

## 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*

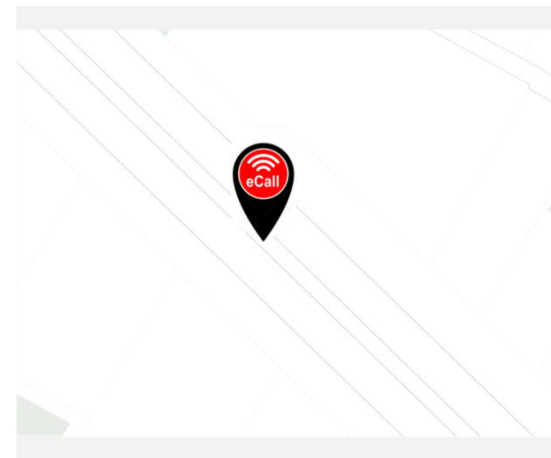
- manually?
- automated

*Retrieving vehicle information from national vehicle registration*

### Result

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

Shot: 4



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

Shot: 5

Time: 13:15

Update the map



Action

Driver passing the incident



Traffic



Police



Crash



Hazard



Gas prices



Map chat

Dialogue

Reports accident in Waze

Shot: 6



Crash

Result

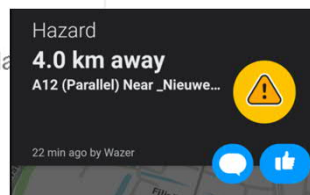
Waze alert generated  
- passerby can confirm



Minor



Ma

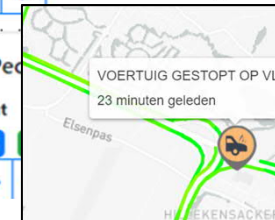
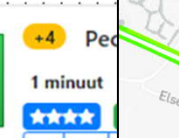
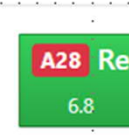
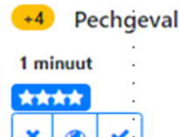


Shot: 7

Time: 13:17

Pechgeval (59)

Laatst bijgewerkt om: 11:32:04



Action

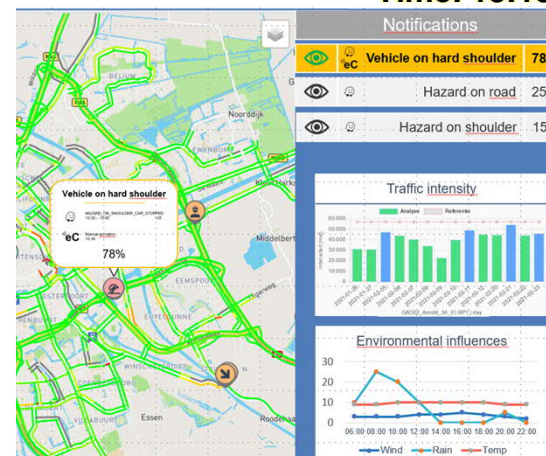
Incoming Waze alert dataset  
available at TMC

Dialogue

eCall reports and Waze alerts  
are fused

Shot: 8

Time: 13:18



Result

Visualisation of fused alert  
reliability

## Scene 2 Scene Description: Major road breakdown and better event details

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



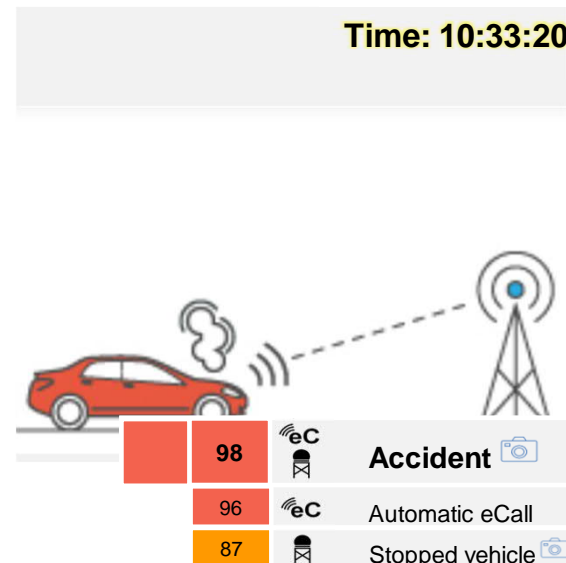
### Action

*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*

Shot: 4



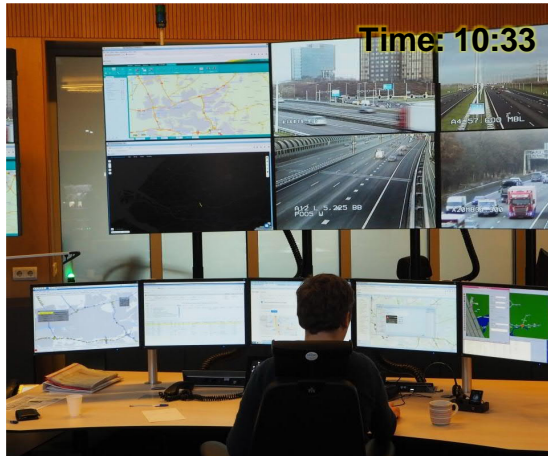
### Result

*eCall data is transmitted to NAP*



## Scene 2 Scene Description: Major road breakdown and better event details

Shot: 5



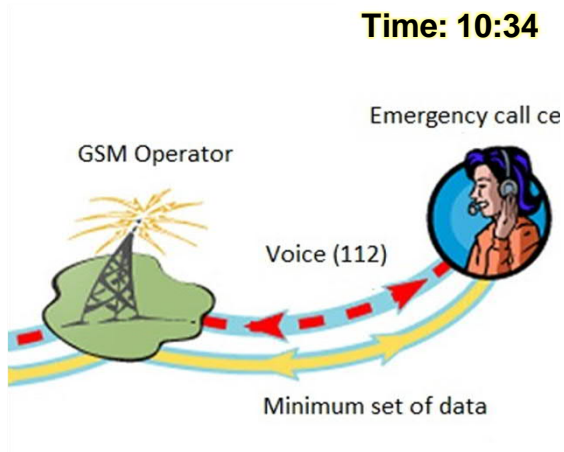
### Action

*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*

Shot: 8



### Result

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

## Scene 3 Scene Description: Major road multiple collision, no RADAR in area

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*



Driver pushes eCall button in car

The diagram illustrates a GSM network setup for emergency calls. On the left, a GSM Operator tower is shown. On the right, a user is depicted wearing a headset. A red dashed line with arrows indicates the 'Voice (112)' path between the tower and the user. A yellow solid line with arrows indicates the 'Minimum set of data' path between the tower and the user.

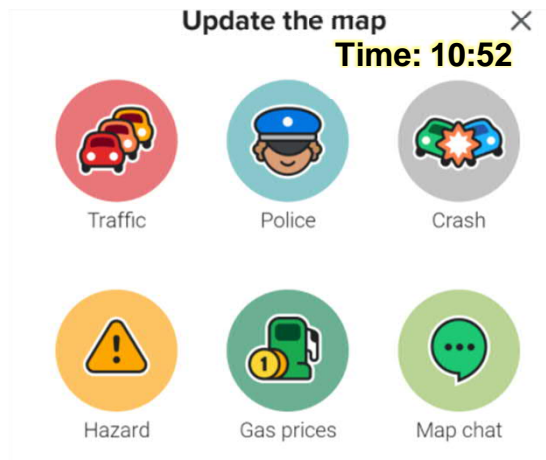
*low impact*

The screenshot shows a navigation app interface. At the top, a black bar displays the time "Time: 10:50" in white text. Below the bar, a map of a city is shown with green roads and blue water. A red icon with a white exclamation mark, indicating an accident, is located on a road. A yellow icon with a white exclamation mark, indicating a manual eCall, is also visible. The bottom of the screen features a yellow bar with a blue eye icon, the number "52", and the "eC" logo. To the right of this bar, the word "Accident" is displayed in large black text. Below the yellow bar, a grey bar contains the number "52", the "eC" logo, and the text "Manual eCall".

Page 6

## Scene 3 Scene Description: Major road multiple collision, no RADAR in area

Shot: 9



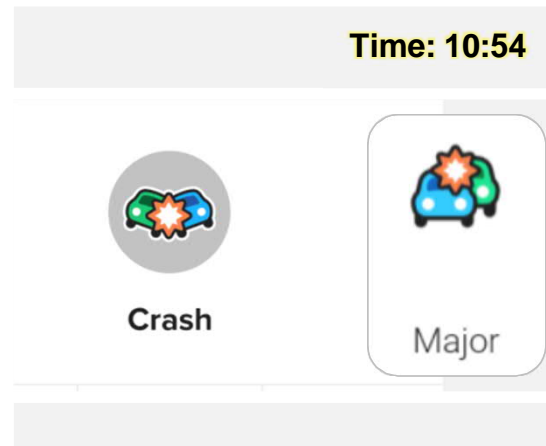
**Action**

*Drivers passing the incident*

**Dialogue**

*Report accident in Waze*

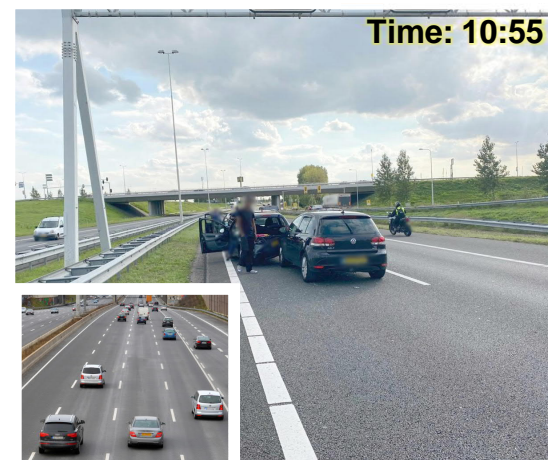
Shot: 10



**Result**

*Incoming Waze alert dataset  
available at TMC*

Shot: 11



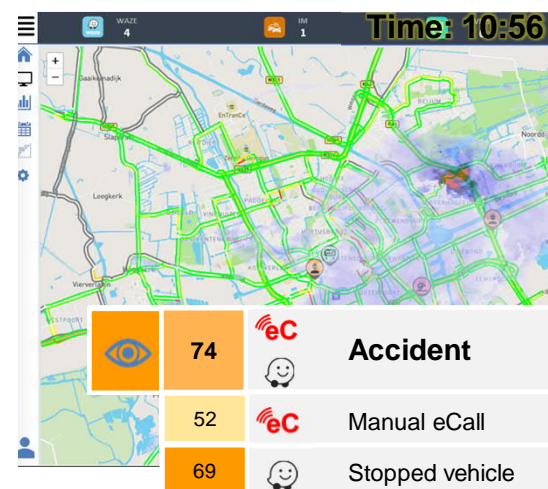
**Action**

*Traffic congestion dissipates*

**Dialogue**

*Collision is not yet resolved, SV  
impact increases*

Shot: 12



**Result**

*Visual urgency of fused alert is  
increased in dashboard*

## Scene 4 Scene Description: Critical incident, multiple collisions

Shot: 1



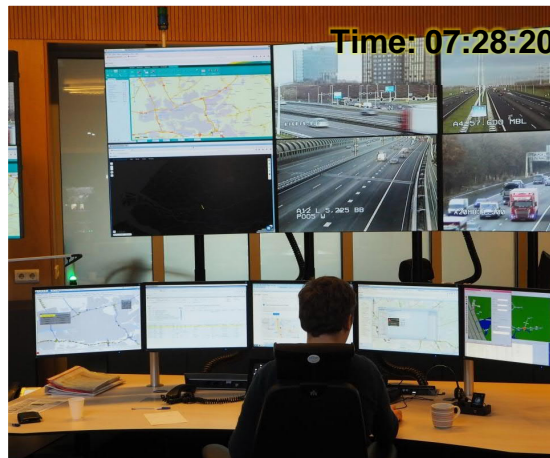
### Action

*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



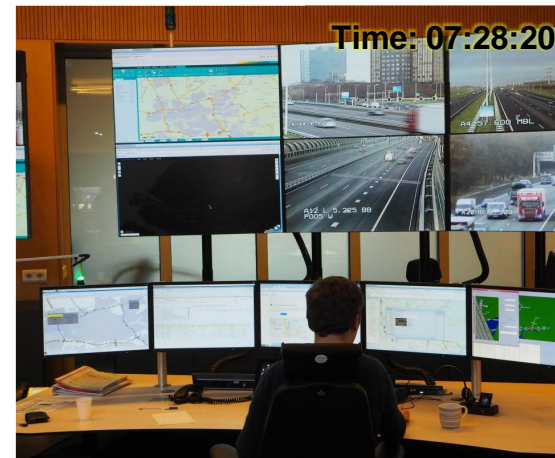
### Action

*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*



## Scene 4 Scene Description: Critical incident, multiple collisions

Shot: 5



### Action

Multiple drivers push eCall button in car

### Dialogue

RADAR detection alert and eCall reports are fused

Shot: 6

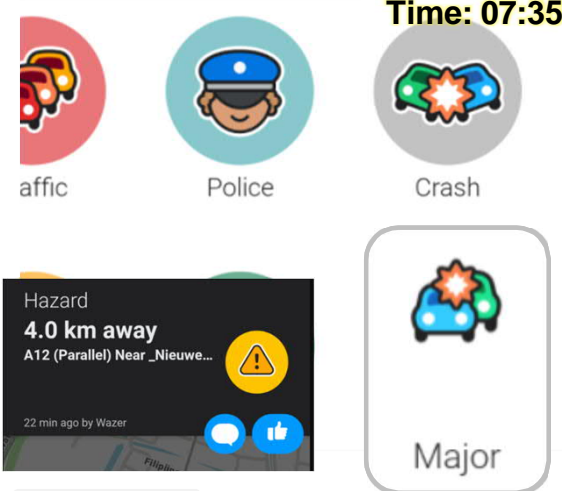
Time: 07:30

98	eC	Accident	40 s
96	eC	Automatic eCall	30 s
87	eC	Stopped vehicle	40 s
87	eC	Manual eCall	30 s

### Result

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

Shot: 7



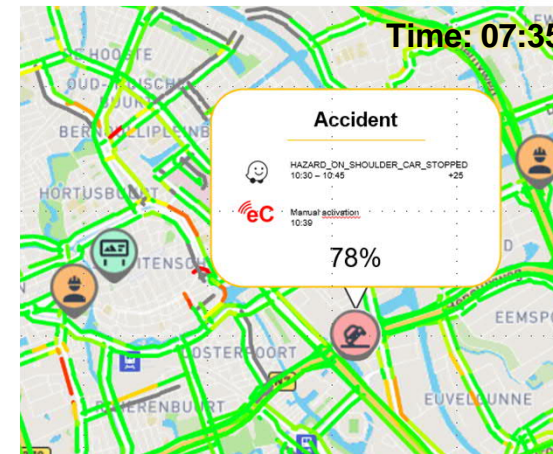
### Action

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

## Scene 4 Scene Description: Critical incident, multiple collisions

Shot: 9

Time: 07:36				
98	eC	Accident	40 s	⬆
96	eC	Automatic eCall	30 s	⬆
87		Stopped vehicle	40 s	
87	eC	Manual eCall	30 s	⬆
84		Major accident	10 s	⬆

### 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:

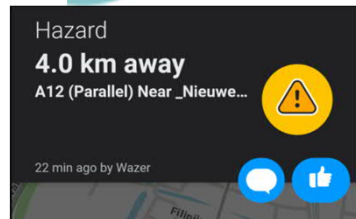
### Action

### Dialogue

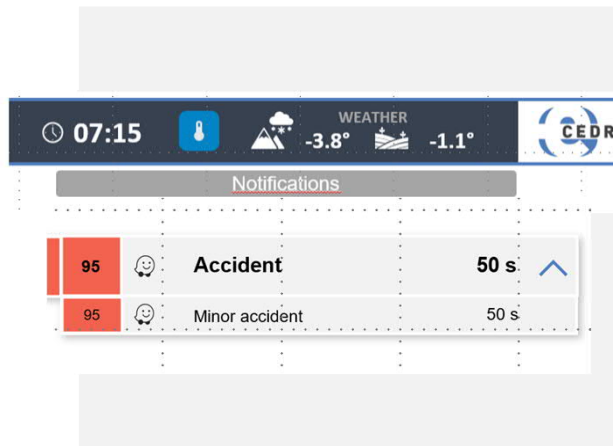
### Result

## Scene 5 Scene Description: Breakdown at night, rural area, bad weather

Shot: 1



Shot: 2



### Action

Waze report accident, normal urgency

### Dialogue

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

### 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



## Scene 6 Scene Description: Waze alert in RADAR area, no RADAR activation (false negative)

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

**Crash**

69	Stopped vehicle	40 s
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Minor

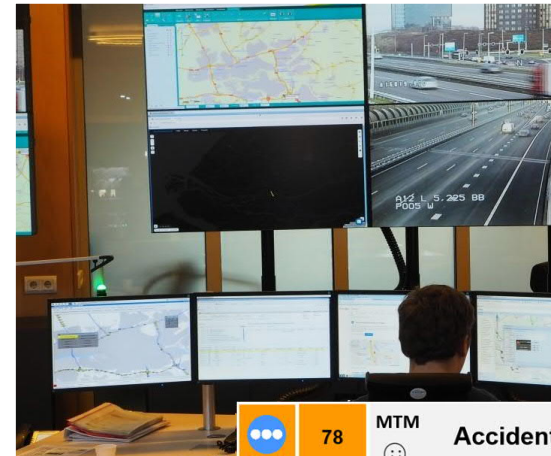
Major

Other side

### 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	

## Scene 6 Scene Description: Waze alert in RADAR area, no RADAR activation (false negative)

Shot: 5



### Action

*No detection from RADAR system*

### Dialogue

*Check detection in interface*

Shot: 7



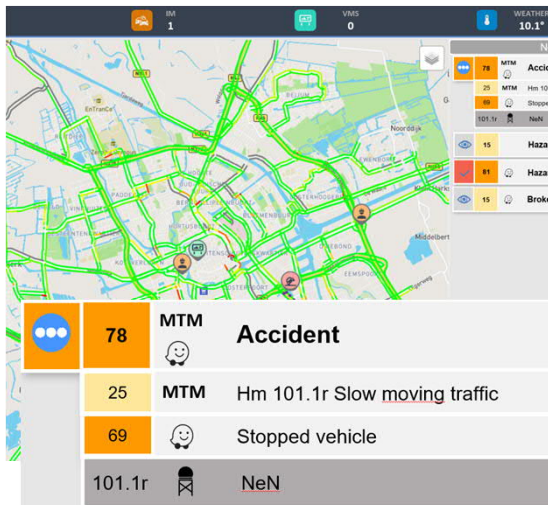
### Action

*Dispatch nearest emergency service responder to incident location*

### Dialogue

*Emergency service responder confirms accident*

Shot: 6



### Result

*No detection available at hm 101.1*

Shot: 8



### Result

*Additional SV response is deployed, incident location is secured*