Table of Contents
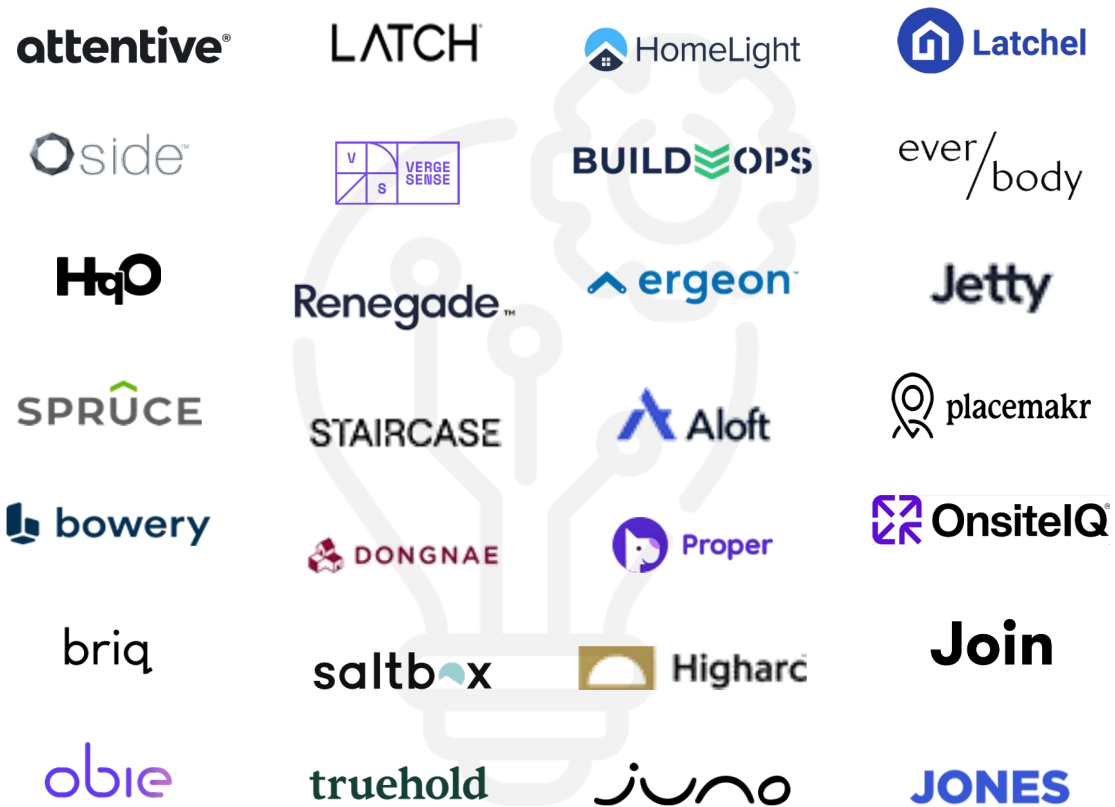
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01

Introductions & PropTech Industry Overview

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The Intersection Of Innovation & Industry

PropTech's leading investor

175+ company PropTech portfolio

attentive® LATCH HomeLight Latchel

side VERGE SENSE BUILD OPS ever/body

HqO Renegade ergeon Jetty

SPRUCE STAIRCASE Aloft placemakr

bowery DONGNAE Proper OnsiteIQ

briq saltbox Higharc Join

obie truehold juno JONES

Global strategic investor base

Representing 20 billion sqft of real estate

Ivanhoé Cambridge AECOM PGIM cerberus

CBRE JLL CUSHMAN & WAKEFIELD MITSUI FUDOSAN

RELATED SWIRE PROPERTIES BRIDGE INVESTMENT GROUP Sumitomo Corporation

FERGUSON SIGNA CapitaLand Altus Group

intact INSURANCE DBJ Development Bank of Japan Inc. Messer RXR

DouglasElliman JEDUNN CONSTRUCTION Hopewell EUGENE

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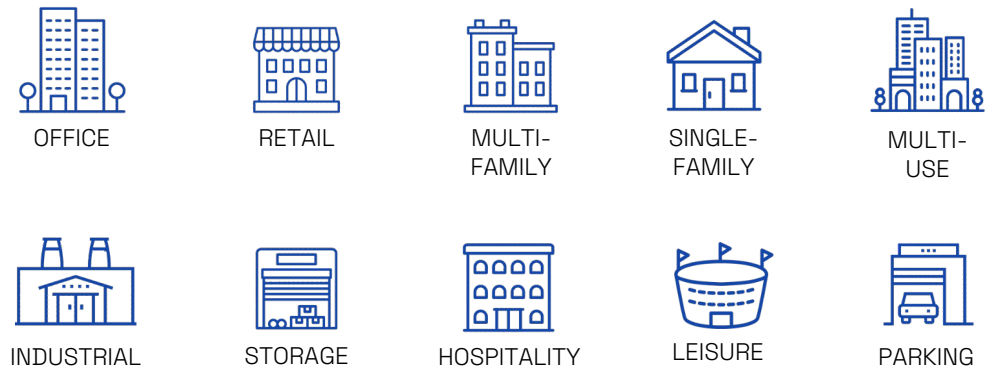# A Diversified Approach To PropTech Investment

We Invest In PropTech Throughout The Full Real Estate Value Chain

Analysis & Financing	Space Identification + Listing	Site Selection & Negotiation	Diligence	Development + Construction	Process Automation	Space Usage & Management	Payments + Services
• Zoning • Appraisal • Budgeting • Modeling	• Marketplace • O2O • Marketing • Review	• Brokerage • Tour • Comps	• Prospecting • Title • Econometrics • Risk pricing • Permitting	• Project oversight • Architecture • Design • Engineering • Compliance • Construction	• Sales • Leasing • Underwriting • Broker tools	• "Basement Tech" • HVAC • Facilities Mgmt • Security	• Rental • Utilities • Service providers • Trade • Credit

Across Global PropTech Hubs

Touching Every Asset Type

OFFICE RETAIL MULTI-FAMILY SINGLE-FAMILY MULTI-USE

INDUSTRIAL STORAGE HOSPITALITY LEISURE PARKING

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The Real Estate Industry's Opportunity Engine

A repeatable playbook to scale new ideas into PropTech market leaders

See it all. Early.

200+ investment opportunities reviewed per month

~90% of the investible PropTech market covered

10,000+ PropTech startups tracked

Select the best

Industry proximity drives smarter, faster decisions
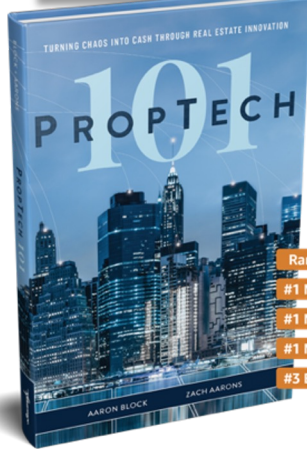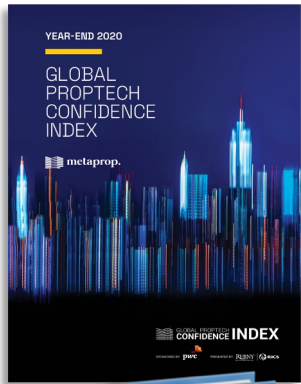
<1% of funnel deals transacted

>90% deal win rate

Accelerate adoption

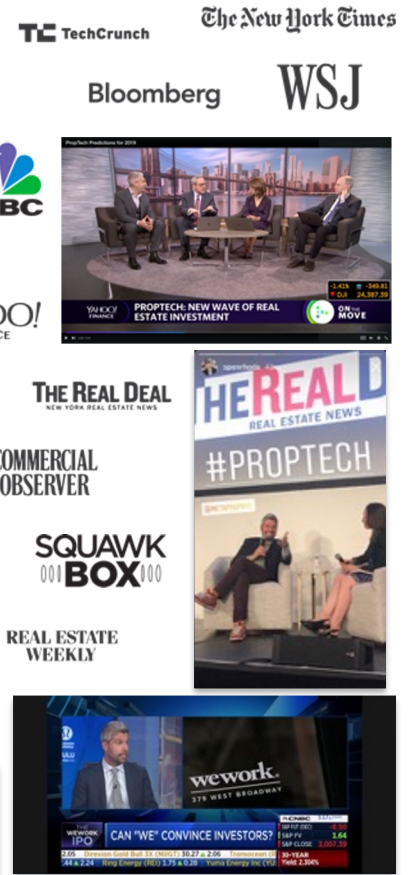Industry connectivity moves the needle for our portfolio

1,500 portfolio value add opportunities / year

>75% of seed investments raise follow-on financing

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At The Center Of The Global PropTech Ecosystem

YEAR-END 2020

GLOBAL PROPTECH CONFIDENCE INDEX

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GLOBAL PROPTECH CONFIDENCE **INDEX**

TURNING CHAOS INTO CASH THROUGH REAL ESTATE INNOVATION

101
PROPTECH

Ranked #1 on Amazon!
#1 New Release in Finance
#1 New Release in Real Estate
#1 New Release in Venture Capital
#3 Best Seller in Real Estate Investment

AARON BLOCK ZACH AARONS

PropTech**PLACE**

Vancouver
Seattle
San Francisco
Los Angeles
Denver
Austin
Dallas
Houston
Chicago
Nashville
Toronto
New York
Philadelphia
Washington, DC
Atlanta
Tampa
Sao Paulo

Helsinki
Stockholm
London
Paris
Barcelona
Vienna
Munich
Moscow
Istanbul
Tel Aviv

Tokyo
Hong Kong
Singapore
Brisbane

TechCrunch
The New York Times
Bloomberg
WSJ
CNBC
YAHOO! FINANCE
THE REAL DEAL
COMMERCIAL OBSERVER
SQUAWK BOX
REAL ESTATE WEEKLY
#PROPTECH

propel
by mipim x metaprop — NYC Online

metaprop accelerator.
AT Columbia University

GLOBAL **2021** PROPTECH AWARDS
PRESENTED BY: metaprop

metaprop. | NYC REAL ESTATE TECH WEEK

Top Industry Partners

Zillow RICS Urban Land Institute REBNY NYCEDC inman COLUMBIA UNIVERSITY REALPAC Enterprise NCREIF BUILTWORLDS mipim pwc

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Partner Engagement Drives Portfolio Value

- Audit existing innovation efforts
- Define objectives & initiatives
- Establish resource plans
- Set ESG goals & commitments

01 DEVELOP INNOVATION PRIORITIES

02 ENHANCE CONTEXT

- Whitepapers & custom research
- PropTech market briefings & analysis
- Sector deep dives
- Private events & access
- Peer learning & practice sharing

- Co-invest opportunities
- Due diligence assistance
- Deal pipeline visibility
- Managed accounts and SPVs

04 DEPLOY CAPITAL

03 DEPLOY TECHNOLOGY

- Market scans & taxonomy
- RFP process management
- Pilot assessment & structuring
- Deployment assistance

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Fast-Growing Platform And Track Record

	Angel Fully Deployed	Fund I Fully Deployed	Fund II Fully Deployed	Fund III Follow-on Only	Fund IV Active/Marketing	Growth I Active/Marketing
Size	$3M	$2M	$40M	$100M	$150M[1]	$200M[1]
Vintage	2011	2015	2017	2020	2022	2022
Positions	86	32	45 total 27 core	38 total 30 core	45 total[1] 30 core[1]	15 total[1] 3 [2]
Performance [2]	3.2x MOIC 1.9x DPI	6.4x MOIC 32% Net IRR	2.6x MOIC 28% Net IRR	1.4x MOIC N/A Net IRR	N/A	1.0x MOIC N/A Net IRR
Strategy	Pre-Seed, Seed, Series A					Series B - D

02

Affordable Housing Innovation Investment Thesis

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Problem Focused Approach To Investing

The Problem

- Global housing crisis
- In the US between 4-5 million more homes are needed in order to close the housing gap
- Insufficient housing, high cost of capital, and inadequate wage prohibit would-be buyers from purchasing a home and renters from accessing affordable rents

The Market

- Significant innovation is taking place to address both the supply and demand side of the housing crisis
- Alternative paths to homeownership, new approaches to renting, improved construction methods, and streamlined property management solutions present strong investment opportunities

The Opportunity

- Pre-construction is a particularly inefficient and costly part of the real estate process
- Permitting consists of multiple approval agencies, thousands of pages of often contradictory building and zoning codes, and little adoption of technology
- Longer wait times for permit approvals leads to costly delays in construction and revenue, making the permitting market worth over $50B within the $1.6T construction market

How Should We Evaluate Companies Addressing Affordability?

Impact Indicators

— Housing price-to-income

— Expenditure-to-income

— Residual income (remaining income for non - housing expenses)

— Housing quality (maintenance deficiencies, overcrowding)

Financial Indicators

— Market size, maturity, receptivity, scrutiny

— Top line growth

— Profitability

— Speed and scalability

— Unit economics

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03

Current State Of Affordable Innovation

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Who Is Involved In The Intersection Of PropTech & Affordability?

Developers
Home Buyers
Local Government
Lenders
Landlords
Homeowners
PropTech & Affordability
Investors
Real Estate Agents
Tenants
Brokers
Property Owners
Property Managers
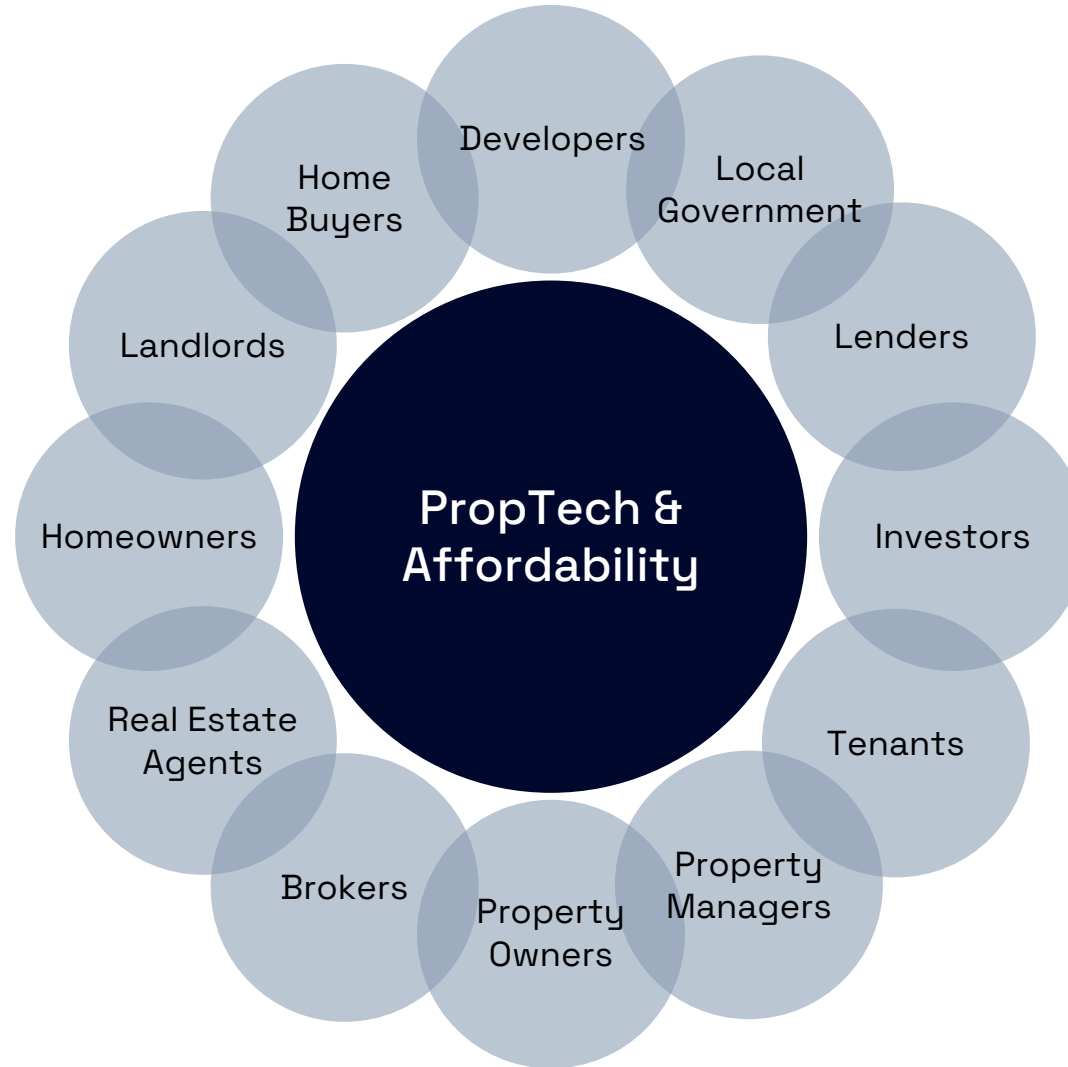
Existing PropTech Approaches To Affordability

New Paths to Homeownership

Reimagined finance models that make ownership accessible to more potential buyers.

Alternative Approaches to Renting

Financial products that ease rent burdens, decrease evictions, and/or create partnerships to increase space efficiency.

Innovations in Housing Construction

Novel construction methods that enable cheaper, quicker, and more efficient building processes in order to increase housing supply.

Improved Management Software

Technology tools to streamline burdensome processes, cut costs, create efficiencies, manage data, and improve customer experience.

Over $7 billion of venture funding has been deployed into companies building solutions for affordability.

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Innovative Companies Span Affordable Housing Approaches

Homeownership
Total Raised: $1.67B
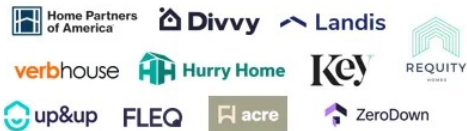
Renting
Total Raised: $1.46B

Construction
Total Raised: $4.12B

04

Deeper Dive In Permitting & Pre-Construction

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Current State Of Permitting: Fragmented, Redundant, Inconsistent

Regulatory barriers, prohibitive land use policies, & outdated zoning regulations cause considerable construction delays & increase builders' costs so much that some developers avoid certain areas entirely if permit approvals are too slow or zoning regulations too strict.

Multiple Approval Agencies

— Different, & sometimes contradictory, requirements add to the lengthy approval process

— Agencies include (but are not limited to) zoning, water & sewer, building codes, licensing, plan-checking

— Different approval schedules

Existing Code Environment

— Different building codes & non-standardized plan review requirements prevent economies of scale & therefore lower construction costs

— Single products rarely meet standards of multiple jurisdictions

Slow Adoption of Technology

— High upfront investment in software & staff training

— Preparation of existing permitting system for use as web-based app

— Maintenance of up-to-date databases with zoning requirements, historic status, & other property attributes

Outdated, Complicated, Difficult- to-Understand Zoning Code

— Intended to give developers clear signals of allowable uses of an area

— Land use regulations often require developers to request a variance for every new project, which requires a long review process

— Rezoning areas for residential use has increased housing supply

Combined with rapidly rising land, material, and labor costs, it is difficult for private sector developers to deliver housing at price points that many working Americans can afford. For builders & developers, time is money. The longer construction is delayed, the more costs they face & fewer projects they build. Ensuring that building permit approvals are timely & efficient is a critical step to increasing housing supply.

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Pre-Construction Approval Processes Are Desperate For Innovation

Slow, complex, and inconsistent building approval processes can significantly hinder commercial and residential development, delay government tax revenues, impact housing affordability, and cost developers and citizens money.

40.6%
Portion of total costs of a multi-family development spent on government regulations

23.8%
Portion of total costs of a single - family home spent on government regulations

11.1%
Amount of total costs spent on complying with building code changes

$50B
Faster permitting market within the $1.6 trillion construction market

19,000
Different permitting jurisdictions in the US

10,000
Pages of building codes for each jurisdiction

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Notable companies

PropTech companies are building solutions to transform the approval process for homebuilders and developers.

Company	Description	Raised	Notable Investors
Ultraground	Scrapes, centralizes, and maps data and decisions from zoning meetings as they happen to help developers get a pulse on what's happening in different markets, highlighting trends and analogous developments.	$0	N/A
Pulley	Streamlines the process of getting permits faster with localized intelligence for each jurisdiction and automated submissions and status tracking. Also offers customers integrated support from a network of local permitting consultants.	$4.4M	Susa, BoxGroup , FifthWall , Suffolk, South Park Commons
PRONTO HOUSING	Affordable Housing Leasing and Compliance Automation Software	$4.5M	Moderne Ventures, Fifth Wall, Wilshire Lane
PermitFlow	Surfaces municipal requirements and digitizes the permit process, allowing builders to easily prepare and submit permit applications, respond to municipal comments, and receive approvals on one platform.	$500K	Y Combinator, Foundamental , Davidovs Venture Capital
greenlite	Creates a "common application" for community planning and accelerates the permitting process by managing requests, preparing submissions, submitting & tracking progress, addressing comments & corrections, and securing approval.	N/A	Currently raising a seed round

05

Intersection Of Generative AI & Affordable Housing

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Rise of Generative AI

In the last 12 months, large language models (LLM) have advanced to an ability to both **GENERATE** and **UNDERSTAND** natural language at a **HUMAN LEVEL**, which will enable a once in a generation transformation of how we work.
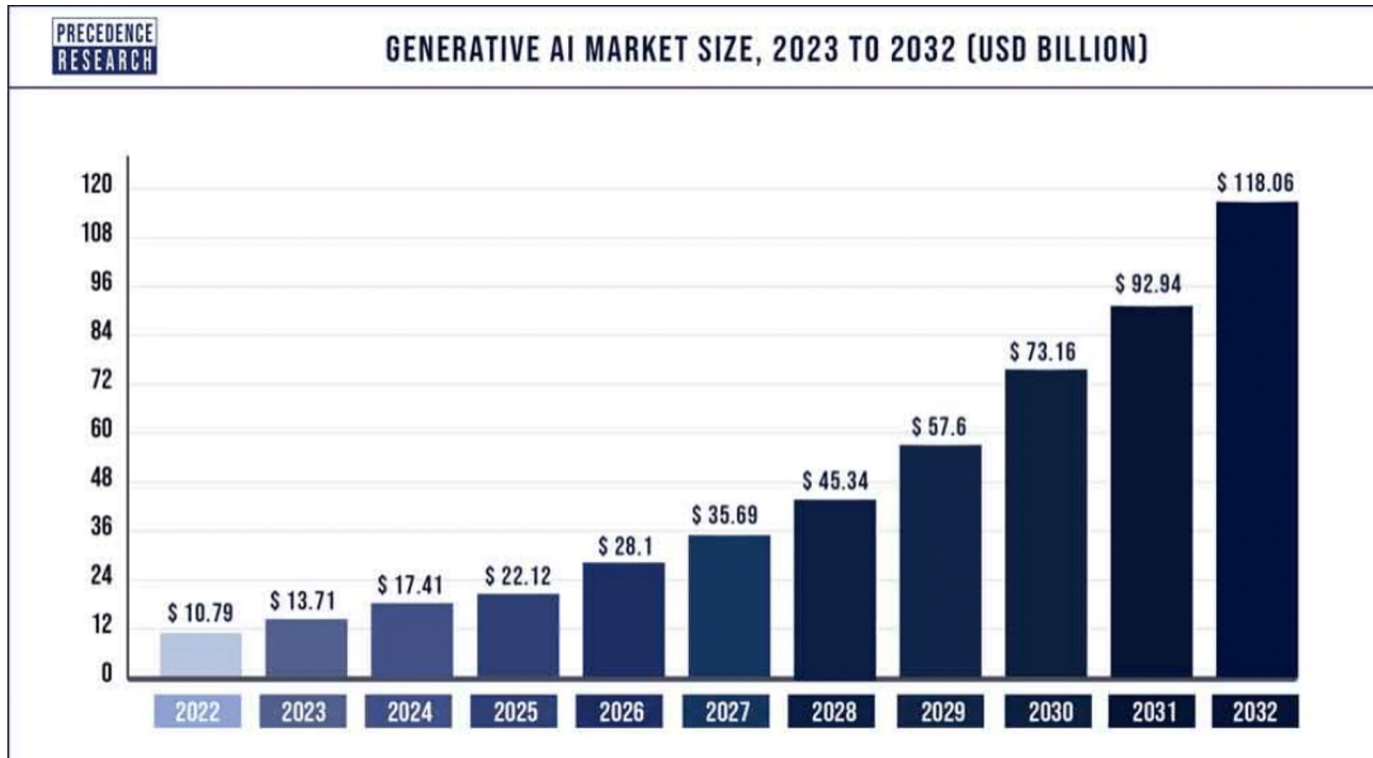
The Impact Of Generative AI On The Real Estate Industry

Generative AI-driven innovations are poised to revolutionize the way people design, plan, finance, build, buy, sell, rent, and manage properties.

— Property Valuation and Pricing Optimization

— Predictive Maintenance and Energy Management

— Streamlined Property Management

— Enhanced Risk Assessment and Fraud Detection

— Improved Decision Making for Real Estate Investments

— Virtual Property Tours and Staging

— Personalized Property Recommendations

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AI Market in Real Estate

GENERATIVE AI MARKET SIZE, 2023 TO 2032 (USD BILLION)

PRECEDENCE RESEARCH

Year	Value
2022	$ 10.79
2023	$ 13.71
2024	$ 17.41
2025	$ 22.12
2026	$ 28.1
2027	$ 35.69
2028	$ 45.34
2029	$ 57.6
2030	$ 73.16
2031	$ 92.94
2032	$ 118.06

New AI tools will allow professionals across the entire real estate ecosystem to offer more personalized and efficient experiences to their clients, while also streamlining their own workflows.

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Source: precedenceresearch.com

Real Estate AI Application Categories

- Marketing
- Conversational
- Search

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Marketing Applications

Automated content creation and generative AI image models revolutionize marketing for affordable housing, enabling efficient production of personalized and engaging content while automating tasks like property descriptions, virtual staging, and photo editing.

OpenAI ChatGPT 4.0	**Automated Content Creation**	— Generate property descriptions, blog posts, and social media posts — Saves time and resources for agents and marketers — Provides informative and engaging content for potential buyers
Jasper	**Personalized Content**	— Tailor content to buyers' preferences and search behavior — Increase buyer engagement and interest in properties
maket	**Market Analysis**	— Analyze property and market trends — Create persuasive content based on trends — Provide accurate and informative content for buyers
Autoenhance.ai	**Multilingual Content**	— Generate content in multiple languages — Cater to diverse markets and international buyers
HYPAR	**Generative AI Image Models**	— Virtual staging and photo editing: Enhance property visuals with furniture and decor — Materials & Finishes: Simulate different materials for interior design — Virtual property tours: Showcase designs before construction — Design visualization: Create realistic 3D visualizations

Conversational Applications

Chatbots and virtual assistants aren't new, but the new large language models are increasingly being used at the core of conversational AI or chatbots. They offer greater levels of understanding of conversation and context awareness than current conversational technologies to provide a much more engaging and valuable experience.

Improved Sales Process	— Chatbots and virtual assistants answer common questions for potential buyers or renters — Free up real estate agent's time for more complex issues — Provide efficient and personalized experiences for clients	**24/7 Availability**	— Virtual assistants available to answer questions and provide support at any time — Cater to international clients and clients in different time zones
Lead Generation	— Chatbots qualify leads through a series of questions — Help agents prioritize follow-ups with qualified leads	**Property Recommendations**	— Chatbots recommend properties based on preferences, budget, and location — Assist clients in finding suitable properties
Rent Payment	— Conversational AI facilitates online rent payments — Enables automatic payments and reminders for convenience	**Mortgage or Insurance Recommendations**	— Virtual assistants offer personalized user experiences for finding mortgage or insurance options — Help users navigate the entire process
Maintenance Requests	— Chatbots and virtual assistants handle maintenance issue reporting — Ensure faster and efficient service for renters	**Data Collection**	— Conversational AI collects data on customer preferences, behavior, and feedback — Supports better decision-making and improves marketing and customer service strategies

Search Applications

Semantic Search	— Users can search based on meaning, not just keywords — Criteria-based property search: location, size, price, features — Example: "3-bedroom apartment with a pool in downtown New York"
Content Curation	— Efficient organization and retrieval of real estate content — User-friendly content management system — Retrieval of relevant content based on topics or keywords
Enhanced Property Valuation	— Consideration of multiple factors: location, size, condition, market trends — Access to data and insights: property history, market data, comparable sales — More accurate valuation and informed decision-making
Transformation of Real Estate Industry	— Personalized and targeted experiences for customers — Improved accuracy and relevance of property valuations — Streamlined content management and curation processes
Future Potential	— Ongoing evolution of semantic search technology — Expectation of innovative and impactful applications in real estate and beyond

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MetaProp AI Portfolio Companies

Computer Vision AI

AIRWORKS

actuate

OnSiteIQ

Betterview

AVVIR®

Image Generation & Parametric Modeling

Higharc

StageGlass

Skipp

Conversational AI

TRAVTUS

Future Investment Opportunity

Exploring opportunities to apply LLM for semantic understanding of permitting requirements and processes for each of the 9000 US jurisdictions as a platform layer to be the Stripe for permitting.

Problem: Get the green light to put shovel in the ground involves a complicated dance with government that takes months and sometimes years

Solution What: We finally have technology that can perform the complicated dance of getting permission which is an incredible milestone to accelerate housing supply

Solution How:

- ✓ Run fine-tune models that can navigate outdated government websites

- ✓ No Website, then generate models which can send back and forth emails to get to an approval

- ✓ No email, then text to speech models which use phones to interact and generate an approval with a human contact

Thank You

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