



How to Create Open Source Projects and Get Private Companies to Pay for It

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BY **CHRIS BOUSQUET** • JULY 18, 2018

Here's a sentence that would make most civic tech leaders drool: "Cities are able to build products they need without having to pay for it, and once something is built, any other city can use it at no cost." While this may sound like something from a far-fetched TED Talk or Elon Musk's dream journal, according to Louisville's Data Officer Michael Schnuerle, it's already becoming a reality.

No-cost development and rampant replication are the basis of the **Open Government Coalition (OGC)**, an organization created by Schnuerle. According to him, the coalition spawned from one basic idea: "We did this project with these sponsors for this use case, and maybe it will work for other use cases too."

The process for introducing a project to the OGC goes something like this. A city proposes an idea to other governments, and when it has support and aligns with the OGC tenets, cities seek out a private sector sponsor. This company has some vested interest in the success of the project—often because it's available on a cloud infrastructure cities have to purchase—and funds a developer to build it out. While the projects are often platform agnostic, increased adoption of cloud infrastructure in general is beneficial to vendors. "Because the projects are open source and will benefit multiple cities, there will always be private companies interested in seeing them succeed," Schnuerle explained. The members will then upload the open-source code to the cloud infrastructure, allowing easy replication and integration with their existing cloud programs.

A good open-source project has a couple basic qualities. According to Schnuerle, the first question to ask is “Can you and are you allowed to put all the code in a public place?” Projects created through partnerships with other institutions or ones that include sensitive information may have restrictions on sharing. The other key feature is independence from any specific cloud platform, so that cities with different cloud providers can make use of the code. Other than these basic considerations however, the opportunities for replication are near limitless: “Most projects can be open-sourced,” said Schnuerle.

Schnuerle created the coalition around a preexisting project with Waze in Louisville. Through the 600-partner-strong **Connected Citizens Program** (CCP), Louisville gives Waze the city’s road closure data, and Waze gives the city anonymized traffic information. While Waze’s data sharing agreement precludes Louisville from sharing any of the actual traffic data, the city has produced a number of useful products through the partnership—like APIs and data visualizations—that it has shared with other cities and is integrating into the open source collaborative project.

As Louisville was developing these tools with Waze, Schnuerle saw an opportunity to bring in sponsors and create a coalition of cities. One of Schnuerle’s goals was to create an **open source cloud data processor** that could collect and manipulate the troves of data created via the Waze collaboration to produce insights for the city. Louisville garnered the **interest of 80 governments** and sponsorship and promotion from Waze and Amazon to develop this tool. “Amazon paid a developer to build out all the code,” Schnuerle explained. The tool is built to be cloud agnostic, and currently works out-of-the-box with Amazon AWS, though Microsoft Azure and Google Cloud support is 80 percent of the way there, according to Schnuerle. Many governments are just getting started with building in the cloud, and efforts like this can kickstart this progress.

As Schnuerle saw the high demand for these open-source projects and the interest from sponsors, he decided to create the Open Government Coalition in the winter of 2018 to assemble cities and vendors and create new replicable use cases. Still in its early stages, the OGC has already brought together cities including Denver, New York City, Los Angeles, and Joinville, Brazil, and private companies such as Amazon, Google, Waze, and cloud developer **Slingshot**. The next phase of projects under consideration includes a crowdsourced broadband speed map for the entire nation, an **IFTTT integrator**, a **street quality data collector**, and a toolkit for replicating data visualizations across cities.

During the Waze project, Schnuerle was surprised that an organization like the OGC didn’t already exist. “When we came to the conclusion that we should create the OGC, we figured that there was probably something already out there,” he said. But, there wasn’t any organization that hit all four of the OGC’s pillars: an open-source concept, help from multiple governments, cloud deployment, and fiscal sponsorship from a private company.

What efforts towards replication did exist often failed to be “plug and play,” in Schnuerle’s words. “In a lot of prior efforts, the code hasn’t been well-documented or relies on some custom system that your city may or may not support,” Schnuerle explained. As a result, when Louisville tried to replicate these projects, “we had to basically rewrite the code.”

By creating interoperable projects that meet specific use cases, carefully documenting code, and writing “infrastructure-as-code,” the OGC ensures that its products are replicable in practice, not just in name. A testament to the ease of replicating OGC projects, the Chief Innovation Officer of Anchorage Brendan Babb deployed the data processor developed through the Waze project in 15 minutes from a plane.

The ability to simply fork code from another jurisdiction can save cities tons of time and money, as well as drive innovation by lowering the barriers to entry. “Because it’s so easy and replicable, it almost seems like you’re cheating,” said Schnuerle. The OGC illustrates the real promise of urban analytics, which goes beyond one use case in one city, but rather presents an opportunity to change standard practice in every city, quickly and cheaply.



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