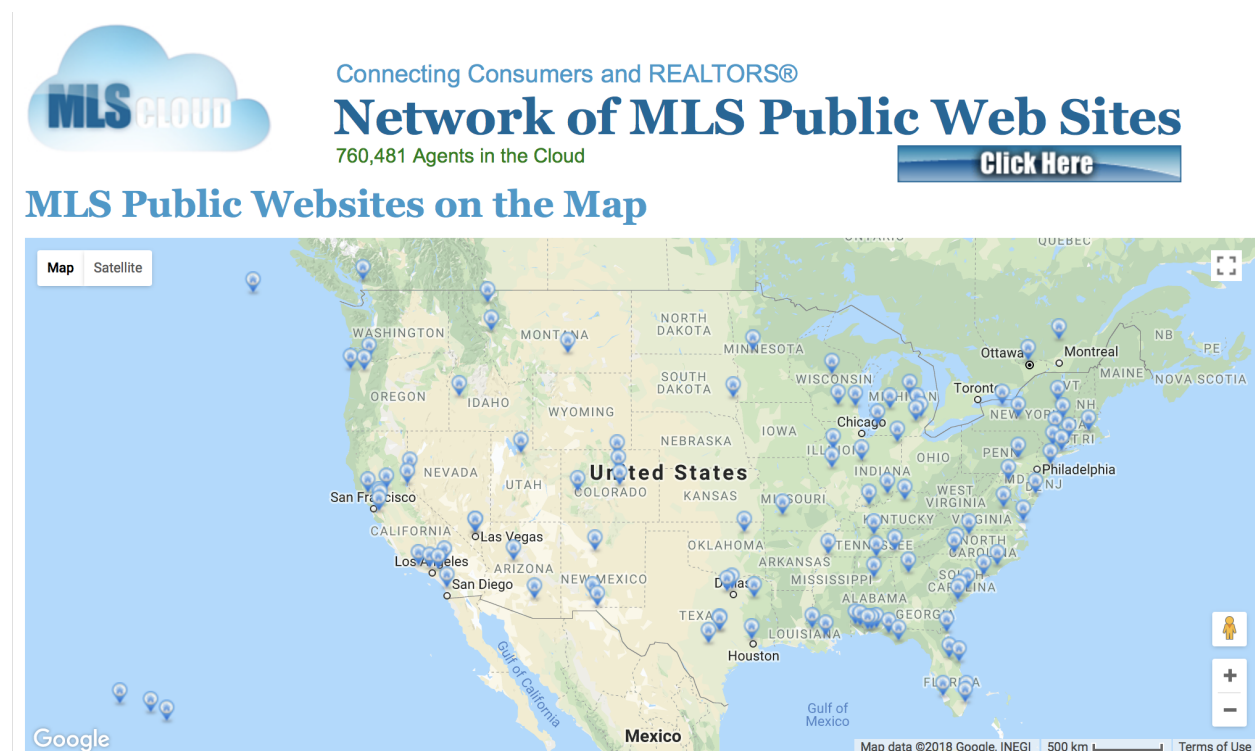
MLSGrid

[MLSGrid](#) is an initiative being led by an ever-expanding group of MLSs to simplify the ingestion of IDX data. Today, technology companies

interested in securing an IDX feed have to work with individual MLSs and then normalize the data in their systems. With MLSGrid, a technology company can gain approval for multiple MLS markets and then receive one feed instead of several to eliminate the need for data normalization. Once this program gets well-established, a website provider for example, will be able to go to one source instead of several simplifying the process of leveraging real estate information.

MLS Platforms

While MLSs are primarily responsible for collecting, cleaning and distributing data to others, MLSs also provide consumer access to comprehensive, up to date and accurate data. MLSs representing nearly 750,000 agents offer their own version of consumer access in all [50 states](#).



MLS System Consumer Data Access

There are several MLS [technology platforms](#) used by MLS organizations called MLS systems. These systems are used by licensed real estate

professionals to input new property listings, conduct market evaluations and provide on-going, real-time updates to consumers. Consumers can also work with agents and set up automated searches outlining the criteria that they are interested in purchasing.

Additional Types of Data Available to Consumers and Developers

While property data is very interesting to consumers, there are a multitude of additional types of data available publicly to help consumers make informed real estate decisions. There are many data sources that can be leveraged by brokerages, both traditional and non-traditional, technology start-ups, entrepreneurs and public companies. With the use of API's, it's easy to mash-up a variety of data sets to create interesting ways to evaluate the real estate industry.

There are now literally hundreds of data sets that can be used to deliver more granular insights and correlations to create opportunities for new types of technology solutions. These data sets are available to be licensed by developers.

There are hundreds of data sets available now surrounding the real estate sale, homeownership, and property investing, predictive analytics, neighborhood level statistics, weather patterns at the property level, transit proximity, drive time, etc.

Here's just a few examples of the types of data available today. This data can be purchased by start-ups, brokers, tech companies or website builders to be used to educate and inform real estate consumers, investors or institutions.

Lifestyle Search

There are several sources that have aggregated lifestyle factors like amenities, school ratings, weather patterns, etc. This allows a consumer to

search first for the location that meets their criteria and then search for a specific property.

School information

Quality of schools is one of the largest factors that consumers need to make a sound decision for their family. Companies like [Greatschools.org](https://www.greatschools.org) and several others have collected school ratings and rankings based on customer feedback, test scores, access to advanced courses, student progress etc. Many websites offer this type of information to help consumers find the home of their dreams with the quality of school they are looking for as well.

Walkability/Transit Scores

There are several companies that measure walkability of a particular neighborhood like [Walkscore.com](https://www.walkscore.com). There are also companies that provide information about the proximity to public transportation. Many websites incorporate this information to help consumers understand the transportation options available to them for each property they are viewing.

Neighborhood level data

Companies like [Attom Data Solutions](https://www.attom.com) power neighborhood level information that can be used for market analysis. Companies like [Neighborhoodscout.com](https://www.neighborhoodscout.com) have packaged this type of information into a monthly subscription that consumers, brokers/agents, lenders and property managers can leverage.

Weather patterns

In some parts of the country like California, for example, larger properties can have several microclimates. One brokerage in California, for example, added micro-climates to properties where consumers might want to grow grapes or other crops.

AI-based Smart Search

New AI-based smart search technologies are emerging that allow a consumer to search at a much more granular level. Companies like [restb.ai](#) for example, enable consumers to search for a sunny kitchen, porch swing, or even a Wolf stove. As this technology matures, it will allow the process of property search to become much more specific than it is today.

Virtual Reality Walk through Tours

Companies like [Matterport](#) and several others have brought virtual reality to real estate. With nothing more than a \$5 virtual reality viewer, a consumer can look at every nook and cranny in a house. This technology is affordable and readily available through a network of photographers. Virtual Reality cameras are getting much more affordable making it easy for builders, property managers, brokers and agents to bring in-depth views of homes to the public.

Street Level drive through tours

Google and others now deliver [Street level](#) drive through tours. A consumer can “drive” down the street on their computer and look at the neighborhood without having to be there. This data can be used by anybody with a license from Google.

Drive Time

Commute time is a major factor for consumers when purchasing a home. Through partnerships with companies like [Inrix](#), tech companies, brokers and start-ups can help a consumer know exactly how long it will take them to drive to work or school at every time of the day. This information is being offered on real estate websites to deliver yet another type of intelligence to help a consumer make a well-informed purchase decision.

Property Improvement/Transaction History

Today, consumers can have access to the history of the renovations and upgrades to property. Companies like [Housefax](#) allow a consumer to run a free report on the property they are interested in to see what repairs it might need. For example, it might tell you that the home's roof has not been replaced in several years based on Building Permit history. That could be a major expense, so these services help consumers understand the short and longer-term liabilities they are purchasing. These services also show transaction history. A consumer can purchase a Housefax report on their own. Today, many real estate professionals provide this report as a service.

Value of Upgrades

There are companies that help a consumer understand the impact that renovations can have on the value of a home based on the local market. Products like [REALTORS Property Resource®](#) have integrated this data to help a consumer manage the return on investment of upgrades to their home.

Public Records

There are companies like [CRS Data](#) and CoreLogic's REALIST product and a new entry called [REMINE](#) that package public records information to allow tech companies, brokers and MLSs to deliver actionable intelligence and prospecting using public records information.

Property Valuation

There is a myriad of companies today that help a consumer estimate the current value of their home or a home they may be interested in purchasing. Many of these products are called Automated Valuation Models or AVM's.

Companies like Collateral Analytics, CoreLogic, House Canary, Zillow, Trulia and even the National Association of REALTORS offer AVM's that are publicly available. CoreLogic offers a product called [ePropertyWatch](#) which sends neighborhood transactions, and home values on a monthly basis to consumers.

Some brokers like [Fox and Roach REALTORS®](#) enable consumers to view multiple sources of AVMs to give a consumer a range of valuations. Having this range of valuations allows consumers to have an educated discussion with an agent when pricing their property for sale or negotiating a deal for a home purchase.

Agent Ratings and Performance

Buying and selling a home is one of the most important financial transactions for families. It is very important for consumers to find the right salesperson to work with that will be responsive, professional and highly knowledgeable of the local market. Today, there are many organizations that are creating full transparency to the performance history of real estate professionals.

Companies like [QSC](#) invite actual home buyers and sellers to complete a review of several of the most important factors of a transaction. This feedback is used to inform consumers about an agent's service levels, negotiation skills and overall ability to support a consumer through a real estate transaction. Brokers also use the feedback to coach their agents on ways to continually improve their service.

There is a myriad of solutions available now to help consumers evaluate not only agent service performance, but also the depth of their experience. Companies like [Homelight](#) shine a light on the depth of experience that agents have so that consumers can make well-informed decisions.

Agent performance data is so powerful that nearly 1/3 of consumers choose their agent based on their ratings, according to a study conducted by the Houston Association of REALTORS®.

Mortgage, Refinance, Home Equity Loan Rates

Many sites now leverage dynamic mortgage, loan and home equity loan rates offered by companies like [Bankrate.com](https://www.bankrate.com). Their data is shared on their own site and is available to others to populate a variety of financial calculators to help educate consumers about what they can afford.

True Lifestyle Cost Calculators

True Lifestyle Cost

\$6,499 / month

Your personal TLC is calculated by using your tax filing status, tax bracket, income, debts and credit score. Just in case you forgot something, we've inserted default values, but you can always change those in [your profile](#).

🏠 + 💡 + 🚗 + 📺 = TLC

Gross Income / month

\$ 14414

Filing Status

Single

Tax Bracket

28%

Net Income / month

\$ 10000

Debt Obligations / month

\$1,000

Available Funds / month

\$10,000

🏠 Mortgage

-\$2,383

💡 Utilities

-\$517

🚗 Transportation

-\$2,748

📺 Monthly Bills

-\$900

🏠 Debt Obligations

-\$1,000

Remaining Funds / month*

\$2,501

Annual Tax Deduction*

\$2,384

*Amounts shown are estimates. If you have questions, please see a qualified tax planner.

Mortgage

Monthly Bills

Commute

Utilities

Debts

🏠 Mortgage

\$2,383 / month

>

💡 Estimated Utilities

\$517 / month

>

🚗 Transportation

\$2,748 / month

>

📺 Monthly Bills

\$900 / month

>

There are also many locations where consumers can pre-qualify for loans, again protecting them from purchasing a home beyond their means. [TLCEngine.com](https://www.tlcengine.com) offers a localized, in-depth calculator that helps consumers know all of the costs of owning a home, not just mortgage and insurance.

Buyer interest/property demand

When a consumer is considering selling their property, many are interested to know what type of demand is there for a property like theirs in the neighborhood where it is located. Today, thanks to companies like [Buyside](#), brokers can offer full transparency on the demand for a property. Buyer Heatmaps are available which reflect all Buyer Activity including: registered buyers, online inquiries, showing visits, open house sign ins, etc. for the past 90 days. The statistics reflect buyer interest within a 5-mile radius in the price range of the subject property.

Home Energy Score

Consumers also have ready access to the Home Energy Score now thanks to a terrific industry collaboration with the Department of Energy's [Better Building Initiative](#). According to its website, the Home Energy Score provides homeowners, buyers, and renters directly comparable and credible information about a home's energy use. Like a miles-per-gallon rating for a car, the Home Energy Score is based on a standard assessment of energy-related assets to easily compare energy use across the housing market.

This exhaustive list of real estate data available today is just a small sampling of the types of insights available to consumers today. Home buyers and sellers have ample opportunity to learn about every facet of buying, selling, financing and owning a home today.

Availability of listings information to consumers

As highlighted in earlier sections of this document, real estate information is readily available to consumers on over 10,000 websites. It is interesting to note, however, that consumer research demonstrates that consumers

TRUST information delivered directly by brokers and MLSs more than other sources. They believe that these sources pay close attention to deliver accurate, timely and comprehensive information.

Stronger Perceived Accuracy of Industry-Supported Sites

According to a study fielded earlier this year by WAV Group on behalf of the Multiple Listing Service of Long Island (MLSIL), consumers believe that sites delivered from MLSs, Brokers, and Agents are nearly twice as accurate as third-party sites.

Regulatory and competitive hurdles facing listings platforms

Listing data regulations are centered primarily on ensuring that real estate information is accurate and timely so that consumers can see a full picture of the real estate market they are interested in buying or selling property. There are few, if any, restrictions on the types of organizations that can distribute real estate information.

Today, just about every MLS organization in the United States provides real estate data to third party listing portals like Zillow, Trulia, Realtor.com, Homes.com etc.

Through services like ListHub, any portal can ingest real estate data from markets all over the United States very affordably. Many MLSs also syndicate data to more than 150 sites through this service.

There are no regulatory hurdles that prohibit non-traditional brokerages, portals or technology companies from leveraging real estate data to provide the public with real estate information. Those interested in using real estate data have several sources to license the information from. Interested parties must secure the proper approvals to ensure that are not misrepresenting the market to protect the best interest of the American public.

The real estate industry takes great care to ensure that data being ingested by consumers to make the most important buying decision of their life is compliant with all local, state and national rules and disclosures. It is part of the industry's Code of Ethics.

Effect of listings platforms on consumers' use of real estate services

Today's home buyer and seller is accustomed to using the Internet to research everything from restaurants, to movies to even choosing a doctor. The real estate industry is no different. While consumers enjoy the broad online availability of real estate education, it does not diminish their interest in seeking the counsel of a real estate professional during the process of buying or selling a home regardless of business model. The majority of consumers are still committed to working with real estate agents.

Consumers STILL rely on professionals

According to [NAR's 2017 Profile of Home Buyers and Sellers](#), 92% of consumers used a real estate professional in their transaction. Only eight percent of recent home sales were FSBO sales again in 2017. For the third year, this is the lowest share recorded since the report started in 1981.

According to the same NAR Study, eighty-seven percent of buyers recently purchased their home through a real estate agent or broker, and seven percent purchased directly from a builder or builder's agent leaving only 5% that did not work with a real estate professional.

Consumers feel more prepared to find the property today because of the data that is readily available, but that does not mean that they do not seek the counsel of a professional for the preparation, marketing, negotiation and successful completion of the transaction.

Consumers demonstrate very strong interest in continued support from REALTORS® for sellers to price the property and market it effectively and negotiate the best price to maximize the value of their investment.

Renters also appreciate working with REALTORS® more than working on their own. According to a consumer study fielded by WAV Group on behalf of the Houston Association of REALTORS®, consumers were more satisfied with real estate agents than leasing agents during the rental process.

While data is important, the majority of American home buyers and sellers still rely on the advice and counsel of real estate professionals for their real estate needs.

While data and technology have made it easier for consumers to stay educated about the market, they still rely on support and counsel from real estate brokerages and agents.

Changes in traditional real estate broker, brokerage, and Multiple Listing Service (MLS) practices

The practices of traditional real estate brokerages and MLSs have remained relatively stable. Agents, supported by their brokerages provide robust service and counsel to help their buyer clients get the most value for their investment and help their seller clients maximize the return on their home investment.

Many traditional brokerages have expanded their technology offerings to include online transaction management, mobile apps. and client relationship management software.

Teams of agents, each of which who specialize in certain aspects of the transaction have become much more prevalent within the ecosystem of a real estate brokerage.

MLSs continue to provide a centralized standardized method for sharing accurate real estate information and fueling real estate information on websites and mobile apps. In the past several years, the number of MLSs has decreased from over 900 to less than 650 today. This consolidation has reduced the cost of operating in multiple MLS markets for brokers and technology companies. This hard work also makes it easier for new companies to enter the space since they can now access larger data sets with fewer barriers. The industry has continued to support MLS consolidation where and when it makes sense as a business.

Changes to MLS Policy

The National Association of REALTORS® (NAR) developed a comprehensive set of data policies many years to ensure the industry was protecting the best interest of consumers. In recent years, the policies driving the display of real estate data have increased a broker's ability to broker even broader and easier to use data access. In the past three years MLS Policy has been enhanced to now require the following:

- Ability to co-mingle data between MLSs
- Data must now be updated at least 12 hours; most MLS update data every 15 minutes or less; Prior rule required data to be updated every 5 days
- Approval of IDX data feeds now required in 5 business days or less
- Expanded data now to include active, pending and sold properties
- Require at least 7 years of sold history to enable deeper market analysis
- Requirement to adopt RESO Standards which can be demonstrated through official RESO certification and offer standardized data to make it easier for technology companies and brokerages to expand

into multiple MLS regions quickly and innovate in their products and services.

- The Virtual Office Website requirements remain in place even after the mandate expires in 2018.
- MLS of Choice for agents and brokerages to ensure MLSs compete based on value proposition of services and community.

Emergence and growth of new fee and service models

The real estate industry is robust because of its entrepreneurial spirit. Smart, well-financed business leaders continually enter the space and contribute to the continual evolution and vitality of the industry.

There are a myriad of new types of brokerages and franchises emerging some with unique non-traditional fee and service models. These new models are enjoying success right alongside the success of their traditional counterparts.

Some of the largest infusions of capital, however, have been realized by more traditional business models. The lines between traditional and non-traditional models have blurred.

There seems to be little, if any, hurdles limiting the consistent influx of well-heeled entrepreneurs, launching exciting new business models and bringing billions of dollars of investment capital into the real estate industry.

Virtual Brokers

In the recent past the industry has witnessed explosive growth from brokers that deliver primarily virtual service and support and rely heavily on technology to support agents and their clients. eXp Realty, as an example has grown from less than 1,000 agents to over 12,000 today in less than 2 years and recently achieved a market cap of \$1 billion. Their model does not rely heavily on bricks and mortar offices, but it does

follow traditional brokerage principles for the most part. eXp Realty's founder, formerly of Keller-Williams, borrows some of the principles of that organization by providing stock ownership to its agents.

Nationwide Niche Brokers

Nationwide niche brokers are emerging as well. Instead of franchising as a means to expand across the country, a single brokerage is expanding into several states. Brokerages are also focusing their offers on a particular type of real estate and recruiting the best of the best in a niche. Lake Homes Realty, for example focuses their business around selling lake homes across the United States. They recruit highly trained and experienced agents that specialize in selling lake homes in resort communities.

Lake Homes Realty is one of the nation's fastest growing real estate companies and is a full-service, lake-focused real estate brokerage currently operating in 17 states. The company's unique operations model is built around the concept of a one-stop website for lake homes and land. The company, like eXp Realty, has foregone a focus on brick-and-mortar locations, choosing to instead invest in a select group of top-producing local agents and in providing consolidated lake real estate listings for consumers via the company website, www.LakeHomes.com. Lake Homes Realty was named [#927 on the 2017 Inc 5,000](#).

New Franchises

There are several new franchises that are growing very quickly.

[Next Home](#), for example is targeting small to medium sized brokerages with a more affordable and automated marketing and technology, flexible commission plans and shorter-term franchise contracts. Their brand is focused at attracting millennial agents. The company has grown to 300 offices with 3000 agents in less than 3 years.

[Compass Real Estate](#), a franchise focused on high end, luxury markets like New York, Los Angeles, Miami, Aspen and The Hamptons was started by

New York investment bankers and have raised over \$500 million in the past several months, the largest capital raise in the history of real estate brokerages. Compass aggressively recruits top producers in luxury markets by doling out packages that can be worth as much as \$1 million over time. They, like many traditional and non-traditional brokerages, claim they have breakthrough technologies that will help their agents be more productive.

[United Real Estate](#), another franchising powerhouse, has come out of the gate in the past three years and has nearly 80 offices and 3000 agents. They recently announced 121% growth year over year in transaction volume and 106% growth in agent count. Their 100% commission model and strong familial culture has landed them on a spot on the Inc. 1000 list.

[Homesmart International](#), one of the largest network of franchises with more than 15,000 agents and 130 offices, recently announced that it is now partnering with a human resources firm to provide more affordable health care and benefits for their agents. Other brokerages do not offer this service.

Discount/Flat-Fee Brokers

There has been an explosion of franchise models that offer lower fees and reduced service levels to their clients. This model relies heavily on technology innovation to ensure that agents have the tools they need to conduct business. These businesses are targeting the value-based home buyer and seller.

Quicken Loans recently purchased For Sale by Owner and has emerged as one of the largest FSBO brokers in the world.

There are discount brokers entering the U.S. market from around the globe. UK-based [Purple Bricks](#) launched in Los Angeles in September 2017. They have a very aggressive ad campaign that talks about the their flat-fee and advantages of using their customer-service model.

iBrokers

The iBroker segment, led by companies like [OpenDoor](#), [Offerpad](#) with a recent entry by Zillow Group, each have raised hundreds of millions of dollars to fund the purchase and flipping of properties. Interestingly, the commissions and fees paid by consumers to these groups is actually [HIGHER](#) than the commissions paid to traditional brokerages.

Consumers are paying a premium for the convenience of not having to prepare their home for sale. While this group of start-ups has gotten a lot of the media attention recently, the jury is still out if they are a viable business model and if consumers will discount them because of the higher fees they are paying to participate in this model.

Hybrid Marketing/Brokerage Models

[Redfin](#) is another brokerage that offers a discount model and a full technology suite. Redfin, unlike most brokerages, has a website that competes with the strongest third-party portals. In April, 2018 Redfin.com was ranked 4th in total visits according to Hitwise trailing closely behind Zillow, Trulia and REALTOR.com. They combine their online strength with discounted commission fees for sellers. They are also entering the iBroker space with their Redfin Now offering. In mid-2017, Redfin went public raising \$138 million and realizing a market cap of over \$1.7 billion.

After reviewing this partial list of the amount of capital that is entering real estate and the diverse spectrum of models being offered, it does not appear that there is any obstruction to new entries into the industry. The definition of traditional vs. non-traditional is

graying so there is no clear-cut differentiation any longer in our view.

Obstacles and catalysts to innovation in real estate fee structures and service models

WAV Group believes there are many catalysts to continued innovation in the real estate industry as evidenced by the huge infusion of capital the industry has experienced.

Catalysts

1. Changing consumer needs and desires

The needs of real estate consumers are ever-changing. The entrepreneur that taps into an emerging need may be able to ride a new wave of success. Zillow, for example, launched their portal with the Zestimate – the most well-promoted AVM at the time. Home prices were rising rapidly and all of us wanted to know how much our house was worth. Zestimate's were the subject of conversation in the early 2000s. Smart innovators listen for those cues and deliver a technology that meets an unmet need for today's consumer. Today, AVM's are provided by many companies in delivering consumers with tools to research real estate.

2. Changing market dynamics – foreclosures to lack of inventory

The dynamics of the real estate industry change often. In just a couple of years we have gone from a market with too much inventory and deflated prices to one with extremely limited inventory and rising prices. Every time the market shifts dramatically it spurs opportunities for new ideas and solutions.

3. Technology breakthroughs

The continual stream of technology innovation continually provides a catalyst for new ideas in real estate. Currently the birth of virtual reality, artificial intelligence and blockchain technologies are examples which are inspiring many new real estate technologies to innovate new websites, mobile apps, customer service, property search and online marketing.

Artificial Intelligence companies like [restb.ai](#), for example, are re-inventing the way we search for properties. [Matterport](#) has brought virtual reality to product tours. Several companies are examining applications to simplify and speed up real estate transactions. There does not seem to be any end in sight.

The proliferation of API's has simplified data portability and integration inviting more sharing and mashing up of disparate data sets.

Finally, the amazing progress that the Real Estate Standards Organization (RESO) has made in standardizing the way real estate data is described and transported is making it much easier for new and established companies to innovate.

RESO has published two cases that clearly outline the cost and time advantages standardized data delivers. [MyTheo](#), a start-up organization proved that using RESO data saved them 40% of their development time. Homes.com, a well-established online portal recently published a case study that demonstrated that the industry could [save \\$1 billion](#) overall by fully deploying data standards.

Obstacles

After reviewing the myriad of data types and thousands of technology companies, it does not appear there are many hurdles to continue innovating and provide more information transparency to consumers. There are some obstacles.

Learning the industry - Education

A new entry must learn how to gain access to data themselves or rely on one of many companies that can provide data access. As long as the organization is working to provide data to a brokerage or agent that is licensed to serve the best interest of the consumer, data access will be granted.

Many new organizations find RESO.org, NAR's CRT Labs, RETechnology.com, Zillow Group's Bridge Interactive Solution. CoreLogic's Trestle platform FBS's Spark platform or Move, Inc's ListHub platform and then they quickly get the support they need to launch their idea.

Property Taxes

Property tax laws are partially responsible for a lack of inventory and creating hurdles to home ownership in some markets. Consumers cannot afford to significantly increase their tax liabilities, so they prefer to stay in their homes. When there's not enough inventory to sell, competition among agents is high and some begin to discount their services to secure a new client. If the market slows down, the demand for new technologies may slow with it, creating an obstacle to continued real estate investment.

Mortgage Rates

Increasing mortgage rates threaten innovation for the same reason as Property Taxes. The real estate industry is a resale industry. Consumers are not selling their homes in order to keep the lower mortgage rates obtained through first-time buying or refinancing over the last few years.

Competitive impact of non-traditional real estate fee and service models

While the definition of non-traditional models is pretty blurry today, there are many types of business models thriving today. Some offer minimal service at lower fees, some use staff instead of real estate agents. Still others provide real estate service without local physical offices. These

models co-exist in markets with traditional commission structures and service models. In some markets the newer business models have larger market share than older brokerages e.g. Phoenix

Despite all of these innovations, traditional brokers are still significant and compete alongside the new business models. The new entries as well as third party sites like Zillow and Trulia, have encouraged every type of brokerage to step up their game with new consumer-centric technologies, improvement in online transaction management, digital signatures, online earnest money processing and a whole host of technologies designed to make the real estate transaction more efficient and less stressful for consumers.

Many of the largest brands are spending millions annually to upgrade their consumer-centric technology solutions.

Like many industries, real estate is developing several different types of business models to serve the diverse needs of the buying public. The new models help evolve the traditional models and the new models have modelled many of the behaviors of traditional models.

Exclusive Business Practices

While organized real estate is trying to do its best to open up data and make it faster and easier to gain approvals to standardized data, some of the commercial entities in the industries are trying to make it more difficult for consumers to benefit from data contributions from all types of inventory sources.

Just this week there was an announcement made by Zillow in changing their agent contribution policy. Zillow does not allow an individual agent to contribute content to their site. Recently, Zillow will not allow individual home builders to contribute property for sale – even if they are represented by real estate professional – without paying an additional fee. In an era where user generated content is prevalent in so many areas, we are not sure why companies would limit the ability to gather accurate data directly from the source that curated it.

State licensing regimes relating to residential real estate transactions

In the past several years, several states have increased the licensing and continuing education requirements for real estate agents and brokers. Some states now require every licensee to be either an Associate Broker or Managing Broker. Most states [require](#) a minimum of 45 to 60 hours of education and some require well over 100 hours of training, as well as, a minimum of 2 days of continuous education every two years.

Many states are contemplating increasing the licensing requirements to help protect the best interest of the American public. WAV Group anticipates that this trend to raise the bar in education and training will continue to ensure that all licensed real estate professionals serve the best interest of consumers as they purchase and sell their most important asset, their home.

Are Consumers Frustrated about a Lack of Real Estate Data Availability?

One of the most important questions the real estate industry asks itself:

Is the real estate providing enough transparency to home buyers and sellers? Do consumers have the information they need from us to make sound buying and selling decisions?

The Multiple Listing Service of Long Island (MLSIL) asked this question of real estate consumers in the Long Island area.

If you were in charge of designing a website for searching for property what features or functions would you add? The question was worded in an open-ended way to see what suggestions they had.

Every suggestion consumers made in answering that question is possible and available on several websites. There was NOT ONE consumer that was frustrated by the lack of real estate information available. WAV

Group believes this is encouraging news and re-affirms that the real estate industry is doing the right thing in ever-increasing the depth and breadth of real estate intelligence available.

About WAV Group

WAV Group is a leading research, consulting and communications firm specializing in the real estate industry. WAV Group coaches leading brokerages, technology companies, multiple listing services and real estate associations in North America and Europe create positive waves of change in their business.

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For more information about WAV Group please go to WAVGroup.com.