Developing Data Acumen
What Cities Need to Know about Data

Data will fuel new mobility. Smart phones, retail, TNCs, bus and transit occupant counters, smart infrastructure and more generate massive amounts of valuable data. This will only escalate with the arrival of connected and automated vehicles. Data can drive innovations in safety, traffic and asset management, transit and freight, and generate new revenue. As cities develop policies for data management, use, sharing, and governance, city planners and innovation offices need become acquainted with six key areas.

Data Standards

Standardizing data formats is key to capturing the full benefits of mobility data. For some time, we have had effective standards for transit and bikes such as the General Transit Feed Specification and General Bikeshare Feed Specification. These define a common format for real-time information sharing between multiple public and private parties. Progress is being made on some standards, but work remains to be done on others.

Privacy and Data Security

Mobility data can contain personally identifiable information (PII) such as age, ethnicity, routines or addresses for home, work, friends, and loved ones. Such information can be sensitive and personal in nature or even susceptible to misuse. Cities should understand how PII can be protected or how its collection can be prevented in the first place. The later approach is known as "privacy by design."

Data Licensing and Ownership

Mobility as fuel for growth, data has value to those who have access to it. Cities should understand their access to and ownership of data under law and via contracts and other agreements.

Open Records and Law Enforcement

Mobility data can be extremely useful for research, management, and other appropriate goals. But it can also be misused. Cities must develop clear and well publicized policies that govern the sharing of data publicly, with secondary researchers, or with law enforcement. Care should be taken to avoid unintentionally providing data that could be deanonymized or disaggregated.

User Trust and Consent

Cities and planners should be mindful user and stakeholder trust. New mobility will bring benefits and changes quickly and in ways the average citizen may not expect. Cities and planners should examine current best practices on genuine consent and privacy. They should also define permissible and disallowed uses for data.

Storage, Management, and Retention

Key to data protection are the policies governing its storage, management, and retention. Data is not protected if it is not protected at every stage of storage and use. Cities should develop clear policies for public and private data retention including: length of storage, storage format, aggregation, and deletion.

Data Verification

The value of data is tied to its accuracy and reliability. It can provide significant value directing allocation of resources and creating new capabilities for mobility systems if trustworthy. Cities need to establish ways to verify data through audits and other means.