



HOW COVID IMPACTED MOBILITY TRENDS FOR 2021

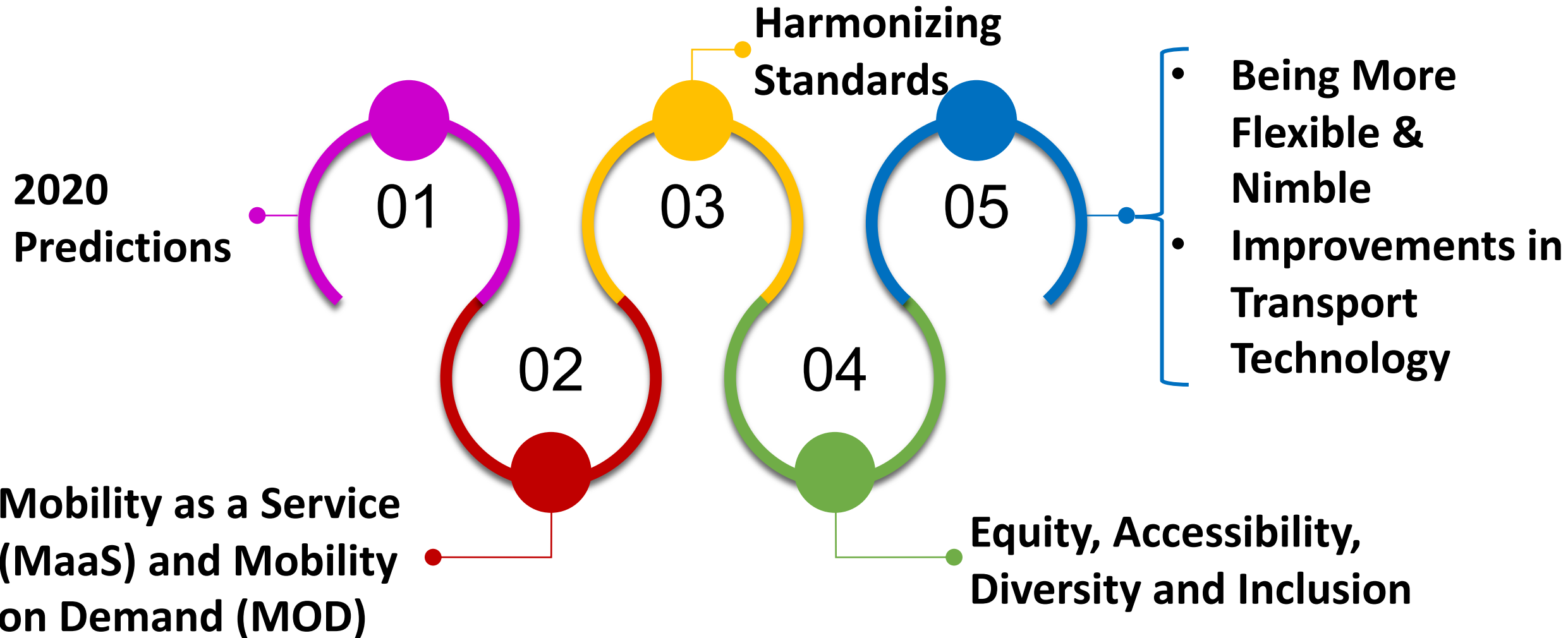
Carol Schweiger

President, Schweiger Consulting

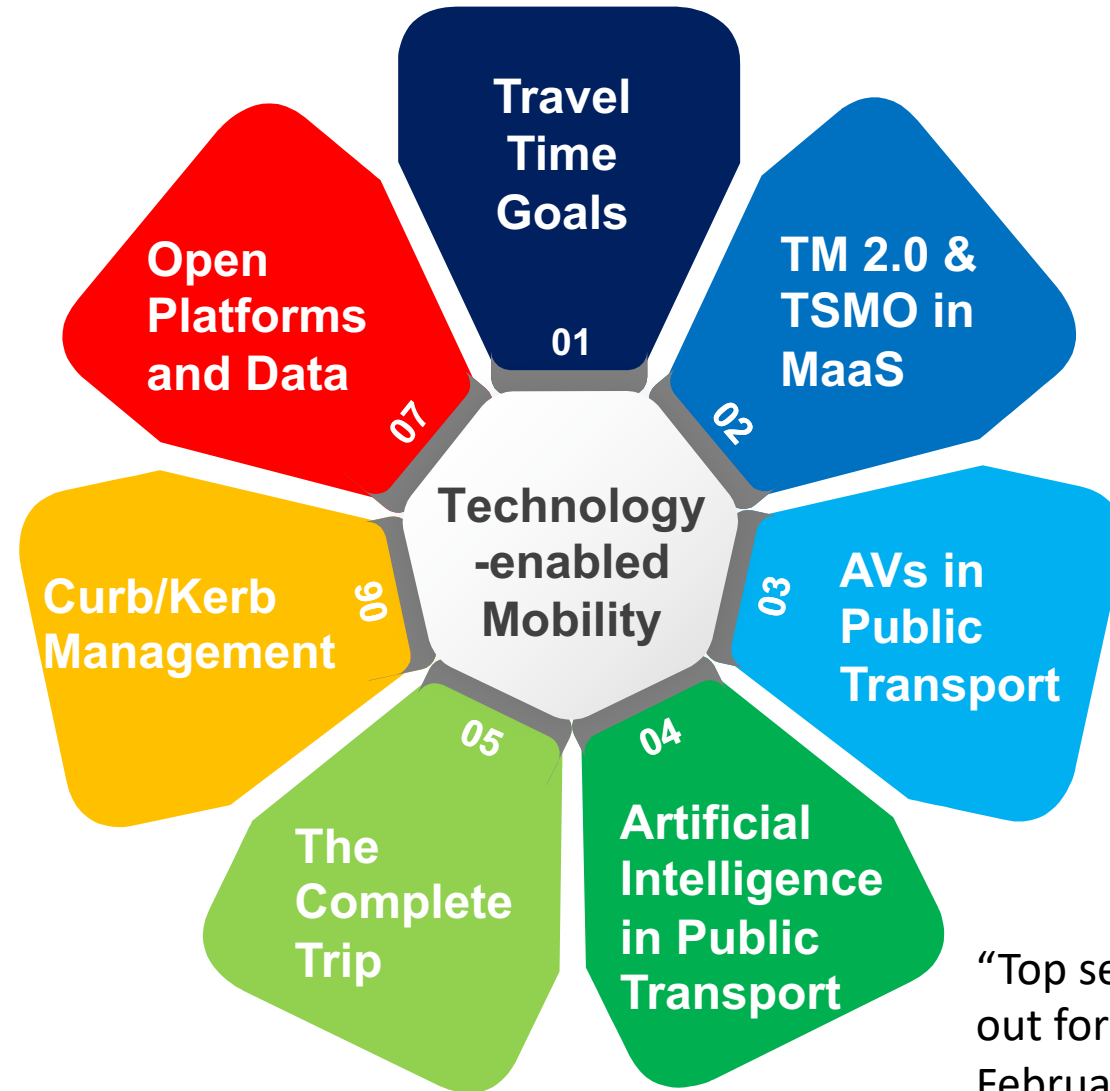
2021 ITS-NY 28th Annual Meeting and Technology Exhibition

Thursday, October 28, 2021

Presentation Outline



2020 Predictions



“Top seven urban mobility trends to look out for in 2020,” *Intelligent Transport*, 5 February 2020

Lines Between MaaS and MOD will Continue to Blur

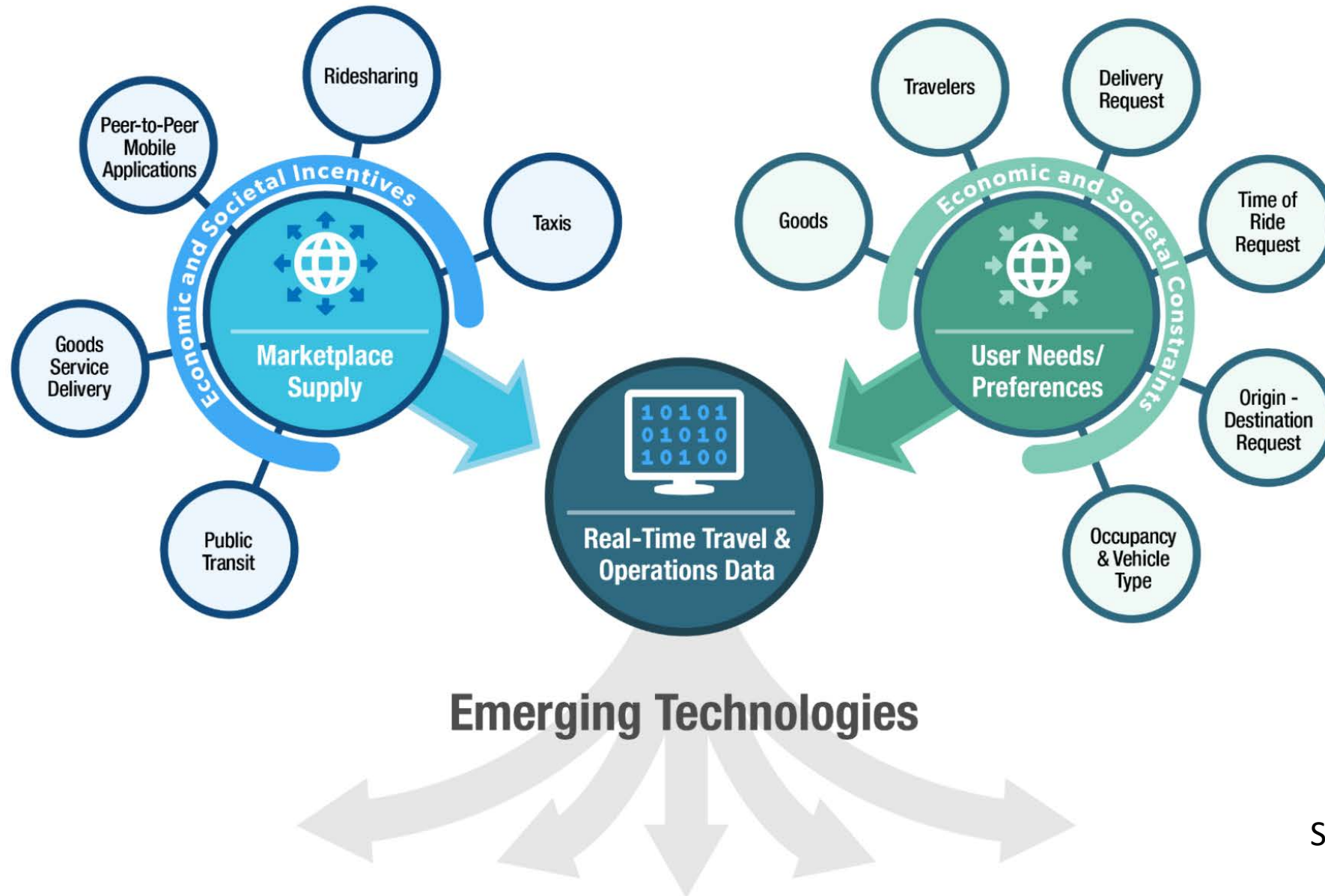
Mobility on Demand (MOD)

A concept envisioning an **interconnected and coordinated mobility ecosystem** to meet the needs of all users by providing the safe, reliable, and efficient movement of travelers and goods. MOD offers users **personalized mobility and goods delivery options upon request**, matched with coordinated network strategies of service providers and operations managers.

Mobility as a Service (MaaS)

A concept envisioning **integrated mobility where travelers can access multiple transportation modes over a single digital interface**. MaaS primarily focuses on passenger mobility allowing travelers to seamlessly plan, book, and/or pay for travel on a pay-as-you-go and/or subscription basis.

Multimodal Marketplace



Source: USDOT ITS JPO

Characteristics of On-Demand Mobility Services

Sustainability of MaaS/MOD Platforms



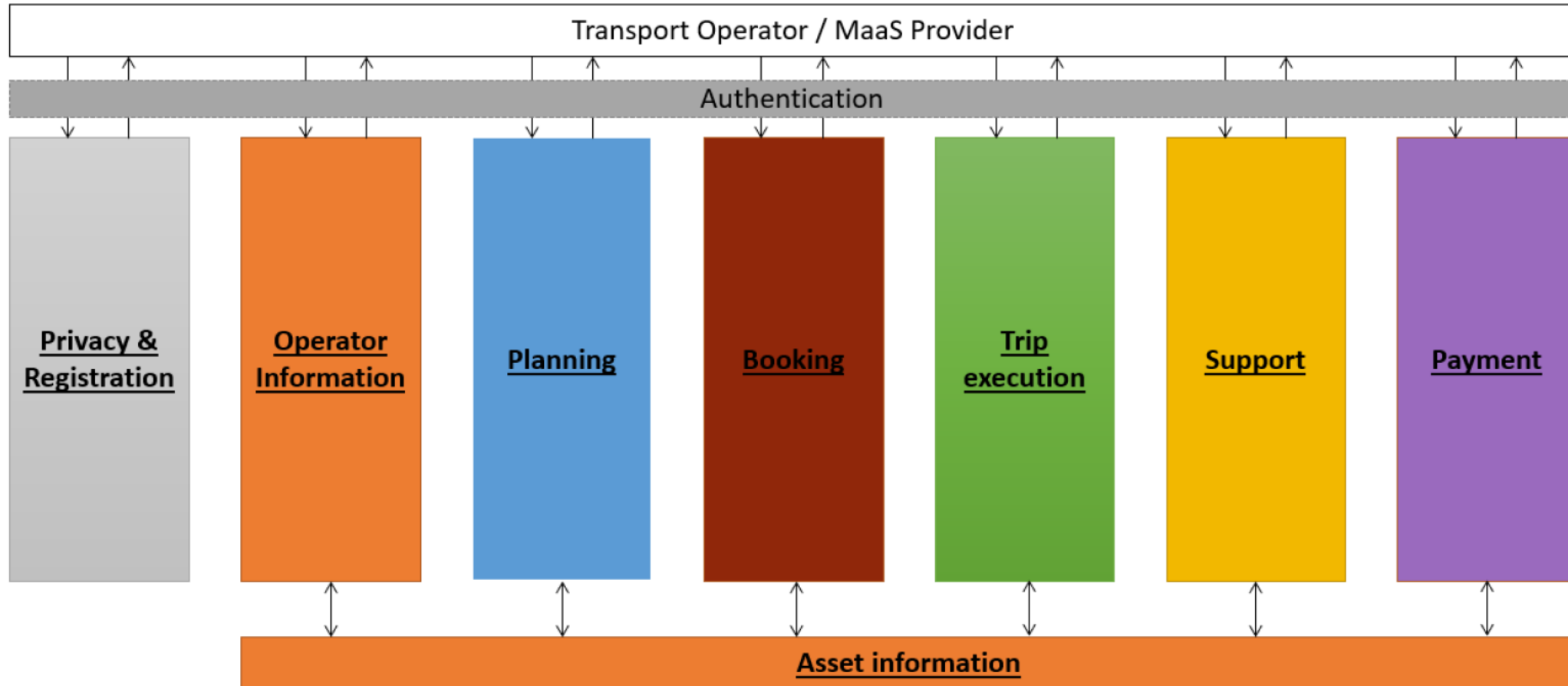
KOMPIS Framework to Evaluate the Effects Of MaaS: Key Performance Indicator Examples

	Ecological effects	Economic effects	Societal effects
Societal level	e.g. "Transport's release of greenhouse gases"	e.g. "Society's cost for transport"	e.g. "Accessibility to transport"
Organizational level		e.g. "The service's profitability"	e.g. "New jobs"
Traveller level	e.g. "Number of trips per individual and month"	e.g. "Monthly cost for an individual's trips"	e.g. "Perceived accessibility to destinations like work"

Ref: Karlsson et al. 2019

Mobility Standards Harmonization

TOMP-API Functional Blocks



Source: Bon Bakermans, Edwin van den Belt, Tjalle Groen and Jef Heyse, "The TOMP-API - from idea to reality," prepared for 2021 ITS World Congress, Hamburg, Germany, Paper ID 282, pages 2-3

Incorporate Equity Into Technology-enabled Mobility Services

- 2016: TRB Special Report 319
- 2017: USDOT STEPS to **Transportation Equity**
- 2018: Greenlining Institute's "**Mobility Equity Framework: How to Make Transportation Work for People**"
- 2019: "**Equity and Smart Mobility**" study commissioned by Institute for Sustainable Communities (ISC) and conducted by Center for Neighborhood Technology (CNT)
- 2023: Transit Cooperative Research Project (TCRP) B-47: **Impact of Transformational Technologies on Underserved Populations** - assessment tool for reviewing inclusiveness of transformational technologies for transportation services

TCRP B47

Impact of Transformational Technologies on Underserved Populations

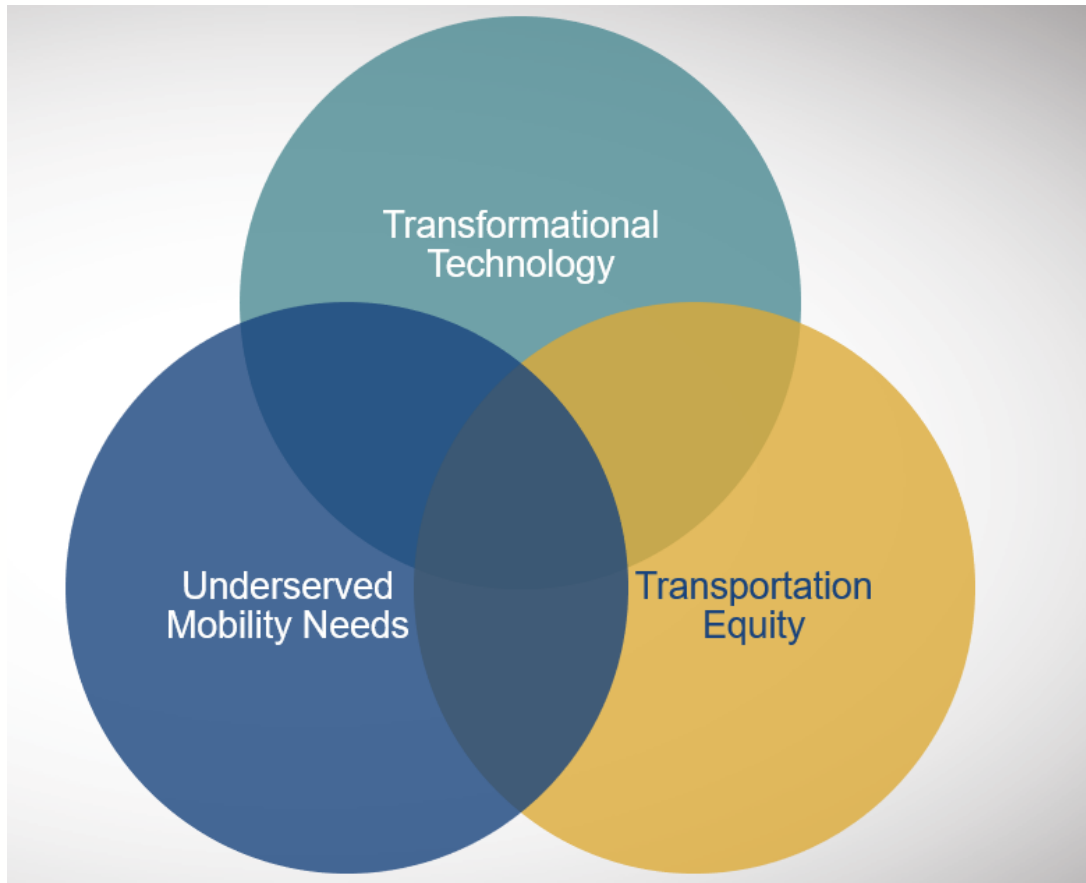
PI: Ipek Nese Sener (TTI)

Project Team

Texas A&M Transportation Institute, TTI (Prime)

EBP US

Go Systems and Solutions




The objective is to develop a playbook with guidance on corrective actions with data, methods, and metrics to achieve inclusive mobility.



- ❖ Examine how technology-enabled mobility services impact a community's capacity to meet the mobility needs with a special focus on how a community can ensure underserved residents will benefit from those technology-enabled mobility services.



Being More Flexible and Nimble



- Required to adjust services or provide new information quickly:
 - Physical distancing
 - Vehicle and station/stop crowdedness and cleanliness
 - Service modification to ensure minimum service levels
 - Transport workforce optimization
- Massachusetts Bay Transportation Authority (MBTA) deployed new real-time crowding information in three months
 - Idea conceived on April 9, 2020
 - Deployed on June 19, 2020



Stops

Search for a stop 

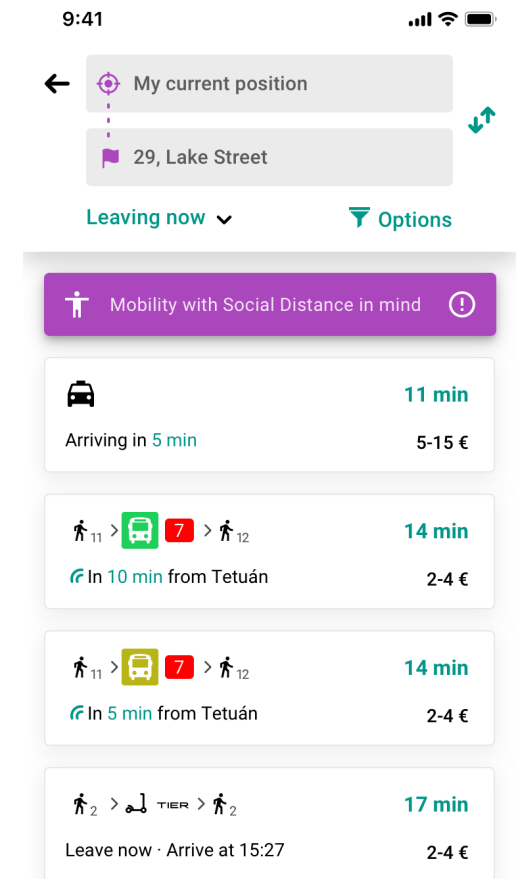
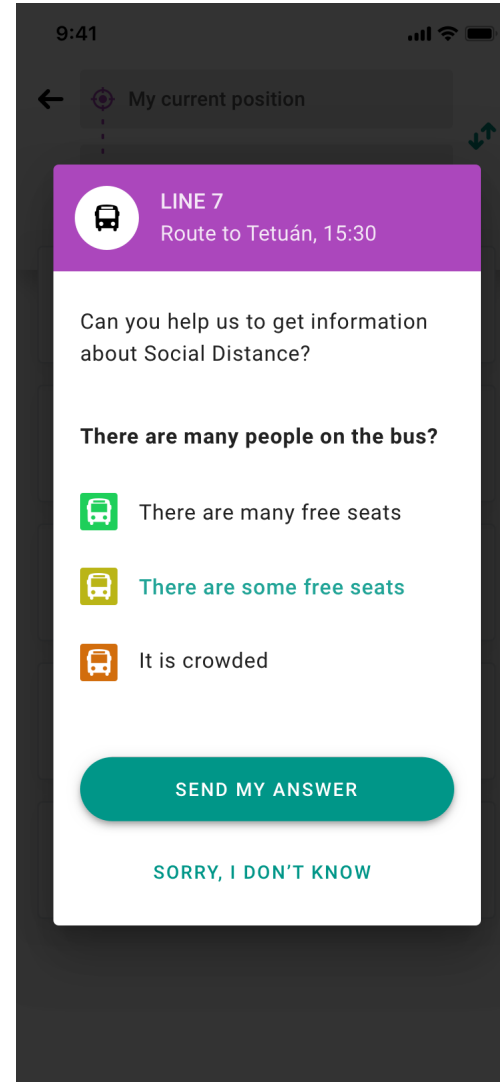
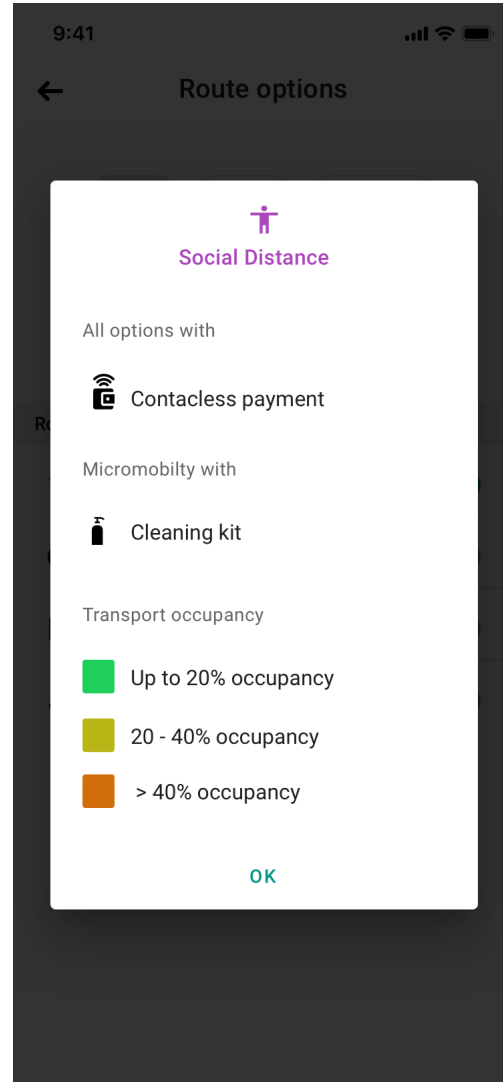
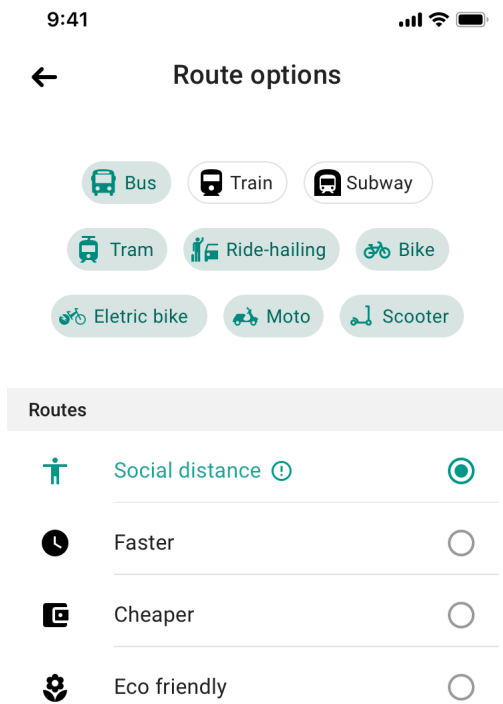
Ruggles 
OL  CT2 CT3 8 15 19 22 28 29 43 44 45 47 Ashmont 6 min
Ashmont 18 min
[View schedule](#)

Malcolm X Blvd @ King St 
15 28 44 45 66 **Currently some crowding** 
Ashmont 13 min
[View schedule](#)

Malcolm X Blvd opp Madison Park HS 
15 28 44 45 66 Ashmont 2 min 
Ashmont 14 min
[View schedule](#)

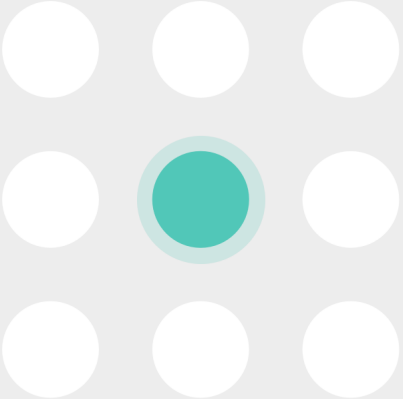
Malcolm X Blvd opp O'Bryant HS 
15 28 44 45 66 Ashmont 2 min 
Ashmont 14 min

COvid-19 REsilient MaaS (COREMaaS): Social Distance Filters



Virtual Seat

Reserve your
Virtual Seat





START


CREATE AN ACCOUNT

powered by
iomob.

Reserve your
Virtual Seat

 Search your destination and schedule

 Check if there is any free seat

 Block your virtual seat and obtain your QR to use in the station

Reminder: Please present this QR code and your valid ticket to board the vehicle

Be nice! You can only block 4 virtual seat reservations. Release the seats that you are not going to use.

LET'S GO!

< Barcelona - Calafell

R 16:02

R4 Barcelona - Arc de Triomf

^ 3 stops

Barcelona - Plaça de Catalunya

Barcelona - Sants 16:27

R 16:34

R2 Barcelona - Sants

^ 9 stops

Gavá

Castelldefels

Sitges

Vilanova i La Geltrú

Cubelles


Cunit

Segur de Calafell


Calafell 17:30


RESERVE MY VIRTUAL SEAT

2020
May 20



AVAILABLE: 16:00 - 17:10

 Barcelona - Arc de Triomf

 Calafell

Reminder: Please present this QR code and your valid ticket to board the vehicle

OK

iomob.

Transport Technology Improvements

- **Improving accuracy of real-time information:**
 - Improved NexTrip system used by Metro Transit in Minneapolis/St. Paul, MN
 - Prototype open platform that can improve the quality of real-time data (next slide)
- **Improving payment** such as pseudonymous payment method



THANK YOU!

Carol Schweiger
President
Schweiger Consulting LLC
781-424-2208
carol@tech4transit.com

