

Innovation in Urban Transportation

USDN and CNCA step up investments in sustainable transportation

It can be difficult for sustainability directors to tackle transformation in the transportation sector, but they are doing it anyway. See what knowledge gaps they are closing to support the shift to low-carbon urban transit.



Figure 1: SUMC website

USDN's Innovation Fund Invests in Shared Mobility

The USDN Innovation Fund invested in two phases of development for creation of a [shared mobility toolkit](#). Three projects were completed in 2016 and this investment was made because, at the time, cities needed a clearinghouse resource for collecting, measuring, and validating shared use mobility (SUM) impacts. They needed consistent evaluation methods means and access to lessons from their peers. The cities used the investment to create a shared mobility scan and toolkit. Since then, the toolkit has been used to support these city efforts:

- Finalizing bikeshare program design in Portland OR
- Piloting a low-income electric vehicle carsharing program in Los Angeles CA
- Creating transit meeting materials in Victoria BC
- Analyzing a one-way carshare program in Seattle WA
- Supporting sustainability planning efforts in Palo Alto CA
- Planning to expand a bikeshare Zipcar partnership in Houston TX
- Prioritizing transit system investments in Denver CO

In addition to funding toolkit development, Technical Assistance was also provided to teach cities how to apply the toolkit to real-life situations. Seattle explored Mobility Hubs, while Los Angeles explored opportunities for expanding the electric carshare pilot project. Minneapolis used the toolkit as the backdrop for their Mobility Action Plan. The website is being used by cities participating in the Federal Transit Administration (FTA) Mobility on Demand Sandbox program, and the Shared Use Mobility Center (SUMC) continues to maintain it.

Innovations in Urban Transportation

CNCA's Innovation Fund Transportation Investments

The Carbon Neutral Cities Alliance (CNCA) has been actively investing in transit system transformation since 2015. Three products were released in 2016, and one project is still underway.

Upscaling Green Vehicles and the Scandinavian Green Procurement Alliance

The Scandinavian Green Public Procurement Alliance was created in 2016, when the cities of Copenhagen, Stockholm, and Oslo were awarded a grant to assess Non-Road Mobile Machinery (NRMM) fleet procurement. Over the course of the grant, lessons have been learned about how different each city is in what equipment they have and how they procure it. In 2018, a baseline study will be released that determines the impact green fleet procurement has on city emissions.

This alliance emerged from a previous CNCA Innovation Fund award to Copenhagen to promote green vehicles” in northern Europe. The [synthesis report](#) highlights the key observations, exchanges, and recommendations identified over a two-day workshop. The workshop paved the way towards more collaboration between CNCA cities, car industry companies, energy companies, interest groups, and mobility operators with a clear interest in promoting green vehicles.

The Impacts of Deep Carbon Reductions in the Transport Sector on Affordability and Displacement

Portland OR addressed issues of displacement and gentrification when they researched issues of displacement and gentrification related to development of a future bus-rapid transit (BRT) line through the eastern part of the city. At the regional level, model results comparing a 2015 base year to a scenario that included the BRT investment showed no significant change in the carbon impacts. Given the results from this process, Portland learned that it is difficult and complicated to assess the carbon emission impact of one isolated project. The BRT project is part of a broader transit system. Assessing carbon emissions impact in relation to household movement is probably best studied at the regional scale rather than at a project scale. A summary of household research in Portland’s Powell-Division Corridor was produced, along with a transit-oriented development and gentrification literature review, a rental properties typology report, a memo on population change, and an emissions summary ([here](#)).

A Blueprint for Development Approval of Hydrogen Re-fueling Stations



Sydney received a CNCA grant to produce a [hydrogen refueling blueprint](#) document. The Blueprint project successfully established a flexible guideline tool to assist project developers and municipalities in the Development Approval of Hydrogen Refueling Stations. Designed in alignment with global best practice, the activity has benefited significantly from direct interaction with other municipalities, government agencies and industry practitioners, through the round of case study visits conducted in Japan (August 2015), Europe (October 2015), and North America (December 2015).

The Blueprint describes the roles and responsibilities of stakeholders, as well as the detailed process describing all the key activities to be undertaken at each stage of the licensing and permitting process. There are detailed activity checklists for both HRS Developers and Planning Authorities. Appendices provide project developers with a comprehensive knowledge base on technologies, standards and regulations. Case studies of hydrogen refueling stations in Europe, Japan and the United States are included.

Figure 2: Blueprint