



**CIMEC**  
PRESENTATION BY  
PER EINAR PEDERSLI  
NORWEGIAN PUBLIC ROAD ADMINISTRATION

# PARTICIPANTS IN CIMEC

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Norwegian Public Road Administration

City of Trondheim

City of Oslo,

City of Bodø

City of Gothenburg (Sweden)

# C-ITS IN NORWAY

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National Transport Plan (NTP) is the Norwegian Government's long term roadmap for all transport modals.

- NTP 2010-2019, ITS nonexisting.
- NTP 2014-2023, ITS one small paragraph.
- NTP 2018-2029, ITS and C-ITS as a main contributor for the next generation of transport system. Focus on urbanisation.

# C-ITS IN NORWAY

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## NTP 2018-2029: 3 ITS/C-ITS-program

### Pilot-T (100 mill. Euro)

- A whole new innovation initiative, a **competition arena for innovation, pilot projects and R & D**. It will be managed by actors in the research and innovation instrumentation. Through Pilot-T, different players will try out new solutions in practice.

### Smart transport (10 mill. Euro)

- In order to stimulate local innovation and development in the transport sector, the Ministry of Transport and Communications will invite county municipalities and Oslo Municipality to a **competition for Smarter Transport in Norway**.

### NPRA C-ITS pilots (50 mill . Euro)

- A six year project, (2018-2023), for testing an implementing C-ITS, both in urban areas and road corridors. **Focus on mobility, and safety.**

# C-ITS IN NORWAY

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- The national Commitments for future C-ITS made it interesting for Norway to take part in the CIMEC project.
- What next, funding is ok but are we prepared?
- CIMEC roadmap will be a useful guideline when we now start the interesting projects

# ORGANISATION AS A BARRIER

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## ROAD ADMINISTRATION IN NORWAY



### ROAD OPERATORS (STAKEHOLDERS)

- Municipality : White roads
- County : Yellow roads
- NPRA : Green roads

### CHALLENGES

- Use cases not related to only one road operator.
- Who is the owner of the use case?
- Who shall fund projects?
- Who is the customer for the C-ITS suppliers?



# ORGANISATION AS A BARRIER

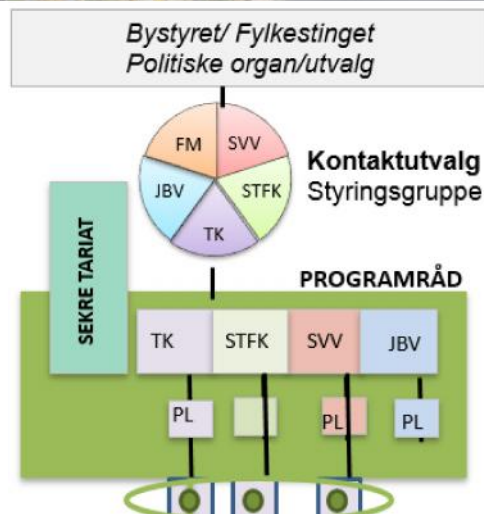
## SMART CITY MARKED APPROACH



**Q-Free: Who is the customer ?**

Need to have a common arena for:

- Defining use cases
- Making decisions
- Procurement
- Knowledge



Trondheim have established an joint venture:

TK = Municipality

STFK = County

SVV = Norwegian Public Road Administration

JBV = National Railroad Administration

# PROJECTS IN NORWAY

# PROJECTS IN NORWAY

## IMPLEMENTED

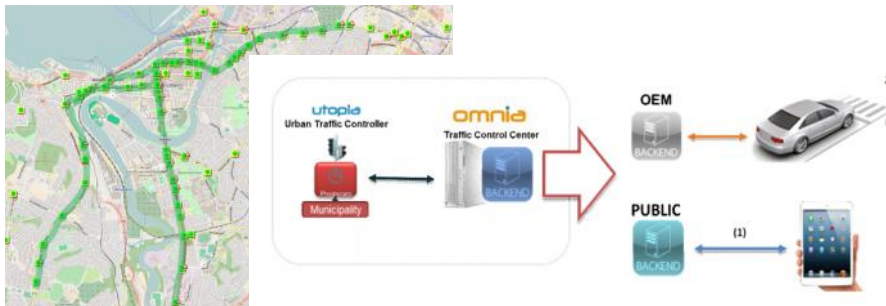


**Kjøretid nå**

Ryen via **E 18** **12 min**

Ryen via **Ring 3** **17 min**

Travel time information system, interface on internet and VMS.



Traffic Light Assistant : implemented for Volvo and Audi. Trial periode 2017

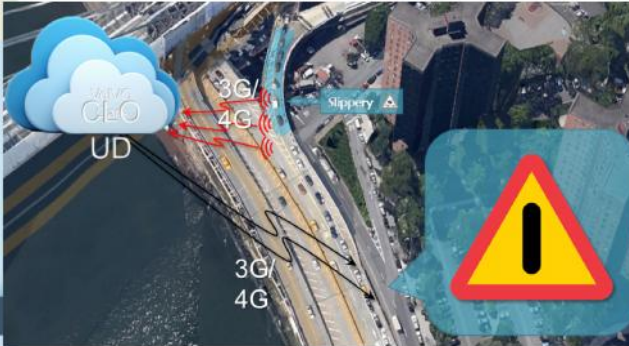
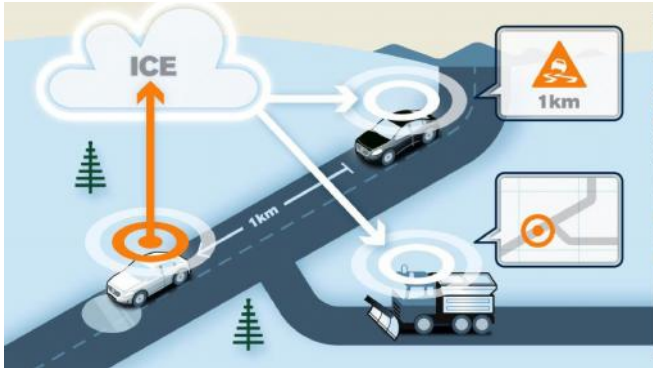


Q-Free brings innovation to the parking sector.

Oslo, 30th of March 2017. Our state-of-the-art radar-based sensors with cellular-based narrow band communication technology, NB IoT, that will significantly reduce the cost of installing and operating smart parking systems in the future.

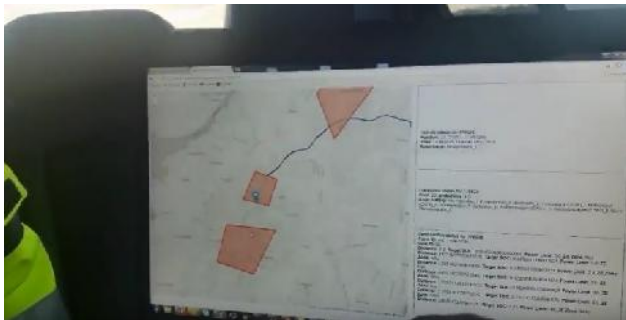
# PROJECTS IN NORWAY

## TESTING



Road status information, vehicle as a sensor.

- Collecting of friction data
- Quality control of data
- Improvement of algorithm



## Geofencing

- Automatic change from fossil- to electric- mode.



## Mapping

- Collect objects from the vehicles video system and map them into national road map database.

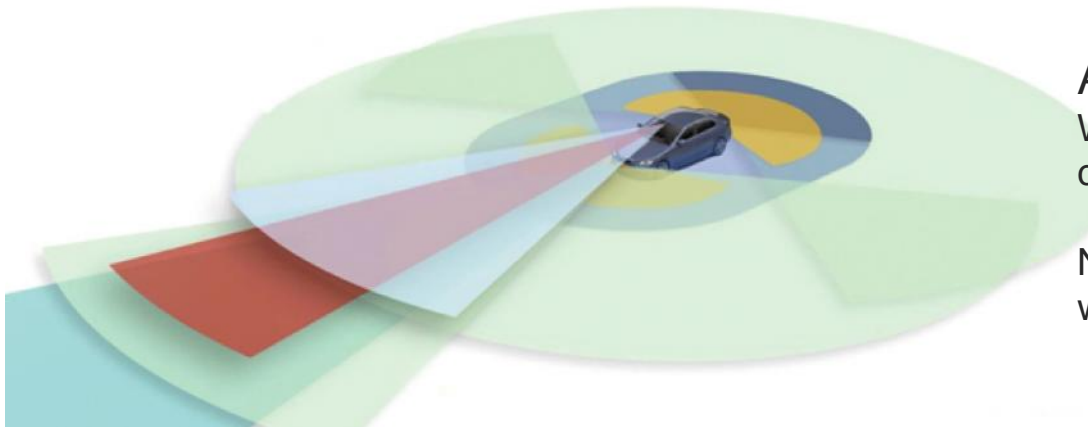


# PROJECTS IN NORWAY

## COMING UP



**Maas in Trondheim:**  
Implement Maas in next tender for public transport, 2021-2028



### Autonomous driving

What happens when sensors get dirty / covered by snow.

Need of special road maintenance under winter conditions?

# PROJECT EXPERIENCIES

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There is still slowness in implementing C-ITS in Norway

political descicions, no long term approach, next election

lack of coordination among stakeholders

technology is not future proofed

How to speed up implementation

make good cost effective evaluations

marked actors must focus on use cases, not only technology and products

start with small and successfull projects, and make them interoperabel

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# THANK YOU !





# OUR PARTNERS

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**Thank you!**