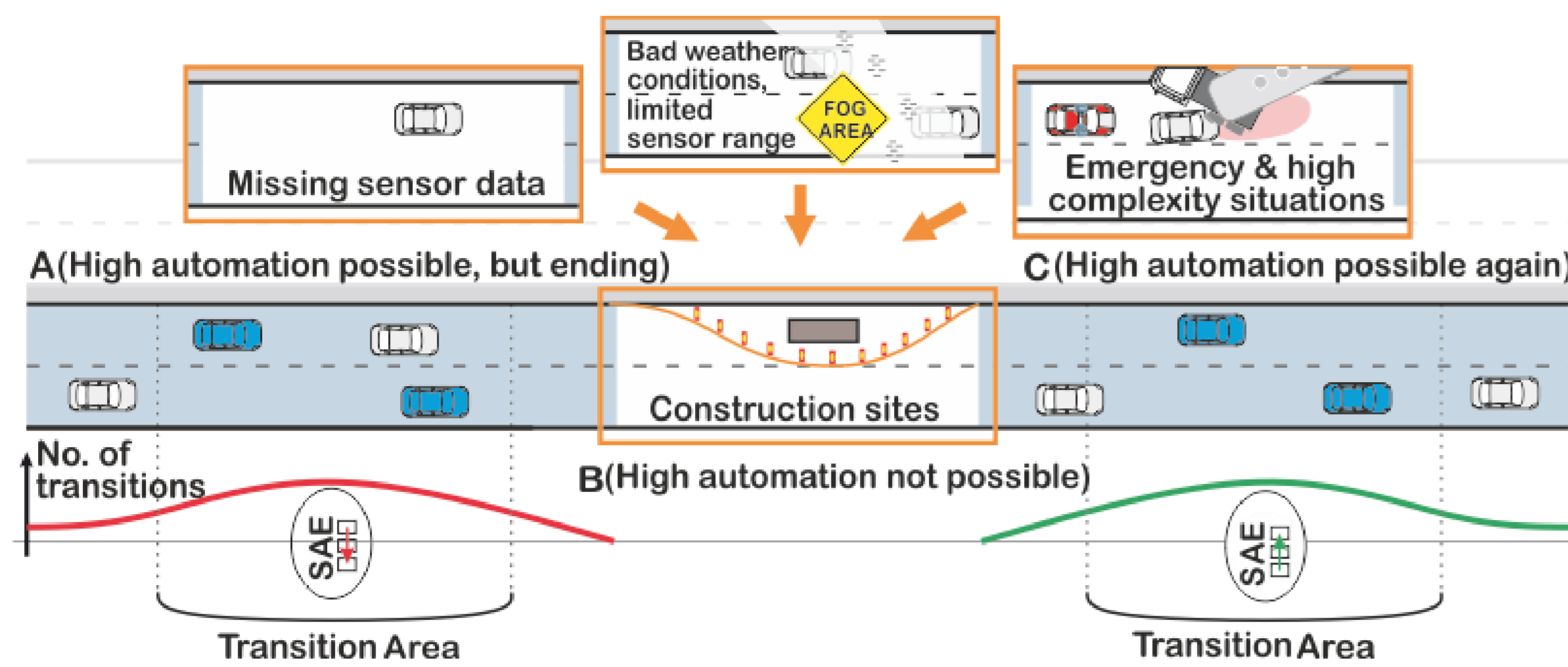


TransAID - Transition Areas for Infrastructure-Assisted Driving

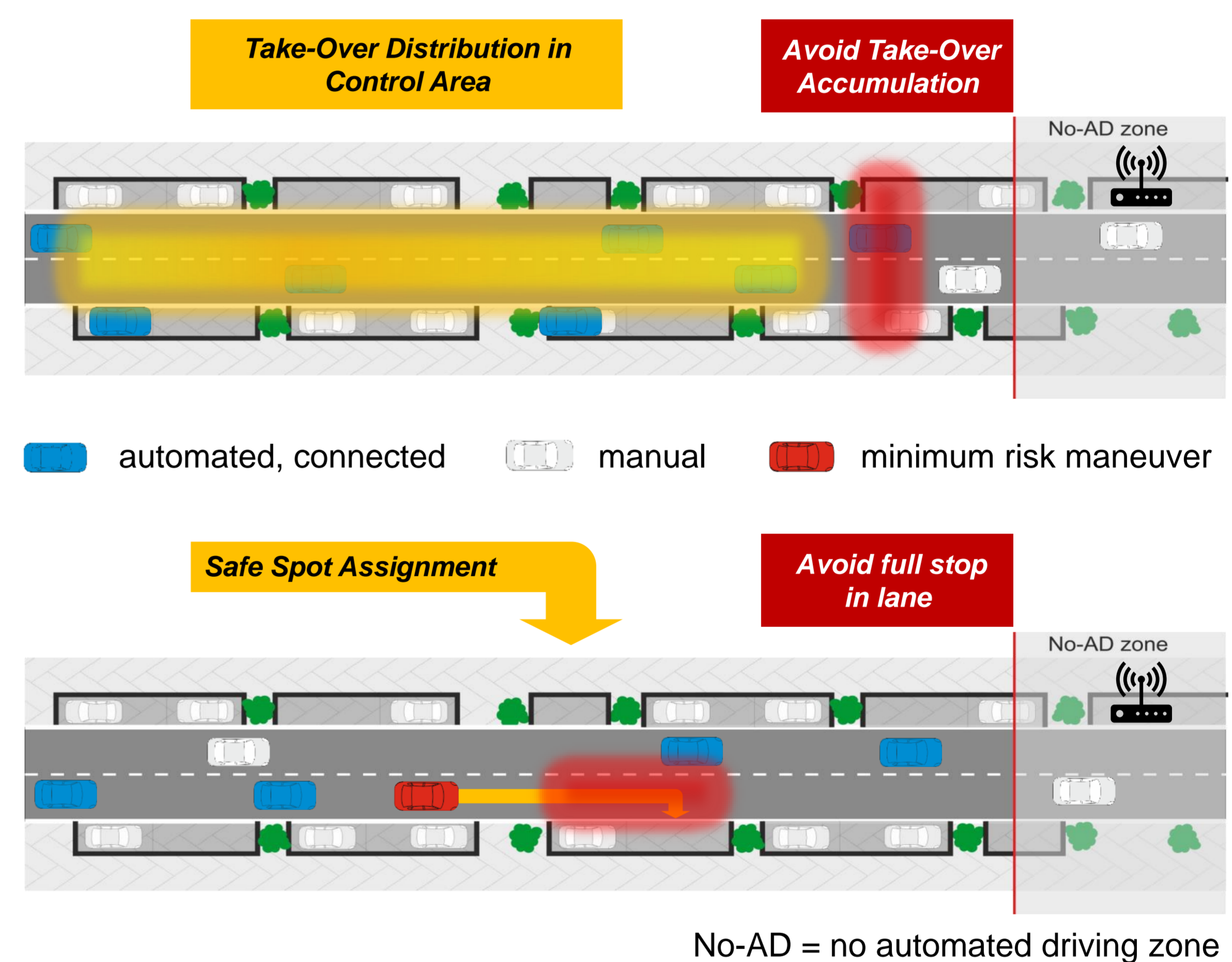


“Transition Areas” are areas on the road where many highly automated vehicles (blue) are changing their level of automation due to various reasons.

- Transitions of Control (ToCs) and Minimum Risk Maneuvers (MRMs) may induce significant disruptions to traffic system if occurring at the same location (Transition Areas)
- Infrastructure-assisted traffic management (V2X) can help to mitigate negative impacts of control transitions

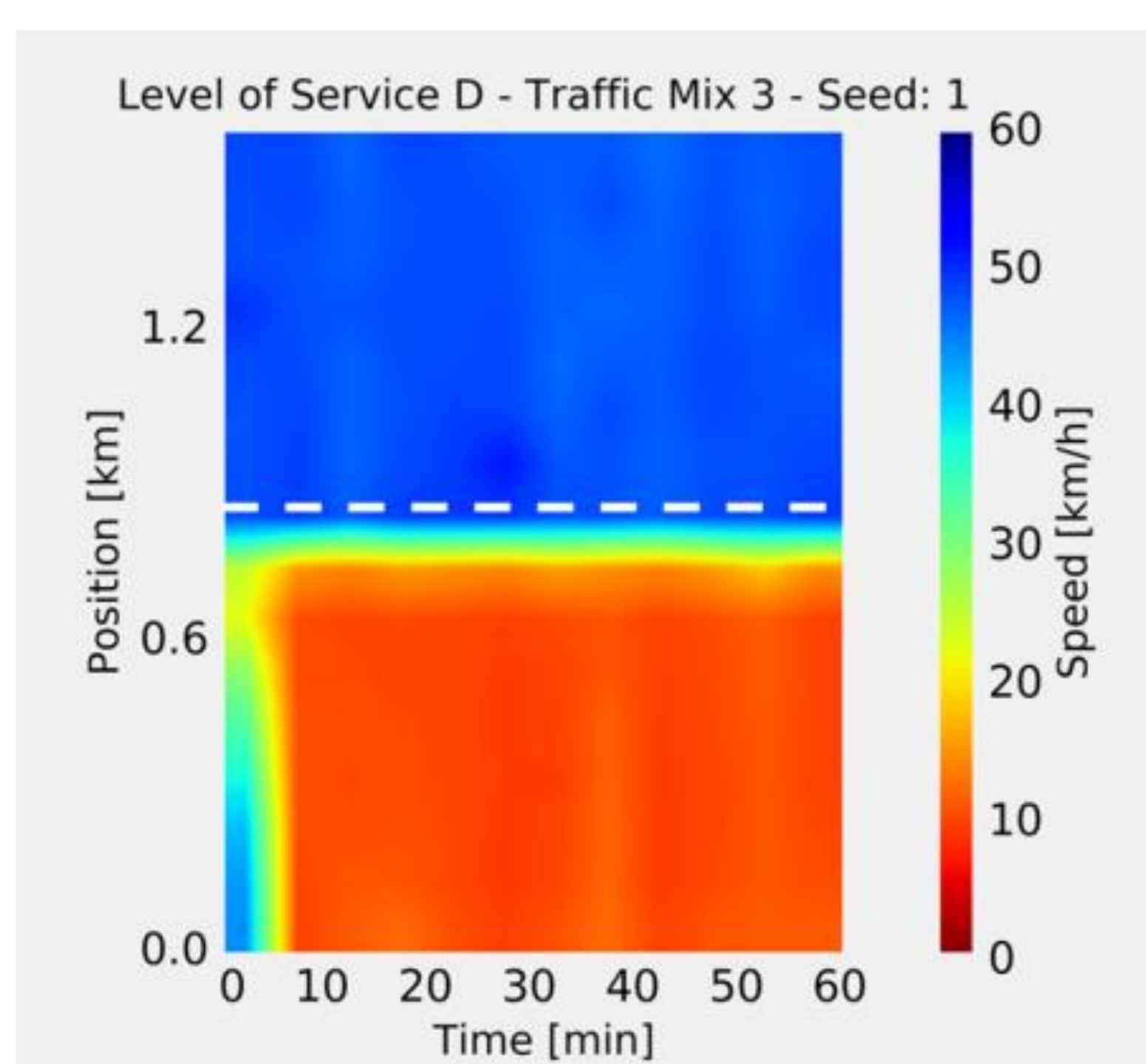
Dispatching Take-Over Request and Safe Spot Assignments

- Procedure I: Traffic management dispatches Take-Over Requests (TORs) to connected automated vehicles within the Transition Area to avoid accumulation of disruptions caused by ToCs
- Procedure II: In case of failed ToC, traffic management guides vehicle to a safe spot (e.g. free parking area) to avoid vehicles performing a full stop in lane



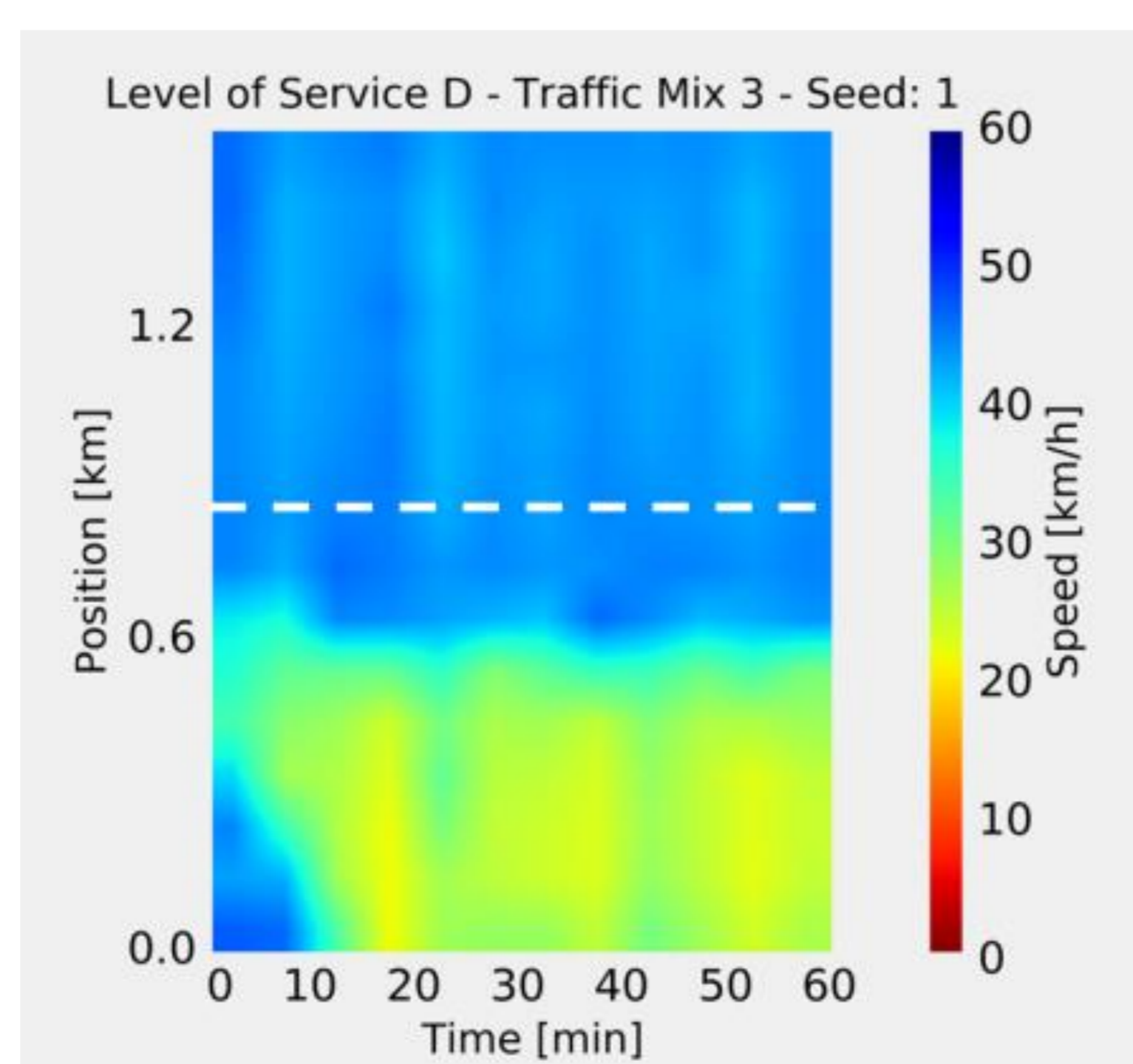
Simulation Results

no traffic management



- above white dashed line: No-AD zone
- below white dashed line: Transition Area

TOR distribution



- Level of Service D: 1386 vehicles / lane / hour
- Traffic Mix 3: 17% manual; 35% connected; 35% connected, automated; 6% light & heavy goods

TOR distribution + safe spot assignment

