Scene **1** Scene Description: Rural road, no roadside tech, accident occurs

Shot: **1**

Action

Car comes to full stop on rural road

Dialogue

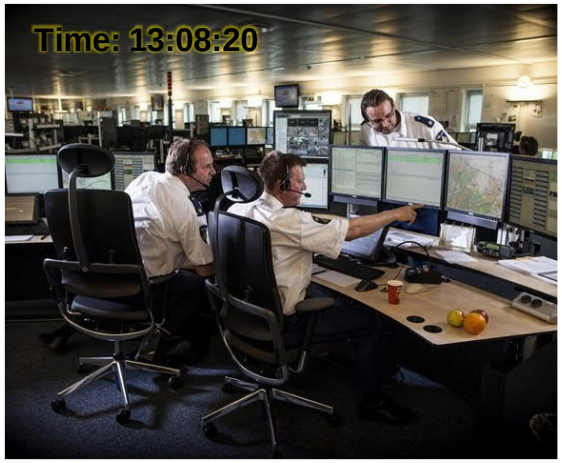
Driver pushes eCall button in car at 13:08 hr

Shot: **2**

Result

eCall data is transmitted to NAP

Shot: **3**



Action

Incoming eCall dataset available at emergency dispatch (within 20 seconds)

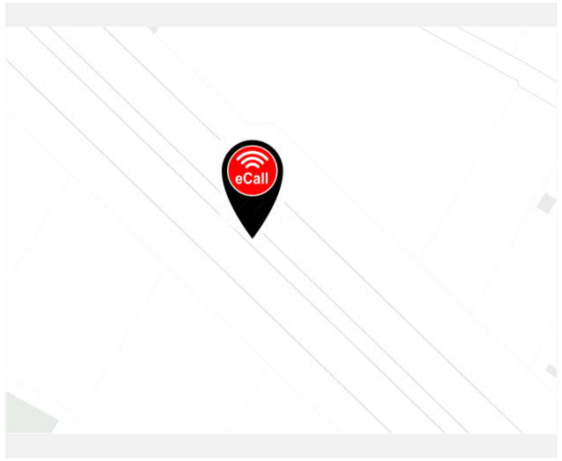
Dialogue

Routing towards TMC

- *manually?*
- *automated*

Retrieving vehicle information from national vehicle registration

Shot: **4**

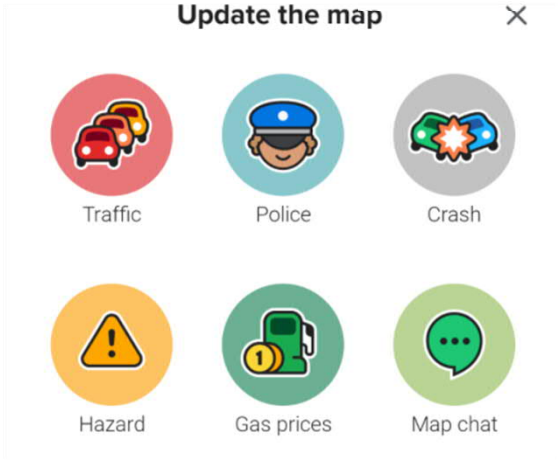


Result

Location, data trace, and vehicle information available in the backend of TMC
Notification for operator, displayed on map

Shot: 5

Time: 13:15



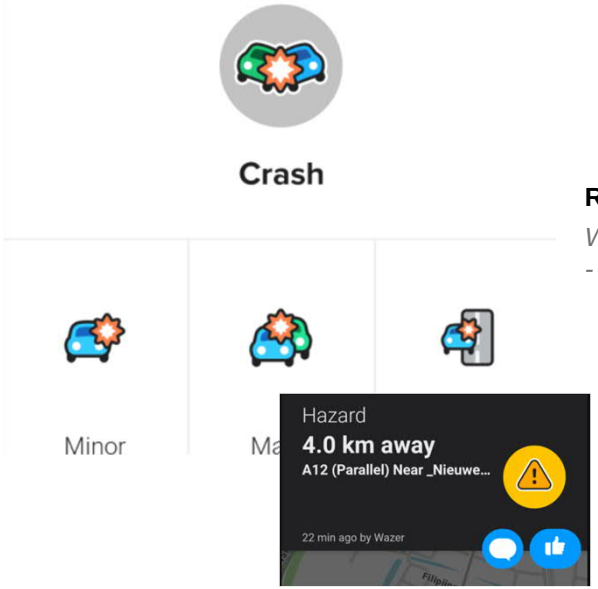
Action

Driver passing the incident

Dialogue

Reports accident in Waze

Shot: 6

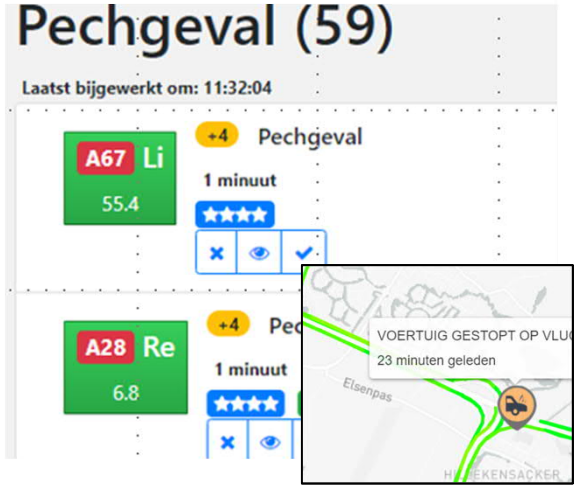


Result

Waze alert generated - passerby can confirm

Shot: 7

Time: 13:17



Action

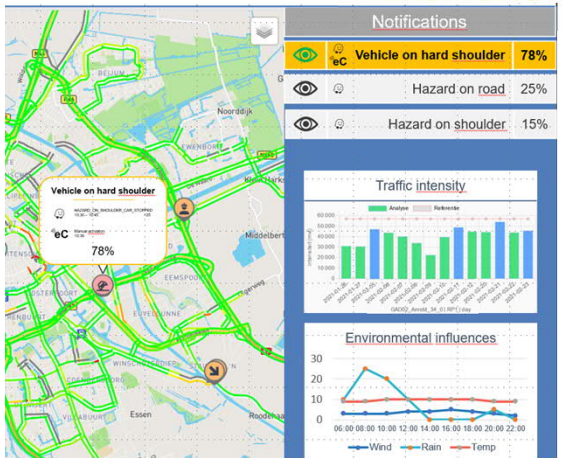
Incoming Waze alert dataset available at TMC

Dialogue

eCall reports and Waze alerts are fused

Shot: 8

Time: 13:18



Result

Visualisation of fused alert reliability

Shot: 1

Action

Car breakdown occurs on major road

Dialogue

RADAR activates and detects the location and lane of the incident

Shot: 2

Result

Location and lane information is sent to TMC

Shot: 3

Action

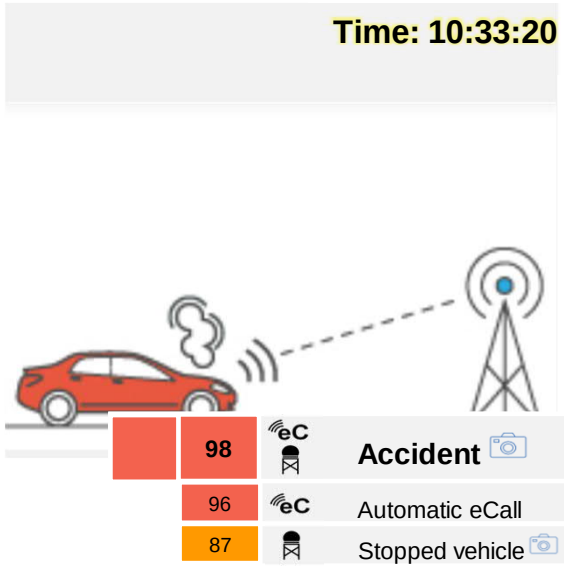
High negative acceleration is measured in vehicle approaching breakdown from behind due to the head to tail collision

Dialogue

Passive occupant restraint systems are triggered

Automatic eCall system is deployed

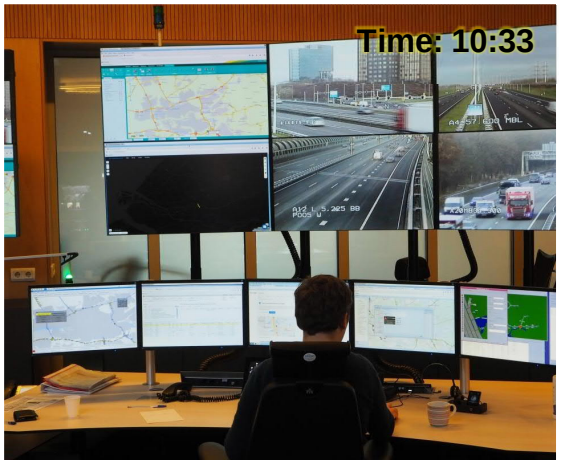
Shot: 4



Result

eCall data is transmitted to NAP

Shot: 5



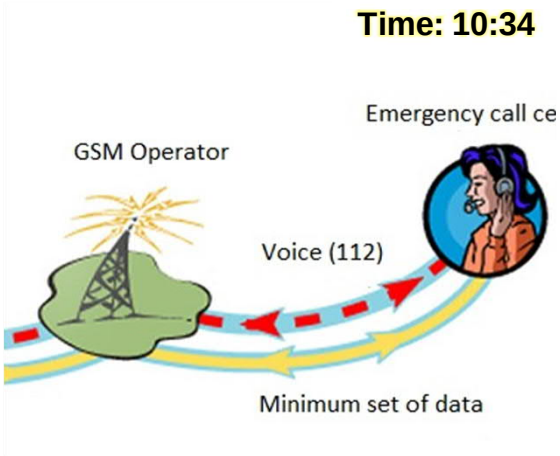
Action

Incoming RADAR data available at TMC

Dialogue

TMC operator assesses situation and coordinates SV response

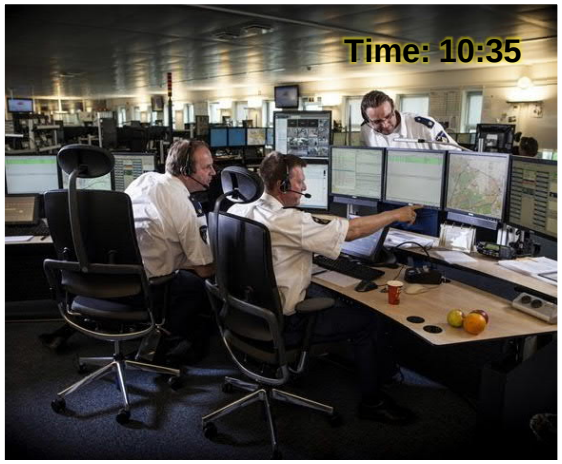
Shot: 6



Result

Incoming eCall dataset available at emergency dispatch

Shot: 7



Action

Location, data trace, and vehicle identification available and fused with RADAR data in the backend of TMC

Dialogue

emergency dispatch automatic enriches the dataset with additional vehicle information from national vehicle registration

(colour, electric, owner etc.)

Shot: 8

Result

SV response is deployed with knowledge of location and vehicle type/specifications

Shot: 1

Action

Traffic intensity increases, critical road capacity is exceeded

Dialogue

Reduced traffic flow and speed

Shot: 2

Result

Congestion occurs

Shot: 3

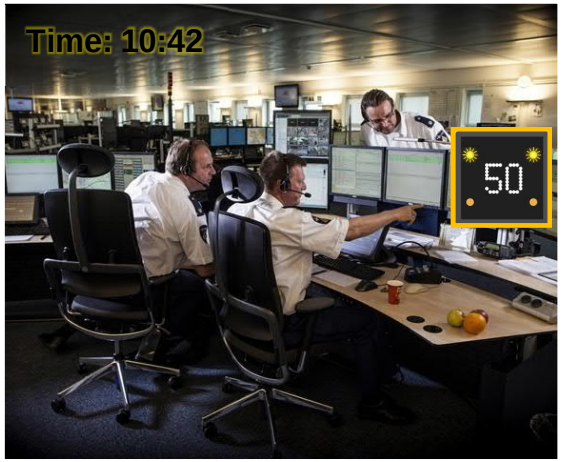
Action

Inductive loops detect reduced traffic flow and speed

Dialogue

Automatic signalling is activated

Shot: 4



Result

Incoming MTM/MIDAS dataset available at TMC

Shot: 5

Action

Major rear-end collision occurs in traffic jam

Dialogue

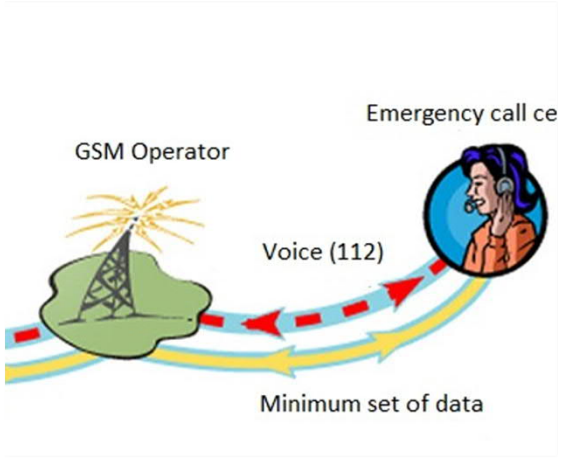
Driver pushes eCall button in car

Shot: 6

Result

eCall data is transmitted to NAP,

Shot: 7



Action

Incoming eCall dataset available at emergency dispatch

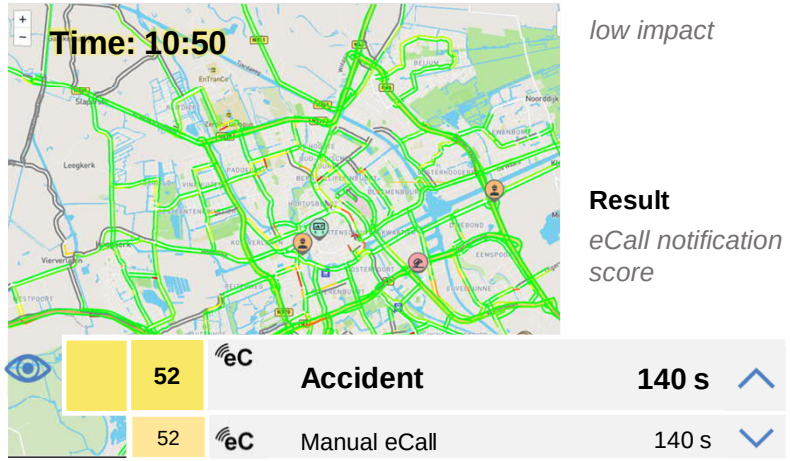
Dialogue

eCall evaluated on reliability/severity

medium likelihood

low impact

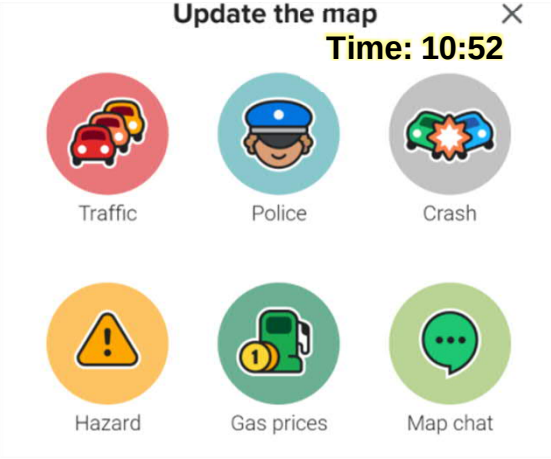
Shot: 8



Result

eCall notification with medium score

Shot: 9



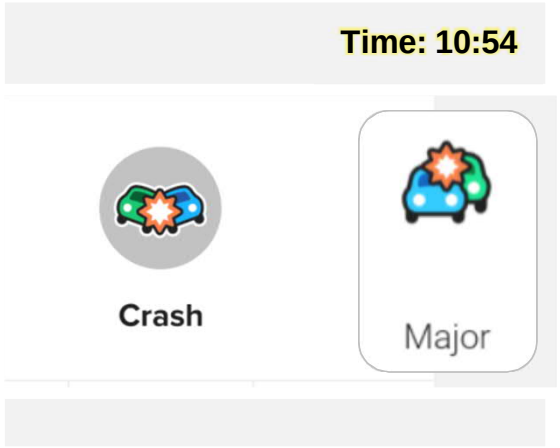
Action

Drivers passing the incident

Dialogue

Report accident in Waze

Shot: 10



Result

Incoming Waze alert dataset available at TMC

Shot: 11

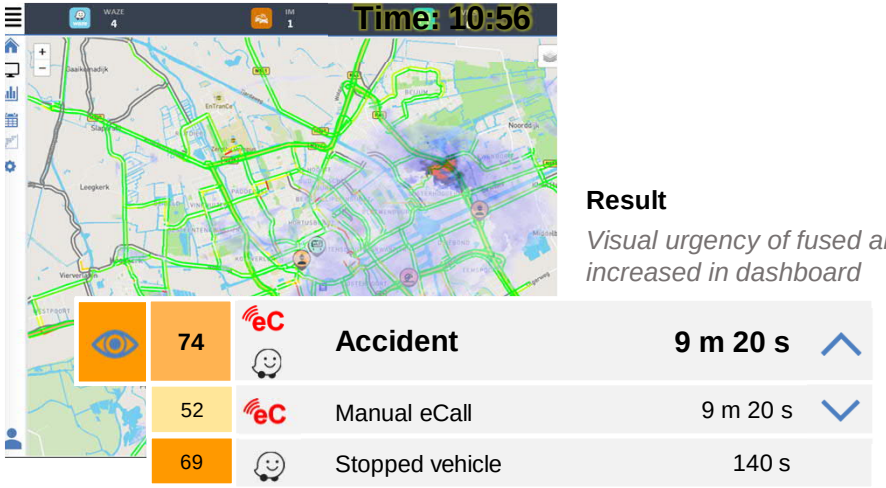
Action

Traffic congestion dissipates

Dialogue

Collision is not yet resolved, SV impact increases

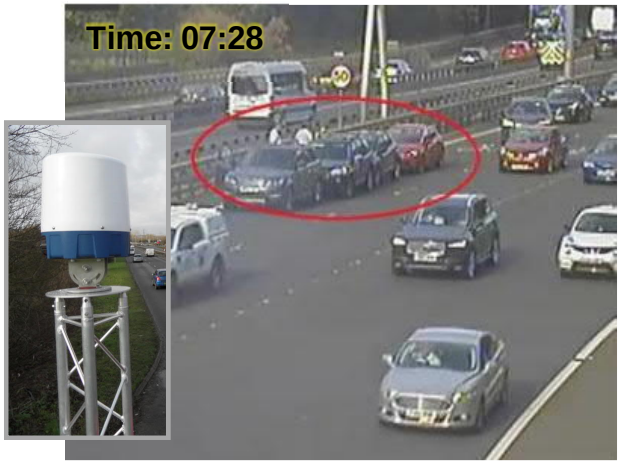
Shot: 12



Result

Visual urgency of fused alert is increased in dashboard

Shot: 1



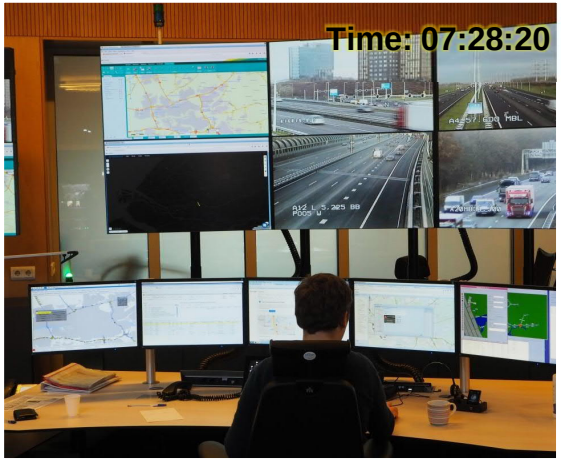
Action

Multi-car collision occurs on major road

Dialogue

RADAR activates and detects the location and lane of the incident

Shot: 2



Result

Location and lane information is available at TMC

Shot: 3

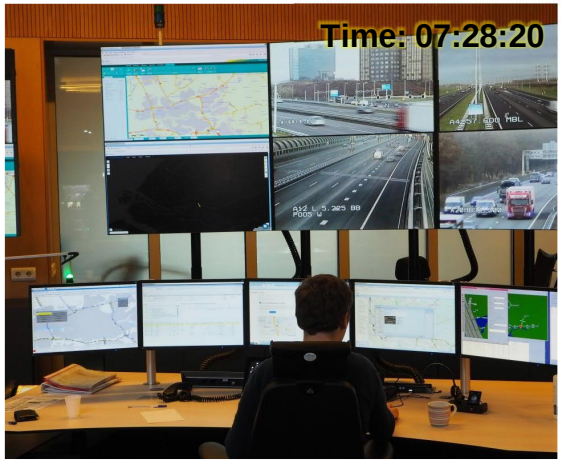
Action

Automatic eCall systems of several vehicles are deployed

Dialogue

eCall data is transmitted to NAP

Shot: 4



Result

Incoming eCall dataset available at TMC via emergency dispatch

Radar and eCall data fused

Shot: 5

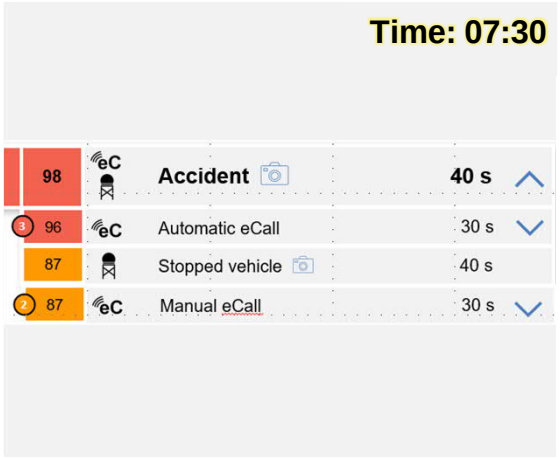
Action

Multiple drivers push eCall button in car

Dialogue

RADAR detaction alert and eCall reports are fused

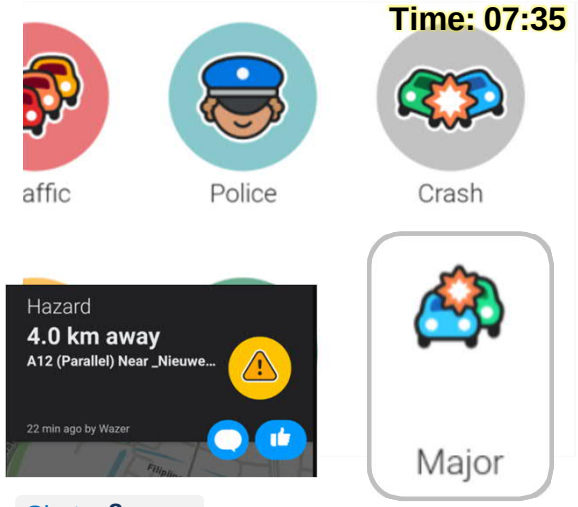
Shot: 6



Result

Multiple eCall reports of the same incident are aggregated in the SV dashboard

Shot: 7



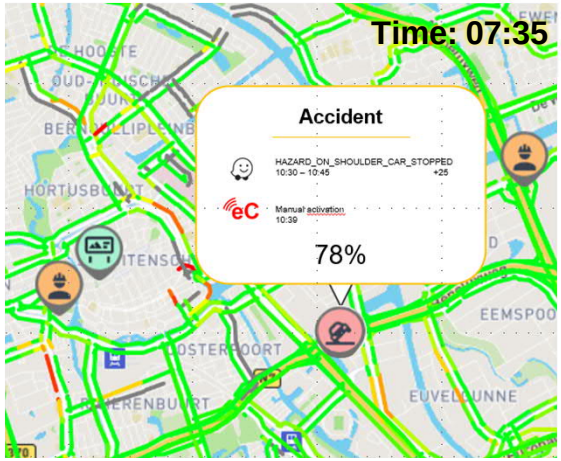
Action

Multiple drivers passing the incident report the accident in Waze

Dialogue

Incoming Waze alert dataset available at TMC

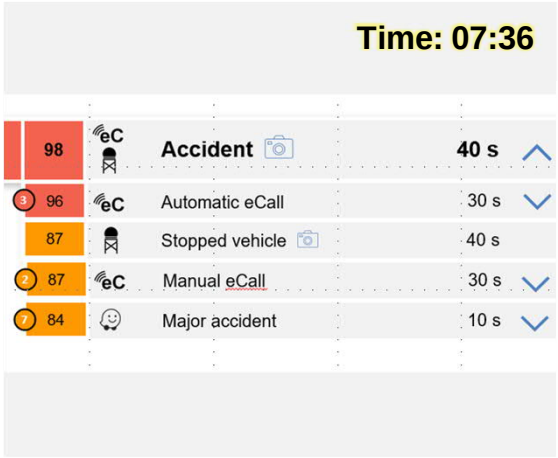
Shot: 8



Result

Fused eCall reports and Waze alerts are visualised

Shot: 9



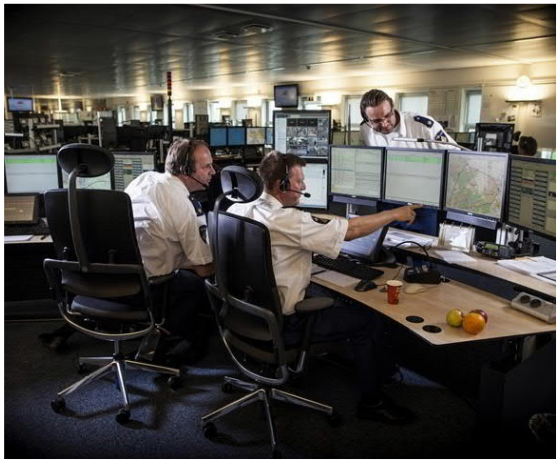
Action

Additional alerts are aggregated per data source

Dialogue

Alerts from new data sources are still fused into the main notification

Shot: 10



Result

TMC operator is not distracted with additional alerts

Shot:

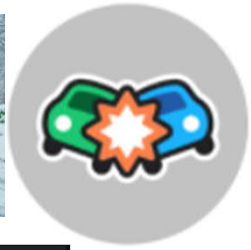
Action

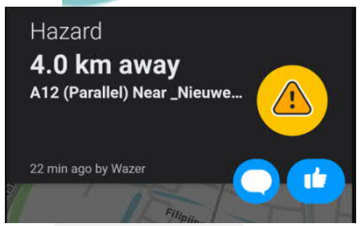
Dialogue

Shot:

Result

Shot: 1





Crash

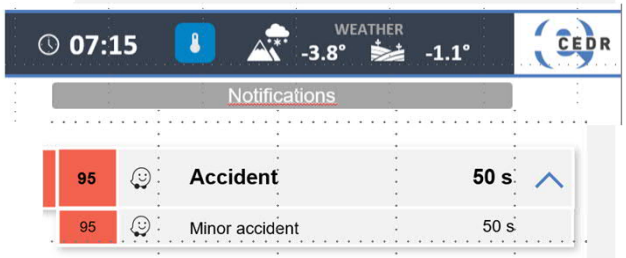
Action

Waze report accident, normal urgency

Dialogue

Time of day and weather conditions are available in backend of TMC

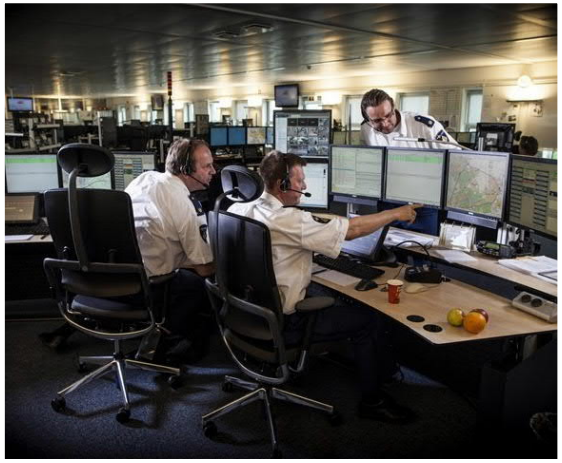
Shot: 2



Result

Increased impact of SV notification due to environmental factors

Shot: 3



Action

TMC operator localises closest emergency service responder

Dialogue

TMC operator instructs emergency service responder

Shot: 4

Result

SV response is deployed. SV responders are given incident details en route

Shot: 1

Action

Inductive loops detect reduced traffic flow and speed

Dialogue

MTM/MIDAS control scheme is activated

Shot: 2

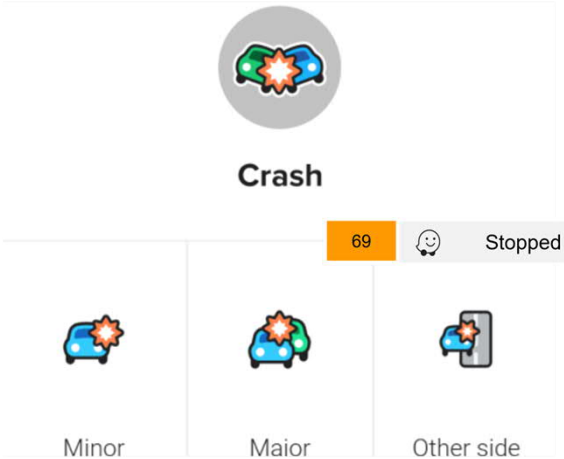
Result

Incoming MTM/MIDAS dataset available at TMC

Notification available (see below but not shown in UI)

25	MTM	Hm 101.1r Slow moving traffic	30 s

Shot: 3



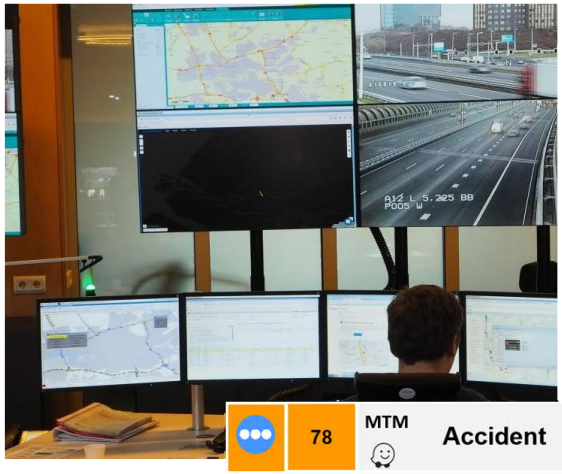
Action

Driver reports accident in Waze

Dialogue

Incoming Waze alert dataset available at TMC

Shot: 4



Result

Visualisation of fused alert with reliability

78	MTM	Accident	40 s
25	MTM	Hm 101.1r Slow moving traffic	30 s
69		Stopped vehicle	40 s

Shot: 5

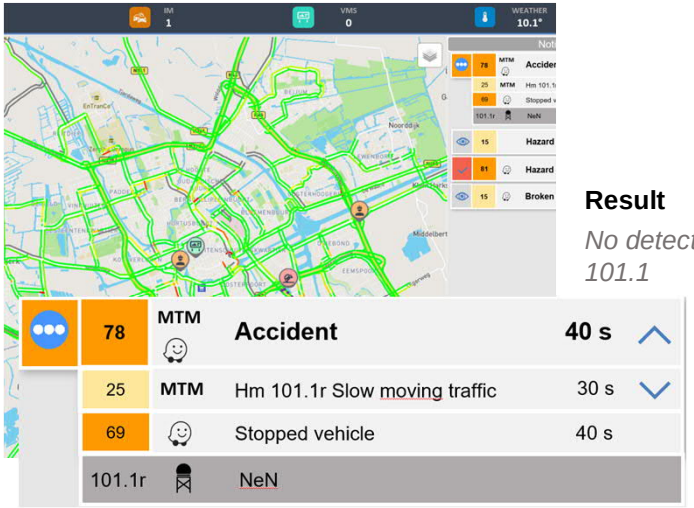
Action

No detection from RADAR system

Dialogue

Check detection in interface

Shot: 6



Result

No detection available at hm 101.1

Shot: 7

Action

Dispatch nearest emergency service responder to incident location

Dialogue

Emergency service responder confirms accident

Shot: 8

Result

Additional SV response is deployed, incident location is secured