

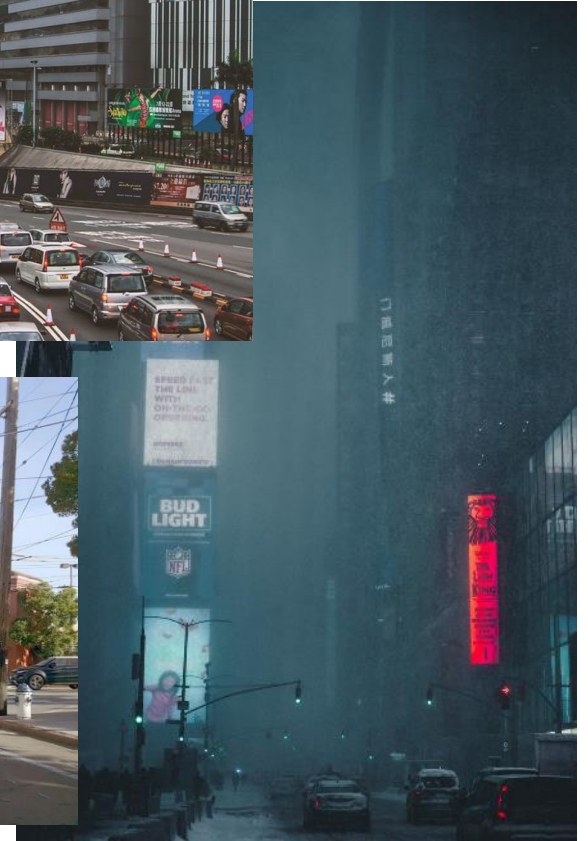
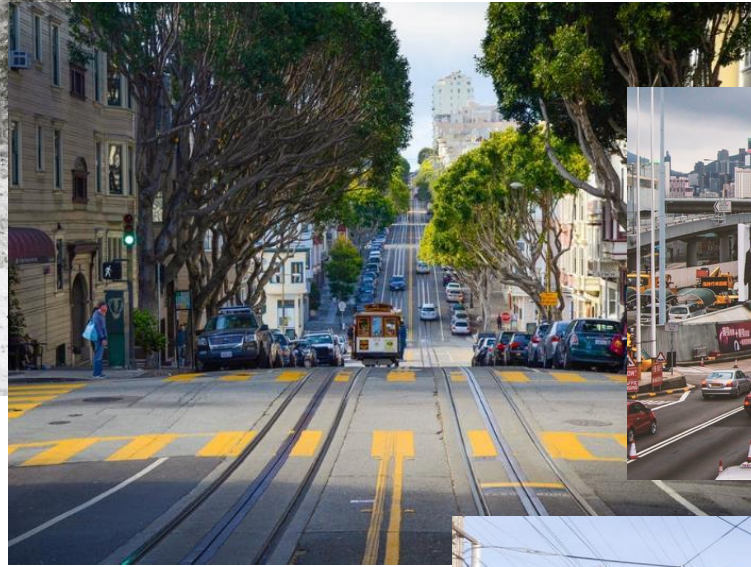
TransAID

Assessment of automated driving to design infrastructure-assisted driving at transition areas

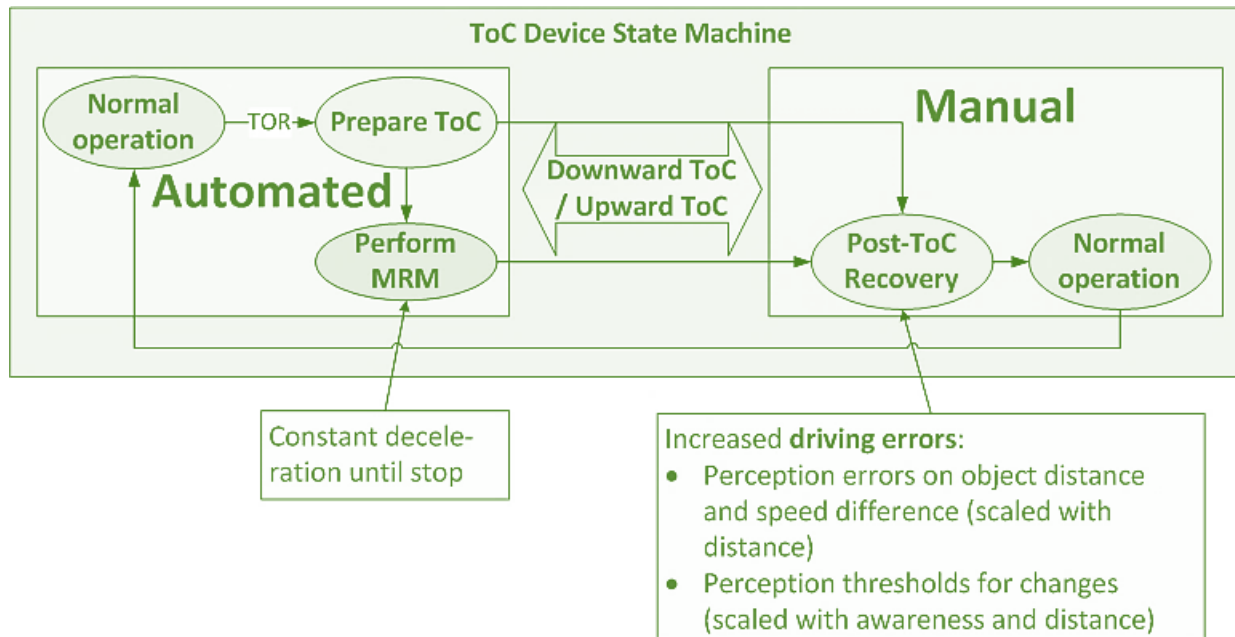
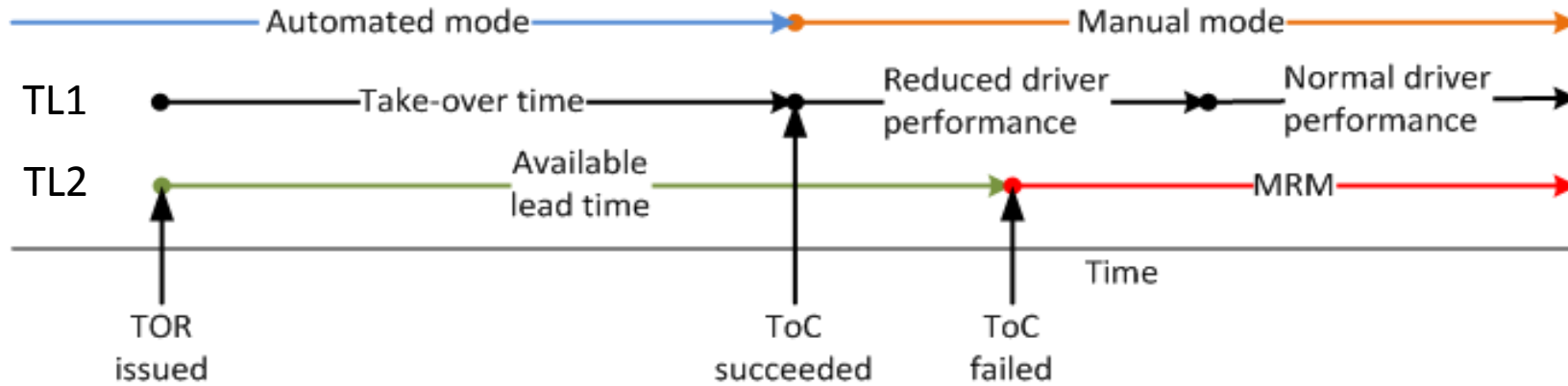
Anton Wijnbenga

MAP traffic management, the Netherlands

AUTOMATED DRIVING LIMITATIONS



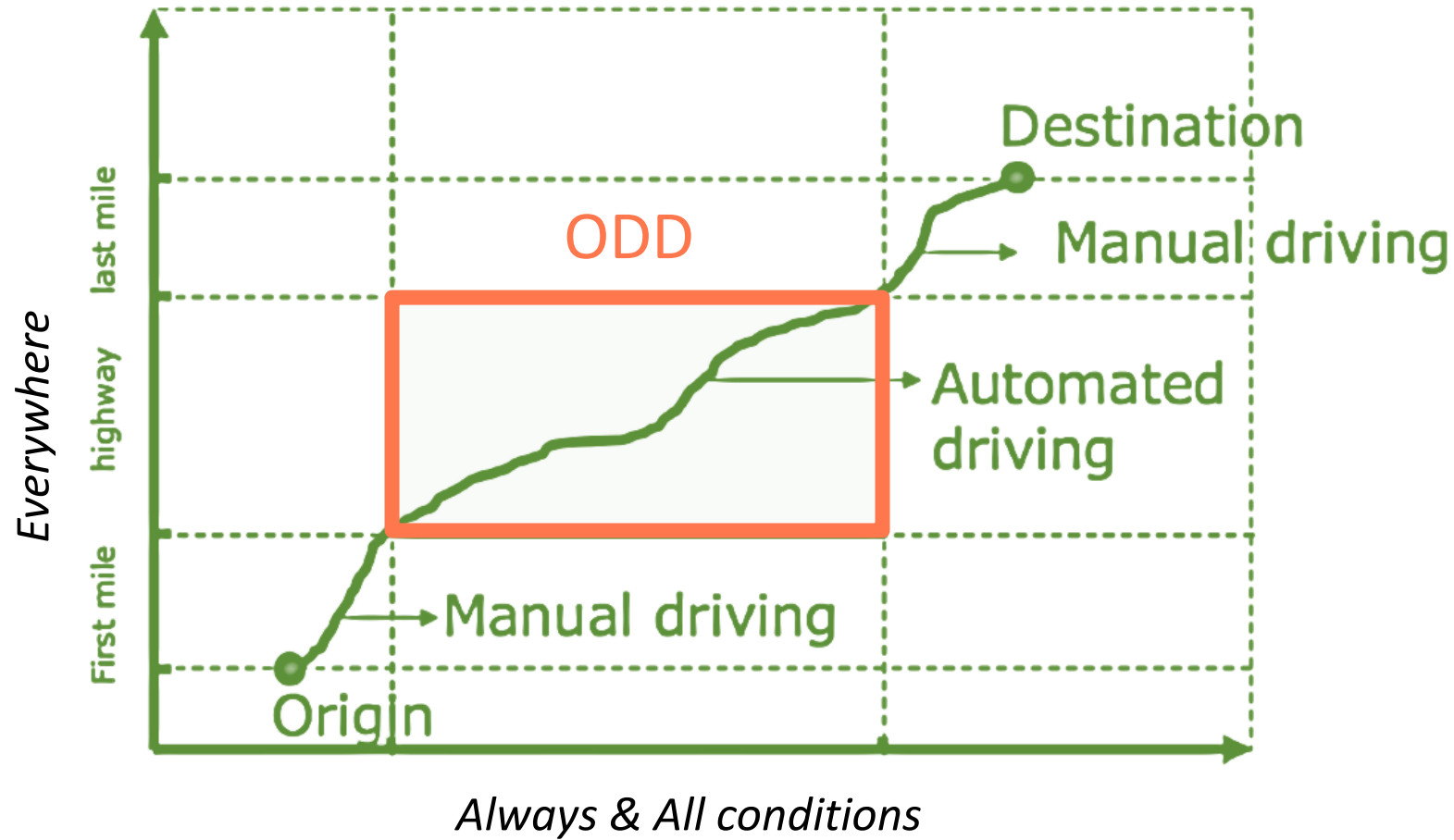
TRANSITION OF CONTROL PROCESS



Abbreviations

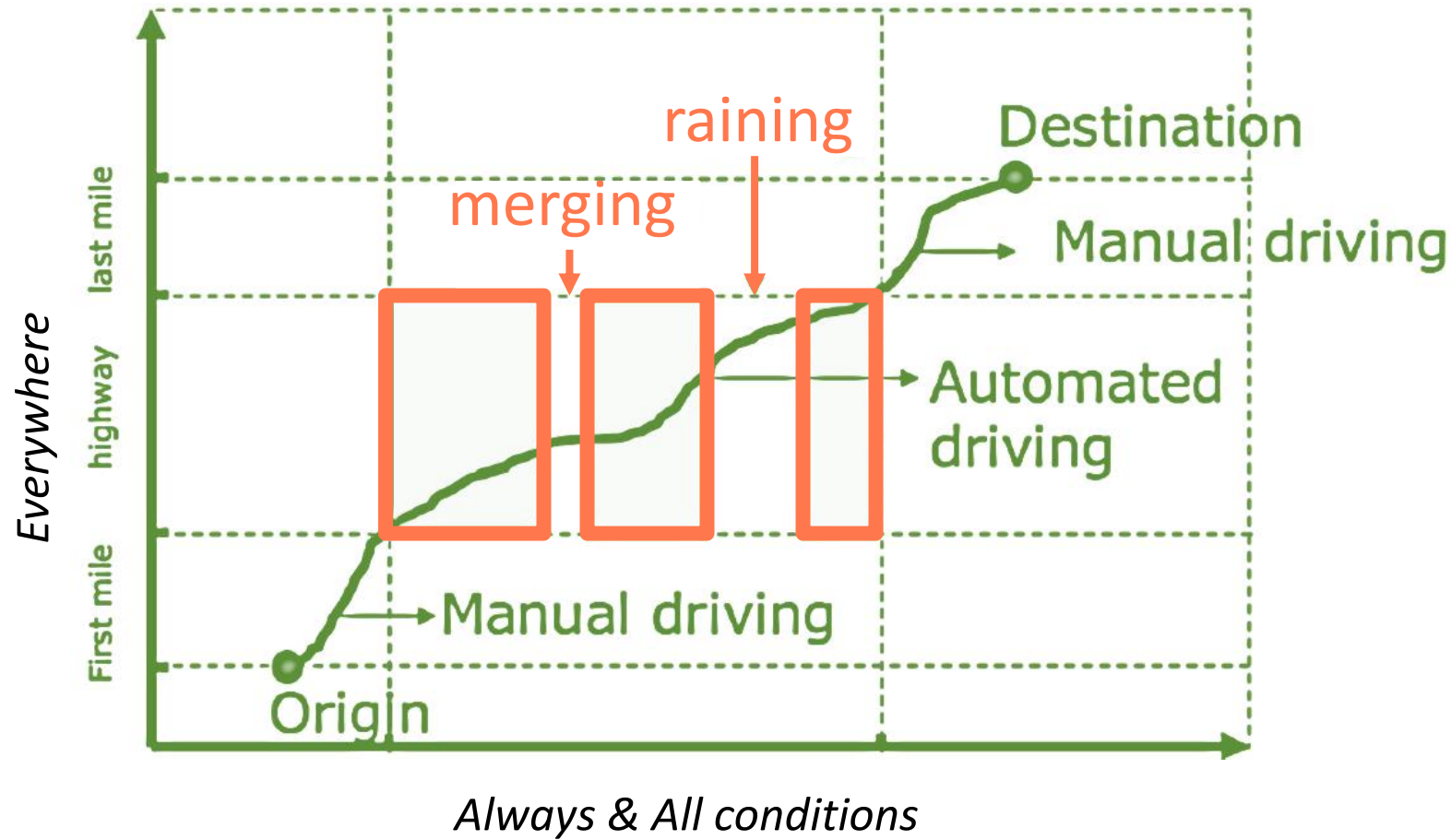
- TOR: Take Over Request
- ToC: Transition of Control
- MRM: Minimum Risk Manoeuvre
- TL: Time Line

CONSIDERING OPERATIONAL DESIGN DOMAIN



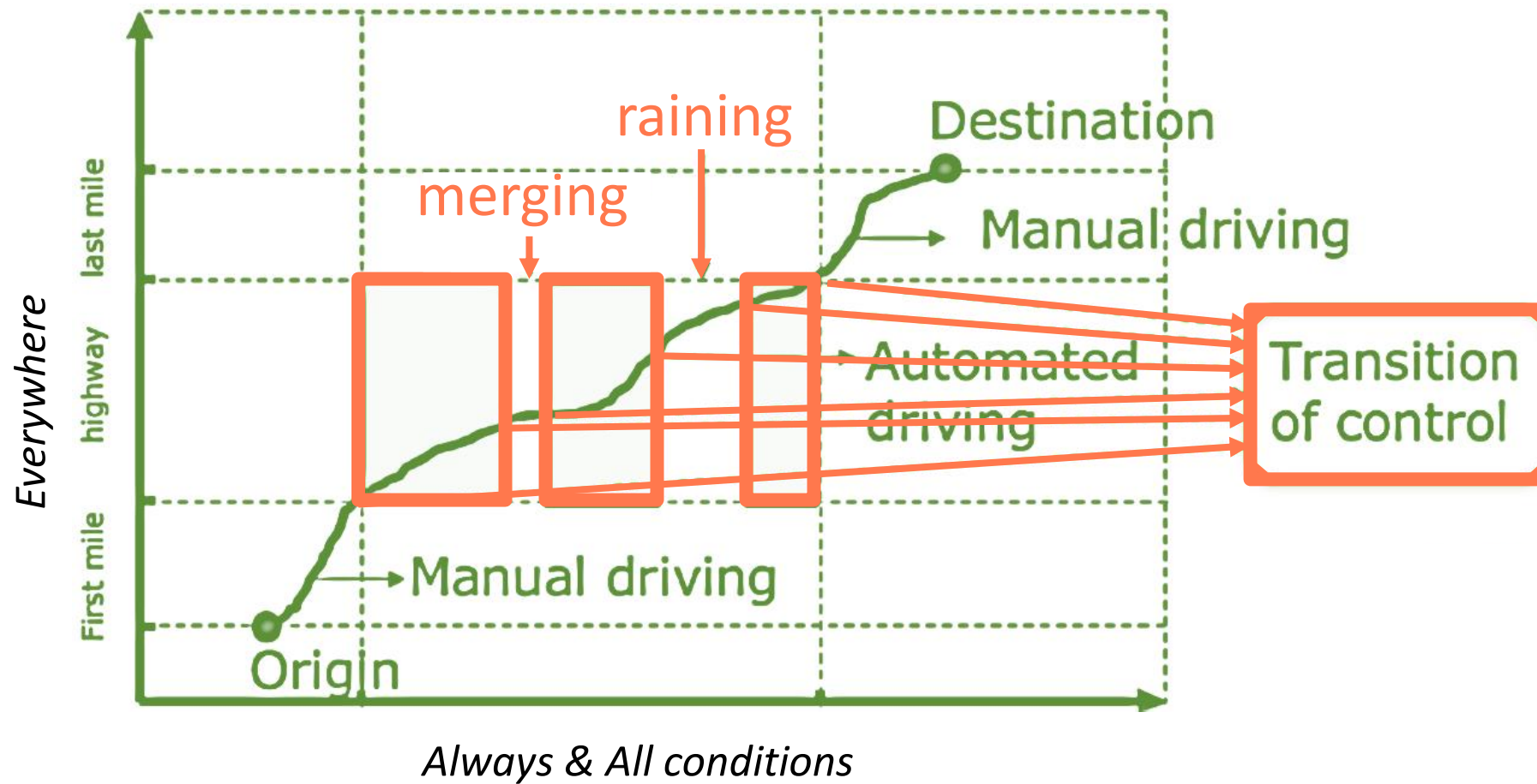
Tom Alkim, Rijkswaterstaat, 2017

CONSIDERING OPERATIONAL DESIGN DOMAIN



Tom Alkim, Rijkswaterstaat, 2017

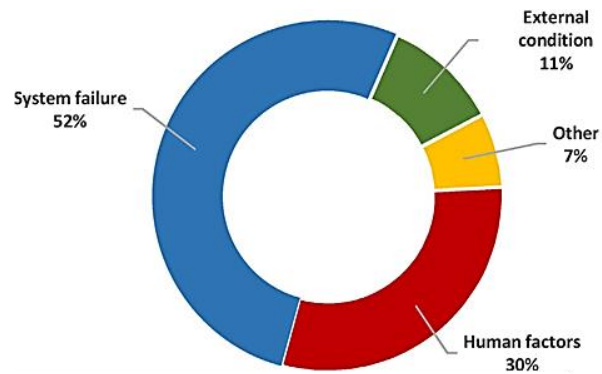
CONSIDERING OPERATIONAL DESIGN DOMAIN



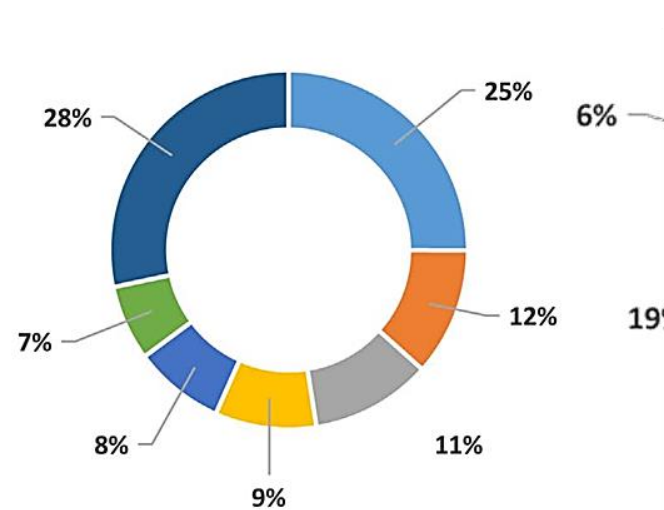
Tom Alkim, Rijkswaterstaat, 2017

DISENGAGEMENT REPORTS 2017

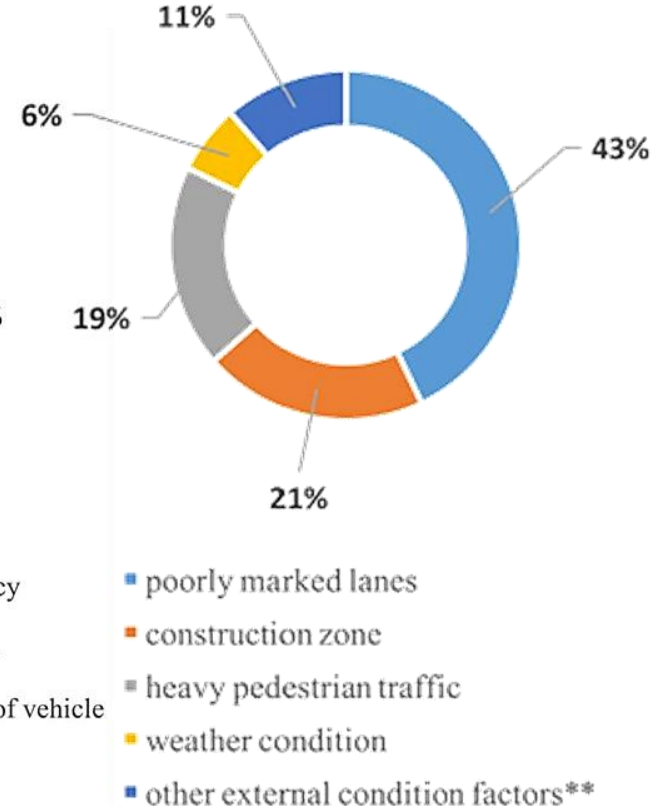
Macro categories



System failure



External condition

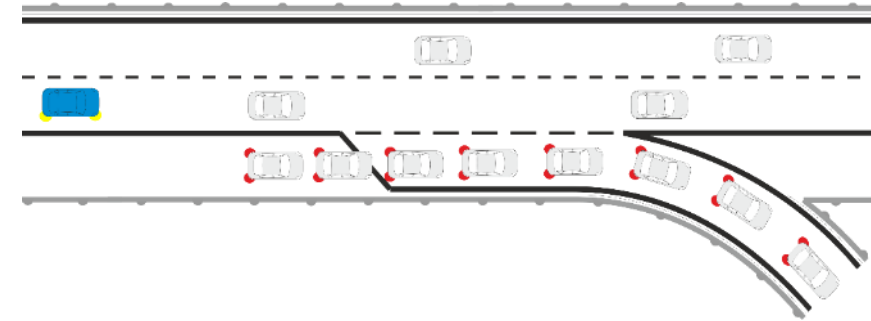
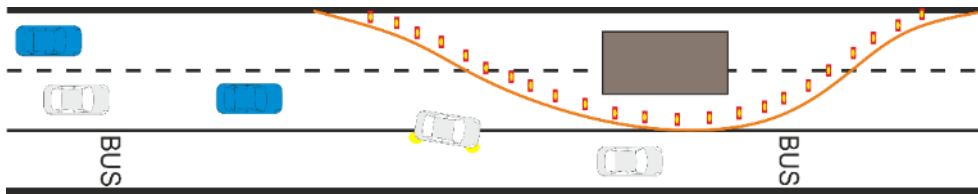


- software discrepancy
- perception discrepancy
- planner not ready
- traffic light detection
- lane change
- unwanted maneuver of vehicle
- Other System Failure factors*
- poorly marked lanes
- construction zone
- heavy pedestrian traffic
- weather condition
- other external condition factors**

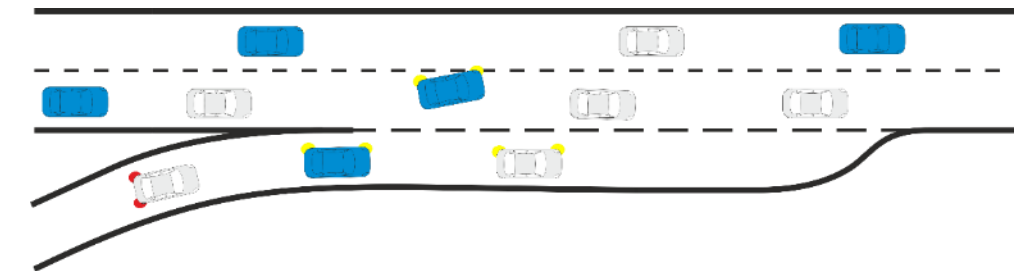
Favaro et al. (2017). Autonomous vehicles' disengagements: Trends, triggers, and regulatory Limitations. *Accident Analysis & Prevention*, 110, 136–148.

TransAID SERVICES AND USE CASES

- Service 1: Prevent ToC/MRM by providing vehicle path information

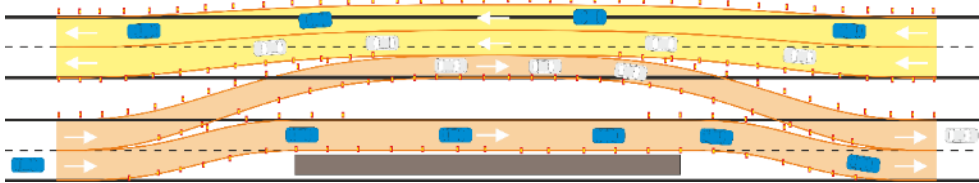


- Service 2: Prevent ToC/MRM by providing speed, headway and/or lane advice

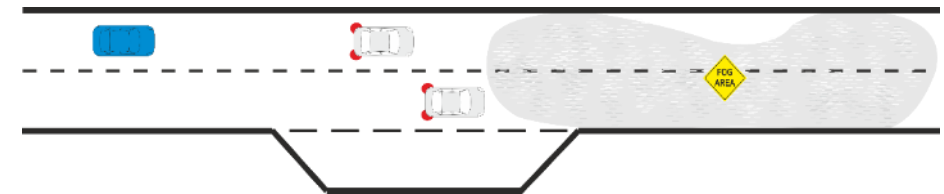
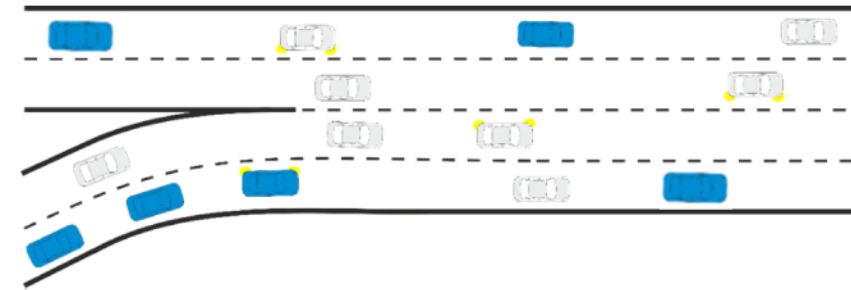
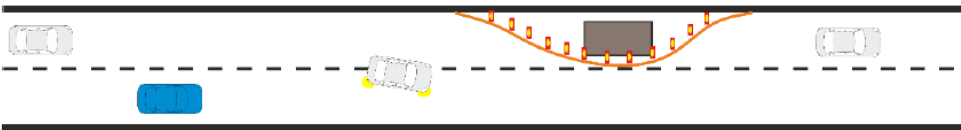


TransAID SERVICES AND USE CASES

- Service 3: Prevent ToC/MRM by traffic separation

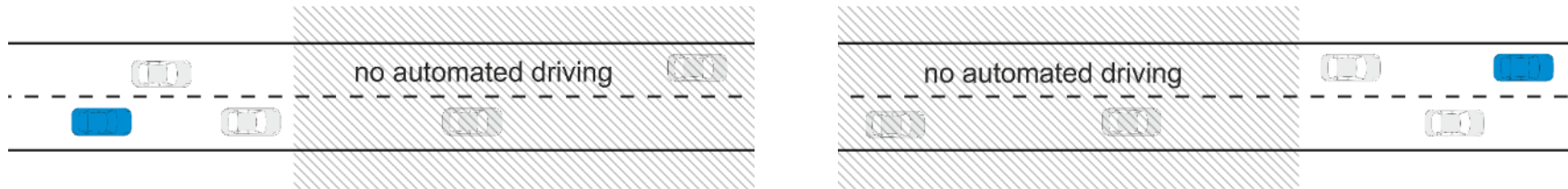


- Service 4: Manage MRM by guidance to safe spot

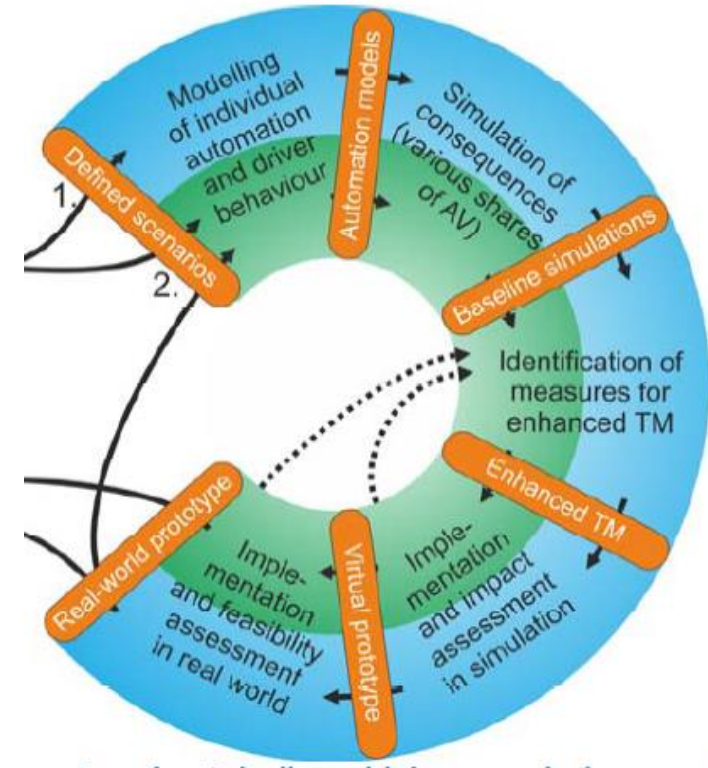
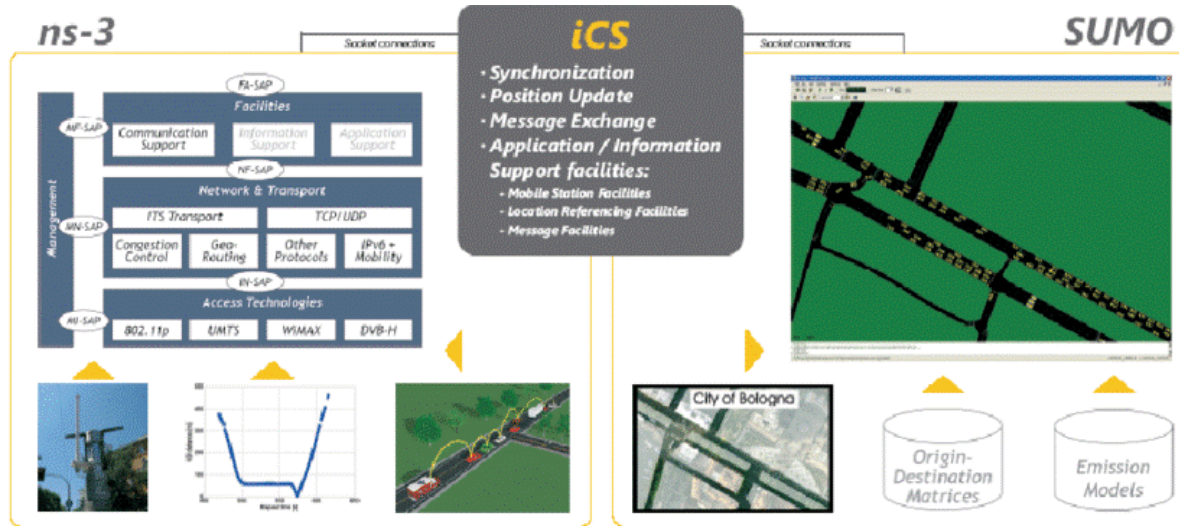


TransAID SERVICES AND USE CASES

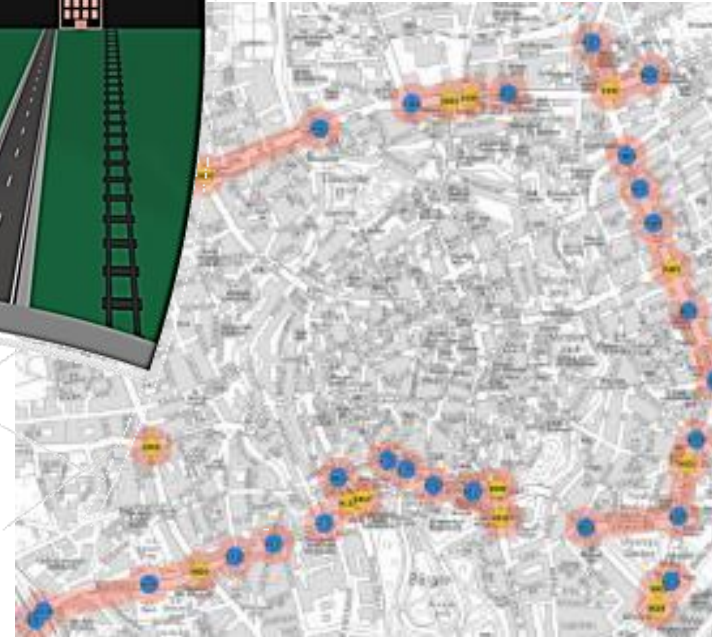
- Service 5: Distribute ToC/MRM by scheduling ToCs



TransAID UPCOMING ACTIVITIES



TransAID UPCOMING ACTIVITIES





Assessment of automated driving to design infrastructure-assisted driving at transition areas

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