

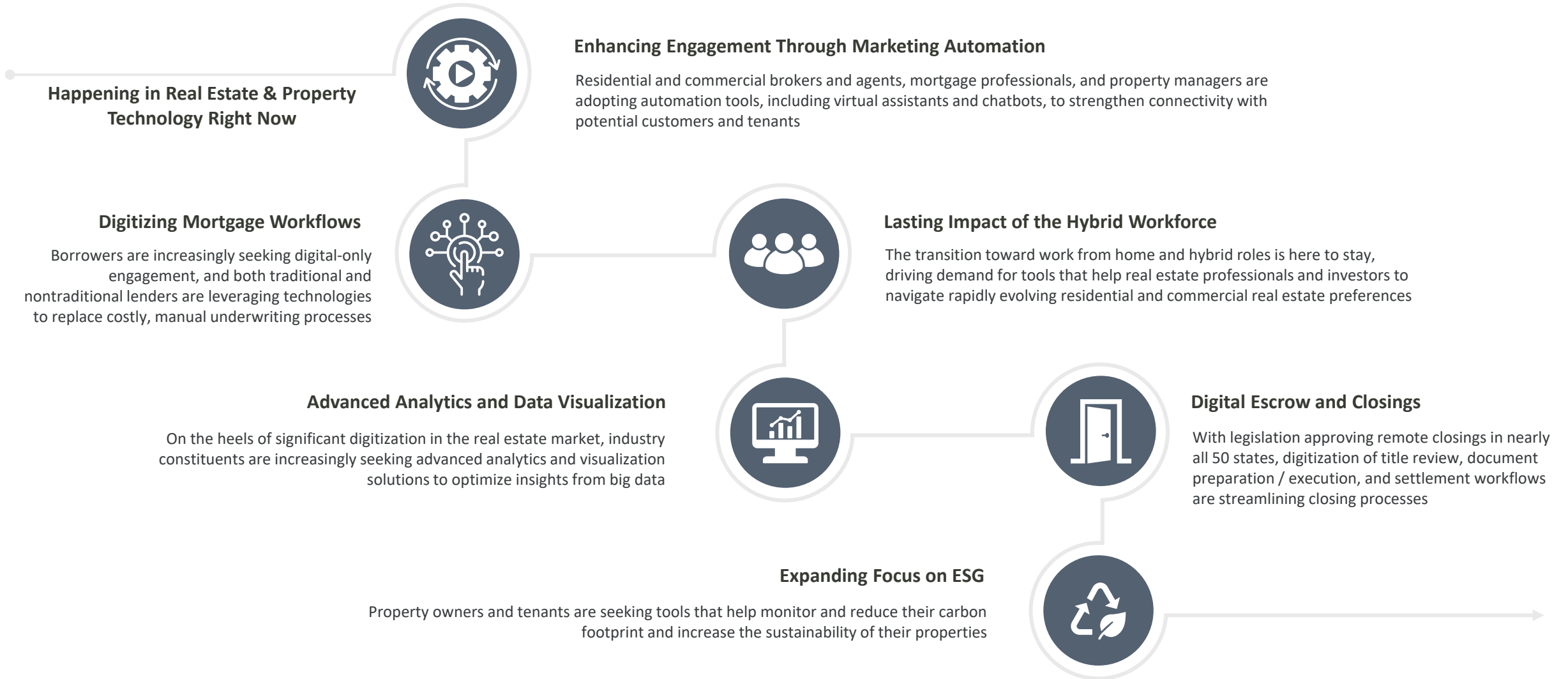


Real Estate & Property Technology Sector Update

Harris Williams | Q1 2023 Report

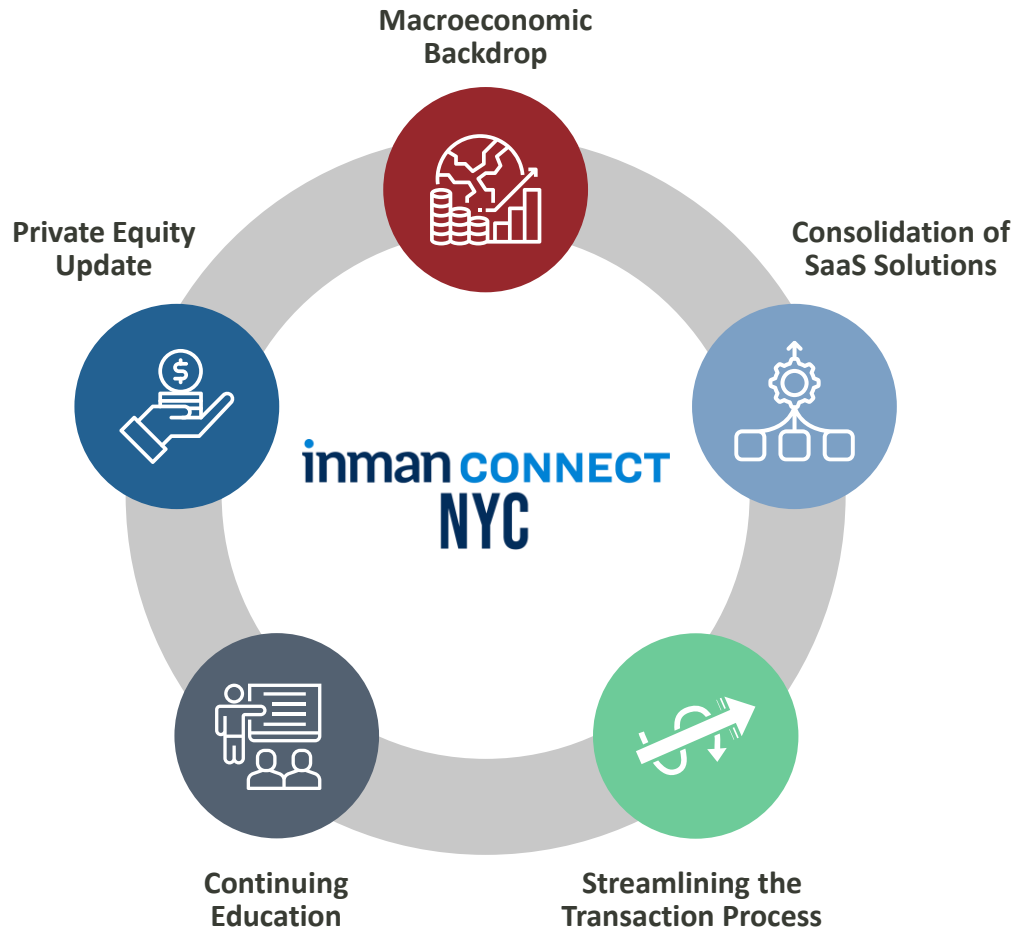
Real Estate & Property Technology Observations

Key trends and demand drivers in real estate & property technology.



Inman Connect 2023 Conference Insights

Key discussion topics among leading real estate technology companies and investors.



Macroeconomic Backdrop

- Rising rates have started to impact home buying affordability, resulting in slowing real estate transaction velocity and rising inventory compared to recent years
- Industry professionals acknowledge the cyclical nature of residential real estate; those that leverage technology and automation tools are optimistic they are best positioned in this macro backdrop



Consolidation of SaaS Solutions

- Competition to market and sell properties is increasing, and as such, brokers and agents are expected to prioritize technology spend with vendors that offer a comprehensive offering over providers of point solutions
- End-to-end platforms continue to seek complementary solutions that brokerages can leverage to differentiate listings, enhance marketing reach, automate workflows, and close more deals



Streamlining the Transaction Process

- Brokerages continue seeking ways to automate back-office processes so they can spend more time focused on revenue-generating activities
- Mortgage originators and title agencies are increasingly adopting solutions that connect all constituents in the homebuying process and reduce the time from offer to close



Continuing Education

- Residential brokerages and mortgage originators are investing in continuing education solutions to set up their teams for long-term success
- Key areas of focus include pipeline building, staging design, networking, and successful marketing tactics



Private Equity Update

- Investor interest in real estate and property technology remains high as demand for technology solutions remains despite cyclical in the end market
- Sponsors continue to take a risk-off approach, placing great scrutiny on profitability or a near-term path to profitability

What We're Reading

Five Real Estate Technology Trends to Expect in 2023

Forbes

The real estate industry has faced significant disruption since the onset of COVID, which was a catalyst for technological adoption and advancements. Virtual reality, AI-enhanced analytics, process automation, fractional ownership, and the Metaverse gained momentum in 2022 and are expected to continue on a growth trajectory through 2023.

Read the full article [here](#).

Have We Found the Bottom in Existing Home Sales?

Housing Wire Media

The residential real estate market all but froze in late 2022, driven by a rapid increase in mortgage rates, which influenced both housing supply and demand. However, purchase application data suggests that buyers may be returning to the market in 2023. As rates and prices stabilize, it is likely that activity will recover in 2023.

Read the full article [here](#).

What Will Rental, Property Management Look Like in 2023?

MPA

While the real estate market cooled in late 2022, the affordability crisis has been a strong tailwind for the property management industry as more individuals look to renting as an alternative to purchasing a home. As property managers continue to grow their businesses, they will continue to seek technology solutions to automate workflows and differentiate the level of service they provide.

Read the full article [here](#).

Can Technology Bridge the Gap Between Buyers, Sellers, and Funds?

DSNews

iBuyers became highly popular over the last few years, offering efficiency and certainty to close for individuals looking to sell their current residence while buying their next home. However, in a cooling market, questions arise on the iBuyers' ability to make competitive offers and the sustainability of this model. Realtors continue to be a valuable resource to buyers and sellers – especially in a softer market.

Read the full article [here](#).

Recent Harris Williams Publications

Architecture, Engineering, and Construction Software Q1 2023 Sector Update



[Link to Read](#)

Home Services Consumer Study Summer 2022



[Link to Read](#)

[Access All HW Insights Here](#)

Perspectives on the Single-Family Residential Market

Trends and Observations

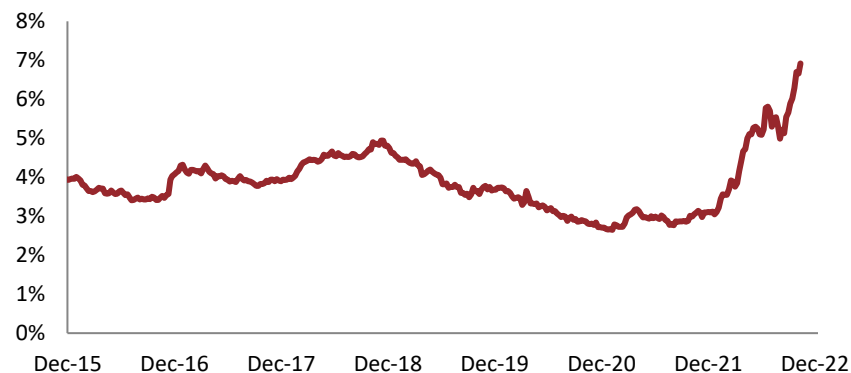
- A significant rise in mortgage rates slowed deal activity in the residential real estate market, resulting in longer sales cycles
- Despite a cooling market, the realtor profession continues to show strength
- Brokers and agents will continue to seek technology solutions that help differentiate their listings and automate workflows, enabling professionals to focus their time on revenue-generating activities

Select Software Providers



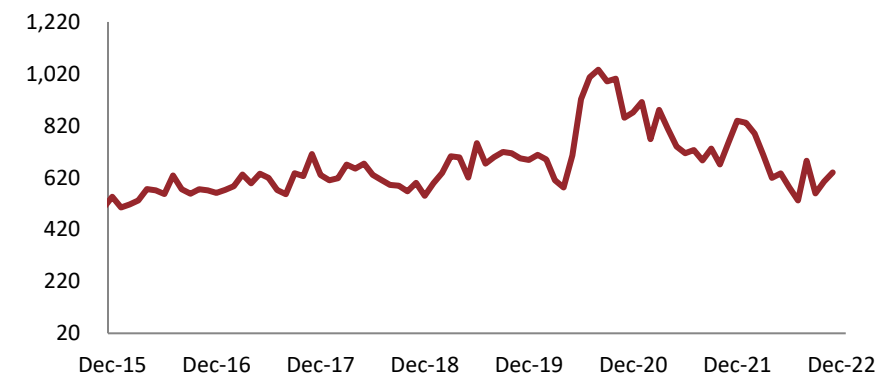
Fixed Mortgage Rate by Week (2015 – 2022)

30-Year Fixed Mortgage Rates Weekly Average



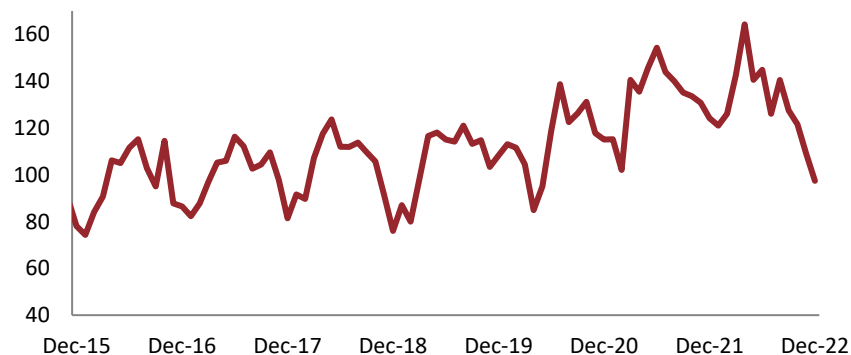
New Home Sales by Month (2015 – 2022)

Number of Housing Units (New Single-Family Houses Only) In Thousands



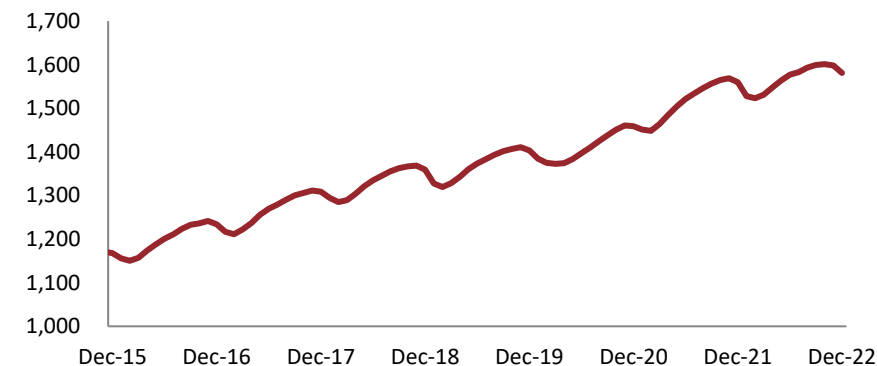
New Housing Starts by Month (2015 – 2022)

Number of Housing Units in Thousands



Realtor Count by Month (2015 – 2022)

National Association of Realtors Membership Count in Thousands

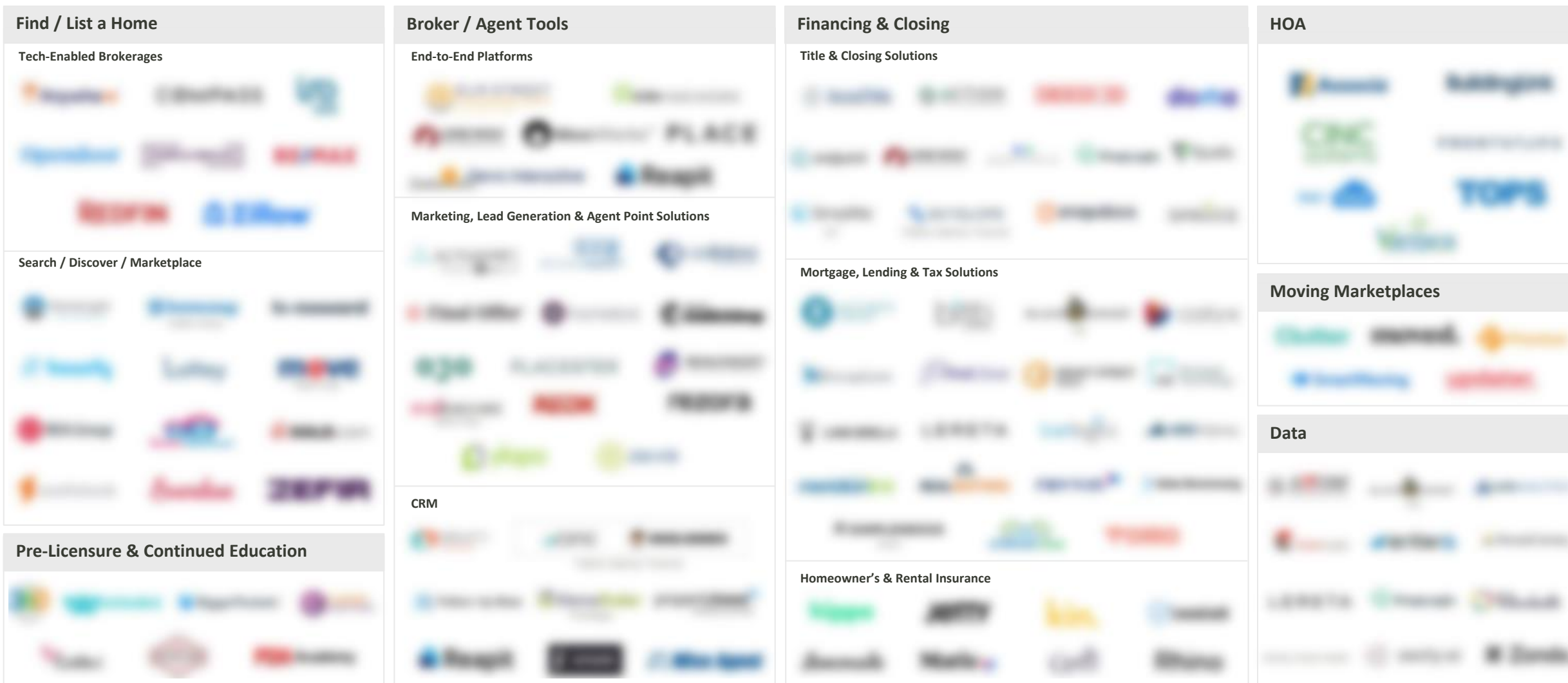


Single-Family / Residential Market Landscape

To view full market map, please contact:

TechnologyInsights@harriswilliams.com

Highly fragmented market benefiting from accelerating adoption of technology at every phase of the home journey.



Perspectives on the Commercial Real Estate Market

Trends and Observations

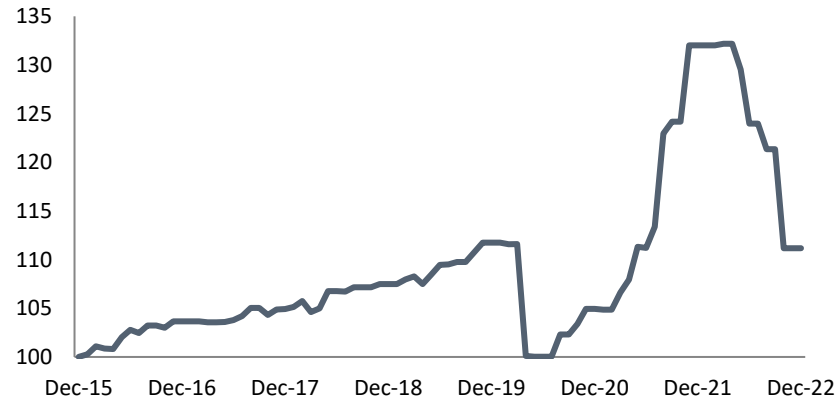
- Sharp decline in commercial real estate prices driven by rising rates and a risk-off mentality as investors seek increasing yield on their investments across all commercial property types
- Despite a correction in prices, construction spend continues to rise and the commercial real estate loan market remains stable, with record low delinquencies
- Demand for commercial real estate software solutions continues as property owners seek ways to improve net operating income (NOI)

Select Software Providers



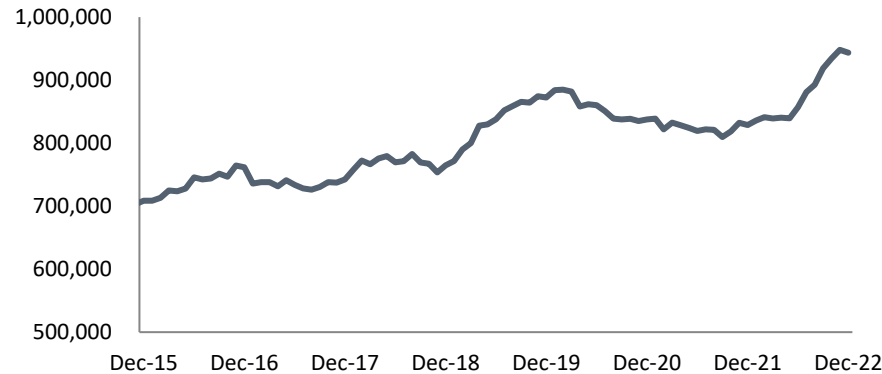
Commercial Real Estate Prices in the US

Commercial Property Price Index (CPPI)¹ (Dec 2015 = 100)



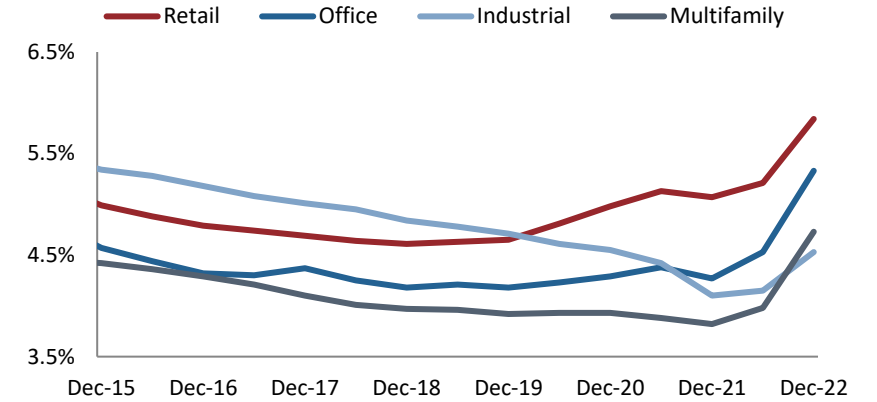
Total US Construction Spending (Nonresidential)

In Millions of Dollars



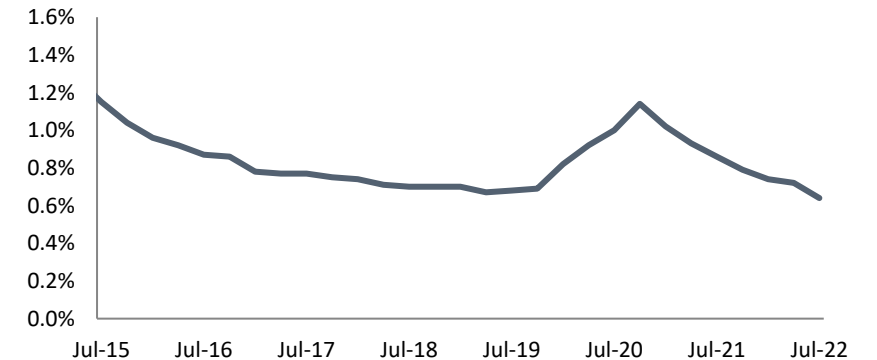
Historical Cap Rates

Cap Rates by Property Type



Delinquency Rate on Commercial Real Estate Loans













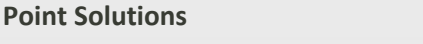
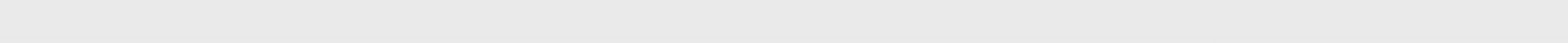

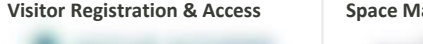
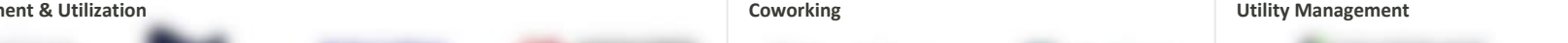





















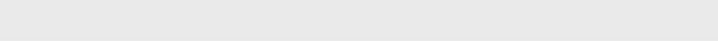
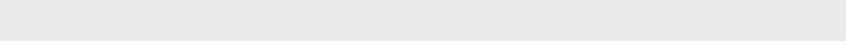













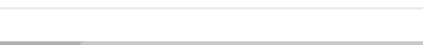
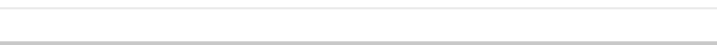
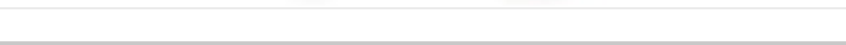








Delinquent Loans as Percent of Total Loans by Quarter



Commercial Property Market Landscape

To view full market map, please contact:
TechnologyInsights@harriswilliams.com

Broad universe of solutions that enable investors and operators to find, underwrite, operate, and market properties.

List a Property	Commercial PMS		Property Operations & Maintenance Platforms					
Tech-Enabled Brokerages								
								
								
								
								
								
								
Search & Discover	Point Solutions							
	Visitor Registration & Access	Space Management & Utilization	Coworking	Utility Management				
								
								
								
Broker Tools	Compliance / Vendor Management		Sustainability					
								
								
								
								
								
								
								
	Data & Investor Tools							

Perspectives on the Property Management Market

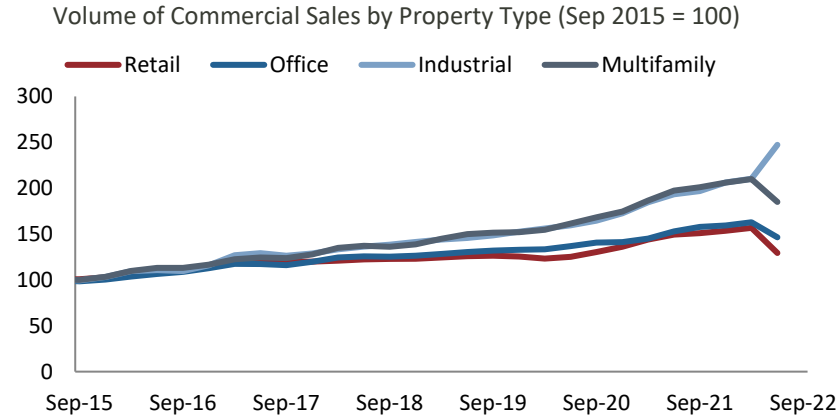
Trends and Observations

- While retail, office, and multifamily sales volumes have seen a recent decline, industrial sales volume has seen accelerated growth
- COVID-19 put downward pressure on multifamily rent growth, which was followed by a rapid rise in rent growth and recent correction driven by a normalizing vacancy rates
- Multifamily loan issuances continue to grow, supporting sustained growth in the end-market
- Enhancing the tenant experience continues to be a key driver of demand for property management solutions

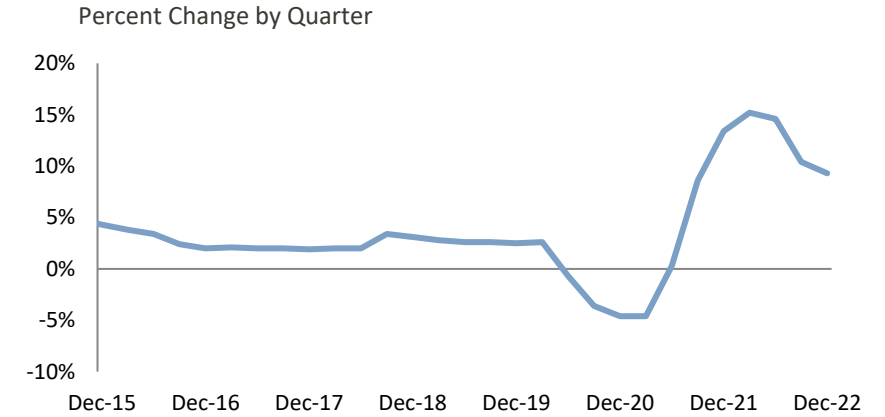
Select Software Providers



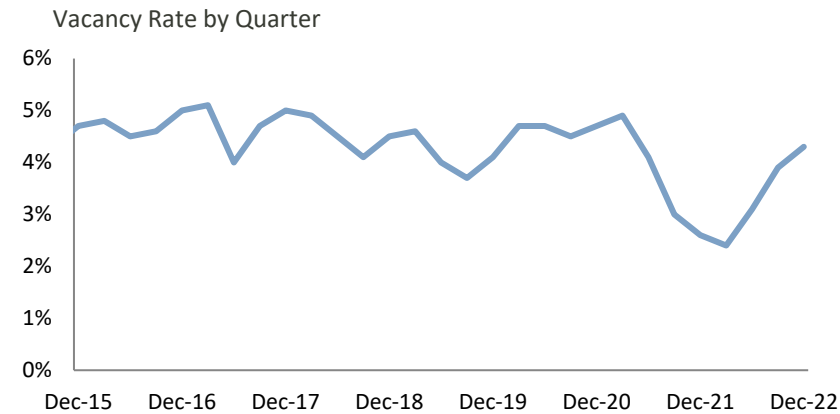
Commercial Sales Indices by Quarter (2015 – 2022)



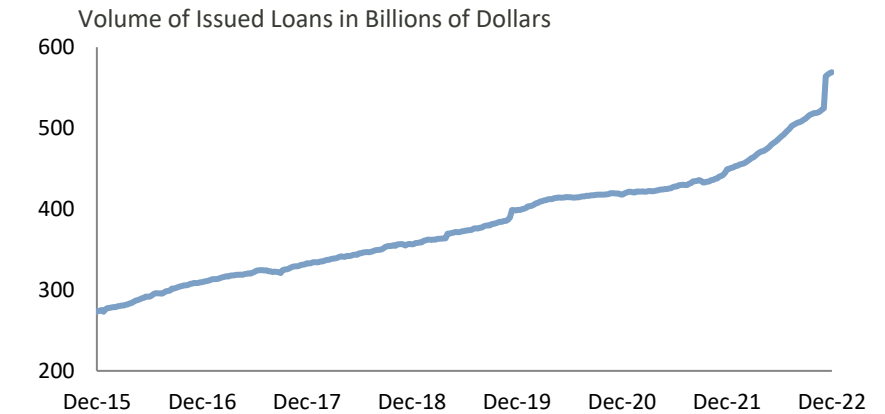
Multifamily Rent Growth



Multifamily Vacancy Rates



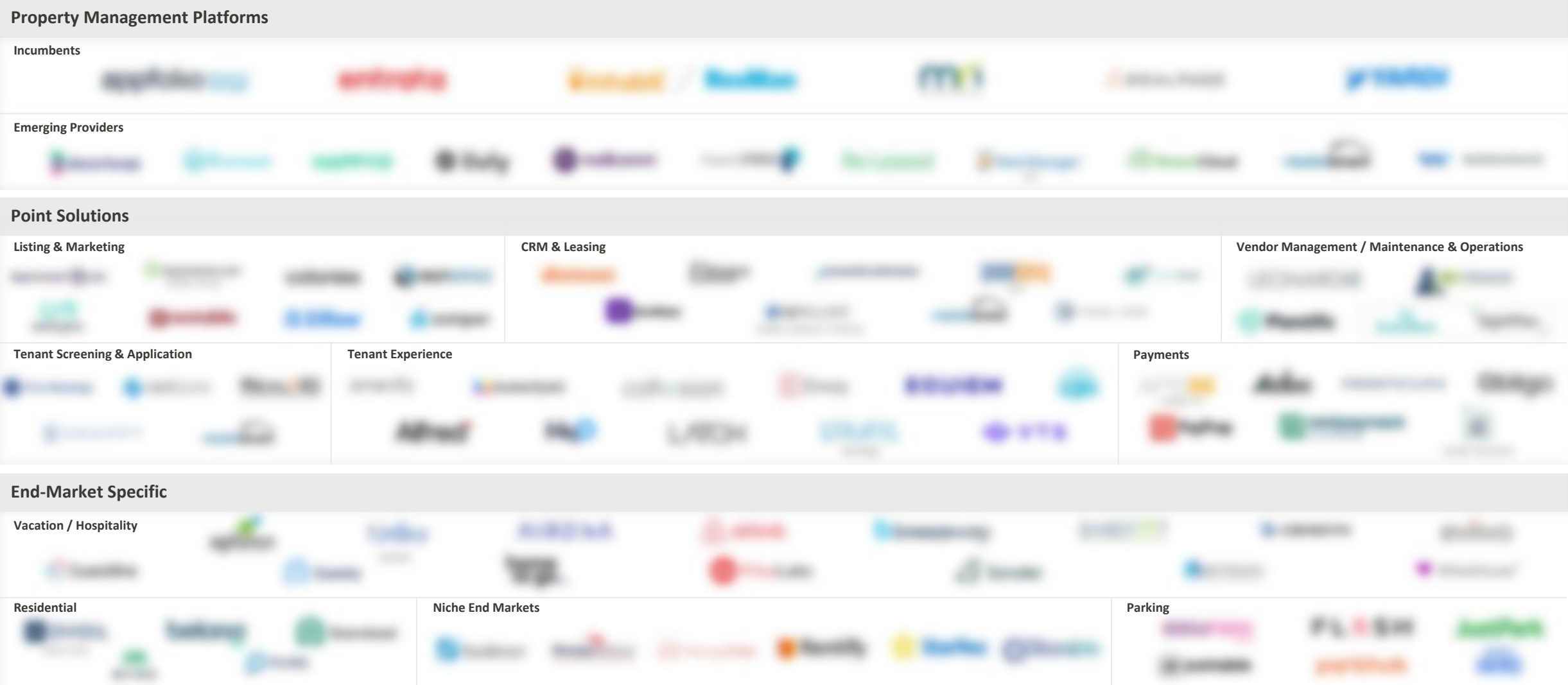
Multifamily Real Estate Loans, All Commercial Banks



Property Management Landscape

To view full market map, please contact:
TechnologyInsights@harriswilliams.com

Focus on increasing property efficiency, space optimization, and sustainability is driving adoption of technology industry-wide.



Select Recent Real Estate & Property Technology Transactions

Inside Real Estate's Acquisition of BoomTown



Target



Buyer

January 20, 2023

- BoomTown is a provider of a real estate sales and automation platform designed to help real estate professionals generate leads, manage contacts, and more efficiently run their business
- The combination expands the breadth of solutions available to Inside Real Estate's customers and extends the platform's reach to serve over 500,000 real estate professionals today

Buildout's acquisition of Oval Room Group



Target



Buyer

January 12, 2023

- Oval Room Group is a provider of marketing solutions for real estate clients, offering planning, documentation, aerial imagery, photography, videography, renderings, and virtual tours
- The acquisition enhances Buildout's media capabilities, enabling brokers and owners to best showcase their properties to the market

Pagaya's Acquisition of Darwin



Target



Buyer

January 11, 2023

- Darwin Homes is a provider of a real estate investment management platform for acquiring, renovating, and managing single-family rental properties
- Pagaya's acquisition accelerates the development of its ecosystem of solutions and helps drive better real estate investment performance for customers

MBS Highway's Acquisition of ListReports



Target



Buyer

November 10, 2022

- ListReports is a provider of a real estate marketing platform enabling real estate agents and loan officers to create high-quality content and maximize opportunities
- The acquisition of ListReports extends MBS Highway's reach to serve real estate agents and expands its suite of sales enablement solutions serving mortgage loan officers

MRI's Acquisition of PropTech Group



Target



Buyer

October 31, 2022

- PropTech Group is a provider of residential and commercial real estate broker / agent and property management solutions primarily serving customers in Australia, New Zealand, and the UK
- The acquisition enhances MRI's suite of real estate agency and property management solutions and deepens its footprint in key geographies

Yardi's Acquisition of Planimetron



Target



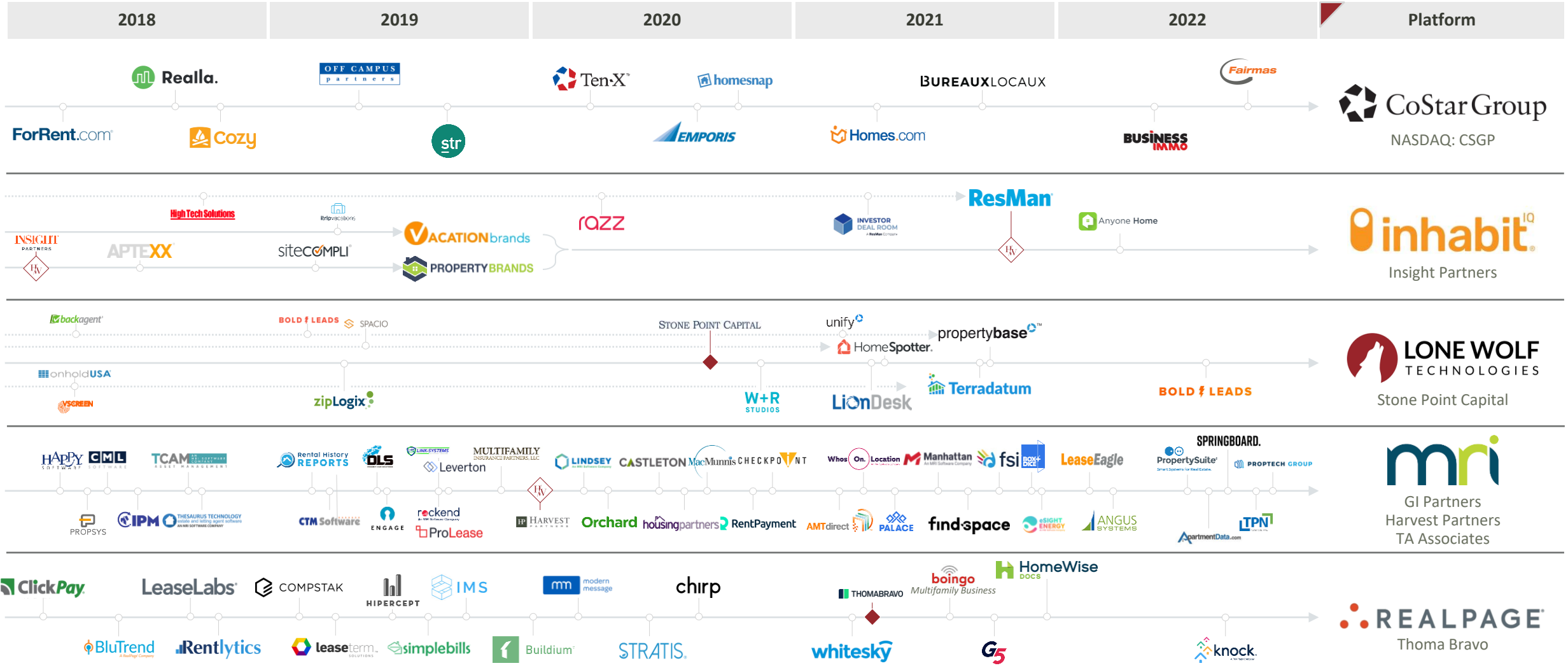
Buyer

October 11, 2022

- Planimetron is a provider of space management and analytics solutions serving the office, retail, and industrial real estate markets
- The acquisition empowers Yardi to meet the growing demand for efficient space management solutions from commercial real estate owners and operators

Select Real Estate & Property Tech Consolidation Platforms

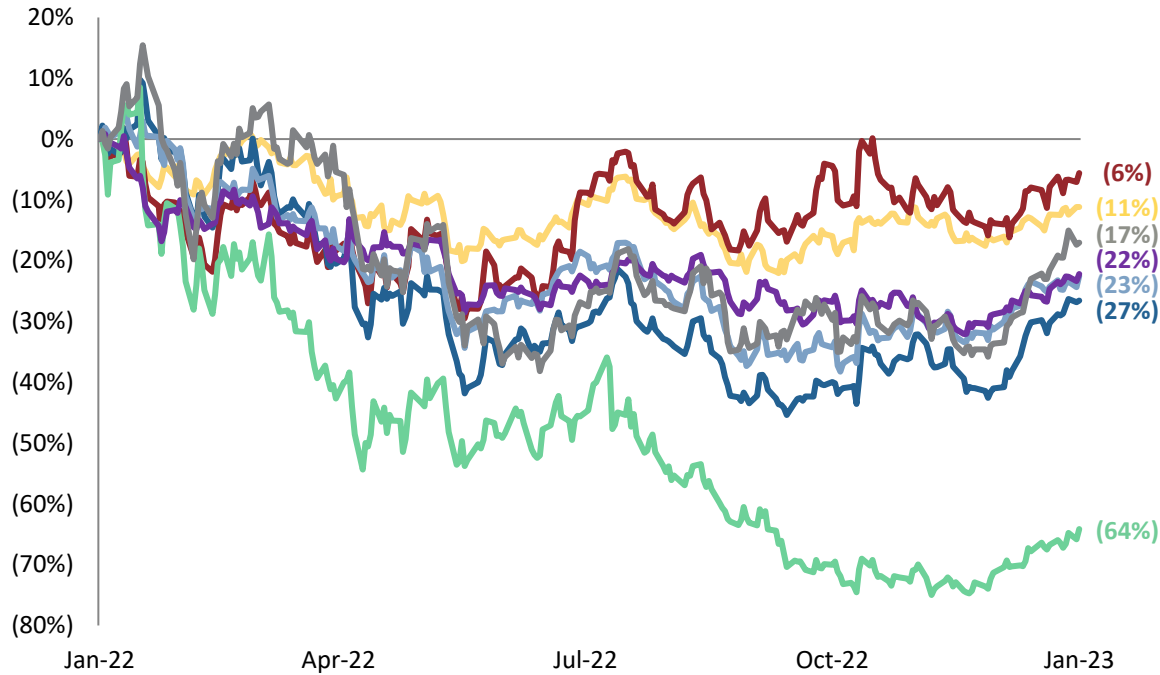
Highly active and well-capitalized consolidation platforms have emerged, driving further M&A activity in the space.



Real Estate & Property Technology Public Company Trended Stock Performance

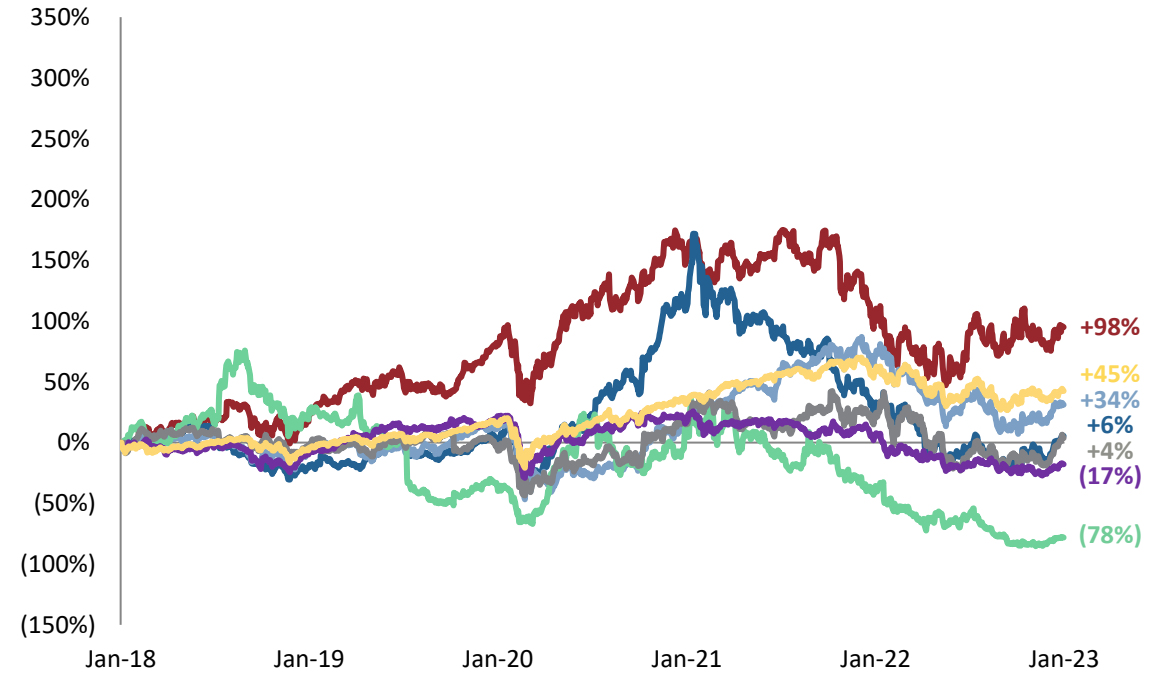
Public Company Stock Performance – Past 12 Months

Indexed Stock Price Performance for the Period January 2022 – January 2023



Public Company Stock Performance – Past 5 Years

Indexed Stock Price Performance for the Period January 2018 – January 2023



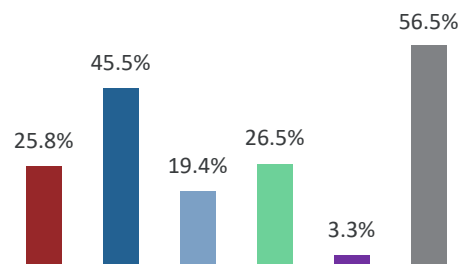
<p>Real Estate & Property Tech</p> <p>Agilysys, Altus Group, ppfolio, AUTODESK, CoStar Group, PROCORE, SmartRent</p>	<p>Tech-Enabled Brokerage: Residential</p> <p>COMPASS, realtor.com News Corp, Opendoor, REA Group, REDFIN, Zillow</p>	<p>Tech-Enabled Brokerage: Commercial</p> <p>CBRE, Colliers, CUSHMAN & WAKEFIELD, JLL, Marcus & Millichap, NEWMARK, REALOGY</p>	<p>Residential Services Tech</p> <p>ANGI HOME SERVICES, nextdoor, Porch Group</p>	<p>Mortgage & Title Tech</p> <p>BLACK KNIGHT, blend, FIDELITY, lendingtree</p>	<p>Short-Term Marketplaces</p> <p>airbnb, BOOKING HOLDINGS, Expedia, home to go, Tripadvisor</p>
---	--	--	--	---	---

Real Estate & Property Technology Public Company Operating and Valuation Metrics

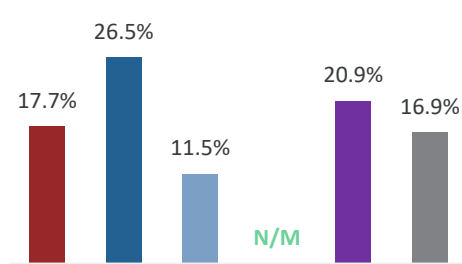
Public Company – Operating Metrics

Public Company – Valuation Metrics

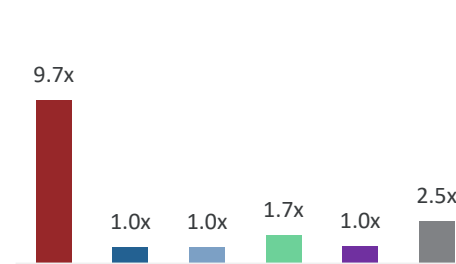
LTM Revenue Growth



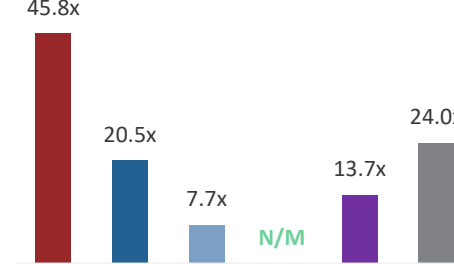
LTM EBITDA Margin



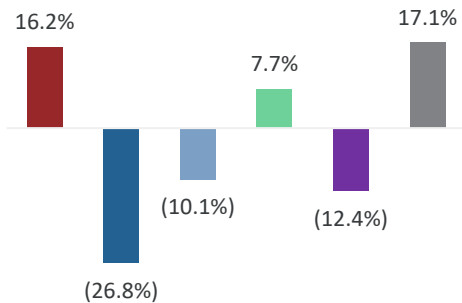
Median EV / LTM Revenue



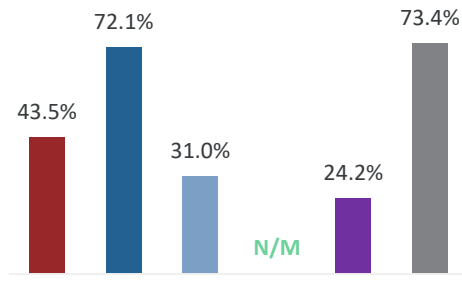
Median EV / LTM EBITDA



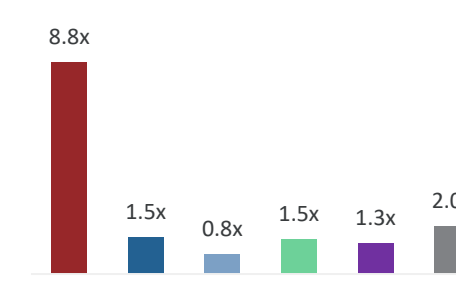
NTM Revenue Growth



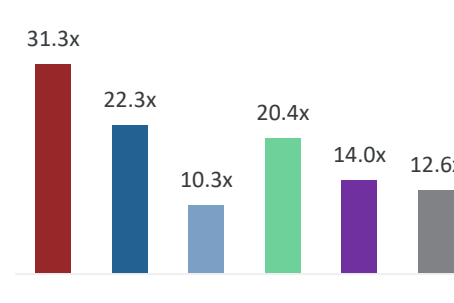
LTM Rule of 40 (Growth + Margin)



Median EV / NTM Revenue



Median EV / NTM EBITDA



Real Estate & Property Tech

Tech-Enabled Brokerage: Residential

Tech-Enabled Brokerage: Commercial

Residential Services Tech

Mortgage & Title Tech

Short-Term Marketplaces

S&P 500

Real Estate & Property Tech

Tech-Enabled Brokerage: Residential

Tech-Enabled Brokerage: Commercial

Residential Services Tech

Mortgage & Title Tech















Short-Term Marketplaces

Select Harris Williams Real Estate & Property Technology Experience

Selected Real Estate & Property Technology Transaction Experience

 <i>a portfolio company of</i>  has been acquired by 	 has received a majority investment from 	 has made a strategic investment in 	 has made a significant investment in 	 has acquired 
 <i>a portfolio company of</i>  has been acquired by 	 has been acquired by 	 has been acquired by  <i>a subsidiary of</i> 	 has been acquired by 	 has been acquired by 

Additional Property Services Transaction Experience

 has received a significant investment from  	 <i>a portfolio company of funds managed by</i>  has been acquired by 	 <i>a portfolio company of</i>  has been acquired by funds managed by 	 has been acquired by 	 has invested in  <i>a portfolio company of</i> 
---	---	--	--	---

Additional HW Technology Group Recent Transactions

 <i>a portfolio company of</i> CARLYLE has been acquired by  part of 	 has been recapitalized by 	 has been acquired by 	 <i>a portfolio company of</i> RLH Equity Partners has been acquired by 	 <i>a portfolio company of</i>  has acquired 
 has been acquired by 	  <i>a portfolio company of</i> CARLYLE have been acquired by 	 <i>a portfolio company of</i>  has received a strategic investment from 	 has made an investment in 	 <i>a subsidiary of</i>  <i>a division of</i>  has been acquired by 

Technology Coverage Areas

- Application Software
- Infrastructure & Security Software
- IT & Managed Services

Sector Coverage Areas

- Architecture, Engineering & Construction
- Education
- Industrial
- Pharma
- Compliance
- Healthcare
- Legal
- Real Estate & Property Tech
- eCommerce & Retail
- Human Capital Management
- Office of the CFO
- Supply Chain Logistics

Thematic Focus Areas

- SaaS / Cloud
- Integrated Payments
- Digital Transformation
- AI / Machine Learning

Contacts

Thierry Monjauze

Head of Technology Group

Managing Director

tmonjauze@harriswilliams.com

+44 20 7518 8901

Julien Oussadon

Technology Group

Managing Director

joussadon@harriswilliams.com

+44 20 7518 8909

Erik Szyndlar

Technology Group

Managing Director

esyndlar@harriswilliams.com

(415) 217-3418

Ryan Costa

Technology Group

Director

rcosta@harriswilliams.com

(617) 654-2120

Sylvain Noblet

Technology Group

Director

snoblet@harriswilliams.com

+44 20 7518 8917

Brian Titterington

Technology Group

Director

btitterington@harriswilliams.com

(415) 217-3425

HW Harris Williams / GLOBAL M&A ADVISOR

Harris Williams is a global investment bank specializing in M&A advisory services. Clients worldwide rely on us to help unlock value in their business and turn ambitious goals into reality. We approach every engagement with boundless collaboration, pooling expertise and relationships across industries and geographies to uncover the unique story of each company.



Aerospace, Defense & Government Services



Business Services



Consumer



Energy, Power & Infrastructure



Healthcare & Life Sciences



Industrials



Technology



Transportation & Logistics

70% Revenue from repeat clients

83% Managing directors promoted from within the firm

30+ Year history



Sources and Disclosures

Sources

1. FRED
2. US Census Bureau
3. National Association of Realtors
4. CBRE
5. Green Street
6. CoStar
7. S&P Capital IQ
8. Pitchbook
9. Mergermarket

Disclosures and Disclaimers

Investment banking services are provided by Harris Williams LLC (Harris Williams). Harris Williams is a registered broker-dealer and member of FINRA and SIPC. Harris Williams & Co. Ltd is a private limited company incorporated under English law with its registered office at 8th Floor, 20 Farringdon Street, London EC4A 4AB, UK, registered with the Registrar of Companies for England and Wales (registration number 07078852). Harris Williams & Co. Ltd is authorized and regulated by the Financial Conduct Authority. Harris Williams & Co. Corporate Finance Advisors GmbH is registered in the commercial register of the local court of Frankfurt am Main, Germany, under HRB 107540. The registered address is Bockenheimer Landstrasse 33-35, 60325 Frankfurt am Main, Germany (email address: hwgermany@harriswilliams.com). Geschäftsführer/Directors: Jeffery H. Perkins, Paul Poggi. (VAT No. DE321666994). Harris Williams is a trade name under which Harris Williams LLC, Harris Williams & Co. Ltd and Harris Williams & Co. Corporate Finance Advisors GmbH conduct business.

The information and views contained in this presentation have been prepared in part by Harris Williams. This presentation does not purport to be comprehensive or to contain all the information that a recipient may need in order to evaluate any investment or potential transaction. This presentation is not a research report, as such term is defined by applicable law and regulations and is provided for informational purposes only. Any and all information, including estimates, projections and other forward-looking statements, presented in this document may involve various assumptions and significant elements of subjective judgment and analysis which may or may not be correct. Harris Williams has not independently verified, and neither Harris Williams nor any other person will independently verify, any of the information, estimates, projections or forward-looking statements contained herein or the assumptions on which they are based. The information contained in this document is made as of the date hereof unless stated otherwise. Harris Williams does not expect to update or otherwise revise this document nor provide any additional information, nor correct any inaccuracies herein which may become apparent.

The information contained herein is believed by Harris Williams to be reliable, but Harris Williams makes no representation or warranty as to the accuracy or completeness of such information, and information contained herein that is based on material prepared by others may involve significant elements of subjective judgment and analysis which may or may not be correct. Opinions, estimates and projections contained herein constitute Harris Williams' judgment and are subject to change without notice.

This presentation is not to be construed as an offer to buy or sell or a solicitation of an offer to buy or sell any financial instruments or to participate in any particular transaction, nor shall this presentation form the basis of any contract. It does not constitute and should not be construed as an endorsement or recommendation of any entities' products or services.

No part of this material may be copied or duplicated in any form or by any means, or redistributed, without Harris Williams' prior written consent.

HW

Appendix

Public Market Operational & Valuation Metrics

As of January 31, 2023

\$ in Thousands

Company	Market Capitalization	Enterprise Value	% of 52-Week High	LTM Gross Margin	LTM EBITDA Margin	Enterprise Value/			
						LTM Revenue	NTM Revenue	LTM EBITDA	NTM EBITDA
Real Estate & Property Tech									
Autodesk, Inc.	\$46,424,533	\$47,655,533	85.3%	91.6%	21.1%	9.7x	9.0x	46.0x	24.3x
CoStar Group, Inc.	31,681,156	28,014,513	91.2%	81.5%	28.9%	13.2x	11.6x	45.8x	38.4x
Procore Technologies, Inc.	7,721,610	7,249,283	79.0%	79.3%	NM	10.9x	8.8x	NM	NM
AppFolio, Inc.	3,949,650	3,839,821	87.9%	59.3%	NM	8.1x	6.7x	NM	NM
Agilysys, Inc.	2,068,051	2,013,479	97.2%	60.7%	8.4%	10.5x	9.0x	NM	59.6x
Altus Group Limited	1,913,821	2,161,111	92.6%	36.0%	14.2%	4.2x	3.8x	29.2x	21.2x
SmartRent, Inc.	579,178	369,066	30.1%	(3.5%)	NM	2.3x	1.6x	NM	NM
Median	\$3,949,650	\$3,839,821	87.9%	60.7%	17.7%	9.7x	8.8x	45.8x	31.3x
Tech-Enabled Brokerage: Residential									
News Corporation	\$11,665,165	\$15,071,165	85.4%	50.7%	13.1%	1.5x	1.5x	11.1x	10.2x
REA Group Limited	11,699,450	11,901,117	82.7%	60.2%	39.9%	12.1x	13.8x	30.3x	24.7x
Zillow Group, Inc.	10,212,733	8,598,733	65.9%	20.2%	NM	1.1x	4.8x	NM	22.3x
Compass, Inc.	1,750,602	2,021,902	43.8%	13.0%	NM	0.3x	0.4x	NM	NM
Opendoor Technologies Inc.	1,388,903	7,956,903	19.2%	5.3%	NM	0.5x	0.7x	NM	NM
Redfin Corporation	813,440	2,134,541	23.2%	14.6%	NM	0.9x	1.6x	NM	NM
Median	\$5,981,667	\$8,277,818	54.8%	17.4%	26.5%	1.0x	1.5x	20.7x	22.3x
Tech-Enabled Brokerage: Commercial									
CBRE Group, Inc.	\$26,431,120	\$30,332,966	80.2%	22.0%	7.6%	1.0x	1.0x	12.8x	12.1x
Jones Lang LaSalle Incorporated	8,774,403	12,268,703	69.9%	70.2%	11.5%	1.0x	NA	8.3x	10.3x
Colliers International Group Inc.	4,593,575	7,149,677	71.2%	37.8%	13.4%	1.6x	1.6x	11.6x	10.9x
Cushman & Wakefield plc	3,257,669	6,466,669	61.3%	20.5%	8.1%	0.6x	0.7x	7.7x	8.0x
Newmark Group, Inc.	1,472,668	3,832,775	46.5%	100.0%	19.5%	1.2x	NA	6.4x	8.1x
Marcus & Millichap, Inc.	1,426,131	1,025,028	62.1%	34.6%	14.8%	0.7x	1.0x	4.5x	14.0x
Anywhere Real Estate Inc.	928,392	4,206,392	41.2%	37.2%	8.1%	0.6x	0.6x	6.9x	7.9x
Median	\$3,257,669	\$6,466,669	62.1%	37.2%	11.5%	1.0x	1.0x	7.7x	10.3x

Public Market Operational & Valuation Metrics (Cont.)

As of January 31, 2023

\$ in Thousands

Company	Market Capitalization	Enterprise Value	% of 52-Week High	LTM Gross Margin	LTM EBITDA Margin	Enterprise Value/				
						LTM Revenue	NTM Revenue	LTM EBITDA	NTM EBITDA	
Residential Services Tech										
Angi Inc.	\$1,468,012	\$1,637,187	32.2%	76.5%	NM	0.9x	0.8x	NM	20.4x	
Nextdoor Holdings, Inc.	909,646	368,619	33.6%	82.8%	NM	1.7x	1.8x	NM	NM	
Porch Group, Inc.	296,636	463,481	26.8%	62.7%	NM	1.8x	1.5x	NM	NM	
Median	\$909,646	\$463,481	32.2%	76.5%	NM	1.7x	1.5x	NM	20.4x	
Mortgage & Title Tech										
Fidelity National Financial, Inc.	\$11,981,974	\$11,759,974	85.7%	58.8%	20.9%	0.9x	1.0x	4.1x	5.0x	
Black Knight, Inc.	9,359,733	12,096,633	75.9%	45.4%	33.4%	7.8x	7.7x	23.3x	15.9x	
LendingTree, Inc.	507,078	1,136,860	30.4%	94.4%	0.8%	1.1x	1.2x	NM	14.0x	
Blend Labs, Inc.	394,588	266,001	16.2%	40.3%	NM	1.0x	1.3x	NM	NM	
Median	\$4,933,406	\$6,448,417	53.1%	52.1%	20.9%	1.0x	1.3x	13.7x	14.0x	
Short-Term Marketplaces										
Booking Holdings Inc.	\$94,417,254	\$94,750,254	89.6%	85.3%	31.7%	5.9x	5.0x	18.7x	15.9x	
Airbnb, Inc.	70,352,316	63,085,914	58.0%	82.0%	21.0%	7.9x	6.9x	37.5x	20.6x	
Expedia Group, Inc.	17,841,188	21,201,188	52.5%	85.5%	12.8%	1.9x	1.7x	14.6x	7.8x	
Tripadvisor, Inc.	3,275,655	3,142,655	76.4%	92.4%	7.8%	2.3x	1.9x	29.4x	9.3x	
HomeToGo SE	446,029	364,503	51.0%	92.9%	NM	2.5x	2.0x	NM	NM	
Median	\$17,841,188	\$21,201,188	58.0%	85.5%	16.9%	2.5x	2.0x	24.0x	12.6x	
Total Comp Set Median	\$3,266,662	\$5,336,530	64.0%	59.8%	13.8%	1.6x	1.6x	13.7x	14.0x	