

# Mobile Road Works Traffic Ahead Warning

Norwegian Pilot 1



Co-financed by the European Union  
Connecting Europe Facility



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# Mobile Road Works - introduction

- Mobile road work is frequently happening along the roads
- Today, the solution is to put up a sign by the road to warn about mobile road works ahead
- This sign is often way ahead of where the actual road work is taking place, because the road work is mobile
  
- And even worse, there is not always a sign except for the sign on the tractor



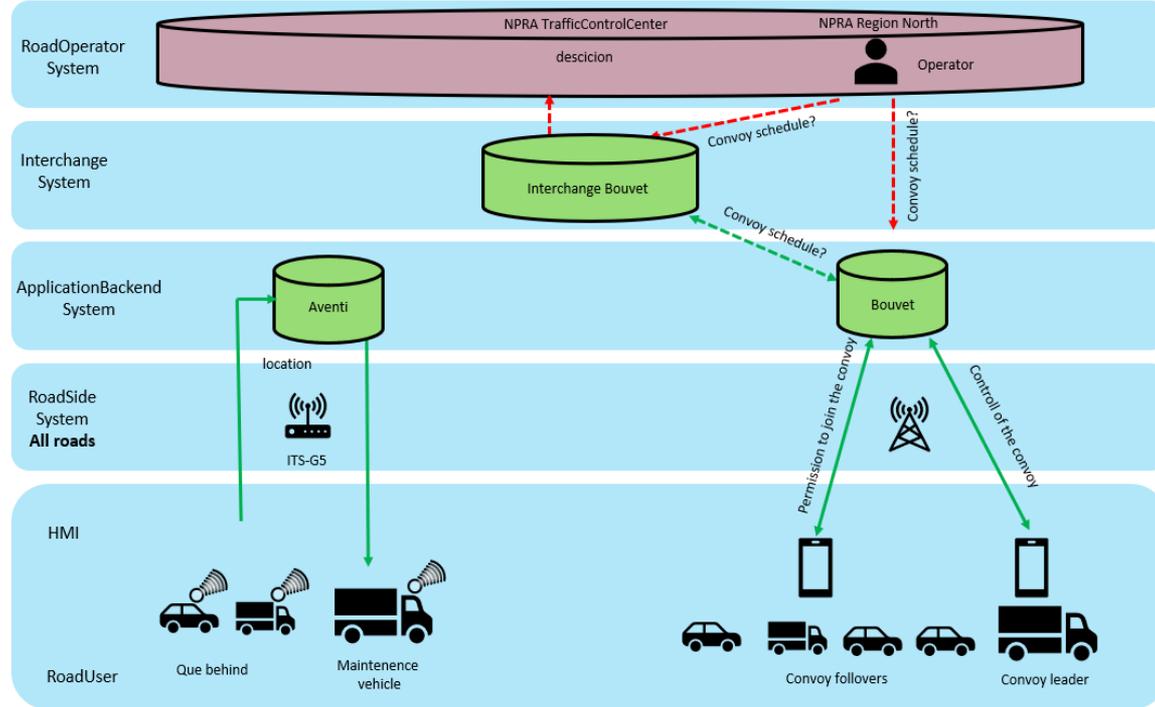
# Test area

- Originally planned on E8 in Skibotn Valley
- Changed to the road around Jonsvatnet in the outskirts of Trondheim
- Municipal road with low traffic volume

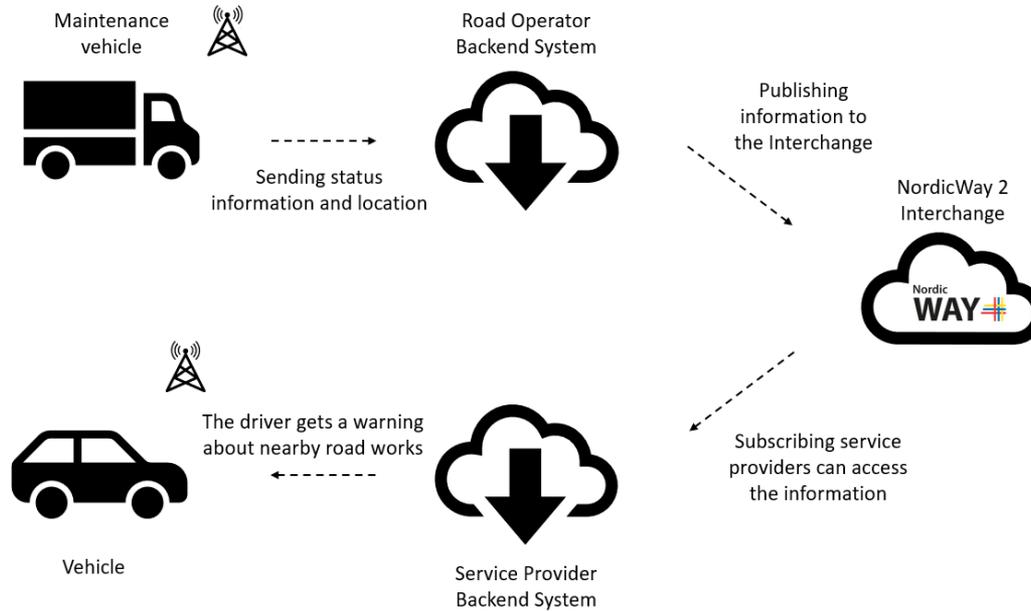


# Mobile Road Works - architecture

## 2.3.2: RWW-RM ( Road works Mobile)

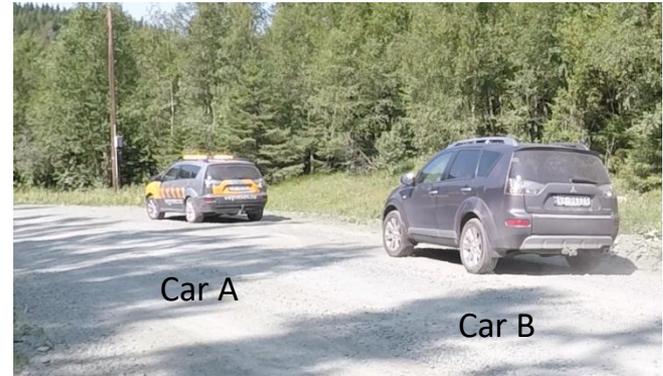
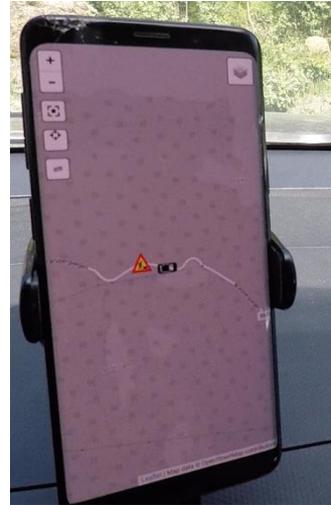


# Flow chart - information via cellular network



# Test setup

- Time: mid summer
- Cellular network
- The maintenance vehicle (car A) had a warning light on the roof (light beam) including technology to send out information about speed and location
- After turning on the warning light (car A), a signal was sent via the cellular network to a cell phone in the following car (car B)



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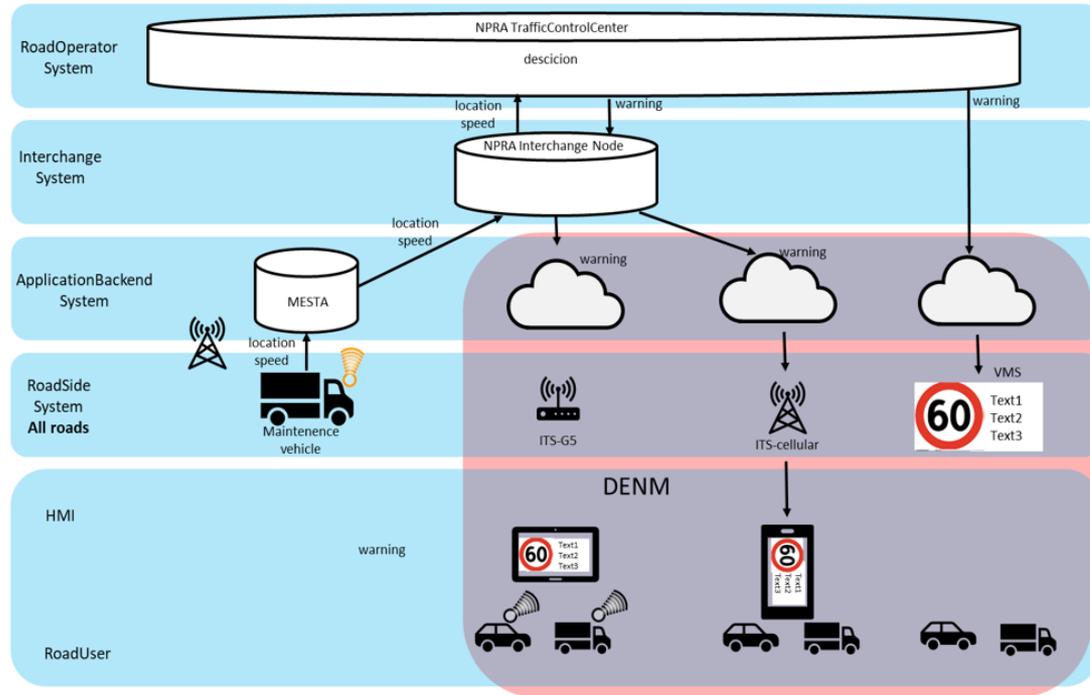
# Test area



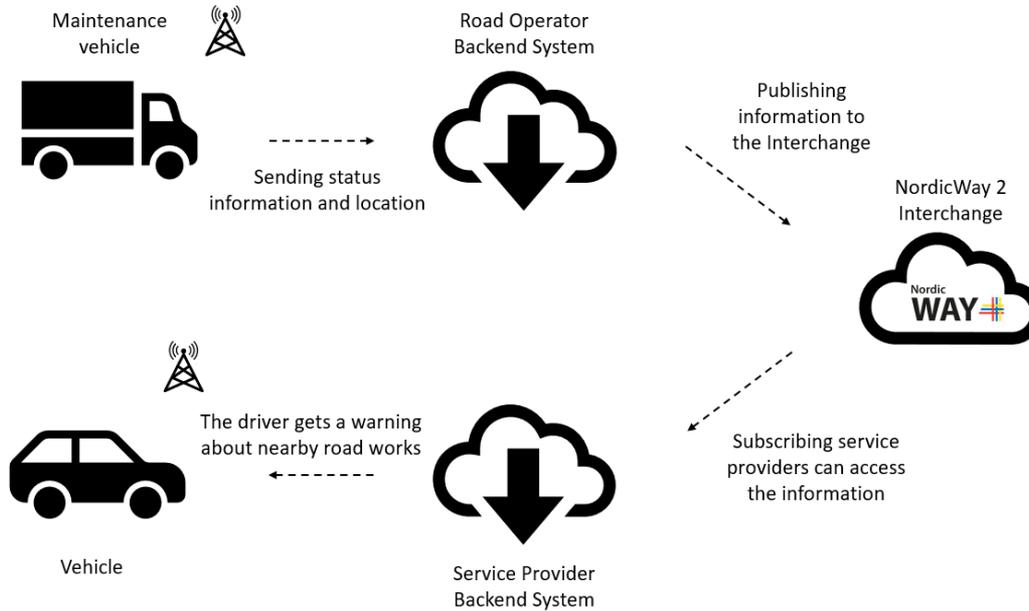
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# Traffic Ahead Warning - architecture

## 2.2.2: HLN-SV ( slow and Stationary vehicles) 2.2.3: HLN-TJA (Traffic Jam Ahead)



# Flow chart - information via cellular network



# Test setup

- In the Traffic Ahead Warning demonstration car A acted as slow-moving traffic by driving way below the speed limit
- After turning on the warning light, a signal was sent via the cellular network to a cell phone in the following car (car B)



# Lessons learned

- The technical solution being demonstrated works well when the cellular network signal is good and stable
- When the network signal is weak it is hard to distribute a continuous location signal over the cellular network
- There is also a problem with sending out messages when the vehicle OBU is changing base station and there is a short period without any signal
- So the question is: How do we overcome the infrastructure barriers hindering some of the C-ITS services to be used also in rural areas?



# Thanks for your attention



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