

What does Heat Seek do?

Heat Seek works at the intersection of *innovative technology* and *tenant advocacy* to provide new tools in the fight to maintain affordable housing in New York City. As a non-profit organization, we support the work of tenant lawyers, organizers, and city officials by providing low-cost, web-connected temperature sensors to tenants facing heating abuse and harassment. At the same time, we draw on our tech expertise to conduct analysis of both temperature data and citywide data to provide new ways for advocates to target and reach at-risk tenants.

Why does Heat Seek exist?

Each winter in NYC, there are over 200,000 heat complaints made to 311. 50% of all residential rental buildings register at least one complaint. Unlike other places, most NYC buildings receive heat from a central boiler, and most tenants lack control over the temperature in their apartment. But when the heat goes out, the process for getting it fixed is far from simple. HPD, the city agency that enforces the housing code, is only able to convert about 4% of complaints into verified violations. It's easy for savvy landlords to avoid getting caught during inspections -- once the city notifies that a complaint has been filed, all they have to do is turn up the heat for a few days until they're sure the inspector has come and gone.

What are the laws around heat?

In New York City, the law requires your landlord to provide heat at the following levels during "heat season" (October 1 through May 31):

- From 6 AM to 10 PM: If the outside temperature falls below 55 degrees, the inside temperature must be at least 68 degrees everywhere in your apartment.
- From 10 PM and 6 AM: If the outside temperature falls below 40 degrees, the inside temperature must be at least 55 degrees in your apartment.

How long has Heat Seek been around?

About 2.5 years. They won the NYC BigApps competition in late fall 2014, and formed the nonprofit right after that.

What's a web-connected temperature sensor?

It's a thermometer that connects to the internet.

How does the technology work?

The sensors consist of two units:

- Cell: A printed circuit board with a temperature sensor, XBee radio, and battery pack
- Hub: A Raspberry pi with an XBee radio, 3G modem, and power cord

Cells are installed in apartments throughout a building. Only one apartment also needs a hub, to collect all the readings from the cells and transmit them over the internet via the 3G modem.

How does Heat Seek find tenants and help get their heat restored?

Heat Seek partners with housing lawyers and tenant organizers to make sure they're reaching the tenants who need them the most. When a tenant is having heating issues, Heat Seek goes

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to their apartment and installs a tiny temperature sensor. The temp sensor starts collecting temperature data and sending it to Heat Seek's app, where tenants and their lawyers can view it and download a "heat log" to use as evidence in landlord-tenant negotiations and/or housing court.

How do they know people don't just put them in the freezer?

After the sensor is installed, the installer uses two pieces of tamper proof tape to secure it to the wall. The tape goes between the case and the wall so that it can't be moved or opened without leaving a sticky, holographic residue. Heat Seek also installs sensors in multiple apartments throughout a building. If one reads 20 degrees and all the rest read 70, we know something's up.

What did Heat Seek accomplish this past winter?

This past winter they installed sensors in 26 buildings. 96% of the buildings had a known predatory landlord with a history of forcing out rent-regulated tenants. Heat Seek was able to help in 100% of the cold buildings. They helped tenants get rent abatements in housing court (\$\$ back on your rent), fine landlords \$300k+, and facilitated inspections and emergency repairs. Plus, in a bunch of buildings, as soon as the landlord learned the temperature was being monitored, the heat miraculously came back on.

How come the city doesn't pay for this?

The way the city currently enforces the housing code is antiquated and low-tech. HPD, the city agency that does the bulk of this work, is chronically underfunded, and is at risk of losing up to 70% of it's funding if Trump gets his way. They don't exactly have money for innovative pilots.

What about VC's? I see tech startups raising huge rounds from them all the time.

VC's only invest in for profit companies where they can take an ownership stake. That way if the company does well, they get a return on their investment. Even impact investors who care about social good typically only invest in for profit companies -- profit is still their bottom line. Heat Seek is a nonprofit, which means there are no owners and there isn't any equity we can trade for capital.

So why is Heat Seek a nonprofit?

Heat Seek is a mission driven organization. They build sensors for our neighbors who are most impacted by lack of heat and tenant harassment, and they know that low-income communities are disproportionately impacted by these problems. Many of the tenants they serve cannot afford to purchase a sensor. Heat Seek thinks that centering the needs of low-income users is a pretty new and innovative way of building technology, and they're really proud of that.

Additionally, Heat Seek's work goes beyond simply designing and manufacturing sensors. The sensors and the data logs they produce are important, but only when tenants and their advocates are able to **do** something with the data. Much of Heat Seek's work involves helping advocates understand their data and decide on a path toward using it to make change. Whether

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it's filing a case in housing court, sending a certified letter to a landlord, or holding a press conference in front of the building, Heat Seek is committed to helping our partners use their data to force change.

What will my donation support?

The funds from this campaign will be used to:

- Double the number of cold New Yorkers Heat Seek serves
- Improve Heat Seek's sensor design to be cheaper to produce and even more reliable
- Advocate for new regulations to force the worst landlords to install sensors in their buildings
- Wrap up court cases from this winter that are using Heat Seek's sensor data, and making sure that those tenants aren't back in court next year
- [Read more here](#)

How can I donate?

You can donate online at heatseek.org/donate. Prefer to mail a check? Please send to:

Heat Seek NYC
242 W. 30th St, Suite 806
New York, NY 10001

Who has funded Heat Seek thus far?

Heat Seek has been generously funded by incubators for the past two years, first at Blue Ridge Labs at Robin Hood and then at Beespace, New York City's premier nonprofit incubator.

- New York City:
 - Brooklyn Borough President
 - BigApps prize money
- Tech companies: Microsoft, Google
- Financial institutions
- Individual donors
- Foundations: Civic Hall Labs in partnership with The Robert Wood Johnson Foundation

Why now?

Heat Seek is at a critical moment in its organizational development. Coming off the success of this heat season, the organization is ready to step out on its own. Nonprofits exist on the support of individuals and foundations who believe their work will make the world a better, more equitable place to live. Heat Seek is excited to join the long line of innovative, impactful nonprofits making the world a better place.

Plus, like any good momma bird, Beespace is pushing Heat Seek out of the nest in August to make room for its next cohort.

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