MODaaS
Committee on Mobility on Demand and as a Service

e-NEWSLETTER

In This Issue

Our Mission:

The ASCE Committee on Mobility on Demand and as a Service (MODaaS) e-Newsletter aims to highlight and recognize the research and activities of the members and friends of the committee.

Our committee was formed in November 2020 and focuses on:

- Setting the standard for how MaaS projects are evaluated
- MOD/MaaS's role in reviving public transportation
- Equity implications of emerging mobility options
- Other topics

If you are interested in joining or participating in the MODaaS Committee, please contact our chair:

Louis.Alcorn@wsp.com

MOD/MaaS Development in China

Professor Xianglong Liu, China Academy of Transportation Sciences, Ministry of Transport (MOT)

In recent years, the integration of internet technology and transportation have profoundly changed travel patterns. Shared mobility and electronic payment have developed rapidly in China. By the end of 2020, car-hailing has covered more than 300 cities, with average ridership exceeding 20 million daily orders, and more than 50 car-sharing companies with over 200,000 vehicles in operation. Dockless shared bicycles operate in more than 360 cities, with 19.45 million bicycles and an average 45.7 million daily trips. In addition, more than 3,000 customized bus lines operated in more than 50 national public transit metropolis pilot cities. Within China, users within 303 cities have used interconnected IC payment cards to take public transportation in these cities. In terms of inter-city travel, China's high-speed rail, civil aviation, and inter-city buses systems have all realized the national networked electronic ticket service as well. Although MaaS development in China is at the early stage, it has shown a vigorous trend. At present, four development forms have been formed, as follows:

Type 1: Navigation-based internet mobility service platform (Nationwide)

National electronic map navigation service companies, such as Baidu Map\AutoNavi, rely on their huge registered user base (more than 400M) to gradually integrate various transportation resources such as bus, subway, tram, car-hailing, and shared bicycles to provide travel services for passengers.

Type 2: Single-mode national e-ticket service platform (Nationwide)

National railway and civil aviation companies, both relying on their nationwide service network, have established an electronic ticket and travel information service system that allows users to purchase multi-modal tickets via the mobile phone QR codes or virtual ID cards. For intercity bus services, the MOT has built the interconnected Ticketing Service Platform. Finally, the China Urban Rail Transit Association has established the "Urban Rail Easy" travel service platform for the nationwide subway system to provide services for passengers to travel by subway across cities.

Type 3: Integrated mobility service platform among Urban agglomeration (regional level)

There are several urban agglomerations in China, such as the Guangdong-Hong Kong-Macao Greater Bay Area, the Yangtze River Delta, Beijing-Tianjin-Hebei, and Chengdu-Chongqing. Cities in these areas have relatively high frequency of economic activities and strong demand for mobility. These areas are carrying out the integration of various transportation service methods. Overall, in addition to public transportation, the integration of other transport modes is still in the research process.

Type 4: Urban integrated mobility service platform (city-level)

China's economically developed cities, such as Beijing, Shanghai, Guangzhou, Shenzhen, Suzhou, and Hangzhou, all have been launching the MaaS system. Beijing has launched the MaaS Mobility for Green City Initiative (depicted here), which integrates the services of buses, subways, suburban railways, car-hailing, shared bicycles, and parking through a single MaaS platform. This public-private-partnership, in addition to mobility services, establishes a mobility carbon credit tracking evaluation and transaction system to encourage users to adopt greener transportation choices through incentives as well as a carbon trading marketplace. Since September 2020, the cumulative number of users has reached more than 30 million with a cumulative CER (carbon emission reduction) of more than 50,000 tons. In September 2021, during the second United Nations Sustainable Transport Conference hosted by China, the Beijing MaaS platform completed its first transaction of 15,000 tons of CER with a high-energy-consuming local enterprise, with a transaction amount of 750,000 yuan.

Beijing MaaS Mobility for Green City Initiative
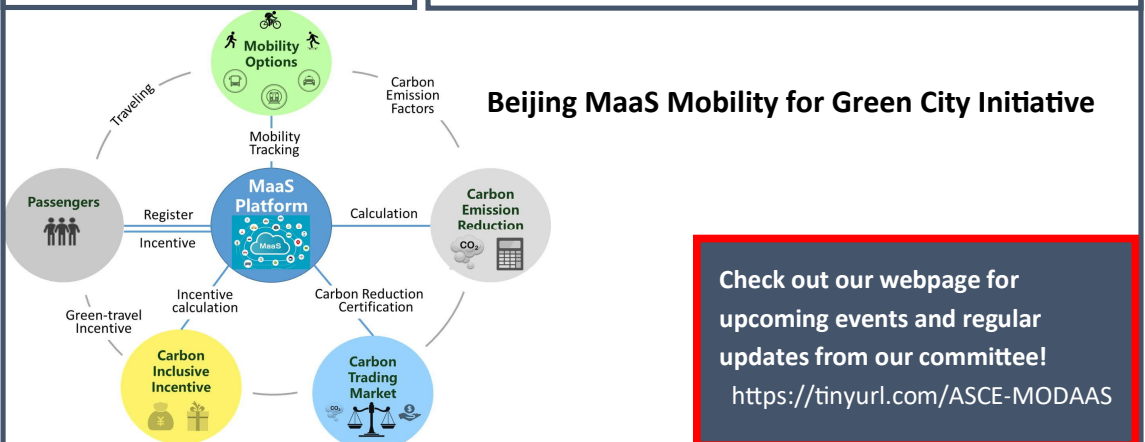
Check out our webpage for upcoming events and regular updates from our committee!
https://tinyurl.com/ASCE-MODAAS

Microtransit Spotlight

Microtransit: On-demand routing of vehicles and their role in reviving public transit

Emily Gates
Transit app

Microtransit is a form of demand responsive transit featuring minibuses that run on a flexible route or schedule, run by transit agencies or private companies through permitting with cities. Transit agencies are running more services that utilize microtransit technology to access more places that are typically considered transit deserts, or replace fixed route services that are no longer sustainable with a typical 40-foot bus.

Agencies are asking for microtransit to be integrated into their networks, and looking for ways to create connections between these flexible routes and offerings, and their pre-existing fixed route services. As a MaaS app, Transit began integrating these services in 2017, bringing microtransit options into the app riders are already using to plan their fixed-route trips. Transit has launched integrations across North America with leading on-demand providers, including Spare Labs, RideCo, Via, and Padam, and is advancing a new industry data standard to promote microtransit. Transit's trip planner automatically displays trips that connect on-demand service with fixed-route transit, so riders can see firsthand how microtransit extends the reach and flexibility of an agency's entire transit network.

In response to the pandemic, Edmonton Transit Service (ETS) implemented a major redesign of its bus network. As part of the change ETS launched a new microtransit service, Edmonton On Demand Transit, in partnership with Via. ETS educated riders about the new network and on-demand service and promoted Transit for riders to plan multimodal trips with the agency's new service, Edmonton On Demand Transit. In the first two weeks after the launch, the service was viewed 900,000 times in Transit, with more than 5,100 taps from users to learn more about it, view trip plans, and download the Edmonton On Demand app for the first time.

In the past year, dozens of agencies have begun pilot programs with microtransit companies, and many more contracts are on the horizon for this emerging mobility option as a way to Build Back Better for public transportation.
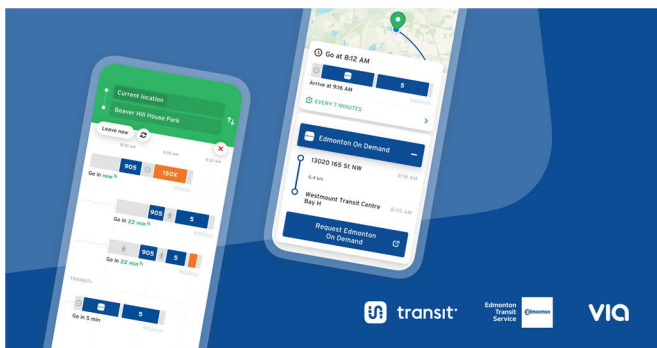
Perspectives of Micromobility

77% of Lime riders said that having multiple options available in the Lime app, including scooters, bicycles, and mopeds, allowed them to use a car less often.

30% of Lime's scooter and bicycle trips connect to or from public transit

Lime's partnerships with Google Maps, Uber, CityMapper, and other transit apps make Lime accessible to millions more users around the globe. These apps show both transit and Lime vehicles, nudging people to take micromobility rides for short trips instead of ridehailing or personal vehicles.

Conferences and Meetings

- ASCE T&DI MODaaS Committee Workshop *Role of MoD & MaaS in Reviving Public Transportation,* March 16, 2022, 4-5 pm EST, Online

- ASCE T&DI MODaaS Committee Workshop *Setting the Standard for How MaaS Projects Are Evaluated,* April 12, 2022 , 4-5:30pm EST, Online

- ITS European Congress, May 30-June 1, 2022, Toulouse, France

- Micromobility Europe, June 1-2, 2022, Amsterdam, Netherlands

- ASCE International Conference on Transportation & Development (ICTD), May 31-June 3, 2022, Seattle, WA, USA

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The MODaaS e-Newsletter is looking to expand! Please contact us if you have anything you would like to share in an upcoming issue. Subjects may include, but are not limited to, the following:

- *Interesting research projects you have been undertaking (recently completed or ongoing);*

- *Announcements on upcoming conferences, workshops, etc.*