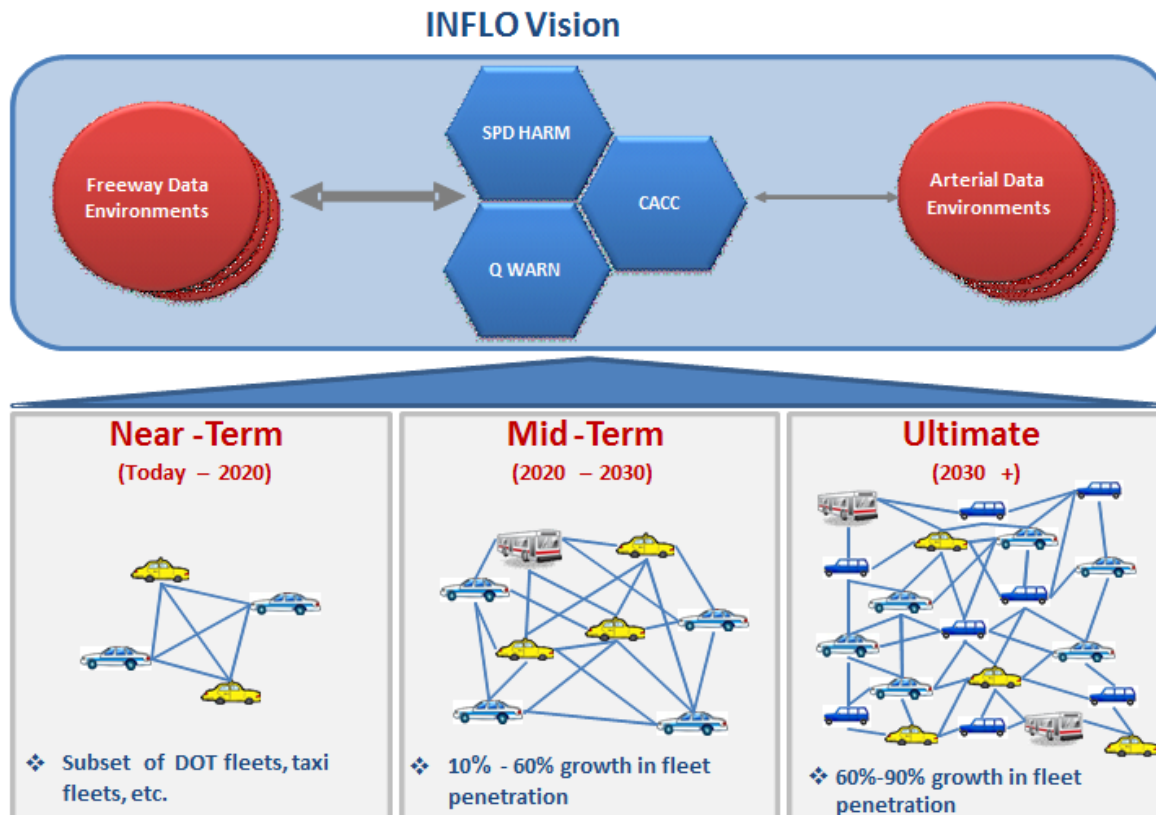


Intelligent Network Flow Optimization (INFLO)

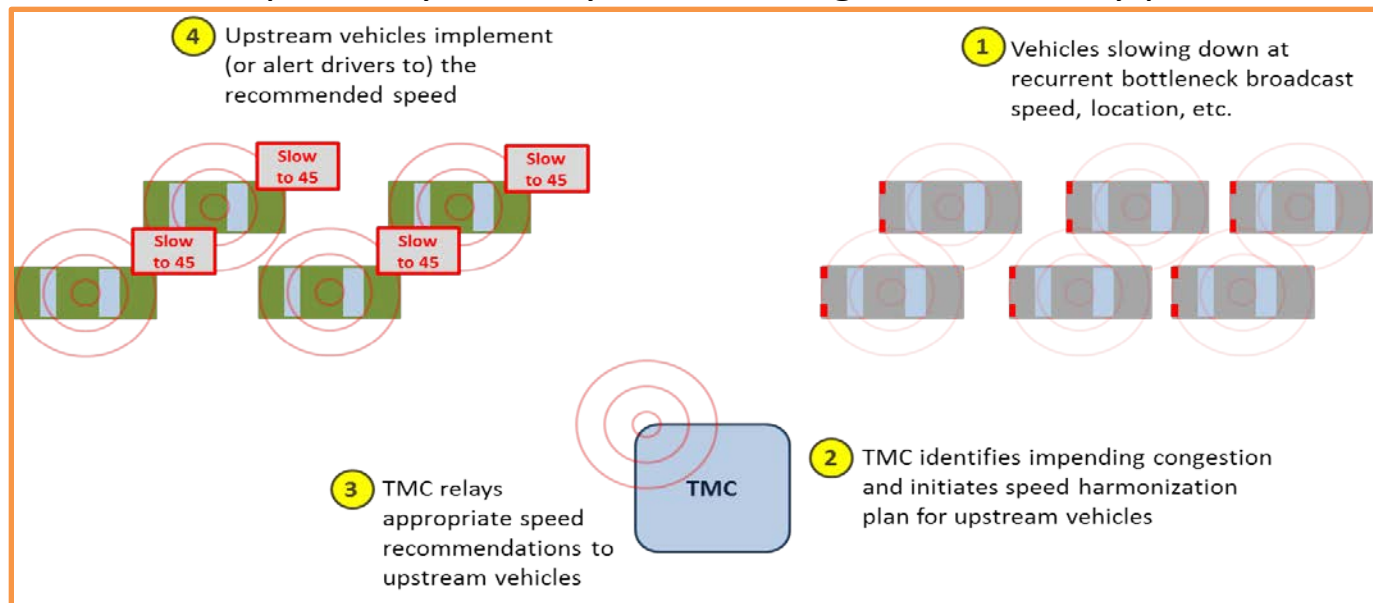
- Intelligent Network Flow Optimization (INFLO) bundle of applications:
 - Dynamic Speed harmonization (SPD-HARM)
 - Queue Warning (Q-WARN)
 - Cooperative Adaptive Cruise Control (CACC)



Dynamic Speed Harmonization (SPD-

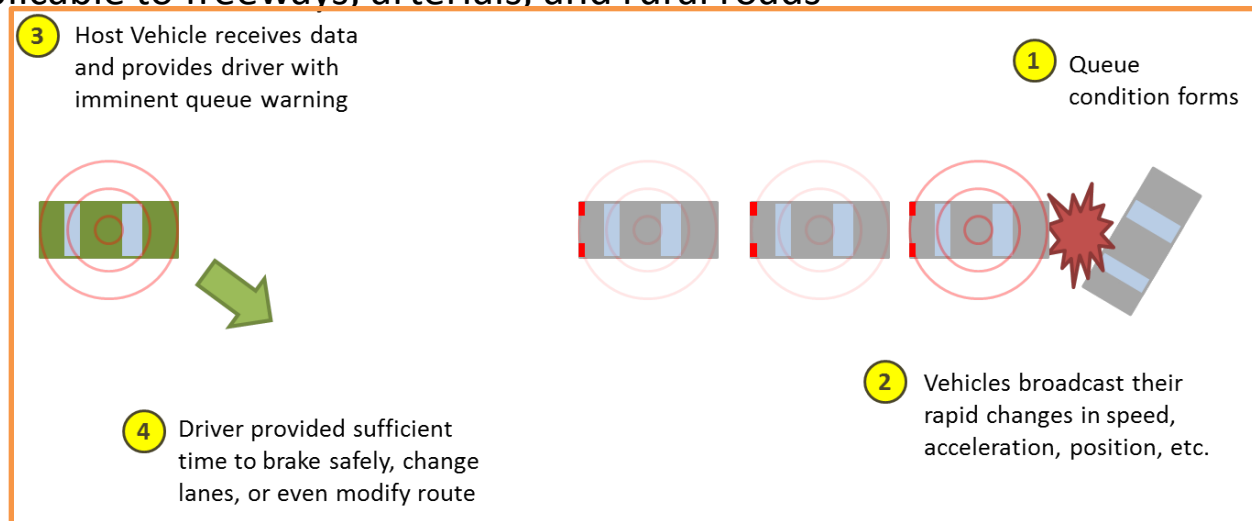
HARM)

- Dynamic Speed Harmonization (SPD-HARM) aims to dynamically adjust and coordinate vehicle speeds in response to congestion, incidents, and road conditions to maximize throughput and reduce crashes.
 - Reducing speed variability among vehicles improves traffic flow and minimizes or delays flow breakdown formation
 - Utilize V2V and V2I communication to coordinate vehicle speeds
 - Provide recommendations directly to drivers in-vehicle
 - Recommend speeds by lane, by vehicle weight and size, by pavement traction



Queue Warning (Q-WARN)

- Queue warning (Q-WARN) aims to provide drivers timely warnings and alerts of impending queue backup.
 - To reduce shockwaves and prevent collisions and other secondary crashes
 - Predict location, duration and length of queue propagation
 - Utilize V2V and I2V communication for rapid dissemination and sharing of vehicle information
 - E.g., position, velocity, heading, and acceleration of vehicles in the vicinity
 - Allows drivers to take alternate routes or change lanes
 - Applicable to freeways, arterials, and rural roads



Cooperative Adaptive Cruise Control (CACC)

- Cooperative adaptive cruise control (CACC) aims to dynamically adjust and coordinate cruise control speeds among platooning vehicles to improve traffic flow stability and increase throughput.
 - Closely linked with SPD-HARM to reduce stop-and-go waves
 - Utilizes V2V and/or V2I communication to coordinate vehicle speeds and implement gap policy

