

The Role Of Transportation Systems Management and Operations (TSMO) in Mobility as a Service (MaaS): New Perspectives on Fully Integrated Mobility Marketplaces

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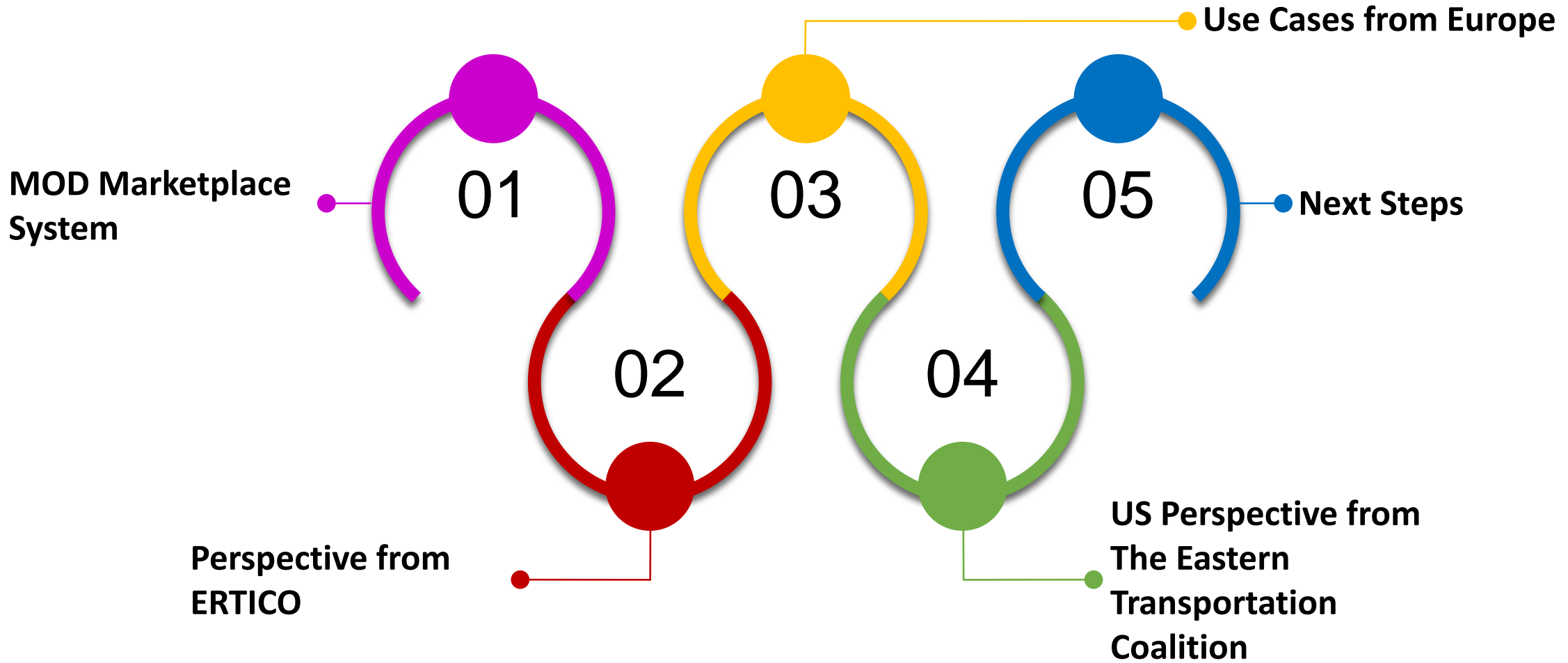
President, Schweiger Consulting

TSMO And MOD Integration Peer Exchange

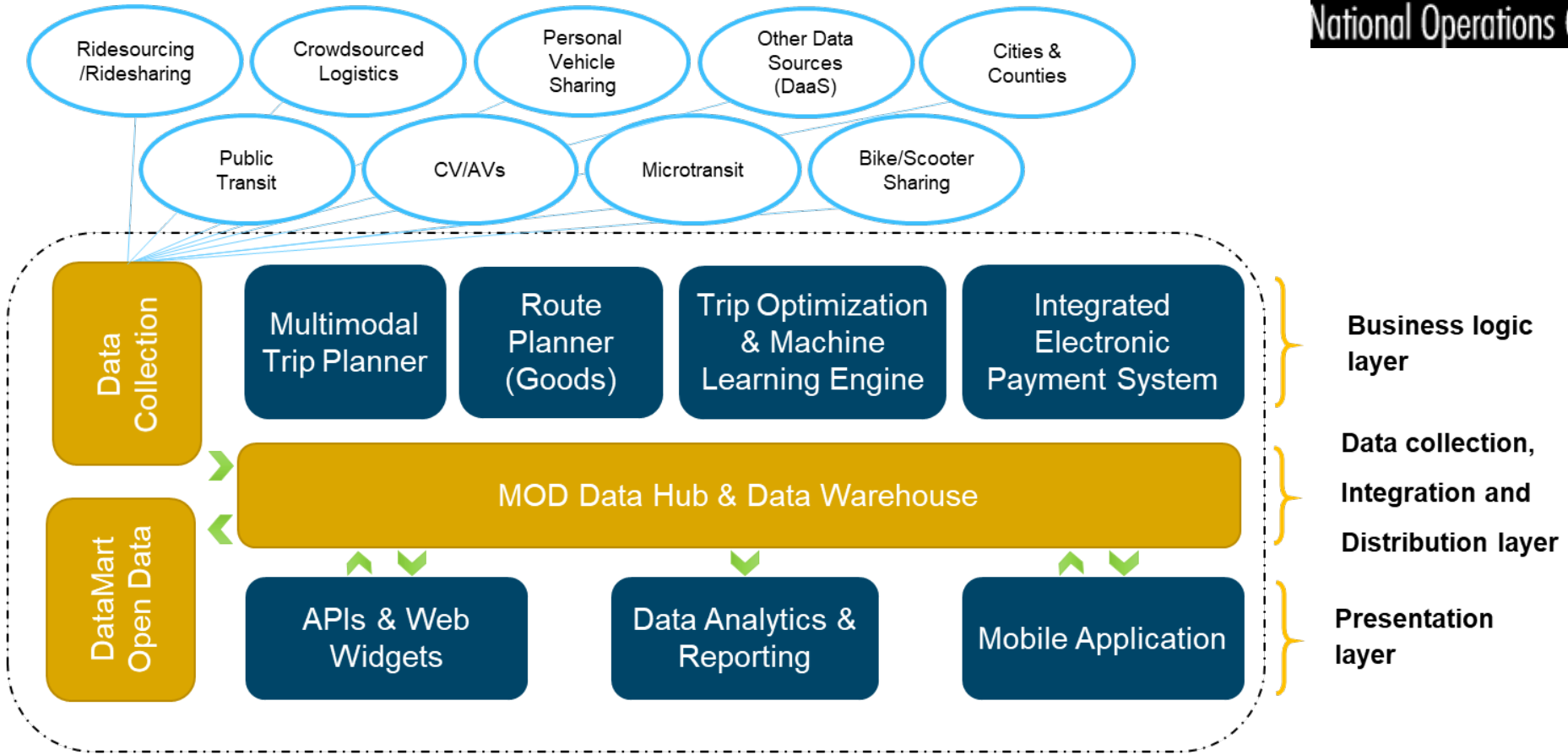
Friday, February 12, 2021



PRESENTATION OUTLINE



MOD MARKETPLACE SYSTEM



Employers, universities, medical centers and Businesses

Transportation Service Providers

3rd Party Solutions Developers

Operations, Planning, Performance Eval.

Users

Image: USDOT - MOD Marketplace ConOps

MOD MARKETPLACE CONOPS BLUEPRINT: OPERATIONAL SCENARIOS

Use Case Scenarios

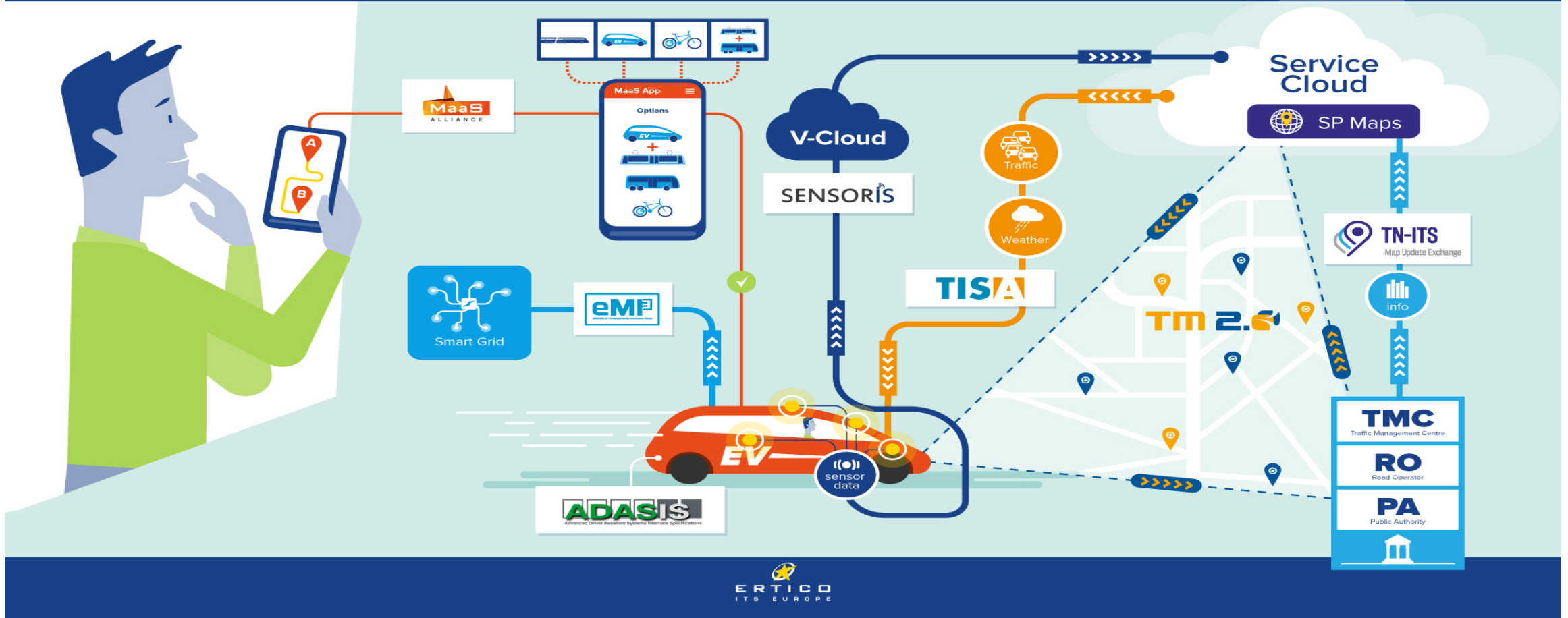
- Leverage shared MOD data to analyze infrastructure conditions and improve transportation operations
- Fill gaps in existing transportation networks and provide travelers with additional options and flexibility
- On-Demand Neighborhood/Campus/Retirement Community/Employer Services
- On-Demand door-to-door and paratransit services
- Plan trip using integrated multimodal application
- On-Demand first/last mile services
- Flexible Goods Delivery Services

User-System Interactions

- Primary actors, supporting actors, stakeholders and interests
- Scenario descriptions
- Preconditions
- Postconditions
- Performance goal
- Basic workflow
- Alternative workflow
- Special Requirements
- Assumptions
- Notes and issues

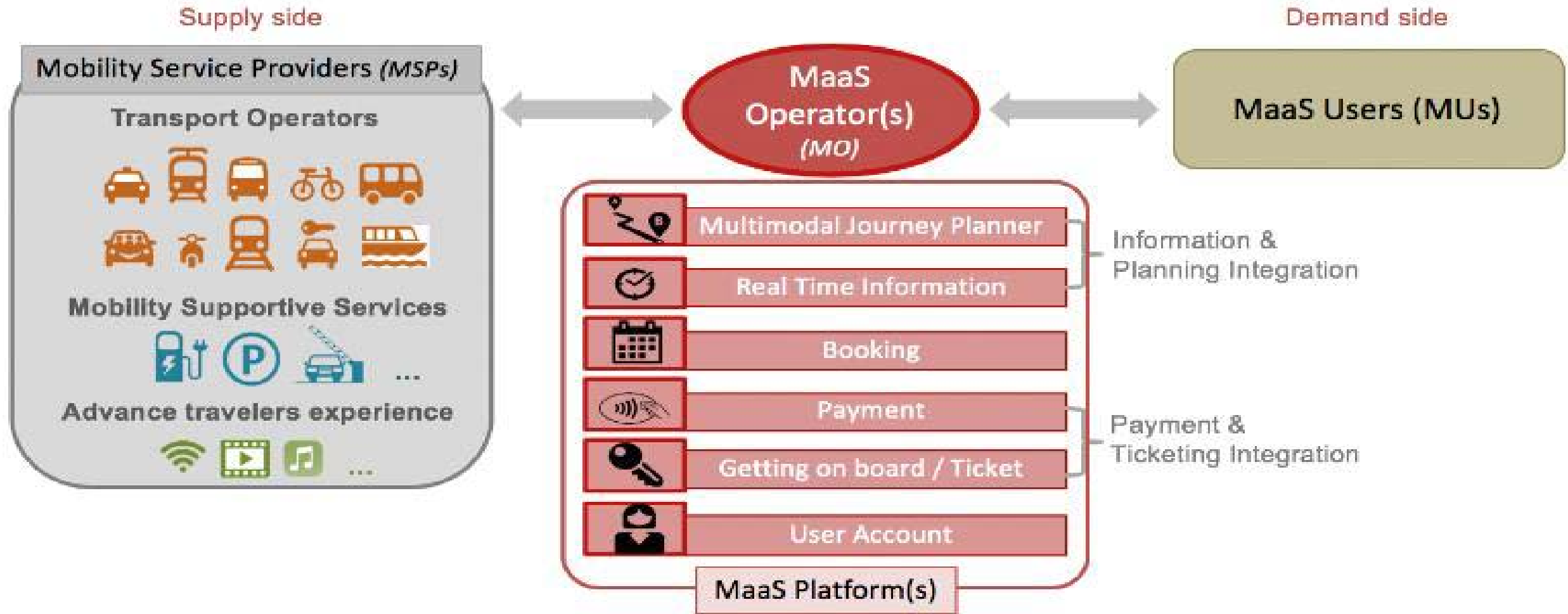
MAAS AND TM 2.0*

SMART MOBILITY DEPLOYMENT BY ERTICO PARTNERSHIP



*Dr. Johanna Tzanidaki, "MaaS & TM 2.0: Network Mobility Management," 2020 ITS World Congress, SIS4018, October 8, 2020, https://gateway.on24.com/wcc/eh/2537028/lp/2615792/the_role_of_transportation_systems_management_and_operations_tsmo_in_mobility_as_a_service_maas_new_perspectives_on_fully_integrated_mobility_marketplaces/

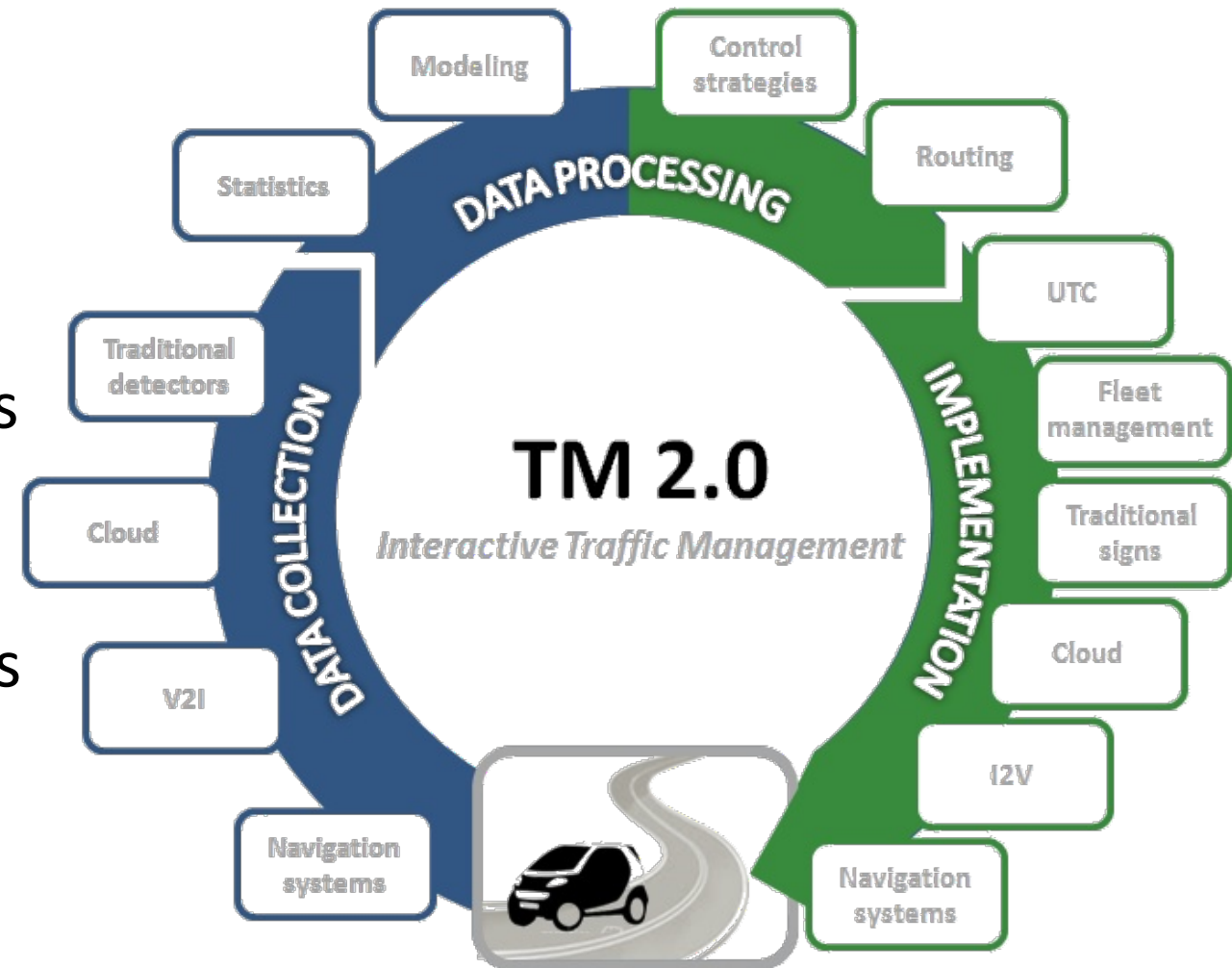
MAAS ECOSYSTEM*



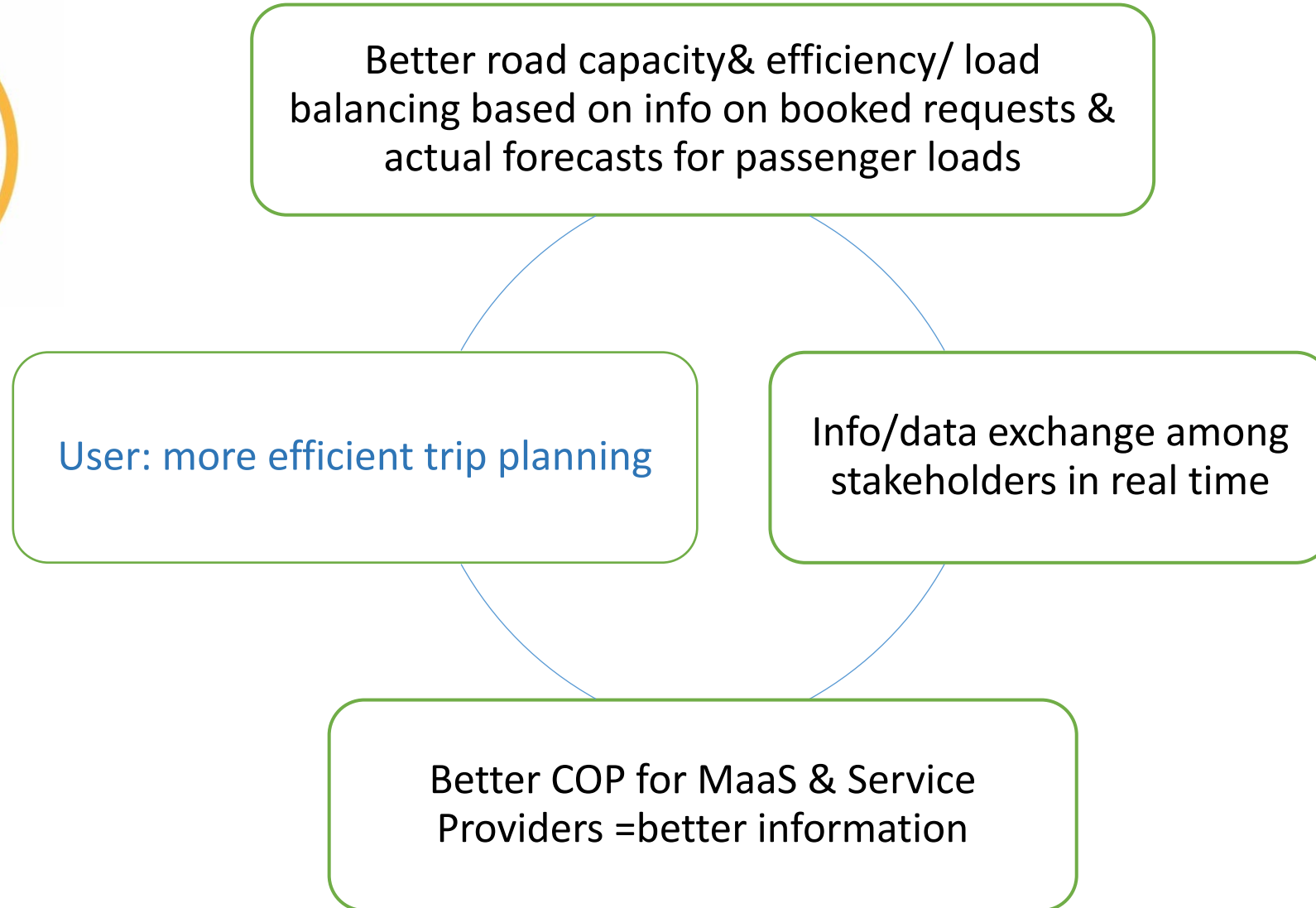
MaaS Concept and ecosystem (source: UCL – MaaS Lab)

TM 2.0: ENABLE VEHICLE INTERACTION WITH TRAFFIC MANAGEMENT*

1. Collaboration and trust
2. Alignment of information to drivers and consistency
3. Understanding among stakeholders (**co-opetition**)



MULTIMODAL MOBILITY MANAGEMENT / MOBILITY NETWORK MANAGEMENT*



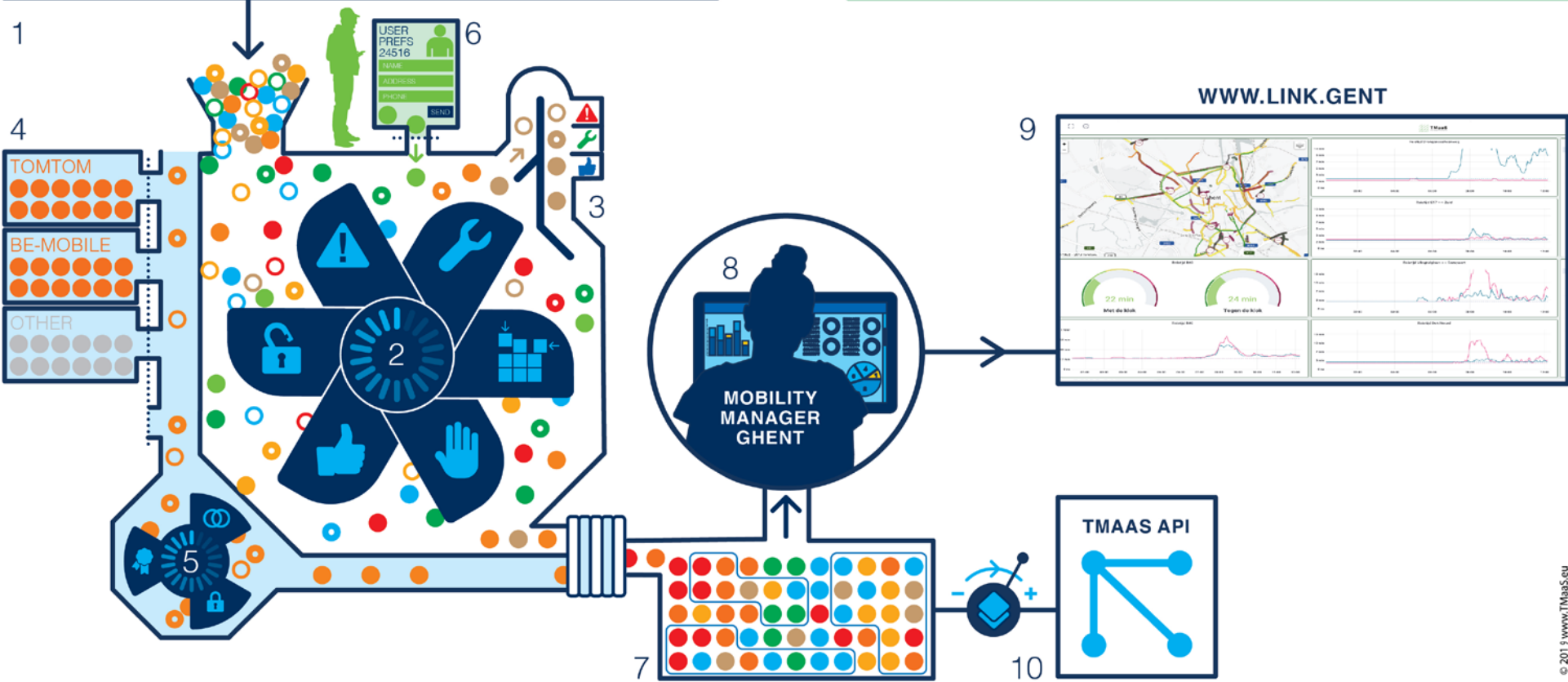
THE GHENT CHALLENGE

MAKE CITIZENS CHOOSE SMARTER BEFORE STARTING THEIR TRIP



LEGENDA

- | | |
|-----------------------------|---------------------------|
| 1. DATA TYPES | 6. USER PREFERENCES |
| 2. PROCESSING BLOCK | 7. AVAILABLE DATA |
| 3. CONTROL DASHBOARD | 8. MOBILITY MANAGER GHENT |
| 4. PRIVATE PARTNERS | 9. FIELD APPLICATIONS |
| 5. NEUTRAL PROCESSING BLOCK | 10. TMAAS API |



Use Case:
Ghent,
Belgium**

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**Stephanie Leonard, Head of Policy & Innovation, TomTom, "SIS4018: Connecting Traffic Management & MaaS," 2020 ITS World Congress, October 8, 2020, https://gateway.on24.com/wcc/eh/2537028/lp/2615792/the_role_of_transportation_systems_management_and_operations_tsmo_in_mobility_as_a_service_maas_new_perspectives_on_fully_integrated_mobility_marketplaces/

Illustrator is Wim Vandersleyen

INNOVATION FOR TRAFFIC MANAGERS AND CITIZENS**

Warnings on pre-defined routes



Dynamic vehicle positions on a map



Show locations of useful PoI on a map



Real-time and historical statistics of KPI's



Immediate insights in real-time traffic events



Asset monitoring



Data editor



2-Way communication

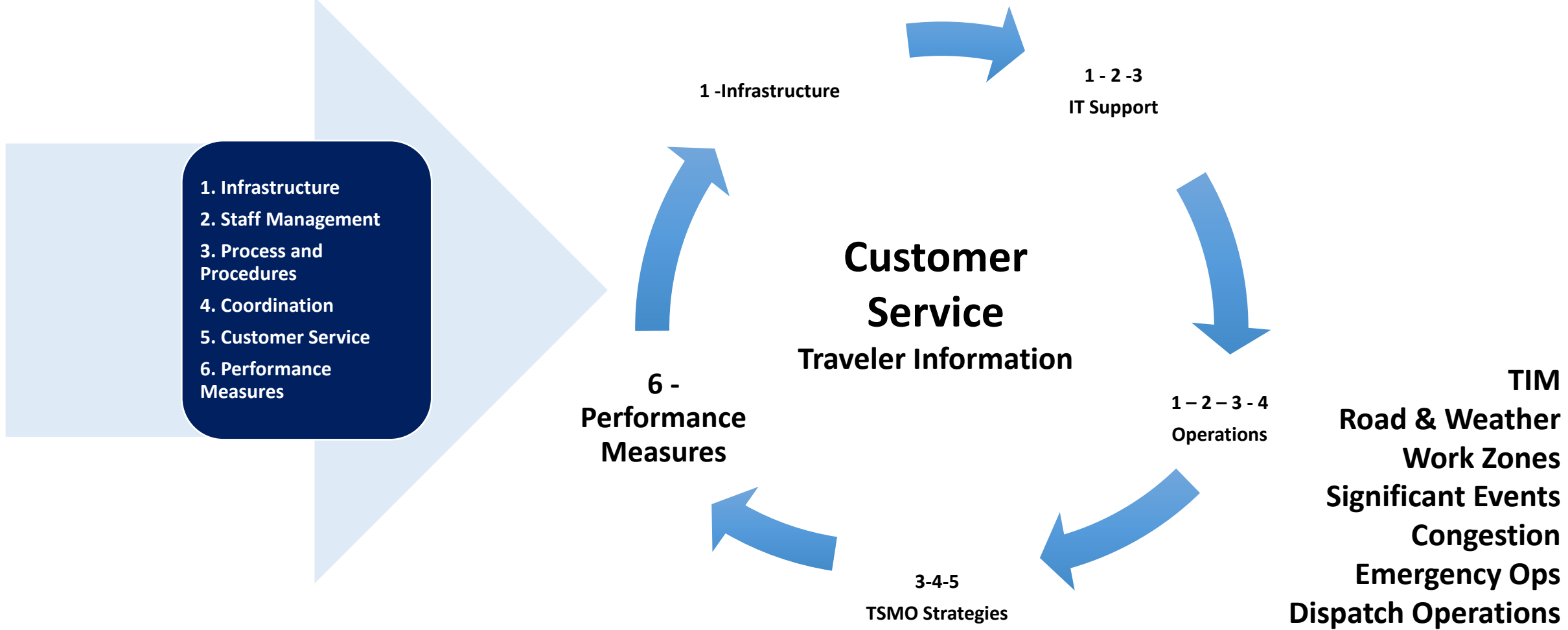


City management panel



www.TMaaS.eu

TSMO - HOW DOES IT WORK IN A TMC?***



***Denise Markow, Director, TSMO, The Eastern Transportation Coalition, "The Role of TSMO in Maas," 2020 ITS World Congress, SIS4018, October 8, 2020, https://gateway.on24.com/wcc/eh/2537028/lp/2615792/the_role_of_transportation_systems_management_and_operations_tsmo_in_mobility_as_a_service_maas_new_perspectives_on_fully_integrated_mobility_marketplaces/

TMC STAKEHOLDERS ARE EVENT FOCUSED***

Maintenance Forces - Road and Weather Operations

Significant Events

Crashes

Emergency Operations
Evacuation Routing

Daily Commute

Construction
Extended Lane
Closures

Secondary Crashes

Security Operations

Transit Scheduling
and Routing

Freight Routing
Permitting

Dispatch Operations

OVERLAP OF TMC'S & MAAS***

*Today:
"It's in the
network info
messaging"*

*"Seamless
payment
systems are
being
developed"*

TSMO Strategy	MaaS Component
Congestion	Travel Times
Crashes	DMS, Third Party Vendors
Construction	Work Zone Closures
Emergency Operations	Road Closures
Significant Events	Roadway network status
Snow and Ice Operations	Road Conditions
Use of Data	Speed and Volume Use Cases

THANK YOU!

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