Sharing Public Transit Data, Now and in the Future

TCRP J-11/ Task 31 Interim Presentation

Cecilia Viggiano, cviggiano@edrgroup.com

July 11, 2019

TRANSIT COOPERATIVE RESEARCH PROGRAM

Sponsored by the Federal Transit Administration, the Transit Cooperative Research Program (TCRP) serves as one of the principal means by which the public transportation industry can develop innovative near-term solutions to meet demands placed on it. The TCRP has an established reputation for providing useful reports and other tools to help public transportation practitioners solve problems and inform decision makers.

Agenda

- Why share data? (And why not?)
- How do you share data?
- How do you get data?
- Initial Guidance

Why share data? (And why not?)

Evaluating Data Sharing

Benefits

- Innovation & Research
- Transparency & Increased Awareness
- Cost Savings
- Data Reciprocity
- Monetary Gain
- Customer Benefits

Risks

- Privacy
- Security
- Misuse
- Strategic Risks

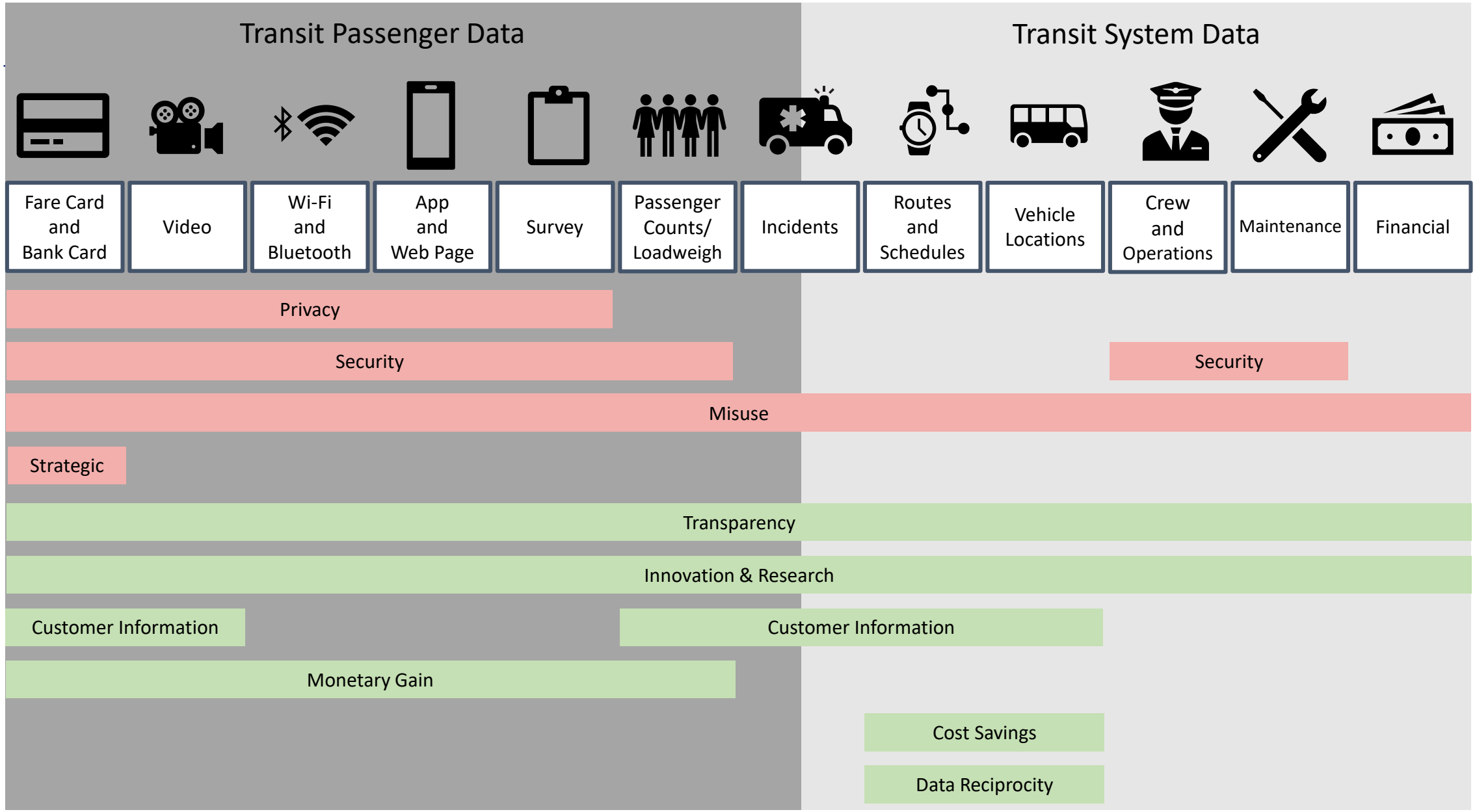
Costs

- Staff time and expertise

Challenges

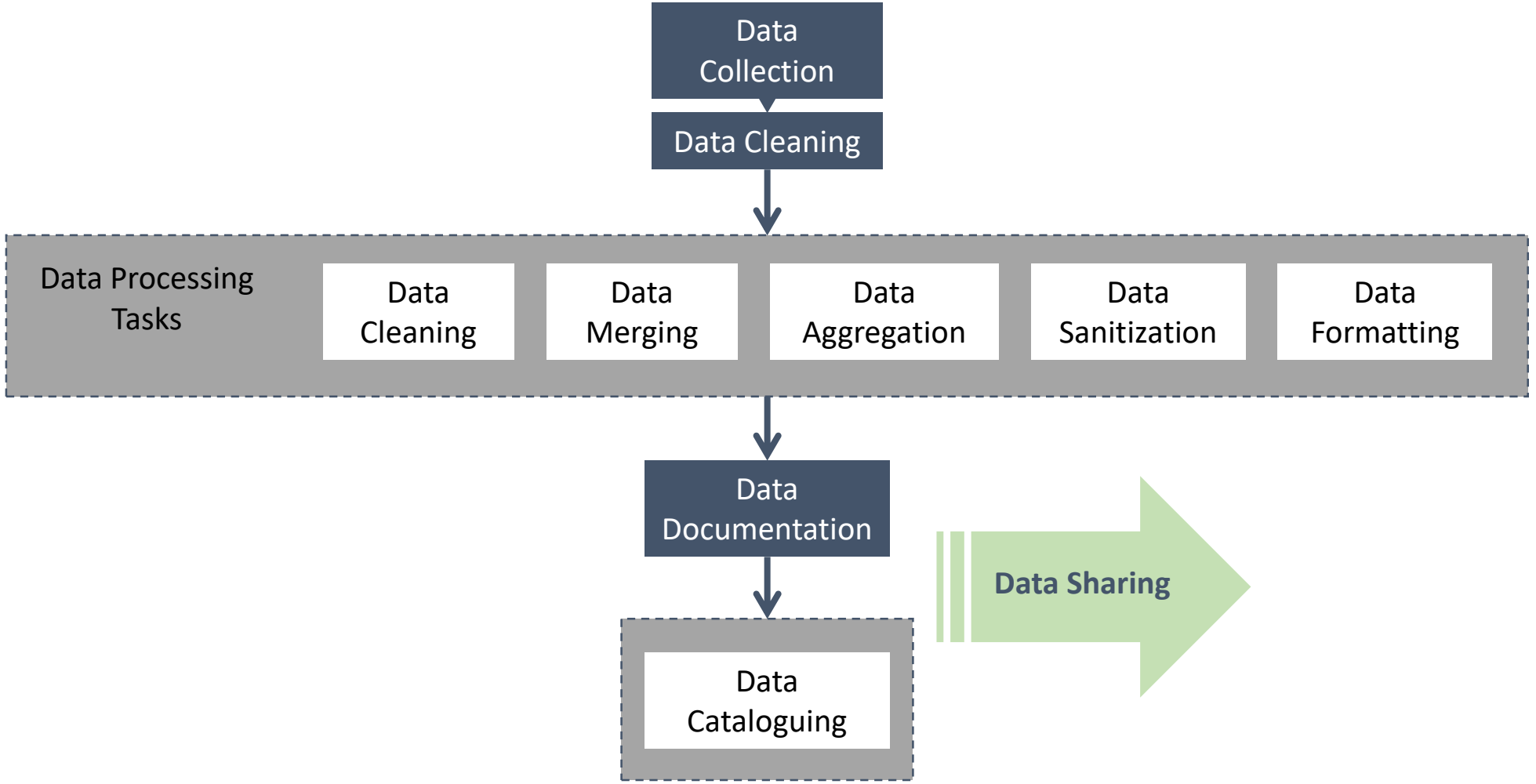
- Internal Organizational Needs (staff and data)
- External Needs (protocols, data standards)

Legal Framework


Transit Passenger Data
Transit System Data
Fare Card and Bank Card
Video
Wi-Fi and Bluetooth
App and Web Page
Survey
Passenger Counts/ Loadweigh
Incidents
Routes and Schedules
Vehicle Locations
Crew and Operations
Maintenance
Financial
Risks of Sharing
Privacy
Security
Security
Misuse
Strategic
Benefits of Sharing
Transparency
Innovation & Research
Customer Information
Customer Information
Monetary Gain
Cost Savings
Data Reciprocity

How do you share data?

Preparing Data for Sharing



Public and Private Data Sharing

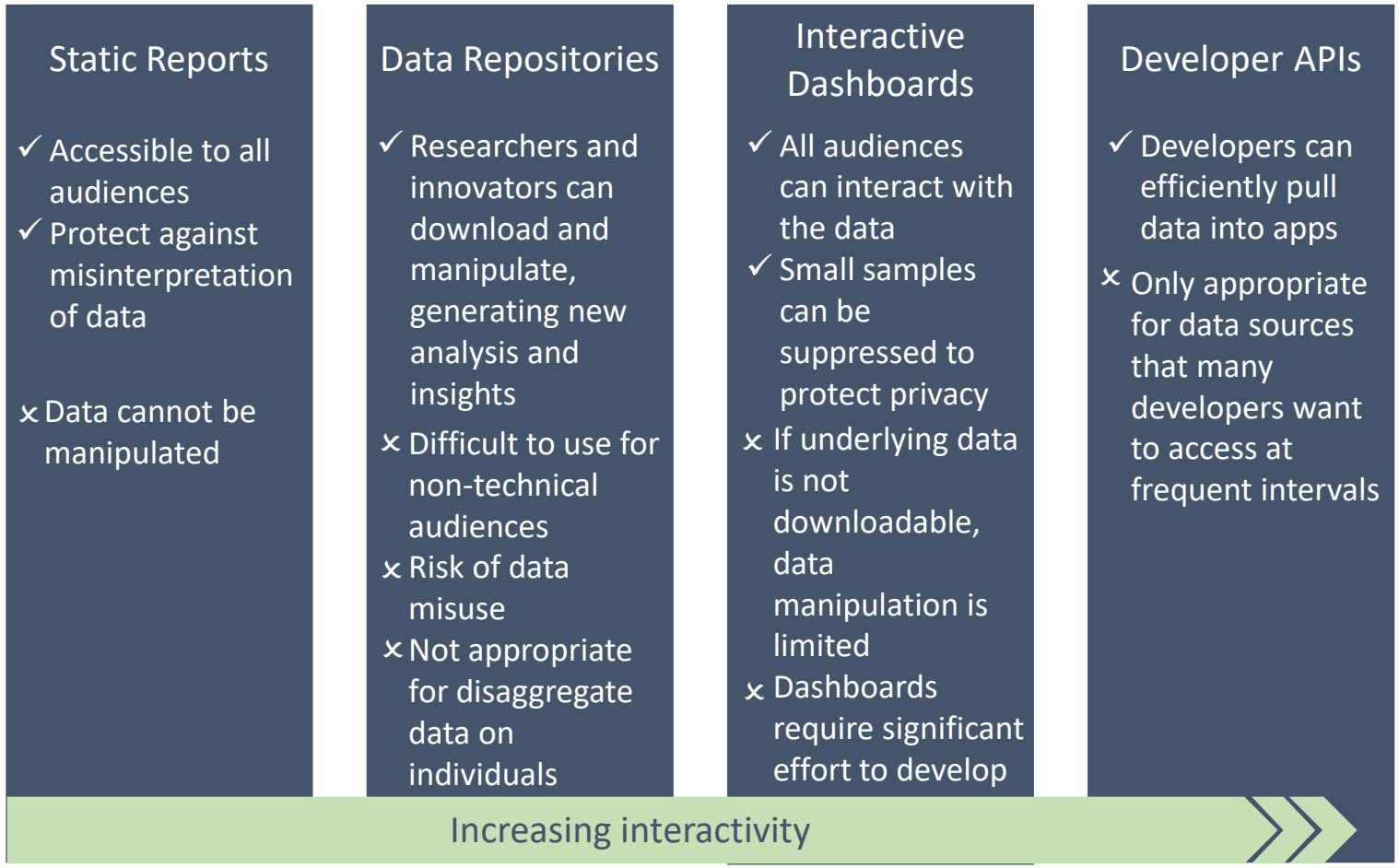
Public Data Sharing

- ✓ Promotes transparency
- ✓ Can spur innovation
- ✓ Saves transit agencies time responding to individual requests in the long run.
- × Lack of control over how the data is used
- × Public release of data that can be used to identify individuals violates customers' privacy
- × Depending on how data is shared, there may be significant effort required upfront

Private Data Sharing

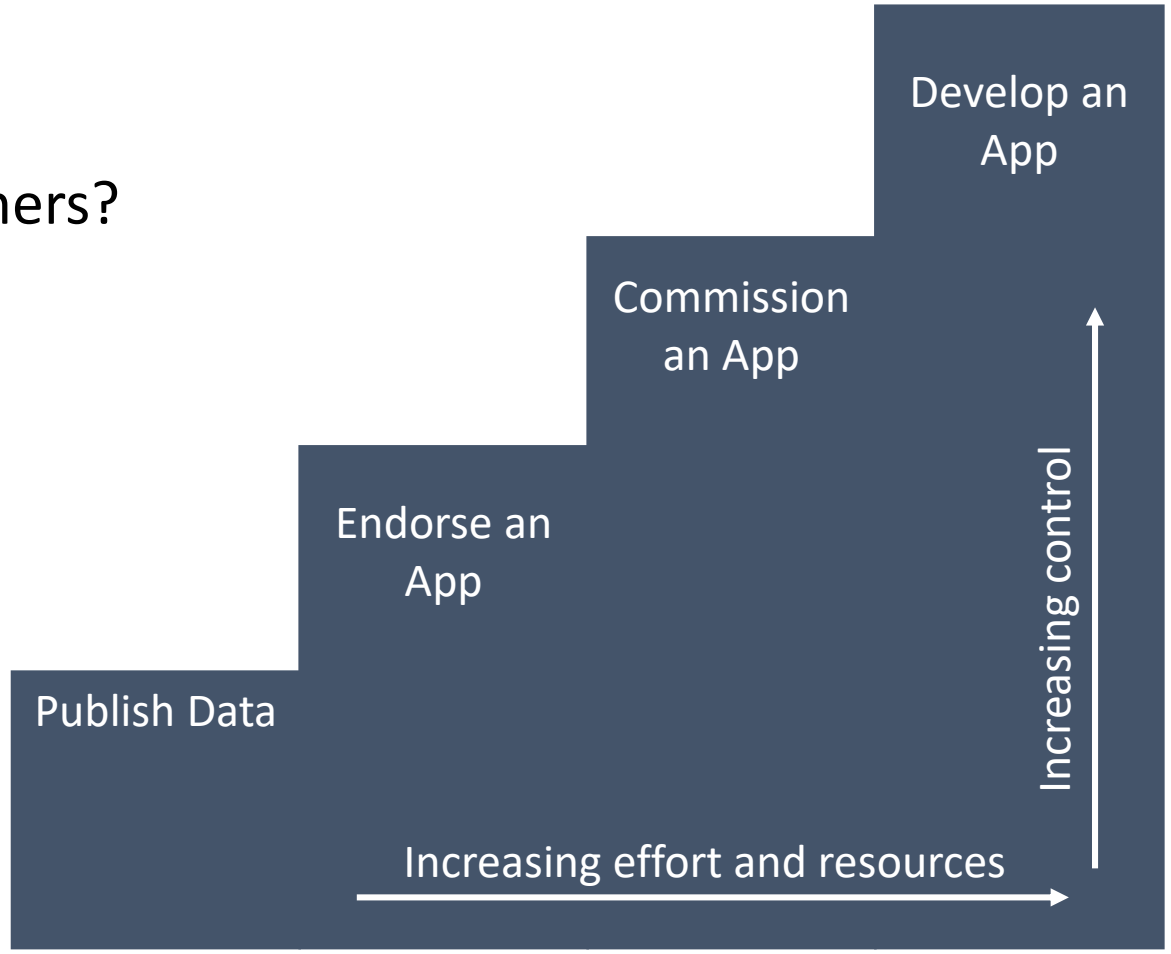
- ✓ Research partnerships can ensure data is analyzed to support transit agency needs
- ✓ Training of trusted partners and non-disclosure agreements can enable sensitive data to be safely shared
- × Significant effort and resources may be required to develop individual data agreements and respond to individual data requests
- × Perceived lack of transparency and equity – data is only shared with certain partners

Public Data Sharing Methods



Effort and Control

How to share data with customers?



How do you get data?

Accessing External Data

- Buying data
- Accessing data through mobility service partnership

Mobility Data Specification

Information Briefing

October 31, 2018

Introduction

Similar to a common language, the Mobility Data Specification (MDS) gives cities an elegant and cost effective tool to actively manage private mobility providers and the public right-of-way. MDS allows cities to collect valuable insights through a shared data vocabulary and to communicate directly with product companies in real time using code. Today, it enables cities to manage dockless scooters, bikes, taxis, and buses. Tomorrow, that could be autonomous cars, drones, and whatever else the future may hold.

Standard Data Sharing

In Los Angeles, permitted shared use mobility providers (like scooters and bikes) must provide real-time information about how many of their vehicles are in use at any given time, where vehicles are at all times, and the physical condition that vehicles are in. Additional information includes:

- Parking Verification
- Operating Cost
- Customer Cost
- Vehicle Utilization
- Percent Battery Charge
- Start Trip Data
- End Trip Data

SMARTCITIESDIVE Deep Dive Opinion Library Events Jobs

Energy & Utilities Transportation Buildings & Infrastructure Environment Resilience

DEEP DIVE

1 year in: Uber's 'rocket shot' Cincinnati partnership

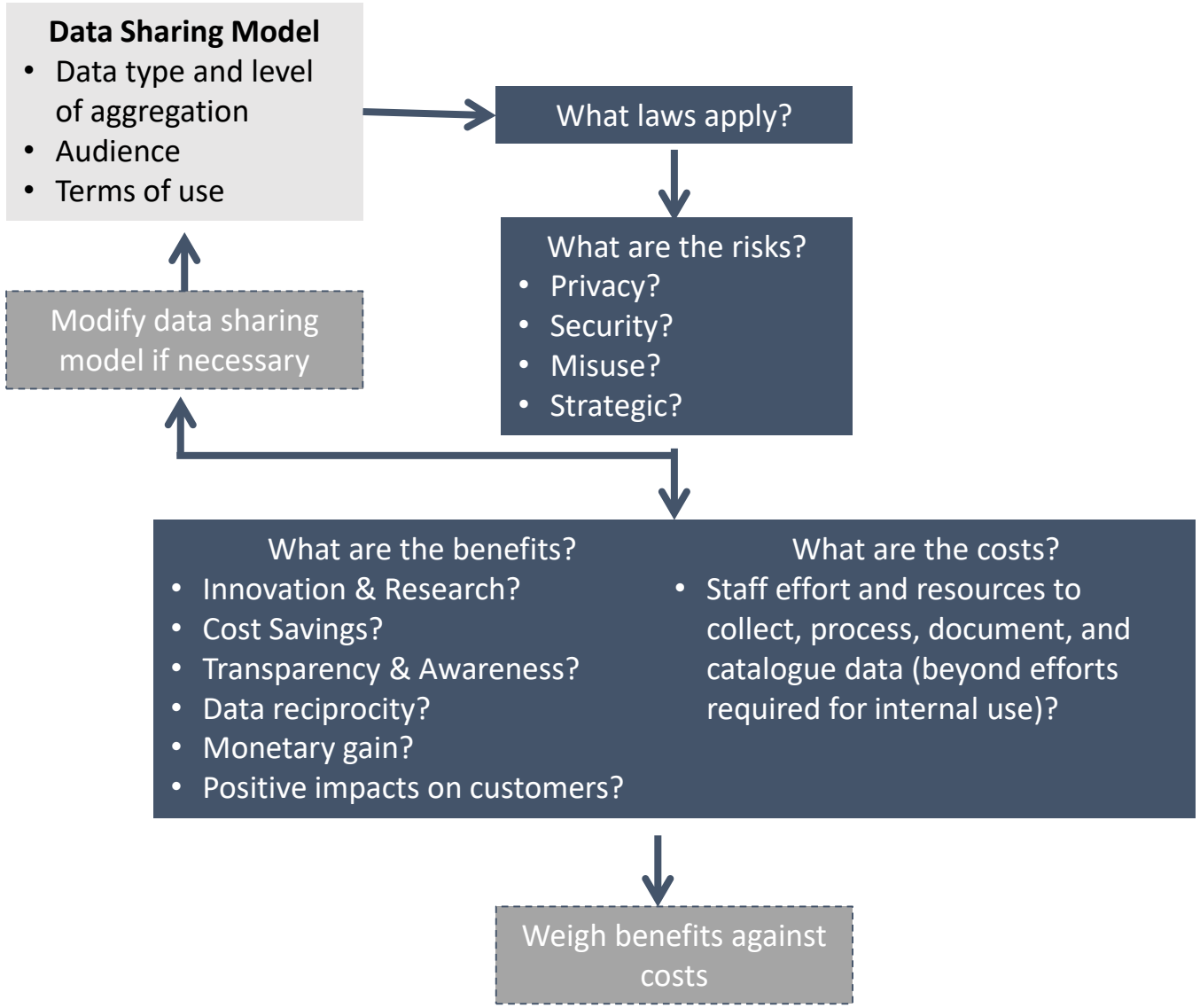
Through the Cincinnati Mobility Lab, the ride-hailing giant has already studied the city's curbside and augmented its travel information system to increase efficiency.

Metro

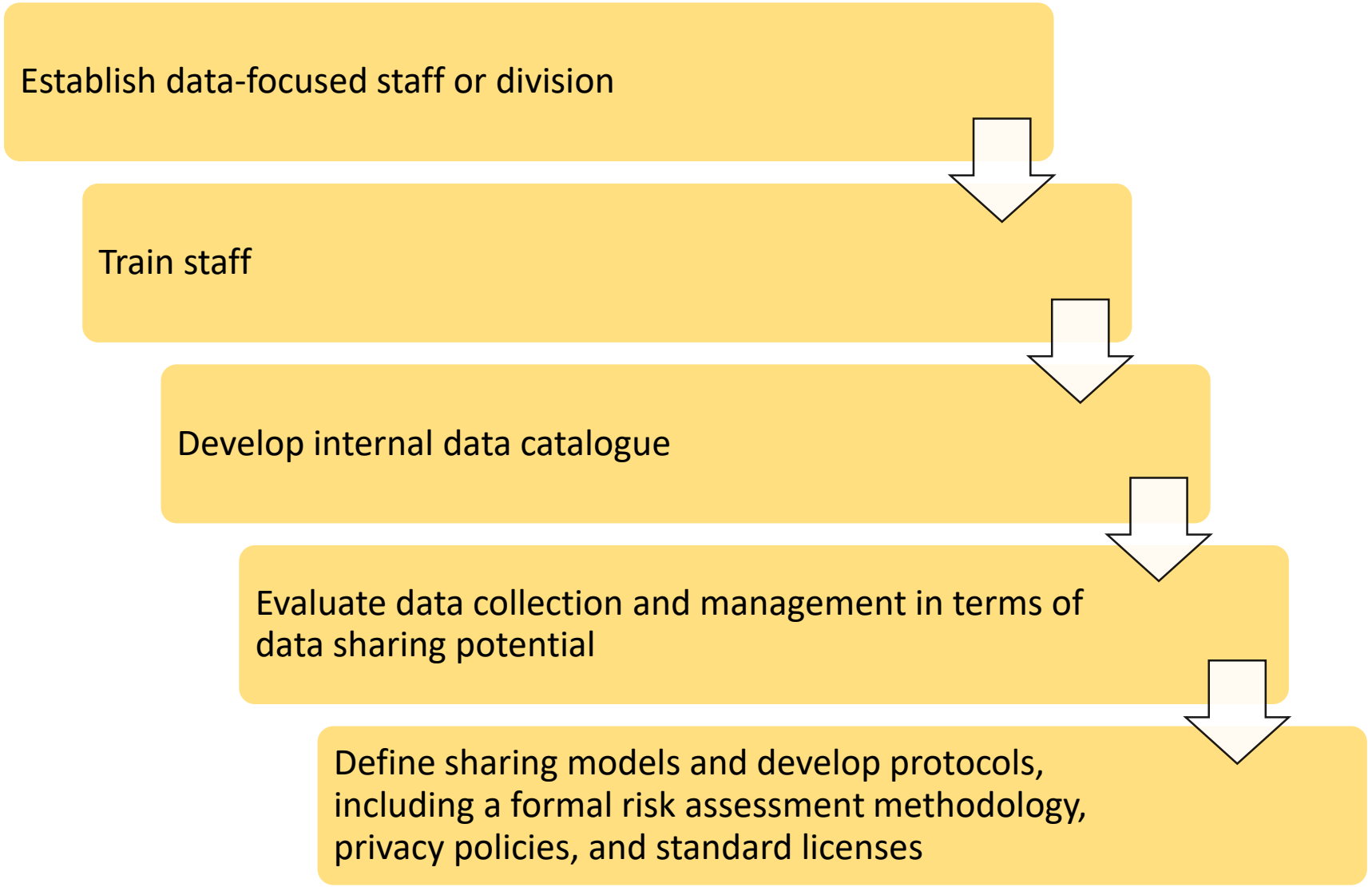
LA Metro Launches Partnership with Via to Provide On-Demand Service to Three Busy Transit Stations

Initial Guidance

Data Sharing Decision Framework



Internal Needs: Data Management Structure and Protocol



Coming Soon…

- Legal summary
- Private sector perspective
- Lessons from cities, states, and utilities