

DC Mobility Innovation District - Call for Projects - On-Demand Mobility Service and Supporting Technology

Background on the Mobility Innovation District

The District of Columbia's Mobility Innovation District (MID) is a multi-year project funded by the District's Deputy Mayor's Office of Economic Development (DMPED) to establish the premier global innovation hub for mobility. The MID offers the opportunity to take advantage of the District Government's unique role as a city and state, connect federal and regional policy goals, and deploy local projects to test these goals and improve the mobility of local residents. This will ultimately create a neighborhood economy that improves local residents' quality of life and connectivity while also demonstrating how these policies, programs, and technology can scale regionally and nationally.

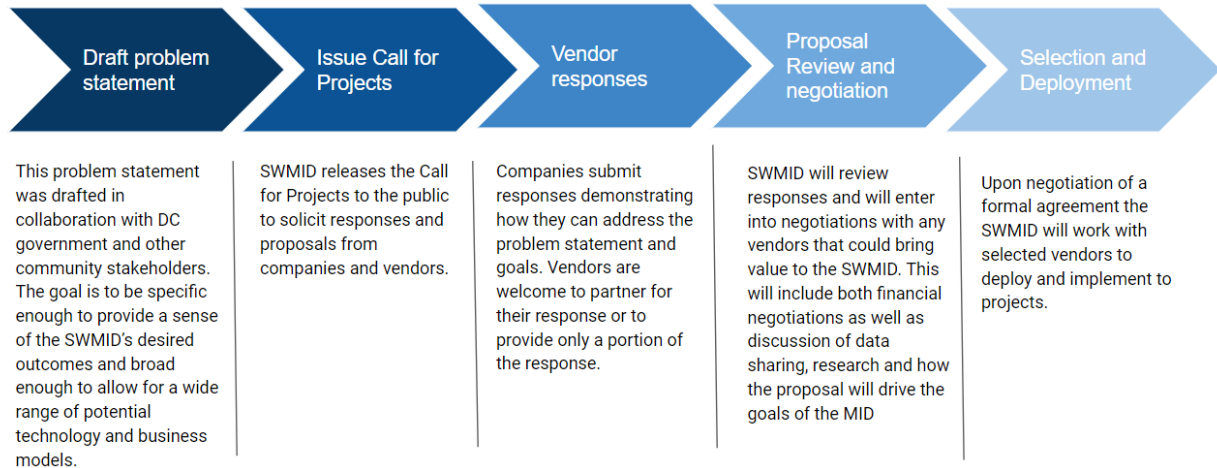
The MID will allow policymakers, private companies, and the local community to demonstrate how mobility innovation can make a city more equitable, sustainable, and prosperous. The MID is both a living lab for entrepreneurs and "Policy R&D" for government with emerging mobility technologies.

Washington, DC is unique for its vast universe of stakeholders. The federal government, industry associations, embassies, think tanks, foundations, media, venture capitalists, entrepreneurs, and virtually every major corporation all have a footprint in DC. The city is a global hub for conferences and major events. In addition, Fortune 500 CEOs, Mayors, State Legislators, Governors, World Leaders, and senior officials from around the world spend time here.

Over the past decade, the southern quadrants of DC have seen tremendous growth and development; combined, Southwest and Capitol Riverfront are now the densest parts of the city and will continue to grow through 2030. These new developments have brought in a mix of housing, entertainment and sporting venues, food and beverage scenes, and ground-floor retail. All of this new development is layered onto an already dynamic urban environment that includes a diverse housing stock, office, and retail, which in turn include or border both on some of the most popular tourist attractions and museums in the world, but also some of the most economically deprived residential areas in the city.

The MID will tap into this set of stakeholders to create a connected ecosystem for solving mobility challenges for DC residents and businesses and turn DC into a hub for innovation in the neighborhood economy.

Overview of the Process



The goal of the Call for Projects is to seek innovative solutions that can improve the mobility ecosystem in the District of Columbia. Where the DCMID feels that proposed solutions fit the established needs, it will contact vendors to formally discuss potential projects and negotiate a contractual agreement. This 'Call for Projects' is not a formal solicitation, and the DCMID is under no obligation to select any of the vendors who respond to this request.

Respondents should know that the MID Program Management team is not naive to the inherent challenges both operationally and financially in the transportation space and wants to provide opportunities that have positive potential impacts for private sector partners (while not necessarily knowing ahead of time if a given technology or service will be deemed "successful" in a pilot implementation). This means a fair deal for everyone involved both financially and in terms of the potential for scalability of successful implementations, both in Washington D.C. or other geographies.

By definition, the MID is focused on "co-creation" opportunities in this testbed with a goal of positive societal outcomes. As such, vendors are welcome to collaborate with other organizations and partners to present a more comprehensive solution or to submit projects that address a part of the overall problem statement. Based on all the submissions received the MID may facilitate collaborations between vendors where we feel that synergies could improve the mobility solution or overall transportation system within the MID.

KEY DATES

Call for Projects Released	7/7/22
Last Day to Submit Questions	7/22/22
DCMID response to Questions	8/5/22
Final Date for Submission of Proposals	8/26/22
Desired Service Launch	11/1/22

Problem Statement

The Southwest quadrant of DC—along with near Southeast neighborhoods—are rapidly becoming the most densely populated parts of the city and will have a population, on their own, equivalent to a mid-size city by 2030. At the same time, the transportation infrastructure in this part of the city is not expected to see any significant upgrade. In other words, now more than ever is a time to find innovative urban transportation solutions in a rapidly changing and densifying part of the District of Columbia.

The need for additional transportation solutions to move people south of the National Mall and connect them with amenities and resources along the Southwest waterfront is demonstrated by the ridership numbers on the [Southwest Shuttle](#), which, at its peak, drew an average monthly ridership of 40,000. The area is currently only served by [three MetroBus routes](#) and [one Circulator route](#). As the southern quadrants of the District see continued skyrocketing development and growth of amenities, the additional demand for transportation resources becomes an ever more pressing situation that requires clever, innovative solutions. It is essential that any transportation solution provides value across multiple types of users, with a special emphasis on low-income communities and access to employment areas, both of which can be found in Southwest and near Southeast. The MID is committed to increasing affordable and high-quality mobility services for all residents.

There are several potential user bases for the service. As there is more development in the area, these groups will likely evolve, and other use cases may emerge. Potential use cases include

- Movement within the neighborhood - Increased ease for residents and visitors to access key points in the southern quadrants of the city.
- Job access - connecting low-income workers with public transit and job opportunities.
- National Mall Connection - For tourists as well as District residents and workers who are looking to move south of the Mall into SW DC.

Mobility Innovation District Goals

- 1) SAFETY - Improve safety in Southwest (and regionally) by reducing vehicular injuries and fatalities in alignment with the city's [Vision Zero goals](#)
- 2) URBAN ENVIRONMENT & NEIGHBORHOOD ECONOMY - Incentivize shared-use transportation instead of single-occupancy vehicles thereby reducing vehicular congestion
- 3) ENVIRONMENT and SUSTAINABILITY - Reduce GHG emissions, air pollution, and noise pollution from congestion and automobile traffic

4) EQUITY - Provide equitable and low-cost mobility options to residents who have limited transportation options due to their income level

Desired Solutions

In order to address the problem statement, goals are listed above. This proposal seeks solutions that could 1) Provide a high-quality demand-responsive mobility service throughout the SWDC quadrant + service to the adjacent Navy Yard. It is anticipated that the service will have the ultimate flexibility to function as a fixed-route at peak, diverted fixed-route off-peak, and on-demand as needed. However, at launch, it may function primarily as demand-responsive. 2) Technology, modeling, and analysis that contribute towards paving a path for autonomous vehicles when they are commercially viable. Respondents are welcome to submit proposals that address both of these solutions or only one.

Though the initial MID pilot was first envisioned as a limited-service, level-4 AV shuttle on 10th St. SW, it was apparent that developing a robust, high-quality mobility solution needed to be the primary goal. As a result, a broader, non-AV service has been conceptualized that would positively impact more people and potentially provide a new service for neighborhood-based transit (vs. arterial, inter-neighborhood). Currently, the Southwest BID contracts a fixed-route bus that successfully serves neighborhoods between the National Mall, L'Enfant Plaza, and the Wharf. Before covid, the shuttle ridership peaked with roughly 40,000 monthly passengers and a 200,000 monthly passenger capacity. There is potential to demonstrate that this service could also be met with next-gen flexible and responsive service.

Mobility Services

Desired Solution: The MID is seeking flexibility to test over time a service that can flex between a *diverted, fixed-route + On-demand service*. The vision is that the service could fluctuate between fixed-route during periods of peak demand and periods of lower demand. The service may operate on a diverted route similar to "micro transit" services where it will go slightly off route to provide more direct service to passengers. Additionally, a demand-responsive service, either served by the same vehicles or supplemental vehicles that can offer direct door-to-door service when needed. The thesis is that all of these elements will combine to provide a high-quality, comprehensive neighborhood-to-neighborhood service. We welcome feedback and alternative ideas on the best way to integrate them into a comprehensive service or other solutions that will provide similar or higher levels of service.

Territory and level of service : ([Map](#)) If successful, it is envisioned that the service will evolve and grow over several months to years as the operator gains more data and the ridership/public awareness grows. The MID has outlined the priority locations to be served by the service. The Priority 1 locations are required for the initial launch phase, but operators are welcome to propose serving additional locations that are covered in Priority areas 2-3 or discuss how the

service can be expanded to these locations immediately or over time. Additionally, the MID will work with the selected operator and DDOT to develop a route and specific pickup/drop-off locations if and when the fixed route is phased in. During peak hours for the Priority 1 stops, it is desired to maintain response times of under 10 min. Respondents should assume 7am to 11pm service hours, 7 days per week for the purposes of operating and cost estimates.

Circuits and routes to consider:

- Primary Route(s)
 - The SW on-demand mobility service is meant to provide a coherent transportation system around Southwest and the adjoining neighborhoods. Therefore, the service area route(s) of the service should focus on a central visitation and residential hub of Southwest: approximately from 9th and Maine SW to 4th and M SW, and emanate from there to significant local destinations.
 - These can be understood in at most three ideas:
 - Connecting East-West: The routing extends to SE DC to the Navy Yard Metro, USDOT, and Nats Park, providing service beyond the DC Circulator and extending further into the neighborhoods along the M Street Corridor.
 - Buzzard Point Extension: The routing extends to traditionally under-served communities South of M Street SW as well as those in the new and upcoming developments further South, as well as connecting Audi Field with the Waterfront Station.
 - Connecting North: The routing extends North to the Smithsonian Museums, the Mall, the International Spy Museum, Museum of the Bible, Artechouse, and the US Holocaust Museum.
- Additional Opportunities
 - Additional Event Service Opportunities: Alleviating overflow demand from events held at the neighborhood's significant event attractions, such as Audi Field, Nats Park, the Anthem, the Wharf, and Arena Stage.

[Map of Priority Locations](#)

- Priority 1
 - Waterfront Station / Greenleaf Gardens
 - The District Wharf
- Priority 2
 - The International Spy Museum / L'Enfant Promenade / District Hilton
 - L'Enfant Metro Station (7th and D SW)
 - The Navy Yard Metro / USDOT
 - Audi Field SW
 - Buzzard Point
- Priority 3
 - Nationals Park
 - Air and Space Museum / Hirshhorn (7th and Independence SW)
 - Arena Stage
 - The Museum of the Bible
 - Citizen M and Hyatt Hotels (5th and E SW)

- Smithsonian Station
- US Holocaust Museum (12th and Independence SW)
- Artechouse and the Mandarin Oriental (12th and Maryland SW)
- I St. SE in Navy Yard (between S. Cap & 2nd SE)

Technology to support a transition to AV

Desired Solution: While the MID welcomes cost-effective solutions that are fully autonomous from the initial launch, we are also realistic and seeking technology and solutions that would help to pave the way for future deployment of AV technology if ultimately desired by city leadership. This could include the use of lidar (either fixed to infrastructure assets or located on vehicles), mapping technology, or the creation of a digital twin that could simulate AV activity within the MID. The MID welcomes any solutions from either company, academic/research institutions, non-profit organizations, or any combination of these.

Information Requested

Applicants are welcome to provide additional information or analysis on their company and /or proposed solution. At a minimum, please respond to the questions as formatted below.

Team/Company Contact: Company name(s), address(es), contact name, contact information

Company background and qualifications: Please provide a brief summary of your company's background and experience and any relevant implementation examples

Proposed Solution: Describe the company/team's interest; vehicle and/or technology offered; overall approach for delivering the product(s) and/or service(s); experience/expertise of company/team; how the technology offered may address the goals and aims expressed in this document

Please include details regarding consumer-facing applications, the technology utilized, and fare collection system, as well as capabilities and strategy for a low-income subsidy to be applied

Financial Support/Business Model: What is your proposed/or preferred business model for this project. (ex. Paid service under a contract from the DCMID, donated services, revenue share agreement, advertising-supported, etc.)

* Please note that there is not one preferred business model for projects, we recognize the cost incurred with operating services and that companies have a wide range of revenue models

A cost-estimate range is appreciated with your submission, ideally by vehicle unit or hour

Partners: Please outline if there are other partners who you are teaming with for this project

Driver Model: (Response not required if only responding to -Technology to support the transition to AV) Provide the staffing strategy for drivers, including drivers' employment arrangement

Regulatory and Permitting: Please provide any known restrictions with operating service under the current regulatory environment in DC. When responding, please provide the citation to DCMR, DC Code, or permit terms and conditions

Physical infrastructure requirements, which may include: Roadway design. Power, if necessary. Charging infrastructure, including charger type, impact on the grid, and frequency of charging. Maintenance and operations facilities, including staging and storage. Any access to roadside assets (please provide size, weight, and power needs)

Data infrastructure requirements, which may include: Mobile device and communications networks, any known interoperability to work with the District's existing application efforts; Data storage; Radio equipment for vehicle-to-infrastructure communication; Communications backhaul (Access to wifi/cellular)

Data-sharing: One of the goals of the MID is to demonstrate how new technologies and services can improve equitable access to mobility, reduce emissions and create a more dynamic urban environment. Please outline how you plan to collect and share data that can help demonstrate success towards these goals

Roles: What does the respondent envision for the roles and/or support needed from the SWBID, District Government, and other project partners

Accessibility: How does the proposed service meet the needs of all community members, including compliance with the Americans with Disabilities Act?

Equity and Mobility: The MID envisions eventually developing a Universal Basic Mobility program that will provide qualified residents with access to a wide range of mobility solutions. How do you envision your pilot assisting with the goal of providing mobility to low-income residents?

Alignment to MID Goals: Please explain how your proposed solution will further the goals of the MID outlined above

RESPONSE SUBMISSION

All responses must be submitted electronically in one PDF file to info@dcmid.org

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**DCMID may elect to hold a call with prospective respondents for Q/A after the 7/22/22 questions submission date.*

The number of project proposals will be reviewed on a rolling basis.

This document does not obligate the SWBID, the District of Columbia, or its agencies to issue a contractual agreement.

If certain portions of your response are considered confidential and proprietary, please mark sections as such and provide a separate redacted copy for sharing electronically with DC agencies. Because the DC government is a partner in this project, we cannot guarantee that the information provided by respondents will not be subject to public release through a Freedom of Information Act (FOIA) request.