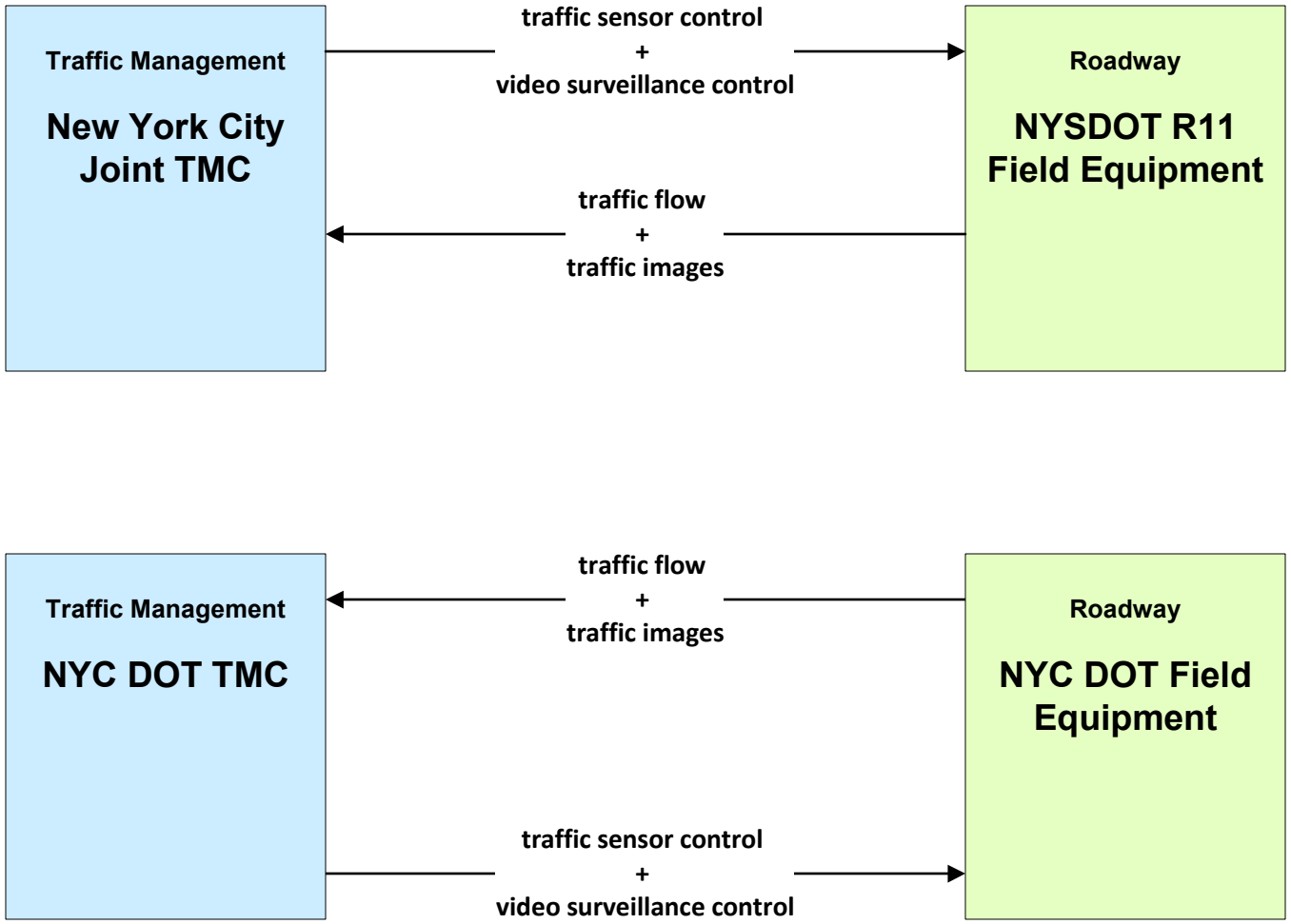
New York City Sub Regional ITS Architecture

Customized Service Package Diagrams

Advanced Traffic Management Systems (ATMS)

ATMS01 - Network Surveillance
New York City Joint TM



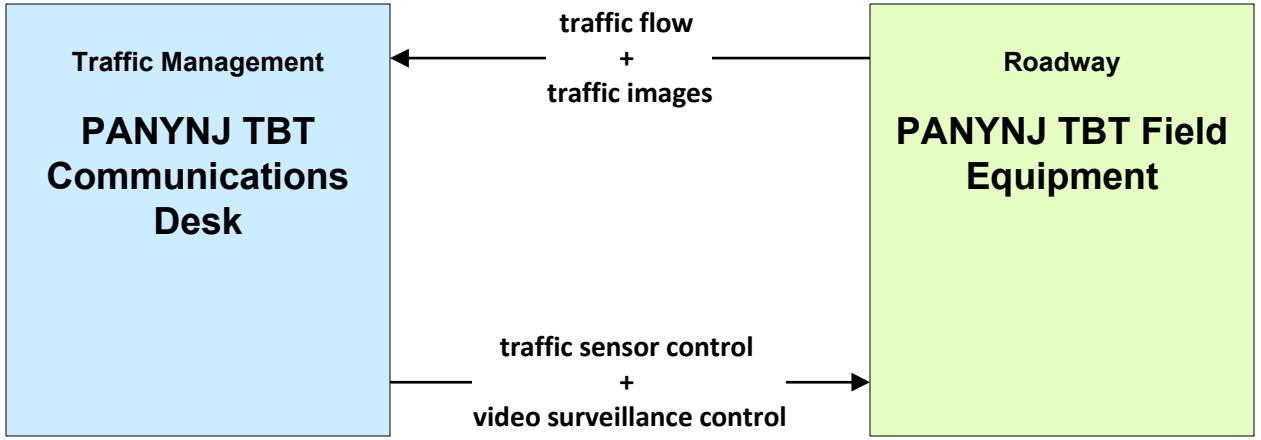
planned/future flow

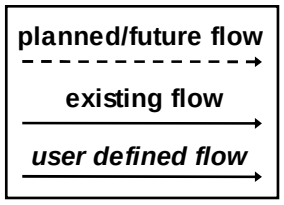
existing flow

user defined flow

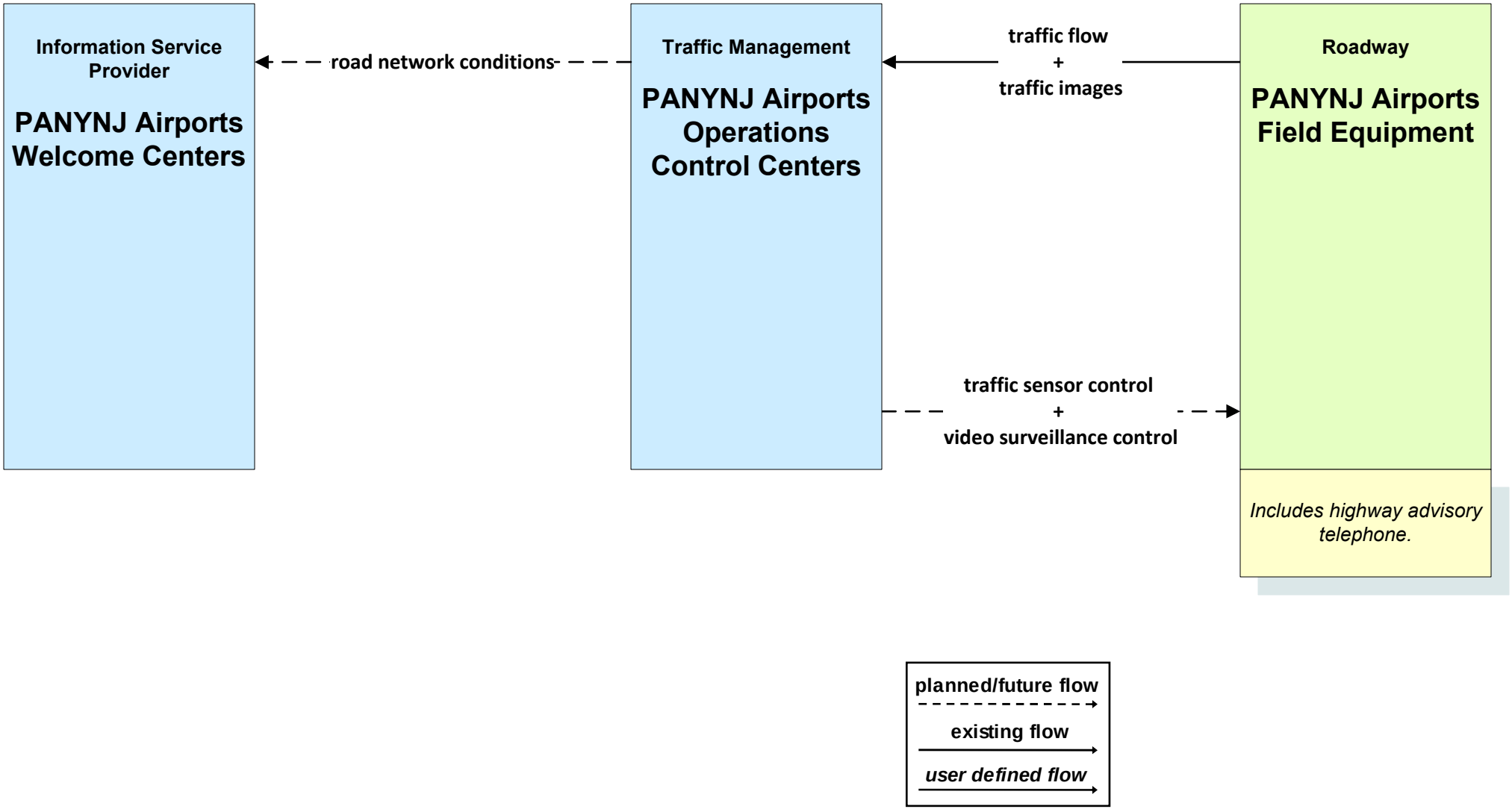
See ATIS02-09 for connections between JTMC and Traveler Information

ATMS01 - Network Surveillance
PANYNJ Tunnels/Bridges

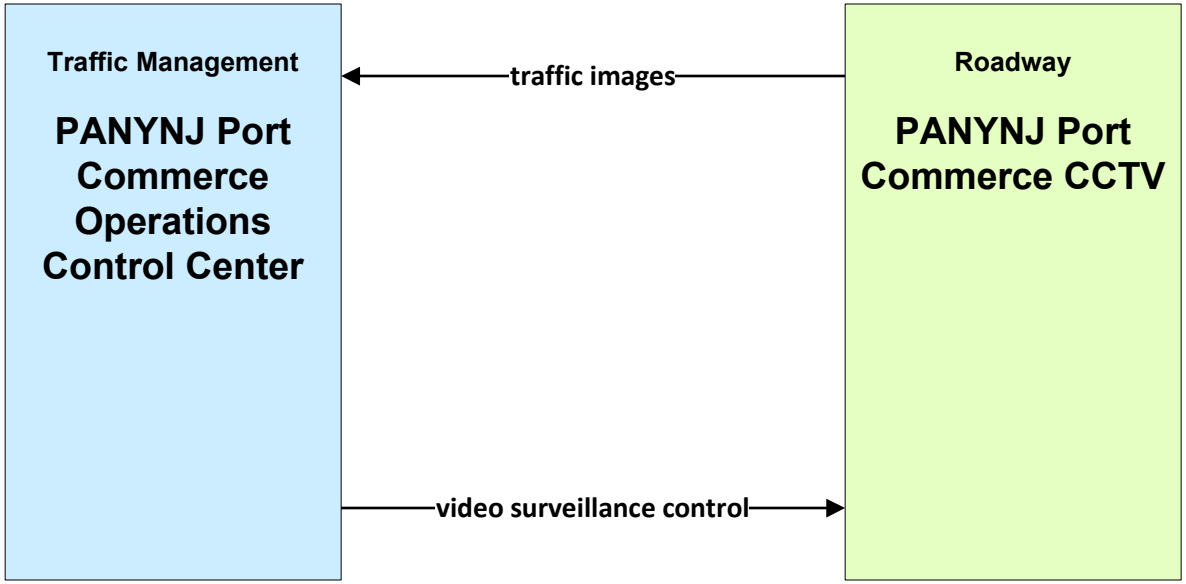




ATMS01 - Network Surveillance
PANYNJ Airports



ATMS01 - Network Surveillance
PANYNJ Port Commerce

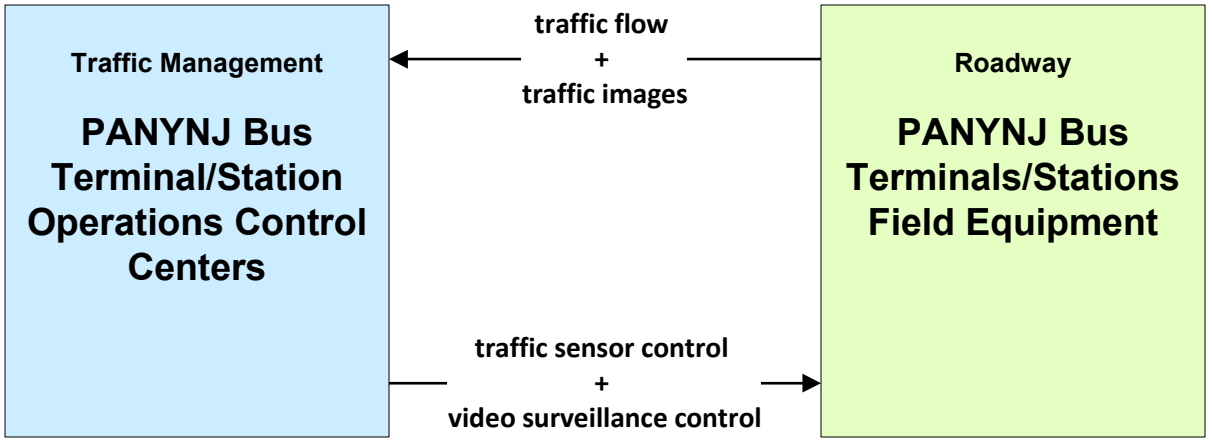


planned/future flow

existing flow

user defined flow

ATMS01 - Network Surveillance
PANYNJ Bus Terminals/Stations

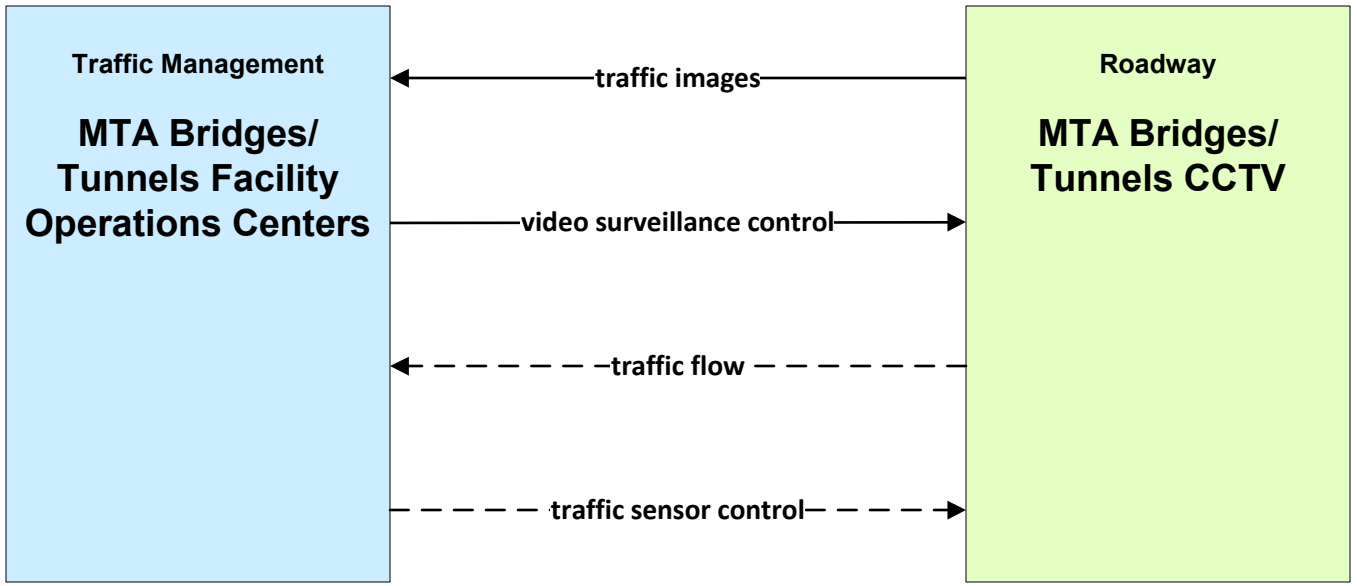


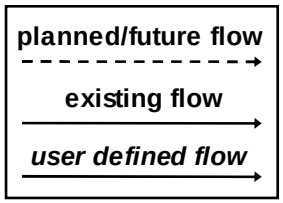
planned/future flow

existing flow

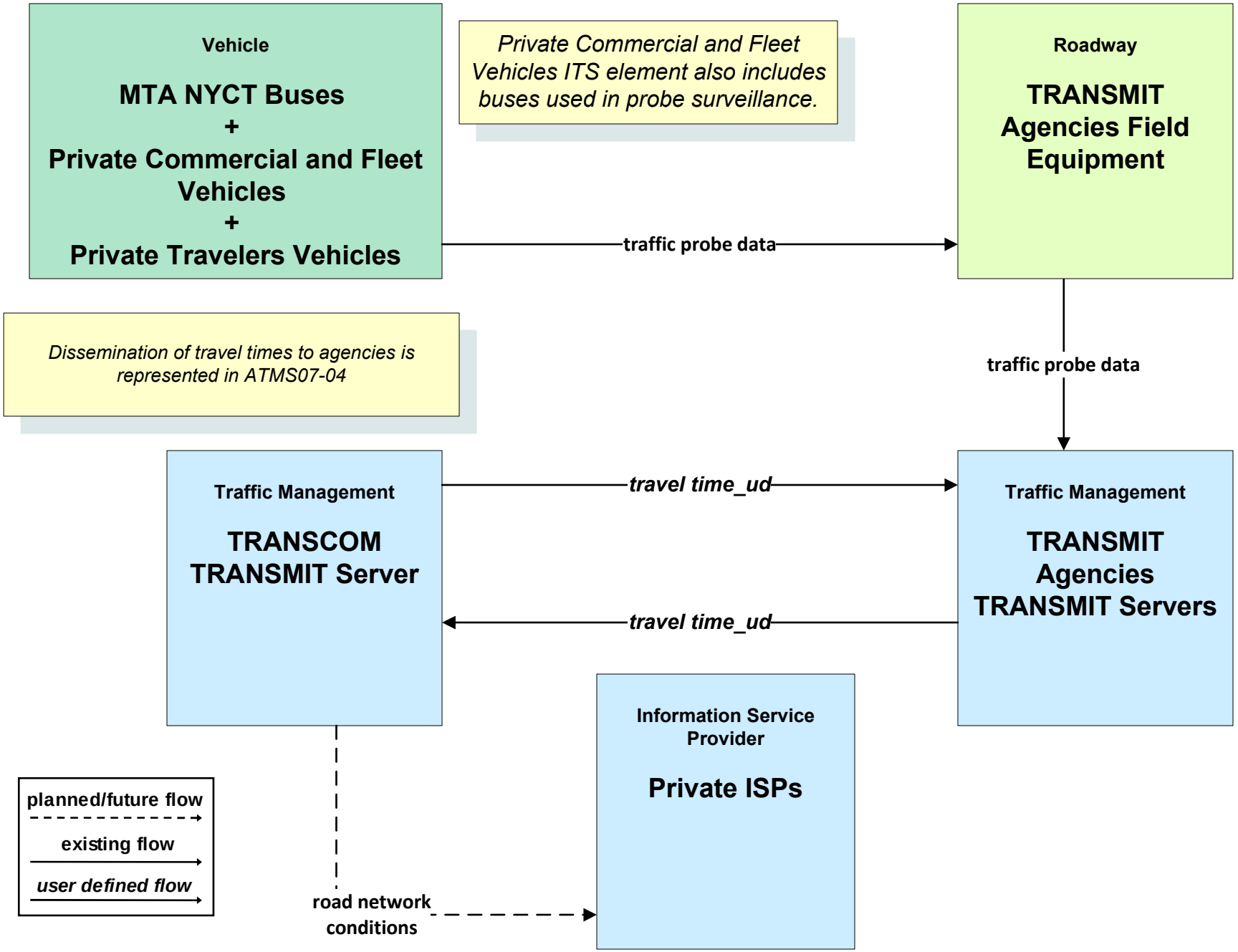
user defined flow

ATMS01 - Network Surveillance
MTA Bridges and Tunnels

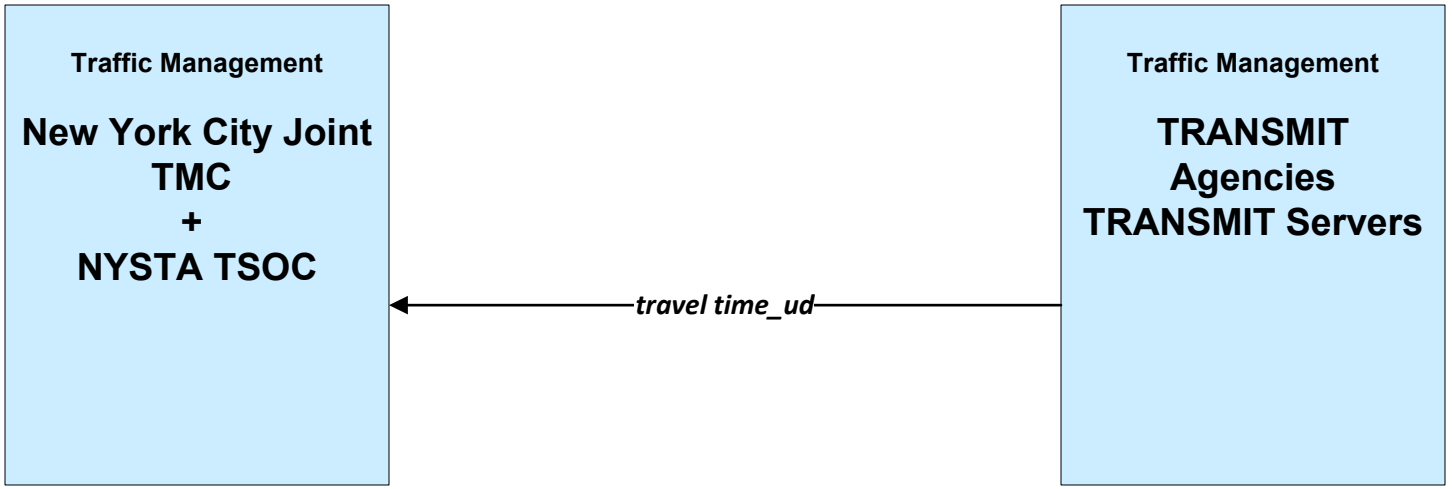




ATMS02 – Traffic Probe Surveillance
TRANSMIT



ATMS02 - Traffic Probe Surveillance
NYSDOT/NYSTA



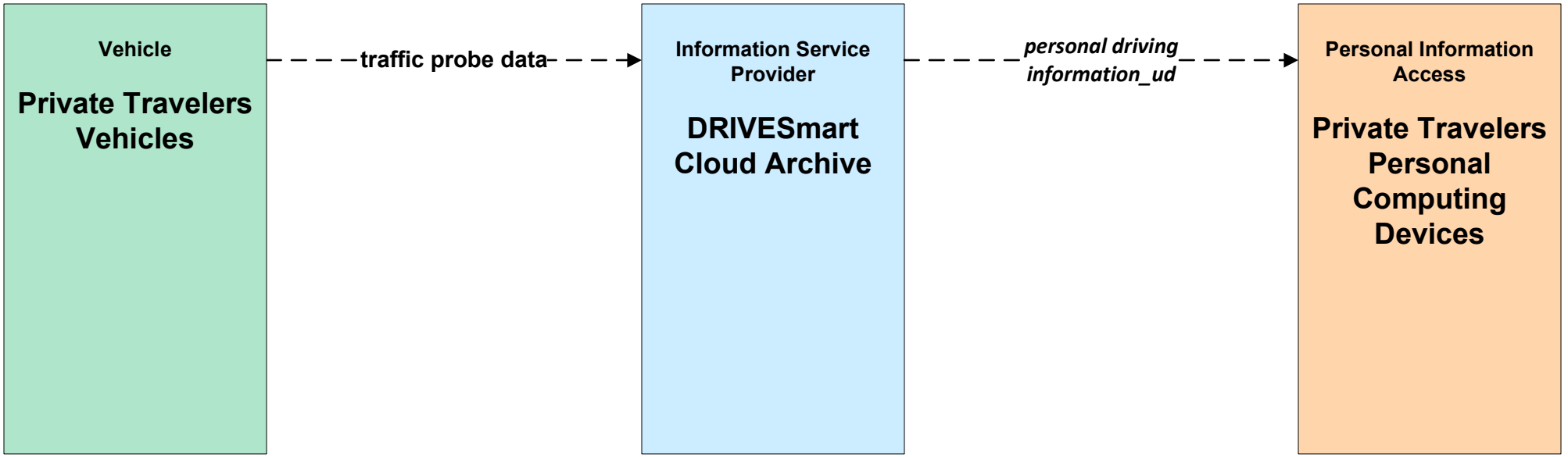
ATMS06 shows Travel Time Dissemination to Dynamic Message SIgns

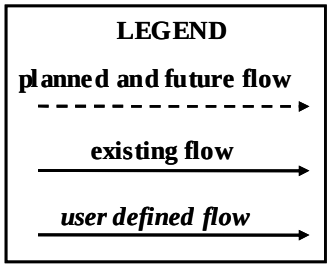
planned/future flow

existing flow

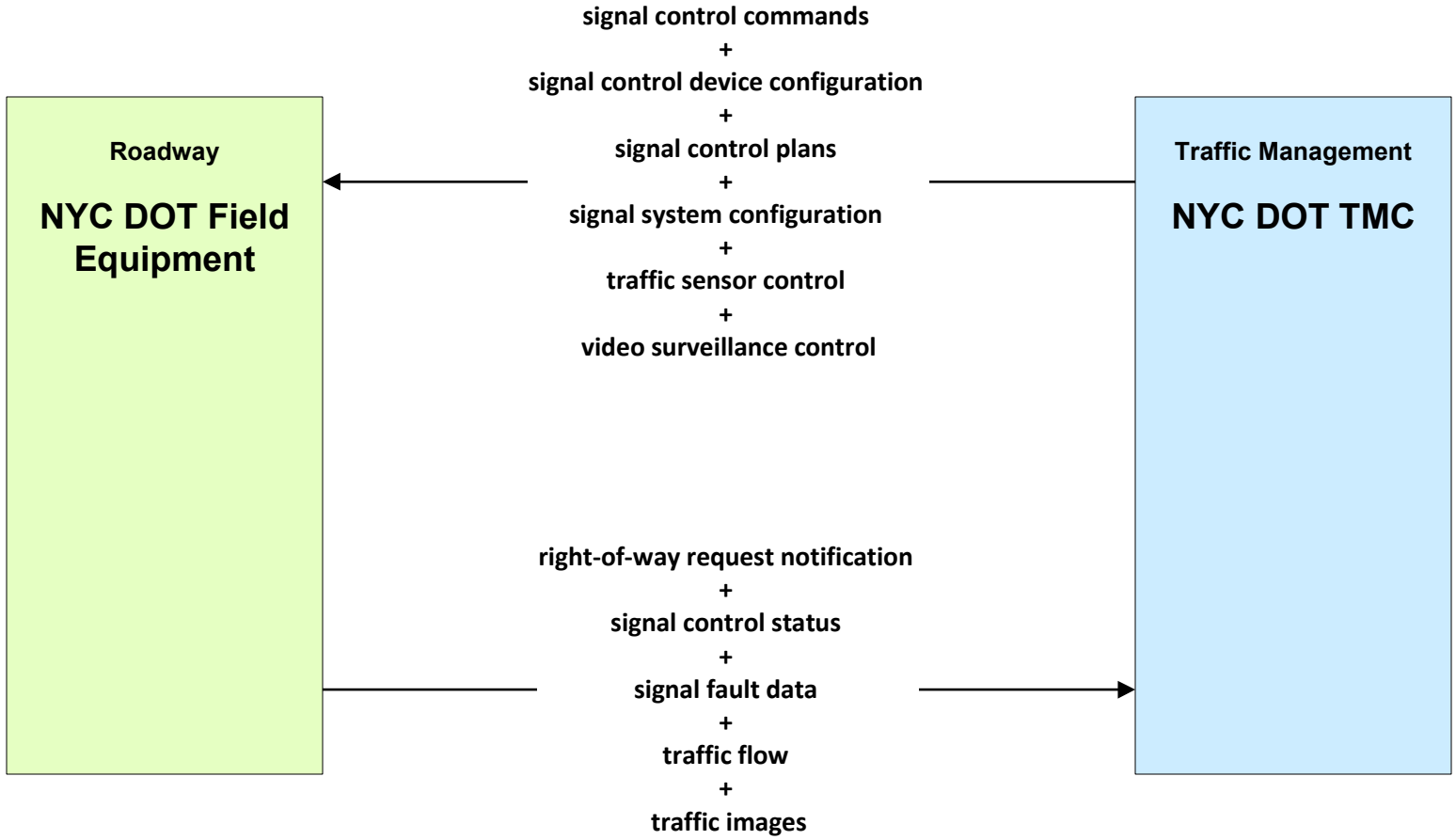
user defined flow

ATMS02 - Traffic Probe Surveillance
DRIVESmart





ATMS03 – Traffic Signal Control
NYC DOT



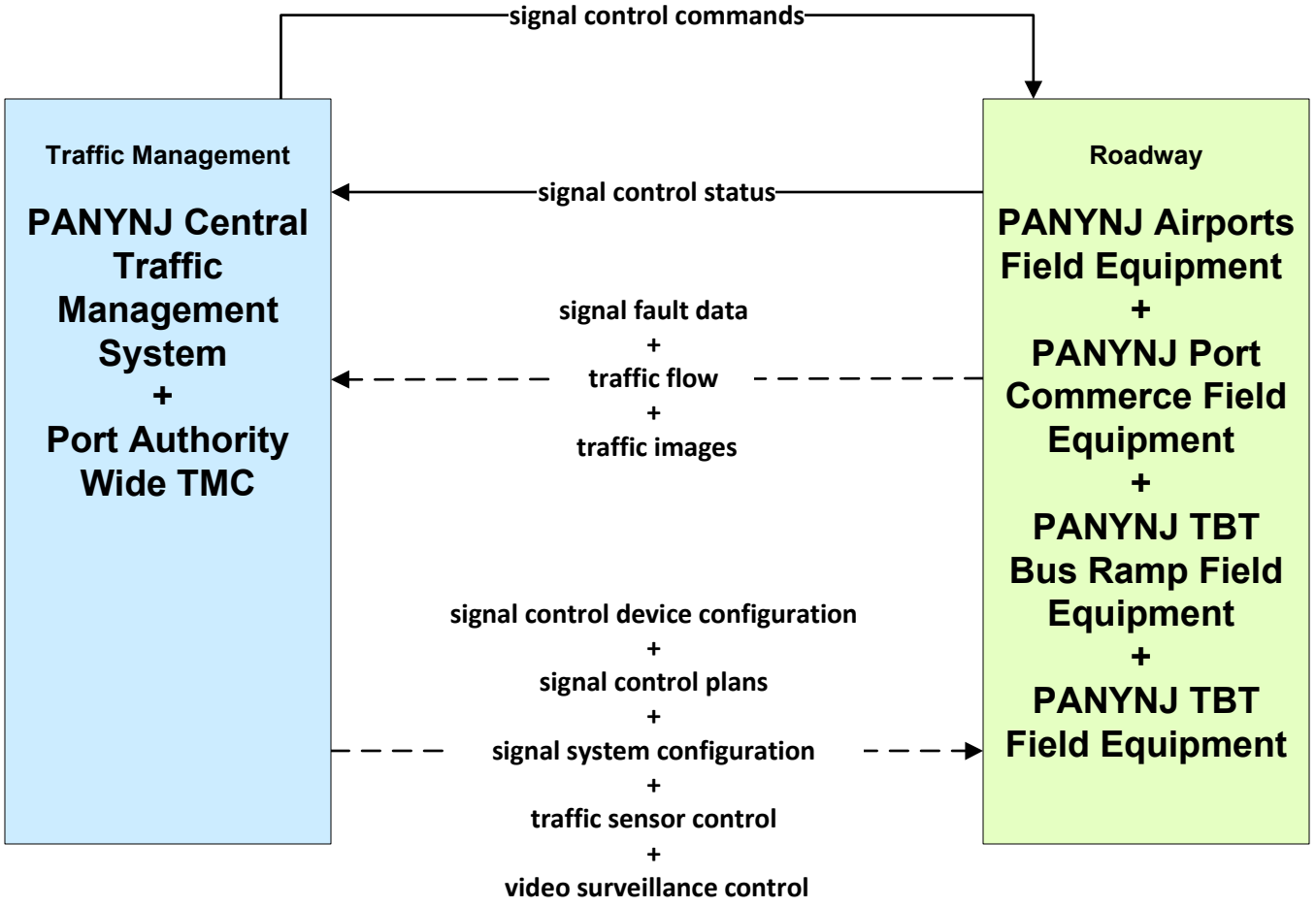
planned/future flow

existing flow

user defined flow

See ATIS02-02 for connections between JTMC and Traveler Information

ATMS03 – Traffic Signal Control
PANYNJ Airports and Port Commerce

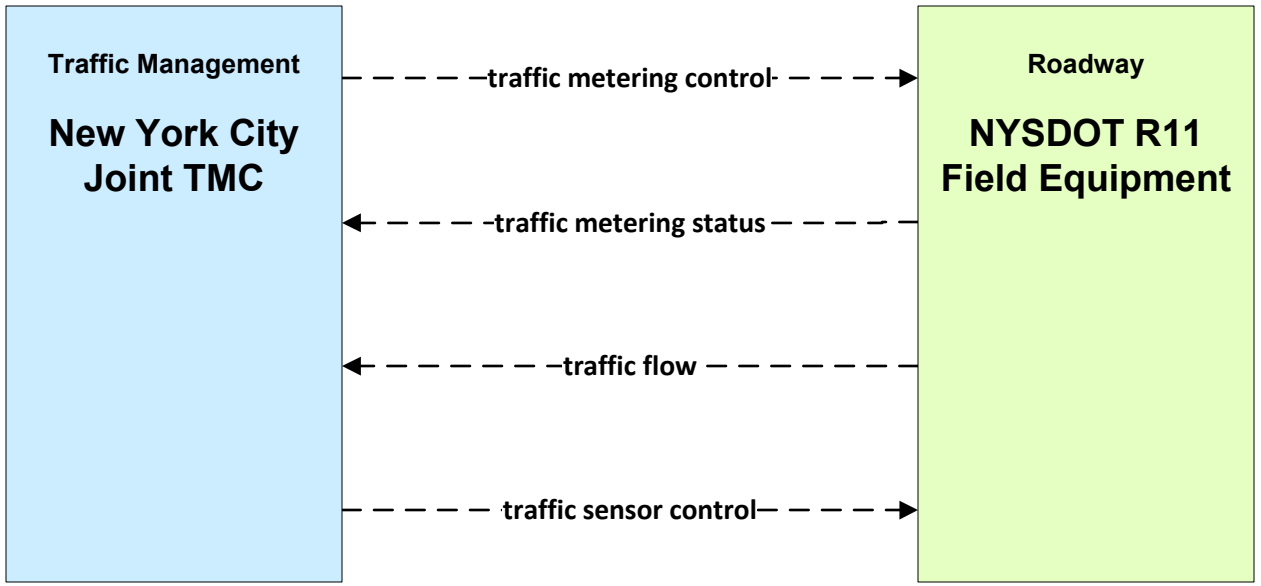


planned/future flow

existing flow

user defined flow

ATMS04 – Traffic Metering
NYSDOT R11

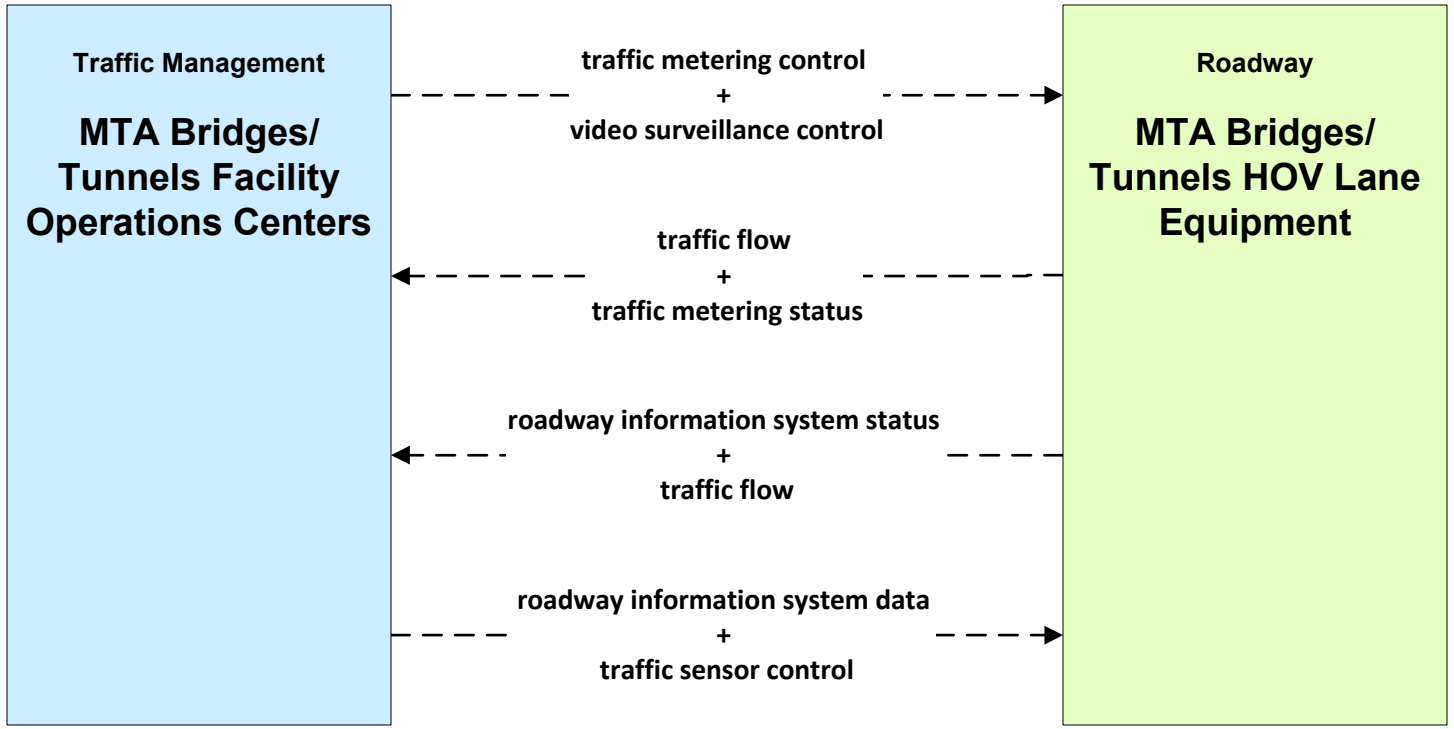


planned/future flow

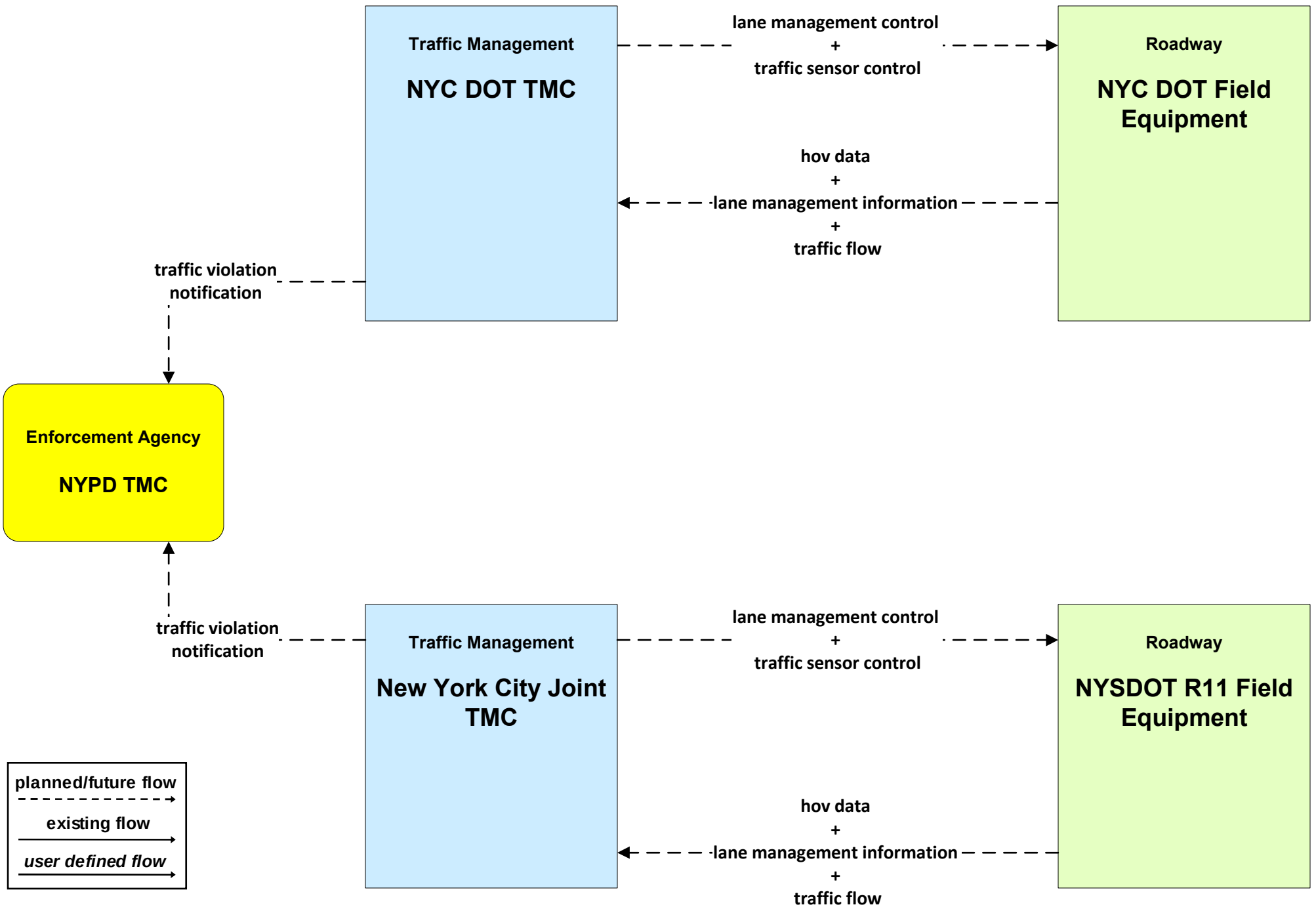
existing flow

user defined flow

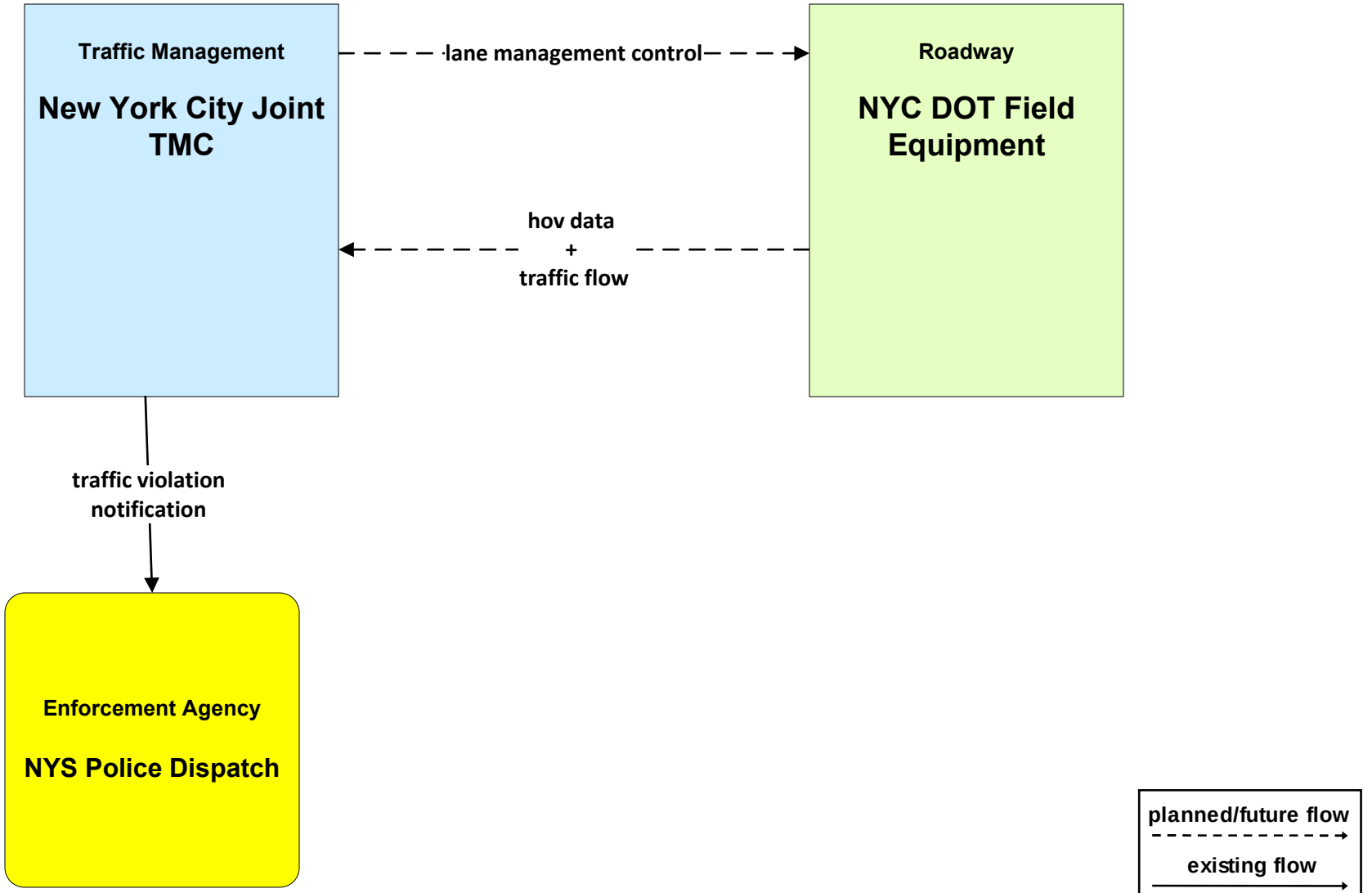
ATMS04 – Traffic Metering
MTA Bridges and Tunnels



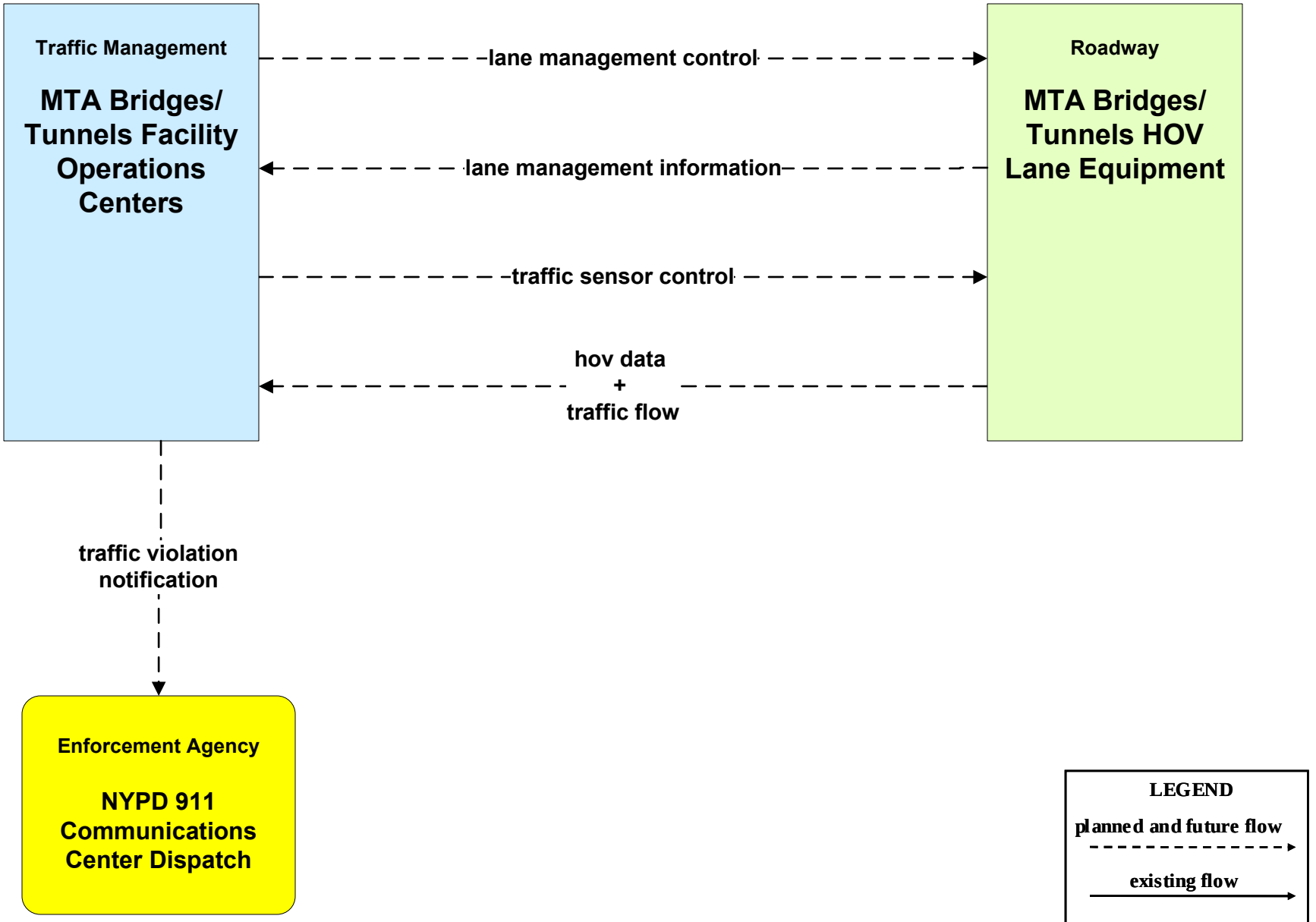
ATMS05 - HOV Lane Management
NYC DOT/NYSDOT



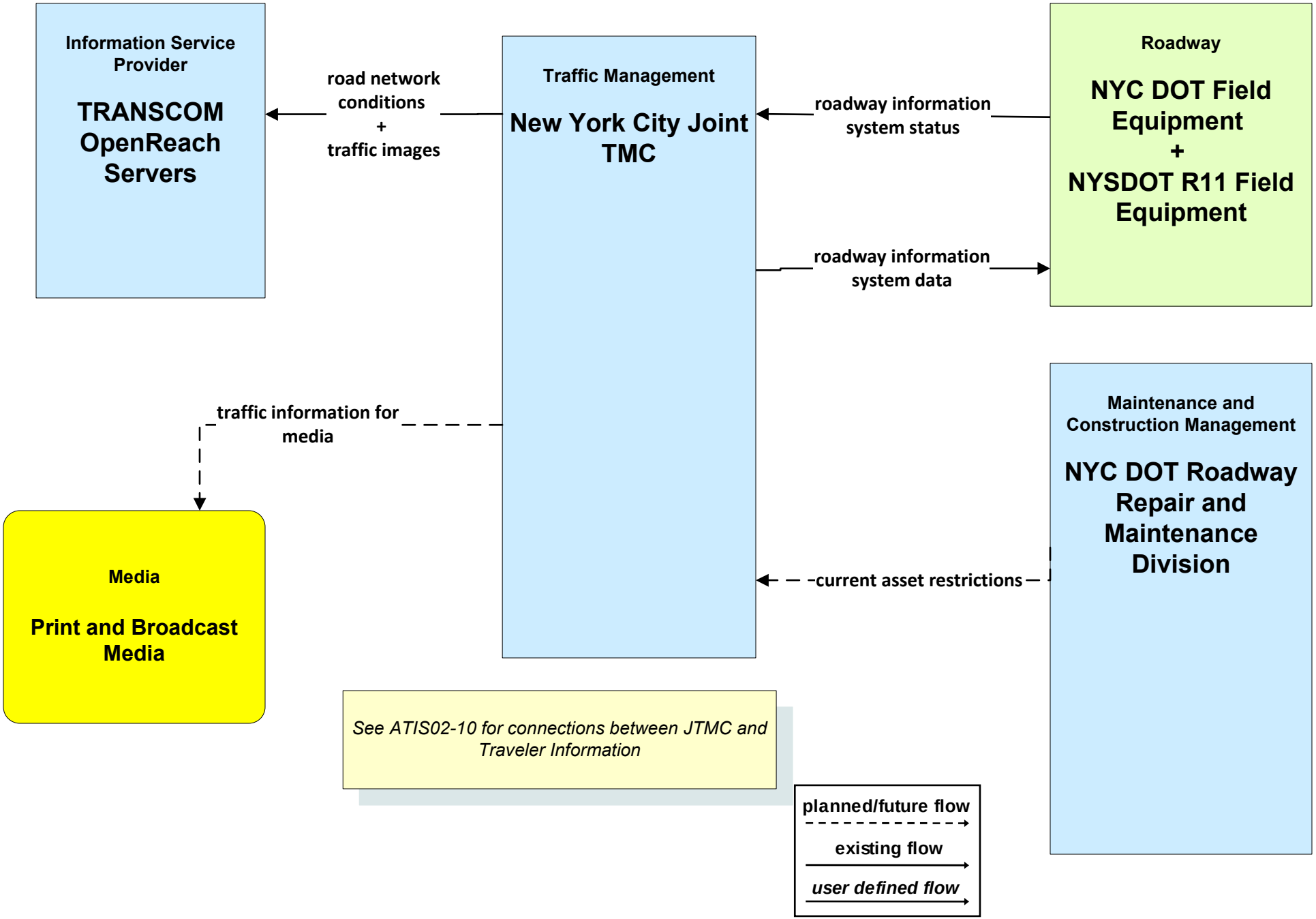
ATMS05 - HOV Lane Management
NYC DOT - East River Bridge Crossings HOV



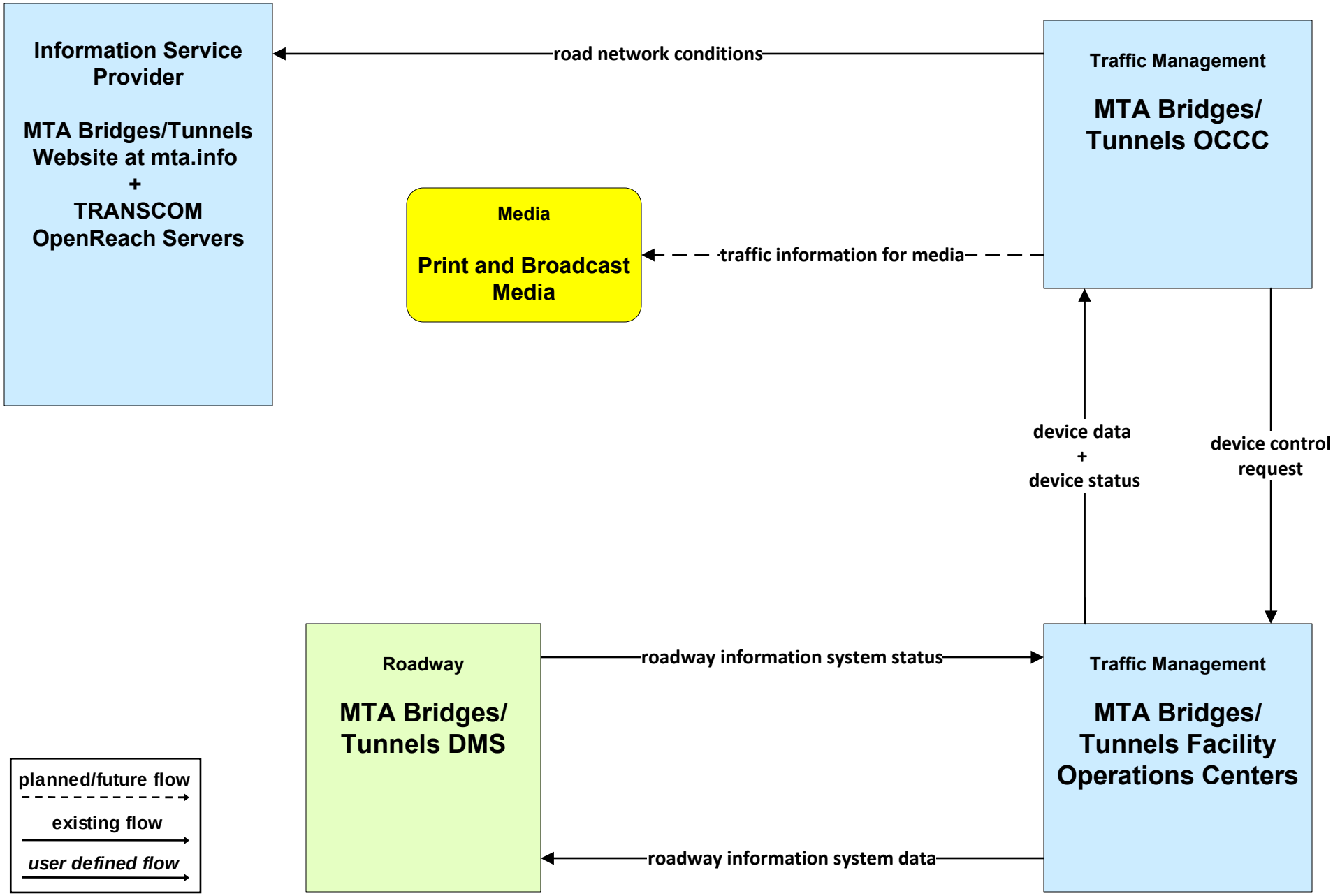
ATMS05 - HOV Lane Management
MTA Bridges and Tunnels



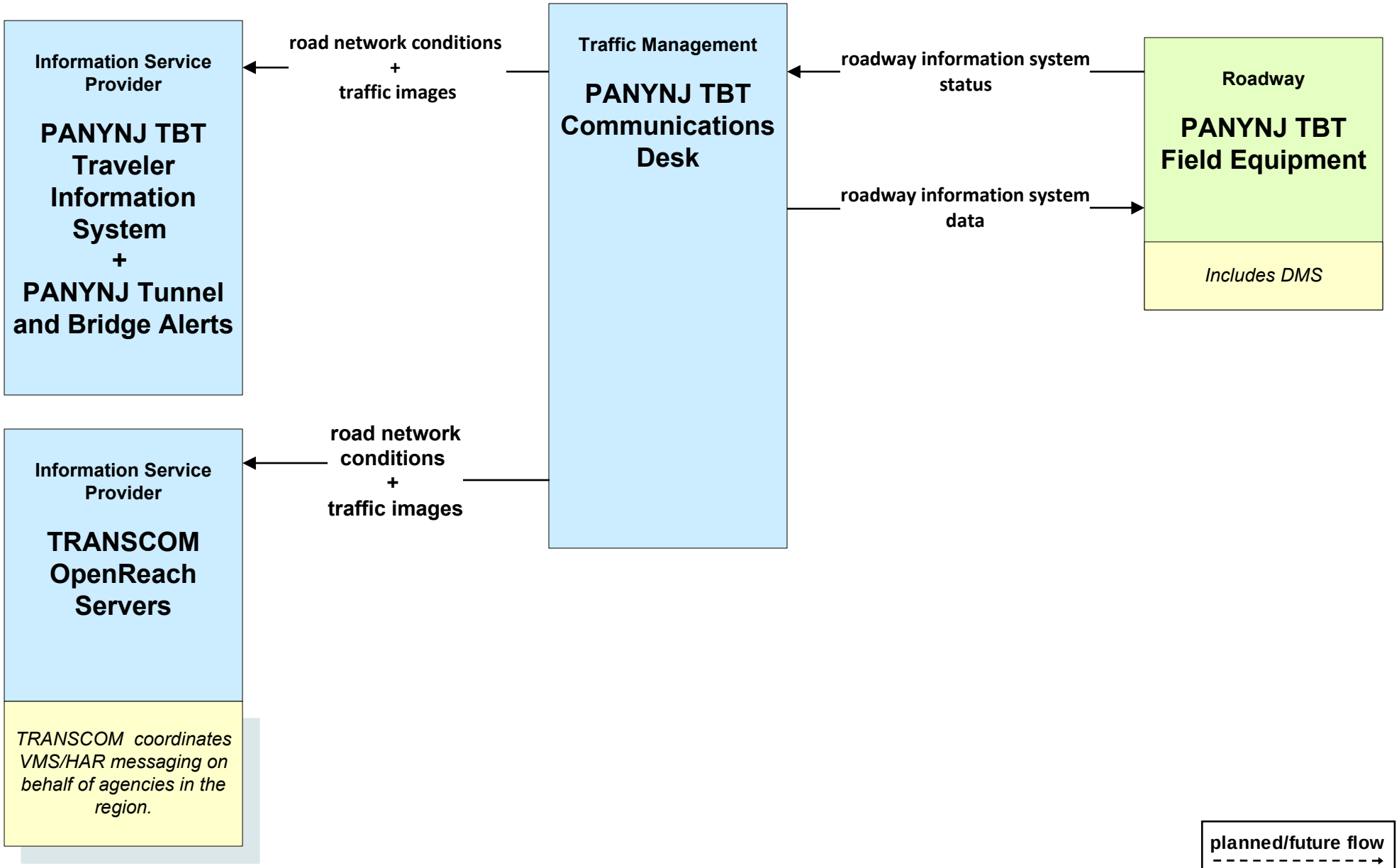
ATMS06 - Traffic Information Dissemination
New York City Joint TMC



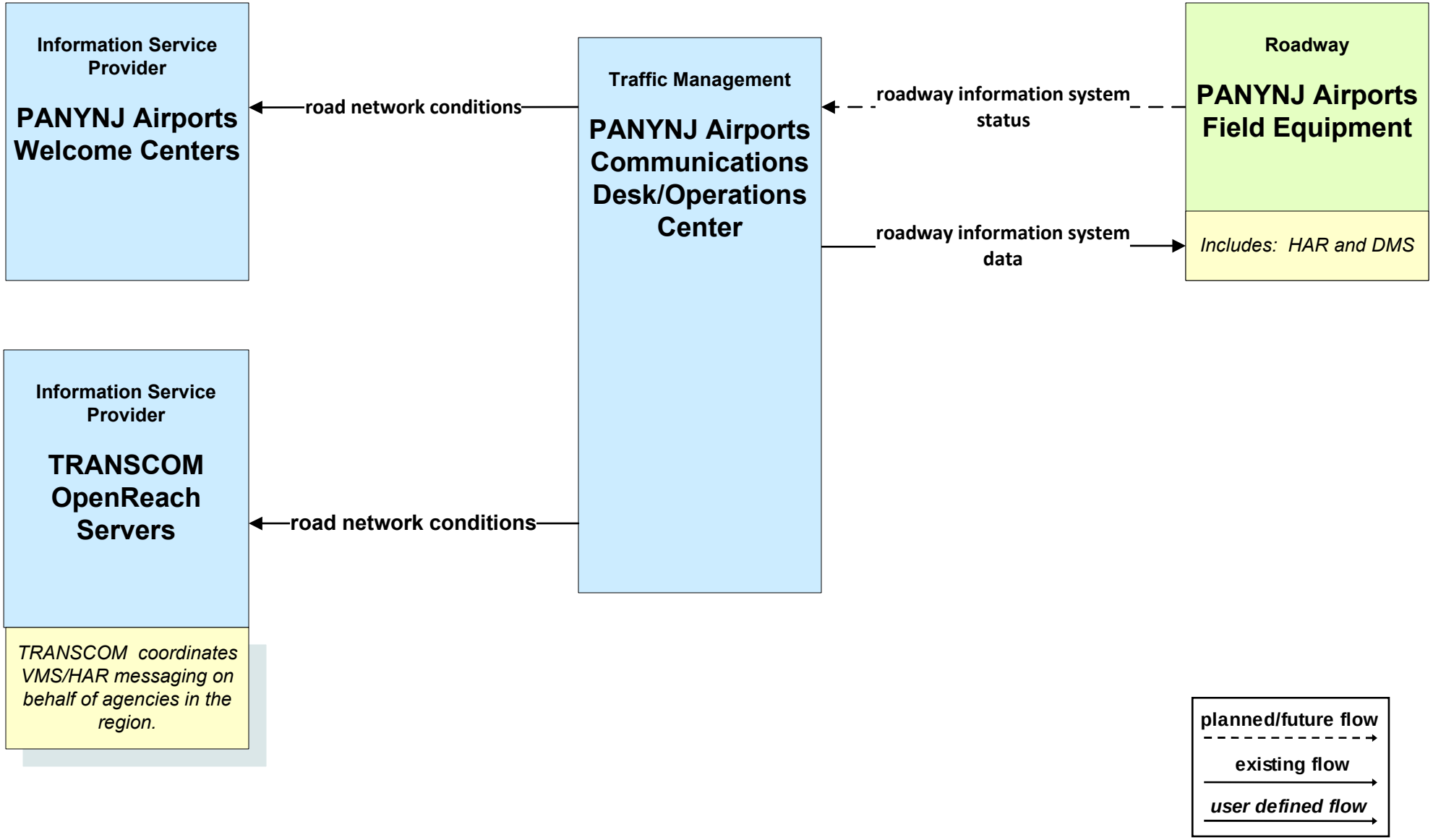
ATMS06 - Traffic Information Dissemination
MTA Bridges and Tunnels



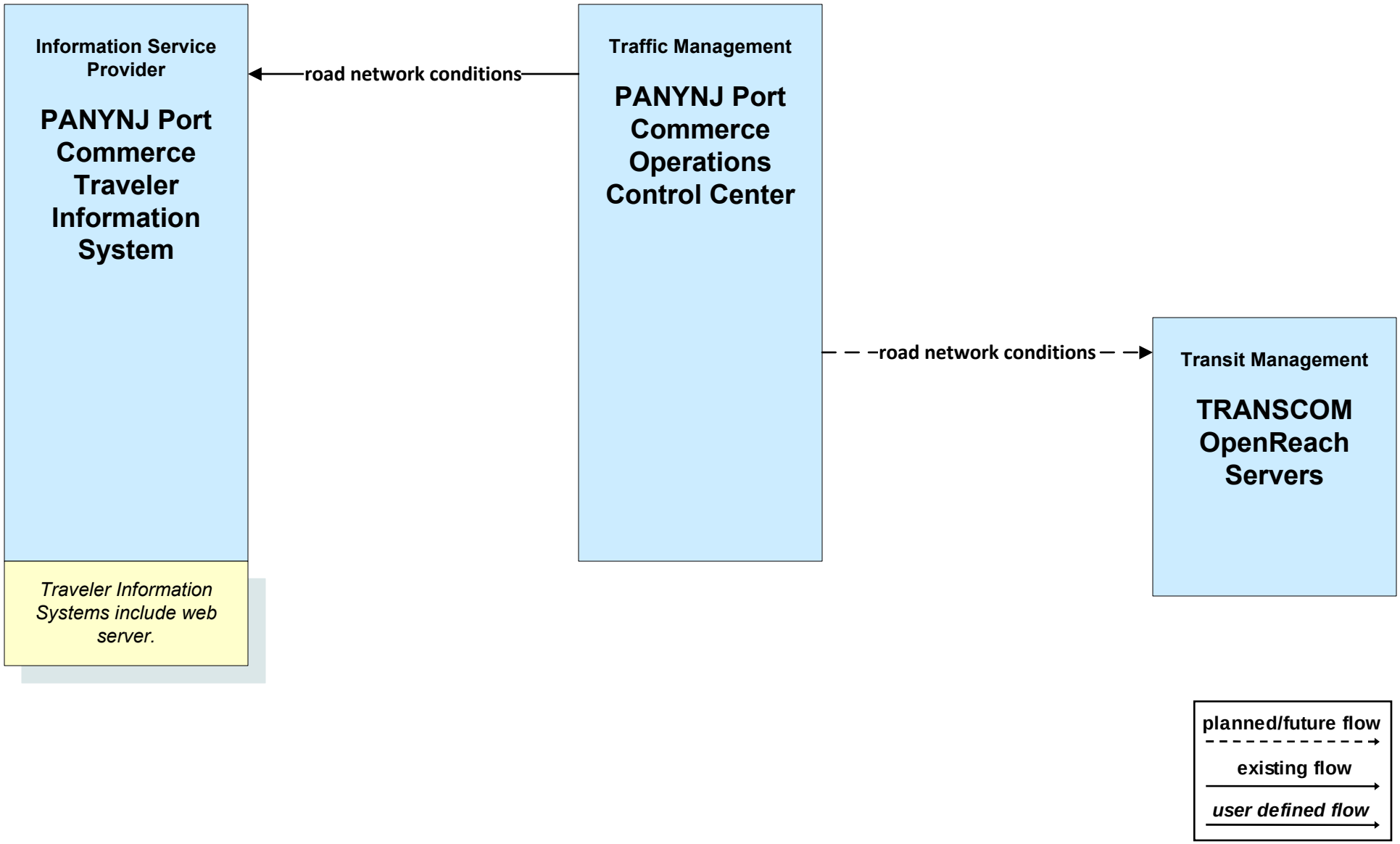
ATMS06 - Traffic Information Dissemination
PANYNJ Tunnels/Bridges



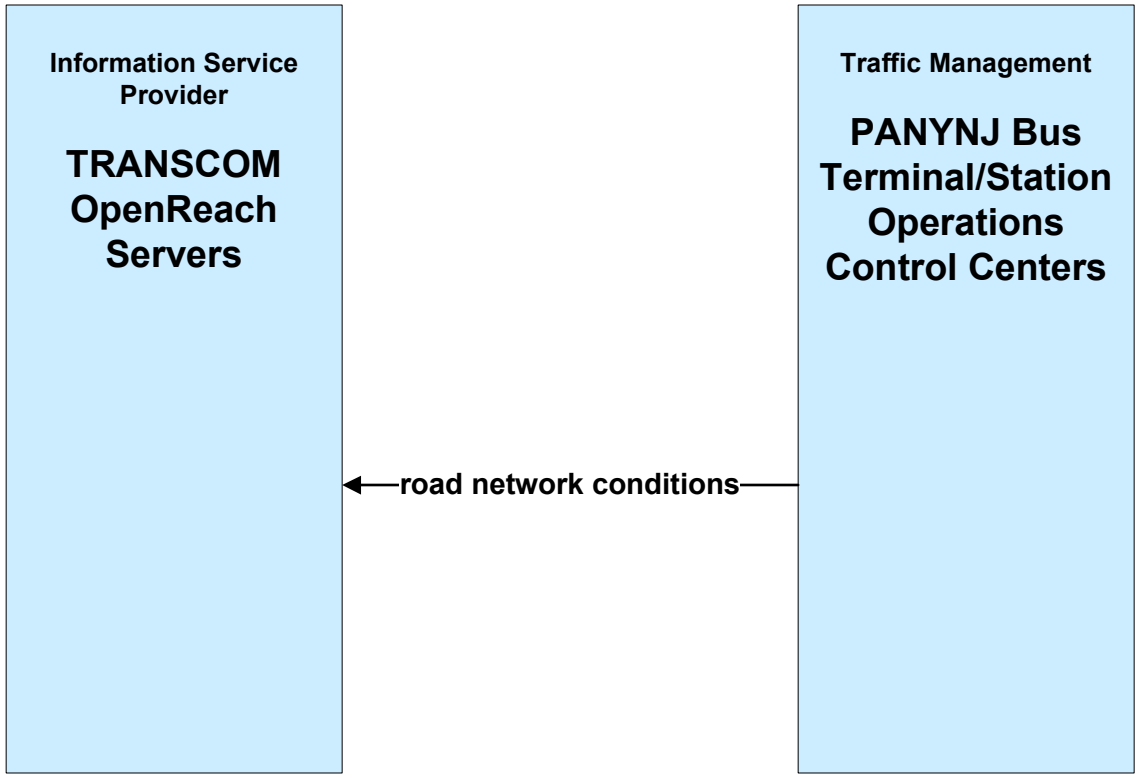
ATMS06 - Traffic Information Dissemination
PANYNJ Airports



ATMS06 - Traffic Information Dissemination
PANYNJ Port Commerce



ATMS06 - Traffic Information Dissemination
PANYNJ Bus Terminals/Stations

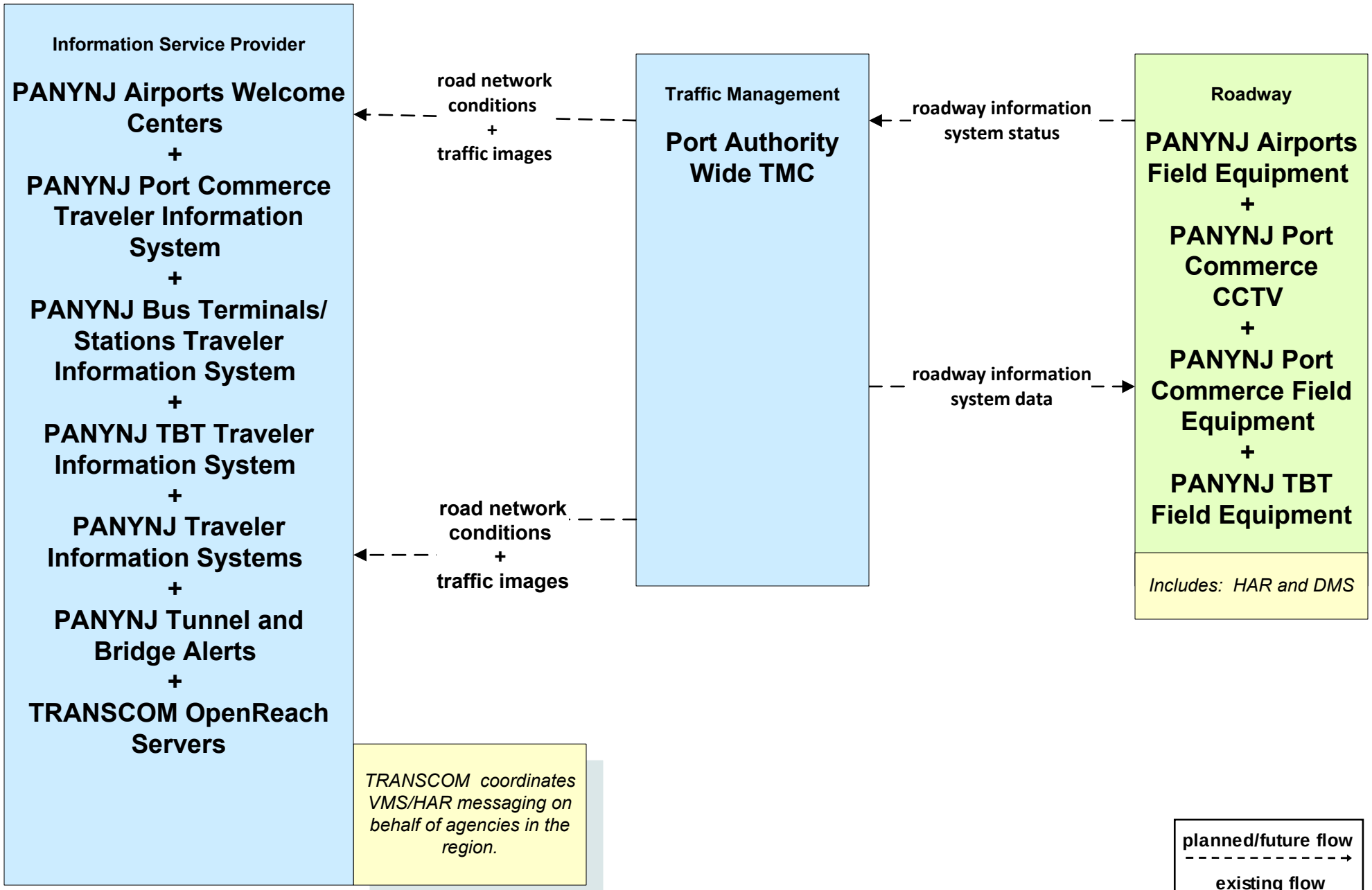


planned/future flow

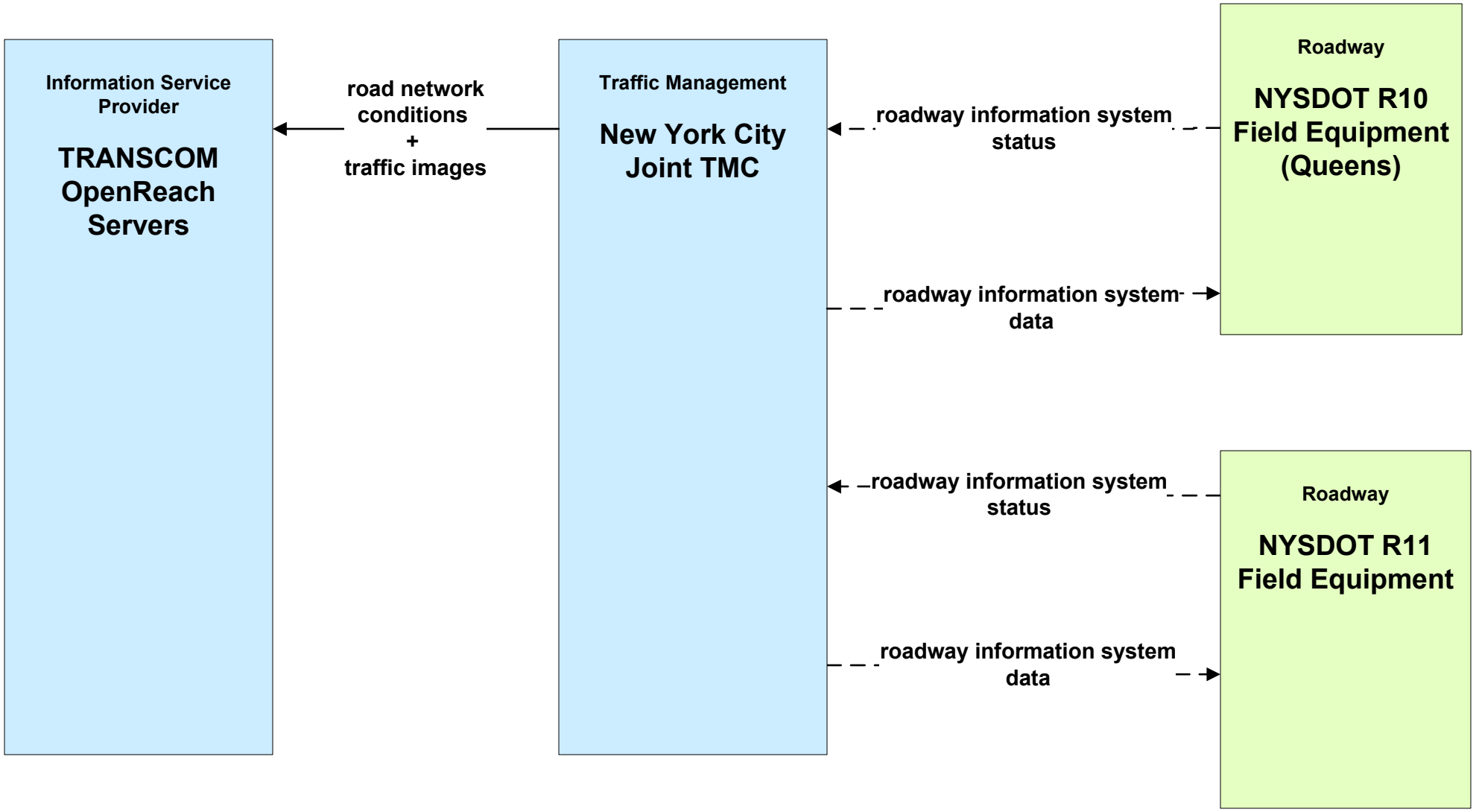
existing flow

user defined flow

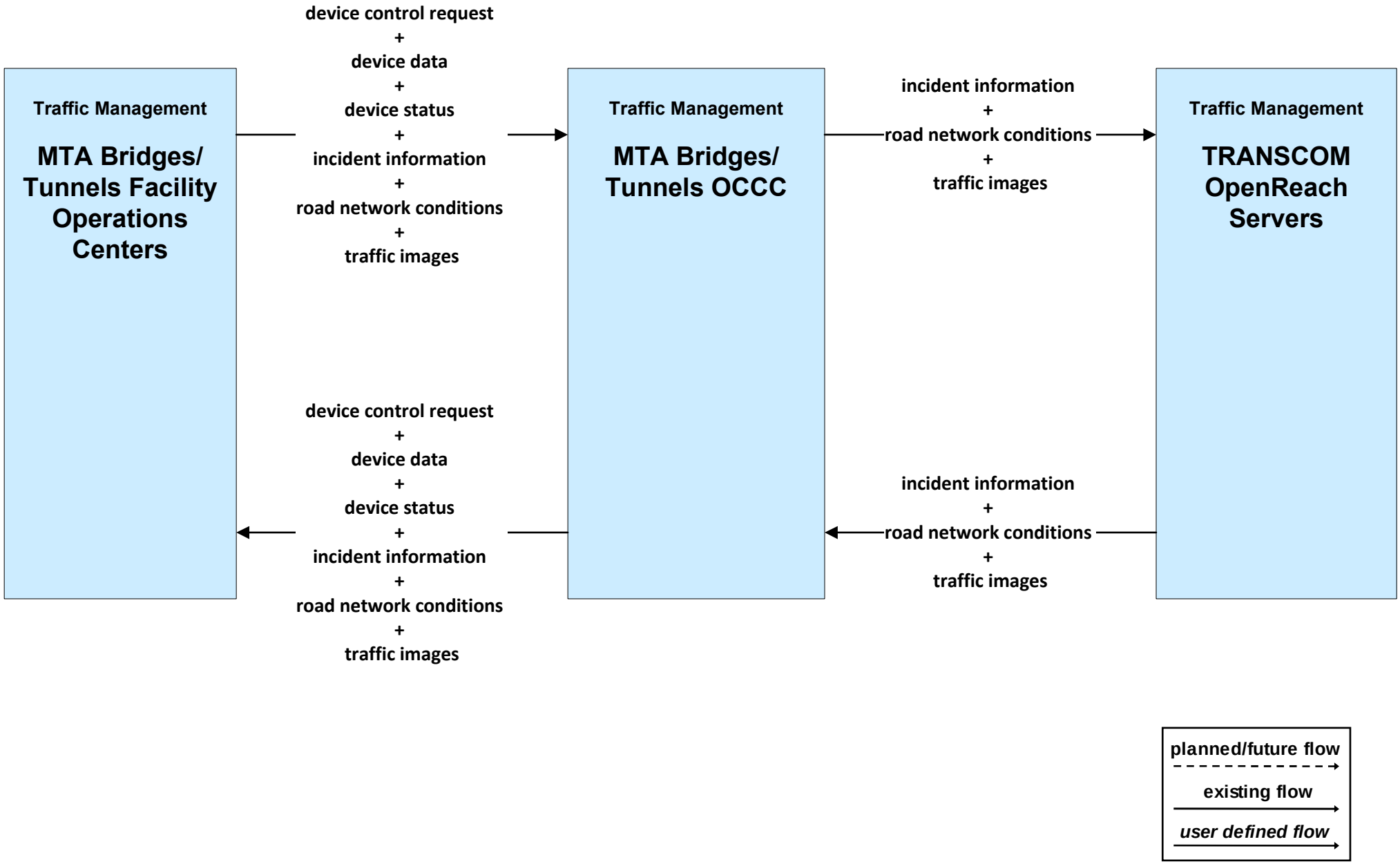
ATMS06 - Traffic Information Dissemination
PANYNJ Central Operations Center



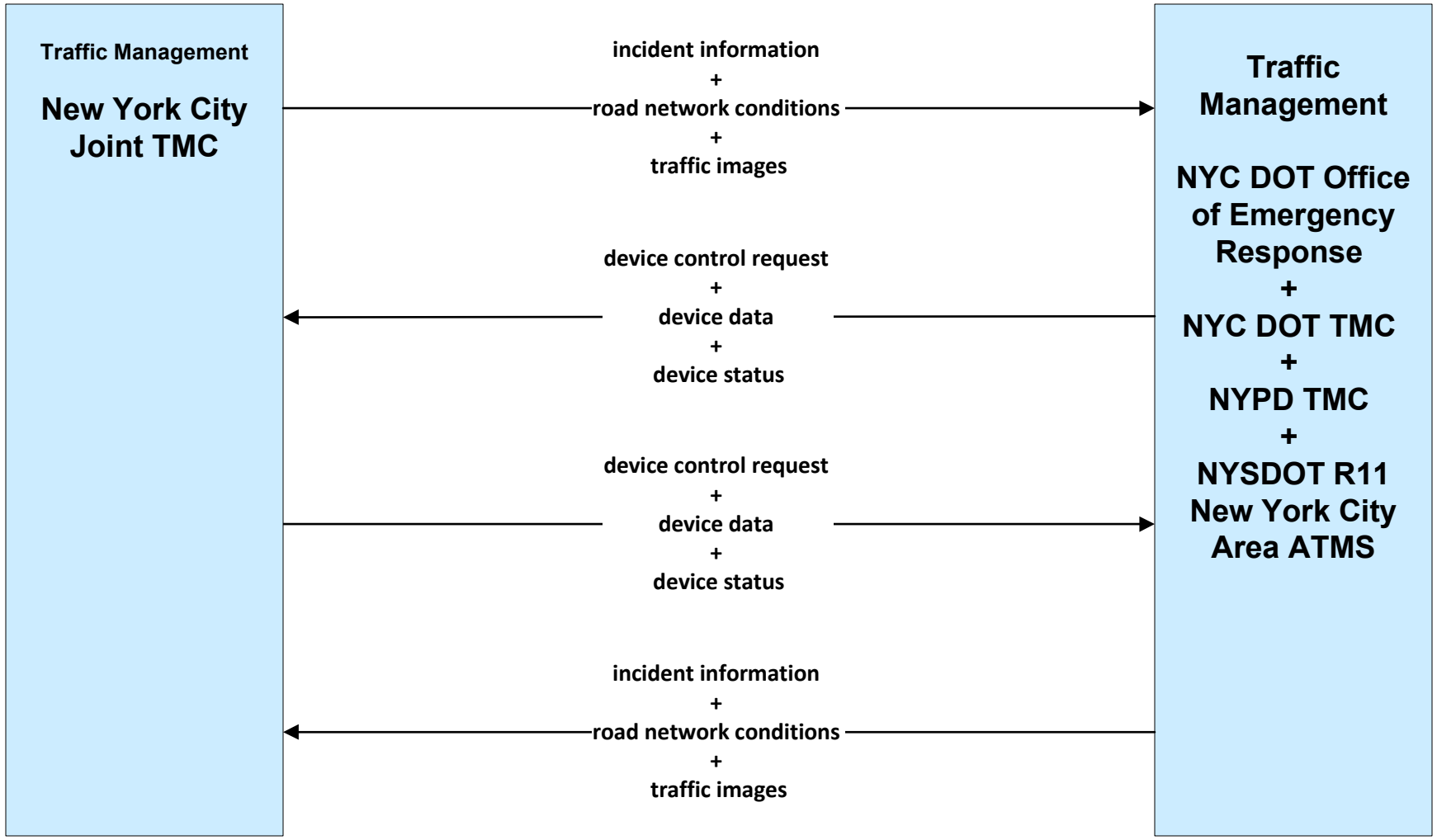
ATMS06 - Traffic Information Dissemination
NYSDOT



ATMS07 - Regional Traffic Management
MTA Bridges and Tunnels



ATMS07 - Regional Traffic Management
New York City Joint TMC (1 of 2)

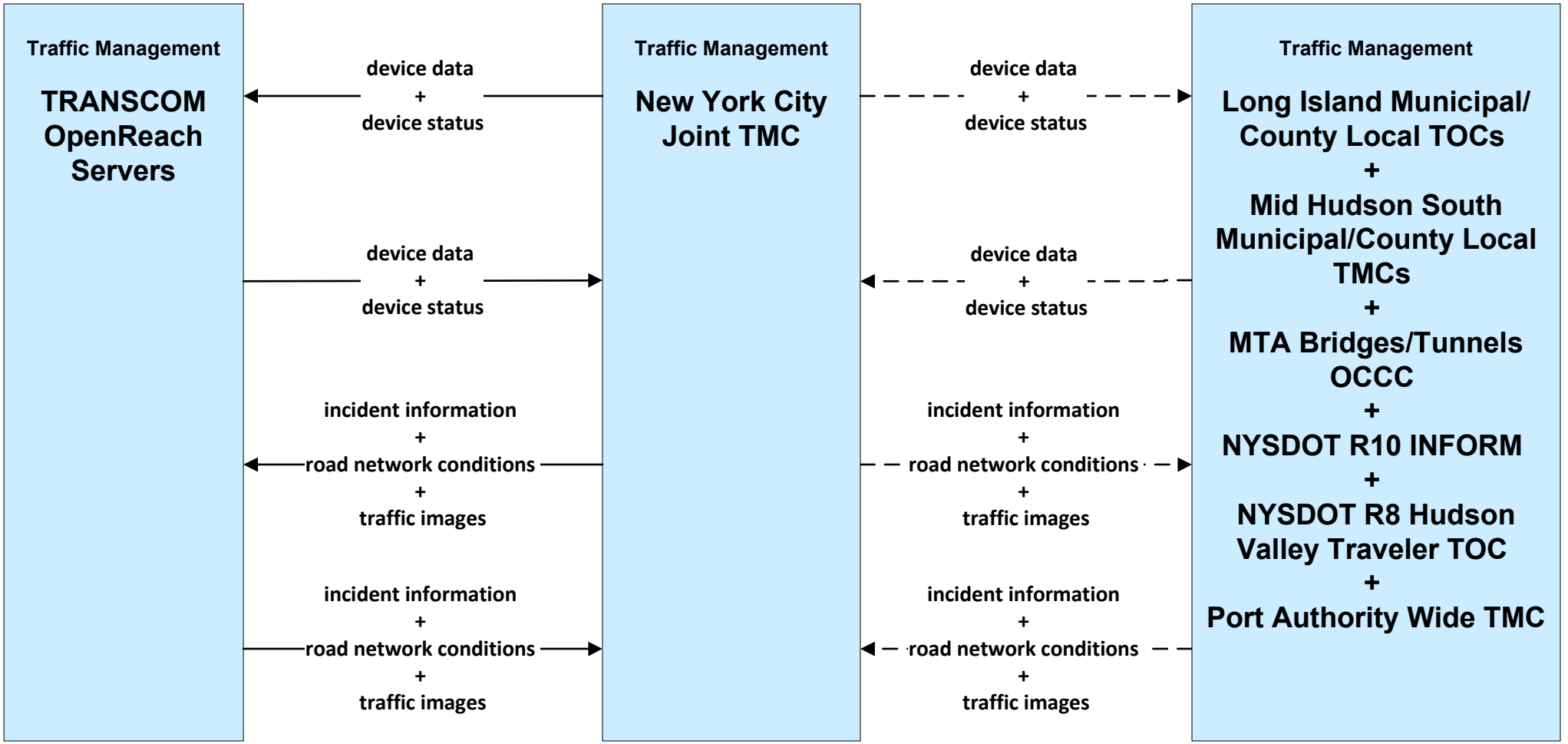


planned/future flow

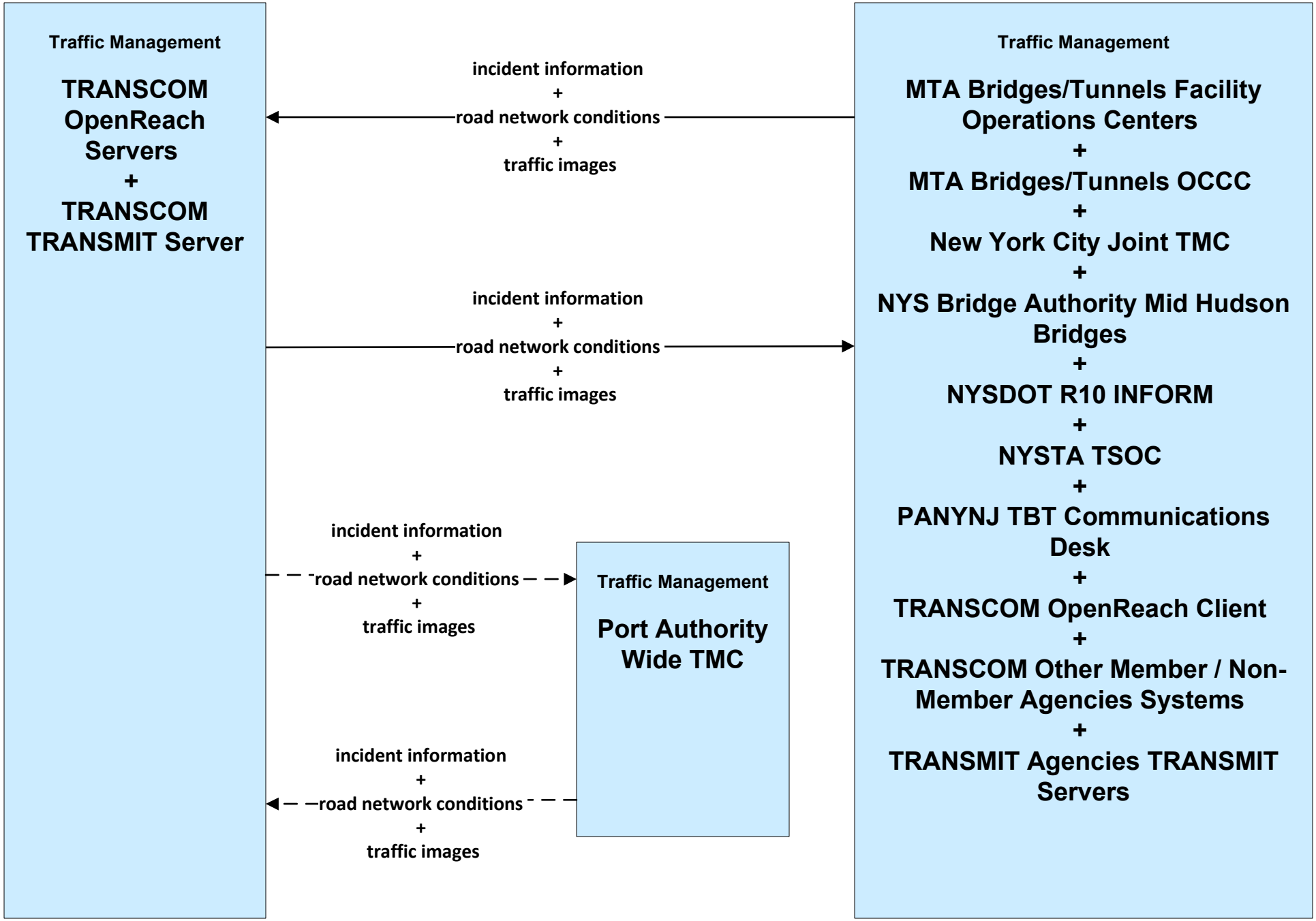
existing flow

user defined flow

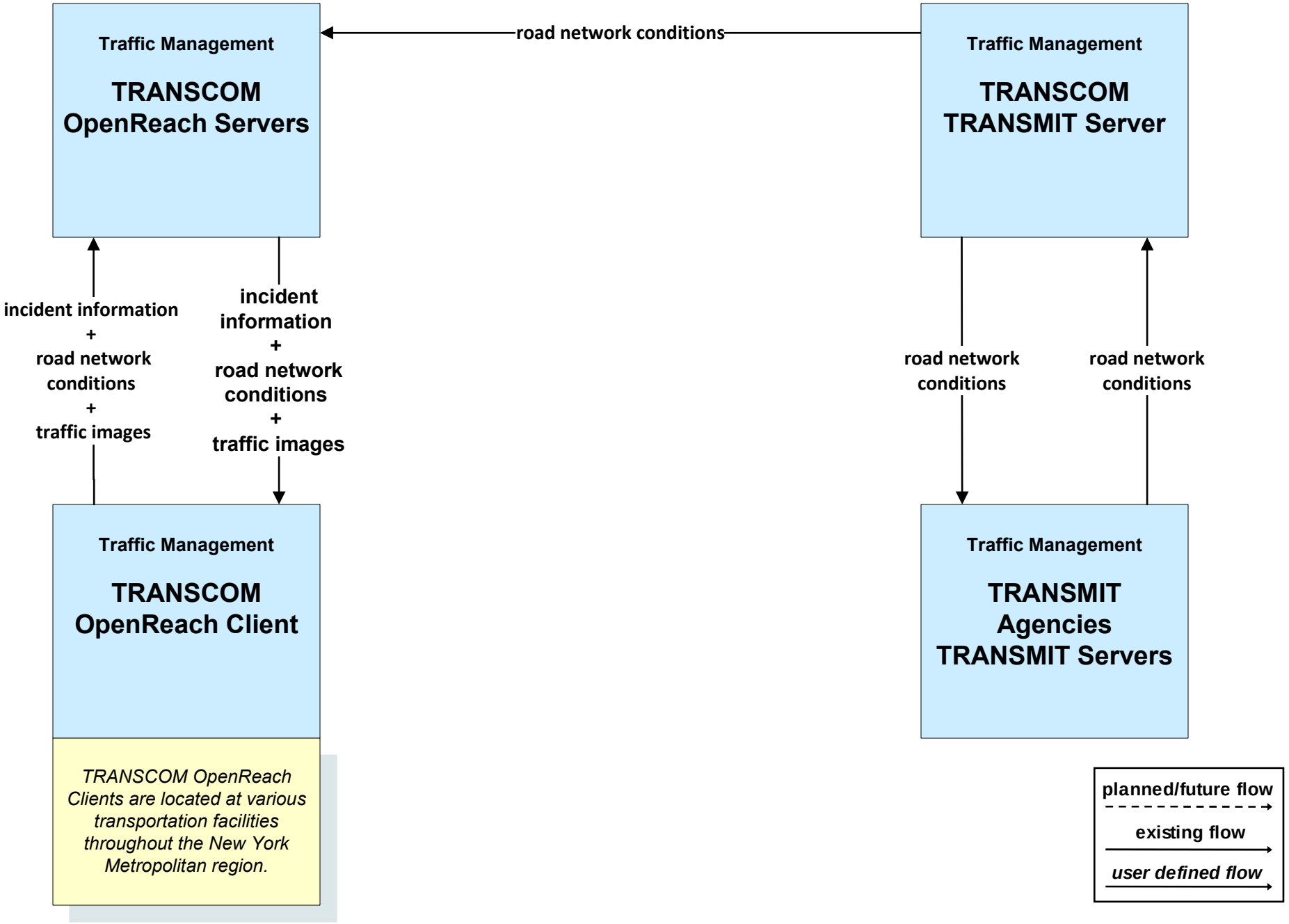
ATMS07 - Regional Traffic Management
New York City Joint TMC (2 of 2)



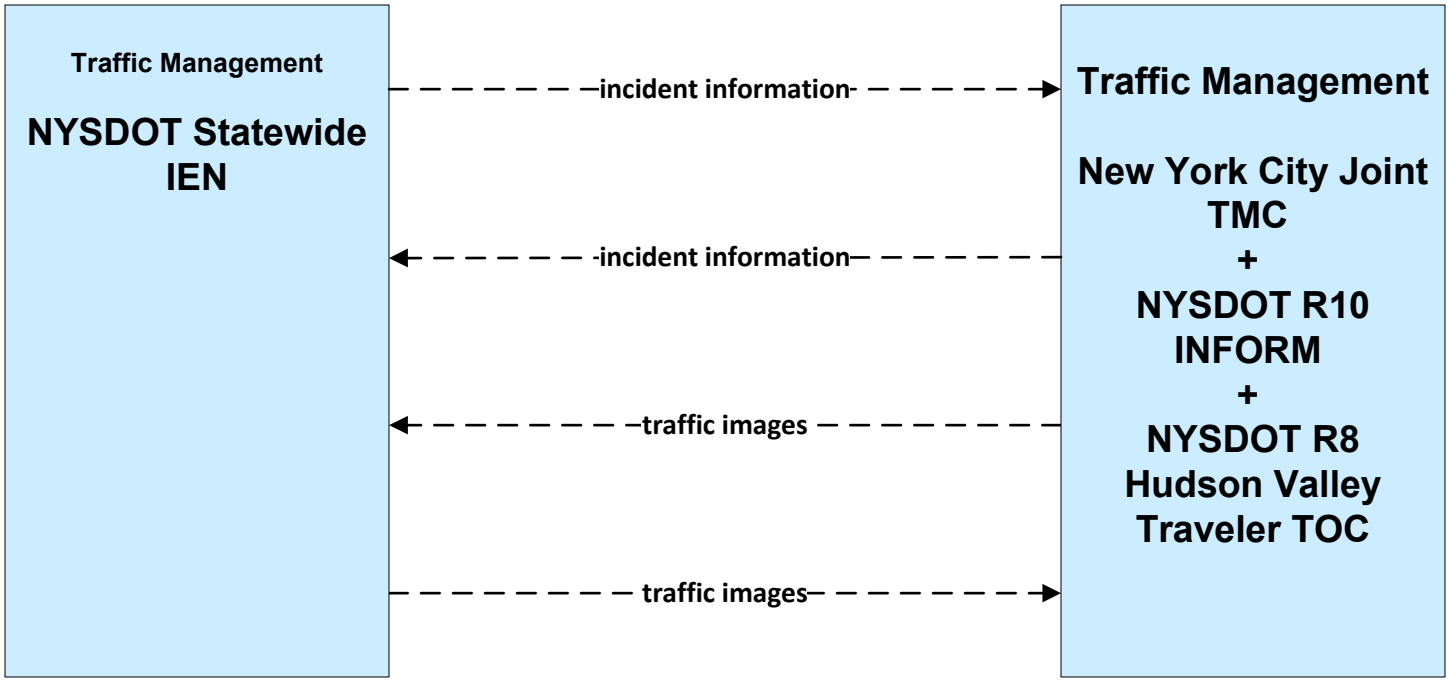
ATMS07 - Regional Traffic Management
TRANSCOM Operations Information Center

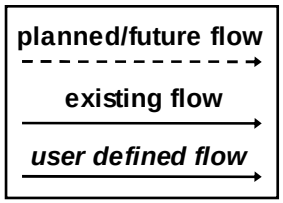


ATMS07 - Regional Traffic Management
TRANSCOM

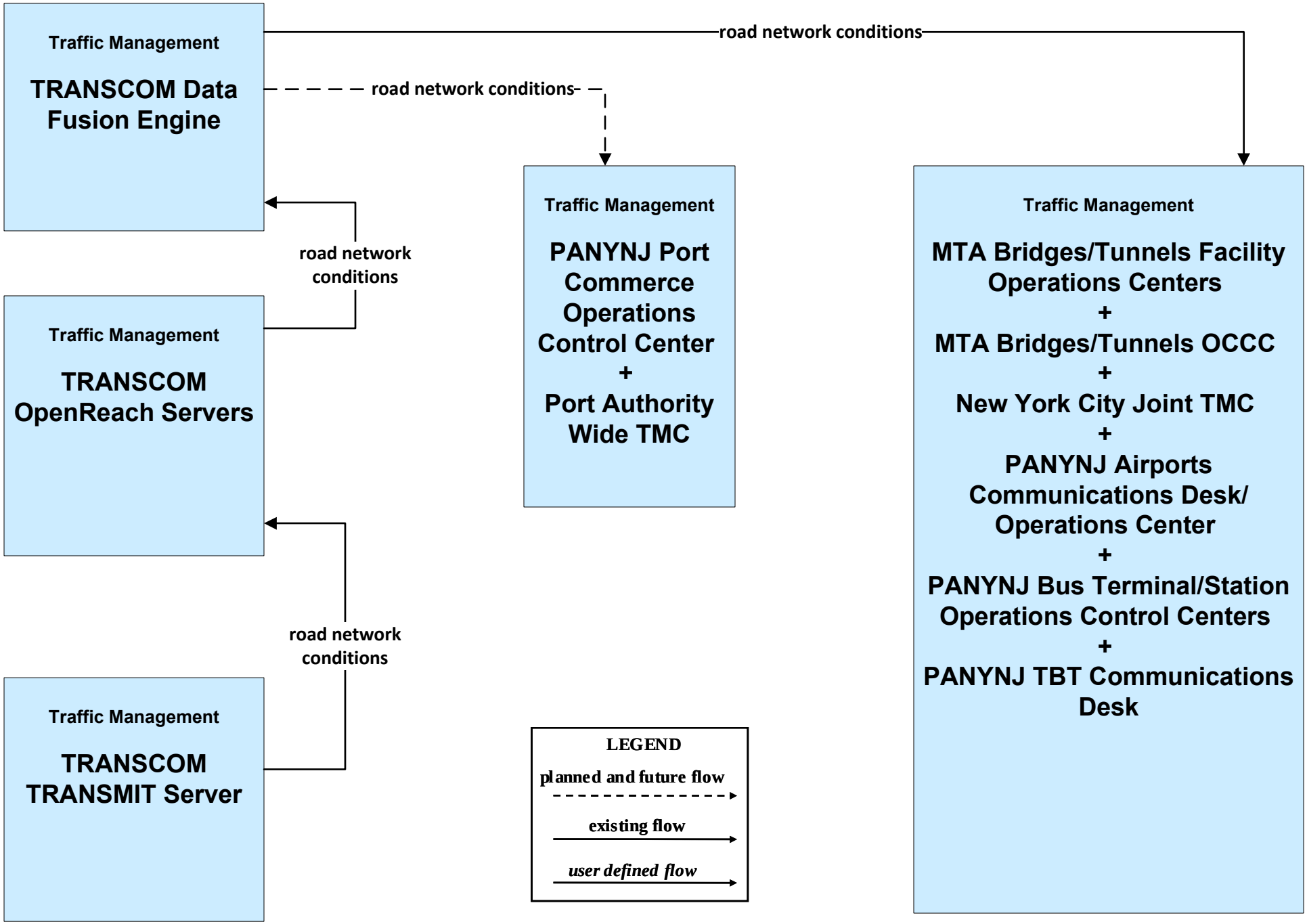


ATMS07 - Regional Traffic Management
NYSDOT Statewide IEN

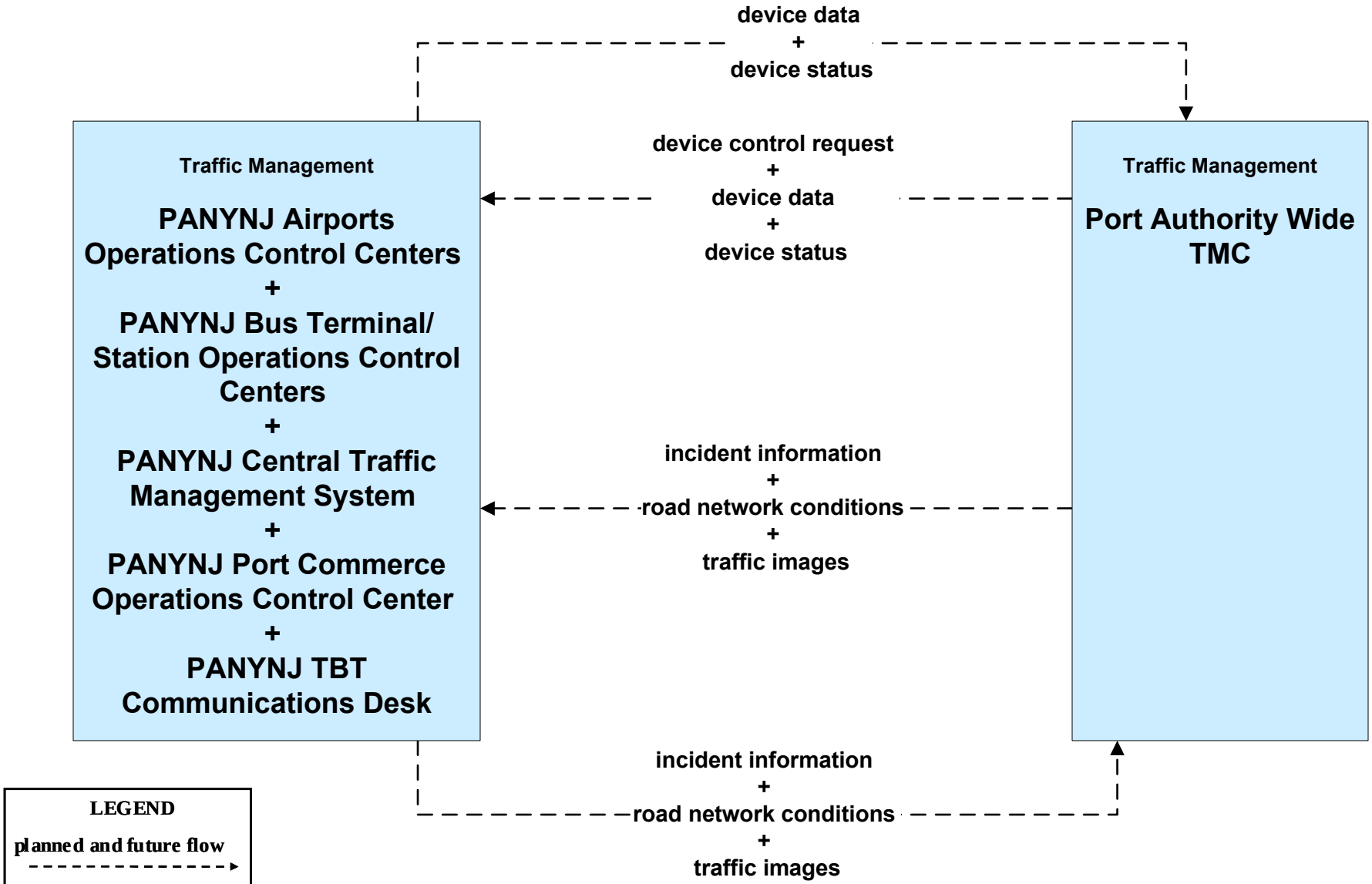




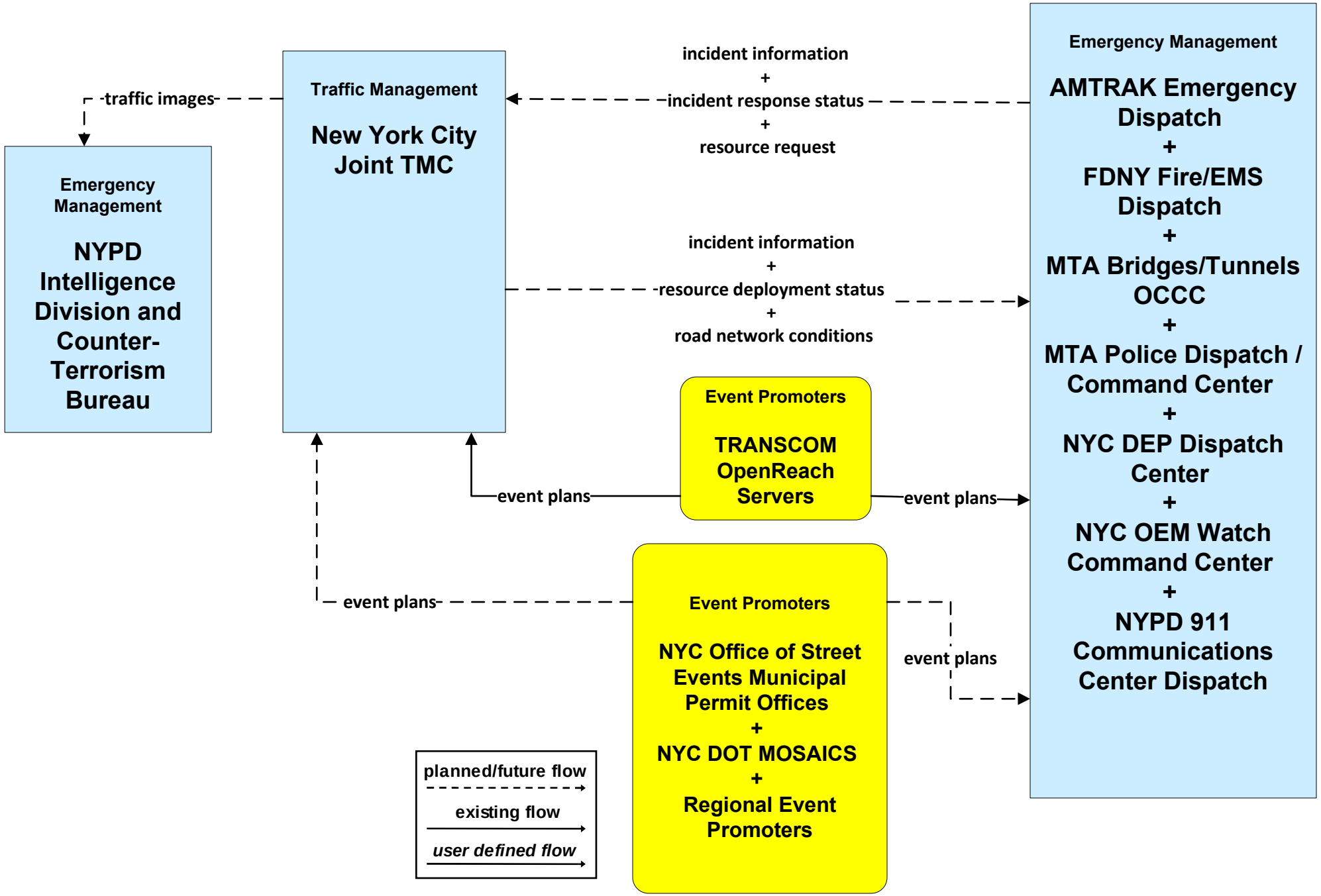
ATMS07 - Regional Traffic Control
TRANSCOM Data Fusion Engine



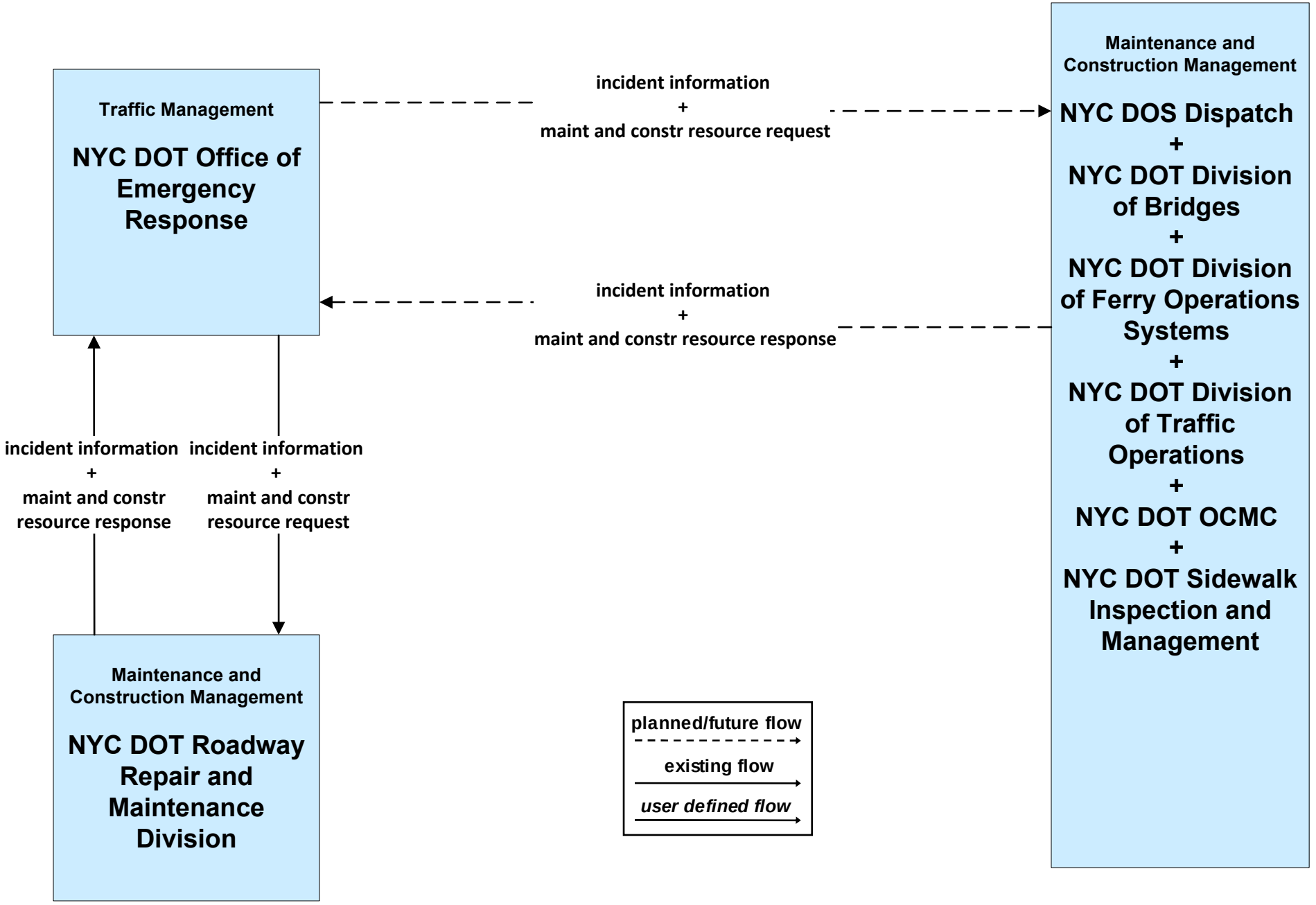
ATMS07 - Regional Traffic Control
PANYNJ



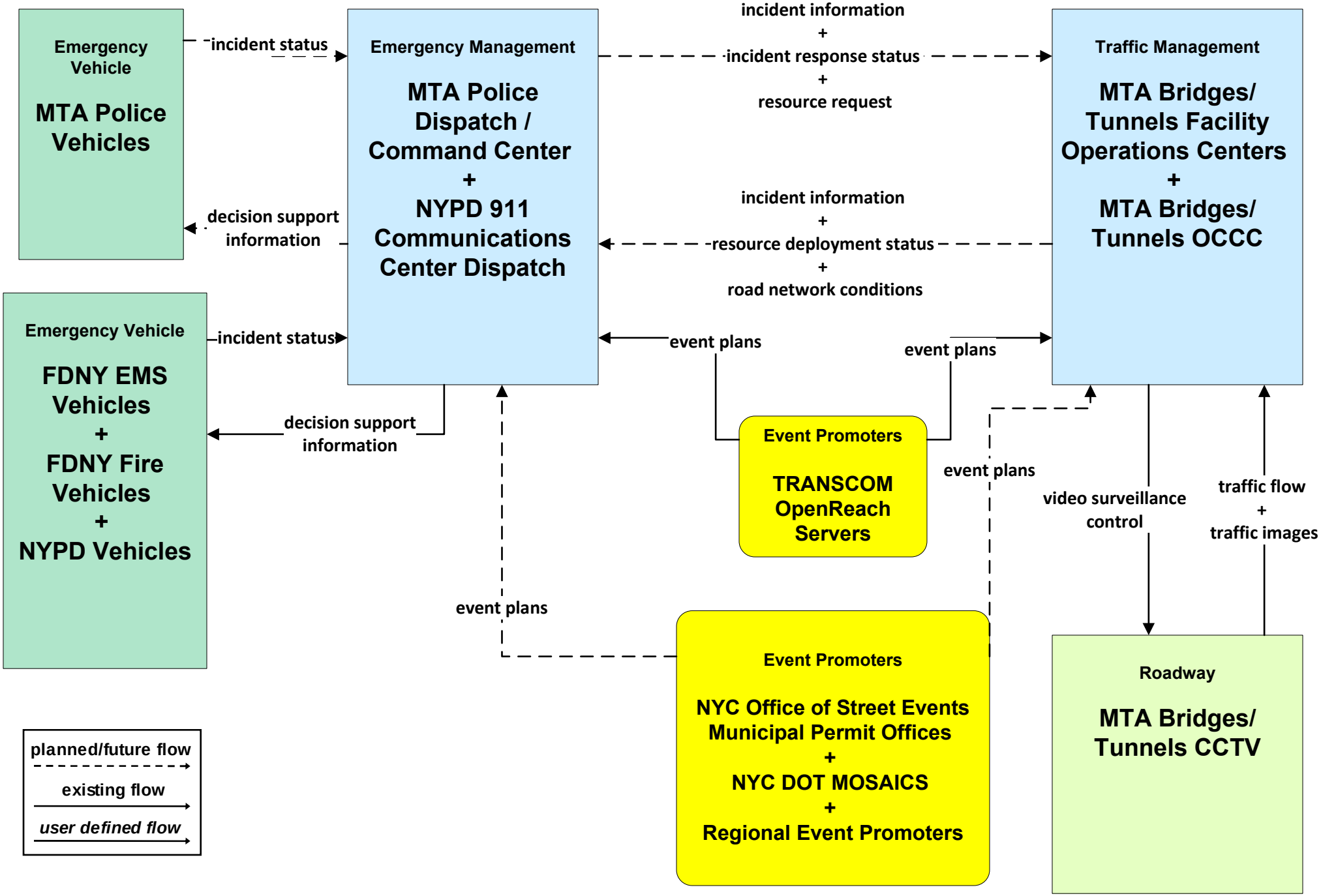
ATMS08 – Traffic Incident Management System
New York City Joint TMC (1 of 2)



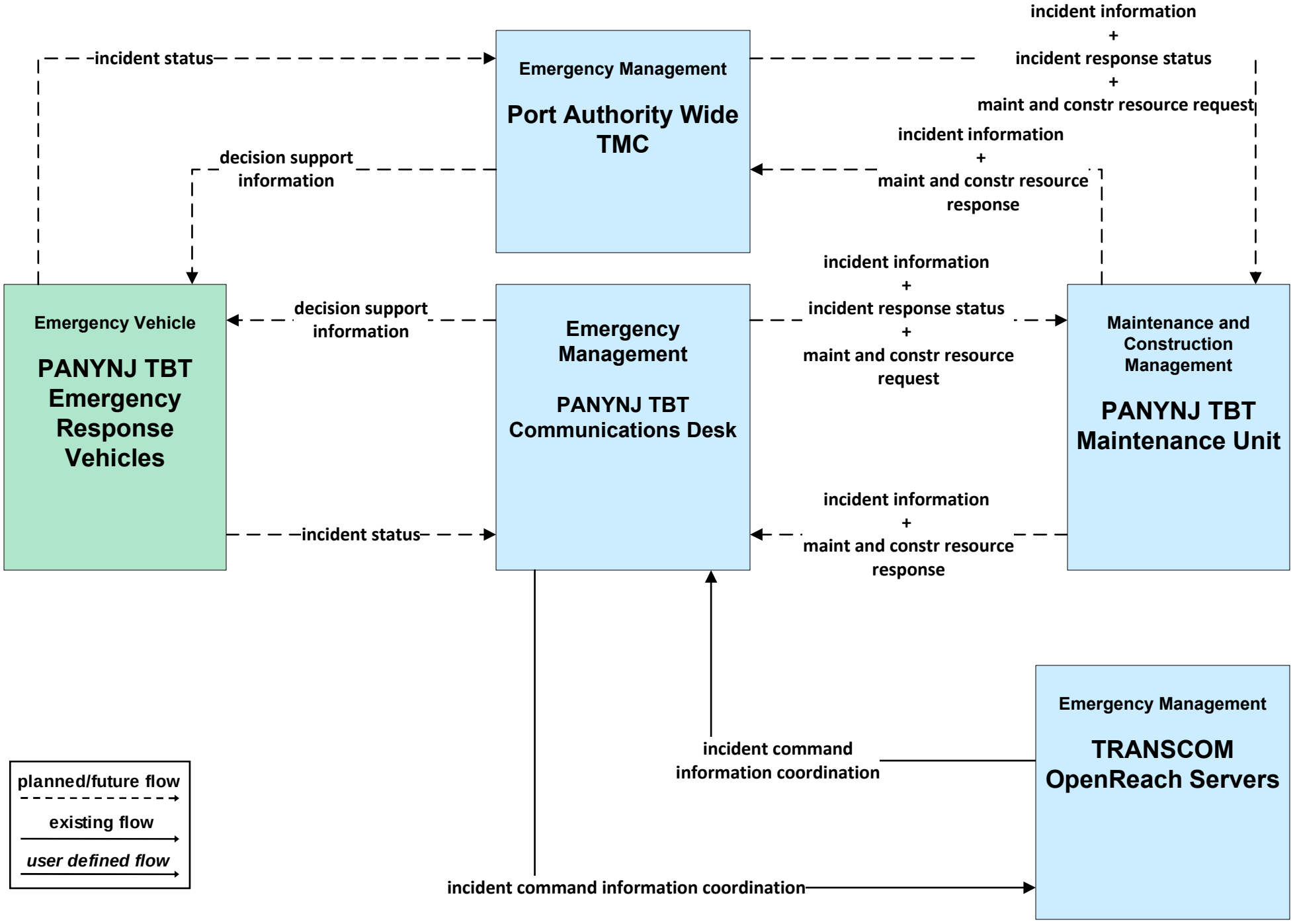
ATMS08 – Traffic Incident Management System
New York City Joint TMC (2 of 2)



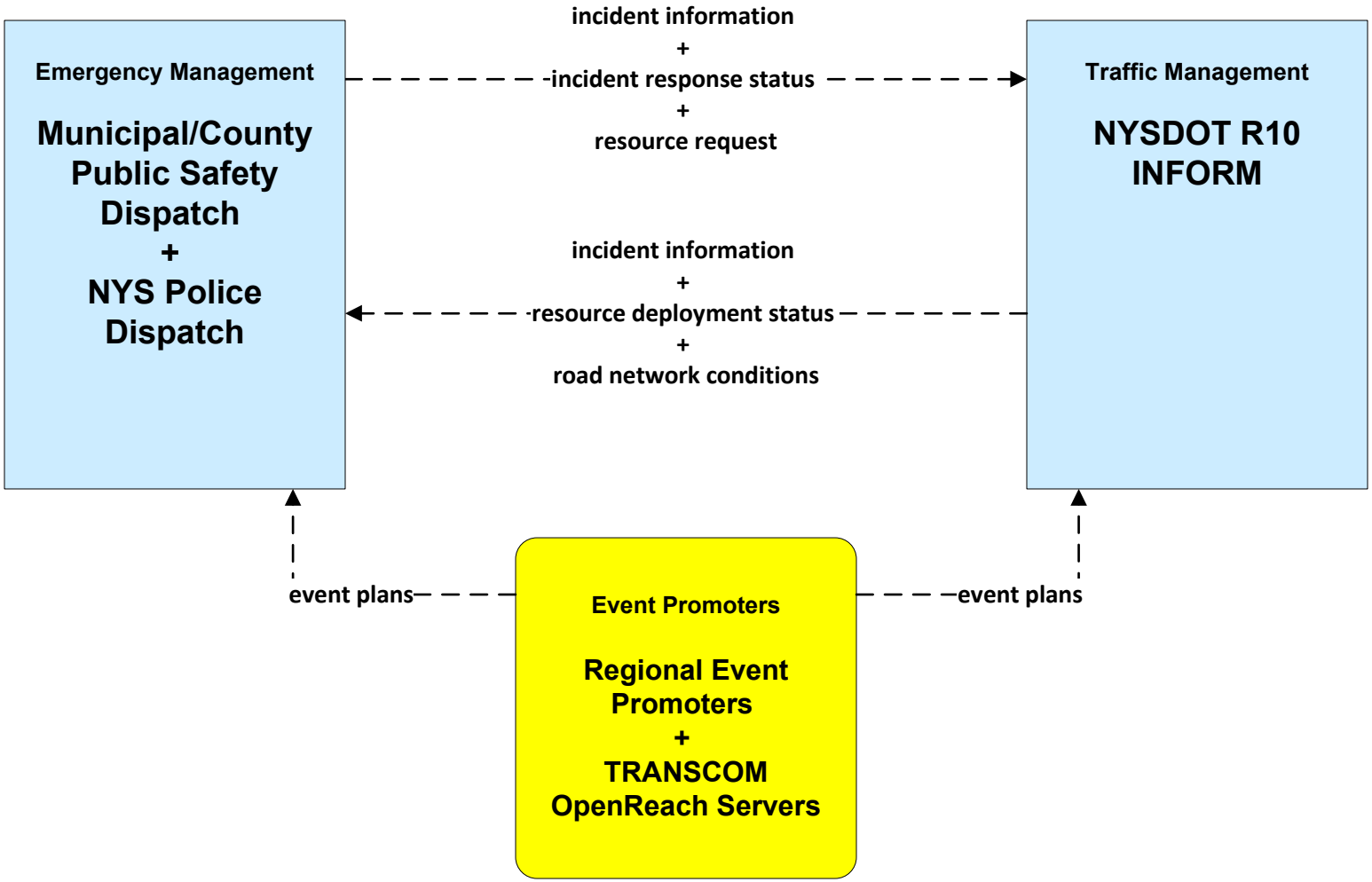
ATMS08 – Traffic Incident Management System
MTA Bridges and Tunnels



ATMS08 – Traffic Incident Management System
PANYNJ Tunnels/Bridges



ATMS08 – Traffic Incident Management System
NYSDOT R10 INFORM

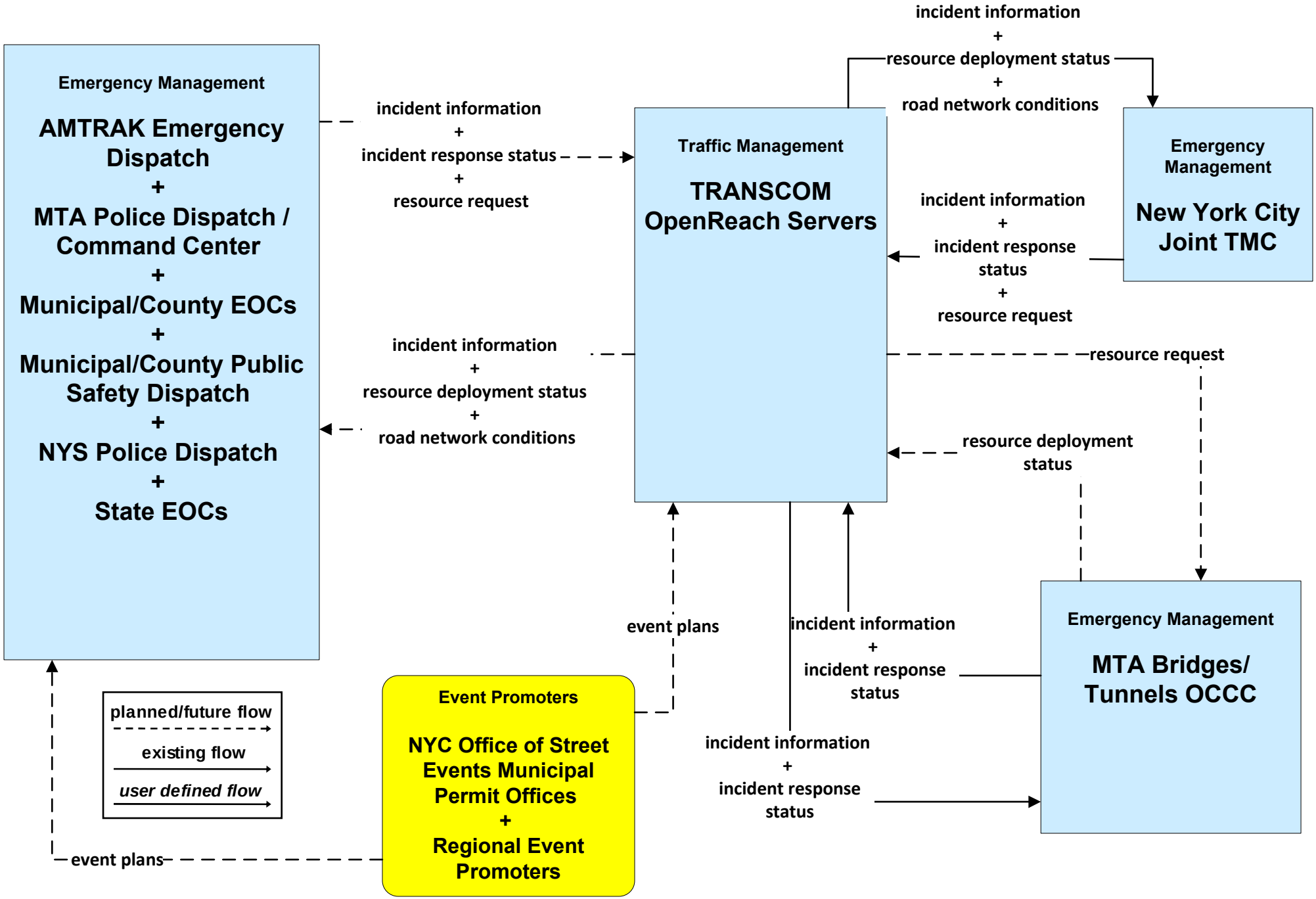


planned/future flow

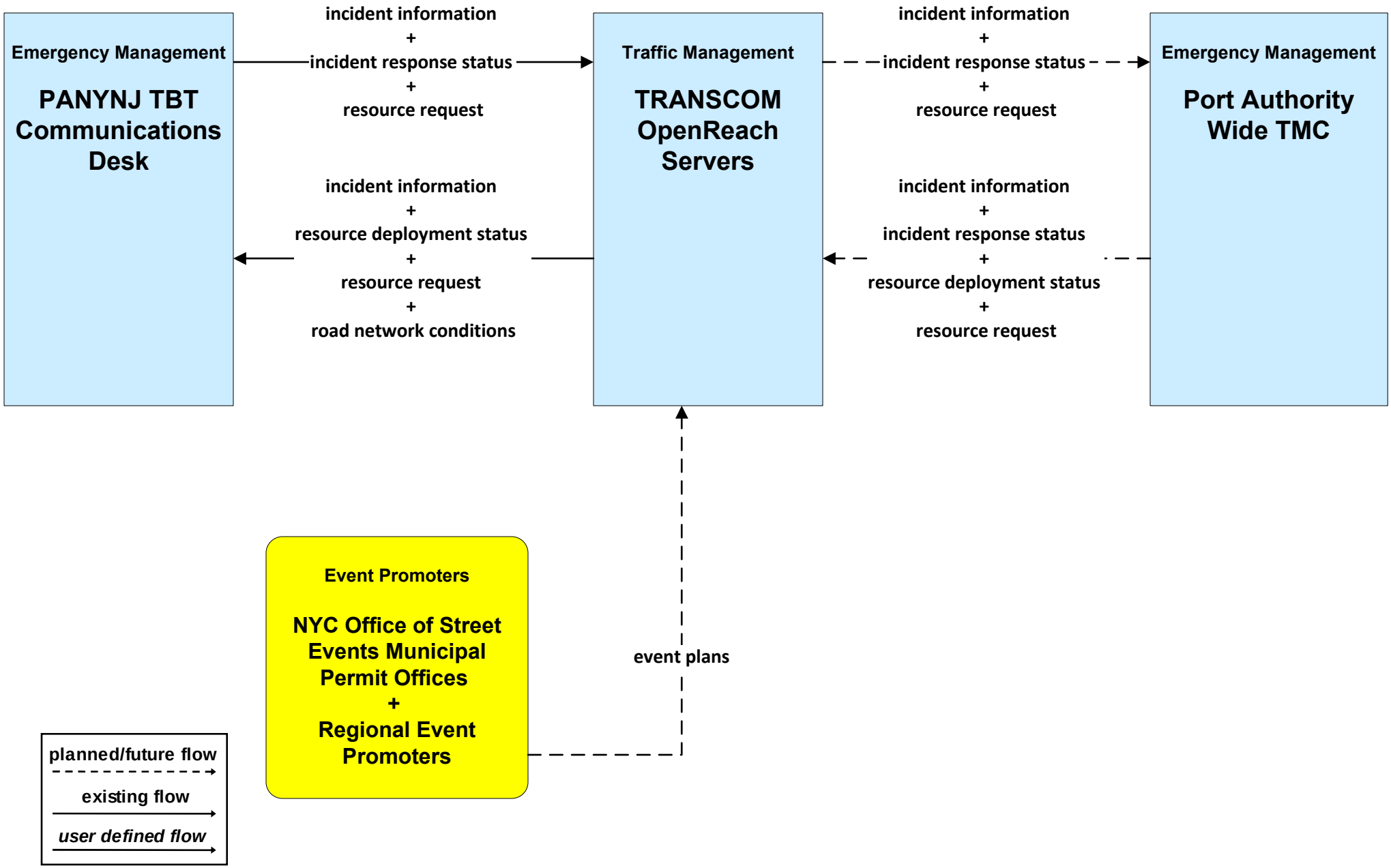
existing flow

user defined flow

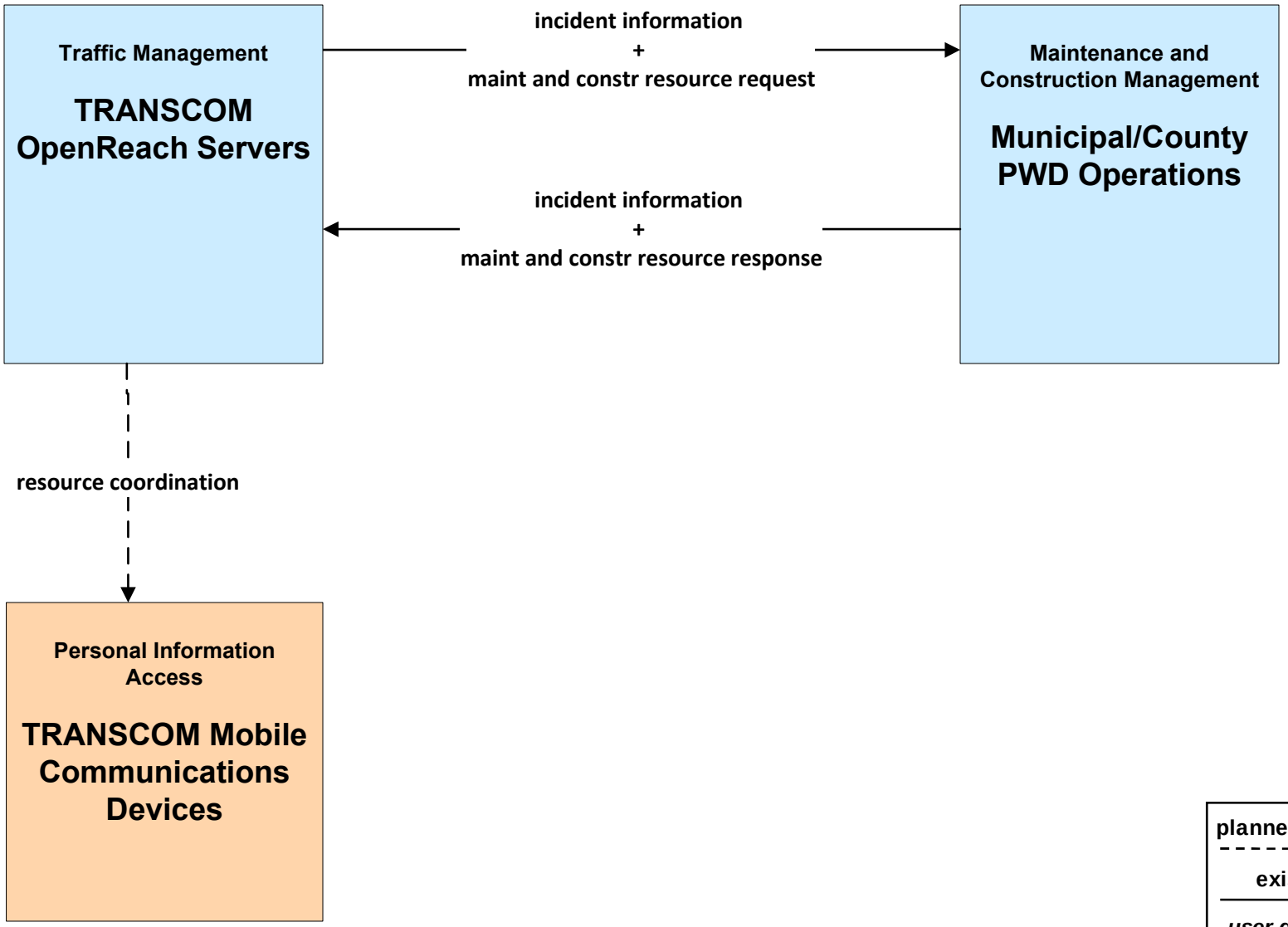
ATMS08 – Traffic Incident Management System
TRANSCOM (1 of 3)



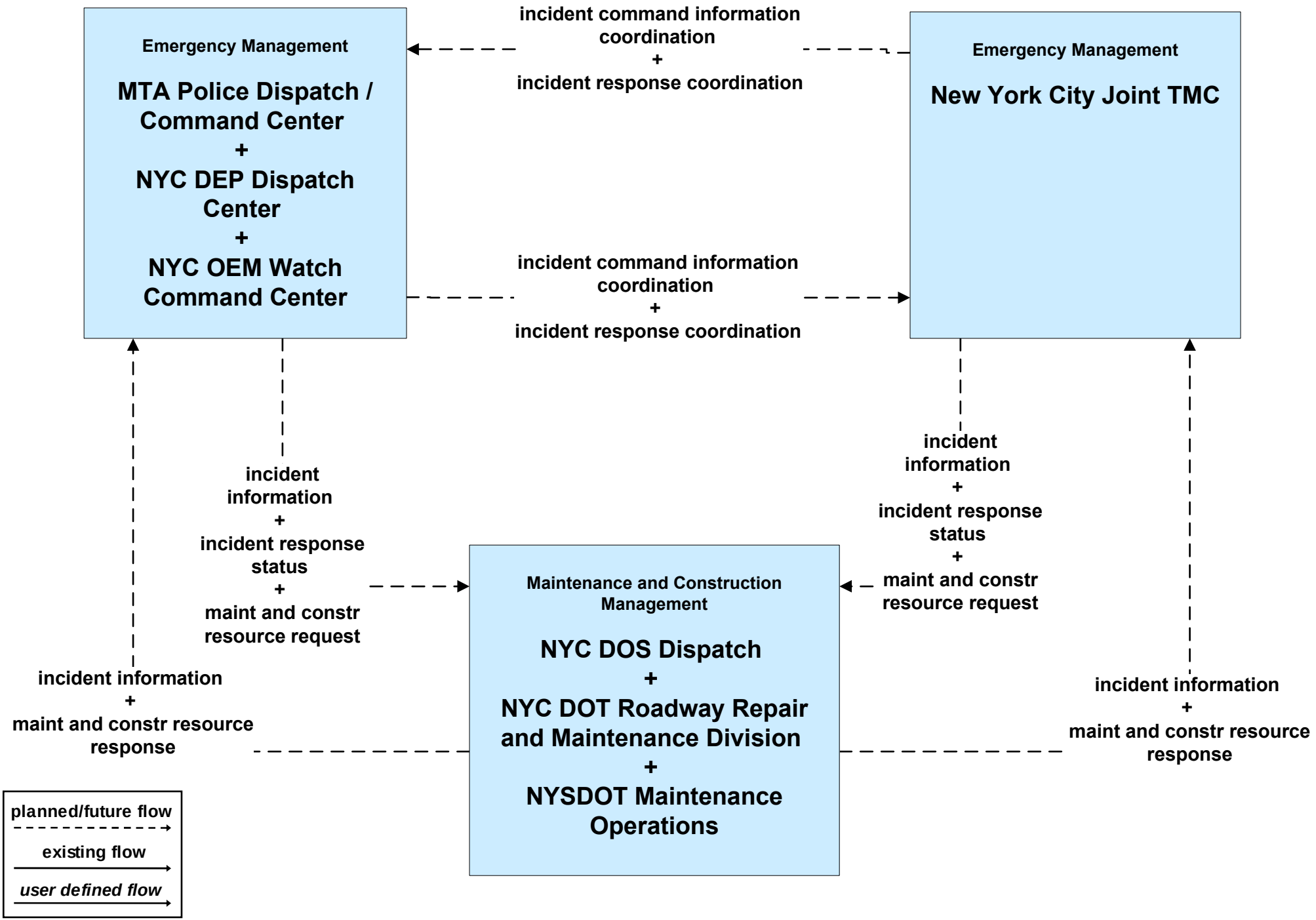
ATMS08 – Traffic Incident Management System
TRANSCOM (2 of 3)



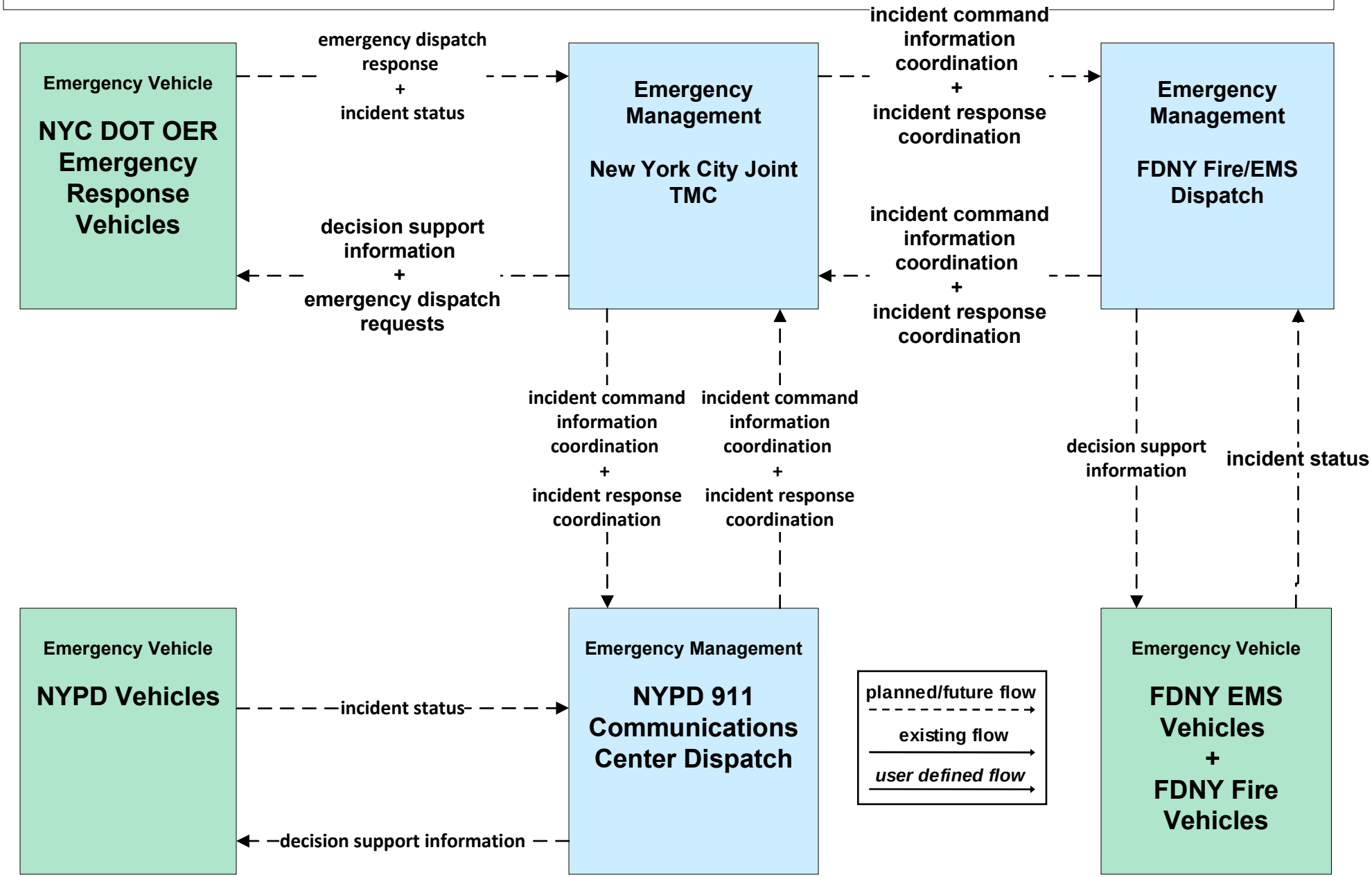
ATMS08 – Traffic Incident Management System
TRANSCOM (3 of 3)



ATMS08 – Traffic Incident Management System
Multi-Agency Coordination (Part 1 of 2)



ATMS08 – Traffic Incident Management System
Multi-Agency Coordination (Part 2 of 2)



ATMS10 - Electronic Toll Collection
New York City

planned/future flow
existing flow
user defined flow

DMV

State Departments of Motor Vehicles

Toll violations only

license request

registration

Payment Administration

E-ZPass CSC

license plate image_ud

reconciliation information_ud

Roadway Payment

E-ZPass Plus Systems
+
MTA Bridges/Tunnels Facility Toll Collection Equipment
+
NYS Bridge Authority Mid Hudson Bridges Toll
+
NYSTA Toll Collection Equipment
+
PANYNJ TBT Electronic Toll Collection Equipment

toll transactions

toll instructions

Fleet and Freight Management

Private Commercial Vehicle and Fleet Dispatch
+
Private Travelers Personal Computing Devices

toll data request

toll data

toll data request

toll data

toll data

toll coordination

toll coordination_ud

vehicle payment information

vehicle payment request
+
vehicle payment update

Information Service Provider

E-ZPass CSC Web Site

toll data request

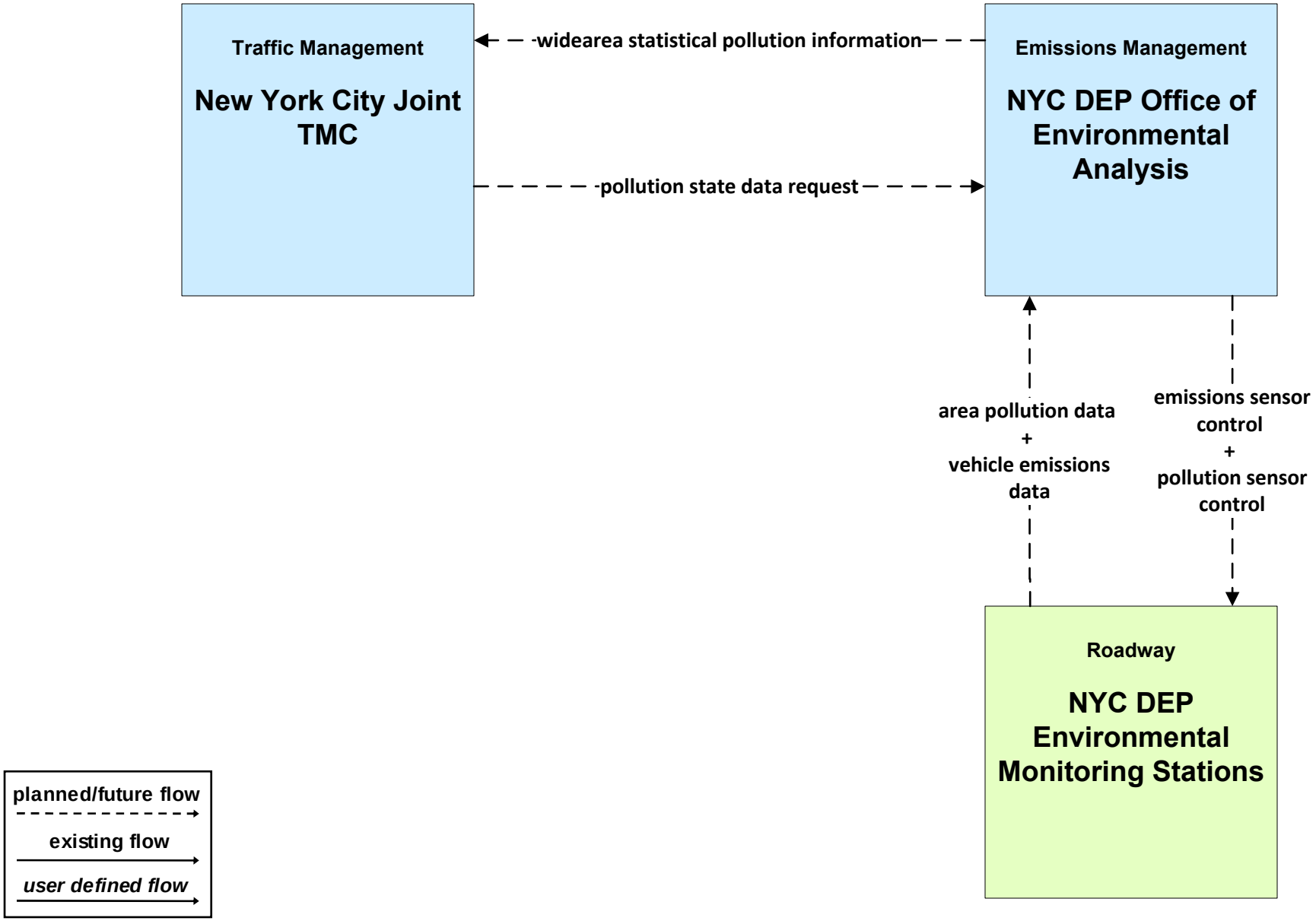
Payment Administration

E-ZPass Reciprocity Network

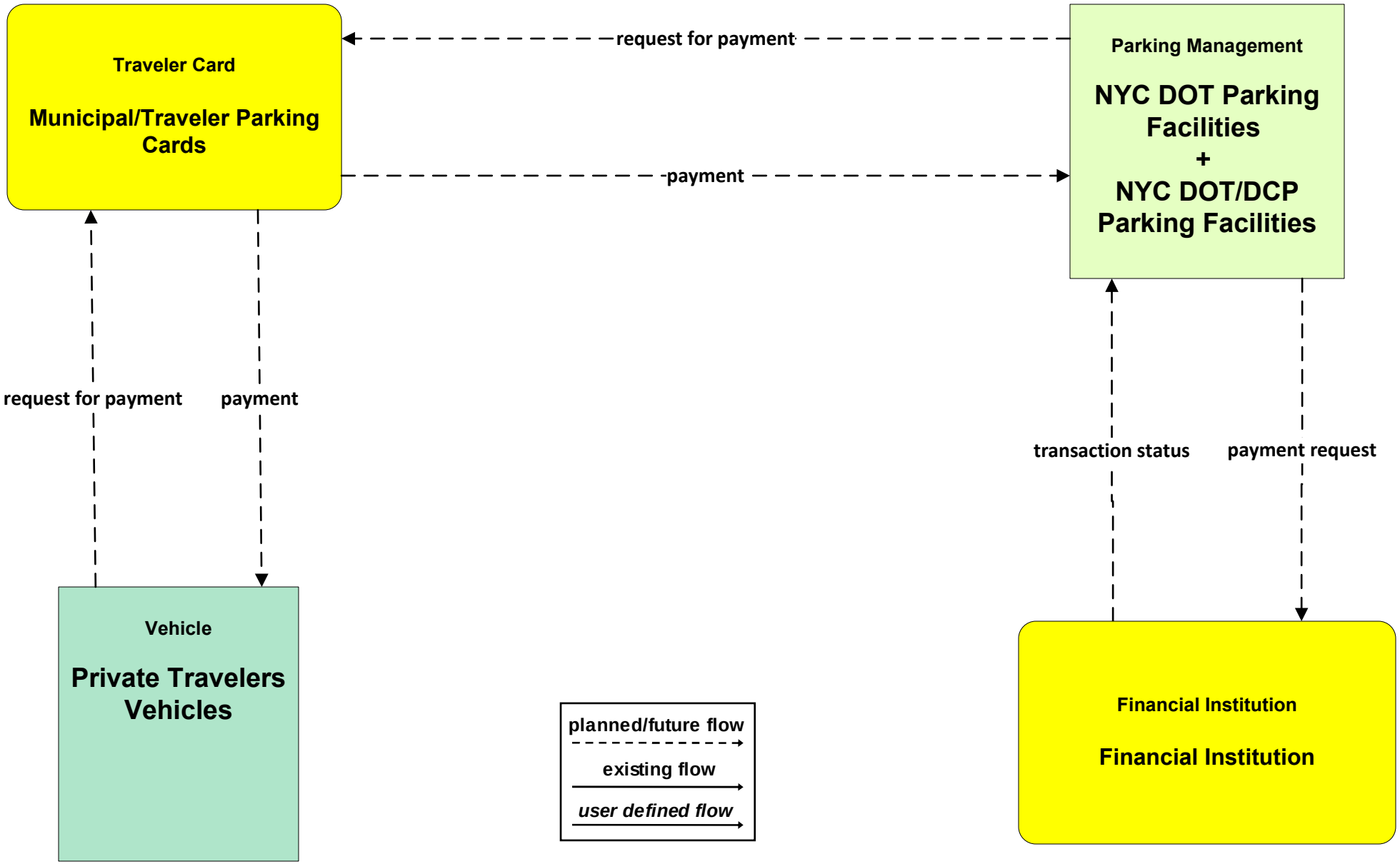
Vehicle

E-ZPass Tag
+
Private Commercial and Fleet Vehicles
+
Private Travelers Vehicles

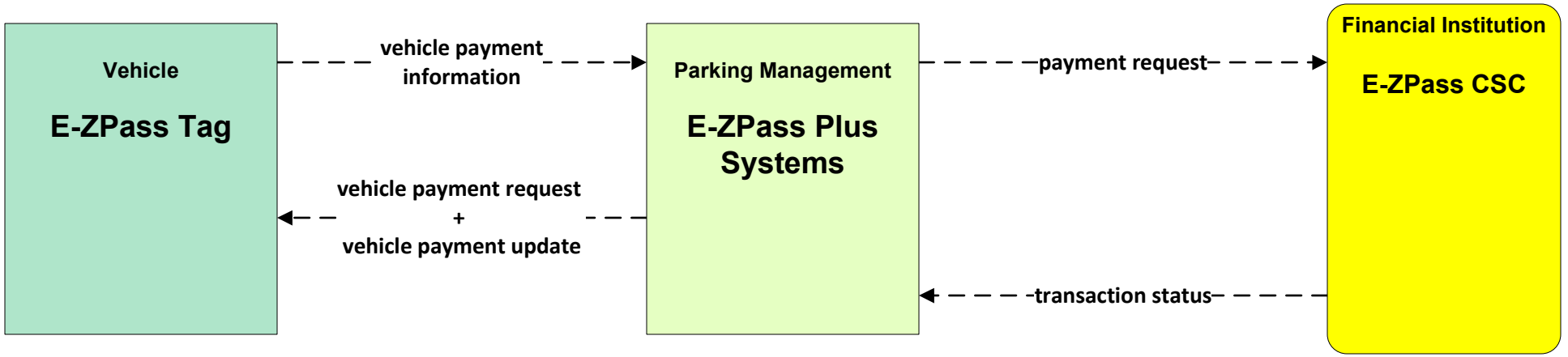
ATMS11 - Emissions Monitoring and Management
NYCDEP



ATMS16 - Parking Facility Management
NYC DOT



ATMS16 - Parking Facility Management
E-ZPass Plus Parking Systems

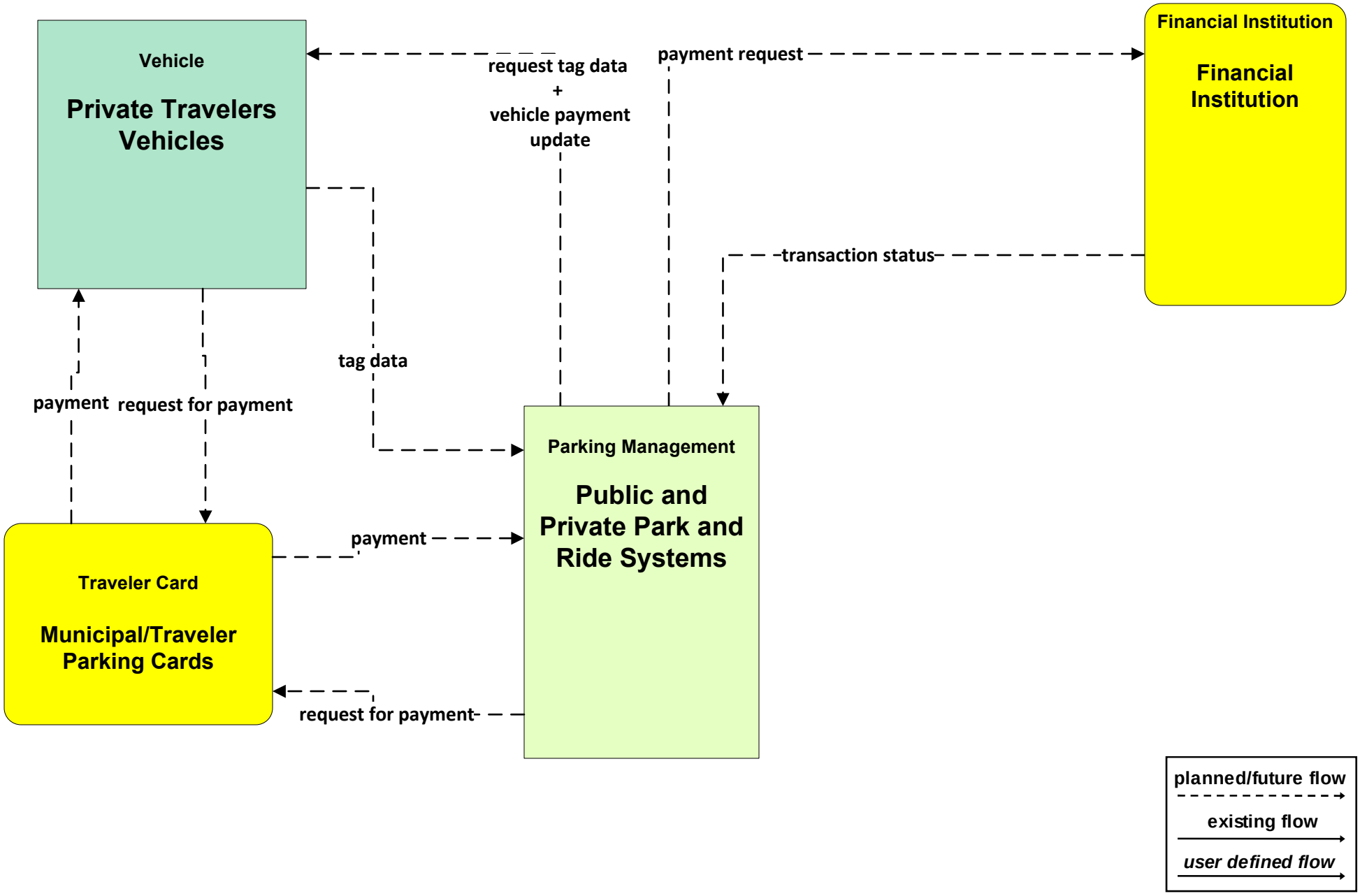


planned/future flow

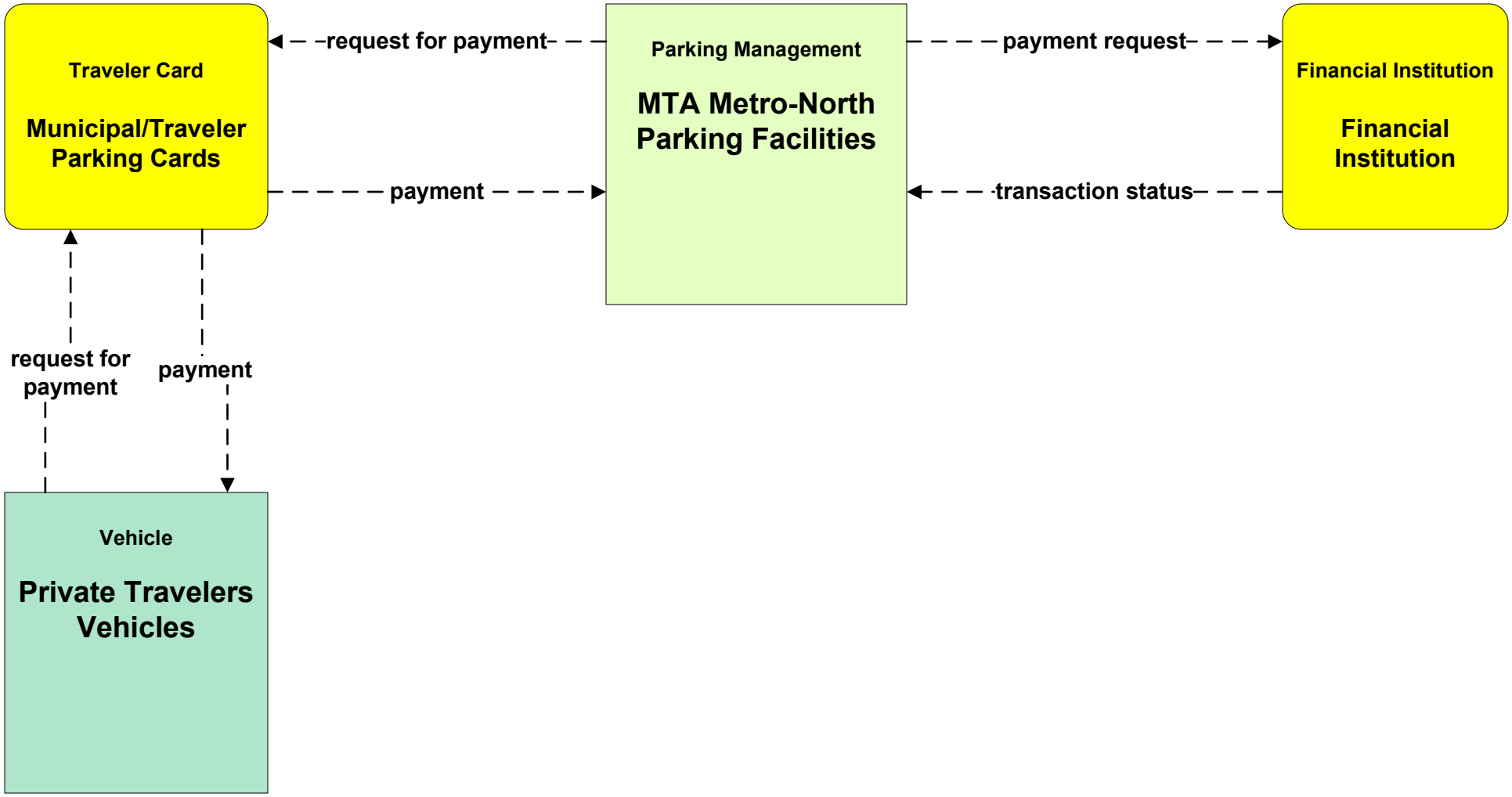
existing flow

user defined flow

ATMS16 - Parking Facility Management
Public and Private Park and Ride



ATMS16 - Parking Facility Management
MTA Metro North Parking Facilities

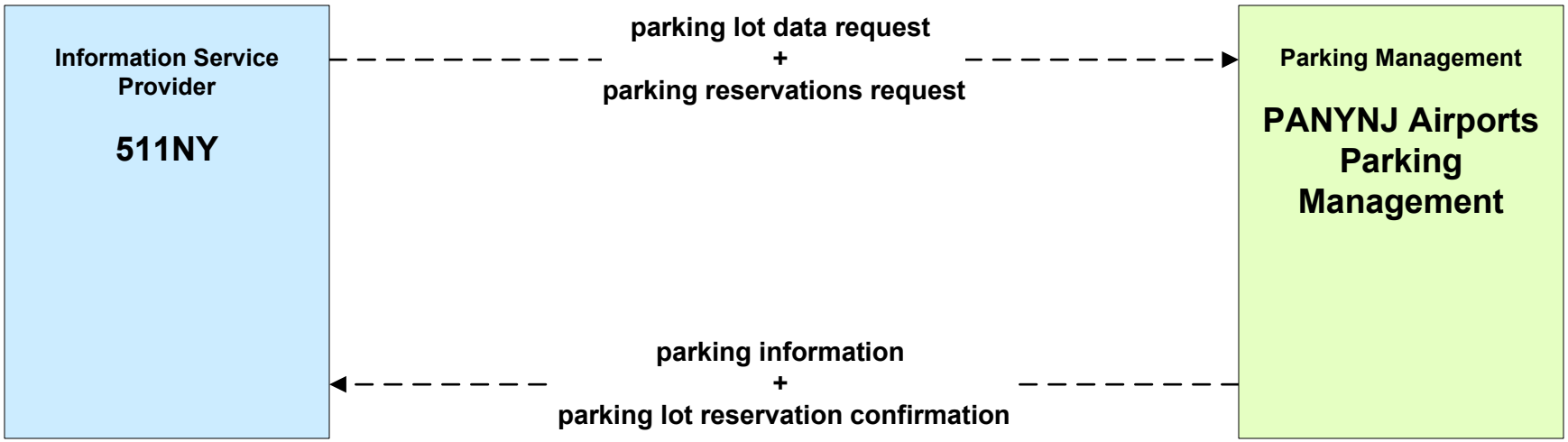


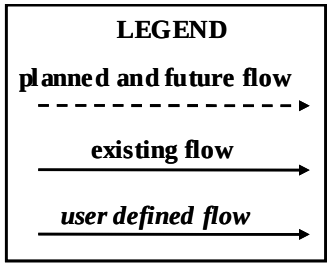
planned/future flow

existing flow

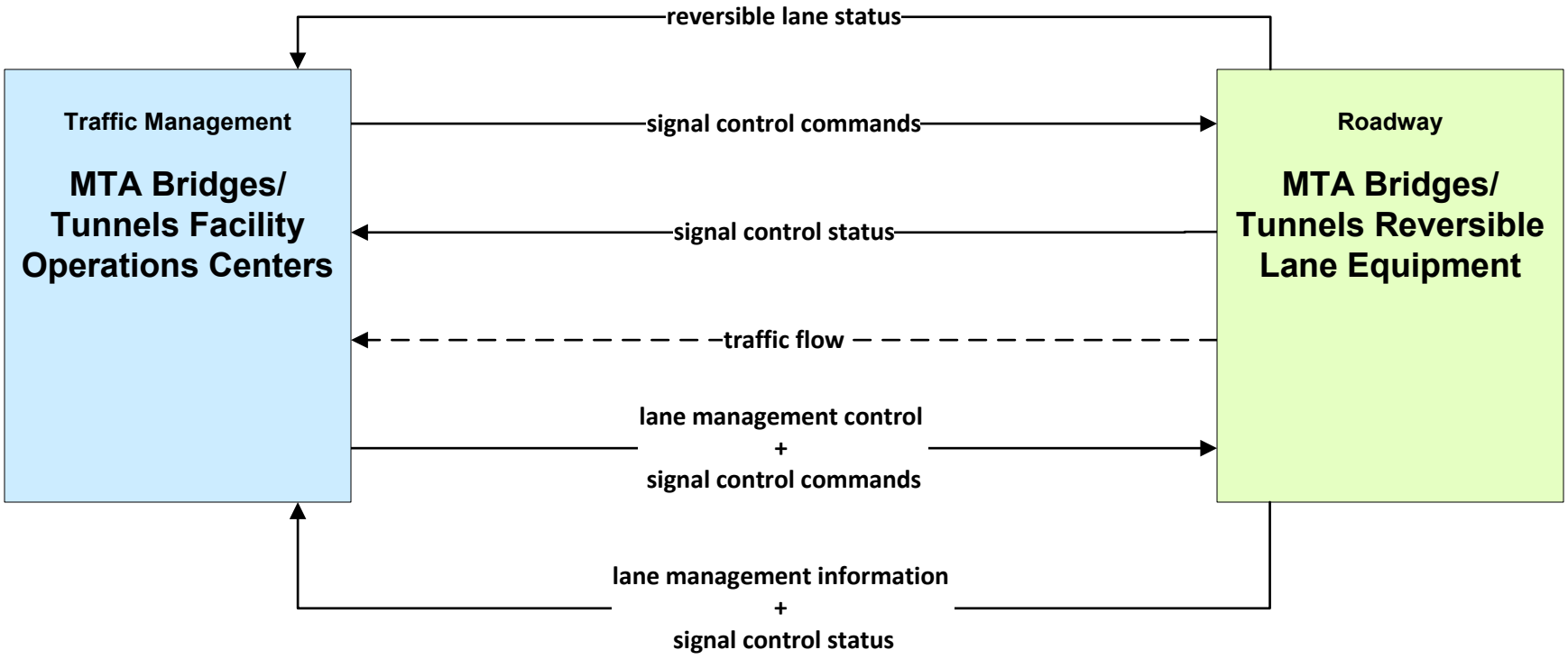
user defined flow

ATMS17 - Regional Parking Management
PANYNJ Airports





ATMS18 - Reversible Lane Management
MTA Bridges and Tunnels

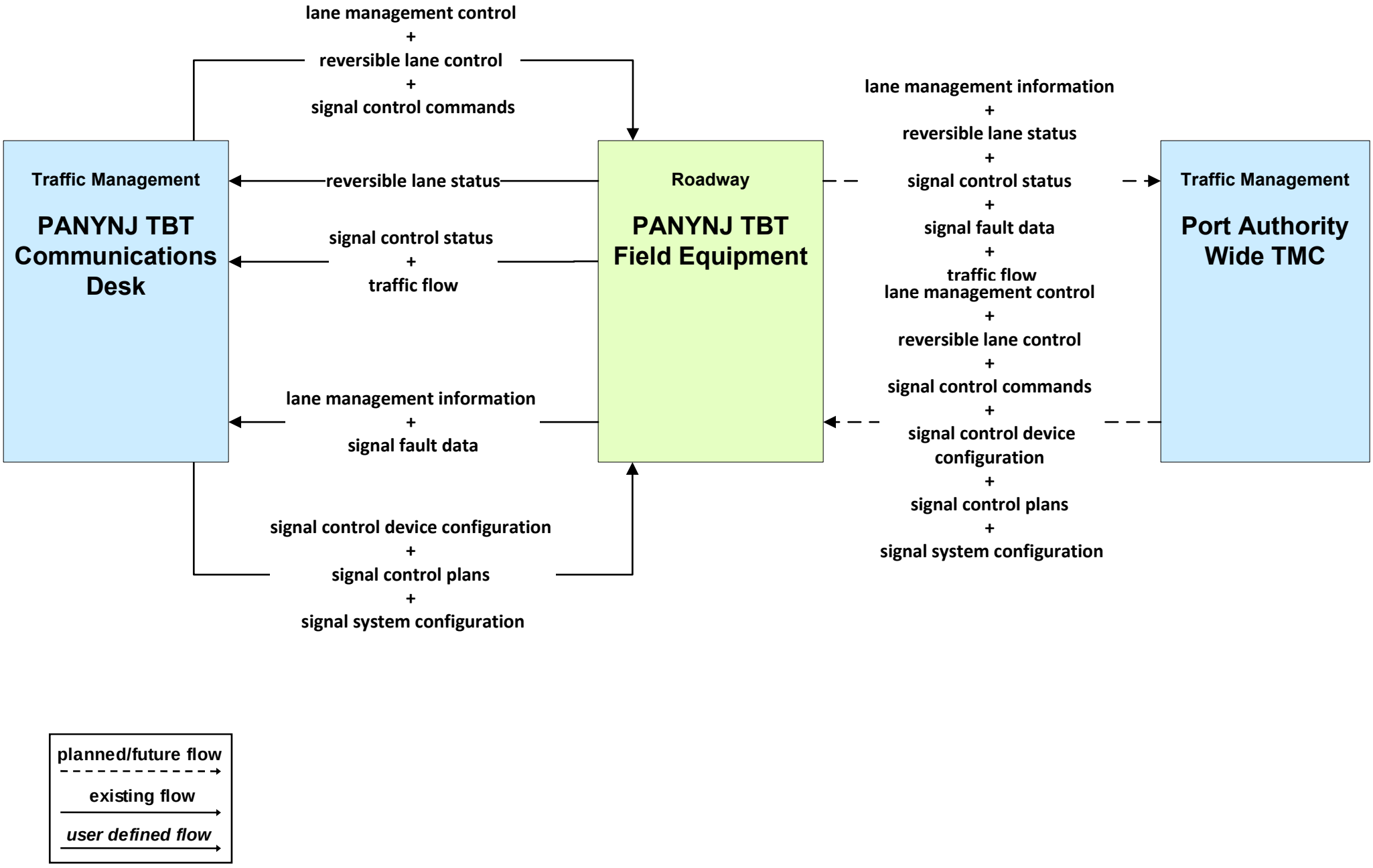


planned/future flow

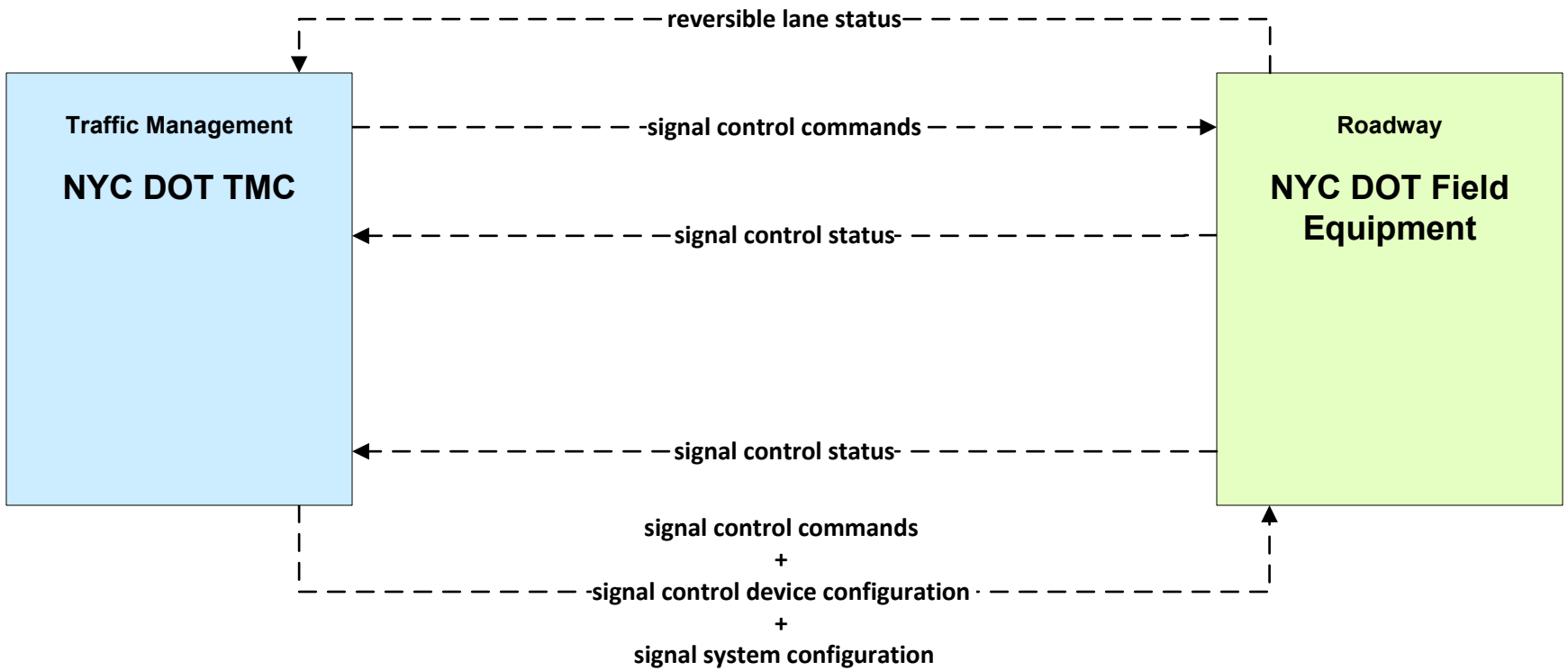
existing flow

user defined flow

ATMS18 - Reversible Lane Management
PANYNJ Tunnels/Bridges



ATMS18 - Reversible Lane Management
NYC DOT



planned/future flow

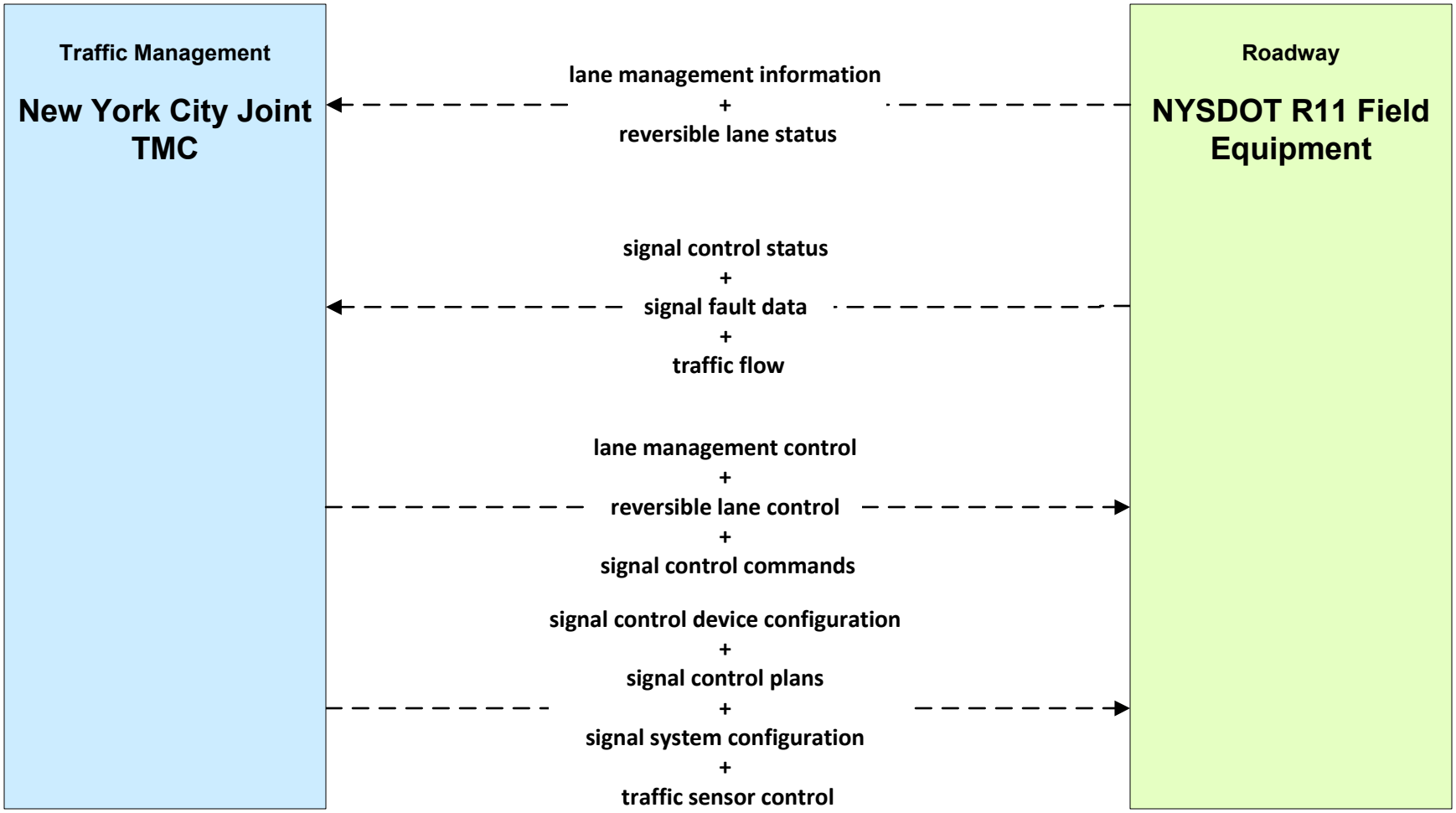
existing flow

user defined flow

Control of NYCDOT Field Equipment is only from NYCDOT Systems located at the New York City Joint TMC

NYCDOT policy is that barriers are controlled by personnel in the field in conjunction with ITS Equipment

ATMS18 - Reversible Lane Management
NYSDOT Contraflow Lanes

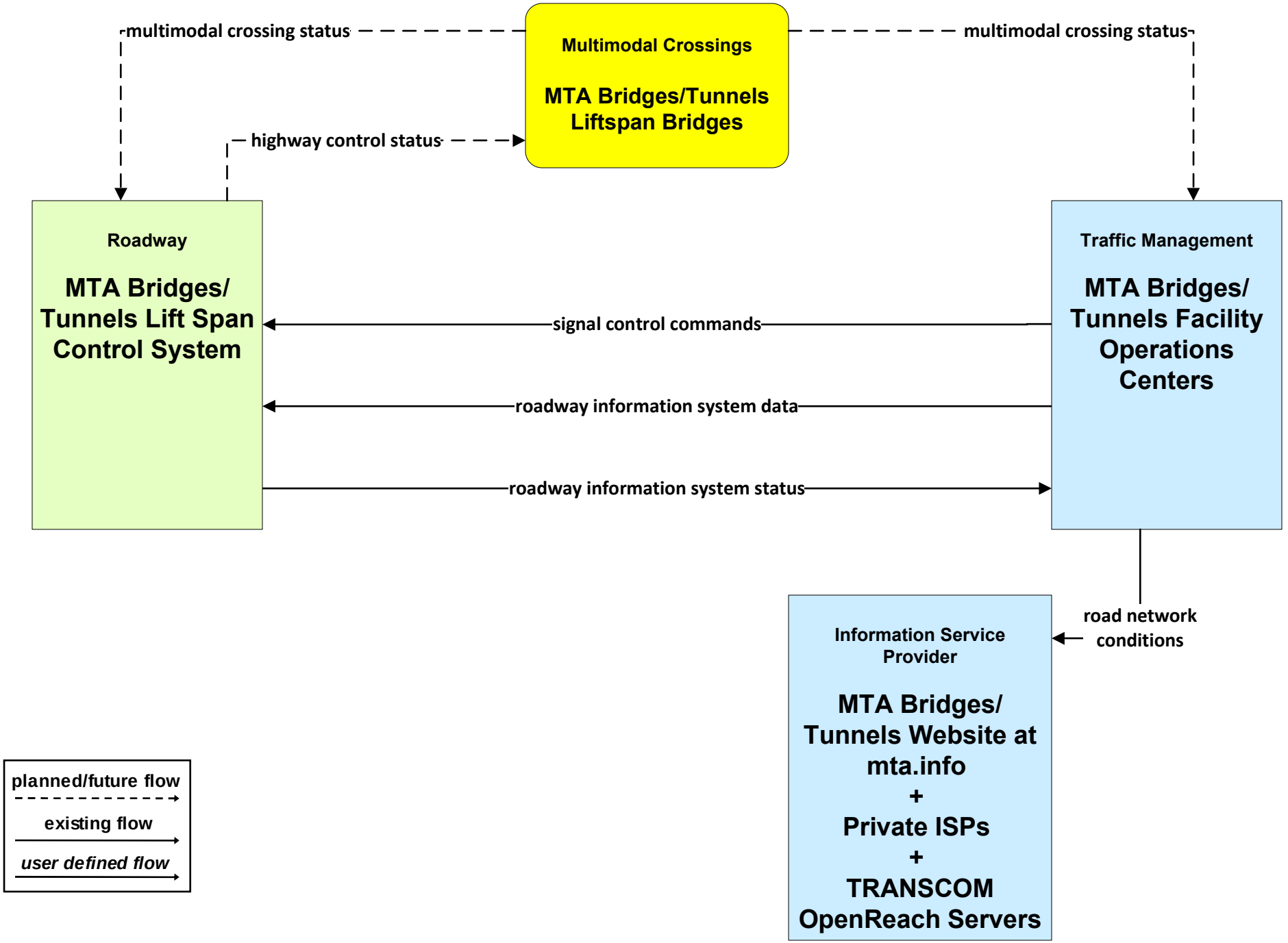


planned/future flow

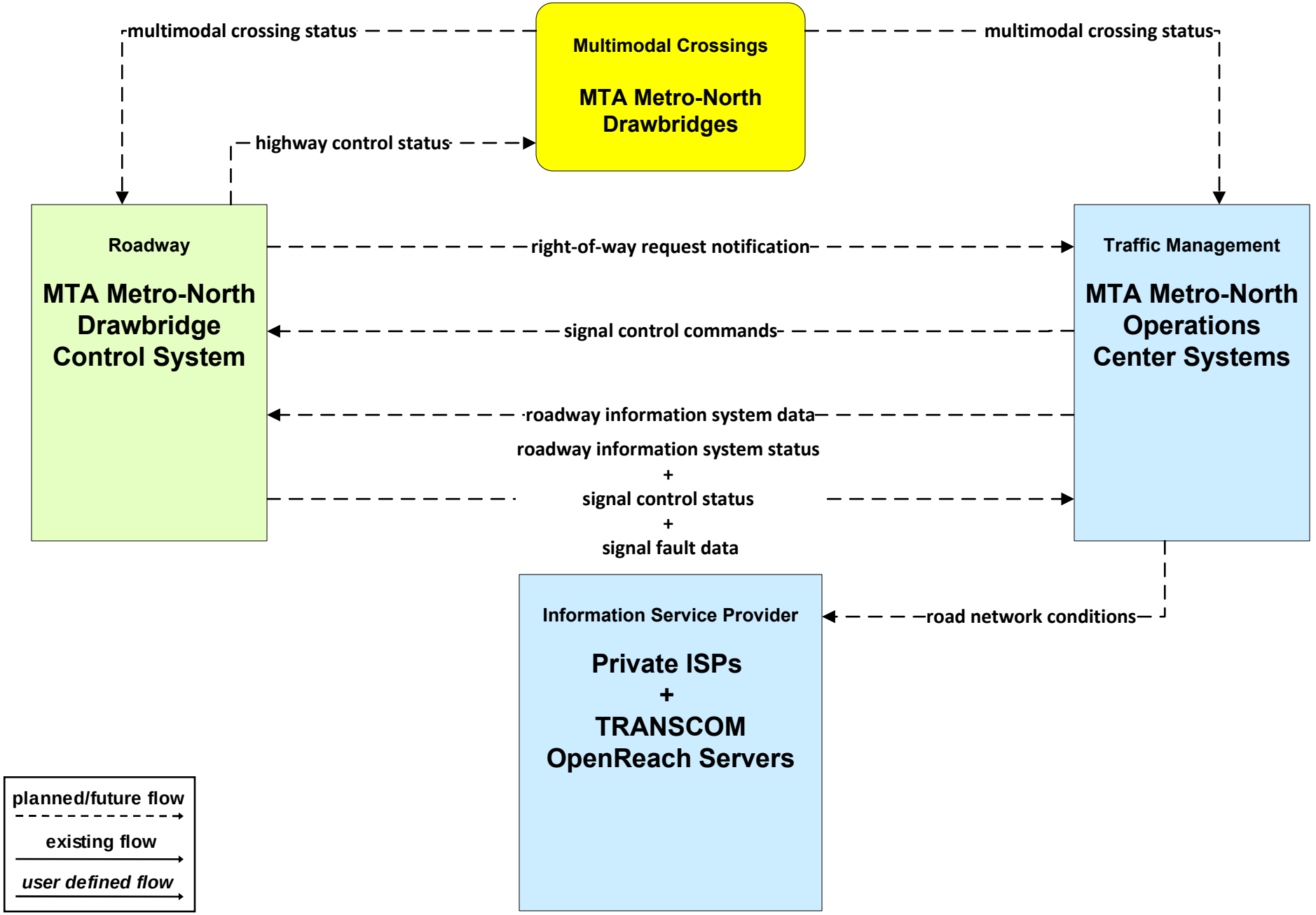
existing flow

user defined flow

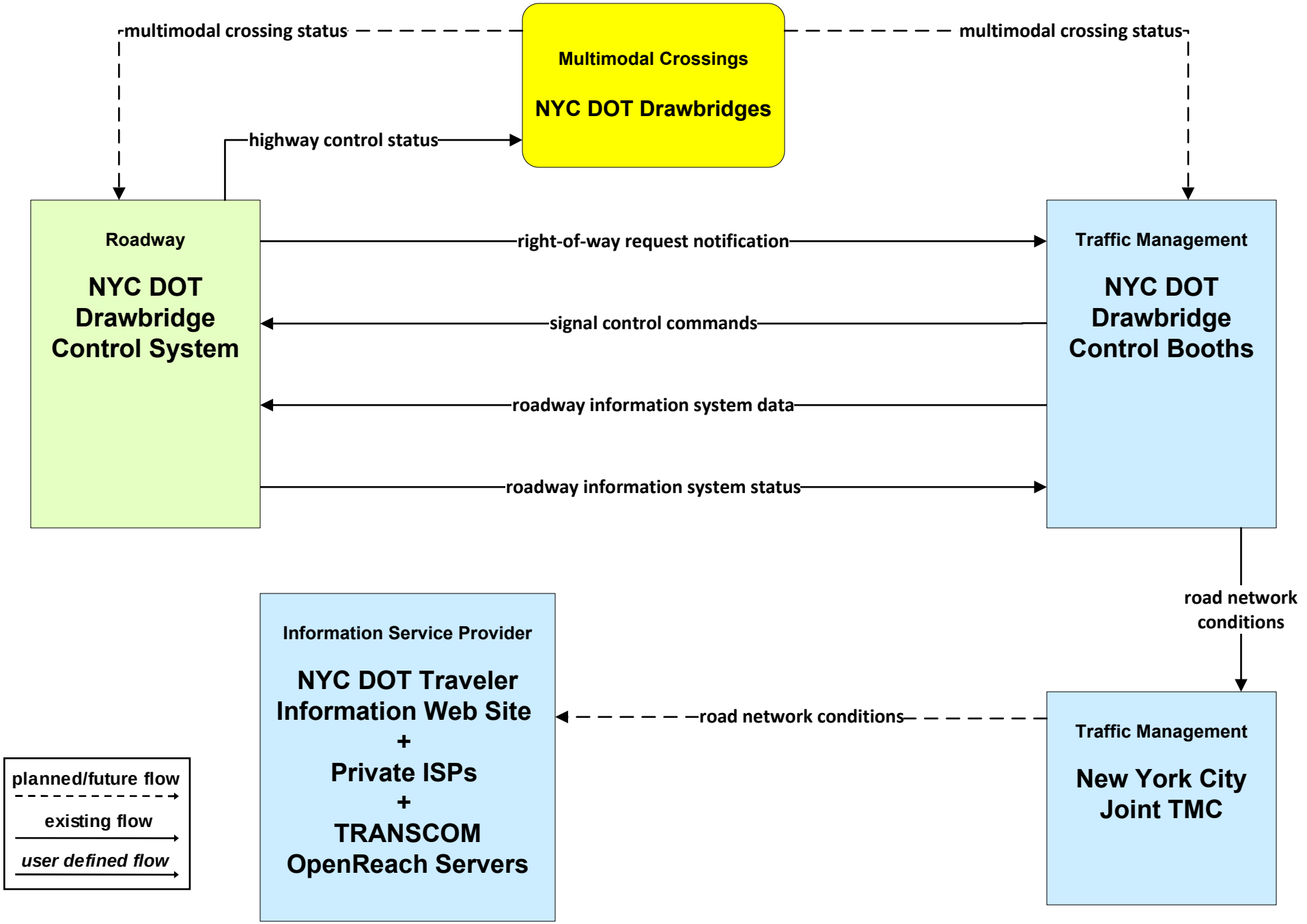
ATMS20 - Drawbridge Management
MTA Bridges and Tunnels



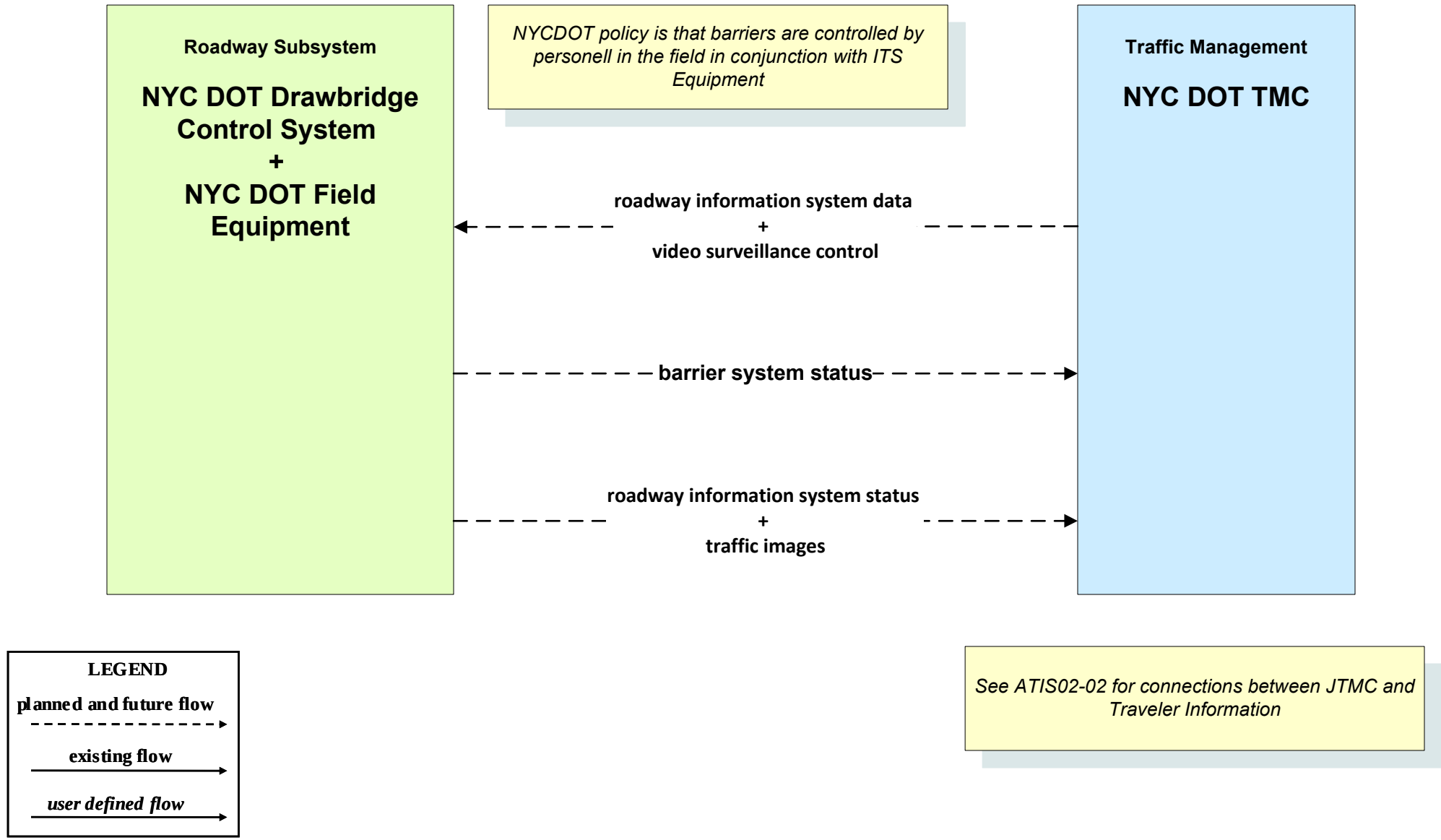
ATMS20 - Drawbridge Management
MTA Metro North Railroad



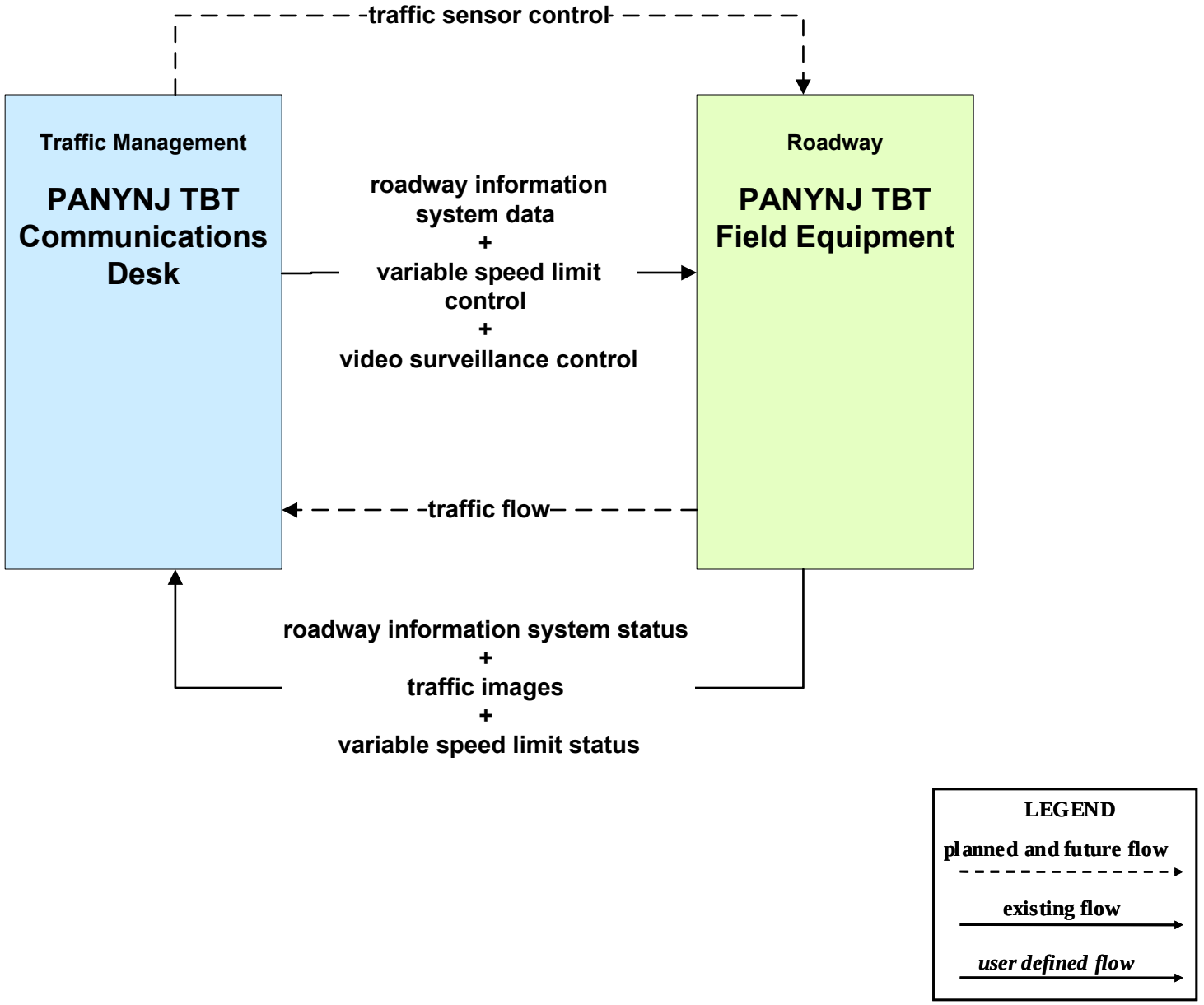
ATMS20 - Drawbridge Management
NYC DOT



ATMS21 - Roadway Closure Management
NYC Roadway Closure Systems



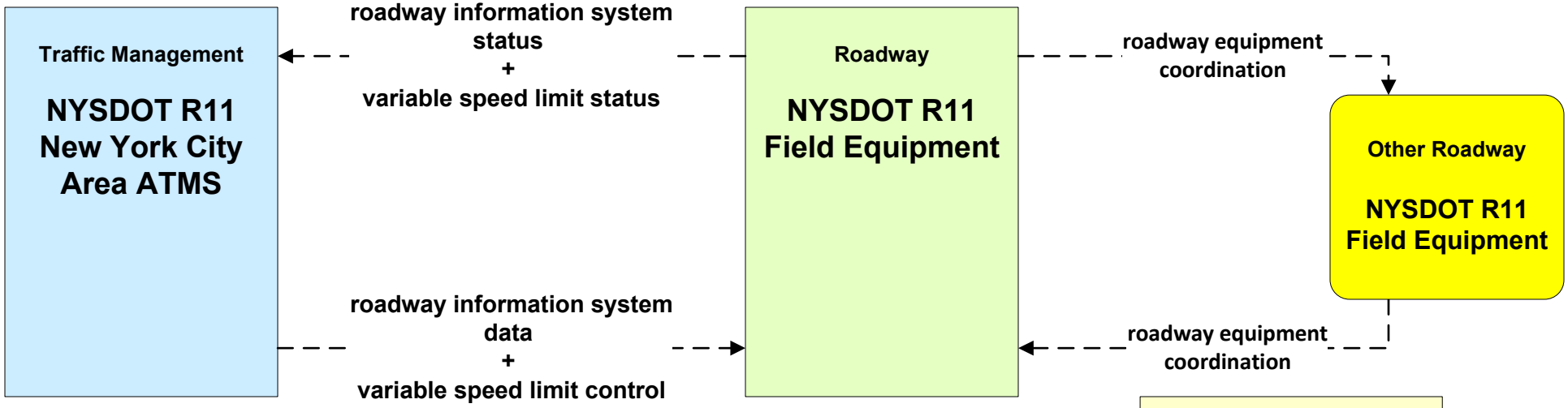
ATMS22 - Variable Speed Limits
PANYNJ TB/T



ATMS22 – Variable Speed Limits
NYSDOT R11 Advanced Traffic and Demand Management (ATDM)

Note: This service is still in the conceptual phase.

Note that this package represents Speed Warnings rather than enforceable speed limits.



These flows represent coordination between the NYSDOT R11 Field Equipment used to open dynamic lanes and shoulders to traffic and the NYSDOT R11 Field Equipment used for traffic metering and ramp management

LEGEND

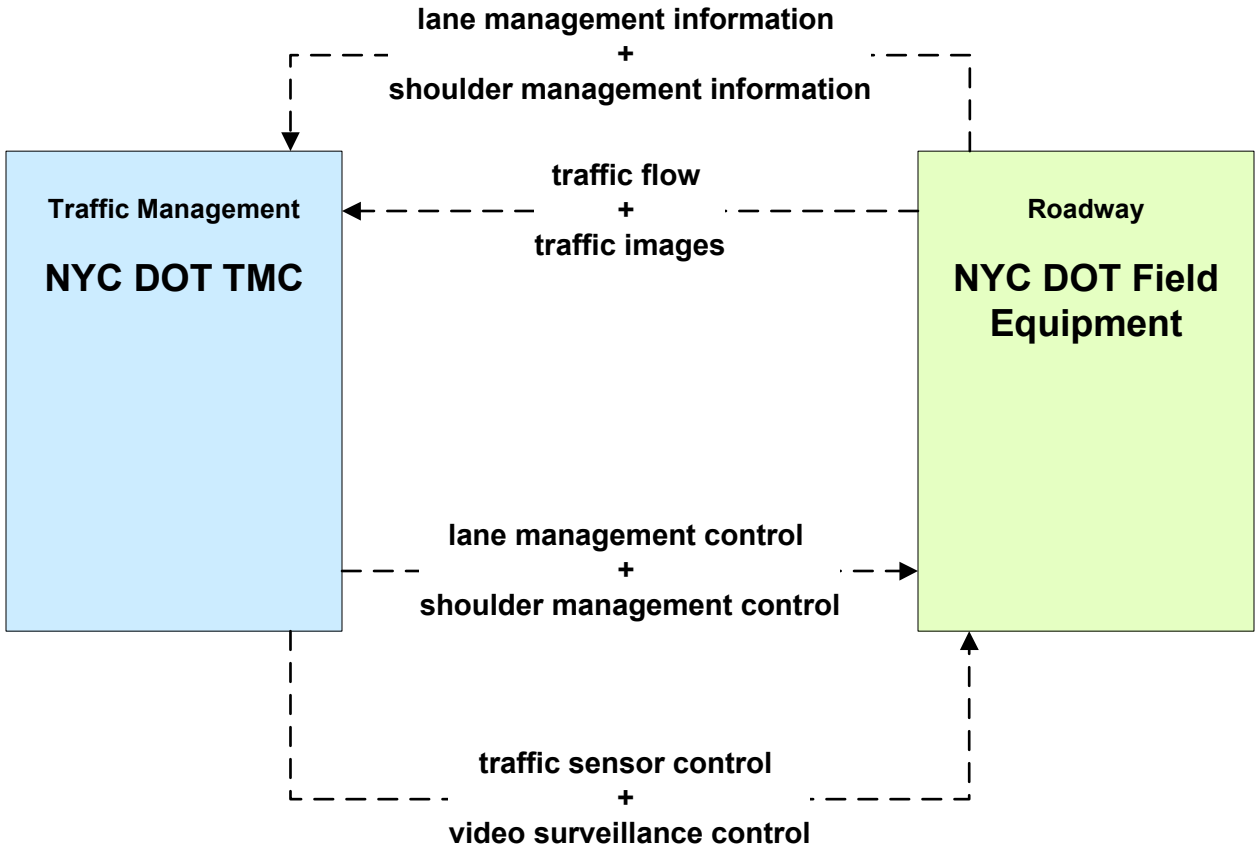
planned and future flow

existing flow

user defined flow

ATMS23 – Dynamic Lane Management and Shoulder Use
NYC DOT

Note: This service is still in the conceptual phase.



LEGEND

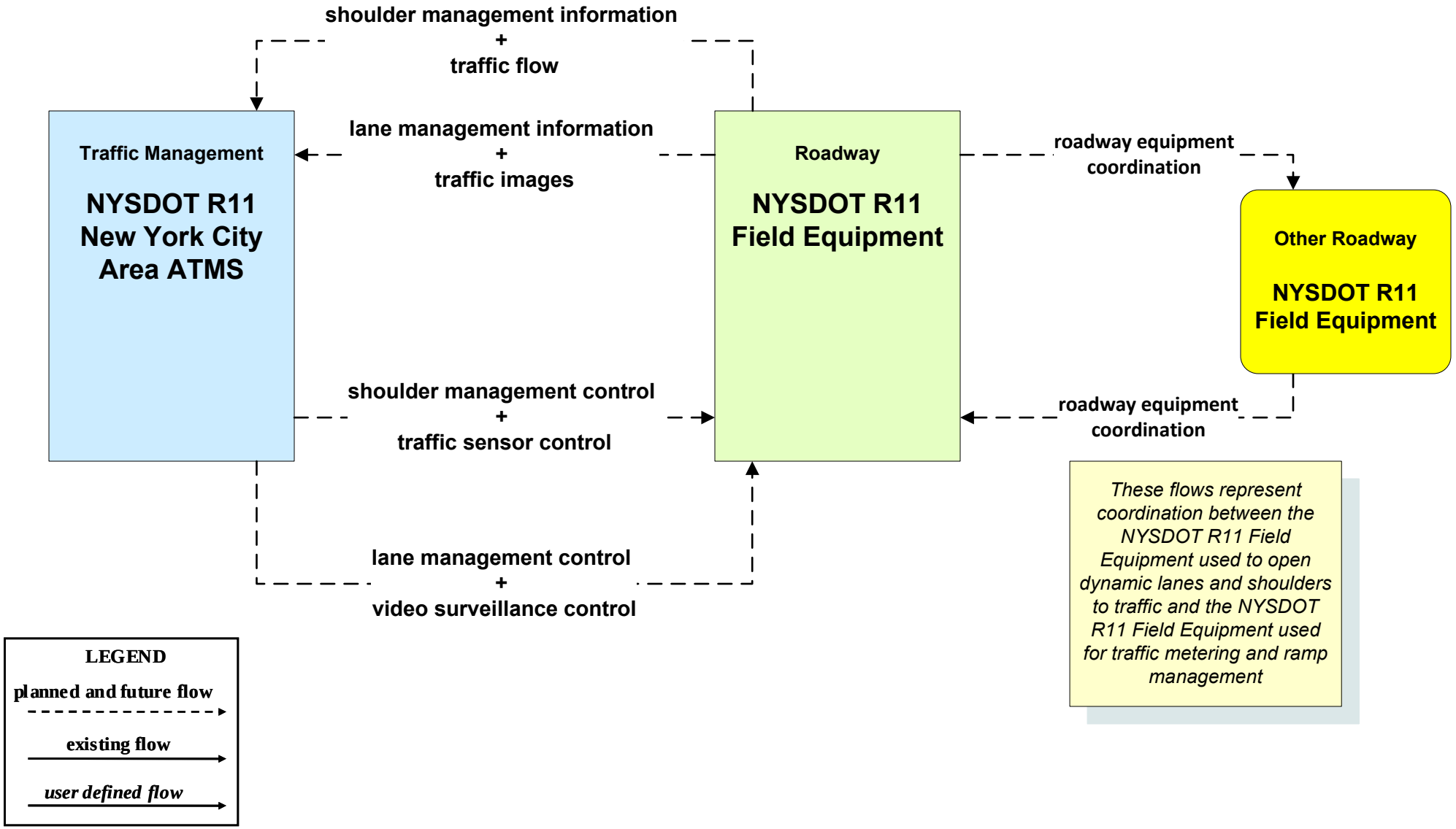
planned and future flow

existing flow

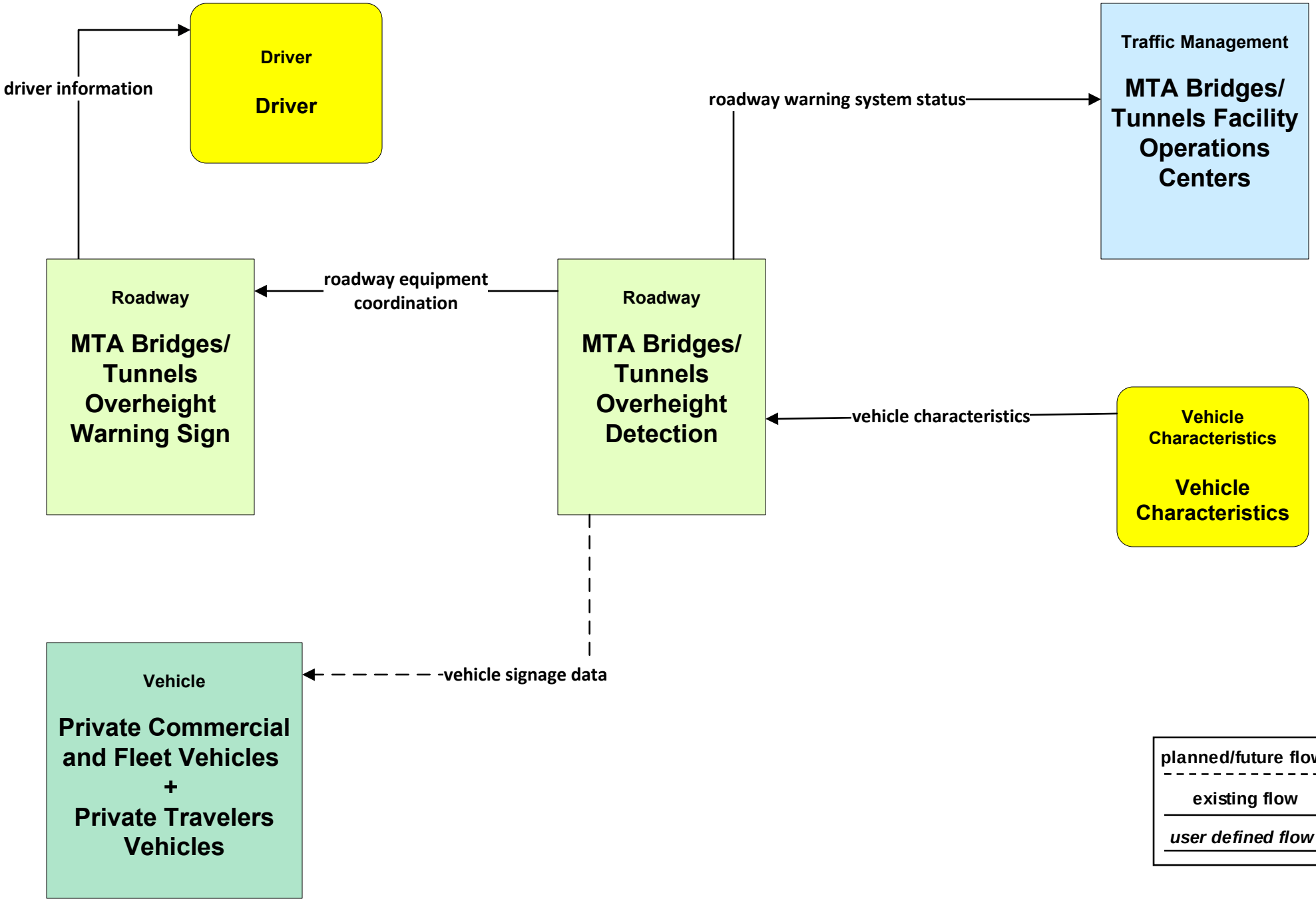
user defined flow

ATMS23 – Dynamic Lane Management and Shoulder Use
NYSDOT R11 Advanced Traffic and Demand Management (ATDM)

Note: This service is still in the conceptual phase.

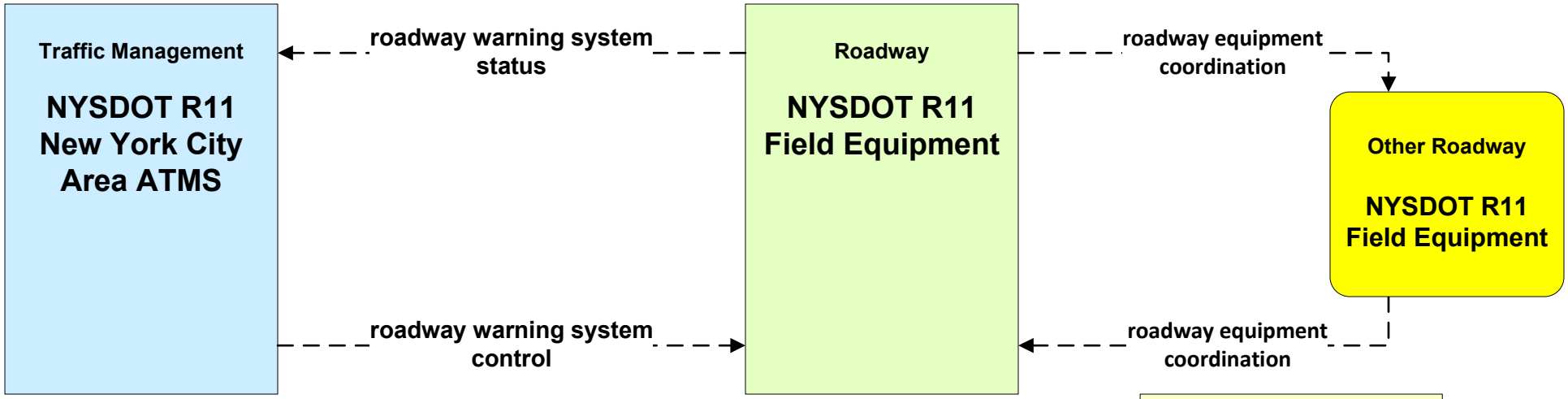


ATMS24 – Dynamic Roadway Warning
MTA Bridges and Tunnels Overdimension Vehicle Detection



ATMS24 – Dynamic Lane Roadway Warning
NYSDOT R11 Advanced Traffic and Demand Management (ATDM)

Note: This service is still in the conceptual phase.



These flows represent coordination between the NYSDOT R11 Field Equipment used to open dynamic lanes and shoulders to traffic and the NYSDOT R11 Field Equipment used for traffic metering and ramp management

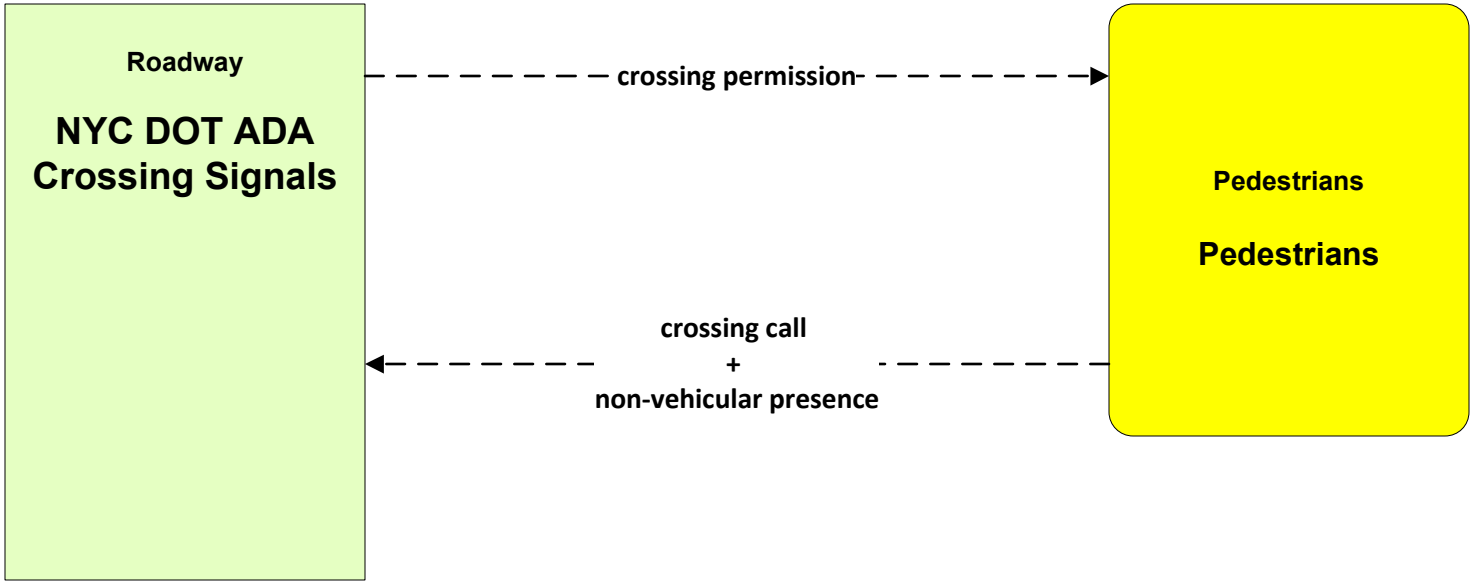
LEGEND

planned and future flow

existing flow

user defined flow

ATMS26 – Mixed Use Warning Systems
New York City Crossing Signals



planned/future flow

existing flow

user defined flow