# DATEX II

# DATEX II CIS
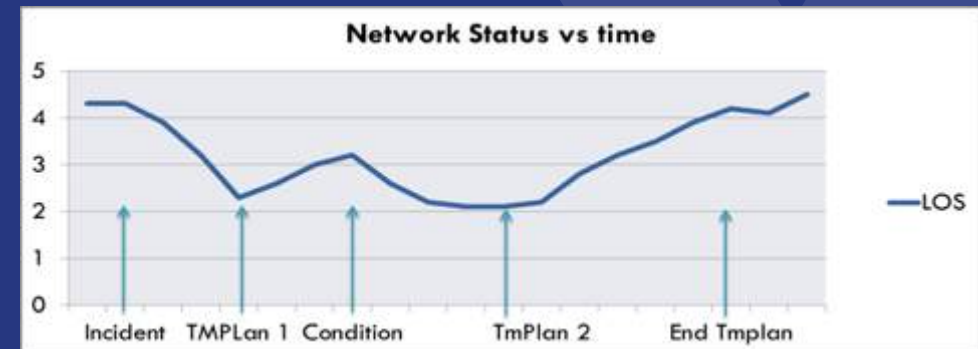
**Collaborating ITS Services**
to support joint traffic management based on
**Traffic Management Plans**

Please ask your questions in the Q&A

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# Why Collaborating ITS Services

- Exchange interaction among center is not concluded in the information delivery functions
    - Processing delivered Information and outcome of those processing is key input to the supplier node to further action
    - Coordination among centers to set up nework consistent traffic management is key
- Collaborative ITS Services is the tool to take shared and coordinated decisions to set up simple device setting actions or complex structured Traffic Management Plan as a counter-measure to improve Road Network Level of Services among different road and traffic operator competences
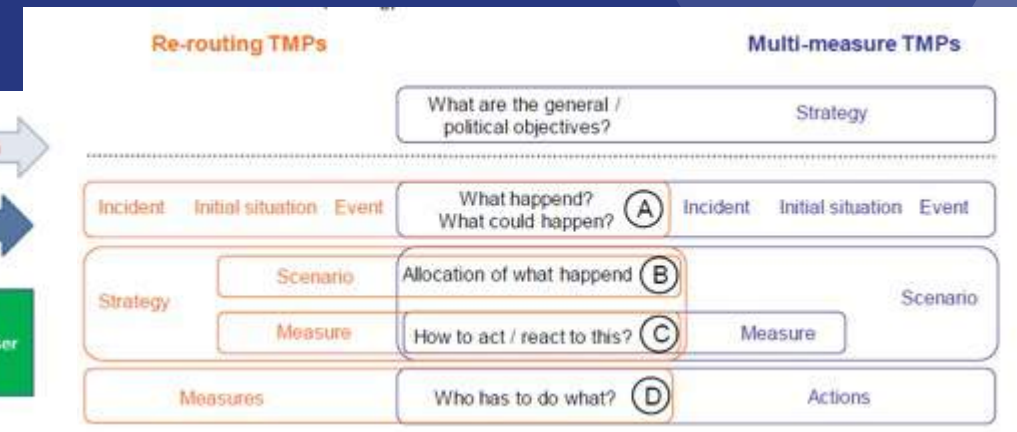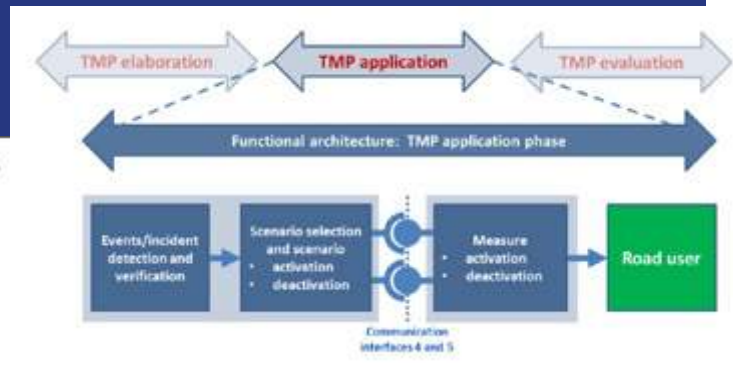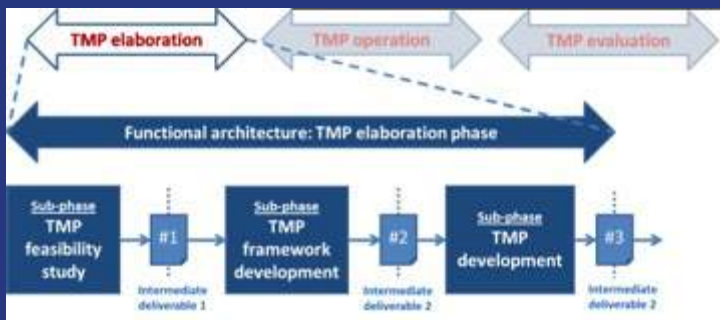


**Network Status vs time**

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# CIS / TMPlan Requirements and Design

- Based on experience about impact on road conditions and frequency of situation occurring, Traffic Engineers may design solutions to cope with problems which frequently arouse in road operation or High Impact Situation.

- CIS Design generalises TMPlan design expressed in **Easyway TMS Deployment Guidelines ➜ EU EIP ITS Handbook**



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# Traffic Management Plan concept



**Involved Organisations**

**Scenario**: An accident occur among Padova and Mestre with heavy impact Traffic Disruption

**Response**

**Strategy**
- Reduce traffic along direction
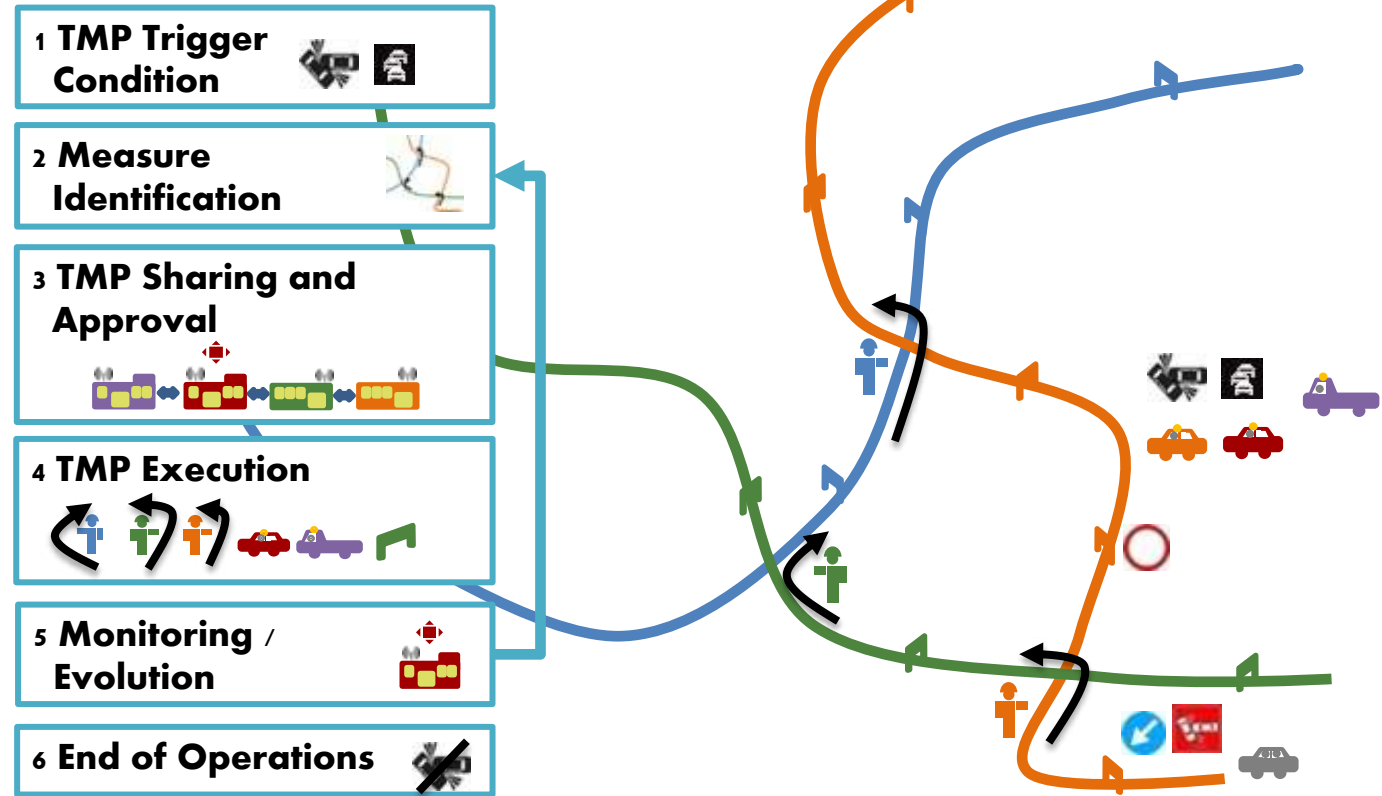
**Measure:**
- Road closed
- Mandatory rerouting

**Actions:**
- Operator Action
  - Road Closed
  - Rerouting
- Information Delivery
- VMS Setting
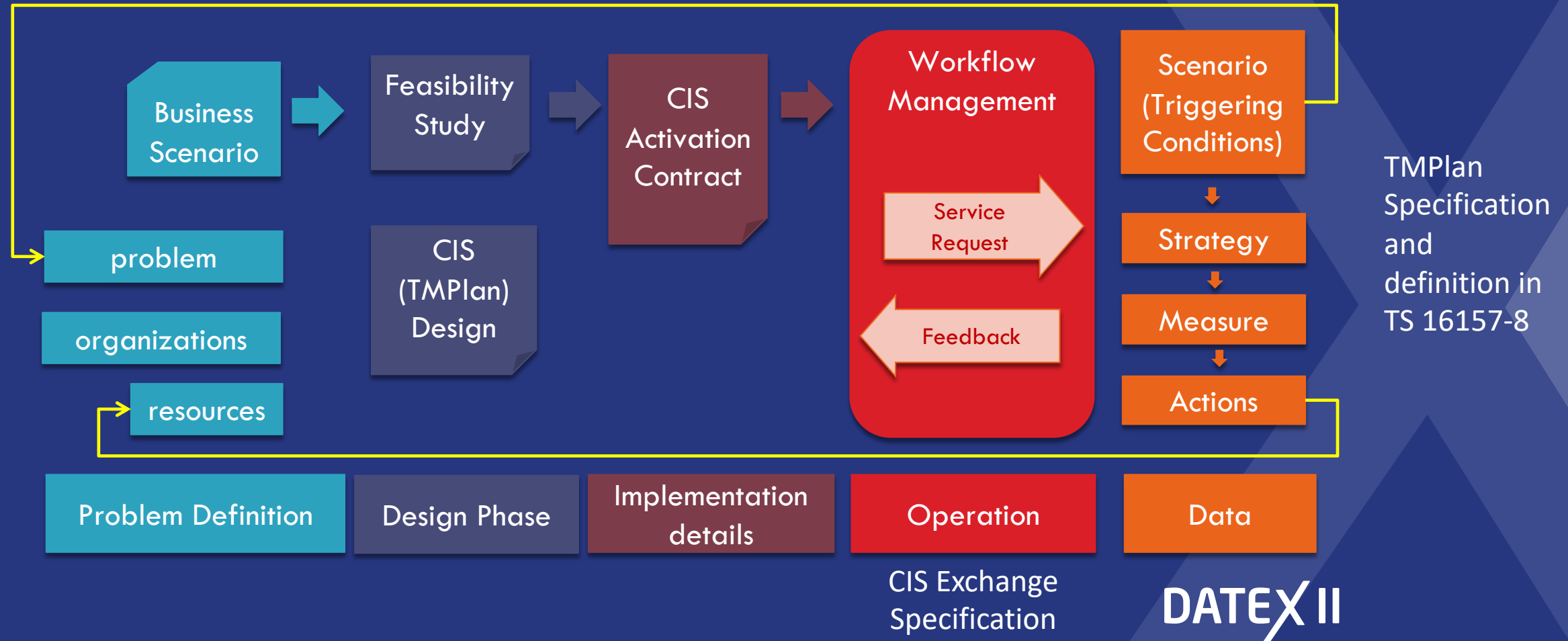- Patrol Management

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# TMPlans operation



1 **TMP Trigger Condition**

2 **Measure Identification**

3 **TMP Sharing and Approval**

4 **TMP Execution**

5 **Monitoring / Evolution**

6 **End of Operations**

# Collaborative ITS Services modeling

# DATEX II Traffic Management Plan Specification

CEN TS 16157-8

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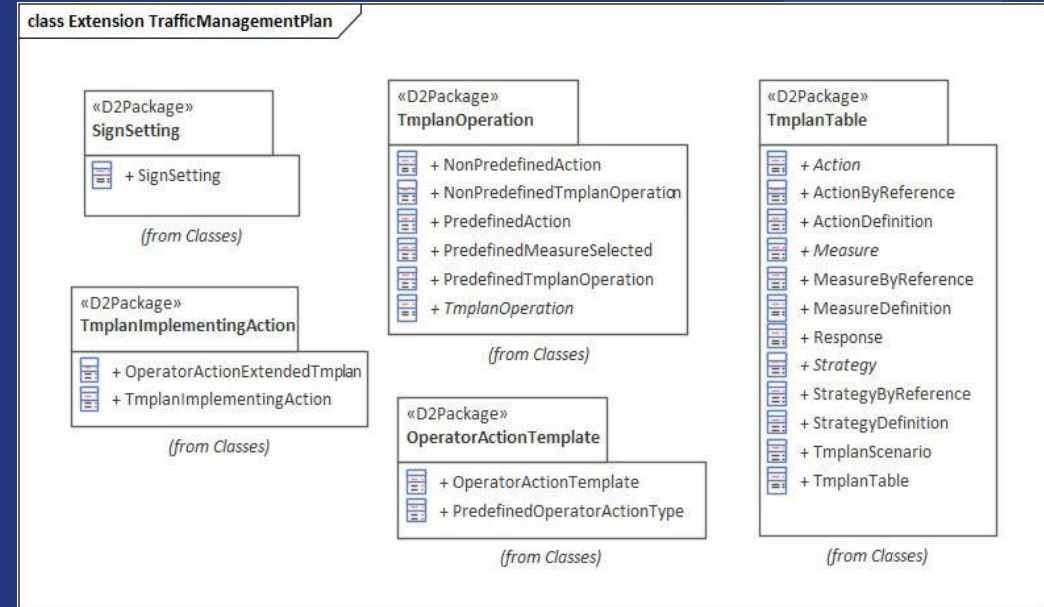# Traffic Management Plan Model

- TMPlan specification are in TS 16157-8, these include
  - TMPlan Table Publication
  - TMPlan Operation Publication

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# Traffic Management Plan definitions

- ## Scenario

describe the overall situation on the road network that leads road operators to initiate and run a traffic management plan

- ## Response
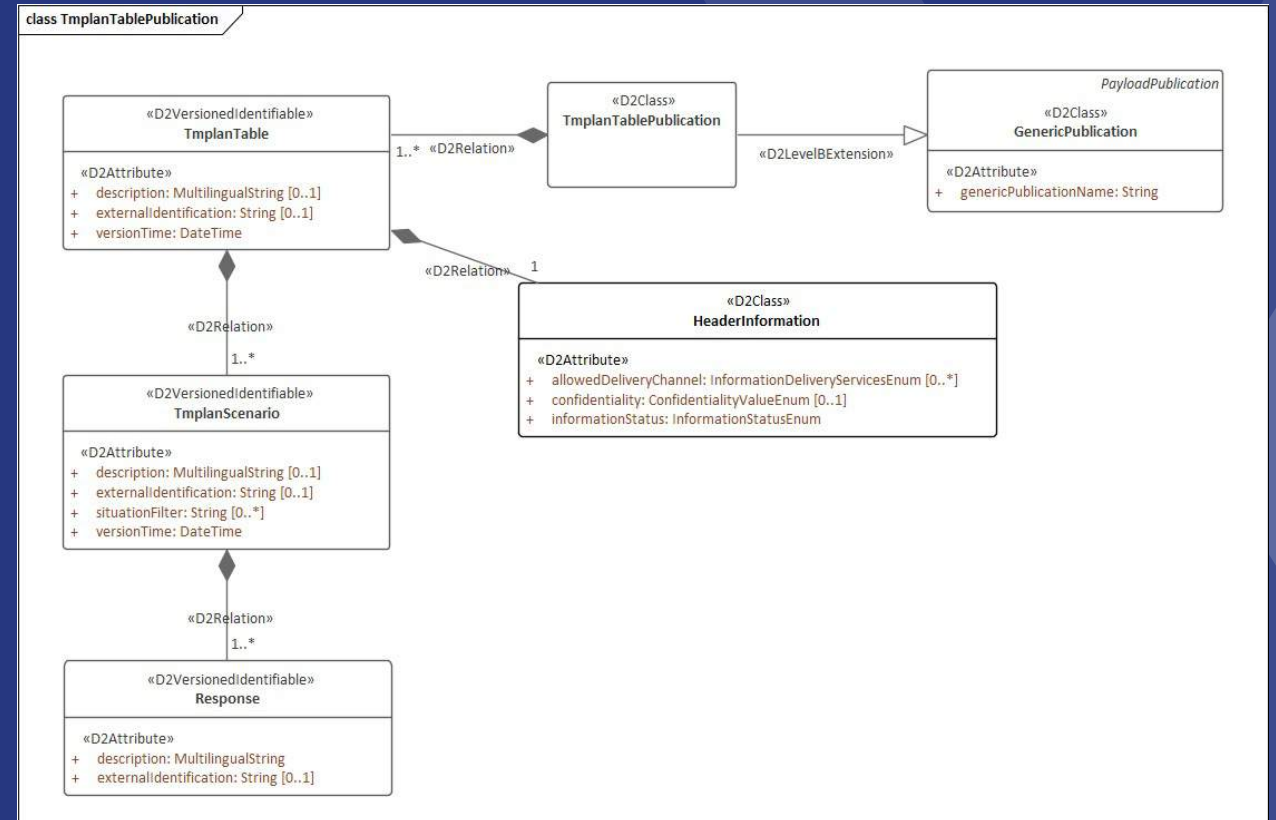
any combination of strategies, measures and actions

- ## Strategy: set of principles that underpin a set of traffic of measures or actions in order to obtain the general objectives of the traffic management policy

- ## Measure: specific set of actions to fulfil a specific goal, in a given scenario, which leads to a specific network operational configuration

- ## Action: a single operator which is normally implemented as an Operator Action Situation Record, implementation of specific messages on variable message signs, by information delivery via other dissemination channels, etc.

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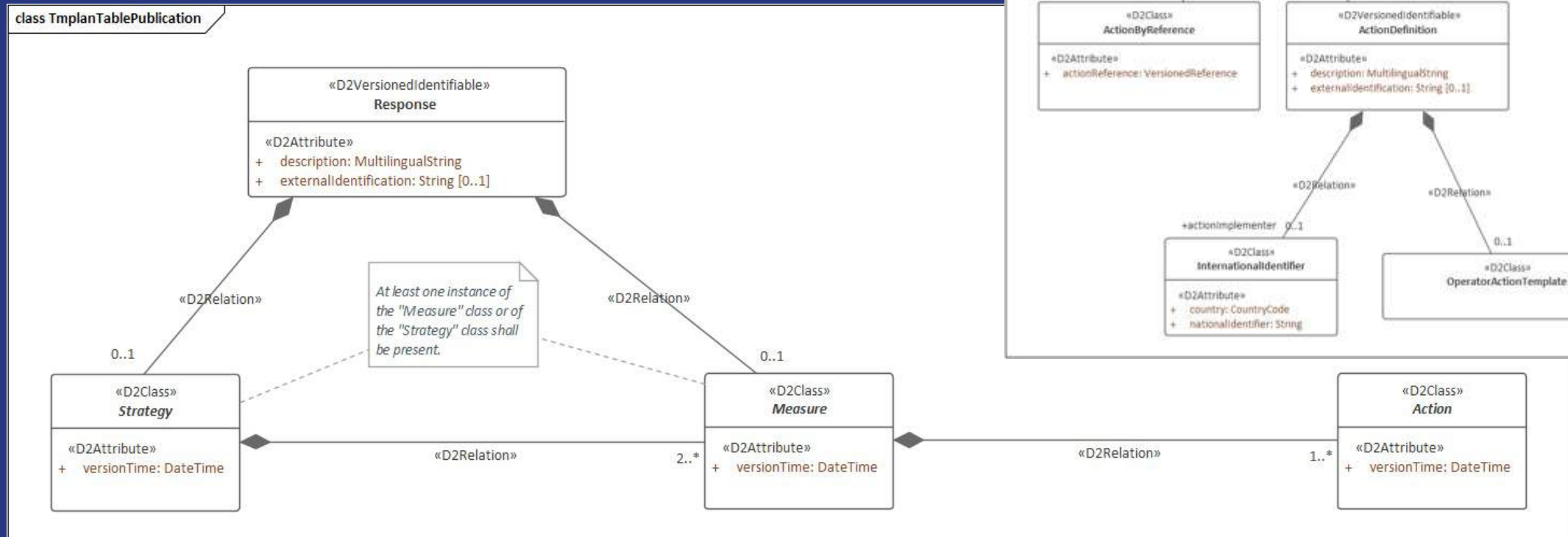
# TMPlan Table Management

- Predefined set of structured responses to specific scenarios, managed once to define their characteristics and identification to be used as reference in real time TMPlan management
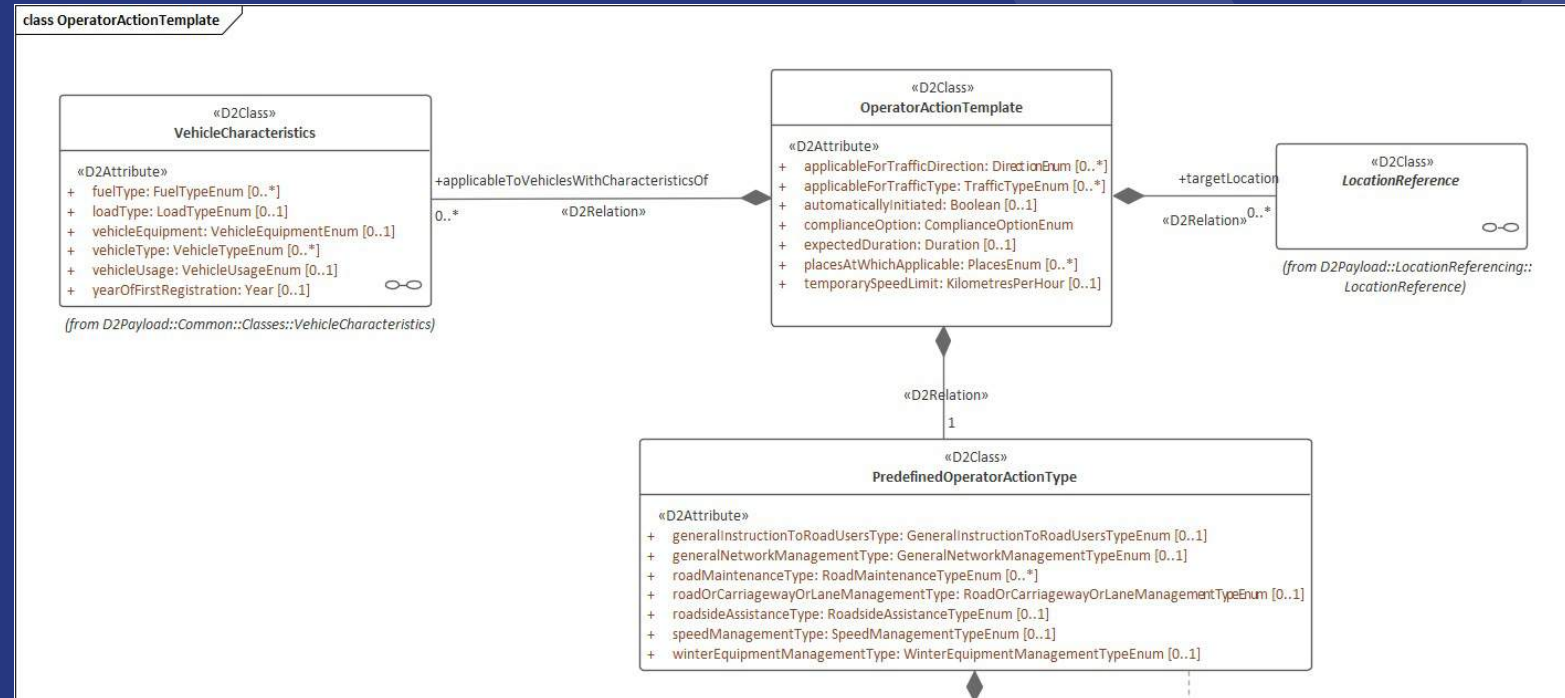
# Response Definition

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# Operator action template

- Any operator action
  - Operator Action sub-types
  - For specific location(s)

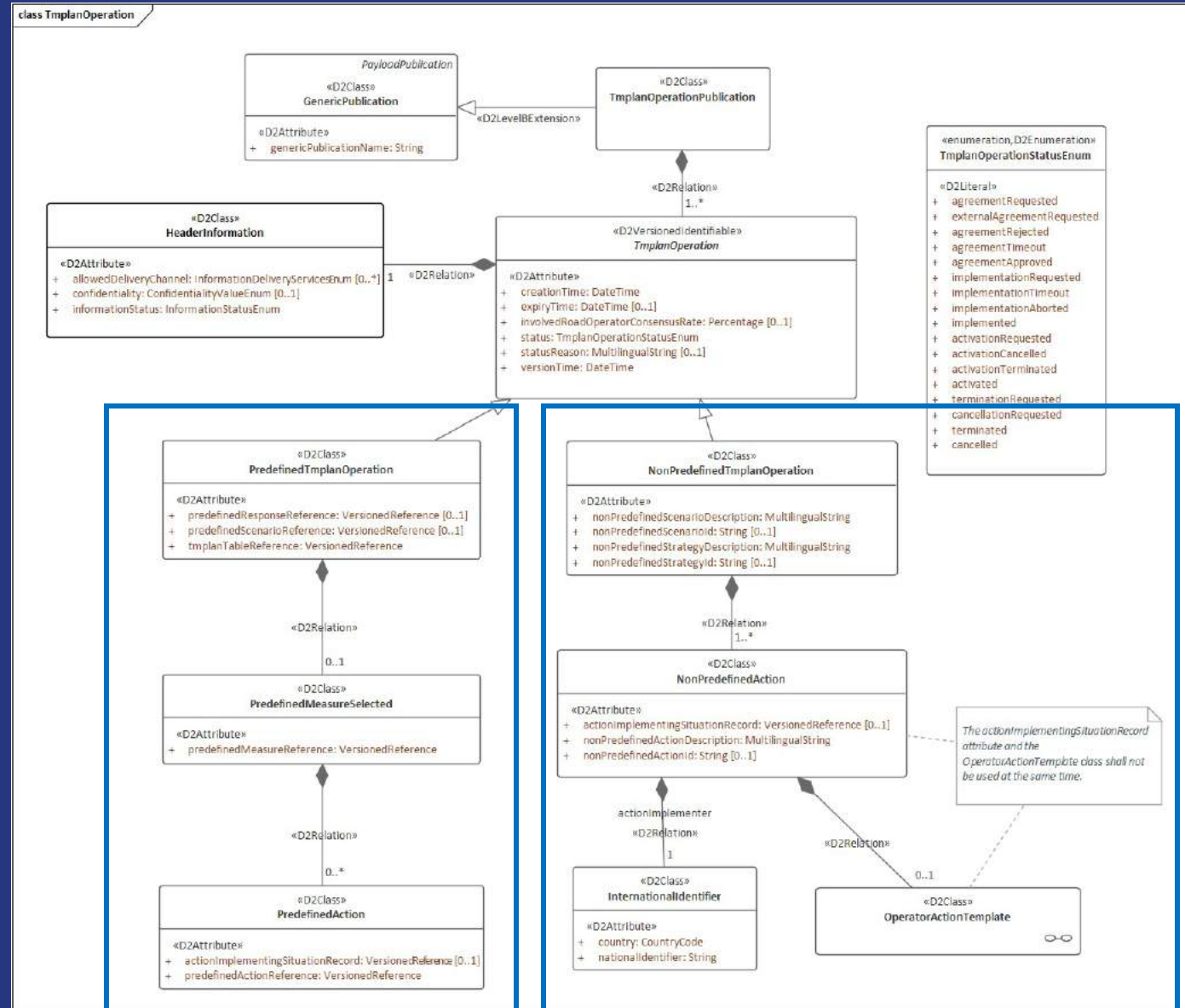- Rerouting Management Enhanced added from part 8 definition

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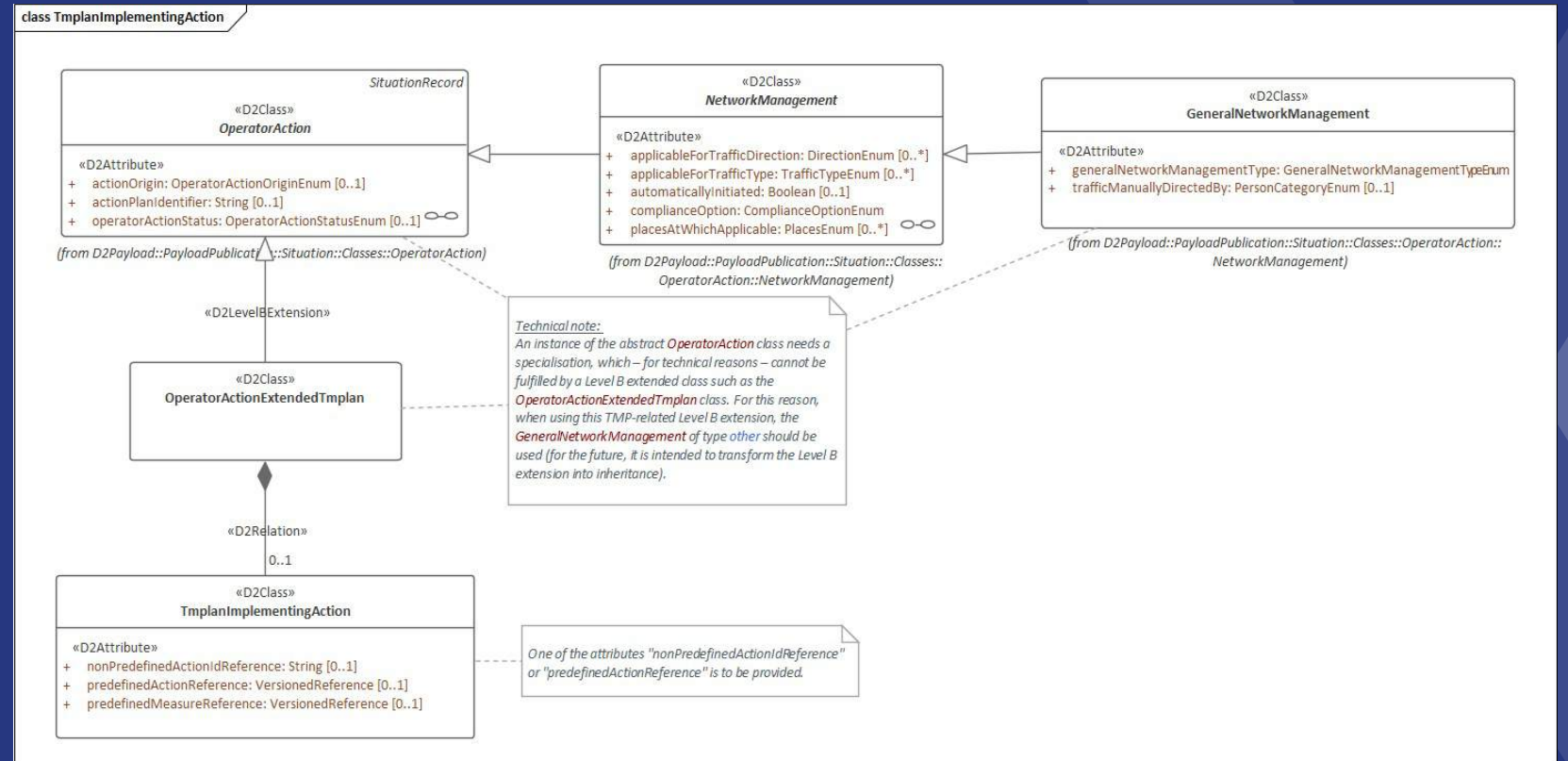European Commission

# TMPlan Operation



- Operation of
  - Predefined TMPlan
    - TMPlan Table id references
  - non Predefined TMPlan
    - On the Fly definition of specific actions by the Operation Template

27th of January 2021

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# Operator Action extension for TMPlan reference

- Situation Publication dependency
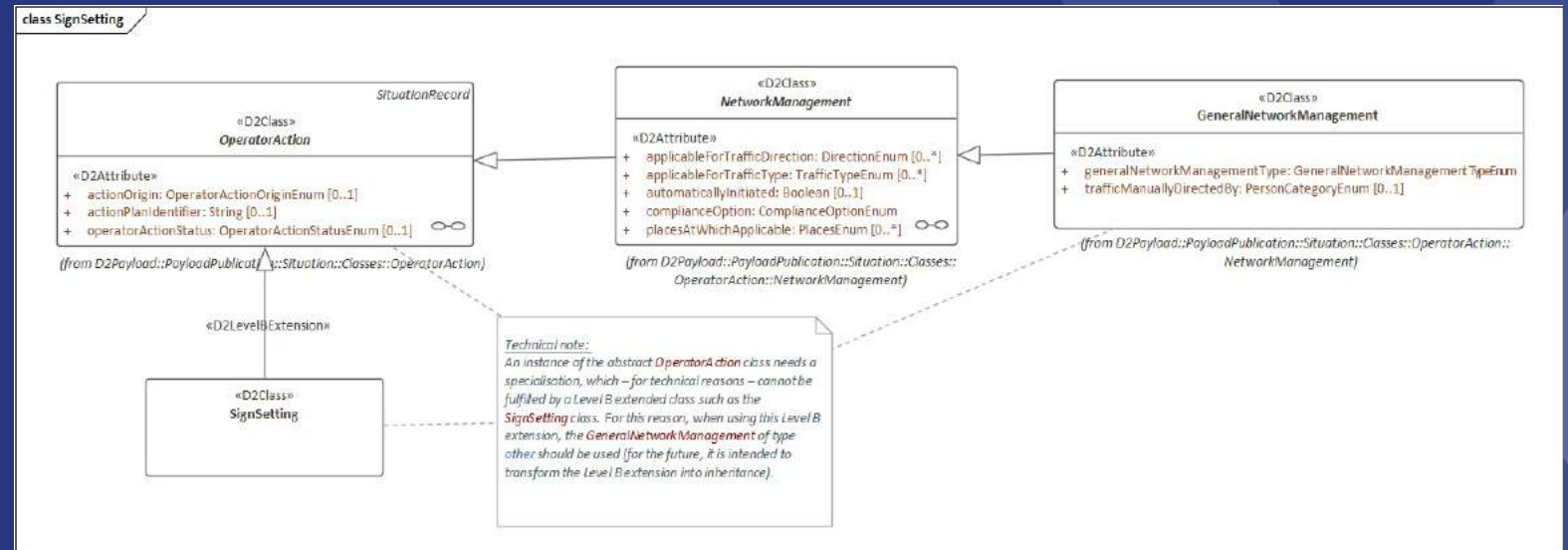
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# SignSetting class

- VMS publication dependency

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# Exchanging TMPlan Publication

- Information Delivery
  - TMPlan definition
  - TMPlan activation status
- Collaborative ITS Service
  - Workflow to implement TMPlan management
    - Service Request
    - Service Feedback



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# CIS Demonstator

Based on DATEX II v2.3 official extension for CIS and TMPlan to extend Information Delivery with bilateral information exchange.

DATEX II extension directory [Link](#)

CIS Demostrator POC [Link](#)

https://datex2.eu/news/collaborative-its-services-cis-demonstrator [Link](#)

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# Collaborative ITS Service conclusion

**Traffic Management Workflow Negotiation is enabled by**

- **TMPlan Model – CEN TS 16157-8**
- **CIS Exchange2020  - CEN ISO TS 19468 + TS  14827-4**

**CIS specification provides an interoperable standardised tool to enable**

- **Service Request**
- **Service Feedback**

**with DATEX II payload reference to exchange Action proposal and relative answer workflow**

Exchange2020 demostrator for CIS https://exchangedemo.datex2.eu/Exchange2020Client/

CIS Demostrator POC Link

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# Thanks for listening

DATEX II Act. 5
https://datex2.eu/activity-5

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