



Smart traffic intersections are key to the deployment of autonomous vehicles in urban environments. Low latency allows rapid exchange of data between vehicles, city infrastructure, and pedestrians, including high-bandwidth video. Edge computing resources facilitate real-time computation of positions and trajectories, and collaborative prediction of optimal traffic flows using deep learning techniques.



COSMOS will make extensive use of dark fiber running along the Broadway and Amsterdam Avenue corridors.



The project also provides hands-on STEM training for teachers, students, and West Harlem residents who will be among the first to see and touch technologies still years away from appearing on the market.



The project is led by researchers at Rutgers, Columbia, and NYU—and in partnership with New York City, Silicon Harlem, City College of New York, and University of Arizona. Within Columbia, it is supported by Columbia Engineering, DSI, Columbia University Information Technology, Facilities and Operations, and the Office of Government and Community Affairs.

Together with an industry consortium, NSF will invest a total of **\$100 million** in the next seven years to build four wireless testbeds around the country. Through COSMOS, New York is currently one of only two cities to receive funding (Salt Lake City is the other).

