Squeezing the best out of mobility data collaboration

Urbanism Next Europe – June 10, 2021

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What is NUMO?

NUMO is **a global alliance** that channels **tech-based disruptions** in urban transport to create **joyful cities** where **sustainable & just** mobility is the **new normal**.

We are a non-profit organisation housed at:

WORLD RESOURCES INSTITUTE

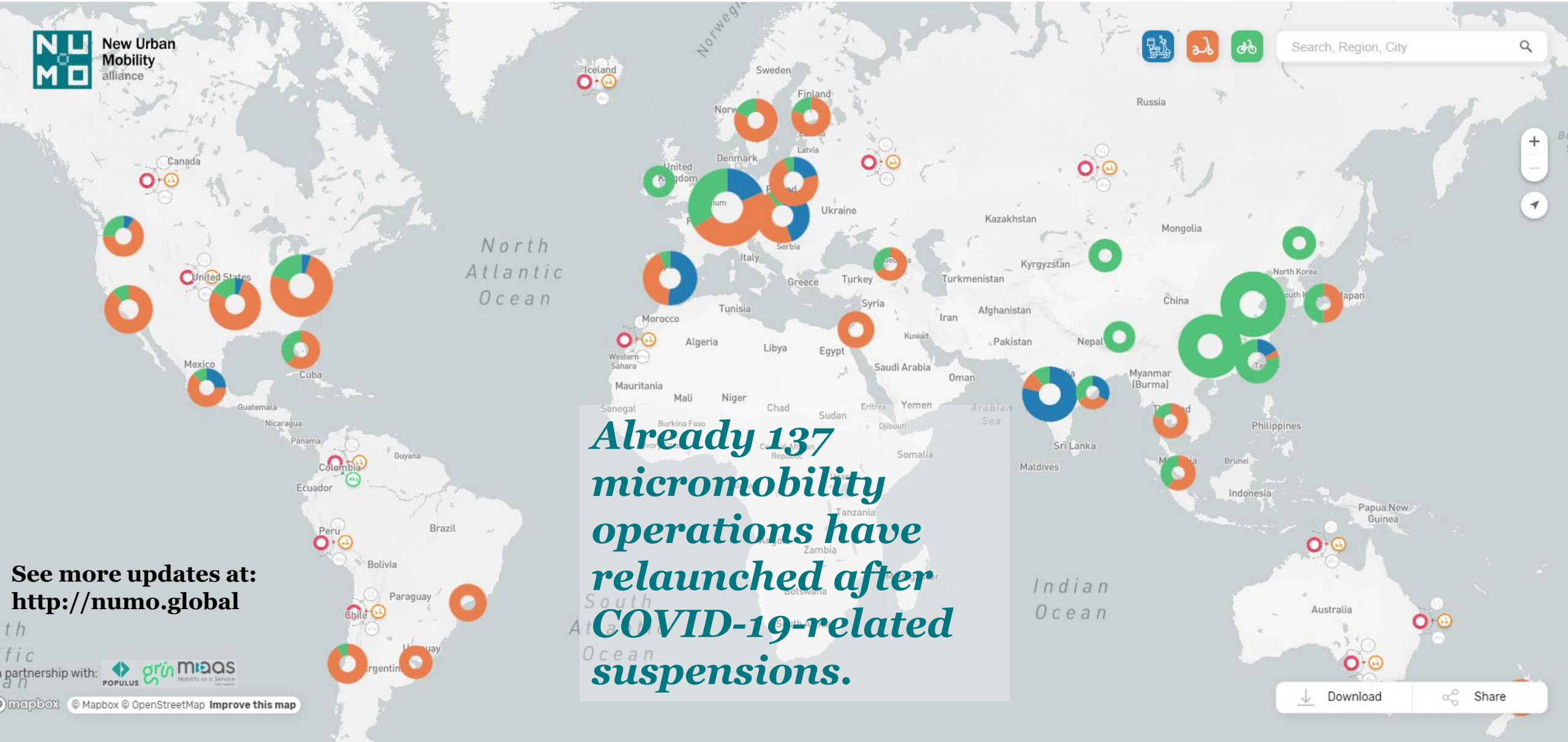
Join us!

Shared Mobility Principles for Livable Cities

10 guiding principles produced by a working group of NGOs, endorsed by 157 cities, advisors, companies, and community advocates designed to guide urban decision-makers toward the best outcomes *for all*.

1. We plan our cities and their mobility together.
2. We prioritize people over vehicles.
3. We support the shared and efficient use of vehicles, lanes, curbs and land.
4. We engage with stakeholders.
5. We promote equity.
6. We lead the transition towards a zero-emission future and renewable energy.
7. We support fair user fees across all modes.
8. We aim for public benefits via open data.
9. We work towards integration and seamless connectivity.
10. We support that autonomous vehicles in dense urban areas should be operated only in shared fleets.

In less than three years, micromobility services have been deployed in over 500 cities worldwide.



Already 137 micromobility operations have relaunched after COVID-19-related suspensions.

See more updates at: http://numo.global

partnership with: POPULUS grin MaaS

Still, many questions remain regarding how these (and future) new modes can help or hinder city goals

Equity

Are these new modes improving equitable access to everyone?

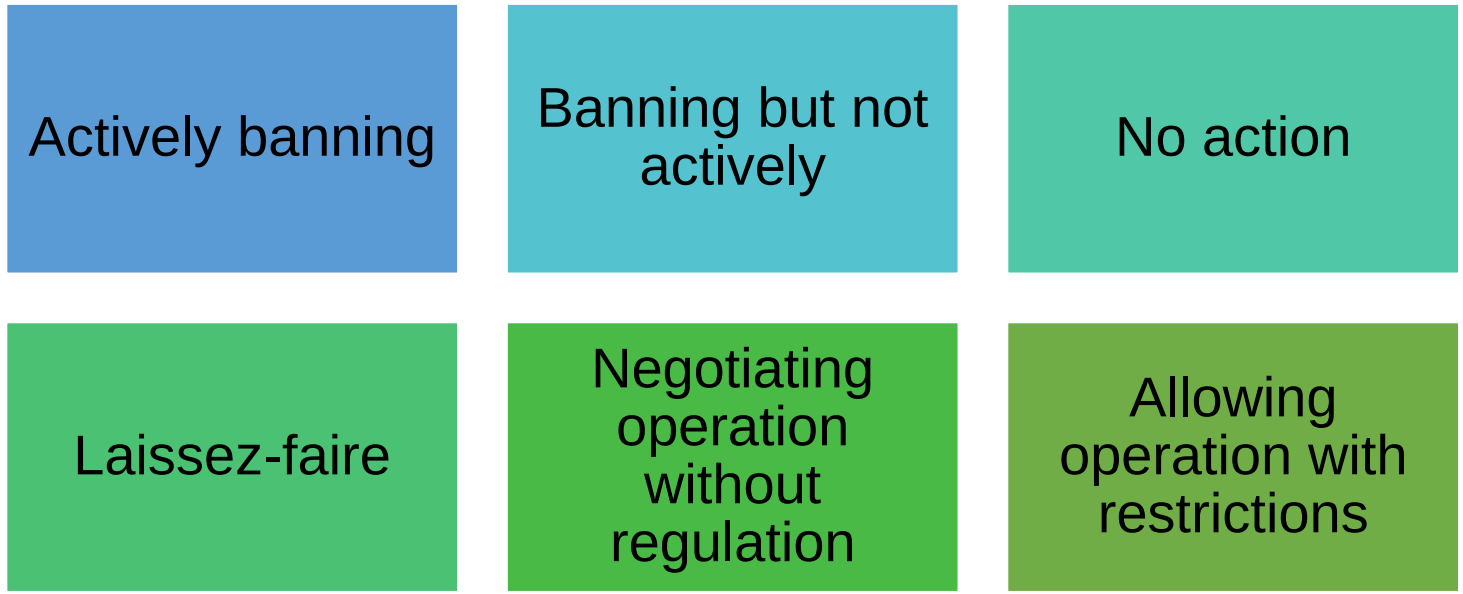
Safety

Are these new modes safe for residents, riders and pedestrians?

Environment

Are these new modes good or bad for the environment?

The range of policy responses has been diverse, and sometimes contradictory



- All of these approaches have advantages and disadvantages.
- We looked at over 100 regulations worldwide to see if there was something we could learn.

Regardless of the way they are regulating, most cities analyzed have adopted some sort of requirement on data sharing (70%)

You can review the data we collected here: https://learn.sharedusemobilitycenter.org/atlas

However, which data are useful, and which are not? Does it make sense for cities to just request everything?

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US cities are joining forces to figure out what the hell to do with all these scooters

After being caught flat-footed, cities are pushing back against scooter companies

By Andrew J. Hawkins | @andyjayhawk | Jun 25, 2019, 8:00am EDT

SHARE

The ACLU is suing Los Angeles over its controversial scooter tracking system

MDS, or Mobility Data Specification, is used by LADOT to track all of the city's electric scooters

By Andrew J. Hawkins | @andyjayhawk | Jun 8, 2020, 5:28pm EDT

SHARE

Cities are held to a higher standard, and therefore must juggle multiple considerations

Expectation (e.g. privacy)

- Would citizens expect their government to have access to sensitive information? E.g. what would a car driver think?

Capacity

- Do governments have the capacity to use all these data? Do governments have a clear understanding of how they will be using it?

Legality

- Is there precedent for governments to have access to these data?

We worked with cities, micromobility companies, data brokers and other NGOs to identify how and what data is actually useful to cities

We defined *use cases* for micromobility data that connect policy goals with data needs.

While city goals around the world can be very diverse, the group identified 3 high level goals that encompass the most basic ones that cities are pursuing

Equity

Access to Necessities for every community resident.

Safety

Ensuring streets are safe for residents, riders and pedestrians.

Environment

Putting the environmental impact of vehicles and services in the public purview.

And for each high-level goal, we identified more specific objectives that apply to shared mobility services

Access to Necessities

Increase access, convenience and reliability to fundamental daily necessities that improve social mobility and quality of life, especially for underserved communities.

Equity

Access to Platforms

Increase the ability for all users, especially in underserved communities, to get timely and accurate information, afford and easily access, and understand how to use micromobility services.

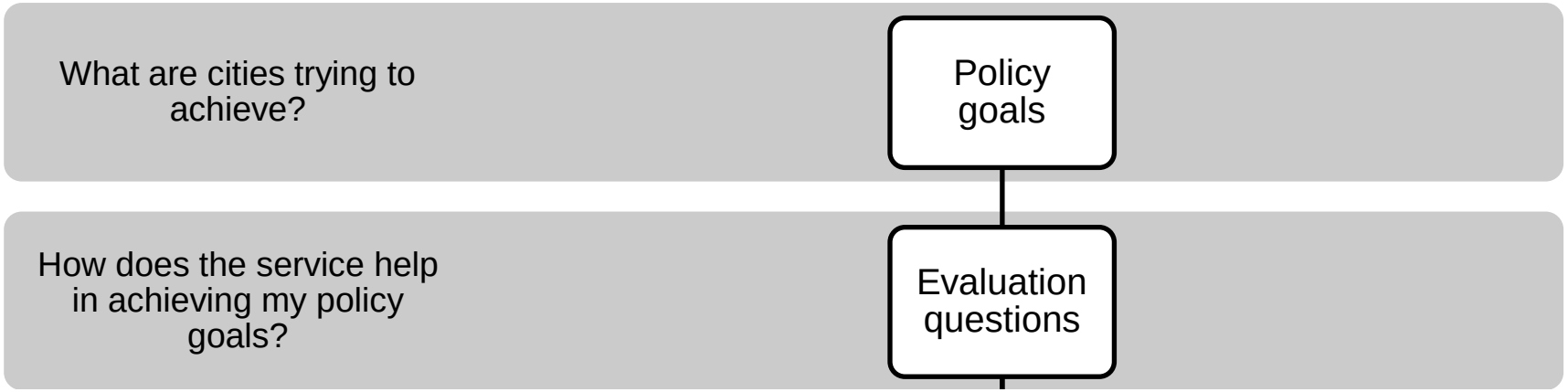
Equity

Access to Vehicles

Anyone, anywhere can find and access an available micromobility vehicle within a x-minute walk.

Equity

For each goal, we then created a set of questions that can help cities get a better sense of how these services are helping or hindering their goals



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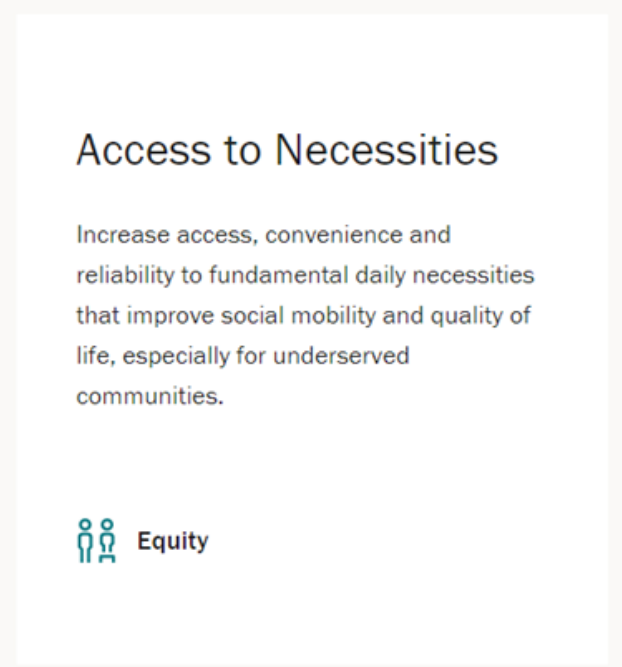
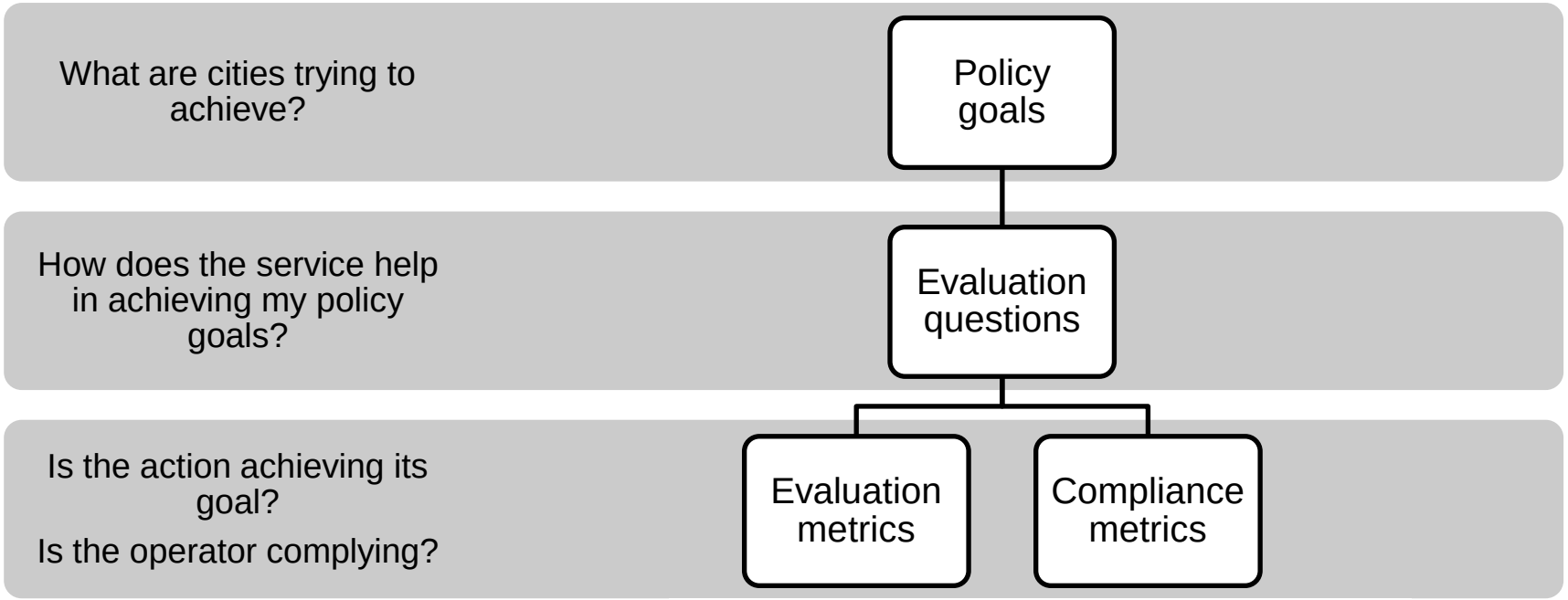


01	Does this service increase access to necessities in the community?
02	Is this service being used to increase access to necessities in the community?
03	How is this service integrating into the transit network?
04	Are there more, new trips added in underserved neighborhoods?

For each question, we then defined metrics to evaluate progress



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02

Is this service being used to increase access to necessities in the community?

Evaluation Metrics ↘ | Equity Metrics →

Evaluation Metrics

Trip use case survey answers

View Data Required

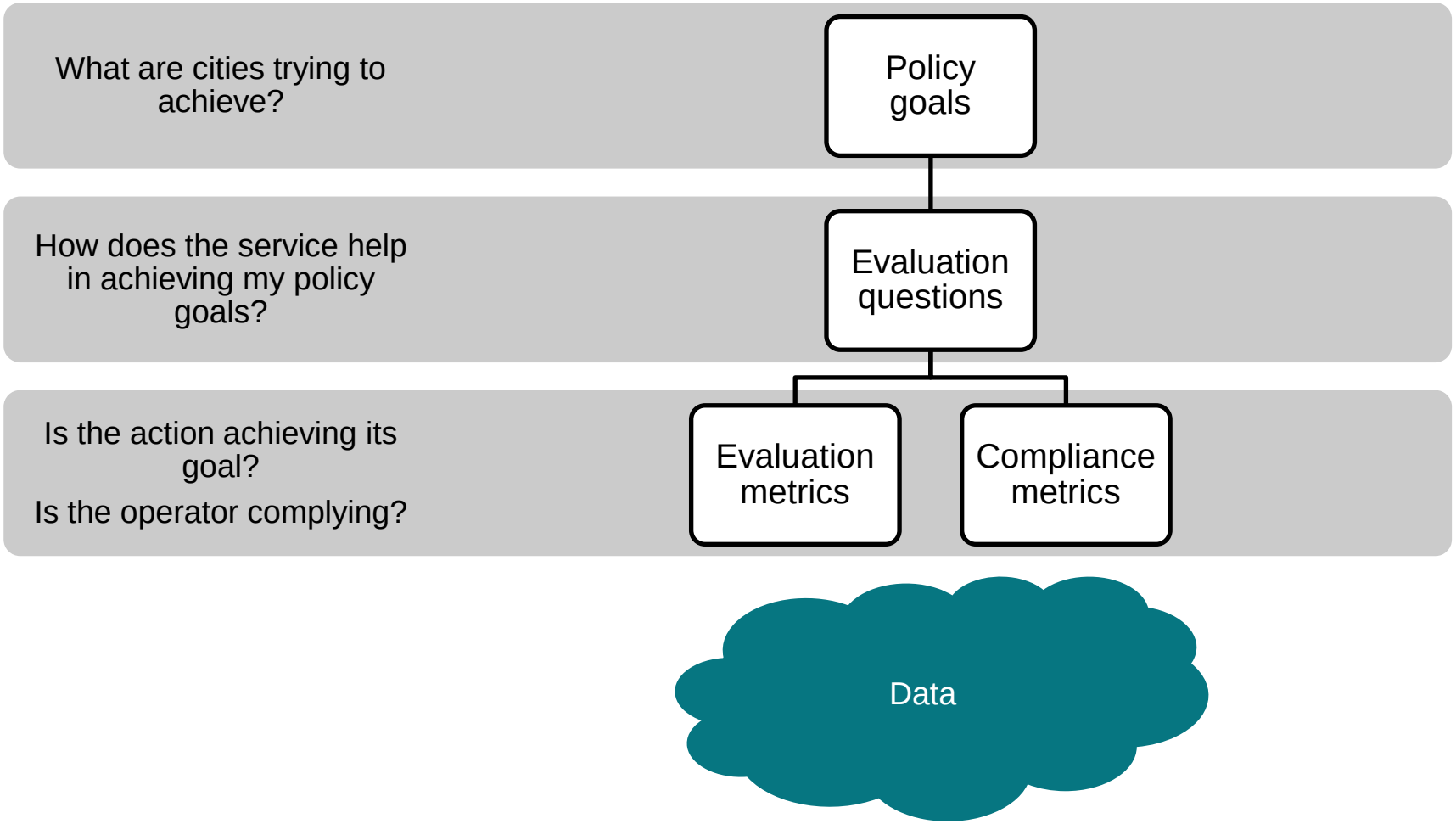
Percentage of trips that start or end at education, healthcare, grocery store, and other community necessities

View Data Required

Trips originating and terminating in underserved areas (total trips + trips per 10,000ppl)

View Data Required

And finally, we identified the data sources required to evaluate each metric



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“route” start

The start location of an individual trip.

Source Mobility Data Specification

“route” end

The end location of an individual trip.

Source Mobility Data Specification

Service area spatial file

A spatial file containing the geographic boundaries where companies may operate in a jurisdiction.

Source City Open Data

Healthcare locations spatial file

A spatial file containing all the locations of healthcare facilities in a jurisdiction.

Source City Open Data

Grocery stores locations spatial file

A spatial file containing all the locations of grocery stores in a jurisdiction.

Source City Open Data

Government facilities locations spatial file

A spatial file containing all the locations of government institutions in a jurisdiction.

Source City Open Data

These use cases are meant to help cities that are currently creating new regulations for any new mobility service

Bogotá

Detroit

See all our use cases at:

https://policydata.numo.global/

Thank you!

Join us in creating **joyful cities** where **sustainable** & **just** mobility is the **new normal**