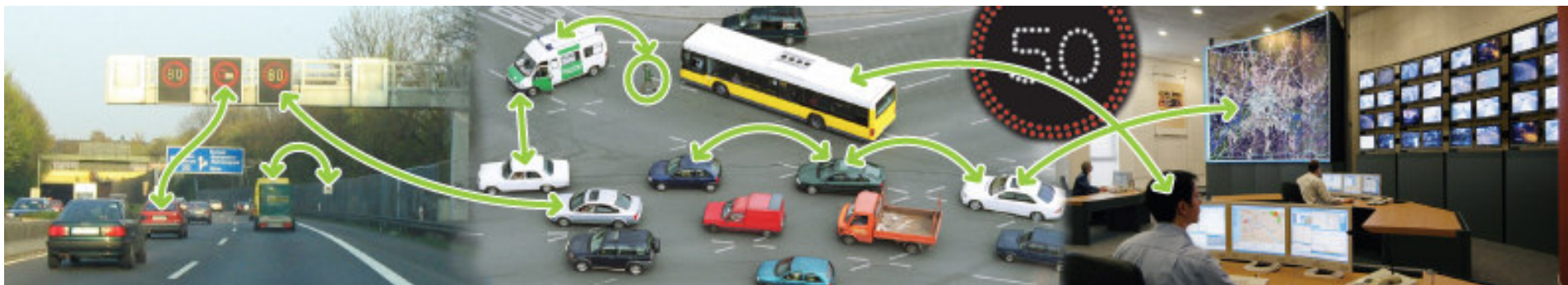




CVIS - Use Cases and Requirements Methodology

CVIS WP2 team

Document editor: Andras Kovacs



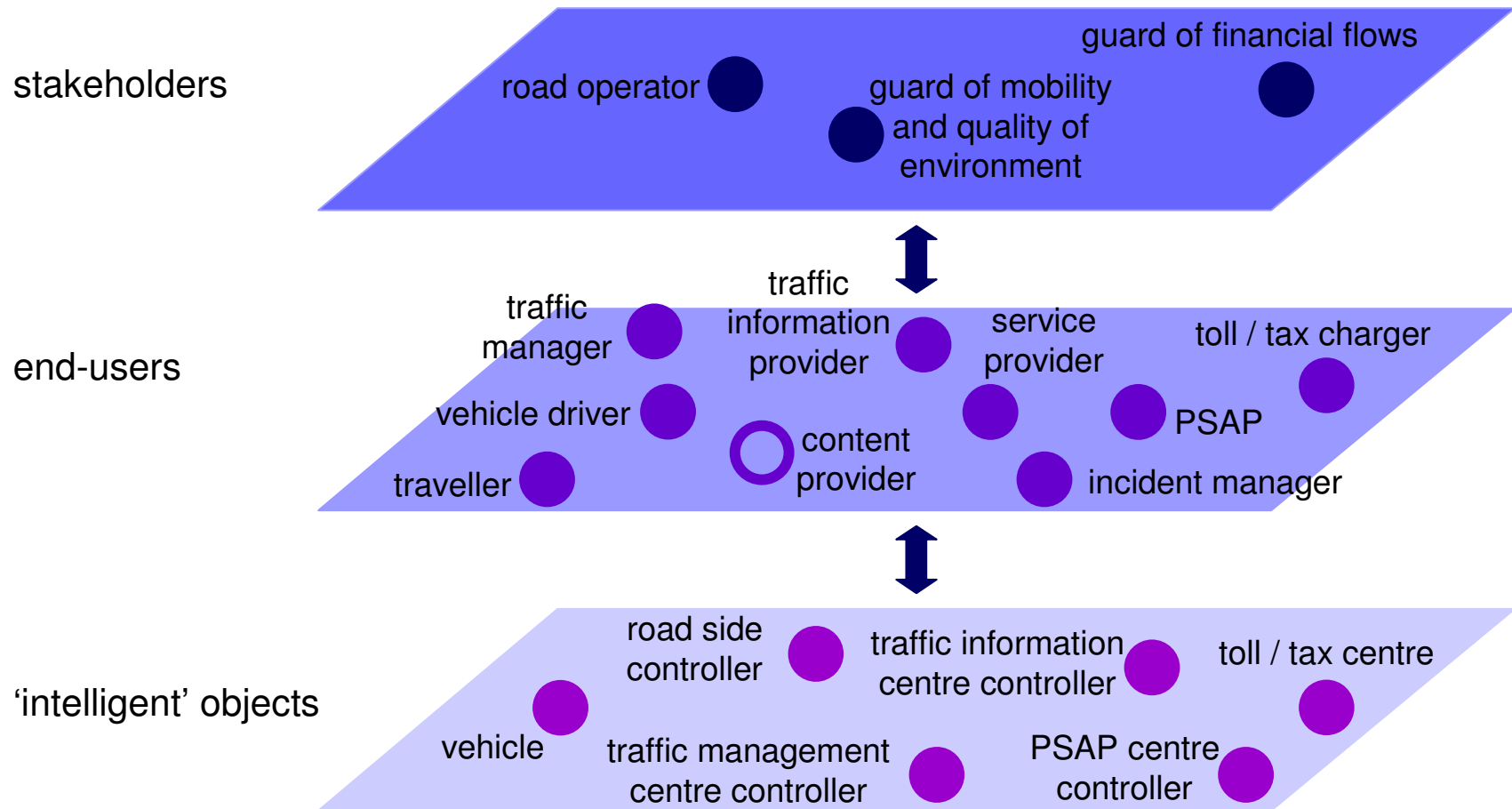


Contents

- Overview of Actors in the system
- Understanding actors of a Use Case
- Graphical representation of process flows
- Description of exchanged messages and trigger points
- Description of Use Case in the template
- Use of V-model



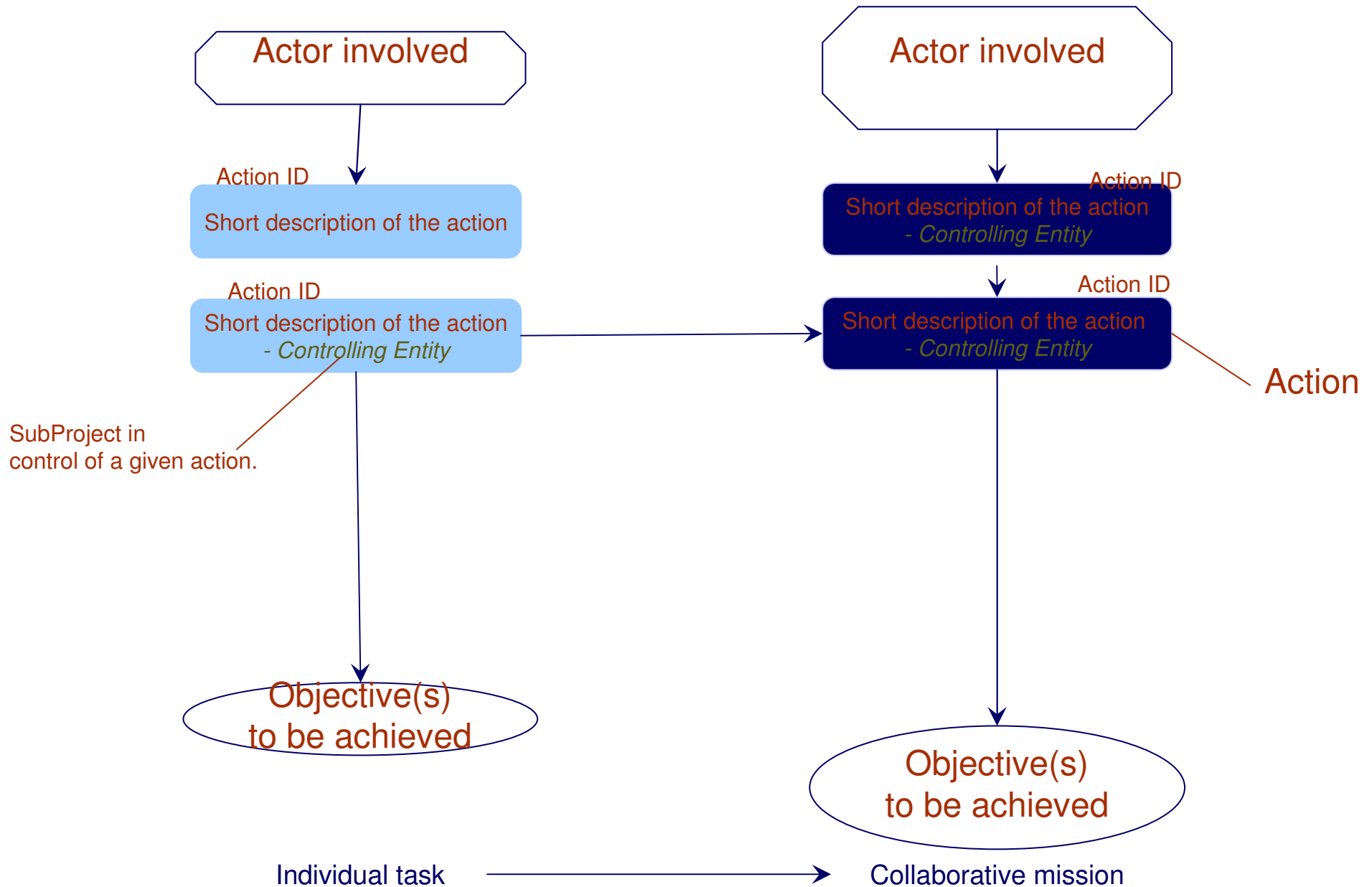
List of CVIS Actors



The placement of an actor within the plane is random.

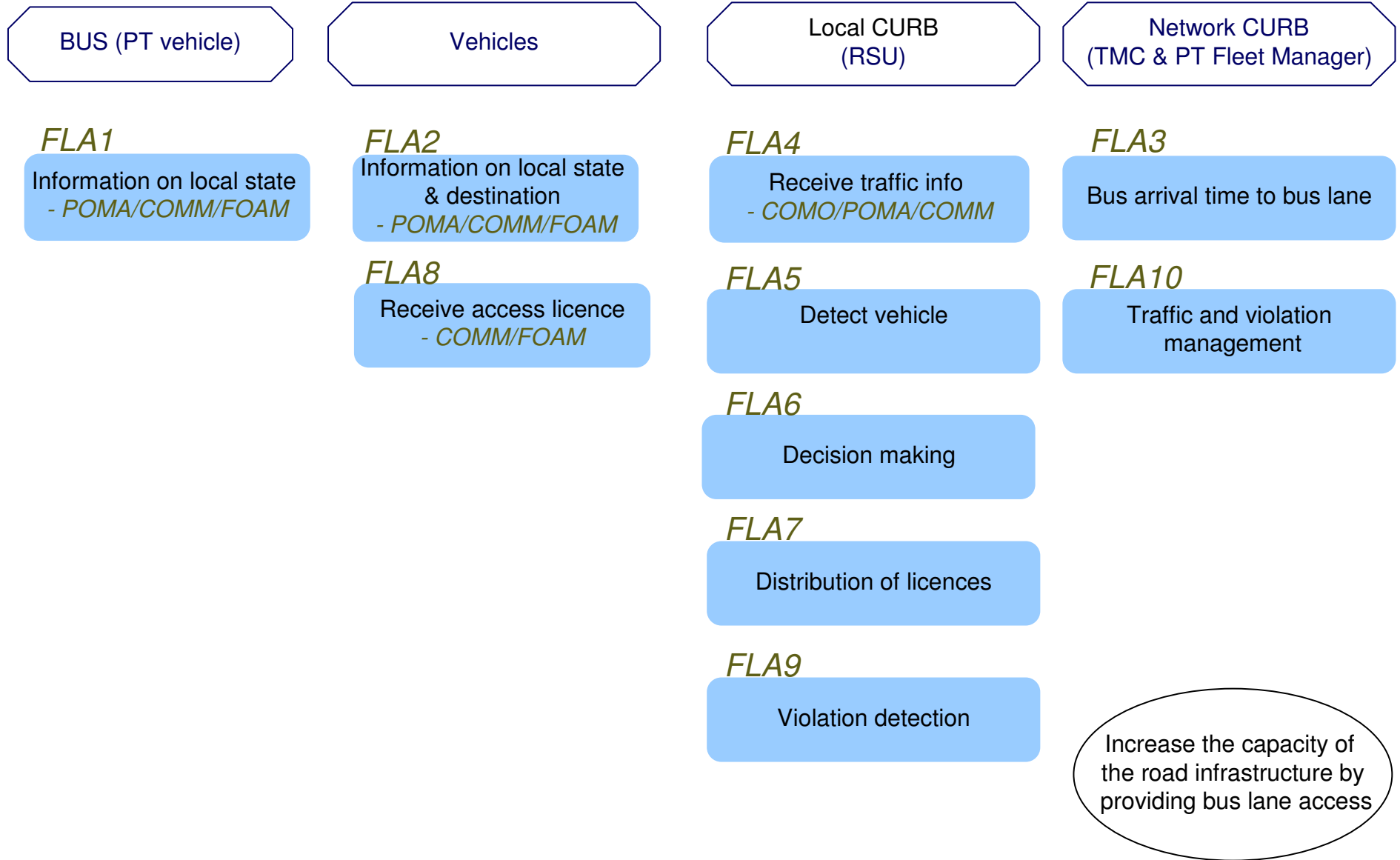


Actor View for an Application: Flow of Actions initiated by some Actors leading to the Desired Objective(s)



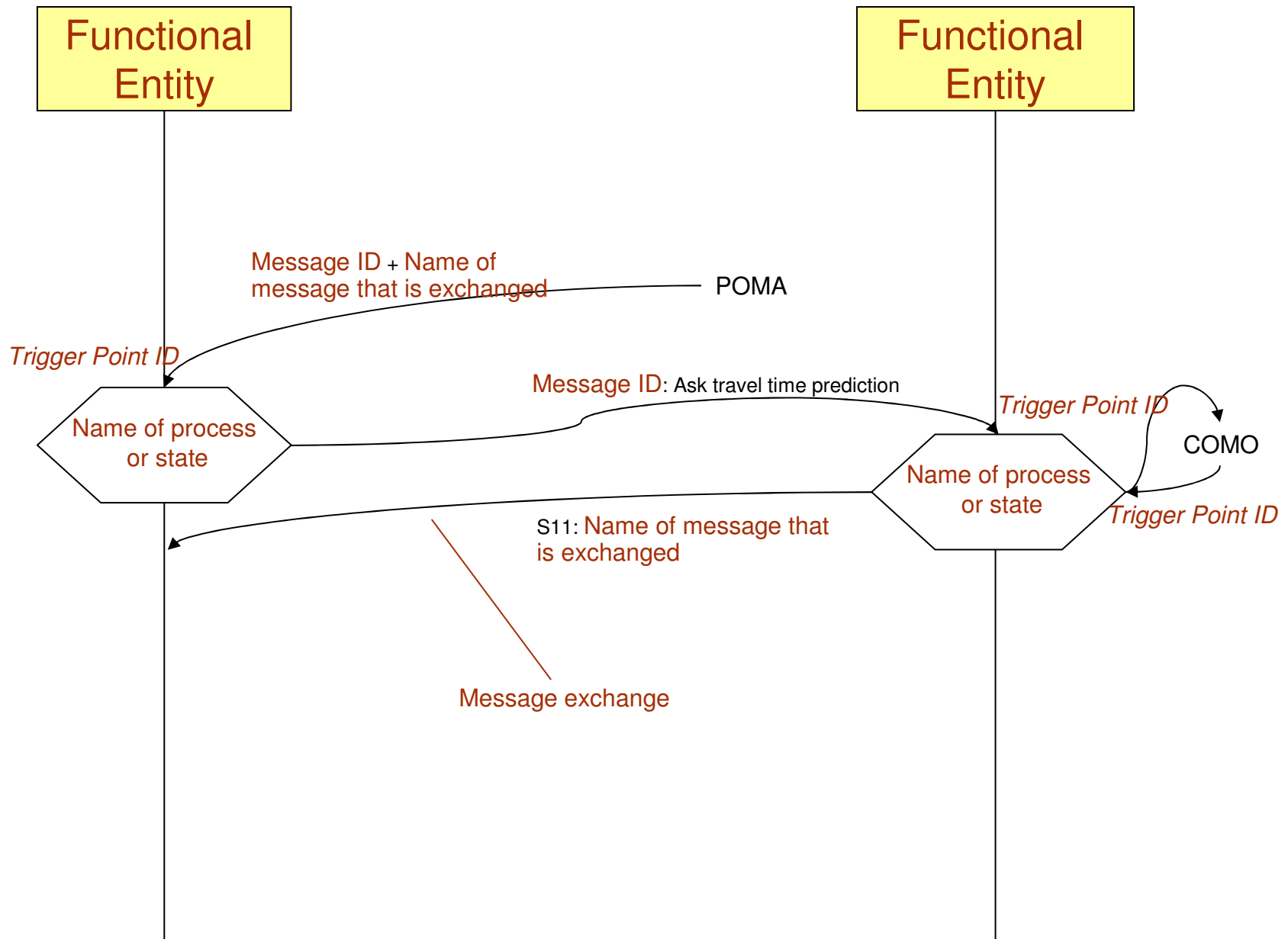


Example Actor View for CURB – Flexible Lane Allocation (UC 001 and UC 002)





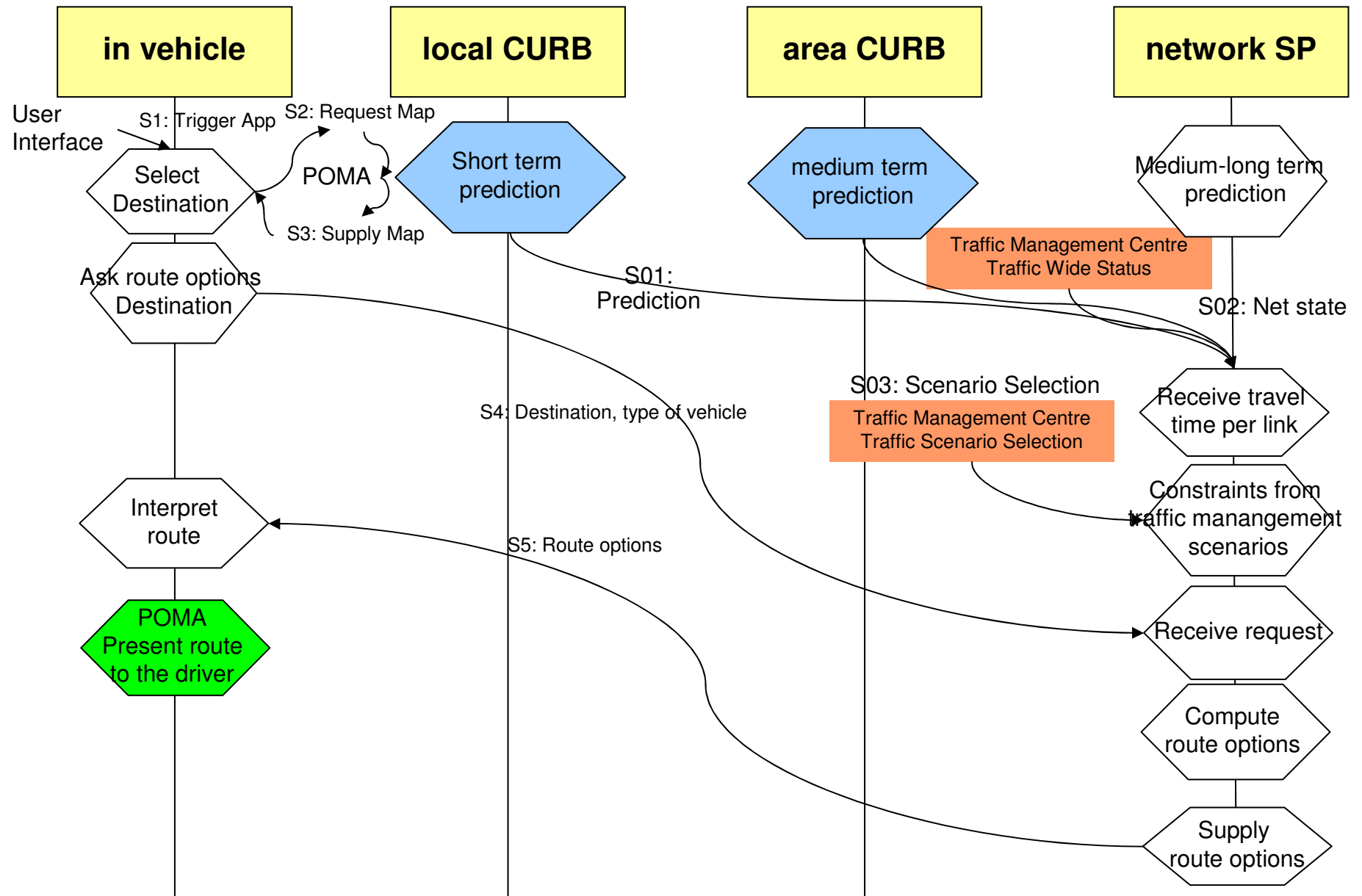
Flowchart View per Subproject for a Use Case: Flow of messages is indicated for each action





Flowchart view Example (CV-UC-SP3.1-0033).

Generate and transmit profiled routing advice to CVIS vehicles





Message Descriptions: describes the content which a message carries, as shown in example below.
(the exact format specification will be done in WP3)

- **Message 8: Ask travel time prediction in region of route**
 - Purpose: trigger response of the the travel flow predictions
 - Contents: List of geo-referenced road sections of interest + times of prediction interest
- **Message 9: Supply travel time predictions in region of route**
 - Purpose: Inform vehicle of predicted traffic flows along the roads and times of interest
 - Contents: List of geo-referenced road sections of interest, for each entry the prediction of traffic flows at the times of interest
- **Message 10: Register route plan**
 - Purpose: Inform management center of the vehicle's route plan, so that collective prediction can be enhanced
 - Contents: Route description along with estimated arrival times to waypoints



Trigger Descriptions: describes the trigger execution and outcomes, as shown in the example below

- Trigger Point 4
 - Trigger entry: the route finding for selected destination is initiated through User Interface
 - Outcome: Message “S6: Ask static Route” is sent to local POMA instance
- Trigger Point 4
 - Trigger entry: reception of “S11: Supply Travel Time” message
 - Outcome: execution of “Refine Route” process



Structure of Use Case description template

Trustworthy infrastructure

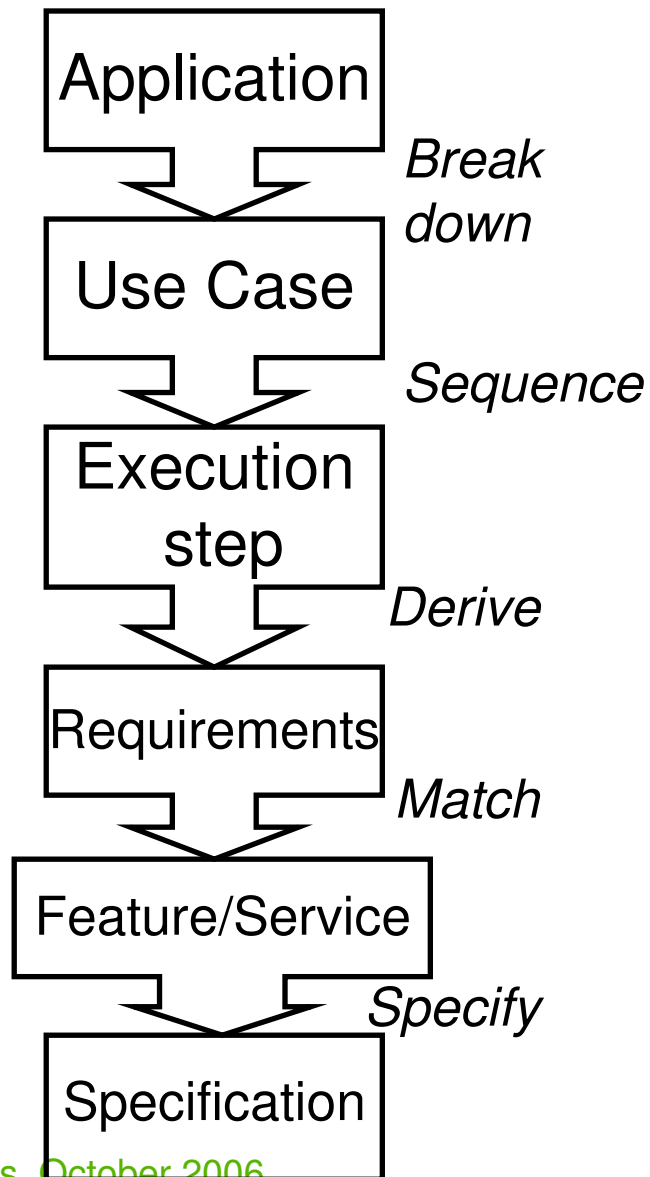
- **GOAL**
- The goal of this use case is to describe a trustworthy infrastructure in action, i.e. how a number of trusted components are used.
- **ACTORS**
- InVehicle platform, InRoadside Platform, Control Centre, Service Centre, Service Providers, End-User
- **PRE-CONDITION**
- Infrastructure for CVIS available
- **POST-CONDITION**
- User has used a number of services
- **MAIN-FLOW**
- End-user authentication phase
 - ▶ The End-User authenticates him/herself to the Client System by presenting or using his/her credentials (e.g., smart card data, presentation of a biometric feature, etc.)
 - ▶ The Client system validates the credentials possibly through a control centre
 - ▶ After successful validation, the Client System caches this authentication for a certain period to provide single-sign on
- Single Sign on phase
 - ▶ The client systems verifies the user credentials and takes care of the authentication with the Control Centre



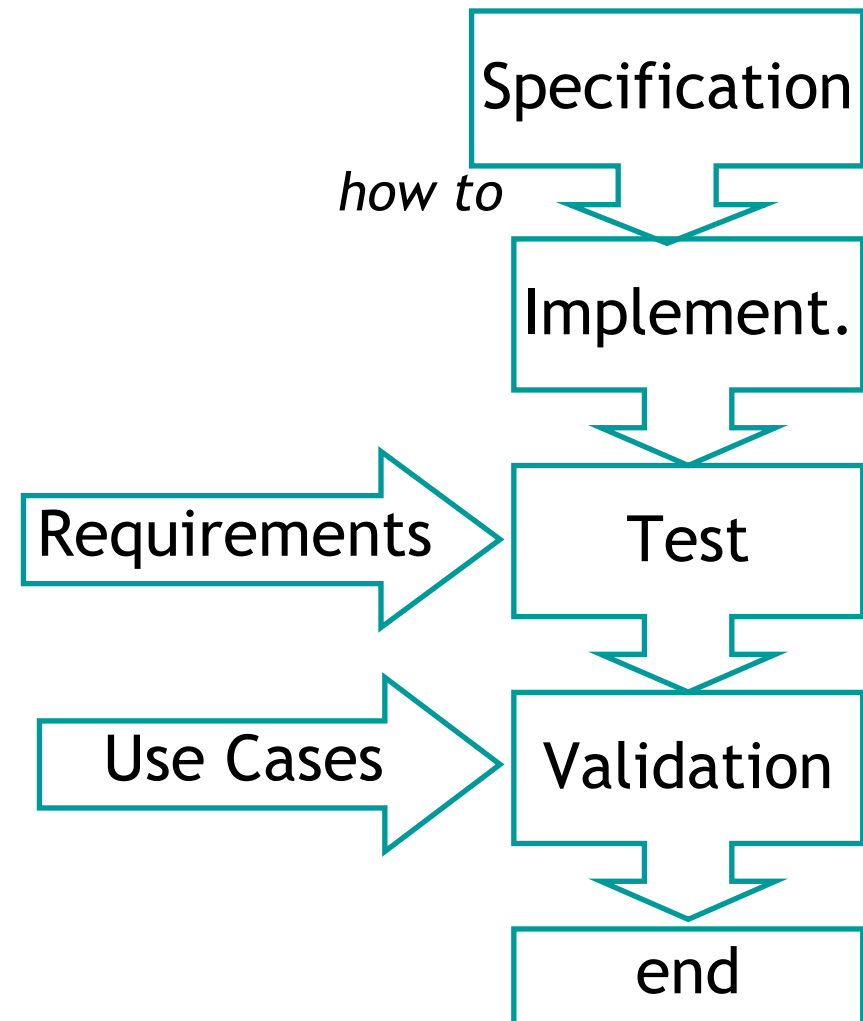


V-model in CVIS

WP2 → WP3



WP3 → WP5





Thanks for your attention...

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