Tech Policy

How tech firm Shadow sought to revolutionize Democratic campaigns — but stumbled in Iowa

A perfect storm of coding mishaps and human errors hamstrung Shadow's operations at the Iowa caucus

By **Tony Romm**, **Neena Satija** and **Drew Harwell**

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When Democratic operatives unveiled the tech company Shadow last year, its founder characterized it as a secret weapon that would help revolutionize political campaigning for "the progressive movement as a whole."

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But the company's vote-recording app now stands at the center of one of the biggest

Shadow grew from a massive effort by Democrats to give their party newfound digital might, as veterans of Barack Obama's and Hillary Clinton's campaigns pushed to compete with Republican rivals and build a for-profit business from party leaders' tech ambitions and anxieties.

But the software was largely untested, and it proved difficult to use when it was most needed Monday night, according to precinct captains, Democratic officials and tech experts, raising concerns about the technology undergirding American democracy — and prompting pointed questions about why Iowa Democratic Party officials chose it in the first place.

Some congressional staff and computer-science experts even raised doubts for months about whether the app would work. But Democratic brass refused to answer key questions about how it had been vetted and approved.

[*Iowa caucuses 2020 live updates*]

In a series of tweets, Shadow said Tuesday it "sincerely regret[s]" the delays in reporting election results, noting that voting was not compromised. "We will apply the lessons learned in the future, and have already corrected the underlying technology issue," it said. The company did not respond to further requests for comment.

Officials from the Democratic National Committee did not respond to questions about their role in Iowa Democrats' decision to use Shadow. State party leaders also did not explain how the relationship came to be.

A top aide to Sen. Ron Wyden (D-Ore.) said he'd sent three emails before the caucuses to Bob Lord, the chief security officer at the DNC, asking how to get more information on the app. The aide asked not to be identified because he was sharing details of a private conversation. Wyden has long been a leading voice on election security in the Senate.

"In particular," the staffer wrote in the initial email on Jan. 14 that was obtained by The Washington Post, "we'd like to find out if anyone has audited it."

After sending two more emails, Wyden's office never received a response.

democracy]

Shadow originated in a much different app and company. A start-up formerly known as Groundbase endeavored to help Democratic campaigns better find, target and mobilize voters on Election Day.

For many political candidates and campaigns, the appeal was Groundbase's cheap tools for texting supporters — and driving them to donate or vote. By the end of the 2018 election, Groundbase said it had helped "75 progressive organizations and campaigns win," the company's founder, Gerard Niemira, wrote in a blog in January 2019. Its clients included Democrats in Arizona, who spent at least $27,000 on its tools to reach voters by text, federal records show. Build the Wave, a progressive political action committee that sought to mobilize millennials against Trump during the 2018 midterms, similarly took advantage of Groundbase's texting tools.

[Social media was a cesspool of toxic Iowa conspiracy theories last night. It's only going to get worse.]

In January 2019, Groundbase was acquired by an even bigger digital player — a group called Acronym that has emerged as a well-heeled political force on the progressive left, raising major sums from top tech, Hollywood and Wall Street donors.

Founded by longtime Democratic strategist Tara McGowan, Acronym has launched a $75

Obama's campaign manager. And it also has amassed a network of organizations that span the gamut of digital advertising and media. Groundbase was folded into that empire and became Shadow, and Niemira, its founder, served as Acronym's chief technology officer.

"Our goal is to develop a data syncing platform that automatically solves ecosystem problems like this one: getting data where it needs to go when it needs to go there, saving organizers hours of work and reducing the risk of mistakes and lost data," he wrote in a his manifesto, titled the "The Shadow Party," announcing the acquisition.

Yet on Tuesday, Acronym sought to distance itself from Shadow, saying it had no role in the disruptions that delayed Iowa results for nearly 24 hours.

The group also declined to answer questions about its relationship with Iowa Democrats, who spent roughly $60,000 on Shadow, state records show. McGowan's husband, Michael Halle, advises Democratic candidate Pete Buttigieg. The former mayor's campaign paid for Shadow's software for his campaign, Federal Election Commission records show.

"ACRONYM and Shadow are distinct organizations, with separate teams of employees that work on entirely different programs and projects. Accordingly, ACRONYM's team was not involved in the development of the app or Shadow's work with the Iowa Democratic Party on it," Acronym spokesman Kyle Tharp said in a statement.

[Iowa Democrats kept their app secret to prevent hacks. Instead, they got confusion and

Before founding Shadow, <mark>Niemira had worked for nearly a decade at nonprofits in marketing and engineering roles before joining Hillary Clinton's 2016 presidential</mark> campaign, his LinkedIn profile states. He said he helped oversee technical systems as the campaign's director of product, leading teams of consultants and building online tools that could be used to track fundraising, contact voters and coordinate campaign volunteers.

And Niemira long has been outspoken about Democrats' need to update the bug-ridden software the party depends on for storing and analyzing voter data nationwide. Of one years-old system prone to crashes, Niemira told Wired magazine last year, "It was a s--- show from the moment I started."

[*Conservatives spread false claims on Twitter about electoral fraud as Iowans prepare to caucus*]

To developers and tech specialists, Shadow's ambition — to build a secure and foolproof mobile app, called <mark>IowaReporterApp,</mark> for quickly relaying vote results — also seemed doomed from the beginning. The app appears to have been developed in a matter of months and was almost entirely untested. On the day of the caucus, it was used by inexperienced volunteers, many of whom had never tried the app before, across a statewide expanse of community centers and high school gyms.

Jon Green, the precinct chair of the caucus in Lone Tree, Iowa, who works in IT at a

The app was not listed on a typical smartphone app store, so most people needed to bypass security safeguards on their phones to install it. To authenticate it, the app also required users to take a picture of a code on their phone with that same phone, requiring extra steps.

Caucus volunteers, he said, were sent the app only about three weeks ago, after the training sessions for it had already been held, and told they should "play around" with it before the big day began. "It's like you take your 14-year-old and say, instead of driver's ed, 'Here's the keys,'" Green said.

On Monday evening, when he tried to submit his results, the app crashed and blocked him from sending in numbers. Like others, he was forced to call in his results, which took him more than three hours. In his email inbox, he saw more than 150 emails from fellow caucus precinct chairs pleading for technical help.

He said Tuesday that he was deeply frustrated by technical errors he called "entirely foreseeable." He also said the lack of transparency around who had designed the app had made the experience even worse.

"This is our democracy," he said, "and we're just going to farm it out to somebody, then be … cagey about who developed it?"

"telecaucusing."

Doug Jones, a computer scientist at the University of Iowa who has served on the state's board of voting examiners, said the DNC asked him to be part of a "caucus security advisory panel" to help persuade Iowa not to make such a decision, an effort that was successful. But he participated in only one call, declining to continue because he was asked to sign a nondisclosure agreement, prohibiting from discussing what took place.

When he later found out the state party had decided to use a mobile app to report caucus results, he said he was immediately concerned.

"The more I learned about the difficulty of learning more, the more it became obvious that the entire thing was obscure in terms of provenance, in terms of who was in charge, the more worried I got," he said.

Isaac Stanley-Becker in Des Moines and Michelle Ye Hee Lee in Washington contributed to this report.

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