

# LEASEONTHEBLOC



Blockchain for Social Impact  
Incubator 2020

SDG #11 Sustainable Cities and Communities

# What Is Lease On The Block

LOTB is a decentralized private ledger using blockchain technology to safely record and track rent regulated apartments in New York City.





# Problem Statement

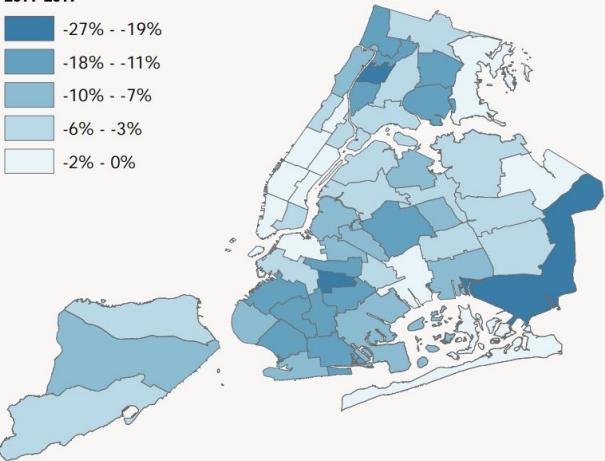
**New York tenants do not have a collaborative tool to preserve and protect their affordable housings.**

- 300 000 rent stabilized apartments lost
- 27 apartments illegally lost everyday
- Official data are not public
- Tenants unable to combat gentrification

MAP 2: MAJOR LOSSES OF UNSUBSIDIZED LOW-RENT APARTMENTS SINCE 2011

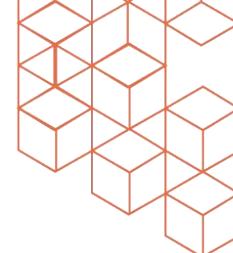
Percentage point difference  
2011-2017

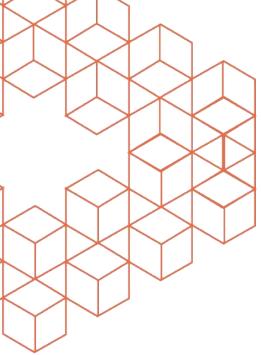
-27% - -19%
-18% - -11%
-10% - -7%
-6% - -3%
-2% - 0%



Source: CSS analysis of 2002-2017 HVS data.

# Competitive Analysis





# Why Blockchain

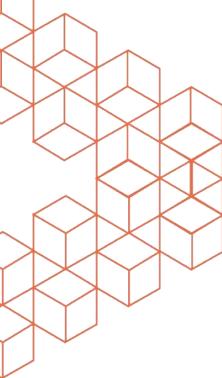


**Collaboration**

**Open  
Source**

**Chain of  
trust**

**Privacy**



# Solution

- Digitally certified lease
- Application, Signature & Transfer
- Payment Services
- Reporting
- Claims Management
- Maintenance Management



ethereum



# Personas



**Tenants**

**Housing Preservation  
Agencies**

**Landlord**

## Lease On The Block Users Benefits

Streamlined, Simplified, Secure  
Inclusive Payments Services



Single Source of Truth  
Harmonization of Systems  
Automation of Controls

Reduced Vacancy Rate  
Conflict Resolution

# Key Success Partners



Housing preservation  
government agencies HCR/HPD

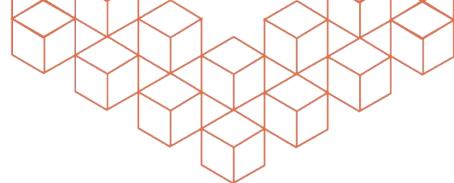


Senator Governor  
Mayor

Rent Stabilization attorney

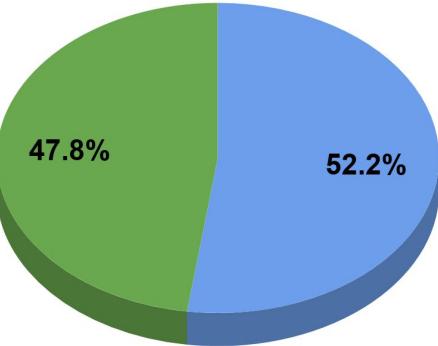


# Target Market And Opportunity



● Market Rent  
● Rent-Regulated

- 1M Regulated units in New York City
- Up to 50% of unbanked tenants in dense regulated-units areas
- **\$60B affordable housing investments within 5 to 10 years**
- **X 2 Budget affordable housing agency \$990M**

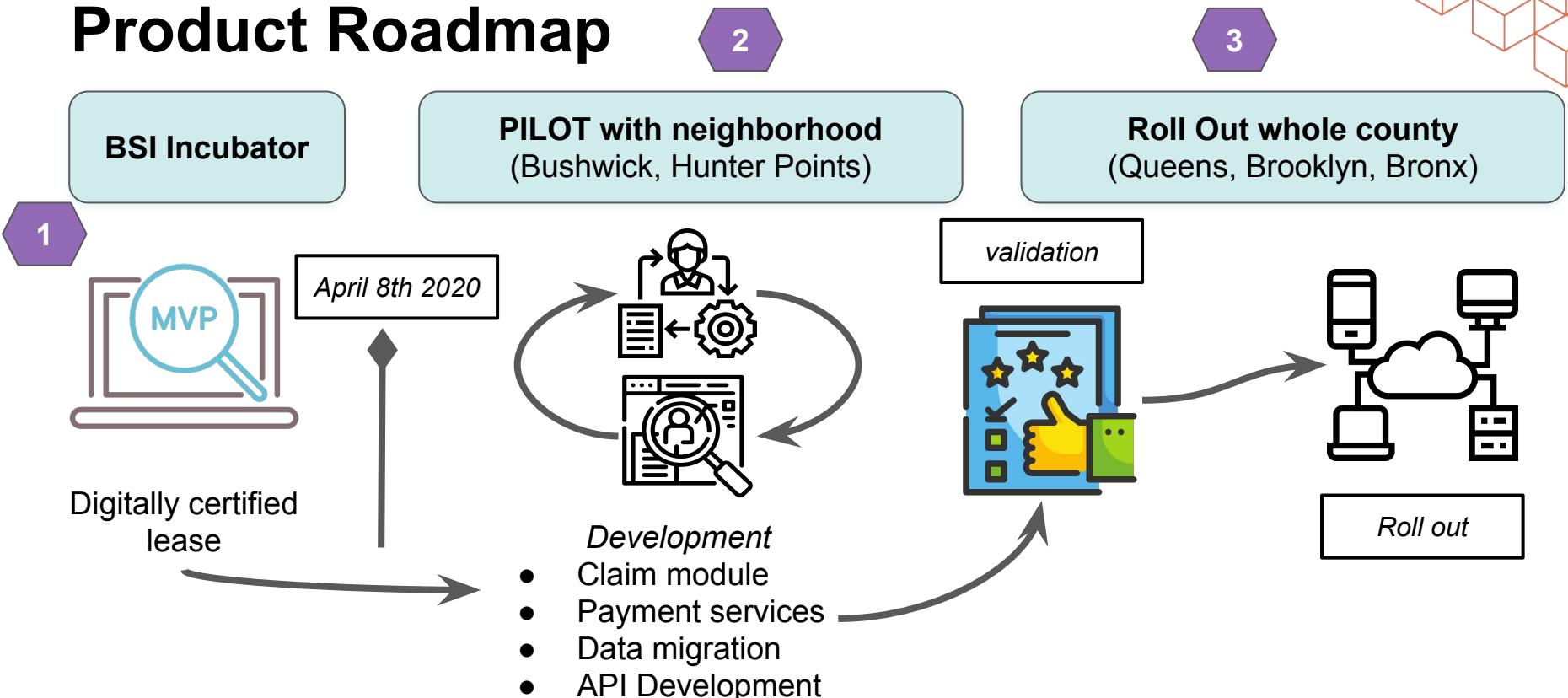


# Revenue Model

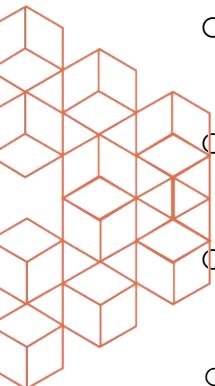


Development Cost		<u>Revenue / Year</u>
 <b>Subscription based with a cost per unit per year</b>	1 000 000 units in NYC 3\$/unit/year	\$3,000,000
<b>Arbitration of dispute with NYC Civil Court.</b>	180 000 case filed in 2019 \$25 per case	\$4,500,000

# Product Roadmap



# What Success Looks Like?

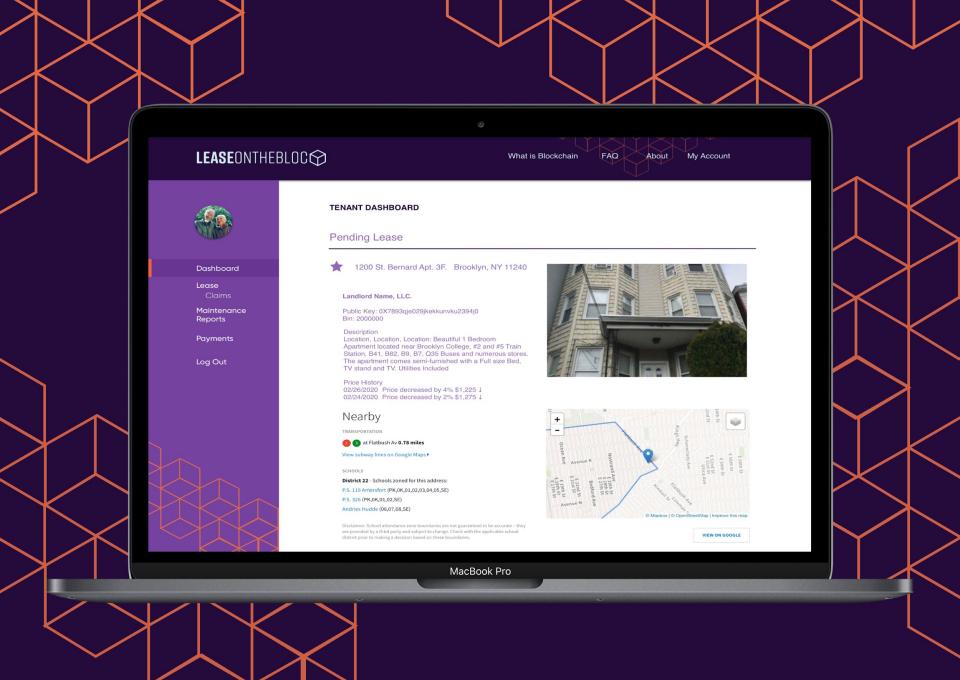


- Decrease in vacancy rate
- Decrease in resources use for claim management
- Increase in electronic payment via 
- Increase claims resolution
- **Decrease in affordable apartment lost**



**LOTB go-to solution for affordable housing hunting!**

# Demo



[> Click here to see demo](#)



Redwan @  
Brooklyn. Founder,  
rent regulation  
bookworm.

Gael @ Brooklyn  
UI & Visual Design

Zach @ Indiana  
Software Architect  
and Full Stack  
Engineer

Peter @ Vietnam  
Backend Engineer  
and Solidity Expert

We are 100% remote !

We met online via the gitcoin chat and the Consensys developer bootcamp community.



750 messages



Google Drive



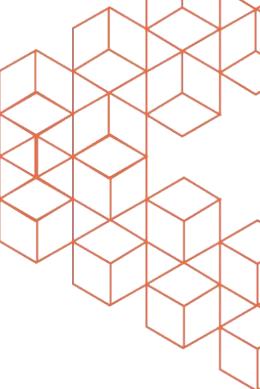
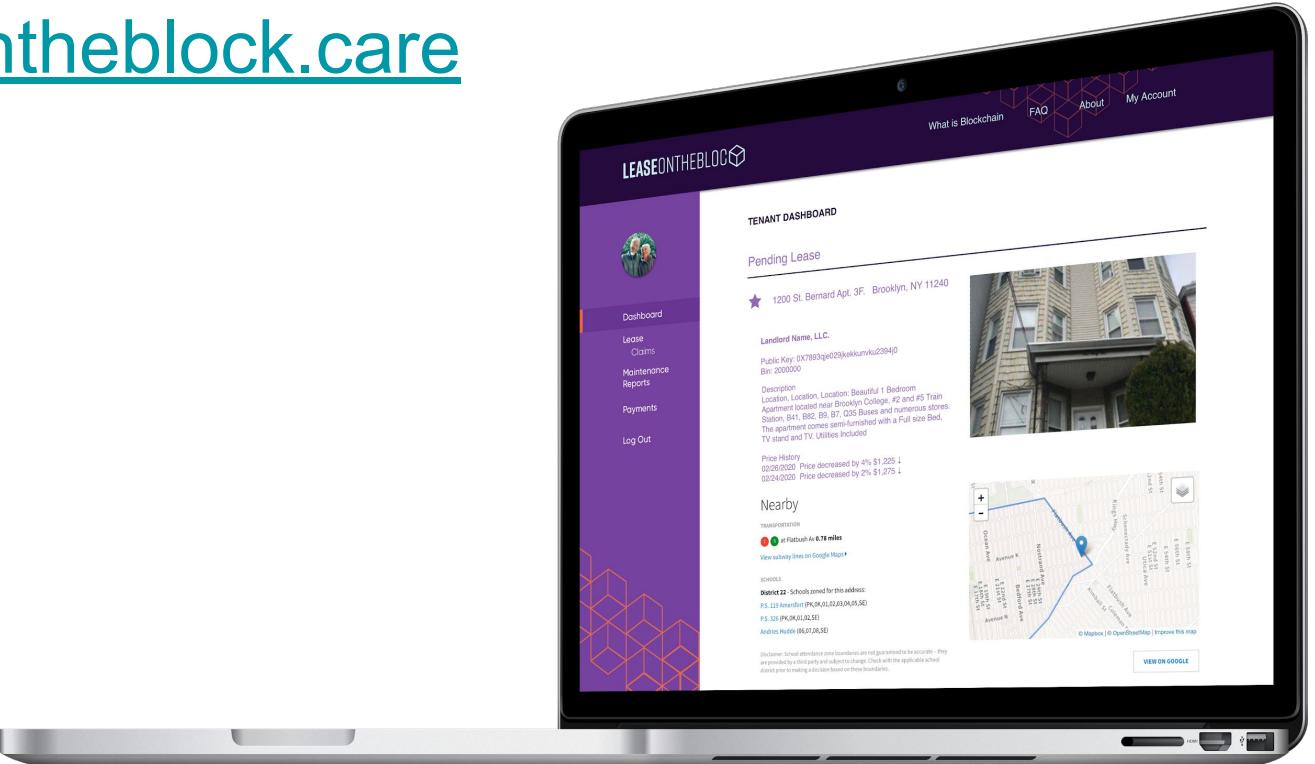
Follow us !  
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# Test LOTB here !

## leaseontheblock.care





Blockchain for Social Impact 2020

Thank you !

Our corporate website

[info.leaseonthblock.care](mailto:info.leaseonthblock.care)



# APPENDIX

# The Challenge

## SDG #11 Sustainable Cities and Communities

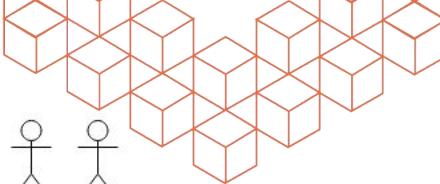


Cities consume 80 percent of energy production worldwide and account for a roughly equal share of global greenhouse gas emissions. Many cities struggle with environmental degradation, traffic congestion, and inadequate urban infrastructure.

City citizens all over the world deserve better basic services, including access to clean water, sanitation, and waste management. **How do we design and build cities of the future that sustain the well-being of people**, economies, and our planet? How can we breakdown the structural racism built into our economies and cities as we invest in sustainable infrastructure?

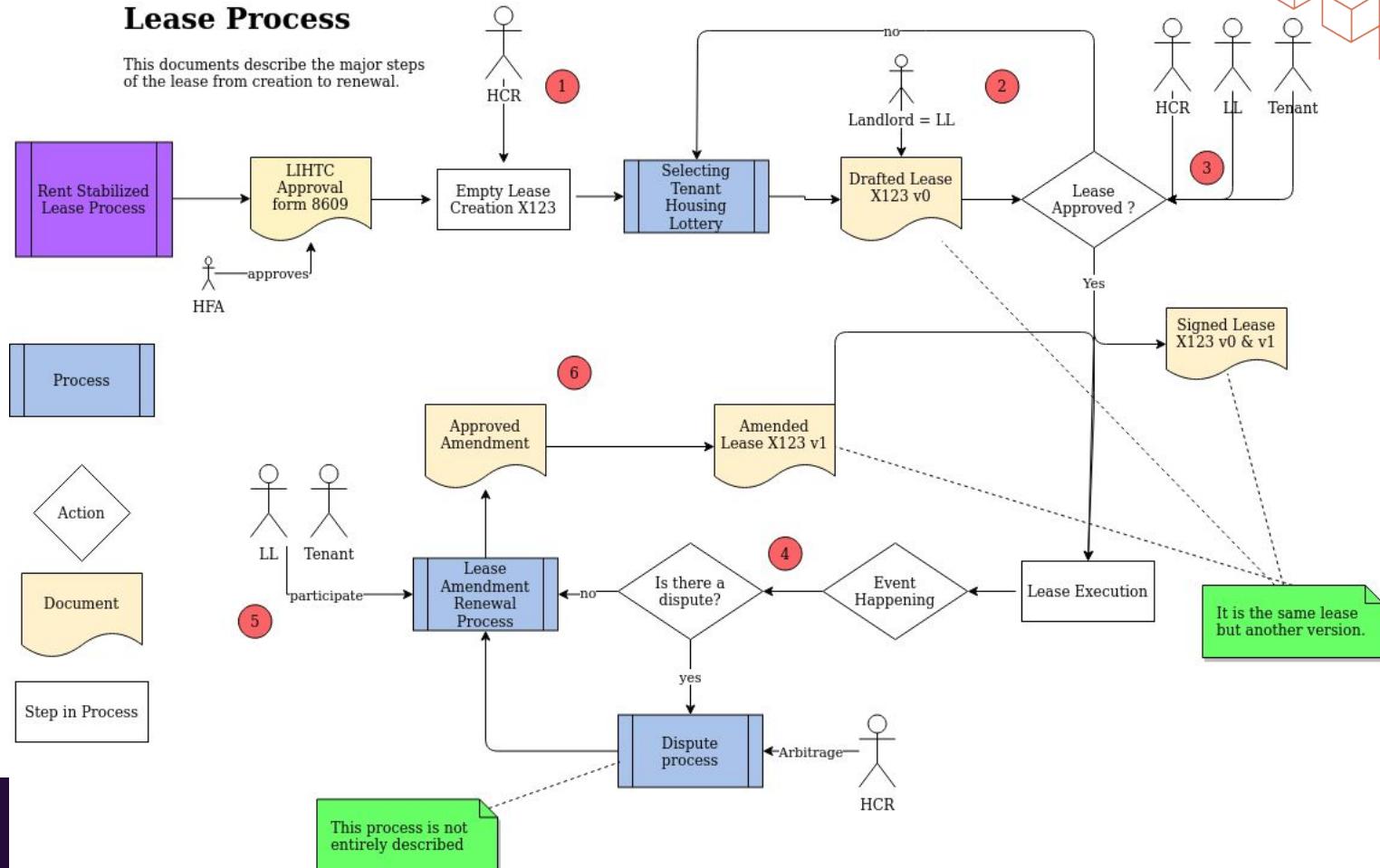
For more information on the SDGs and identify some of the use cases and stats, please visit the [SDG 11 Goals and Targets page](#).

# Tenant & affordable housing



## Lease Process

This documents describe the major steps of the lease from creation to renewal.



# Technical Appendix - #1

## Identity and Authentication

LeaseOTB is a consortium blockchain, powered by Kaleido. Members in this system require third-party authentication systems, and for this project we use GoogleOAuth through Firebase. Keys for Kaleido are stored in Firebase, to allow users to interact with this blockchain without a Web3 provider. In the future, we hope to implement fully decentralized identity for LeaseOTB, but for the purposes of our MVP, Firebase will do.

## User Roles and Organizations

On signup, users must choose a role, Landlord, Tenant, or Regulator. All 3 of these roles must be approved by the current Regulator and be given role-specific Kaleido API keys before they can interact in the system, a design choice mirroring current bureaucracy. This process can be automated with an identity token in future LeaseOTB versions.

# Technical Appendix - #2

## Lease and Listing Document Store

Kaleido's Document Store feature allows verified users in our system to upload and sign lease documents, and create regulator-verified Listings. However, because users need a membership to even view these files, we require a centralized cache for unverified users, currently built on Google Cloud Platform. The underlying assets are decentralized, but the data in our current build is served using traditional methods.

## Celo Integration

Celo is an amazingly accessible tool for crypto payments as it offers financial inclusion to our Tenants. We have completed a set of cloud services to assist our users in paying each other using Celo.

# Design Dashboard Tenant

Tenant

## Tenant Overview

Apartment History Overview

**1200 St. Bernard**  
Last Updated 01/23/2020

Maintenance Requests Pending

**2**  
↑ 13.8%

Rent Due

**April 10**  
6 Days

**Pay Now**

### History of Maintenance Requests

Year	Category	Requested By	Details	Completed
2003	Building	Tenant	No Hot Water	Yes
2003	Building	Tenant	Smoke Detector Broken	Yes
2005	Repairs	Tenant	Front Doorknob replaced	Yes
2010	Repairs	Super	New Flooring for Kitchen	Yes
2012	Repairs	Tenant	Refrigerator Repair	Yes
2015	Building	Tenant	Fix Light Fixtures	Yes
2020	Repairs	Tenant	Repair Furnace	No
2020	Repairs	Tenant	Install Window Guards	No

Show More

Icon made by Freepik from www.flaticon.com

### Apartment Details

Show All List

### Nearby

TRANSPORTATION

at Flatbush Av **0.78 miles**

[View subway lines on Google Maps ▾](#)

SCHOOLS

**District 22** - Schools zoned for this address:  
P.S. 119 Ambersort (PK,OK,01,02,03,04,05,SE)  
P.S. 326 (PK,OK,01,02,SE)  
Andries Hudde (06,07,08,SE)

Disclaimer: School attendance zone boundaries are not guaranteed to be accurate – they are provided by a third party and subject to change. Check with the applicable school district prior to making a decision based on these boundaries.

# Design Dashboard Gov

Search leases, invoices or properties



## Agency Overview

Total Rent: Stabilized Apartments

2K

↓ 12.8%



Leases with outstanding violations

453

↑ 12.8%



Lease Expiring

25

30 Days



### Landlords

LOCATION	Apartments	Occupied	Open	Pending Violations
Allstate Real Estate	3746	752	43%	\$19,291
BK Realtors	8126	728	32%	\$17,635
Smith Seed Estates, LLC	8836	594	28%	\$16,218
Empire Real Estate	1173	645	24%	\$14,421
NYC Properties, LLC	2739	539	20%	\$12,370
Bushwick Properties	1762	432	18%	\$9,928
Reserve Realtors, LLC	3746	752	43%	\$19,291
Trident Properties, LLC	3746	752	43%	\$19,291

Show More

### By NYC Borough

Show All List



Brooklyn	\$29,193
Bronx	\$18,832
Queens	\$19,758
Manhattan	\$23,078
Staten Island	\$29,193