

Columbus Pivot Platform/ Smart Columbus *Columbus, Ohio*



Key Dates and Project Owner

In 2016, the City of Columbus won the first-ever [U.S. Smart City Challenge](#) sponsored by the U.S. Department of Transportation and the Paul G. Allen Philanthropies. The award provided the city with more than \$50 million in seed funding, which it used to establish '[Smart Columbus](#)', a regional Smart City initiative co-led by the City of Columbus and the Columbus Partnership. Since that time, the city has been hard at work defining how a midsize city becomes “smart”, by way of reimagining traditional transportation services.¹ As the most recent step in the region’s smart journey, Smart Columbus launched an integrated trip planner app in 2019, known as [Pivot](#).²

1. Smart Columbus Engaging with the Community³



Geographic Context

¹ <https://smart.columbus.gov/playbook-assets/our-journey/transporting-our-city-to-the-future--five-lessons-learned-since-the-smart-city-challenge>

² <https://pivotcolumbus.com/about>

³ <https://smart.columbus.gov/>

The Pivot app serves the Columbus Metropolitan area, which consists of both urban and suburban communities. Columbus itself is the 14th largest city in the US, and serves as a Midwest hub for many other smaller communities.

Project Goals

The goal of the overarching Smart Columbus initiative is to accelerate human progress through open mobility to drive economic growth, improve quality of life, foster sustainability, and improve safety.⁴

For the Pivot app, the stated project goals are:

- To make it easier for residents to plan and book travel through a variety of service providers⁵
- To help residents and visitors plan and pay for their local trips using one or more transportation options such as [COTA bus](#), ride-hailing, carpool, bikes, scooters, taxis, and even personal vehicles
- To understand equity issues regarding mobility in Columbus, in which people in under-served areas such as Linden (a Columbus opportunity neighborhood) and Easton (an employment and retail district) struggle to find transportation options for first-mile last-mile issues⁶
- To make the region's transportation system more efficient, safer, greener and better at connecting people with jobs

Funding

The initial funding for Smart Columbus and Pivot combined was \$50 million in grants; \$40 million of that amount came from the USDOT and \$10 million came from the Paul G. Allen Family Foundation. \$1.25 million of the total federal funds went towards the development of the Pivot app.

Governance Model

The City of Columbus and the Columbus Partnership established a public-private partnership to manage the Smart Columbus and Pivot projects. The initiatives are also supported by public, private, and academic industries from within the city and around the Columbus region. In this way, the city's role could be classified as 'MaaS Partner'. Find out more about this public sector governance role, and others, on the MaaS Governance Models page.⁷

⁴ <https://smart.columbus.gov/about>

⁵ <https://pivotcolumbus.com/features>

⁶ <https://www.lextant.com/our-work/pivot-app>

⁷ MaaS Governance Models Page

The Smart Columbus team hired Etch, a Columbus-based geospatial solutions startup, to develop Pivot.⁸ Additionally, Smart Columbus hired Pillar Technology (acquired by Accenture in 2018), a local smart-embedded software company, to further develop the existing Smart Columbus operating system that Pivot operates with. This \$15.9 million open-source platform hosts the city's mobility data, including over 2,000 datasets and 209 visualizations, and is integral to the functionality of the Pivot app. While the City of Columbus funded the project through federal grants, development and maintenance of the app is handled by private organizations.

In addition to the technology stakeholders, Ohio State University supports the project through the Mobility Assistance for People with Cognitive Disabilities (MAPCD) Study, which works to support increased independence and autonomy in public transportation, to subsequently improve community access and quality of life.⁹

Overall, public-private partnerships govern the Columbus MaaS Initiative, and the city of Columbus has partnered with over 100 different organizations, including consulting firms, colleges, stores, automobile companies, and healthcare organizations.¹⁰

Project Components

While Smart Columbus has multiple mobility initiatives, the Pivot app specifically has the following components:

- **Integrated trip planner:** the Pivot app is a multi-modal trip-planning application that allows users to book multiple forms of transportation to get to their destination in the most efficient way possible. Modes of transportation include transit, bike-share, scooter-share, ride-share, taxi, and walking. Participating mobility providers in the Pivot app include COTA (Central Ohio Transit Authority), Campus Area Bus Service (CABS), Yellow Cab of Columbus, CoGo, Lime, Bird, Lyft, Uber, and Gohio Commute.
- **Integrated payment:** In their original launch of the app in 2019, Pivot included trip planning features only. The Pivot app now includes an app-to-app payment portal linking from Pivot to partner mobility providers to deliver user a seamless experience using accounts they already have set up with different included mobility providers. In order to pay within the app, users can create a Pivot account

⁸ <https://techcrunch.com/2021/06/28/all-the-tech-that-went-into-turning-columbus-ohio-into-a-smart-city>

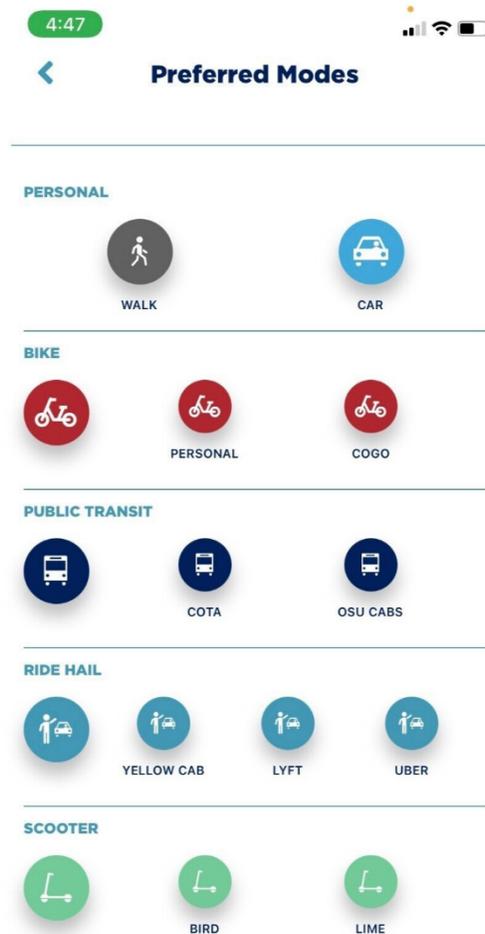
⁹ <https://u.osu.edu/smartcbus/about-us/>

¹⁰ <https://columbuspartnership.com/members>

and link other mobility providers for easy payment processing (such as linking their Uber app or Lyft account).

- **Open-source data:** The app is based on open-source tools like OpenStreetMap and OpenTripPlanner. Etch, the developer of Pivot, uses OpenStreetMap to get up-to-date crowdsourced information from the community about what's happening in a given area (similar to Waze).

2. Home Screen of the Pivot App¹¹



Related Efforts

Related efforts to the Pivot app include:

- **Park Columbus:** Columbus has partnered with ParkMobile, an Atlanta-based provider of smart parking solutions, to alleviate traffic and pollution from cars circling around looking for event parking. As part of the effort, users can find, reserve, and pay for parking on the app.
- **Smart Mobility Hubs:** Smart Mobility Hubs are “interactive digital kiosks designed by [IKE Smart City](https://pivotcolumbus.com), a company that builds media displays to integrate into urban

¹¹ <https://pivotcolumbus.com>

landscapes. The hubs bring the city's transportation options together at a single location, like a physical manifestation of the Pivot app, which can actually also be accessed via the kiosks."¹² The hubs include the city's bike share program, bike racks, designated dockless scooter share and bike share parking, rideshare pickup and drop off zones, car sharing parking, and EV charging stations. They also include free WiFi and a directory of nearby restaurants, shops, and activities.

- **Connected vehicle environment:** Columbus has also teamed up with Siemens in creating Vehicle-to-Infrastructure (V2I) and Vehicle-to-Vehicle (V2V) capable environments. In this, connected vehicles can "talk" to each other and to 85 intersections, seven of which have the highest crash rates in central Ohio-- the project cost about \$11.3 million.¹²

Collectively, these efforts illustrate how a mid-sized city has leveraged grants and private-public partnerships to explore innovative transportation services and to usher in a new era in mobility.

¹² <https://techcrunch.com/2021/06/28/all-the-tech-that-went-into-turning-columbus-ohio-into-a-smart-city/>