



Landeshauptstadt  
Düsseldorf

## Recent ITS developments in Düsseldorf

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Traffic Management

City of Düsseldorf



**:DÜSSELDORF**



## City of Düsseldorf

City of Düsseldorf

Traffic editors

Traffic messages

Traffic management

New applications

### Function

- state capital of North Rhine-Westphalia
- public authorities
- service industry
- city of fashion, shopping and culture
- major events and trade fairs
- international airport

### Generated Traffic

- 600.000 inhabitants
- 450.000 in-commuters/weekday
- 76 % in-commuters use private car
- 35 % private car in domestic traffic

heavy road traffic in and around Düsseldorf during rush hours

**How does ITS help us to deal with it?**

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## Modules of ITS in Düsseldorf

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- Traffic editors
- Traffic messages
- Traffic management

# Traffic editors



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## Edited traffic messages

### Traffic problem • Roadworks, left lane closed

**District:** Oberkassel

**Adresse:** Rheinalleetunnel outbound

**Valid:** 11.03.2015

**Information:**

Due to maintenance work in outbound Rheinalleetunnel the left lane is closed from 15-03-10 to 15-03-20 between 6 a.m. and 3 p.m.

### Unforeseeable incidents

### Bomb alert • Traffic problem • closed

**District:** Mörsenbroich, Düsseltal

**Adresse:** Heinrichstraße, Graf-Recke-Straße

**Information:**

Due to a bomb disposal the area 500 m around Reitzensteinkaserne will be closed for traffic after 2:30 p.m.

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# Traffic editors



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# Input

**Straßen.NRW**  
(road works, congestions)

**Police**  
(accidents)

Incident Information

Traffic Light Failure

Strategic Traffic Management

Congestion Information

Event-related Information

Tunnel Safety Warnings

**Traffic Centre**  
**VIZ.NRW**

**Traffic Message Generator**

**Fire Brigade**

# Output

...

**WDR**

**TMC**  
TRAFFIC MESSAGE CHANNEL

**ANTENNE**  
UKW 104,2  
**DÜSSELDORF**



**BMW**

**INRIX**

**MWM**

...



# Traffic Management System: Interaction of individual applications

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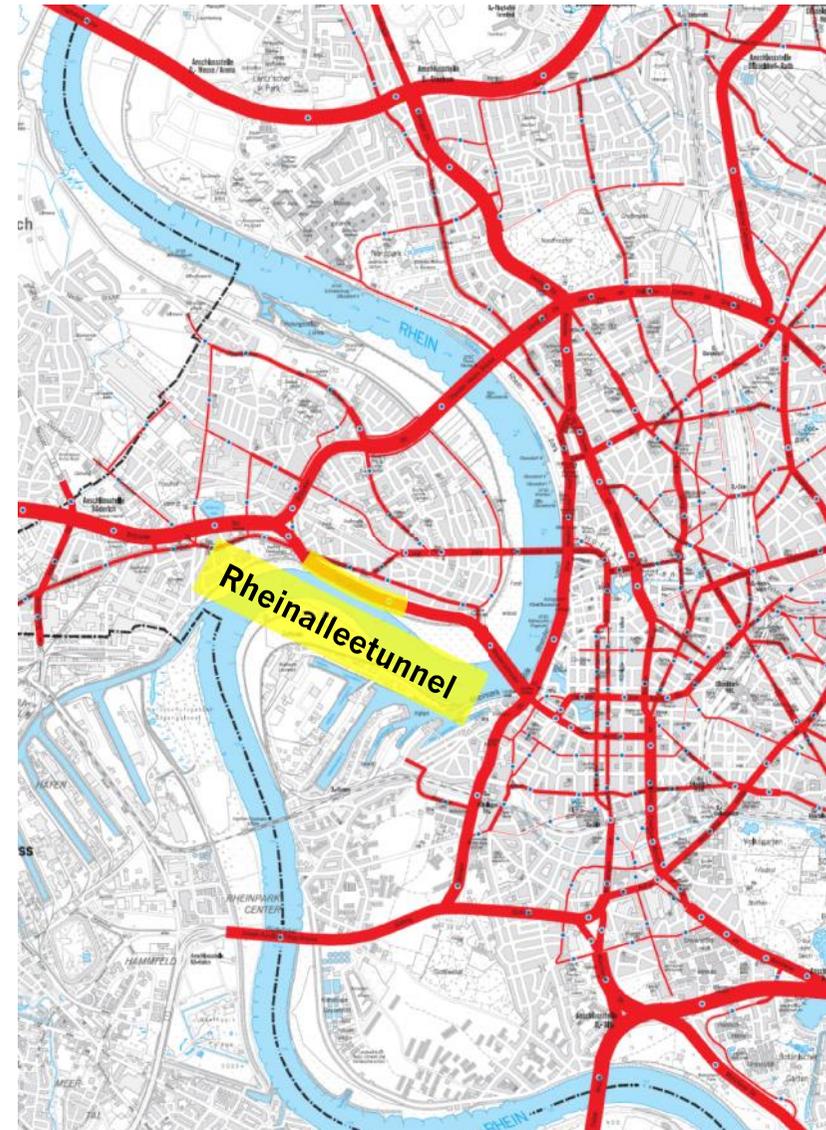
New applications

## Example: Closure of Rheinalleetunnel

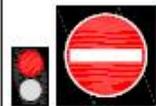
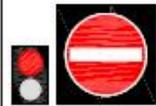
- automatically: e.g. fire detection system
- manually: traffic centre operator

## Traffic volume (2011)

Vehicles per 16h:	43,254
Peak hour:	4,256



### Closure West



### Closure East



1. Closure of tunnel portals
2. Change of traffic light programmes on small-scale bypass



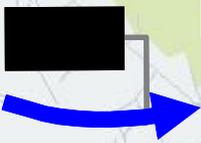
## TUNNEL CLOSURE

Rheinalleetunnel

Note following sign-posting!

52 Essen	Rheinalleetunnel
Düsseldorf-Nord	
Düsseldorf-Zentrum	
Th.-Heuss-Brücke	
D-Seestern	D-Oberkassel

← →



Rheinalleetunnel



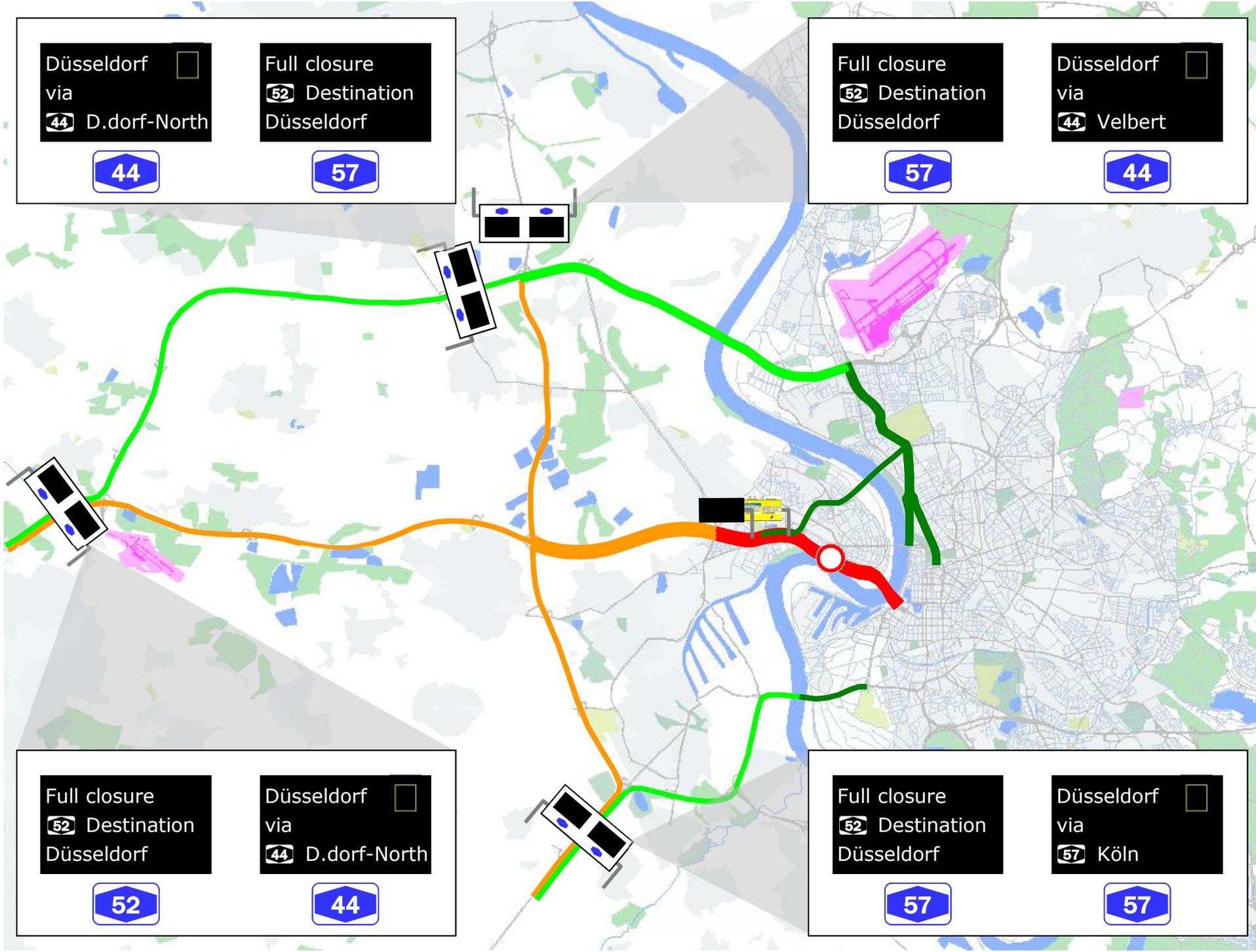
**Destination Düsseldorf Centre:**

1. Information on alternative route on variable message signs
2. Change of traffic light programmes on large-scale inner-city bypass

**Destiantion West:**

**Tunnel closure announcement on variable message signs – no alternative route available**





**Fire Brigade**

**ANTENNE**  
UKW 104.2  
**DÜSSELDORF**

**WDR**

**Tunnel closure**

**District:** Oberkassel

**Adresse:** Rheinalleetunnel

**Information:**

Tunnel closure of Rheinalleetunnel in both directions.

**VIZ.NRW**

**Mobilitäts  
Daten  
Marktplatz**

**Traffic message**

# Routing based on energy consumption



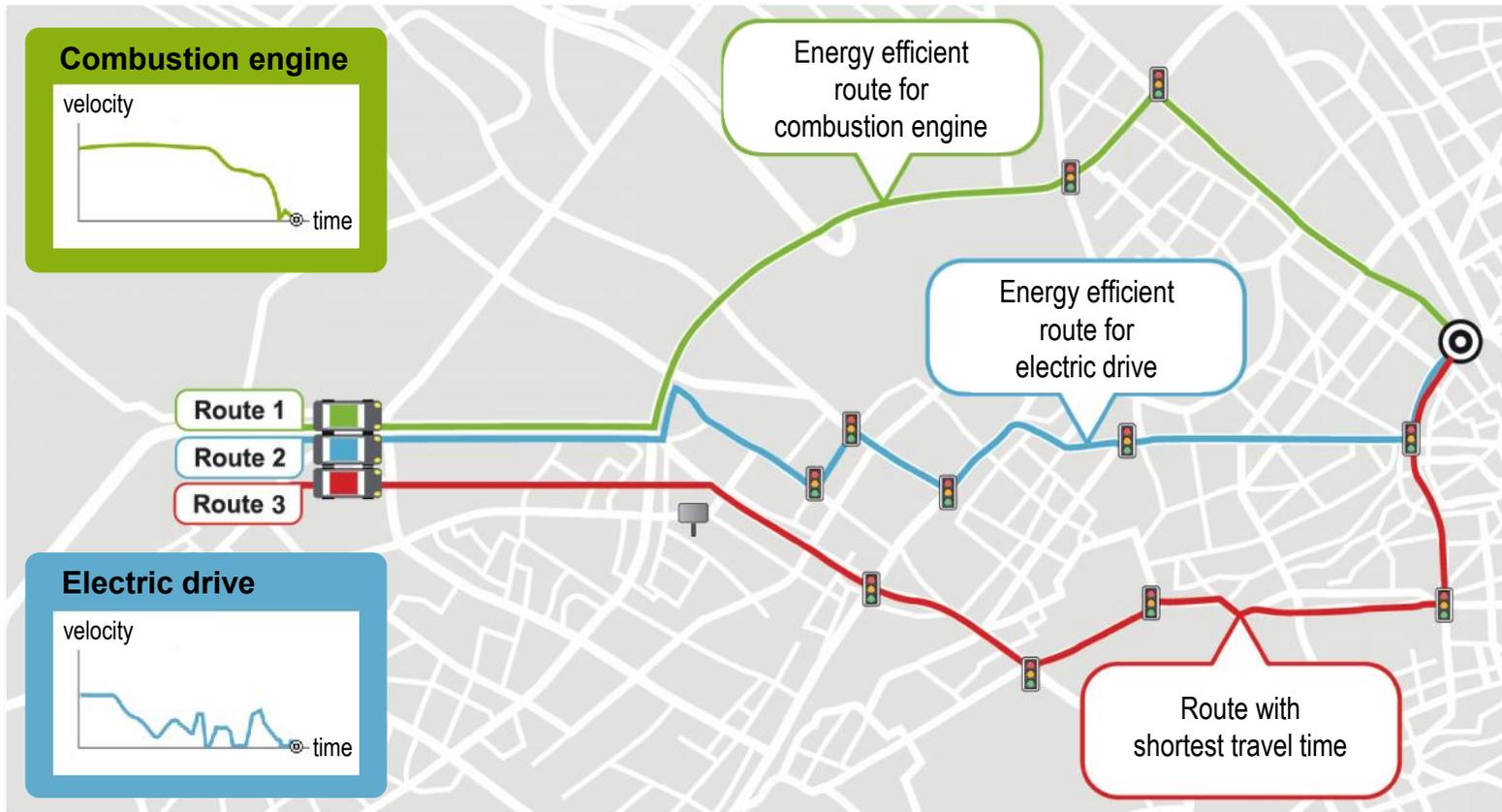
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Aim	Method
Provide car users with energy efficient alternative routes based on their engine concept.	<ul style="list-style-type: none"> <li>• Predict consumption based on current traffic situation for electric drive and combustion engine.</li> <li>• Direct car users on the most energy efficient or quickest route.</li> </ul>

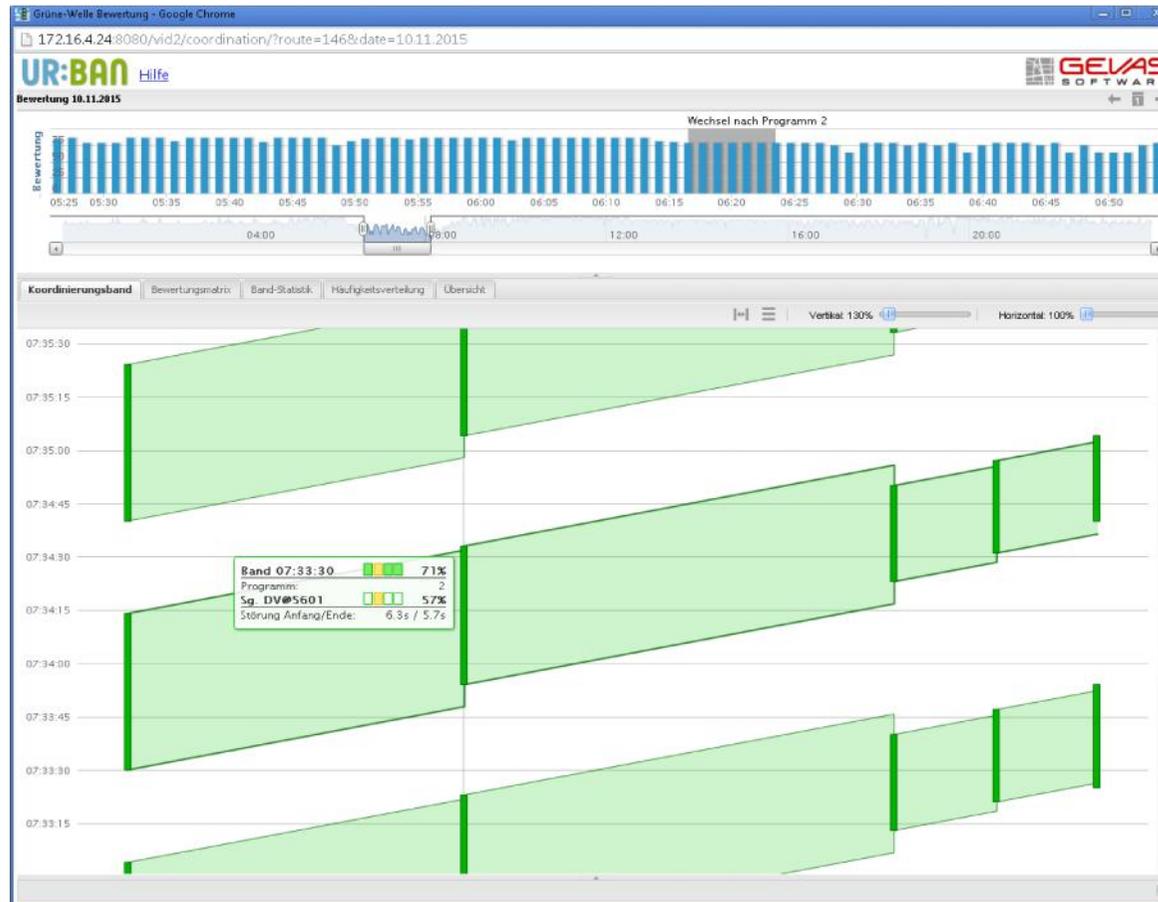
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## Aim

Quality checks of phased traffic lights.

## Method

- Record realtime data of traffic lights
- Visualise green periods on defined road sections



# Thank you!

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