

# An App For Mapping Crime, or Urban Paranoia?

## City Lab

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[HTTPS://WWW.CITYLAB.COM/EQUITY/2019/03/LOCAL-CRIME-APP-CITIZEN-POLICE-911-CALLS-BALTIMORE-DATA/583576/](https://www.citylab.com/equity/2019/03/local-crime-app-citizen-police-911-calls-baltimore-data/583576/)

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**The crime-tracking app Citizen, which recently launched in Baltimore, alerts users to danger nearby. Where some critics see risks, others see a tool for empowerment.**

It is 2:25 p.m. on a Wednesday, and on North Streeper Street in East Baltimore, a worker is threatening to burn down a building. Seven hours earlier and a few blocks north, a woman was assaulted. The day before, in the same neighborhood, a shot was reportedly fired, and a teenager was spotted “with axe” by a 911 caller who said the boy was off his ADHD medication. Last weekend, another woman—or the same one—was assaulted there, too.

I know all this and more not because I’ve reporting from the streets of Maryland’s biggest city but because I’ve been tracking Baltimore for the last few weeks on an app called Citizen. Using police reports, 911 calls, and ambulance dispatches, the public safety app places red dots of varying sizes on a dark, gray-scale Gothamscape. They glow like sirens, indicating where and when and with what intensity things are going wrong. With the tenor of a military video game, Citizen creates an image of a city coursing with widespread dysfunction each day—for free, and in real time.

Citizen was deployed first in the New York City metro area in 2016 and then in San Francisco, before launching last month in Charm City. There’s a big difference between the app’s initial markets—two affluent enclaves that are now enjoying historically low homicide rates—and its third one. Of the 50 biggest U.S. cities, Baltimore reported the highest homicide rate in 2017; nearly 24 percent of its residents live below the federal poverty line. The city, said Citizen founder and CEO Andrew Frame, was specifically chosen in part because of these fearsome stats. “Given the escalating crime and lack of public safety resources, Baltimore was a great place to try something new,” Frame wrote in a blog post.

It also had a very powerful local booster—the former head of the NAACP and the most recent Democratic candidate for governor of Maryland, Ben Jealous. He’s a major investor in Citizen, and the one who invited Frame to come to town.

“I think the app needs to be in every city in the country,” Jealous told me. “What we’re doing is taking a closed information loop that used to only flow to first responders, and including everyone in that loop.”

“It allows people to take greater control of their lives, and to feel fully informed, in real time, of what’s happening around them.”

Not everyone agrees that the current gaps in information are wide enough to be harmful. Detective Jeremy Silbert, a public information officer for the Baltimore Police Department, told me by email that the BPD launched its own free mobile app in 2017, which “allows users to submit tips, locate phone numbers, file police reports, watch our live press conferences,” and more. The city also puts 911 call information online for the public to see, as part of a transparency measure passed by the city council. “Accurate and timely information is a powerful tool for members of the community,” said Silbert.

Jealous agrees, and insists that Citizen will only help on that front. “This really is just an extension of a commitment to transparency that the city has had for a long time and led other cities on,” he said.

But it takes 30 minutes for the city’s 911 site to update, and not everyone is constantly monitoring kludgy municipal crime blotters. Citizen cuts out the wait time, uses a slick smartphone interface, and introduces a layer of human curatorial expertise. “We have a team of analysts reviewing information, making editorial decisions, and issuing real-time notifications,” a Citizen spokesperson told me. “There are roughly 2 million notifications made each day.”

Only a relative handful of them are considered “major incidents” that merit sending push notifications to every user in the city. Over the past month, Citizen sent out an average of 74 of these a day across the three markets, the spokesperson said. They’re like personalized Amber Alerts, for everything from manhole cover fires to attempted stabbings.

Already, in the New York metro area, the app has helped rescue a kidnapped child, find a lost 103-year old, and inform the public about an active shooting at a Jersey City mall. A 4 a.m. Citizen notification informed one man in New York City about the fire in his apartment building, even though no fire alarm went off. When a shooter attacked San Francisco State University last month, Citizen alerted students to the danger before the university’s alert system did, too. (“By the time SFSU acknowledged the shooting incident at 9:09 PM ... Citizen had already sent 15 updates and 5 safety notifications, alerting 9,985 people within a 3-mile radius,” according to Citizen’s blog.) And already in Baltimore, students looked to the app when another shooting rocked Frederick Douglass High School, a day after the app launched there.

“In this moment, [it] allows people to take greater control of their lives, and to feel, for the first time in their lives, fully informed, in real time, of what’s happening around them,” said Jealous. “That empowers people to navigate their day with greater confidence and safety.”

Citizen’s user alerts can cover all manner of urban dangers. (Citizen)

Jealous wasn't always so gung-ho. When Citizen first launched in 2016, it used a very different name: Vigilante. That got it swiftly booted from Apple's App Store, amid fears that, if people were given a tool that showed the location and details of a crime—and especially if that app's name was Vigilante—they might be struck with the urge to fight it. (Never mind that many of the alerts Citizen pushes out seem to be things like car crashes and gas leaks, which are hardly ripe for intervention by wannabe Batmen.) “Crimes in progress should be handled by the NYPD and not a vigilante with a cell phone,” the NYPD said at the time.

“We just weren't going to invest in a company with the old name,” said Jealous.

So Frame gave the app a rebrand, changing its name to Citizen and leaning into its potential for public safety. “Our mission is to ‘Protect the World,’” the Citizen blog now reads. And that was enough for critics like Jealous. “When Frame came back with the new name, yeah, then we were ready to go,” said Jealous.

But the rechristening didn't entirely eliminate concerns about the possible effects the service might have on the communities it reaches. Some of those concerns are shared by other neighborhood-based social apps whose unstated purpose seems to be to make the problems of an area legible, and therefore more solvable.

One of the most widely used of this fleet of crime-spotting platforms is the social networking service Nextdoor. Communities take to its messaging boards to post about babysitting gigs, free couches, surly raccoons, missing cats—it's a space for celebrating, commiserating, and sharing. Nextdoor's insistence on having its members post under real names and addresses makes it less of a vitriolic free-for-all than other social networks. But that hasn't stopped the site from earning a reputation as a platform for propagating un-neighborly racial profiling, with posters taking to the site to alert others about “sketchy characters”—often African American or Latinx—walking past their homes. The site introduced an algorithmic form intended to stop people from posting about “crime and safety that focus on an individual's race and nothing else,” as Buzzfeed News reported in 2017, but the profiling issue has been a challenge to eliminate.

Citizen is different. It displays a more objective set of realities, crowdsourced not from residents but from city safety officials. It doesn't compel law enforcement to police; it just reflects where they're already policing. Its detailed editorial guide, which is being updated frequently, ensures no reports of suspicious people, says a spokesperson for Citizen. They don't post “vague suspect descriptions,” either.

But it can traffic in similar tensions. Though Citizen responders are not able to generate their own alerts, they are encouraged to keep their eyes on the streets, pinged to livestream events as they happen. After each incident pops up, they're given the option to warn friends, share an alert, react with a little “aghast” emoji, or chat—“Don't push him cuz he's close to the edge,” user suebeehoney quipped of the would-be arsonist. Citizen has a full-time content moderator on staff to ensure the chat language is appropriate, a spokesperson said. The company bristles at comparisons to other apps: “Before Citizen, no one has built a safety network that gets people real-time emergency information,” a spokesperson said.

As Jealous says, an app like this can—at its best—complement existing emergency services and empower residents with the information they need to navigate their cities safely. But in doing so, might it also reinforce neighborhood or municipal stereotypes, and further entrench them?

Location-tagging is central to one of Citizen’s objectives—helping people steer around danger. Think of it as Waze, but for urban mayhem.

That’s a particular risk in Baltimore, which has long borne a wide reputation for being dangerous and crime-ridden. And Citizen’s interface might encourage that image. It punctuates the map with blood-red splotches, flattening the content of the alerts: One red dot could be a man exposing himself, an unfounded report of house fire, a woman attacked.

These incidents aren’t the same. But taken together, they form patterns. And seeing the dots cluster in particular neighborhoods can both reflect the reality of an unequal city, and harmfully strip it of context, says Munmun De Choudhury, a professor in the School of Interactive Computing at Georgia Tech who has done research on the relationship between crime and psychological health gleaned from social-media posts. “There are upsides to it, but you also have to weigh that in terms of what it will eventually lead to: It could lead to certain neighborhoods being completely abandoned.”

Other research bolsters this worry. “When people encounter signs of disorder they physically withdraw from those areas, confining their activities to those times and routes perceived as the safest,” write Bruce Doran and Melissa Burgess in the book *Putting Fear of Crime on the Map*. They’re describing Wesley Skogan’s “Disorder and Decline” hypothesis, which expanded on the influential “broken windows” theory that small environmental factors (like broken windows) communicate something about the level of safety of an entire neighborhood; Skogan’s research looked at the psychological effects on residents. Policing strategies that follow the broken-windows approach have been found to disproportionately impact communities of color, while doing little to address the larger problems in a city. The “disorder and decline” hypothesis, however, focuses more on the *fear of crime*. Doran and Burgess argue that perceived risk is almost as powerful as actual risk, and fear alone can have “an atomising effect upon individuals and households.”

Citizen isn’t like tuning in to a police scanner—it doesn’t post all 911 calls or broadcast each and every crime scene. To ensure privacy, for example, suicides at private residences don’t become alerts on the app. And cases of domestic abuse aren’t logged at their exact address, instead tagged at the nearest intersection. However, multiple “woman assaulted by man” posts I saw were associated with a street and building address. In response to a question about why an address was included on one of the posts, a spokesperson for Citizen said “it appears the first call came over as an assault, not as a domestic call. Once we learned it was domestic in nature, we stopped providing additional details.”

Location-tagging is central to one of Citizen’s objectives—helping people steer around things that could put them in danger. Think of it as Waze, but for urban mayhem. Jealous cites an example of a friend in Baltimore who rerouted to miss a robbery they saw reported at their bank, and a flower shop owner who used Citizen to keep her delivery workers driving safe and

efficiently on Valentine's Day, the busiest day of the year. But if reacting to those one-off incidents results in long-term behavioral changes, that might ultimately reduce "the amount of informal social surveillance that occurs naturally with pedestrian activity," as Doran and Burgess write.

When the city started reporting police calls online as part of the transparency measures, a similar fear that real-time reporting could be misleading was raised, according to the *Baltimore Sun*: James Green, the BPD's counsel, pointed out that with 34,000 false burglary alarms triggered in 2011, a screening method would have to be determined "so as not to give residents a false impression of the amount of crime in their neighborhoods."

Robert Rueca, a San Francisco Police Department spokesman, expressed the same concern to KQED months after the app launched in San Francisco. "There's a lot of times that calls are put out there, and it may appear to be one thing, but it ends up being something completely different," he said. When I followed up with SFPD about Rueca's critique, a spokesperson said in an email: "There are no changes or updates to this matter. To my knowledge, SFPD is not involved w/ the App."

"The only thing that actually trumps general fear is specific information."

Citizen updates posts with new information as it becomes available. But the red dots on Citizen's map don't immediately disappear after threats dissipate. While monitoring the app, I saw three-day-old incidents glowing on the map right next to reports from within the hour. (I also saw a few stray dots from 2017 in cities where the app is not officially launched—a glitch in the interface, a spokesperson said.) Citizen also told me that "the last roughly 15 incidents for any service area are populated within the map view on our application. As new incidents occur, older incidents cannot be seen by members of the public."

Still, zooming and panning over Citizen's Baltimore map will give you a landscape of new and old incidents, frozen in mid-mayhem. By Thursday evening, Citizen had not posted a new alert on the worker who threatened to burn down a building, but the original post was still active. Did he follow through? Was he apprehended? Did he run? From my voyeuristic perch in Washington, D.C., I could only Google and wonder, or take Citizen's lack of update as an update in itself.

The other perhaps unintended consequence of Citizen's constant barrage of information is psychological, De Choudhury says. "When people are exposed to a lot of information, and they're living in a context where there are these kinds of incidents, it naturally would have a negative effect," she said. "Because they're constantly immersed."

In a 2014 paper, De Choudhury and two other researchers analyzed half a million Twitter posts in Atlanta, Georgia, at a time when the crime rate there was three times the national average. "Most of the things we were looking at were particularly targeted at the idea that people are constantly exposed to these types of posts of crime on social media," she said, in a different, more personal way than TV or newspaper reports used to. In the short term, they found that

individual crimes did not have an impact on people's emotions. But over a longer term, historical crime did account for heightened negative emotions and anger expressed in the future.

But in Baltimore, having additional information might be less damaging, Jealous says. Here, rather than compound a widespread fear of crime, he's seen the opposite. "The only thing that actually trumps general fear is specific information," he said. "It calms you because you know when you need to worry, and then you also know when you don't need to worry."

Jealous also points out that Citizen can be used to help residents hold police and other authorities to account. This is, after all, the city that is still grappling with the killing of Freddie Gray, a black man who died in police custody after being arrested in 2015, touching off a firestorm of protests. It's the city that, since 2017, has been under a consent decree with the U.S. Department of Justice, which calls for a sweeping set of police reforms, including enhanced civilian oversight and transparency. Citizen, Jealous believes, can be an instrument of that reform.

"On the second day they launched the app in Baltimore, there was a young man who had been mistaken for a murder suspect—living out many men's greatest fear," said Jealous. "This man found himself handcuffed on the ground, with the officer's weapons drawn interrogating him." As he lay there, a Citizen user walked up and started recording the incident on their phone. And the officer's behavior changed.

"When the young man was released, he got up and thanked the Citizen user," he said. "He said that they may have just saved his life."