
The Smart City, integrated design and planning and UrbanTech

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UrbanTech - General definition

UrbanTech is solving problems of digital information sharing with the objective of improving the way built environments are designed, constructed and maintained as well as making life in buildings and neighbourhoods more comfortable and convenient.

UrbanTech talk



Article

Why urban tech is the hottest investment in town

Tech-driven services like ride-sharing, scooter sharing, food delivery apps, and co-working have quickly infiltrated the daily lives of city dwellers. Venture capitalists have been pouring record amounts of investment into the sector

September 20, 2018

10/2/2018

CITYLAB

www.citylab.com

'Urban Tech' Is Unleashing Creative Destruction on Cities - City

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A cyclist delivers food for Deliveroo in London. // Toby Melville/Reuters

The Rise of 'Urban Tech'

RICHARD FLORIDA JUL 10, 2018

The terms high-tech and venture capital conjure images of industries such as artificial cryptocurrency. But the fact of the matter is that cities and urbanism represent the sector of all, what I like to call "urban tech."

Habitat III can set the urban-tech vision for years to come

The New Urban Agenda is an opportunity to bridge the gap between urbanists and technologists, radically improving the lives of people in cities worldwide.



Rohit T. Aggarwala

Follow

Aug 15, 2016 · 7 min read

This commentary originally appeared at Citiscope.

English Français Español العربية 中文 High contrast

unicef | for every child

EXPLORE UNICEF PRESS CENTRE DONATE

WHAT WE DO RESEARCH AND REPORTS WHERE WE WORK TAKE ACTION SEARCH

Press release

Companies investing in urban emerging tech opportunities could change 2 billion lives and make up to \$2 trillion in revenue according to Arm and UNICEF

20 September 2018

Streets ahead

The world's first neighbourhood built "from the internet up"

Toronto's run-down Quayside area will have snow-melting pavements, package-delivery robots and self-driving shuttles

The Economist Topics Current edition More

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Print edition | Business > May 3rd 2018 | TORONTO

UrbanTech - Relevance

Before:

Corporate-designed Smart Cities (Songdo (Korea), Masdar City (UAE), or PlanIT Valley (Portugal) guided mostly by the experience with hardware and software.

Large corporations who undertake them, Siemens, IBM, Cisco, and Phillips, qualified because of their product range and to a lesser degree by their knowledge about how cities function.

Today:

Many start-up companies offer UrbanTech services, because they understand how cities function and how apps and platforms function.

A chance for an open approach to support innovation and excellence through competition.

A chance to build up local variants of an UrbanTech or City Data Marketplace.

UrbanTech - Definition from a customer perspective

UrbanTech

GovTech

CivicTech

... physical infrastructure or the built environment

... government operations

... community connectivity

Products:

- IoT
- ConTech
- MobilityTech

- Software as a Service (SaaS)

- social networking platforms for collaborative consumption, the sharing or peer economy

Customers:

- government entities
- private sector companies
- end consumers

- government agencies

- end consumers,
- advertisers,
- elected officials

Question:

What potential have isolated private sector UrbanTech projects for contributing to and form an integrated smart city platform?

Structured entrepreneurial efforts of UrbanTech

Cases:



Meet The UrbanTech Advisor Network

- | | | |
|--|---|---|
| <p>Maria Seredina
M&A & Partnerships
Zillow Group</p> | <p>Suresh Madhavan
Head of Ecosystem
machineQ at Comcast</p> | <p>Guy Vardi
Chief Innovation Officer
Silverstein Properties</p> |
| <p>Edgar Stach
Professor at Thomas Jefferson &
Managing Director at e-Homes</p> | <p>Anthony Chow
Founder & CEO
Iglouhome</p> | <p>Cameron McCaskill
Sr. Director Sales
Qualcomm</p> |

URBAN-X



INVESTMENT OFFERING.

\$150,000 initial funding. No catches. No education fees. No rent. Startups have full ownership over deciding how the investment will be spent.



DEPLOYMENT & CUSTOMERS.

Being able to prove that customers want new products or services is an essential measurement for seed stage investors. At URBAN-X, we help startups meet and secure potential customers because traction is paramount. [View case studies.](#)



DESIGN RESOURCES.

Each startup has access to unparalleled, human-centric design, product development and engineering knowledge through world-class in-house MINI and BMW design talent.



GLOBAL EXPOSURE.

Media access and press across our global network. Opportunities to feature your solution and showcase your team to target customers in the US, EU and Asia.

PARTNERSHIPS AND PERKS.

The right programs and software can have transformative benefits for startups. URBAN-X partners include HERE, Google Cloud, Amazon Web Services, Hubspot, Intercom, IBM, foundersuite, ReachNow and CitiBike. We also offer connections to potential pilot spaces, including at A/D/O and in Downtown Brooklyn.



\$10,000,000
AVERAGE INVESTMENT
PER COMPANY

6 EXPERTS
ON-SITE DESIGN
'EXPERTS-IN-RESIDENCE'

\$150,000
INITIAL FUNDING
FROM URBAN-X

**2000+ MENTORS
IN THE NETWORK.**

The projects

Dreamit UrbanTech Startups

HealthTech | SecureTech | EdTech | Current Cohort | All Startups

Fall 2018



PassiveLogic



Spring 2018



KOGNITION

myComply



Fall 2017



cityzenith

ecomedes



knowify

URBAN-X

PROGRAM TEAM OUTCOMES COMPANIES UPDATES CONTACT APPLY

FILTER BY SECTOR FILTER BY COHORT



ALL COMPANIES



BUILT ENVIRONMENT & REAL ESTATE



INFRASTRUCTURE & INDUSTRY



FOOD, WASTE & WATER



PUBLIC HEALTH & SAFETY



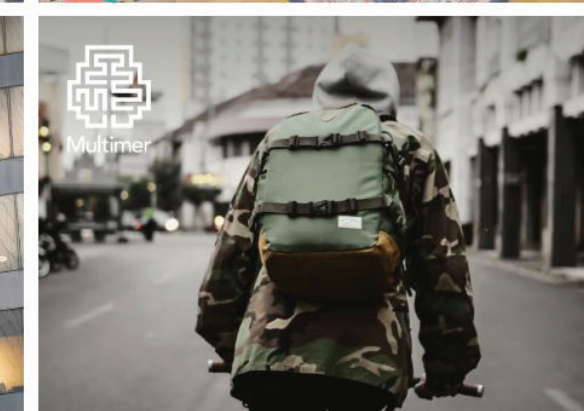
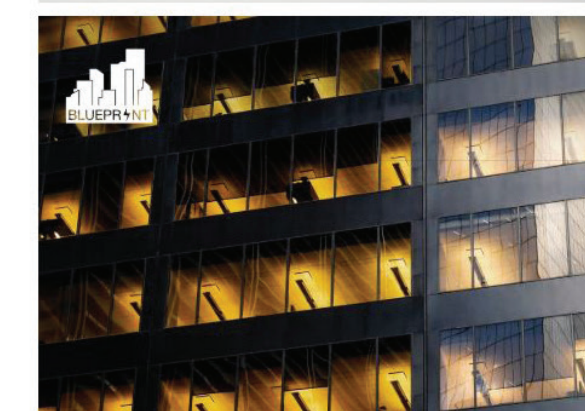
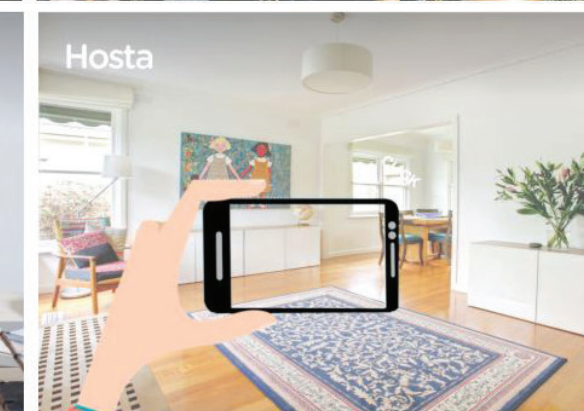
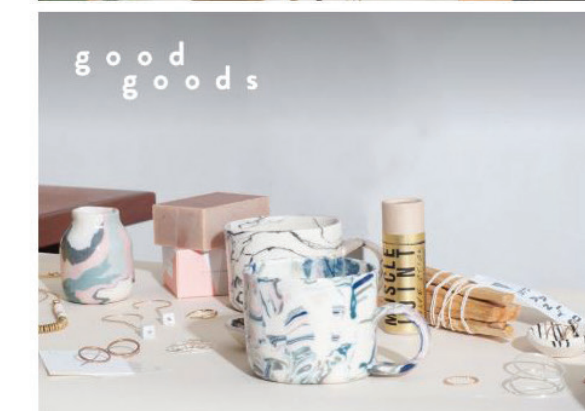
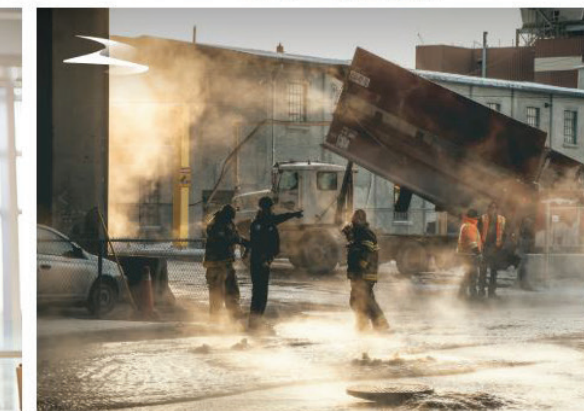
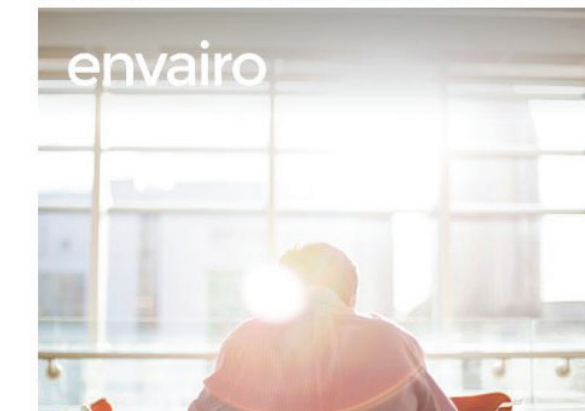
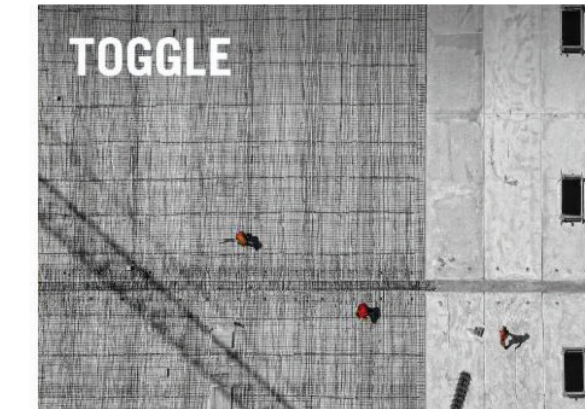
ENERGY & GRID



GOVTECH & CIVIC SOLUTIONS



TRANSPORTATION & MOBILITY





idevelop.city

PRODUCT ▾

PRICING

ABOUT ▾

LOG IN

TRIAL SEARCH

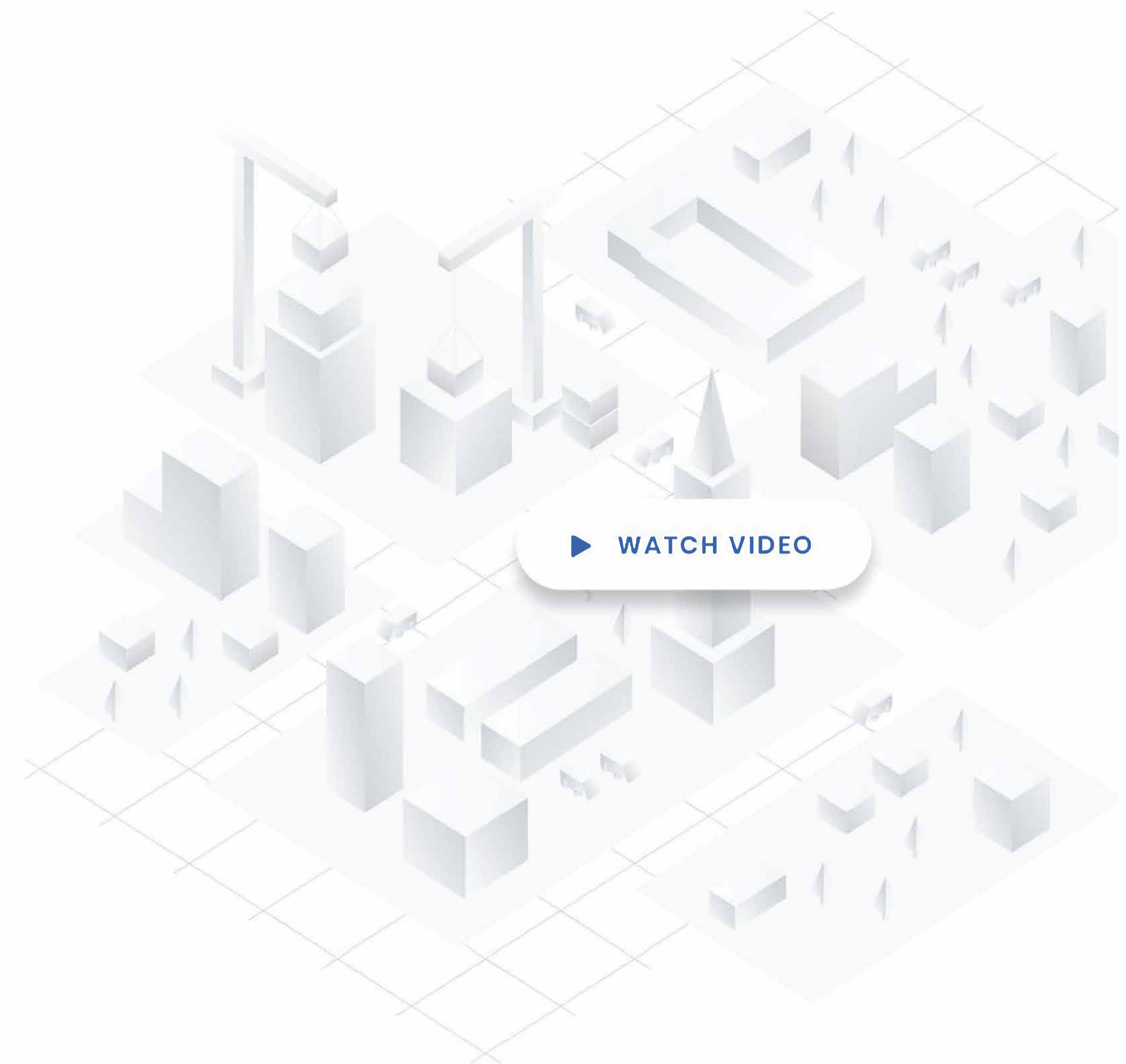
Find. Accelerate. Build.

- ✓ Run searches for development opportunities in zoning areas.
- ✓ Use advanced filters to find your high-value sites.
- ✓ Compare current conditions to development potential.
- ✓ Generate maximum development capacity and model in 3D.

Making zoning work for you

TRIAL SEARCH

SCHEDULE DEMO



Leave a Message



FIND

Opportunity Search

Run a search within a zoning area for development opportunities. Use advanced filters to focus on high value sites.

For example, search for:

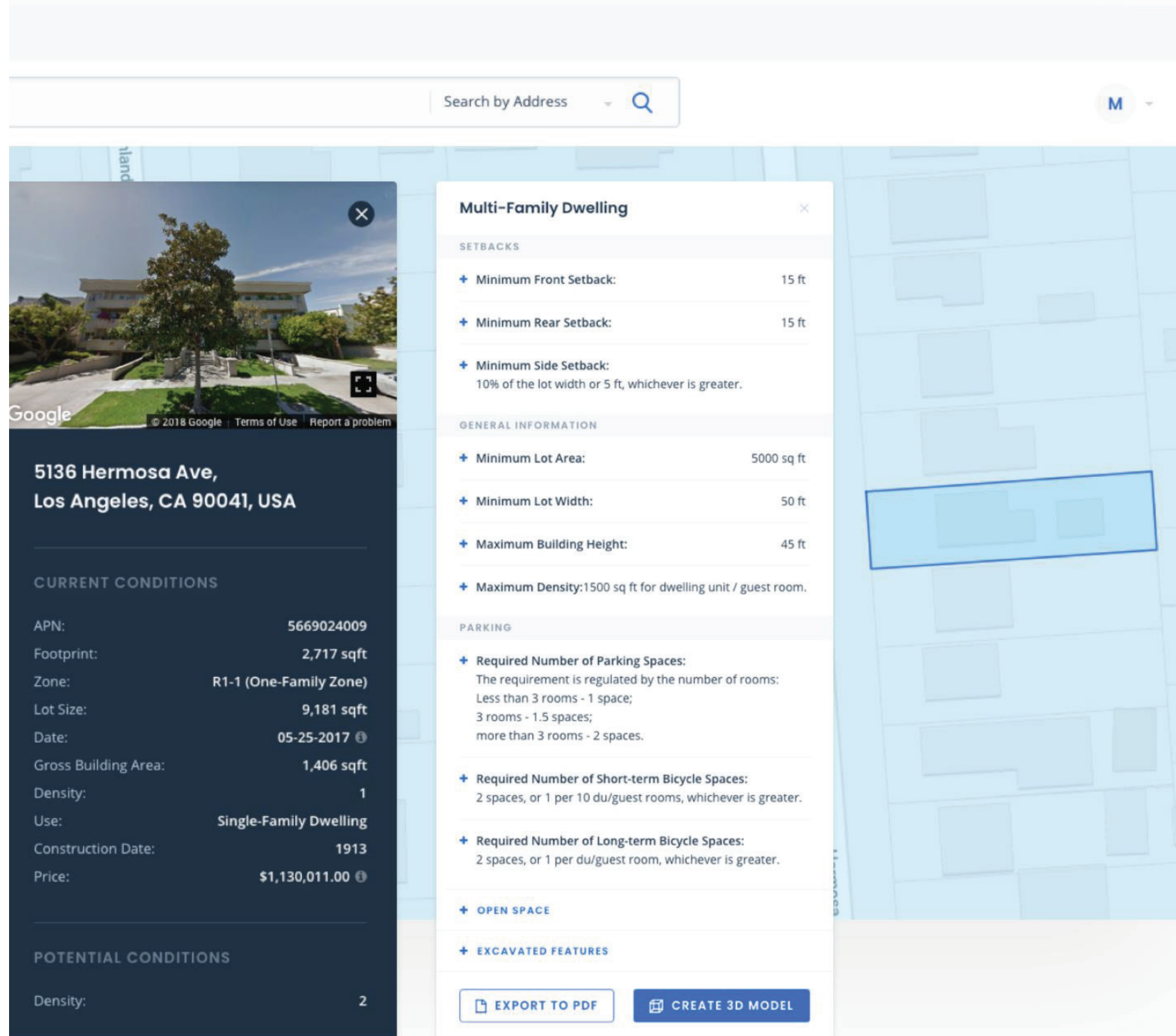
- Multi-family as a permitted use
- Sites where 30 or more residential units can be added

Add important layers including:


- Specific or Precise Plans
- Opportunity Zones
- Transit Corridors

Refine using filters:

- Desired Lot Size (Min. and Max.)
- Current Building Coverage (Min. and Max)
- Construction Date (built before)



Search by Address M ▾



**5136 Hermosa Ave,
Los Angeles, CA 90041, USA**

CURRENT CONDITIONS

APN: 5669024009
 Footprint: 2,717 sqft
 Zone: R1-1 (One-Family Zone)
 Lot Size: 9,181 sqft
 Date: 05-25-2017 ⓘ
 Gross Building Area: 1,406 sqft
 Density: 1
 Use: Single-Family Dwelling
 Construction Date: 1913
 Price: \$1,130,011.00 ⓘ

POTENTIAL CONDITIONS

Density: 2

Multi-Family Dwelling ✕

SETBACKS

- + Minimum Front Setback: 15 ft
- + Minimum Rear Setback: 15 ft
- + Minimum Side Setback: 10% of the lot width or 5 ft, whichever is greater.

GENERAL INFORMATION

- + Minimum Lot Area: 5000 sq ft
- + Minimum Lot Width: 50 ft
- + Maximum Building Height: 45 ft
- + Maximum Density: 1500 sq ft for dwelling unit / guest room.

PARKING

- + Required Number of Parking Spaces:
The requirement is regulated by the number of rooms:
Less than 3 rooms - 1 space;
3 rooms - 1.5 spaces;
more than 3 rooms - 2 spaces.
- + Required Number of Short-term Bicycle Spaces:
2 spaces, or 1 per 10 du/guest rooms, whichever is greater.
- + Required Number of Long-term Bicycle Spaces:
2 spaces, or 1 per du/guest room, whichever is greater.

+ OPEN SPACE

+ EXCAVATED FEATURES



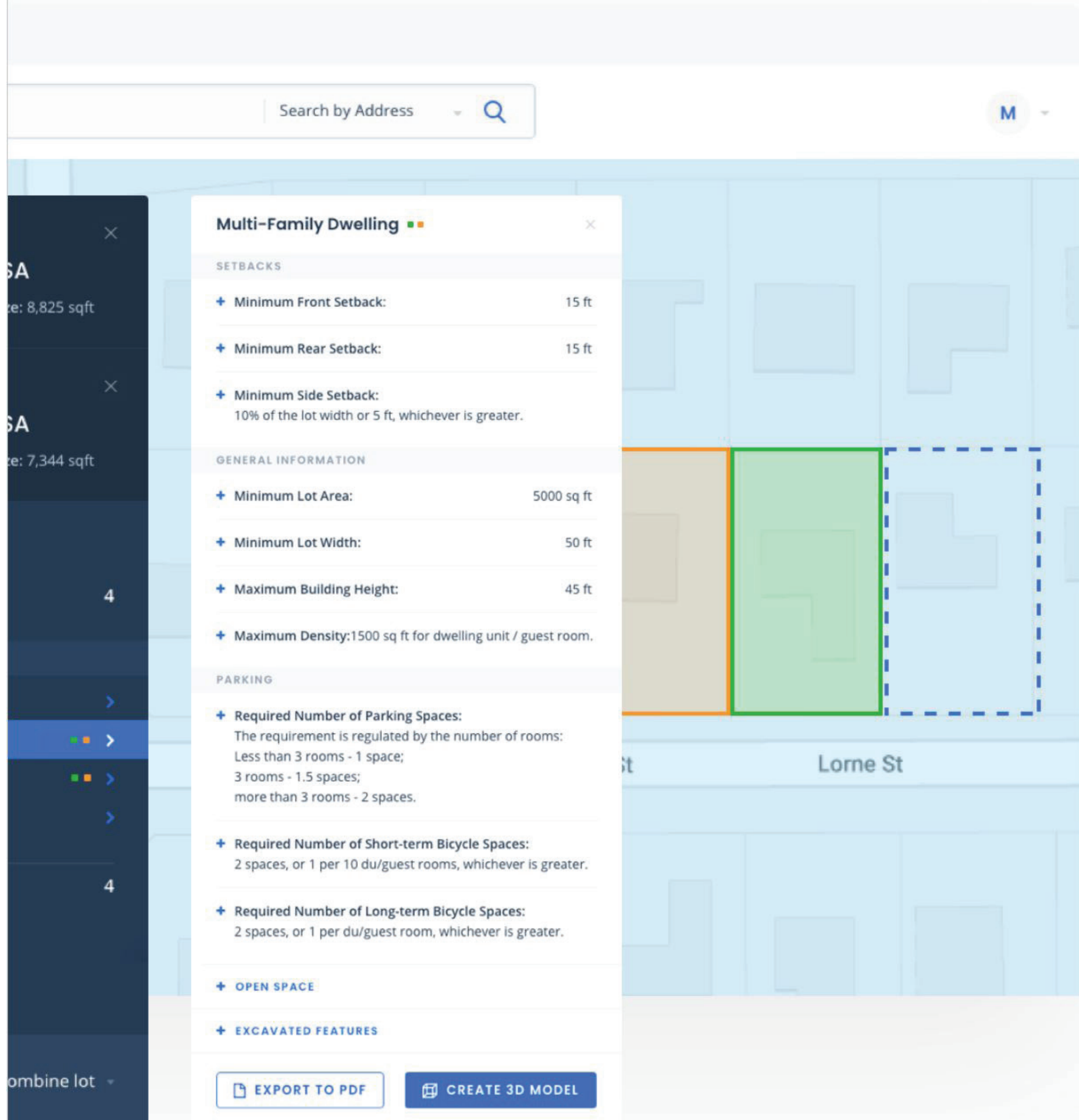
ACCELERATE

Zoning Viewer

You can easily access site-specific information.

Most importantly compare current conditions to development potential. You can do the following:

- **Compare current conditions vs. development potential**
- Access current use and relevant site data
- One-click to layers and sub-layers of zoning restrictions
- Navigate through multiple uses and sites rapidly.
- Run and re-run different uses and test assumptions.



ACCELERATE

Run “What-If” Scenarios (coming soon)

Change development inputs. Override assumptions for current restrictions. Use the “What-If” to understand unseen development opportunity with ability to model:

- Combining and splitting lots
- Adding state density bonus
- Transit corridor incentives
- Parking requirements
- Heights



Leave a Message

Our Coverage

16

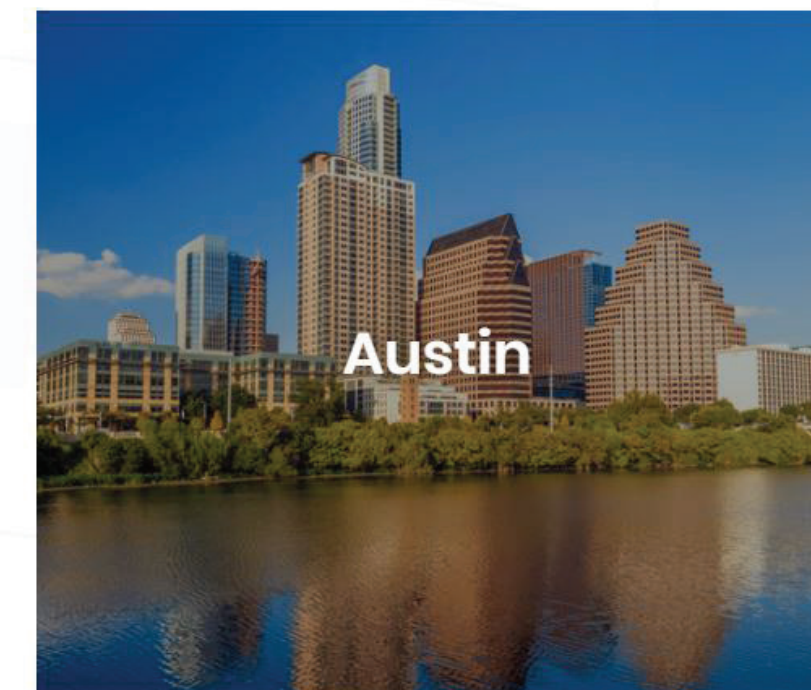
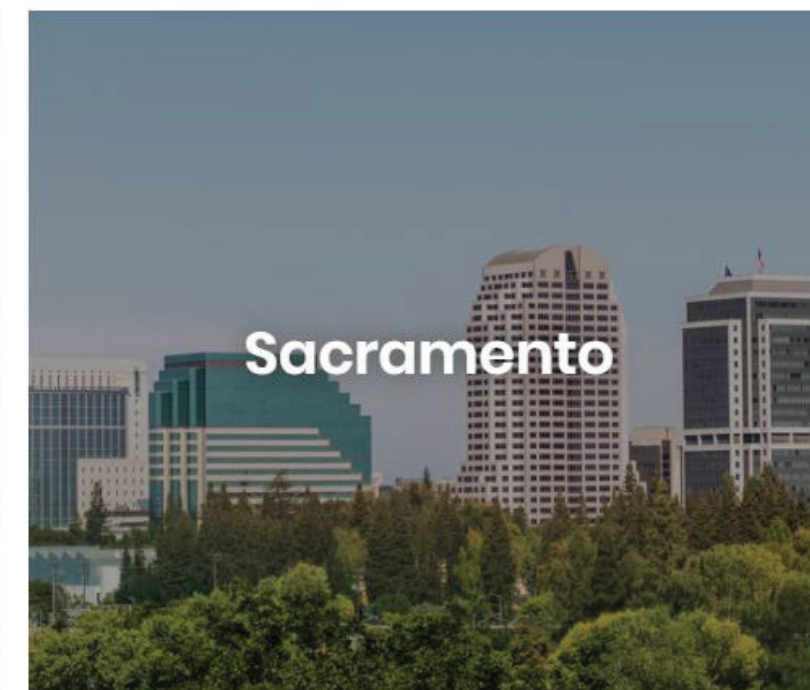
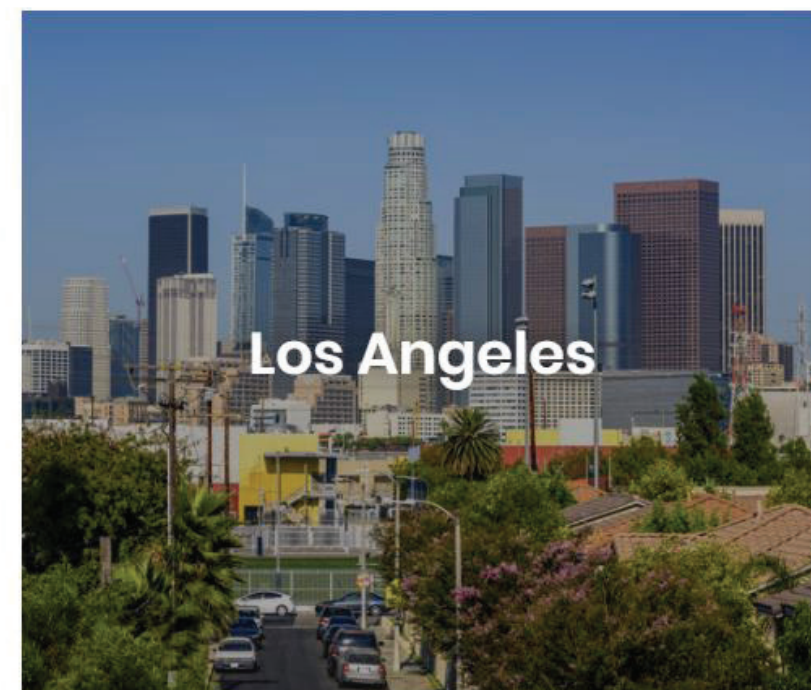
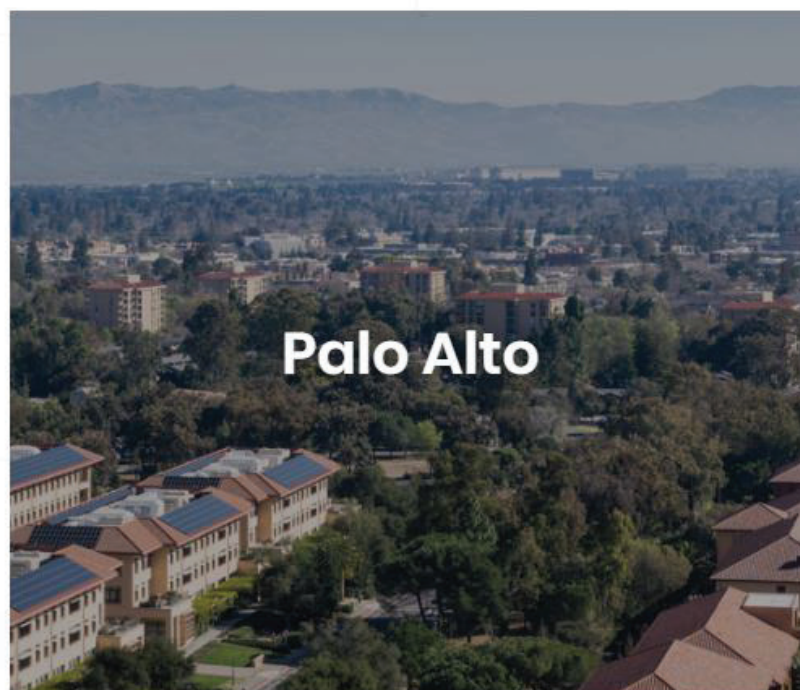
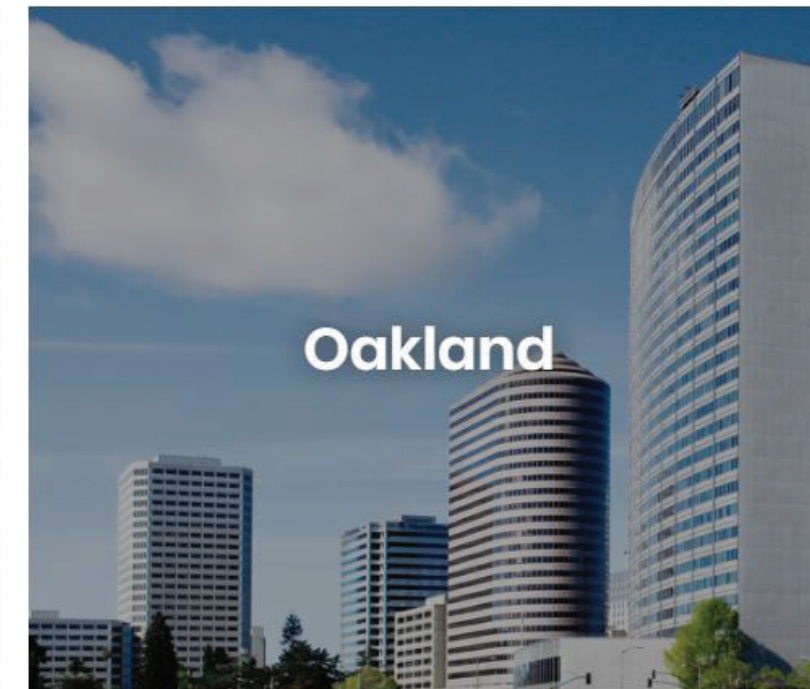
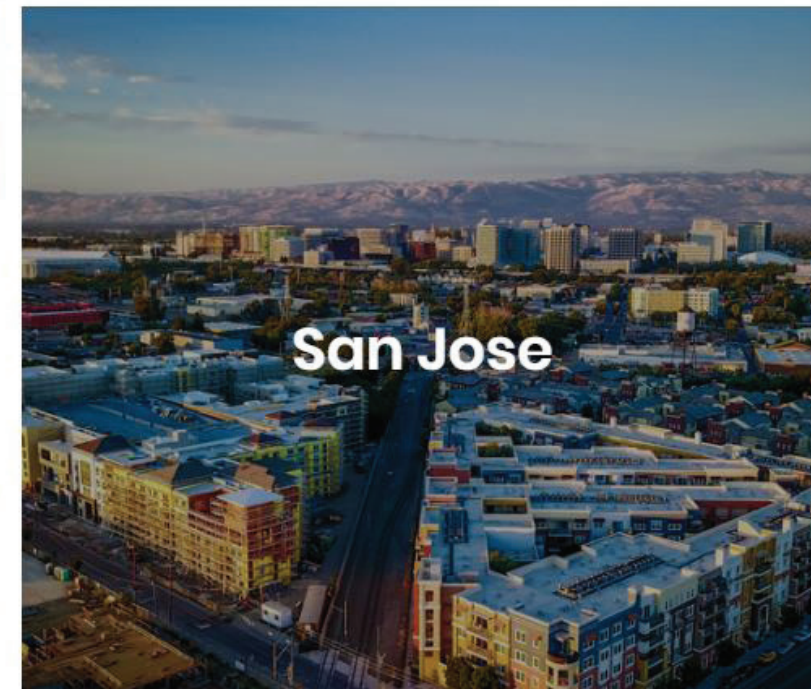
Digitized cities

1,748,523

Lots available for search

59,829,025,883

Total area covered (sqft)



AVVIR PROVIDES AN END-TO-END CONSTRUCTION MONITORING SERVICE.

By automating the processes around data acquisition, visualization, and analysis, we can provide near real time insights into the state of a project including progress monitoring and defect detection.



SCAN SITE
REGULARLY



COMPARE
PROGRESS SCANS



DETECT DEFECTS
AUTOMATICALLY

**ConTech/ real time
construction
monitoring**

**4D BIM,
pointcloud**

Point cloud scan

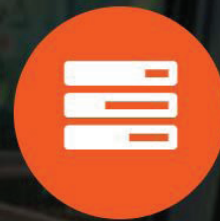
SMART BARREL

Automated Construction Time Tracking



Live Project Monitoring

Monitor your projects and employees from any location



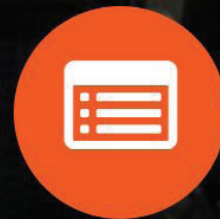
Allocate Tasks

Allows managers to designate tasks easily



Daily Timesheet

Issue, share and archive your daily reports from anywhere and anytime



Project Overview

Dynamic project monitoring system with customizable features



Payroll

Instant Payroll Report issuance and sharing



Live Weather Station

Go Get instant notifications on incoming weather conditions to keep your employees safe

**ConTech/
construction staff
supervision and time
management**

**Photographs,
personal identity,
time sheets**

**Facial detection
camera,
weather station**



Instant Identity and Financial Verification to Prevent Fraud

- Reduce Bad Debt
- Increase Asset Value
- Reduce Application Review Time

PropTech/
rental application
screening platform

Applicant data

Self-uploaded documents, third party documents, filled in surveys



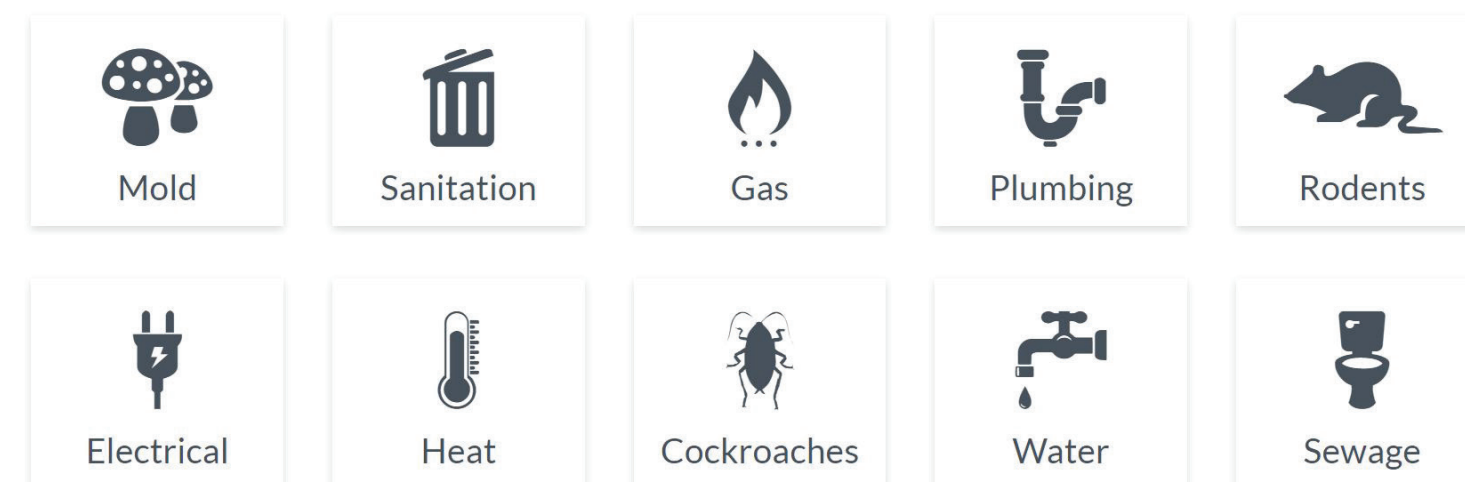
Apartment building grades based on facts, not opinions

Rentlogic grades 1.1 million apartment buildings in New York City based on physical inspections and objective health and safety standards.

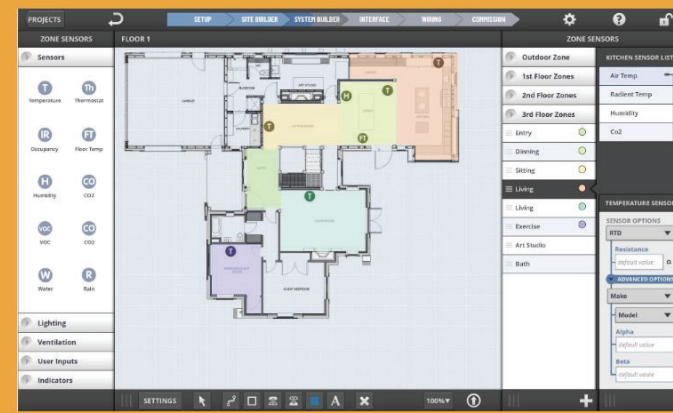
PropTech/
Real estate rating

Hygiene (pests), damages, state of equipment

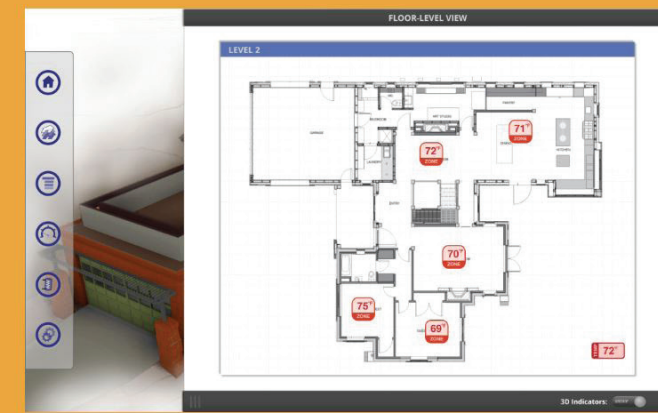
Physical on-site inspections



PassiveLogic



JUST DRAW NO CODE NEEDED



AUTOMATION SIMPLIFIED



PLUG & PLAY CONTROL

**PropTech/
smart real estate**

**Building control
and management
data**

**Sensors,
cameras,
touchpads**

envairo

Transform your workplace

Envairo maximizes employee comfort and productivity by making your air responsive to your people. If your office gets too hot or too cold, we can help.

**PropTech/
smart real estate**

**Air quality,
occupancy,
temperature**

Sensors



We're the technology that powers convenience

Amenify simplifies apartment living by providing convenient in-home services to multi-family properties

A grid of six colored squares, each containing a white icon and a service name. The services are: In-Home Massage (teal square, massage icon), Pet Care (orange square, dog icon), Fitness Classes (purple square, dumbbell icon), Personal Training (dark blue square, key icon), Rideshare (pink square, car icon), and Cleaning (light blue square, broom icon).

**CivicTec /
in-home services**

**Property types
and locations,
services offered,
service requests**

**Apps,
phone hotline**

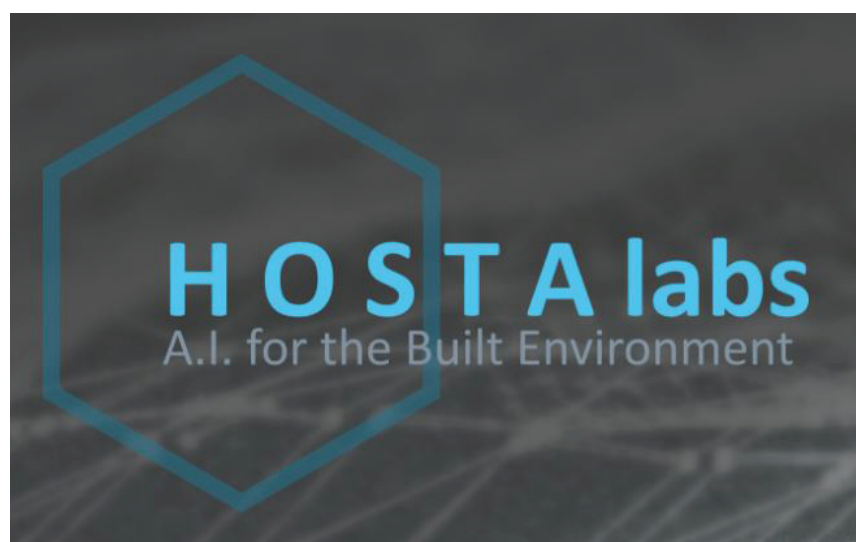


A banner with a light green background. The text reads: "Spend More Time Outside" in large bold letters, followed by "Book inspiring outdoor venues for offsites and events" in smaller text. At the bottom, there are two buttons: a green "SIGN IN" button and a red "SIGN UP" button. The background features a stylized mountain range and clouds.

**PropTech/ outdoor
space booking**

**Description of
outdoor spaces**

App/ online form



A banner with a dark background featuring a network of white lines and dots. The text reads: "AI powered software that autonomously converts interior photographs into smart 3D models." in white.

**DesignTech/ 3D
models for design
and renovation**

**3D models
created from
photos**

**Mobile phone
camera**

Criteria for analysis

What **TYPES OF DATA** are collected

HOW IS DATA COLLECTED (sensors, surveys, etc)?

- Can mistakes be avoided through **INTEROPERABILITY**?
- To assess the relevance of the project for a smart city platform, the **GEOGRAPHIC RANGE** they currently cover and their potential to **SCALE** is assessed, along with the type of **CLIENTS** and **PROFESSIONAL ALLIANCES** they formed so far.
- Can aggregating data create **FEEDBACK LOOPS**, where better information causes planners and designers to adapt plans.

Companies at Dreamit UrbanTech Vertical, 2018 Fall Intake

Name	Service	Data types	Data collection	Interoperability	Professional alliances	Clients	Spatial scale
Amenify	CivicTec / in-home services	Property types and locations, services offered, service requests	Apps, phone hotline	Property management software (Yardi, RealPage, OneSite)	Lyft, Pupjoy, Corepower Yoga, Sun Basket	Multi-family property managements, local businesses, residents	4 cities, scalable
iDevelop.City	PropTech/ scenarios for real estate development	Zoning data, vacancies, requests	Self-digitized zoning codes, Apps	google maps	Unspecified off-site constructors	Real estate developers	3 cities, scalable
PassiveLogic	PropTech/ smart real estate	Building control and management data	Sensors, cameras, touchpads	Pre-installed mechanical building equipment	unknown	Owners and occupants of residential and office buildings and units	Unknown, scalable
Snappt	PropTech/ rental application screening platform	Applicant data	Self-uploaded documents, third party documents, filled in surveys	Bank and credit statements, etc.	Goldman Property Group	Landlords, property managers	US wide
Smart Barrel	ConTech/ construction staff supervision and time management	Photographs, personal identity, time sheets	Facial detection camera, weather station	Unknown project management software	NOOS Labs, StartUP FIU, Miami Ironside	Construction companies, site managers	Construction sites, scalable

Companies at Urban-X Built Environment & Real Estate Vertical

Name	Service	Data types	Data collection	Interoperability	Professional alliances	Clients	Spatial scale
Envairo	PropTech/ smart real estate	Air quality, occupancy, temperature	Sensors	Unknown	Unknown	Property managements, office tenants	Unit, building, scalable
Avvir	ConTech/ real time construction monitoring	4D BIM, pointcloud	Point cloud scan	Unknown	Unknown	Construction companies, site engineers	Building sites, scalable
Campsyte	PropTech/ outdoor space booking	Description of outdoor spaces	App/ online form	google maps	Unknown	Citizens, owners of outdoor spaces	City, scalable
Rentlogic	PropTech/ Real estate rating	Hygiene (pests), damages, state of equipment	Physcal on-site inspections	Real estate ratings can be displayed on websites with a plugin	Streeteasy, Nooklyn, renthop, compass, Douglas Elliman, NYBits, Zillow, Realtor.com	Tenants, landlords	New York City, scalable
Hosta Labs	DesignTech/ 3D models for design and renovation	3D models created from photos	Mobile phone camera	Unknown	MIT	Homeowners	Rooms, units

Analysis

- **Data collection**
 - **from sensors (ConTech and RealEstateTech)**
 - **from citizens (sometimes using access to prestructured data (bank information, but access upon permission))**
 - **rentlogic collects their data in physical (on-site) inspections**
 - **only i.develop.city uses municipal data**
- **Third party apps are used in many projects**
(timesheet, BIM, data is georeferenced on googlemaps, rentlogic makes data available on third party sites through plugins)
- **Partnerships: with building managers (CivicTech)**
- **Data analysis algorithms appear to be proprietary. (No findings)**

Topics beyond data interoperability

- **Questions of proprietary algorithms**
(Market forces and competition vs. “Principles for Algorithmic Transparency and Accountability”*)
- **Relationship between commercial for profit UrbanTech ventures and accessible, responsive and effective government administration.**
- **Who is participating in the digitalisation of urban information, who profits and whose habits as citizens are represented in the data?**
- **Constraints given by the business model of VC funded accelerators.**
(Quick value increase and financial returns on investments vs. the long view)

*USACM (U.S. Association for Computational Mechanics) and Garfinkel, Simson L. 2017. ‘A Peek at Proprietary Algorithms’, American Scientist, 105: 326.

Conclusion

Initial Question: Contribution of isolated UrbanTech projects to an integrated smart city platform?

Positive:

- **Start-up projects cover all stages of a building/neighborhood lifecycle.**
- **Funding set impulses to develop tools for digital data based services and build a marketplace.**

Negative:

- **The market alone won't bring about inclusiveness.**
 - a) **Aiming for short term returns.**
 - b) **Some citizens will ultimately be under-represented (because they have no interests to fight for).**

Neutral:

- **Urban Tech projects still very fragmented, many are still on the level of a refined slide deck and a beta type.**

Unsolved:

- **How spatial levels of urban data can be combined on a platform and trigger can to responses/adjustment (government).**

Thank you!

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