

CITYWIDE DIGITAL INFRASTRUCTURE



Urban Connectivity

Urban connectivity refers to the collective set of technologies that can collect data and provide communication to infrastructure, mobility devices, and people. Data collected can be used to analyze performance on mobility-related metrics such as traffic speed, curbside usage, and air quality. By gathering data on how pedestrians, cyclists, and motorists move, San Diego can better understand what is happening on local roads which can then help the City improve infrastructure and operations practices. This information can inform policies and plans that aim to improve the overall experience for everyone in the City. A network of connected technology that ensures personal privacy protection, can further help to advance the City's goals related to enhancing mobility options for all, increasing efficient and safe circulation, and reducing greenhouse gas emissions.



*Futuristic Urban Connectivity Concept
Source: Geospatial Commission*

PROGRAM HIGHLIGHTS



Estimated Initiation Timeframe

3-5 years



Implementation Cost

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Potential Funding Sources

- » General Fund
- » Federal, state, and regional grants



Leading Department

Transportation Department

Collaborating Entities

Other City departments, partner agencies, public-private partnerships



Relevance to Mobility Master Plan Goals

Goals 1, 3, 4, 5, 8, 9

Relevance to Climate Action Plan

Actions 3.4b, 3.4 SA-2, 3.6a



Incorporating Community Engagement

The community identified sidewalk and bikeway improvements and traffic calming measures as priorities to improve safety. Urban connectivity provides information about traffic and infrastructure conditions that can inform policies and plans to address safety challenges.

PROGRAM IN ACTION

In 2016 the City of Chicago, IL launched the Array of Things (AoT) initiative, an urban connectivity project that installed a network of interactive, modular sensor boxes across the city to collect real-time data on the environment, infrastructure, and activity for research and public use. AoT builds privacy protection into the design of the sensors to minimize collection of personal data. Since these sensors were installed, data has been used to assess the safety of at-grade rail crossings, assess pedestrian crosswalk usage, and detect flooding along the Chicago River. More information can be found at: <https://arrayofthings.github.io/>



*Installing AoT sensors, Chicago
Source: University of Chicago, 2016*