

Tech-Enabled Housing Rights

Leveraging innovation and data to empower tenants in Inwood & Washington Heights



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Department of
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& Development



Mayor's Office
to Protect Tenants

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NYCx Co-Labs Inwood/Washington Heights Worksheet

Background
NYCx Co-Labs is seeking your help to collaboratively design, evaluate and challenge interventions in urban technology and innovation in this community.

Why are we doing this?
This activity will help us to produce relevant community priorities for NYCx Challenge and help us strategically identify sites and City government and resources that can help support the research process.

Community Issues
What about conditions in the community that are barriers to growth and should be addressed?

City Commitments
What are the city government that you believe is related to the issue?

Challenge Statement
What is a change statement in the community that you believe is related to the issue?

Research Resources
What resources can you identify to help address the community issues? Community Based Organizations, Non-Profit, Local Government, etc.

[^ PHOTO] Building Community Power Through Creative Technologies at Alianza Dominicana Cultural Center in Inwood and Washington Heights, September 2018/Oscar Romero

Executive Summary

The NYCx Co-Labs Housing Rights Challenge set out to deploy real-world technology solutions in Northern Manhattan that addressed a key question: how might we support the provision of more strategic, targeted and tailored information to tenants about their housing rights, enabling them to take action? Through the program, NYC successfully launched two pilots, despite the pandemic and a bevy of unique constraints.

At its core, NYCx Co-Labs is a replicable urban innovation model that identifies a critical, neighborhood-level issue and finds tech solutions to address it via funded pilots. It begins with a rigorous community engagement process to surface top-line issues facing the neighborhood. For this Co-Lab, the issue was tenants' rights and housing discrimination. Tenant harassment is a profound challenge in Inwood & Washington Heights, as tenants are often ill-informed about their rights and how to access concomitant services and resources despite increased protections. Furthermore, tenants fear retaliation by their landlords, and their understanding of housing laws are often hampered by a lack of culturally competent outreach and education resources. The issue intensified during COVID-19 as economic insecurity increased.

After a competitive public application process, the NYCx Co-Labs team selected two novel solutions to pilot in the community: Heat Seek & JustFix.nyc ("JustFix"). JustFix co-created a novel Tenant Text tool with the community, which allows residents to navigate a range of housing resources via SMS in English and Spanish. Heat Seek deployed low-cost, web-connected temperature sensors to help tenants prove serious and persistent lack of heat in their apartments, providing critical data for advocates to support at-risk tenants suffering from heat violations.

The challenge unveiled crucial insights about what does (and does not) work in government innovation models. It helped agency partners understand more about piloting, scaling, and supporting vendors. But above all, it strengthened two powerful new tools that empowered tenants in a housing-insecure community. This report seeks to summarize the challenge, meditate on key takeaways, and provide recommendations to improve upon similar endeavors in the future.

NYCx Co-Labs Partners

Challenge Winners

Heat Seek

Heat Seek builds innovative technology to support New York City tenants. Since its founding in 2014, the organization has played a dual role as both a tech startup and a mission-driven nonprofit helping tenants, community organizers, and lawyers use data to tell stories about housing mismanagement. Recognizing that heat is the #1 complaint made to 311 by New Yorkers in the winter months, Heat Seek focuses on building low-cost, web-connected temperature sensors to help tenants prove serious and persistent lack of heat in their apartments. They analyze both temperature data and citywide data to provide new ways for advocates to target and reach at-risk tenants. Heat Seek believes that technology is a powerful tool to confront New York City’s worst landlords, keeping tenants in their homes and preserving affordable housing.

JustFix

JustFix develops data-driven tools that provide tenants and community advocates with the resources they need to create safe and healthy homes for all New Yorkers. They use technology to break down barriers in the housing system and empower under-represented tenants to take action against landlord harassment, wrongful eviction, and other housing issues. JustFix aims to strengthen existing tenant support systems and energize a tenant movement to provide housing for all by combining highly scalable SMS and mobile services with advanced housing data analysis. They work closely with community partners and the housing justice movement to advocate for systemic change by leveraging their resources and large-scale data analysis.

Community Tech Board

The NYCx Co-Labs program engaged with 35 Inwood & Washington Heights community based-organizations, entrepreneurs, educators, and small businesses in a series of workshops on housing, education, health, arts & culture, economic development and immigrant affairs to identify community priority issues. The group became the Inwood and Washington Heights Community Technology Board. The full list of members can be found in the appendix section.

Agency Partners

Mayor’s Office of the Chief Technology Officer

Our mission is to ensure that technology is inclusive, accessible, human-centered, and works for all New Yorkers. We view technology as a critical tool for making New York City the fairest big city in America. Our work is organized around four pillars: Universal Broadband, ensuring high-quality, affordable internet for all New Yorkers; Inclusive Innovation, making New York City the place where new ideas are applied to improve lives; Digital Services, delivering government services online to make government work better for everyone; and Emerging Tech & Society; advancing laws, rules, and plans that promote the public good and protect New Yorkers’ digital rights. Learn more at nyc.gov/cto.

Oscar Romero	Director of Inclusive Innovation & International Cooperation
Shanna Crumley	Senior Innovation Advisor
Ayesha Issadeen	Senior Advisor for Multimedia Design
Paola Sastre	MOCTO Fellow
Nicole Vogt	MOCTO Fellow
Larisa Lustik	MOCTO Fellow
Eduardo Valdez	MOCTO Fellow
Julianna Galvão	MOCTO Fellow

Liliana Avila	MOCTO Fellow
Michelle Meza	MOCTO Fellow
Jessica Copi	MOCTO Fellow
Julia Vieira de Andrade Dias	MOCTO Fellow
Elaine Mingsum Hsieh	MOCTO Fellow
Sara Sacks	MOCTO Fellow

New York City Economic Development Corporation

NYCEDC works to make New York City’s neighborhoods and economy stronger and more inclusive. We’re working with and for communities, putting New Yorkers’ needs before everything else. For us, economic development is about more than just the bottom line—it’s about human impact. That’s why we are investing in the jobs, industries, and communities that will drive New York’s economic future and make our city stronger, safer, and more equitable.

Sander Dolder	Senior Vice President
Jonathan Lane	Assistant Vice President
Nicholas Kraus	Project Manager

NYC Mayor’s Office to Protect Tenants

The Mayor’s Office to Protect Tenants (MOPT) was created on January 10, 2019 when Mayor Bill de Blasio signed into law Executive Order No. 39, establishing an office to coordinate the City’s range of tenant protection efforts. Our first Director, Jackie Bray, started in May 2019. MOPT is a core part of the City’s strategy to confront the affordable housing crisis. This newly established office will work across City agencies to make existing anti-harassment and anti-displacement programs better, and create new strategies to root out abuse.

Ricardo Martínez Campos	Director of MOPT
Olivia Amezcua	NYC Urban Fellow

NYC Housing, Preservation and Development

NYC Housing Preservation and Development (HPD) is the nation’s largest municipal housing preservation and development agency. Its mission is to promote quality housing and diverse, thriving neighborhoods for New Yorkers through loan and development programs for new affordable housing, preservation of the affordability of the existing housing stock, enforcement of housing quality standards, and educational programs for tenants and building owners. HPD is tasked with fulfilling Mayor Bill de Blasio’s Housing New York: A Five-Borough, Ten-Year Plan to create and preserve 300,000 affordable units for New Yorkers at the very lowest incomes to those in the middle class.

Elizabeth Johnson	Deputy Director of Neighborhood Stabilization
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Acronyms

AMI	Area Median Income
ARPA	American Rescue Plan Act of 2021
CDC	Centers for Disease Control and Prevention
CEEFPA	COVID-19 Emergency Eviction and Foreclosure Prevention Act
CITYF-HEPS	City Family Homelessness & Eviction Prevention Supplement
ERAP	Emergency Rental Assistance Program
HDC	New York City Housing Development Corporation
HNY	Housing New York: A Five-Borough, Ten-Year Plan
HNY 2.0	Housing New York 2.0
HPD	New York City Housing Preservation and Development
HSTPA	Housing Stability and Tenant Protection Act of 2019
IAI	Individual Apartment Improvement
MCI	Major Capital Improvement
MOCTO	Mayor's Office of the Chief Technology Officer
MOPT	Mayor's Office to Protect Tenants
NYCEDC	New York City Economic Development Corporation
NYSHCR	New York State Homes and Community Renewal
ODTA	New York State Office of Temporary and Disability Assistance



[^ PHOTO] Community Tech Board at Building Community Power Through Creative Technologies in Inwood and Washington Heights, September 2018/Oscar Romero



NYCx Co-Labs Inwood/Washington Heights

Background
NYCx is seeking community members to help address community issues.

Community Issue
Write about a problem in the community that the lab could and should be addressing.

City Commission
Cut and paste your issue description to the City Commission.

Introduction

According to a 2018 UN World Cities report, an estimated 55.3% of the world's population lived in urban settings, and by 2030 one in every three people will live in a city with over half a million inhabitants.¹

In recent decades, population has grown faster than housing production, limiting the housing available for both long-term and newer residents. Some landlords and investors have taken advantage of this scarcity, forcing out long-term tenants in order to bring in new tenants who are able to pay higher rents. Despite the efforts of cities like NYC where rent regulation laws help stabilize tenants and put restrictions on how much landlords can raise rents, tenants can still be put at risk when some landlords neglect building maintenance to maximize profit. This disinvestment leads to deteriorating conditions that force tenants out by making their homes uninhabitable. As a result, low-income and vulnerable tenants both in NYC and around the world are facing harassment and displacement.

The City of New York has undertaken a wide range of efforts to combat these challenges, including:

- Building and preserving 200,000 homes in the last 8 years,
- Implementing the Mandatory Inclusionary Housing Program, which has added new affordable homes in NYC,
- Providing property owners with financial and technical resources to preserve the existing affordability of their housing units, and created several new programs to combat tenant harassment and displacement.

Through the NYCx Co-Labs Housing Rights Challenge, the City is seeking to complement these efforts by implementing tech-enabled strategies for overcoming obstacles to safe, secure, and affordable housing.

¹ "The World's Cities in 2018: Data Booklet," United Nations, Department of Economic and Social Affairs, Population Division, 2018. <http://bit.ly/2P3R2IE>

The NYCx Co-Labs

Housing Rights Challenge

NYCx Co-Labs is a civic innovation program managed by the NYC Mayor’s Office of the Chief Technology Officer (MOCTO) and the NYC Economic Development Corporation (NYCEDC). The program combines community building, participatory research, tech education and open innovation challenges to address urban inequality across NYC neighborhoods.

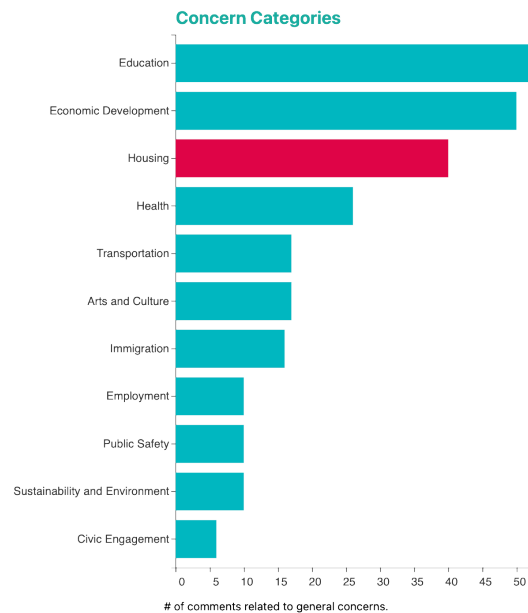
NYCx Co-Labs brings together a set of partners — from government, local non-profit organizations, technology companies, communities, and foundations — through various events, workshops, and community spaces to accelerate the development of new tech-enabled solutions to NYC’s most pressing issues.

In each Co-Labs community, NYCx convenes a Community Technology Board (CTB) to serve in an advisory role throughout the process of developing the Co-Labs site, defining challenges that are a priority to community members, supporting the challenge competition and advising on pilot implementation.

Currently there are two active NYCx Co-Labs sites: one in Brownsville in Brooklyn, and one in Inwood & Washington Heights in Manhattan.

The NYC[x] Co-Labs: Housing Rights Challenge emerged from a series of participatory workshops with community experts from Inwood and Washington Heights. In August 2018, NYCx Co-Labs engaged 35 Inwood/Washington Heights residents, representatives of community-based organizations, entrepreneurs and educators in a series of workshops on housing, education, health, arts & culture, small businesses, and immigrant affairs to identify priority issues in the community.

The outcomes of the first five issue area workshops held in September 2018 can be found in the report: [Building Community Power through Creative Technologies](#). The community unanimously advocated to



have another community workshop focused particularly on the needs of immigrant communities.

The results of the sixth workshop can be found in the report: [Building Community Power: Challenges to Immigrant Communities](#).

This research was complemented with six one-on-one interviews, one workshop with tenant organizers, 191 relevant data points from the [OneNYC challenge survey](#), expert interviews, a literature review, and participatory workshops with NYC City agencies.

The data collected from the community workshops can be found in the following [data visualization page](#).

After extensive research and iteration with City agencies and the Community Technology Board, the NYCx Co-Labs Housing Rights Challenge asked global innovators the following question:

How might we support the provision of more strategic, targeted, and tailored information to tenants about their housing rights, enabling them to take action?

To learn more about the challenge design, selection process, selection criteria, see the [NYCx Co-Labs Housing Rights Challenge Manual](#).

Community Overview: Inwood & Washington Heights

Community Context

In the northernmost tip of Manhattan lie the culturally and geographically rich Inwood and Washington Heights neighborhoods, which are home to approximately 217,000 residents.² About 68% of the population identifies as Latinx, and the largest group in the community is of Dominican descent.³ With a foreign-born population of 44%,⁴ the Inwood and Washington Heights neighborhoods have a diverse cultural identity and heritage. In recent years, though, the area has attracted many new residents, who are drawn by its relatively low rents, thriving streetscape, and plentiful public transit.

As its population has grown, the neighborhood is facing new challenges. A lack of housing development, coupled with slow growth in wages, is making Inwood and Washington Heights less affordable. The vast majority of units were built more than 20 years ago.⁵

The median household income is \$53,814, compared to the median in Manhattan, which is \$86,553.⁶

Approximately 62% of residents are extremely low-to low-income, making less than 80% of the Area Median Income (AMI),^{7,8} and 17% are under the age of 18.⁹ The neighborhood also had an unemployment rate of 6.2% prior to the Covid-19 pandemic.¹⁰



² US Census Bureau, 2015-2019 American Community Survey 5-Year Estimates. Table number DP05 (ACS Demographic and Housing Estimates).

³ US Census Bureau, 2015-2019 American Community Survey 5-Year Estimates. Table number DP05 (ACS Demographic and Housing Estimates).

⁴ US Census Bureau, 2015-2019 American Community Survey 5-Year Estimates. Table number DP02 (Selected Social Characteristics).

⁵ NYC Housing and Vacancy Survey, 2017. US Census Bureau/NYC Dept of Housing Preservation and Development. The NYC HVS is based on 55 Sub-Borough Areas (SBAs approximate NYC community districts but are not coterminous).

⁶ US Census Bureau, 2015-2019 American Community Survey 5-Year Estimates. Table number B19013 (Median Household Income in the Past 12 Months). Income in 2019 inflation-adjusted dollars.

⁷ US Census Bureau, 2015-2019 American Community Survey 5-Year PUMS Data. These estimates are based on survey data and are therefore subject to sampling and non-sampling error.

⁸ In 2019, Area Median Income (AMI) was \$96,100 for a family of three.

⁹ US Census Bureau, 2015-2019 American Community Survey 5-Year Estimates. Table number S0101 (Age and Sex).

¹⁰ US Census Bureau, 2014-2019 American Community Survey 5-Year Estimates. Table number DP03 (Selected Economic Characteristics).

Housing in Inwood and Washington Heights

The majority of residents in Inwood and Washington Heights are renters, with 87% of apartments occupied by renters.¹¹ The community has about 64,000 renter-occupied apartments and approximately 67% of households live in rent-stabilized apartments.¹² As the neighborhood grows in popularity, it is increasingly difficult for tenants to find vacant apartments.

The housing stock in Inwood and Washington Heights is fairly homogeneous. About 89% of all units are in buildings that were built before 1947, and 95% are in multifamily buildings with 20 or more apartments. The neighborhood has seen very little new construction in recent decades, despite the recent influx of new residents. The majority of the buildings in the neighborhood have:

- Low- and moderate-income residents;
- Vulnerable tenant populations, including (undocumented) immigrants, senior citizens, non-English speakers, and families with children;
- Rent-regulated apartments; and
- Histories/signs of physical and financial distress, harassment, and displacement.

Residents reported three or more maintenance deficiencies in 15% of apartments in Inwood and Washington Heights.¹³ These maintenance deficiencies include: a lack of heat or hot water; cracks or holes in interior walls, ceilings, or floors; the presence of rodents in the building; the presence of broken

¹¹ NYC Housing and Vacancy Survey, 2017. US Census Bureau/NYC Dept of Housing Preservation and Development. The NYC HVS is based on 55 Sub-Borough Areas (SBAs approximate NYC community districts but are not coterminous).

¹² NYC Housing and Vacancy Survey, 2017. US Census Bureau/NYC Dept of Housing Preservation and Development. The NYC HVS is based on 55 Sub-Borough Areas (SBAs approximate NYC community districts but are not coterminous).

¹³ NYC Housing and Vacancy Survey, 2017. US Census Bureau/NYC Dept of Housing Preservation and Development. The NYC HVS is based on 55 Sub-Borough Areas (SBAs approximate NYC community districts but are not coterminous).

plaster or peeling paint; and toilet breakdowns and leaks. These issues usually arise when a landlord fails or refuses to make repairs. However, when landlords do make repairs, tenants in these buildings report that the repairs are often insufficient and fail to address the underlying conditions that cause the problem. Maintenance issues are often indicators of a landlord's inability or unwillingness to care for their buildings, but they may also be a sign of tenant harassment.

Issue Context

Overview of Tenant Harassment in New York City

Tenant harassment is any act or failure to act by a landlord or their agent(s) that causes or intends to cause a tenant to give up their home or any of their related rights as tenants. In New York State, tenant harassment can be a felony or misdemeanor. In New York City, it is a violation of the Housing Maintenance Code, and tenants can sue their landlords for harassment in Housing Court.

Approximately one million apartments citywide are rent-stabilized, with increases to their rents governed by the New York City Rent Guidelines Board. Rent stabilization is a form of regulation that applies to multifamily buildings in the five boroughs that were built before 1974, as well as to buildings that receive certain tax abatements/exemptions or financing from HPD. Landlords of rent-stabilized apartments cannot raise rents by more than the annual threshold set by the Rent Guidelines Board, usually between 1% and 5%.

Under the previous rent-stabilization laws, which were in effect until June 2019, once the rent of a rent-stabilized apartment was raised above a certain threshold (most recently, \$2,774 per month), a landlord could remove the apartment from rent regulation upon turnover and charge market rates thereafter. The laws provided two main ways for landlords to increase rents:

1. The "vacancy bonus": Landlords could raise the rents of rent-stabilized apartments 20% upon vacancy by the previous tenants.

2. Major Capital Improvements (MCIs) and Individual Apartment Improvements (IAs): Landlords could raise rents after completing building-wide (MCI) and/or individual apartment (IA) improvements in order to recoup the costs of these improvements.

Because tenants in rent-stabilized units are guaranteed lease renewals, some landlords resorted to harassing tenants and forcing them out of their homes in order to raise rents and ultimately transition apartments from being rent-stabilized to market rate. Many speculative landlords utilized business models that explicitly called for the deregulation of rent-stabilized apartments and implicitly relied on harassment to remove rent-stabilized tenants.

Tenant harassment can take many forms. Some of the most common tactics reported in Inwood and Washington Heights include:

- Cutting essential services, such as heat and hot water, electricity, and gas;
- Failing to make repairs or making insufficient repairs;
- Engaging in illegal or unsafe construction activity (e.g., tearing apart a tenant's bathroom for repairs and never replacing it; allowing construction debris and dust to accumulate; performing construction without a permit, etc.);
- Bringing repeated, frivolous lawsuits against tenants;
- Making repeated offers to buy out tenants;
- Threatening to call ICE on foreign-born tenants, regardless of their immigration status;
- Failing to recognize rent reduction orders obtained by tenants from New York State Homes and Community Renewal (NYSHCR);
- Discriminating against tenants who are members of a protected class or based on their source of income;
- Disrupting tenants' efforts to organize.

The City provides strong legal protections for tenants, especially for those in rent-stabilized buildings; however, many tenants are unaware of their

rights and/or do not have the confidence to claim them. This lack of knowledge and confidence leaves tenants vulnerable to landlords who want to harass them and force them out of their homes. Combating tenant harassment requires residents who are well-informed about their rights and who feel empowered to fight back.

In New York City, and in Inwood and Washington Heights in particular, tenant organizers help tenants fight harassment and displacement through a combination of education, advocacy, and legal action.

The New Rent Laws

In June 2019, the New York State Legislature passed the Housing Stability and Tenant Protection Act of 2019 (HSTPA), which led to sweeping reforms of the laws that govern New York City's housing stock. These new laws expanded tenants' rights and closed many of the loopholes that were inviting speculative investment in rent-stabilized multifamily buildings. By abolishing the destabilization threshold, doing away with the "vacancy bonus," and reforming MCIs and IAs, the new legislation undermined investors' business model of churning tenants in order to raise apartment rents to market rates. The legislation also extended new protections to tenants in both stabilized and non-stabilized apartments.

While HSTPA is a huge win for both tenants and housing advocates, many tenants may still be at risk of harassment and displacement. Some landlords have threatened that the new laws will require them to defer routine maintenance and repairs, claiming they no longer have the means to financially support building maintenance. Speculative landlords whose business models are premised on the ability to raise rents to market rate also run the risk of financial crisis in their overleveraged buildings, which could lead to foreclosure and displacement.

The need for continued tenant protection, education, and organizing is great. Landlords continue to violate HSTPA and exploit weaknesses in other rent laws. The Covid-19 crisis has compounded the housing crisis, pushing vulnerable tenants even closer to the edge. The challenge of educating tenants about

their rights and ensuring that landlords are complying with HSTPA and Covid-related housing protections falls largely on already-overburdened tenant organizers. New tools and strategies are necessary to ensure that they can get the message out.

Purpose of the Challenge

At the time that the challenge was launched in February 2020, an estimated 68% of New Yorkers rented their apartments¹⁴. Tenant laws in New York City and state law protect renters from wrongful eviction, harassment, and discrimination, and dangerous or unsafe conditions in the building. It is illegal for building owners to force tenants in rent-stabilized units¹⁵ to leave their apartments, or to surrender their rights.¹⁶

However, some landlords in NYC harass and displace their tenants through a combination of illegal tactics. New York City's robust real estate market and specific provisions in the State's housing laws created incentives for landlords to harass and displace their low-income tenants. Harassment can take many forms, including cuts to essential services, mismanagement of building operations and construction, and neglect of necessary repairs. These tactics force tenants to suffer in their homes until they feel they have no option but to leave. In recent years, both City and State lawmakers have taken steps to protect tenants and strengthen tenants' rights in order to shield them from landlord abuses.

¹⁴ NYC Housing and Vacancy Survey, 2017. US Census Bureau/NYC Dept of Housing Preservation and Development. The NYC HVS is based on 55 Sub-Borough Areas (SBAs that approximate NYC community districts but are not coterminous).

¹⁵ New York City has a system of rent regulations known as "rent stabilization." The system was enacted in 1969 when rents were rising sharply in many post-war buildings. The system has been extended and amended several times, and now about one million apartments in the City are covered by rent stabilization. Rent Stabilized tenants are protected from sharp increases in rent and have the right to renew their leases, among other protections. For more information, visit: <http://bit.ly/324sNt1>

¹⁶ "Tenants' Rights and Responsibilities", NYC Housing Preservation & Development, last accessed 2019. <https://on.nyc.gov/2T8Ln3C>

Tenants are often ill-informed about their rights and how to access services and resources. They fear retaliation by their landlords, and their understanding of housing laws are often hampered by a lack of culturally competent outreach and education resources. The challenges that tenants face are complex and numerous, and they can be difficult for tenant organizers and legal service providers to triage. Tenant organizers struggle in ensuring that tenants understand their rights and in connecting them with appropriate services. Tenant organizers are often under-resourced and understaffed. Because of the pervasiveness of harassment, their workloads are high, limiting the amount of support they can provide to individual tenants. Addressing tenant harassment will require new solutions that enable tenants to better understand and claim their rights and to help tenant organizers to better support and educate tenants at risk of harassment and displacement.

In that context, the City of New York called for innovative products, services, or practices to enable tenants to learn, understand, and claim their housing rights in order to prevent tenant harassment, abuse, and displacement. Solutions were expected to address the needs of tenants, tenant organizers, or community-based organizations that provide housing-related services. Challenges faced by these groups include, but are not limited to, the following:

Challenges for Tenants

- Displacement through harassment, limited succession rights, preferential rent issues, and petty cash buyouts
- Lack of awareness of the appropriate venues and the process to claim housing rights
- Lack of awareness of legal council available through community based organizations
- Lack of clear, plain-language information on City and State policies and regulations
- Lack of basic information on rights leads to fears around immigration, losing housing subsidies, and being punished for exercising rights or asking for help

- Low digital literacy and language barriers prevent use of existing tenant resources

For solutions addressing tenants, the City expected projects that direct tenants to the appropriate venues to claim their rights, or that connect them with community-based organizations, resources, or relevant City services. The city encouraged projects focused on tenant education and outreach, as well as initiatives focused on simplifying laws, regulations, and procedures.

Challenges for Tenant Organizers & Community-Based Organizations

- Limited financial and human resources to tackle this issue
- New York State housing laws are difficult to interpret
- Lack of available data for rent histories
- Lack of transparency in housing developments and developer practices
- Difficulty deploying resources in the community and getting tenant participation

For solutions addressing tenant organizers and housing community-based organizations (CBOs), the City was looking for strategies that improve their ability to determine how, where, and through what means they can most effectively deploy resources in the target neighborhood. The City encouraged solutions that could enable organizers and CBOs to provide tailored, real-time information and resources to tenants based on their needs, improving and supporting existing advocacy strategies. Similarly, tools that could increase the ability of CBOs to train tenant organizers are welcomed.

Finally, solutions were expected to be tailored to NYC's laws and regulations and to incorporate interactive, engaging, and culturally appropriate methods for tenants' rights education and outreach.

Key Challenge Indicators

Demographics and Socioeconomics

Estimated population Inwood & Washington Heights

216,591

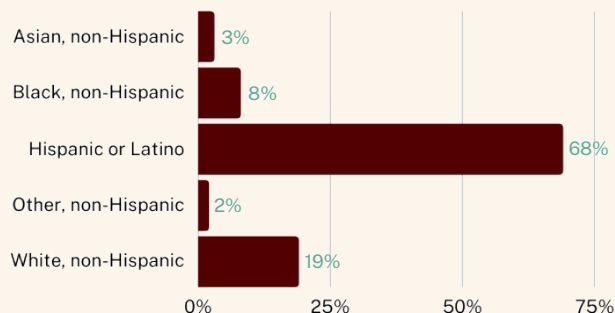
Percent of population that is foreign-born

43.7%

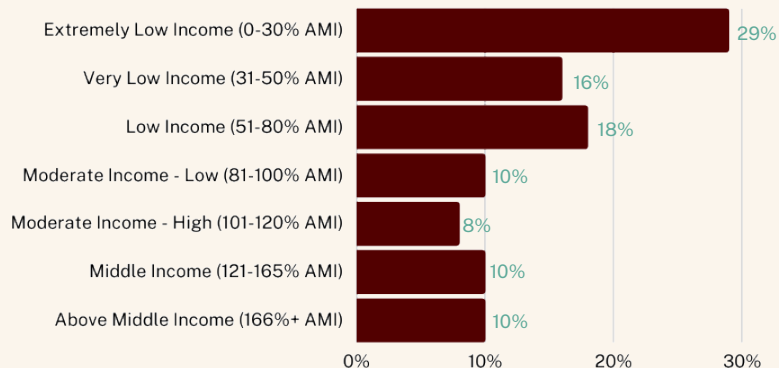
Median Household Income¹⁷

\$53,814

Race/Ethnicity Distribution



Income Distribution



Sources: U.S. Census Bureau, 2015-2019 American Community Survey 5-Year Estimates. Table numbers B19013 (Median Household Income in the Past 12 Months) and DP05 (ACS Demographic and Housing Estimates). Income in 2019 inflation-adjusted dollars. Data are not available for combined area.

ACS 2015-2019 5yr PUMS Data. These estimates are based on survey data and are therefore subject to sampling and non-sampling error.

Housing Market and Conditions

Percent of units that are renter-occupied	87%
Amount that median rent rose between 2011 and 2017	14%
Percent of apartments with 3 or more maintenance deficiencies	15%
Percent of apartments that are rent-stabilized	67%
Percent of households that are rent-burdened	53%

¹⁷ The median household income in Inwood and Washington Heights is \$53,814, which is below both the borough-wide median of \$86,553 and the city-wide median of \$63,998. The majority of residents are defined as extremely low-, very low-, or low-income, meaning they make less than 80% of the Area Median Income for the NYC metropolitan area.

Challenges of Covid-19 for Housing Rights in NYC

When Covid-19 brought much of the economy to a standstill, many tenants in Inwood and Washington Heights lost their jobs and found themselves unable to pay rent. Others were frontline workers who risked exposure to Covid-19 and bringing it home to their families and roommates.

Tenants living in substandard and/or crowded housing found themselves at even greater risk of contracting Covid-19. For example, tenants living in homes with mold problems are at elevated risk of asthma and other respiratory diseases, common comorbidities for Covid-19. Furthermore, in the early days of the pandemic, landlords used the crisis as an excuse to withhold essential services and to refuse to make necessary repairs, citing the lockdown and limits on non-essential activities.

Organizers had to pivot quickly to respond to the challenges raised by Covid-19. Prior to the pandemic, tenant organizing was largely a face-to-face activity; many tenants lacked reliable internet access and digital literacy, making in-person interaction critical to success. Tenant organizers shifted to remote and/or digital organizing, not only changing how they did their day-to-day work, but teaching tenants how to use new, remote organizing tools, like Zoom, along the way. In the immediate aftermath of lockdown orders, tenant organizers and tenants sprang into action to keep people in their homes. They pursued more aggressive tactics, such as rent strikes, and tenants who had not previously faced housing insecurity helped grow the tenant rights movement when they found themselves unable to pay rent.

City, State, and federal governments likewise took action to address the housing crisis wrought by the pandemic. Governments enacted new legislation and programs to keep tenants in their homes in order to prevent the further spread of disease and a surge of evictions.

In such context, both winners of the NYCx Co-Labs Housing Rights Challenge adapted the design and implementation of their pilots to serve tenants under new social distancing requirements, while also navigating quickly evolving housing protection regulations.

Changes in Legislation for Rent Assistance and Eviction Moratoriums

Below are some of the key changes in legislation that impacted the operations of tenant organizers and the challenge winners:

- In September 2020, the federal Centers for Disease Control (CDC) passed a national eviction moratorium to protect health and safety. The CDC moratorium failed to stand up to legal challenges and was struck down by the Supreme Court in August 2021.
- New York State has had a moratorium on evictions in one form or another since the spring of 2020. The exact parameters of this moratorium have changed on multiple occasions, in response to expiring deadlines and legal challenges (see below). The latest eviction moratorium expired on January 15, 2022.
- New York City launched several programs to help tenants claim their rights and stay in their homes, including the Tenant Helpline, the Tenant Resource Portal, and the Tenant Landlord Mediation Project.
- In response to mounting rental debt, the federal American Rescue Plan Act (ARPA) established the Emergency Rental Assistance Program (ERAP), which provides funds for low- and moderate-income tenants who were impacted by the pandemic to pay back rent and utilities owed. Tenants or landlords, on behalf of their tenants, may apply for funds through ERAP and payments are made directly to landlords. The ERAP fund is \$2.7 billion in New York State and is administered by the New York State Office of Temporary and Disability Assistance (ODTA).

Since March 2020, tenants' risk of eviction and the necessary steps to stopping evictions have changed dramatically multiple times in response to ever-changing COVID-19 protections and legislation. The below timeline demonstrates just one aspect of tenant protections that has changed frequently over the last 12 months.

- On December 28, 2020, the COVID-19 Emergency Eviction and Foreclosure Prevention Act (CEEFPFA) passed and stayed nearly all residential evictions, building on previous eviction bans that date to the early days of the pandemic.
- After February 26, 2021, CEEFPFA protections narrowed, extending only to those tenants attesting to physical or financial hardship related to COVID-19 via a Hardship Declaration form. Those protections expired May 1, 2021.
- From May 1, 2021 through May 3, 2021, there was no eviction moratorium (though the moratorium was later retroactively reinstated).
- On May 4, 2021, CEEFPFA was extended until August 31, 2021.
- On June 1, 2021, applications for NYS's Emergency Rental Assistance Program (ERAP) opened. Nearly all applicants received further stays of eviction while their applications remained pending.
- On August 12, 2021, CEEFPFA was struck down by the United States Supreme Court, re-initiating eviction cases for all renters without a pending ERAP application.
- From August 12, 2021 through September 1, 2021, there was no eviction moratorium due to the US Supreme Court ruling.
- On September 2, 2021, New York State extended, amended, and reinstated CEEFPFA, offering landlords an opportunity to challenge a Hardship Declaration but otherwise pausing evictions until January 15, 2022.

While governments have put these new protections in place, tenant organizers have been critical to spreading the word about these protections,

ensuring that tenants understand their new rights, and walking tenants through the process of claiming these rights and protections. The COVID-19 pandemic has highlighted the critical role that tenant organizing plays in ensuring wide understanding and uptake of tenants' rights, as well as the need for modern, tech-enabled tools that are responsive to a rapidly and constantly changing housing policy landscape.

CASE STUDY 1

Heat Seek



①

Review hourly temperature readings from all of your sensors.

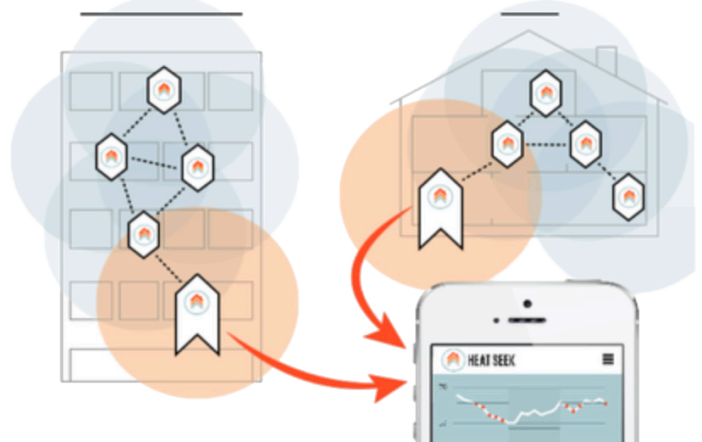
②

Keep track of your readings, identify trends, and find out just how well your climate control system is working for you.

③

Keep track of NYC heating code violations in your apartment, or customize your own alerts.

IN AN APARTMENT BUILDING



IN YOUR HOME

About Heat Seek

Heat Seek builds innovative technology to support New York City tenants in their fight for safe, healthy, dignified housing in NYC. Since its founding in 2014, the organization has played a dual role as both a tech startup and a mission-driven nonprofit helping tenants, community organizers, and lawyers use data to tell stories about housing mismanagement.

Recognizing that heat is the #1 complaint made to 311 by New Yorkers in the winter months, Heat Seek uses smart temperature sensors to help tenants prove serious and persistent lack of heat in their apartments, providing them with tangible 24/7 data to prove heat violations. Heat Seek makes web-connected temperature sensors available to tenants throughout the five boroughs of NYC experiencing persistent lack of heat in order to help them document the indoor temperature in their apartments.

Heat Seek analyzes both temperature data and citywide data to provide new ways for advocates to reach at-risk tenants and to empower tenants. Heat Seek uses cutting edge technology to gather the temperature data tenants need to hold their negligent landlords accountable and ensure that their homes remain a respite from the cold in winter. Heat Seek believes that technology is a powerful tool to confront New York City's worst landlords, keeping tenants in their homes and preserving affordable housing.

Team Members

Noelle Francois	Executive Director of Heat Seek
Eric Skiff	Co-Founder of Tanooki Labs
Ryan Boland	Senior Developer at Tanooki Labs

The Heat Seek Pilot

For this pilot, Heat Seek focused on expanding into the neighborhoods of Inwood and Washington Heights in Manhattan. Heat Seek's intended impact was to support the tenants, housing organizers, and legal service providers of Inwood and Washington Heights in asserting their right to affordable housing that is safe, healthy, and dignified.

Because Heat Seek did not previously have a presence in either neighborhood, the goal of the pilot was to develop new partnerships with tenant organizers and legal service providers working in these neighborhoods and to install sensors in tenants' apartments across buildings served by organizers. Heat Seek ultimately partnered with three new organizations: Met Council on Housing, the Northern Manhattan Improvement Corporation (NMIC), and Legal Services NYC's Manhattan office.

Pilot Timeline

Design & Implementation	November 2020 - June 2021
Funding Provided	\$20,000 USD
Original stage of initiative	Existing Product & Service

High-Level Output & Outcome Indicators

Deliverable	Description	Output Indicator	
Partner with local tenant organizers	Heat Seek partnered with tenant organizers from Inwood and Washington Heights	# of engagements to secure partnerships	5
		# partners	3
Government Engagement	Advisory sessions with government partners.	# of support strategy & planning sessions	30
Partnership with Academic Institutions	Heat Seek partnered with the Milstein Program at Cornell Tech to improve operations	# of students engaged in Heat Seek operations	22
		# of student-led products implemented by Heat Seek	5
Deploy Heat Seek sensors	Develop manuals, videos and assets in English and Spanish to support tenants installing the sensors and seeing the data.	# of videos for tenants	1
		# of assets designed to support tenants usage and installation of sensors	1
	Heat Seek deployed & retrieved sensors virtually	Range of days it took from meeting each tenant to having sensor online	31-51
		# of sensors mailed and installed	27
		# of buildings served	13
		# of sensors returned	20
Customize Heat Seek Technology & Operations to better serve pilot users	Heat Seek tested new LTE technology to migrate the sensors from 2G	# of LTE Modules procured and tested	10
	Customize UX/UI to better serve tenant organizers	# of new functionalities included	1

Outcome Categories	Expected Outcome Statements	Indicator	
Increase real-time, scalable, and resource-efficient data collection regarding New York State rent laws violations in vulnerable communities.	Evidence of violation collected by sensors was used by tenant organizers.	# of total heat violation hours identified	4355
		# of pilot buildings where tenant organizers have taken action	13
		# of buildings where landlord has already made upgrades as a result of this pilot as of August 2021	1

Pilot Theory of Change

Challenge: Heating Violations in New York City

In New York City, all landlords are required to provide access to heat in residential apartments during the winter. And yet, each winter the city receives over 200,000 heat-related complaints, concentrated in lower-income neighborhoods throughout Upper Manhattan, the Bronx, and Brooklyn.

Although heat is consistently the #1 complaint during the winter, less than 7% of heat complaints result in a violation being issued to the landlord.¹⁸ It can be exceedingly difficult for tenants to receive an official Department of Housing Preservation and Development (HPD) violation for heat because outages are often intermittent, HPD does not schedule inspections directly with tenants, and cold temperatures often occur outside regular business hours.

Tenants have tried to document the insufficient heat in their apartments, but tracking real-time data at all hours of the day and night and keeping consistent logs is burdensome. Furthermore, because the temperature logs are produced by the tenant, they are often called into question by landlords and their attorneys who argue they are inconsistent and unreliable.

Heat Seek's Response: Smart Sensors

Heat Seek provides the objective, reliable temperature data tenants need to expose the problem and hold their landlords accountable. Heat Seek works closely with tenants, tenant organizers, public interest attorneys, and City officials to document heating violations and track data.

With the help of tenant organizers and legal service providers, Heat Seek deploys sensors to buildings with a demonstrated history of insufficient heat and buildings where the risk of landlord retaliation has prevented tenants from seeking redress from official City sources.

Heat Seek helps tenants install their sensors, view and interpret their data, and develop a plan to address their heating issues. The proprietary temperature sensors consistently and reliably document the indoor temperature inside a tenant's apartment 24/7. The sensors take hourly temperature readings and send the data to the Heat Seek web application, where it's combined with the outdoor temperature in order to calculate each instance where the temperature is below the legal limit set forth in the Housing Maintenance Code.

Through the web application, tenants can view their data on graphs and download a comprehensive heat log of all their temperature data for use in landlord-tenant negotiations and/or housing court. Advocates can also use the web application to view all of the temperature data from the sensors deployed in their buildings. Heat Seek sensors allow tenants to document exactly how often their landlords fail to provide adequate heat during the wintertime.

¹⁸ See more at: <https://www.osc.state.ny.us/state-agencies/audits/2020/09/24/heat-and-hot-water-complaints>



MEASURE

Our web-connected temperature sensors can be installed in any number of apartments throughout a building. Sensors take **hourly temperature readings** and send them through an onboard internet connection to our secure servers, where we store the data all winter long. To ensure data custody, our team conducts all installs and protects the devices from potential tampering.

ANALYZE & IDENTIFY

Our web application analyzes the sensor data, alongside the outdoor temperature, in order to **record each hour the temperature falls below the legal limit** as defined by the NYC Housing Code. Data is displayed in a graph as well as a **comprehensive heat log**, so that tenants and their advocates have robust data to take to court and to use in landlord-tenant negotiations.

ADVOCATE

Armed with this data, public interest attorneys, community organizers, and even city officials can advocate on behalf of at-risk tenants, and **better hold landlords accountable** for their negligence and harassment. Our data can **demonstrate patterns of landlord abuse**: manipulating the heat before, during, and after city inspections; targeting specific tenants; using heat as a harassment tactic; and more.

Pilot Deployment

The pilot period lasted roughly from November 2020 to June 2021, encompassing New York City’s 2020-2021 ‘heat season,’ the time of year during which landlords are responsible for providing heat to tenants. Heat season extends from October 1 to May 31 each year.

The pilot ran during the Covid-19 pandemic, which impacted installation procedures. Without being able to conduct home visits to install sensors, Heat Seek developed a process for guiding tenants through remote sensor installations, including a written installation guide (in English and Spanish) and an instructional video to guide tenants through installing their own sensors.

The NYCx Co-Labs Housing Rights Heat Seek pilot had five discrete goals:

[1] Retrofit 30 Heat Seek sensors for use in the pilot

Sensors that can connect to both a wifi and a cellular network is a core requirement of Heat Seek’s work; many tenants lack home wifi service. However, in 2020 the major cellular carriers announced that they would phase out 2G in favor of the 5G network rollout. Heat Seek needed to upgrade its existing 2G

cellular sensors, which are used to transfer temperature data to the organization’s servers when a wifi connection is not available.

Heat Seek purchased a set of 10 LTE cellular chips to test extensively in the field connecting the new chips to existing sensor boards to support both wifi and cellular connectivity. However, further into the pilot, Heat Seek learned the 2G network shutdown was postponed until September 2021. Heat Seek decided to test a new model while rolling out the 2G sensors for the remainder of the heat season.

[2] Establish partnerships with community organizations in Inwood and Washington Heights

Heat Seek mapped the community-based organizations and legal service providers present in Inwood and Washington Heights and created an outreach plan. The Metropolitan Council on Housing (Met Council), the Northern Manhattan Improvement Corporation (NMIC), and the Manhattan office of Legal Services NYC (LSNYC) worked in buildings across the neighborhoods and supported tenants in Housing Court. Heat Seek invited each organization to offer the sensor program to the tenants they served, and each provided a list of potential buildings to participate in the program.

[3] Identify the buildings that will receive the 30 Heat Seek sensors

In all cases, Heat Seek looks for buildings that have a demonstrated history of inadequate heat, typically in the form of HPD violations for insufficient heat, or 311 complaints made recently regarding the heat. Through a series of conversations with Heat Seek's new partner organizations, they identified appropriate buildings to receive sensors for the 2020-2021 heat season--buildings with strong tenant associations, consistent heat complaints and were part of the partner organization's portfolio. In Inwood and Washington Heights, many of the buildings that organizers selected are managed by Barberry Rose, a notoriously predatory management company known for keeping their buildings in disrepair.

[4] Install sensors

Heat Seek identified individual tenants in the selected buildings, 2-3 tenants per building to get good temperature reads while protecting tenants from retaliation, enrolled tenants and mailed out the sensors and installation guides. The guides, translated into Spanish, helped tenants with remote installation during the Covid-19 pandemic. Installations occurred throughout January, February and March.

[5] Provide ongoing support for tenants, tenant organizers, and legal service providers throughout the heat season

The technical nature of Heat Seek's work means that the organization is often asked to advise on how to use Heat Seek data effectively in support of tenants' rights. Heat Seek also acts as a technical expert when introducing Heat Seek data into formal landlord/tenant negotiations in a legal setting. Heat Seek has been asked to do this in formal written affidavits that are submitted as part of a tenant's legal case.¹⁹ Throughout the pilot, Heat Seek remained responsive to partner organizations' questions and

updates, maintaining strong relationships with the Inwood and Washington Heights network.

Closing out the heat season

In June 2021, Heat Seek closed out the pilot by sending pre-paid envelopes to all tenants to return the sensors. Heat Seek then downloaded all the additional data and wiped the sensors to be ready for the next heat season.

Additional pilot activities

Heat Seek developed an email system to notify tenant organizers and legal service providers any time one of their tenants' sensors registered two or more hours of temperatures under the legal limits, making it easy for them to get a quick read on apartments that need support. After testing this with a small group, they rolled this system out to all advocates across Heat Seek's partners.



¹⁹ See Housing Court Answers to learn more about what a tenant legal case may entail: <http://housingcourtanswers.org/>

Pilot Results

Heat Seek distributed 27 temperature sensors across 13 buildings located in Inwood and Washington Heights. The sensors collectively captured 4,355 hours where the temperature was below the legal limit. The frigid temperatures were not evenly distributed; seventeen of the sensors registered 20+ hours of illegally cold temperatures. Of those, 10 registered 100+ hours of illegally cold temperatures.

Example: Data-Driven Building Repairs

One single sensor in a Washington Heights apartment captured 943 hours (over just 3.5 months) with a temperature below the legal limit; nearly half its readings were below the limit. The coldest temperature recorded by the sensor was 53 degrees, 15 degrees colder than the minimum daytime temperature required by law.²⁰ If this sensor had been installed at the beginning of the heat season, it would have captured the coldest months and, likely, significant data on illegally cold temperatures.

As a result of the pilot, **the landlord in that building agreed to make repairs on a number of apartments based on Heat Seek data.** Previously, the landlord had discounted tenants' heat complaints. Once tenants and organizers presented this data, he agreed to perform an inspection and repair radiators and radiator valves throughout the building. With additional data and advocacy, the landlord later agreed to weatherize windows, replace some old radiators, and ultimately provide new insulation as needed. This is just one example of the kinds of actions tenants can take with Heat Seek data to demand repairs and ultimately solve their heating issues.

²⁰ Between October 1 and May 31, the housing maintenance code requires the indoor temperature to be above 68 degrees between the hours of 6am and 10pm if the outdoor temperature is below 55 degrees, and above 62 degrees between the hours of 10pm and 6am regardless of the outdoor temperature

Findings & Analysis

Spanish-speaking staff members increase equity.

Heat Seek learned that having a Spanish-speaking staff member who could assist clients in their primary language was essential in this pilot in order to provide the same level of service to Spanish-speaking clients as English-speaking clients, particularly when working with remote installations.

Wifi-based sensors had higher customer success rates than expected.

Heat Seek anticipated that tenants would be uncomfortable sharing wifi information and difficulty setting up the sensors remotely. In fact, tenants were eager for sensors of any kind, and responded well to guidance about pre-programming wifi information.

Data can help the City hold landlords accountable.

Heat Seek demonstrated that a lack of evidence of heating violations is a straightforward problem that can be solved by the thoughtful deployment of temperature sensors. The sensors collect objective, reliable data on the temperature inside a tenant's apartment 24/7 and document exactly how often the apartment is in violation of the City's heating laws.

Heat violations are one part of the larger pattern of tenant harassment.

Landlords often have strong incentives to make low cost, temporary fixes rather than addressing the building-wide structural issues that can lead to lack of heat. They may also withhold heat intentionally to force a tenant to move out of their apartment and be willing to pay hundreds or even thousands of dollars in city fines in order to achieve that goal. Further, tenants may not have the knowledge, time, or resources to attend to the multiple inspections, access dates, and court hearings necessary to see the issue through to resolution. Any or all of these things can prevent a tenant from receiving heat even if they have unimpeachable data that demonstrates the lack of heat in their apartment.

For this reason, Heat Seek has always viewed the temperature sensor program as part of a larger network of services aimed at helping tenants maintain or reestablish their housing rights, and that

is why Heat Seek has invested so strongly in their partnership model. Heat Seek believes that tech solutions in service of community organizing can be a strong model for civic tech organizations whose primary goal is to drive impact.

The sensor program empowers tenants to improve their housing situation. In addition to the data itself, Heat Seek has seen that the sensors can be a powerful organizing tool long before a legal case is established. The sensor program brings tenants and organizers together to collectively decide where to install sensors, often connecting tenant leaders with less active tenants in the Tenant Association.

The sensors give tenants and organizers an opportunity to participate in a tangible and discrete activity to improve their housing situation. They provide tenants with data to present to their landlord, and that data gives tenants the opportunity to be the expert in the room. In many cases, the data forces landlords to take seriously the complaints tenants have been making for years -- a strongly felt win for tenants.

Temperature data helps tenants negotiate in court. Heat Seek has also seen how access to the data can bolster tenants' and attorneys' negotiating positions in Housing Court situations where heat is only one of many issues being litigated. When resolving a housing court case, some landlords will attempt to force the case to go to trial, knowing that whoever loses the trial must pay the legal fees of the other party. This is often cost-prohibitive for tenants, and many landlords know this and demand a trial as a way to get tenants to back down and drop their case. However, with Heat Seek data, many tenants are more confident that the trial will go their way, and thus Heat Seek data has allowed them to confidently stand up to their landlord's demand for a trial. When they call the landlord's bluff and agree to the trial, it is often the landlord who ends up agreeing to concessions in order to settle before the trial begins. Again, this is a big win for tenants and demonstrates the creative ways that Heat Seek tenants use their temperature data to build power and advocate for their housing rights.

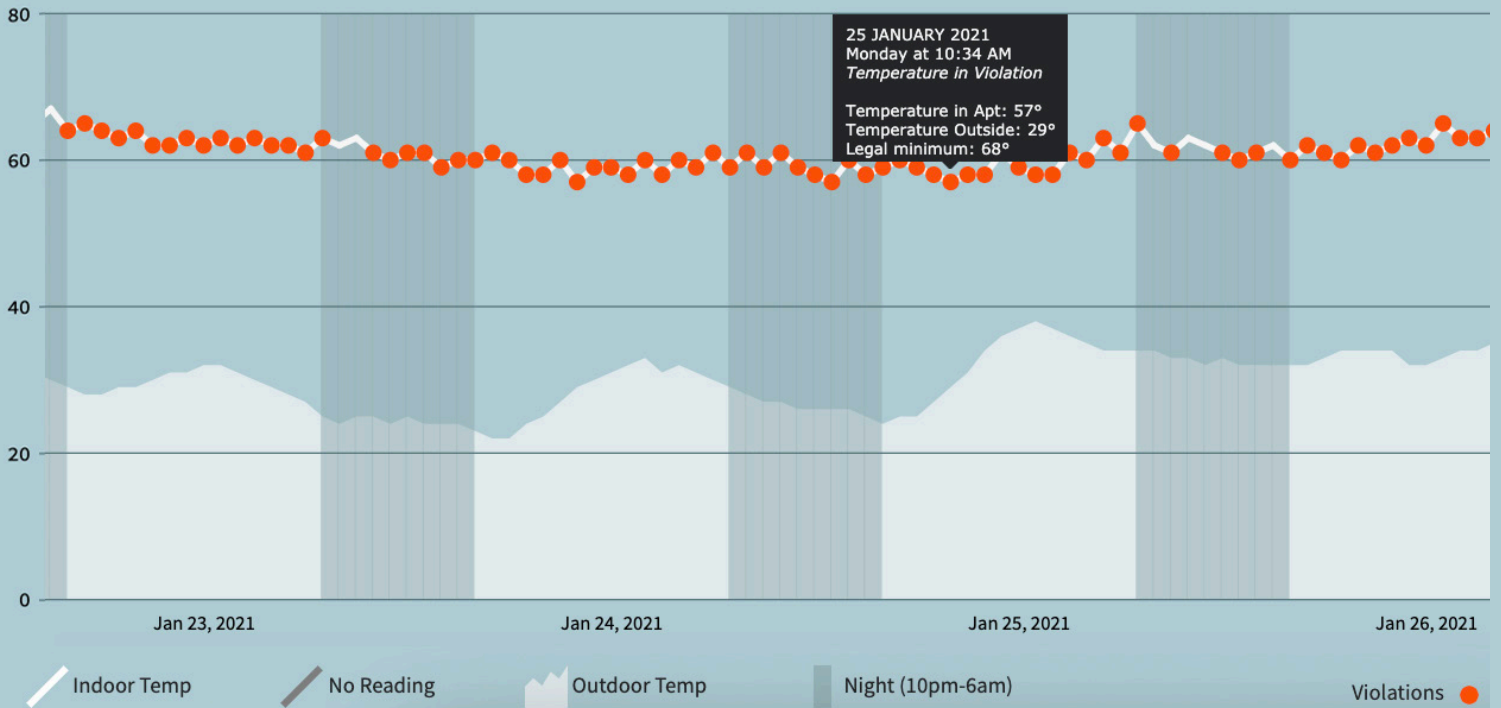
59°

Current indoor temperature

215

Hours of violation

Indoor and outdoor temperatures (last 7 days)



[^ DATA] Select sample of HeatSeek Pilot data, from Jan 23 - Jan 26, 2021.

CASE STUDY 2

JustFix

New York State law allows tenants to have immediate family members, such as spouses and children, live with them!

Family members sometimes have the right to take over the apartment if the tenant who initially signed the lease leaves.

Type "1" To learn more about the rights of family members to take over an apartment

Type "2" to learn about other kinds of renters

Type GO BACK at any time to learn about another housing topic.

1

Great, let's keep learning about rent regulation!

Type "1" for rent stabilization

Type "2" for rent control

Type "3" for public housing

Type "4" for other forms of regulation

About JustFix

JustFix develops data-driven tools that provide tenants and community advocates with the resources they need to maintain safe and healthy homes for all New Yorkers. Using technology to break down barriers in the housing system, JustFix works to uplift the voices of underrepresented tenants united in the fight against landlord harassment, eviction, and other forces of displacement. JustFix aims to strengthen existing tenant support systems and energize the tenant movement by combining highly scalable SMS and mobile services with advanced housing data analysis. Working closely with community partners within the housing justice movement, JustFix advocates for systemic change by leveraging its own resources and engaging in large-scale data analysis.

Team Members

Georges Clement	Executive Director
Steph Rudolph	Deputy Director
Samara Trilling	Staff Software Engineer
Aida Flores	User Research Contractor
Tahnee Pantig	Senior UX/UI Designer

The Tenant Text Pilot

“Tenant Text,” an SMS portal, connects renters in Washington Heights and Inwood with up-to-date information and organizational resources to address their specific housing issues. This service streamlines and simplifies tenants’ access to referrals and information when they need them (and at any time of day), and meets the needs of those who fall on the less technical side of the “digital divide.” Accessible to the elderly and those without ready access to Internet-connected devices, Tenant Text offers an innovative, action-oriented and connected tool.

Pilot Timeline

Design & Implementation	December 2020 - December 2021
Implementation timeline	Spring 2022
Funding Provided	\$20,000 USD
Original stage of initiative	Idea Stage

High-Level Output & Outcome Indicators

Deliverable	Description	Output Indicator	
Work with local tenant organizers to design the SMS tool	JustFix partnered with tenant organizers from Inwood and Washington Heights	# of engagements with tenant organizers	3
		# local partner organizations	1
	Undertake user testing sessions	# of housing attorneys interviews	3
		# of tenant interviews	20
Government Engagement	Advisory sessions with government partners.	# of support strategy & planning sessions	15
Create the SMS Tool	Design SMS content flows in Spanish and English.	# of content flows	7
		# of actions packaged for tenants	30
		# of message dialogs	251
		# of available languages (human-translated)	2

Outcome Categories	Expected Outcome Statements
Provide actionable pathways to help tenants understand and claim their housing rights.	Evidence of violation collected by sensors was used by tenant organizers.

The Content

Tenant Text offers the following benefits:

1. **Know Your Rights:** Using the digital platform, “Textit,” JustFix delivers and receives messages from users related to housing rights. Thus far, JustFix has created seven (7) “Flows,” that each hit on an important topic in housing rights. They are:
 - a. Evictions
 - b. Repairs
 - c. Rent Regulation (including stabilization, control, public housing, and affordable housing that falls under other regulatory schemes)
 - d. Succession
 - e. Illegal Lockouts/Unlawful Evictions
 - f. Ordering Rent History
 - g. Rights of Roommates, Subletters, and Other Licensees

2. Connection to Local Groups: Tenant Text provides contact information for local organizing and legal services organizations in Inwood and Washington Heights. The organizations featured throughout the various Flows include: Northern Manhattan Improvement Corporation (NMIC), Legal Services NYC (specifically Manhattan Legal Services), and the Legal Aid Society of Manhattan.

3. Taking Action: Tenant Text provides renters a menu of potential action items and step-by-step instructions for carrying out each action. From tips for negotiating with roommates to filing an Order to Show Cause (OSC) to stop an eviction, each Flow provides detailed instructions and offers appropriate warnings about the risks of certain courses of actions, particularly for those living in market-rate housing. Some direct-action resources include links to New York State Homes and Community Renewal (HCR) forms (online or PDF) for overcharges, rent reductions, failure to renew a lease, and others. Finally, tenants gain easy access to other tools in JustFix’s ecosystem such as ordering a rent history, filling out a Hardship Declaration, or writing a letter of complaint.

4. Connection to other neighbors in building:

JustFix will explore a feature that would ask renters if they would like to connect with neighbors in their building or in their neighborhood. Because privacy proves a top priority, JustFix will build a secure system prior to deploying this feature, and will continue to perform user-research on the question of what, if any, contact information tenants would like to share when connecting with neighbors.

Given the large number of rent regulated buildings in Washington Heights and Inwood, JustFix also created several relatively “evergreen” informational Flows focused on the needs of rent stabilized and rent controlled tenants. For example, most families living in rent stabilized housing need to know about how to prepare a succession claim well in advance of asserting such a claim. For this reason, JustFix created a prominent “Succession Flow,” offered not only from the main menu but from several other Flows (such as when the user opts to learn about rent stabilization more generally).

COVID-19

JustFix built this project during the COVID-19 pandemic. Throughout the pandemic, housing courts have been, at different times, totally closed to the public, partially open, or fully open to the public. To keep Tenant Text relevant and up-to-date, JustFix’s program team continually monitors NYS State law, administrative orders, executive orders, directives, and even policies instituted specifically in certain boroughs (i.e. not all boroughs maintain the same rules with respect to accessing the courthouse in person)

Needless to say, over the course of the nine month pilot, the shifting political landscape required constant substantive changes to the various Flows (and JustFix’s other suite of tools). While perhaps, in the future, the housing landscape will change at a slightly slower pace, JustFix will need to continue to dedicate resources to updating content and making sure the information remains relevant and helpful

The Technology

A. Main Menu

An SMS-based chatbot, renters access Tenant Text by simply texting a number from their cell phone to start the conversation in English or Spanish. The chatbot asks the renter to indicate their area of housing interest by pressing a number or letter on their phone (e.g. “Press 1 to learn about illegal lockouts” and “Press 2 to learn about repairs”).

By asking renters to press a single number or letter as opposed to typing plain text, Tenant Text allows those with low vision or limited literacy to access and navigate Tenant Text more easily.

Welcome to "Tenant Text"! Ready to learn about your housing rights?

Get information about the following topics by typing:

"1" for Rent stabilization and other kinds of affordable housing

"2" for Repairs

"3" for Illegal evictions or lockouts

"4" for Succession rights (passing an apartment to a loved one)

"5" for Subletters and roommates

"6" for your rent history

Or type "Goodbye" to stop using Tenant Text.

B. Accessibility/Ease of Platform

While some text-based platforms favor “plain language” conversations (e.g. “please describe your problem...”), a multiple choice number or letter system provides a more guided experience and proves more accessible to those with limited literacy, writing, or spelling skills.

Further, Textit allows users to move seamlessly between Flows (i.e. topics). For example, if a user enters the “Illegal Lockout” Flow but later realizes the real issue is a Marshal’s Notice, the user can type a single number or letter to transfer into the “eviction flow” and learn how to file an emergency OSC in housing court.

C. Referral to Additional Resources

Textit’s technology also allows tenants with Internet access to click on hyperlink to websites with more in depth information. Users can download PDF complaint forms from DHCR or other relevant agencies. For those without Internet access, users can save the information for weeks or months and refer to it later when they have access to a computer, smartphone, or iPad.

D. API Calls to Identify Housing Regulatory Status

Textit allows users to enter their address to see eligibility for rent stabilization. Textit allows JustFix to create an Application Programming Interface (“API”) call to their [Who Owns What](#) Product. Who Owns What, by further pulling data from the NYC Department of Finance, ²¹ provides users a highly educated guess as to whether the unit in which they live is a rent stabilized or NYCHA unit. Textit then offers further instructions for users to confirm their regulatory status (by ordering your rent history immediately through the Textbot and/or a guided review of their lease).

²¹ Every June, DOF requires owners to pay a nominal tax/fee on each apartment registered as rent stabilized in each building. This allows JustFix to estimate the number of probable rent-stabilized units and provide users an educated guess of their own status.

Pilot Theory of Change

A healthy home is fundamental to individuals as well as community health, and these issues severely and disproportionately impact communities of color and immigrants. JustFix designs tools, alongside renters and housing advocates, that prioritize the needs of these populations and those at the highest risk of eviction and homelessness due to systemic oppression. Our tools focus on bringing renters closer to housing justice by shedding light on deliberately hidden data and making information visible and easily accessible.

Due to the COVID-19 pandemic, New York City is experiencing a period of heightened inequality. While tenants struggle to pay rent and evictions remain largely paused, landlords have refused to repair buildings at unprecedented rates. In some instances, landlords have even gone so far as to engage in egregious acts of tenant harassment (e.g. invading tenants’ personal space through unnoticed visits and the installation of surveillance cameras, hiring sadistic actors to move in with tenants who can’t pay rent, and unlawfully locking tenants out). ²² Now, more than ever, renters need to connect to resources--both informational (e.g. accessible fact sheet) and organizational (e.g. legal services).

²² See e.g. the plight of [70 South Elliott Place](#) or the egregious actions of [landlord Yehuda Kohn in Bushwick](#).

Co-Design Process

User Research

A. Demographics for Co-Design

The dense regulatory schemes that govern affordable housing in New York City confuse even attorneys specialized in housing and benefits law. For the more than one million renters living in regulated housing, an understanding of these complexities proves integral to preventing displacement and preserving neighborhood stability. New Yorkers without regular internet access and/or technology fluency face additional hurdles to accessing clear and detailed housing information.

The community of under-resourced renters in Washington Heights and Inwood proves extremely diverse. Renters include long-term rent stabilized tenants, family members of long-term tenants, subletters, roommates, students, public housing tenants, and those living in illegal apartments. Accordingly, JustFix centered Tenant Text on those likely to rely almost exclusively on text-based tools while eschewing web-based resources. JustFix developed Tenant Text with the following demographic criteria in mind:

- Renters using only SMS technology (i.e. flip phones);
- Renters living in rent regulated, primarily rent stabilized housing (given the nature of the housing stock in Washington Heights and Inwood);
- Renters with only one Internet equipped device such as a smartphone or tablet;
- Senior citizens and older New Yorkers;
- Monolingual Spanish speakers as well as English-speaking immigrants;
- Renters without clear long-term rights to their apartments (i.e. subletters, holdover tenants, family members of tenants, and unrelated roommates).

Due to the advanced age and limited technological fluency of the target demographic, JustFix sought out users for socially distant in-person meetings. Meetings occurred outside in public locations during the warmer months of the year with both the user and the testers wearing masks. All parties explicitly discussed and consented to the safety protocol prior to meeting up in person.

B. Community Partners in Co-Design

Initially, JustFix intended to partner with Northern Manhattan Improvement Corporation (“NMIC”), MET Council, and Manhattan Legal Services (“MLS”) to launch the prototype of Tenant Text.

Each of these organizations had, prior to COVID-19, a strong in-person presence in the rent stabilized housing stock of Washington Heights and Inwood. Several groups organized across particular portfolios of predatory owners seeking to displace long-term rent regulated tenants in order to rent to students and other gentrifiers. However, between March 2020 and present day, most lawyers and organizers reported that they had transitioned to hosting only virtual meetings out of concern for staff and tenant safety.

JustFix determined that the target demographic of renters (see Section I(A) above) would prove unlikely to attend virtual meetings, reliant on web-based platforms such as Zoom, Teams, or WebEx. Given this limitation, attending virtual tenant association meetings to recruit users did not prove a viable option for JustFix user testing. Further, organizers and advocates responded extremely slowly to requests for member or client referrals. When these organizations did follow up, they justifiably cited other, more pressing priorities related to the COVID-19 pandemic (such as helping people apply for rent relief or their own staff contracting COVID-19).

Despite not serving as a resource of user testing, NMIC affirmatively asked to be listed as a potential resource to Tenant Text users. They, along with the Legal Aid Society of Manhattan and MLS, were selected as the primary referral organizations for Washington Heights and Inwood users. Because

LSNYC cannot serve all New Yorkers due to their Legal Services Corporation (“LSC”) funding (including many undocumented renters), the Legal Aid Society and NMIC serve as important alternative resources.

C. Community of User Testers

JustFix located users through the following formal and informal channels:

- **Community Partners Referrals:** Through several active MLS attorneys and advocates, JustFix engaged several MLS clients in user testing.
- **Less Formal Recruiting:** JustFix recruited other renters through less formal channels (e.g. contacts in Washington Heights from organizers or current members of our staff).
- **Current JustFix Users:** In addition, JustFix sent emails and text messages in English and Spanish (including to market rate, rent stabilized, and public housing tenants), asking them if they would be willing to participate in our user testing. Several dozen responded.

D. Spanish-Speaking Users

Each “Flow” or housing topic has been or will be translated into Spanish. Our primary user tester, Aida Flores, is a native Spanish speaker who is deeply attuned to the most common housing-related vocabulary used in Washington Heights and Inwood. In addition, the author of the Flows, Stephanie Rudolph, has worked with Spanish-speakers as a legal services attorney for the last decade. For example, while JustFix customarily uses “dueño” for “owner” when translating most of our products, renters in Washington Heights tend to use the term “casero” (common among those from the Dominican Republic and Puerto Rico). Further, many Spanish speakers use English-derived terms like “el lease” (translated formally as “contrato de arrendamiento”) to describe the contract between a landlord and a tenant. Future user research will allow JustFix to tailor our Spanish language translations to the vocabulary usage most common in the areas of Washington Heights and Inwood.

E. User Research Conclusions

While at first, the failure to more consistently partner with a particular grassroots community organization seemed like a loss to the user testing process, recruiting tenants less steeped in the organizing community had some key advantages.

Users more affiliated with a community group or legal services organization found the Tenant Text Flows somewhat repetitive and rudimentary. For example, a long-time tenant leader referred through MLS found the content related to requesting repairs (i.e. calling 311 or filing a rent reduction complaint with DHCR) somewhat basic. She moved extremely quickly through a long Repairs Flow and did not feel the content offered her much novel insights into her right to obtain repairs.

By contrast, renters not referred through established organizations found the Repairs Flow material more complex and raised important questions not surfaced by those users with deeper ties to the housing justice community. Their input motivated JustFix to add additional flows with information not necessarily relevant to tenants with roots in the organizing community.

For example, one user, an immigrant who spoke Mandarin as a first language and English, lived in a regulated building and worked for a social service organization that assists clients with housing. Despite her area of work, this user reported that the content felt challenging and new to her. This user disclosed she found her room online through the master tenants, suggesting she had no direct rights as a tenant or record (a point of which she had some understanding). Because the original content of Tenant Text only contemplated use by legal “tenants,” JustFix chose to add a flow to help users understand the more limited set of rights associated with subtenants, roommates, or other licensees. Because this user assumed she had no rights at all, JustFix added content outlining the rights she does have (i.e. protections against illegal, the right not to be overcharged in a rent stabilized unit, the right to repairs, and the right to live free of harassment).

A second user disclosed during testing that she had been renting a room in a rent stabilized three

bedroom. She initially rented from a family using the CITYFHEPS program (for room rentals only). However, the family abandoned their apartment during the beginning of the pandemic, leaving her with no tenancy rights and a subsidy of only about \$900.00 for an apartment that rents for more than \$2,000. Again, this testing session demonstrated the importance of offering a wide-variety of resources relevant to non-traditional renters. While this user had concerns about repairs, her primary questions revolved around whether she had any rights to her apartment and if so, how to assert them.

In sum, attracting a mix of users from both established organizing backgrounds as well as those not yet connected to a community-based organization helped JustFix gain important insight into the pacing of the Flows as well the content offered.

Pilot Deployment

As of the publication of this report the tenant text tool has not yet been deployed. Deployment is scheduled for Spring 2022.

3

An illegal lockout is when a landlord or someone you live with changes the locks to your apartment or even forces you out of your apartment physically. This is called an illegal lockout because it is completely illegal!

Only a judge can order an eviction. And, even then, only a City Marshal can evict a tenant. A landlord can never evict a tenant.

Type "1" to learn about illegal lockouts
Type "2" to learn about Marshal's evictions

At any time, type GO BACK to learn about a new housing topic.

3

Aunque no es común, a veces, un dueño cambiará la cerradura o intentará forzarle físicamente a salir de su apartamento. ¡Esto se llama un desalojo ilegal porque es completamente ilegal!

Solo un juez puede ordenar un desalojo. Y, aún entonces, solo un Mariscal de la Ciudad puede desalojar a un inquilino.

Escriba "1" para aprender mas sobre desalojos ejecutados por Mariscales.

Escriba "2" para aprender más acerca de lo que debe hacer si usted es desalojado ilegalmente.

En cualquier momento, escriba "REGRESAR" para aprender sobre un nuevo tema de vivienda.

1

First, protect yourself from an illegal lockout ahead of time!

If you suspect your landlord might change the locks, you should always carry a photo identification and proof of your address.

Type "1" to learn about how to prove your address
Type "2" if you are already locked out and need help

1

¡Primero, protéjase de un desalojo ilegal antes de que suceda! Si sospecha que su dueño podría cambiar las cerraduras, debe siempre llevar una identificación con foto y evidencia de su dirección.

Escriba "1" para aprender cómo puede comprobar su dirección.

Escriba "2" si usted ya fue desalojado ilegalmente y quiere saber lo que puede hacer ahora.

[PHOTO >] Examples of TenantText bot in use, in English and in Spanish.

NYCx Co-Labs Lessons

Learned & Policy

Recommendations

Urban Innovation in NYC

Since 2015, NYCx Co-Labs has served to design, test and iterate collaboration frameworks for New York City Government agencies to put new and emerging technologies to the service of all New Yorkers. Rather than proposing a particular agenda, the [NYCx Co-Labs framework](#) has always been tech-agnostic, problem-centric, community-driven and collaborative.

The following lessons offer insights for public servants in the civic tech space who aim to address urban development challenges through collaborative multidisciplinary partnerships with community members and government agencies.

From Community Engagement to Participatory Design²³

Communities know what they need. Community engagement efforts should go beyond simply documenting concerns, and should provide community members the opportunity to qualify the level of urgency of the issues they share.

The issues around housing conditions, displacement prevention, and tenant rights abuses in the community were a primary concern expressed in community workshops, conversations as well as the documented research and Community Board

²³ These lessons learned are based in the participatory design process that led to defining Housing Rights as a priority issue area for the communities in Inwood and Washington Heights (see page 9 of this report). To learn more about that process see the following reports: [Building Community Power](#), [Challenges to Immigrant Communities](#), [the literature reviewed](#), and [the data visualisation summary](#).

12 needs assessments. Having mechanisms for the community to constantly qualify priority issues allowed us to build consensus and support among advocates, and agencies.

How you document civic engagement matters.

Traditional community engagement efforts rely on notetakers to document the outcomes of town halls, interviews and workshops. Creating thoughtful documentation frameworks to collect information is as important as what gets to be documented. The NYCx Co-Labs team classified community feedback into: solutions, problems, concerns and resources, which allowed us to find opportunities to leverage community resources and to better connect with community members.

Communities have resources. Know them. Communities constantly create strategies to address the issues that they encounter. They organize and develop community support networks, initiatives and services. Creating strategies to document such resources allows government agencies to empower ongoing efforts and nourishes community networks. We classified community assets as follows: Access to people, access to places, expertise, and other resources.

Engaging with the government is everybody's right, but inequality makes it a privilege. Engaging with the government in addressing local challenges is the right of all the people who live in NYC. However, not all New Yorkers have the same ability to invest time in talking to government entities. In the context of vulnerable communities, this is even more evident. It is important to implement complementary civic engagement strategies that account for such reality. For this challenge, government agencies engaged in a combination of individual community person-to-person surveys, community open sessions, events, housing advocate workshops, and participatory community workshops.

Build internal capacity of City agencies to do civic engagement. Scoping the right problem to solve is critical to innovate in public service. Building the capacity of City agencies to do user research and

community co-design would improve the success rates of urban development initiatives in the future.

Government agencies must meet communities where they are. When participating in civic engagement activities, community members come to the table with anger, deep sadness, confusion, and distress, which are all legitimate expressions of communities' reality in engaging with the government. Civic engagement efforts should be designed to operate in the context of deeply personal and difficult emotions rather than expecting logical, calm statements. This is particularly vital in the context of vulnerable and marginalized communities that have historically suffered in the face of government (in)action.

Community partnerships require trust. Trust comes with transparency, accountability and collaboration. Community partnerships are critical for the success of any social & economic development initiatives. Public servants are discouraged from pursuing civic engagement when they lack resources, regulatory powers, or authority over a particular issue area. In the context of these pilots, well documented community input served as a backbone for coalition building, which empowered both community members and city agencies to effectively advocate for resources.

Civic Engagement as a permanent feature rather than a phase of initiatives. Rather than looking at civic engagement as a phase of a process, we found through this experience that civic engagement as a continuum increases trust among community members as well as opportunities for pilots to be successful.

To improve civic engagement, government agencies should constantly iterate in their processes and provide training opportunities for staff. Not all public servants work on civic engagement, but all public service could be improved with thoughtful, diverse, and constant community input.

Global Partnerships to Address Local Challenges

Well documented research makes the difference between isolated initiatives and long-term planning. The Challenge Manual produced for this challenge fulfills three roles: 1) Provide an overview of the community context. 2) Map out community challenges in the context of housing rights that could be addressed through technology and innovation. 3) Provide an overview of ongoing initiatives, laws, and policies led by NYC. Regardless of the outcomes of the two pilots that this partnership funded and implemented, the manual offers opportunity areas for other city agencies, elected officials, entrepreneurs, and foundations to continue to advance housing rights in NYC.

Open Innovation Challenges as a collaboration framework for local communities. Open Innovation Challenges can be used as encompassing partnership umbrellas that allow community based organizations and residents to elevate their challenges to global audiences. Such a framework leverages the role of government as a convener to increase the reach of CBOs and nonprofits to donors, investors, and allies.

Inclusive marketing for the competition is as important as inclusive design. Regardless of how inclusive the design of the competition has been, if marketing is not thoughtful and inclusive (language, location, and media channels) then the opportunities will end up benefiting organizations that are already pursuing opportunities to work with the government.

Governments share challenges, and could be more impactful if they also shared resources. The Housing Rights Challenge served as an opportunity to gather government officials from across the world, working on housing rights at the municipal, state and federal level, to discuss public policies to protect housing rights as well as strategies to address displacement and gentrification.

Finding the right audience for the challenge is critical to success. Through the Housing Rights Challenge we identified that most of the organizations working on leveraging technology to protect housing rights were nonprofits rather than for-profit startups. Although Open Innovation Challenges offer great collaborative frameworks to rally governments, foundations, and policy makers to promote cooperation across jurisdictions, challenges should be designed to serve diverse organizational structures, particularly in the (many) instances where the issue at hand cannot be addressed through privately funded entrepreneurship.

Selection criteria for pilots must match expected outcomes and available resources. The selection criteria will determine the kind of applicants one could expect. The more demanding and specific, the more time that vendors would be expected to dedicate to the application. If the goal is to incentivize new ideas, and new organizations, then the criteria should be flexible, and the challenge should provide support for the organization to develop both the solution and the organizational capacity.

Housing Rights & Innovation Findings

Tenant rights protection is not perceived as a profitable area for social entrepreneurs. Traditionally VC-backed social entrepreneurship models rank profit-viability higher than social impact. Social entrepreneurship is often framed as issue-agnostic which supports the notion that all social justice issues have a potential business model approach waiting to be found by creative innovators. While that is certainly possible, private funding available for social justice ventures is finite, and prioritizes ventures that promise high-returns and large-scale.

The lack of capital to support startups and nonprofits working on housing rights reflects the perception of such issues as high-impact, low-profit. Although such an assumption is not necessarily true, local governments and foundations should evaluate the unequal distribution of resources and encourage funds specifically designed to support under-invest-

ed fields. These types of tools and technologies add value beyond profit.

Not all challenges can be framed within the scope of sustainable business models. Not all sustainable business models allow for high-returns and large-scale. Very successful programs can exist while having a well-defined focus area anchored in a particular geography. That leads to innovation ecosystems that rank profit-viability higher than impact.

Particularly in the context of Housing and Innovation in NYC, [Blue Ridge Labs](#) funded by the [Robin Hood Foundation](#) is already leading incubation models focused on the impact of tech-enabled ventures to address economic inequality. In fact, both of the [winning organizations of this challenge](#) are alumni of Blue Ridge Labs programs.

Leveraging tech & innovation requires technical capacity. Tenant organizers work tirelessly to provide tenants with valuable information and legal advice as they face unlawful forms of abuse (intimidation, lack of or intermittent heating, unresponsiveness to address repairs, pests, exorbitant fees, etc.). However, limited funding and increasing needs push tenant organizers to the limits of their organizational capacity. Under those conditions, providing legal advice and supporting information campaigns is prioritized over procuring or developing more technology to improve operations.

Language accessibility is about transparency, accountability, and collaboration. Inwood & Washington Heights are predominantly Spanish speaking neighborhoods. Making the competition available in Spanish and English was important to build partnerships with community based organizations, and residents.

Leveraging low cost telecommunications networks for social entrepreneurship is affordable but means that the lifespan of all products is reduced as networks are deprecated. Nonprofits across the US are trying to leverage low cost networks to increase data collection strategies through IoTs as a means to improve operations and impact. Nonetheless, the maintenance of the communications infrastructure upon which they operate relies on market

profitability. As networks evolve, old networks get deprecated.

That means that the efforts of nonprofits that have limited resources to leverage the cheapest networks can lead to a short life expectancy of their projects putting stressors in their ability to sustainably leverage IoTs and data.

Community-based organizations often have very limited resources; depending on them without funding can be problematic. Both Heat Seek and JustFix struggled when they relied on partnerships with legal service providers. Anybody aiming to work with CBOs should think of their role from a perspective of complementarity to the work they already do, rather than expecting new work. Failure to properly manage expectations might lead the CBOs to disengage.

Urban Pilots Procurement & Management

Micropurchases²⁴ as a procurement mechanism are not fast enough for rapid pilot testing. The City of New York's procurement processes require 2-4 months from approval of the vendor scope of work (SoW) review and approval of procurement mechanism to contract negotiations and drafting to execution of contract and final disbursement.

In the context of an innovation challenge, when we don't know who wins until the end of the competition, such a slow procurement process means that vendors must wait for 2-4 months after they have finished their SoW to start working on a six month pilot causing numerous issues:

- Long waiting times disproportionately affect smaller organizations that require the funding to start operations, and that do not have the ability to allocate resources beyond a particular proposed timeline.

²⁴ Micropurchases are procurement mechanisms that allow City Agencies to procure goods and all services except construction the value of which is \$20,000. See more about procurement processes in NYC at the Procurement Policy Board (PPB) Rules: <https://www1.nyc.gov/site/mocs/legal-forms/procurement-policy-board-ppb-rules.page>

- Community members that have participated in the selection process have to wait for several months before the winners start operating, which reduces buy-in and limits the ability of the vendors to work with community partners originally involved in the selection process.
- Slow procurements particularly **hinders the ability of totally new ventures to thrive**. When brand new organizations aim to leverage the competition to start operations, a long wait takes away momentum in a critical organizational juncture that may influence their capacity to actually deliver on the selected proposal.

Micropurchases of \$20,000 do not provide enough resources to cover the operational costs of six- to nine-month pilots. Challenge winners needed to develop partnerships with local advocates either to deploy or to co-design their products. Such work was labor-intensive and resulted in organizations working more than the reasonable expectation for the \$20,000 purchase. Such conditions can negatively impact smaller organizations, who cannot afford to hire additional staff to help implement a new program at this funding level.

Open innovation challenges are a catalyst to develop innovation capacity at City agencies. The challenge required City agencies to develop cooperation frameworks; assessments mechanisms; legal documentation; and processes to procure, evaluate, manage, and expand applied civic technologies to the issue areas they oversee.

Impact Assessment in the Context of Housing Rights Innovation

Open innovation challenges allow government agencies to push the boundaries of what can be done to address social and economic development challenges. It is not a mere exercise to test “new or emerging technologies” for the sake of innovation or potential efficiencies. Instead it offers an opportunity to create tech-enabled services, products, and initiatives to address social and economic inequality.

Evaluation frameworks for the creation of new services, and products should be different from those used to evaluate deployment. A six- to nine-month time frame is too short to set up the legal and procurement documentation, develop, and implement a new tech-enabled solution. When supporting the development of new initiatives, agency support should focus on product design, user research, accessibility and product testing. Consequently, the evaluation of the product should be related to the creation process rather than “service” indicators. Failing to assess the difference between incubating and deploying a pilot can lead to unreasonable timelines and poor delivery.

Promote outcome-oriented scopes of work for tech-enabled pilots. New organizations and new initiatives are bound to encounter operational challenges. Defining outcome-oriented scopes of work anchor the pilots around the goals rather than particular activities. Such design provides clarity and flexibility for both the government agencies and the vendors. Additionally, having clear, simple, and actionable theories of change -- centered on how the pilot serves New Yorkers -- provides transparency to residents and makes it easier for third parties to assess the value of the pilots.



[^ PHOTO] Virtual Event: “Políticas públicas para la vivienda digna ante el Covid-19: CDMX- NYC”, June 2021. Speakers from left to right; Jorge Islas López - Consul General of Mexico in New York; Oscar Romero - Director of Inclusive Innovation and International Cooperation (MOCTO); José Luis Rodríguez Díaz de León - Diputado Distrito 12, Congreso de la Ciudad de México; Ricardo Martínez Campos – Director of MOPT; and Ernesto Carmona Gómez - Subdirector de Cooperación Bilateral.



Policy Recommendations

NYC Agency Capacity Building

Build internal capacity of City agencies to develop and maintain community networks in languages other than English. Community networks require maintenance, management, and constant messaging to stay relevant. City agencies should invest in staff to do community management at the tenant level, as well as community rosters at the tenant level to increase the ability of public servants to improve user testing and co-design.

Allocate resources to compensate tenants for participation in user-research sessions. Constant user-research should be a part of any city service. Compensation should be provided to participants of co-design sessions, especially when working with communities that face different forms of systemic inequality.

The City should double down on procurement training for City officials. Public officials across City agencies would benefit from periodic training on procuring tech-enabled solutions, outcome oriented reporting, bias management prevention, and strategies to address systemic racism, sexism, and discrimination throughout the city's procurement process.

Information should be actionable, culturally competent, and accessible. Information provided about tenants' rights should not primarily be walls of text containing legal definitions. Instead it should provide simple and concise descriptions, with real-world examples, to educate tenants and provide them actionable processes to assert their rights.

Cultivating a Housing & Innovation Tech Ecosystem

Develop an Innovation fund for tenant organizers. Resource-starved, community-based organizations are too worried about survival and service

delivery to think about how emerging technology could expand and improve their impact. NYC should create an innovation fund for tenant organizers that could allow for the procurement of the following products and services:

- **Human-Centered Design and Outcome-Oriented Training:** Tenant organizers provide meaningful support to tenants that is often not solely reflected by the outcomes of a legal case. Lawyers, social workers, and organizers provide meaningful support throughout the entire process that tenants experience from the moment they face some form of abuse to resolution, and after. Improving the ability of local organizations to measure their impact, would greatly increase their ability to fundraise, scale operations, and better serve residents.
- **Organizational Technical Capacity-Building:** The NYCx Co-Labs research identified several opportunity areas (case management, direct tenant outreach, volunteer management, multi-lingual information distribution and training of organizers) where Information and Communications Technologies could play a role in improving and scaling the operations of tenant organizers. Creating a fund to support tenant organizers' technical capacity would allow them to develop the technologies they need to better serve New Yorkers.
- **Hardware and Services:** There are a number of tech-enabled nonprofits and services that could greatly improve the capacity of tenant organizers to serve New Yorkers. However, even discounted services have a cost, whether these are client relationship management (CRM) systems, scheduling systems, design, direct outreach lines, Internet of Things devices (IoTs), subscriptions, etc. Creating this fund will allow tenant organizers to procure technologies without jeopardizing the limited funding they have for organizing operations.

Open an “ideas track” when procuring solutions or launching competitions. Not all ideas are ready to be deployed, and not all institutions have the capacity to work with the government, but if someone has the interest in addressing a community challenge, we should have the capacity to listen and cultivate such ideas. If government agencies are already launching open competitions, we should open an “ideas track” as well to identify potential allies (such as universities or private sector/philanthropic partners), and support community-driven initiatives. Such an “ideas track” would allow City agencies to learn more about how potential solution partners are thinking through these types of challenges.

Elevate the per-pilot funding to support pilot customization, community engagement, and program deployment. To meet the ambitions of the NYCx Co-Labs program, more funding should be made available to support pilot development and deployment. At the \$20K level, we found that challenge winners worked, unfunded, beyond the limits of their contracts in order to meet their state program goals. The level of funding and procurement method (micropurchase versus full Request for Proposals) should be determined relative to the scope and ambition of the current challenge.

Explore partnerships with foundations to provide funding faster to urban innovation pilots. City agencies take a long time to process contracts, which negatively impacts smaller organizations and delays operation timelines. If instead city agencies contributed funds to a master agreement then a third party could procure urban pilots faster. During their pilot, Heat Seek received a bridge loan from an undisclosed foundation at 0% interest which allowed them to operate until the City was able to make its first payment.

The city should develop pathways to scale successful pilots. There should be a clear path to city-wide expansion and/or agency adoption if pilot projects prove to be successful. New nonprofits don’t yet have the networks and name recognition to develop these partnerships on their own, but the city does. The city could act as a convener for public/private

partnerships that fund innovators to deploy commercially available technology in civic-minded ways to support the public good.

Appendix

Community Tech Board Members

Name	Organization
Adam Fran	Local resident
Allegra LeGrande	NASA Scientist -Local Resident
Ayisha Oglivie	CB12
Joseph Barba	CCNY/ Zahn Innovation Center
Charles Corliss	Inwood Community Services
Charlene Edwards	NYC Parks + Recreation / J Hood Wright Recreation Center
Christopher Nickell	Uptown United
Devin Voorsanger	Zahn Innovation Center
Danny Reyes	Trailo
Diego Quintuña	Inwood Community Services, Asst Director Work Learn Grow
Eddie Silverio	Catholic Charities/Alianza Dominicana
Bruce Forman	New York Presbyterian Hospital / IEC for Health and IT
Frank Diaz	American Association of Latinos in STEM
Jose Salcedo	Dyckman Digital
Juan Camilo	Dyckman Beer Co.
Led Black	Uptown Collective
Lucia Alcantara	Futures Today Consulting
Maria Lizardo	Northern Manhattan Improvement Corporation
Michael Zigman	FIRST Robotics
Naiomy Rodriguez	Dyckman Farmhouse Museum
Obed Fulcar	Friends of Sherman Creek Conservancy
Patricia Falto	New York Presbyterian Hospital
Richard Lewis	CB12, 1st vice chair, interest in biotech, STEM
Rodrigo Camus	Northern Manhattan Improvement Corporation
Edgar Roman	Resident
Ralph Vacca	Educator, Latinx Tech Innovator
Seny Taveras	CUNY in the Heights
Tiasia O'Brien	Seam Social Labs
Tiffany Lee	Altagracia Faith and Justice Works
Washington Hernandez	PS8 -Luis Belliard School
Yandra Castillo	Inwood Community Services, Asst Director Work Learn Grow
Yecenia De La Rosa	Gregorio Luperon High School
Yolise Fajardo	Inwood Community Services, Asst Director Work Learn Grow

Challenge Design & Selection Process

Community Engagement & Research

Community Based Organizations (CBOs) engaged for challenge design	35
Community Information Sessions to join design challenge	3
Thematic challenge design workshops with CBOs	6
People participating in community workshops	44
Direct CB-12 resident responses through ONENYC Survey	190
Community Feedback Reports <ul style="list-style-type: none">• Building Community Power• Challenges to Immigrant Communities	2
Documents evaluated in the literature review	43
Workshops with Tenant Organizers	1
Interagency design workshops (HPD, MOPT, NYCEDC, MOCTO)	8

Challenge Outreach Indicators

Open Application Window ²⁵ (months)	4.6
International Government Partners	8
Challenge Website Users (Feb 25 - July 15)	1,449
Challenge Website Sessions (Feb 25 - July 15)	2,126

(continues on next page)

²⁵ On March 12, 2020 NYC declared a state of emergency due to the Covid-19 Outbreak. All City Employees devoted their attention to work on emergency response which led the innovation challenge application window to be extended until July 15.

Challenge Outreach Indicators – continued



User distribution by Country, City & Language

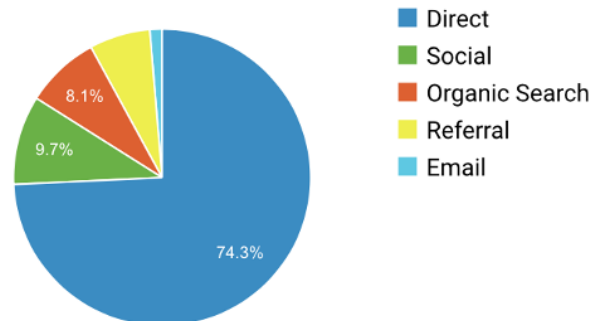
City	Users	% Users
1. New York	543	36.25%
2. Mexico City	91	6.07%
3. Cheyenne	74	4.94%
4. (not set)	65	4.34%
5. Quincy	63	4.21%
6. Ashburn	39	2.60%
7. Athens	31	2.07%
8. Coffeyville	24	1.60%
9. Helsinki	18	1.20%
10. Amsterdam	16	1.07%

Language	Users	% Users
1. en-us	1,009	69.39%
2. es-es	76	5.23%
3. es-419	73	5.02%
4. en	72	4.95%
5. en-gb	66	4.54%
6. es-mx	37	2.54%
7. es-xl	30	2.06%
8. es-us	19	1.31%
9. es-la	7	0.48%
10. fi-fi	7	0.48%

User distribution by Source

Source / Medium	Acquisition
	Users
	1,449 % of Total: 100.00% (1,449)
1. (direct) / (none)	1,111 (74.07%)
2. google / organic	116 (7.73%)
3. t.co / referral	56 (3.73%)
4. linkedin.com / referral	37 (2.47%)
5. m.facebook.com / referral	33 (2.20%)
6. govtch.com / referral	24 (1.60%)
7. Tech:NYC Newsletter / email	13 (0.87%)
8. l.facebook.com / referral	12 (0.80%)
9. mail.google.com / referral	11 (0.73%)
10. smartcitiesdive.com / referral	11 (0.73%)

Top Channels



Source: NYCx Challenge website analytics.

Challenge Applications

Started applications	29
Submitted & complete applications	12
Countries represented in submitted applications	3
Solutions pitched to agency partners & community members	5
Finalists	3
Winners	2

Winner Selection Process

Selection Process	Description
Agency Evaluation	Agency judges from MOPT, HPD, MOCTO and NYCEDC reviewed all applications based <u>on the challenge criteria</u> .
First Feedback Round for Finalists	All finalists received clarifying questions and were invited to participate in a virtual pitch with agency partners and community members.
UX/UI Design Feedback Round	<p>All solutions were evaluated by a panel of UX/UI Designers based on the following criteria:</p> <p>A. User-centric/relevant - Concept: Do we have enough data to believe that idea solves a real human need? Was there re-search involved in framing the problem?</p> <p>B. User-centric - User Experience: Is the idea well executed, with good design, clear mental models, and a good user experience and usability? Do we agree with any implicit assumptions around user behavior? Has the design been tested with users?</p> <p>C. Innovative: Have we seen something like this before?</p> <p>D. Scalable: Does it feel like the idea can be scaled? Are there tech elements that will cause issues (ie, unscalable feedback or moderation mechanisms, manual back-ends, etc)? Is user adoption considered or does the idea rely on scale from the beginning?</p> <p>E. Other: Is there something that gives us pause in terms of technical implementation (or general “plausibility”)? Are there assumptions we don’t share?</p>
VC Feedback Round	VCs provided feedback on the scalability and potential of the projects to raise private funds.
Pitch sessions	Finalists had 10 mins to present their solution and 20 minutes to answer questions from judges and community members.
Final Selection	Based on all the feedback from agency judges, UX/UI Designers, and Community Members the challenge winners were selected.

Information Sessions & Housing Rights Challenge Events

Event Title	Partners	Date
<u>Public Private Partnerships for Public Innovation</u> @ Zahn Innovation Summit	The Zahn Innovation Center, City College of New York	February 2019
<u>Tackling Covid-19 and Social Issues in NYC and Beyond</u> @ Call for Code Event Series	IBM, Clinton Global Initiative , NYC Mayor's Office of the CTO	May 2020
<u>NYCx Co-Labs Housing Rights Information Session</u>	NYC Agencies: HPD, NYCEDC, MOPT, MOCTO (Virtual)	June 2020
NYCx Co-Labs Housing Rights: Pitch Session 1	Inwood Community Tech Board & Agency Partners	September 2020
NYCx Co-Labs Housing Rights: Pitch Session 2	Inwood Community Tech Board & Agency Partners	September 2020
<u>Políticas públicas para la vivienda digna ante el COVID-19: CDMX-NYC (Spanish)</u>	Organizer: NYC Mayor's Office of the CTO. NYC Mayor's Office to Protect Tenants. Secretaria de Relaciones Exteriores. Gobierno de la Ciudad de México. Congreso de la Ciudad de México	June 2021
<u>Winner of the 2021 IDC Smart Cities North America Awards</u>	Organizer: IDC	October 2021



[^ PHOTO] NYCx Co-Labs Housing Rights Challenge partners from left to right: Nicholas Kraus (NYCEDC), Shanna Crumley (MOCTO), Elizabeth Johnson (HPD), and Oscar Romero (MOCTO) with the 2021 IDC Smart Cities Award, October 2021 /Ayesha Issadeen



PROHIBIDO EL PASO
NO ENTRENAR
NO PASAR
NO EXCEDERSE
NO PASAR
NO PASAR
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