



XIII
INTERNATIONAL
WINTER ROAD
CONGRESS

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Québec 

SUSTAINABLE WINTER SERVICE FOR ROAD USERS

Development of Road Maintenance Expertise

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Statens vegvesen

Development of expertise for road maintenance

Project period: 2007-2010

Purpose: to enhance professional skills and the status of road maintenance work within the NPRA and in the road maintenance sector.

To establish systems and routines for continuous development of road maintenance competence.

Cooperation with
the road maintenance sector



Road maintenance sector

- Public Roads Administration
- Municipalities
- Aviation (airports)
- Contractors
- Suppliers
- Consulting companies
- Research and Educational institutes



Background

The Norwegian Public Roads Administration (NPRA) is concerned about the loss of maintenance competence:

- NPRA lost expertise and experience following the separation of the production unit in 2003
- Introduction of competitive tendering has caused a shift of focus from maintenance practices to contract issues
- Contractors are not willing to spend their resources on long-term research without incentives
- Change of contractor and maintenance staff every 5 year
- During the next years many employers will retire

Analysis of competence within Road Maintenance



Conclusions:

- We are losing competence:
 - local knowledge
 - operational experience
 - cost competence
- Competence is spread on many hands
- Some are not eager to share own experience
- As state road owner NPRA should have a total competence within Road Maintenance (no one else have)

Focus areas

1. Visibility



2. Training and education



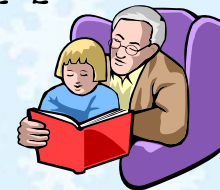
3. Specialization



4. Research and development



5. Transfer of experience



Visibility



Purpose:

To present and promote road maintenance in a positive manner, in order to enhance status and recruitment to this field

Positive presentation of the field:

- the diversity and importance of road maintenance
- an interesting and challenging field of work
- R&D work and the potential for development
- creating new stories with a positive angle

Example: Visibility

Winter conference 2008
Minister of transportation opened
and handed out a winter reward

400 participants 28 students



Video presenting road maintenance work

Internet site www.vegvesen.no/kdv



Training

Purpose:

To enhance the skills among everybody who works with road maintenance aiming to improve the quality of the services

Cooperation with the industry,
upper secondary schools
university colleges and universities

- Competence requirements
- Training programs based on modulus
- Textbook about Road Maintenance



Example: Winter maintenance course

Content:

- Standard requirements and planning
- Traffic safety and environment, health and safety
- Meteorology, follow up /documentation, quality system
- Methods, equipment and execution of various tasks

For:

- Leaders and supervisors from road administration and contractors
- Winter maintenance crew



Specialization



Purpose:

To enhance expertise and research capabilities related to road maintenance

- More specialist in road maintenance
- Better facilities for field and laboratory experiments, especially with regard to cold-weather situations

Example: Specialization

Postdoc-position at the Norwegian University of Science and Technology in Trondheim (NTNU)
Basic scientific research in winter friction
and use of chemicals

Initiated new PhD-studies:

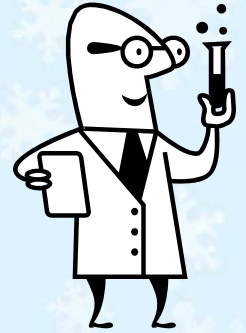
- 1 Salting
- 2 Road Maintenance

Financial support:

- climate laboratory at NTNU
- research equipment



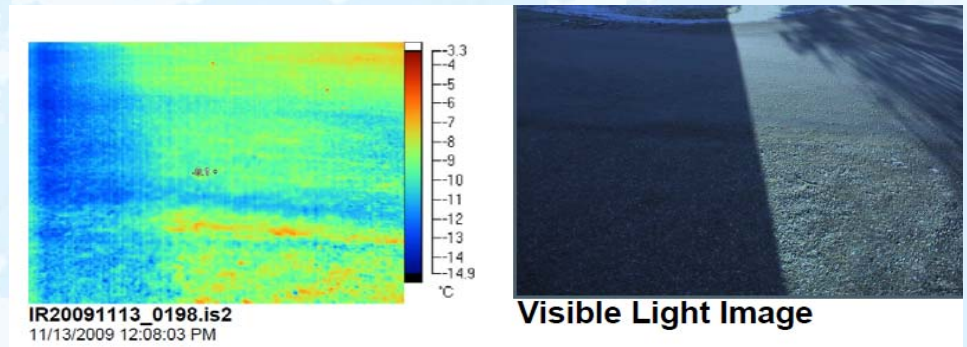
Research and development



Purpose:

More research and development in order to improve knowledge and methods

- To develop and use new technology



- Establish systems to include R&D in contracts
- Inspire “practical research” and development work.

Example: More R&D projects in maintenance contracts

Research and development work part of performance contract “Indre Romsdal” and other contracts

Follow up and documentation of:

- Winter standard, friction
- Work done
- Weather conditions
- Traffic speed, accidents
- Drivers satisfaction

Development and testing of new methods and equipment



Transfer of experience



Purpose:

To collect, preserve and disseminate experience-based skills in order to:

- Avoid repeating old mistakes**
- Mutually benefit from each other**

Transfer from experienced staff to newcomers

Transfer between various industry actors

Transfer from Maintenance to Planning and Construction

Example: How to transfer experience

- Electronic photo archive for Road Maintenance pictures
- Map-presentation of local knowledge from the follow up system (ELRAPP)
- Systems to transfer experience from road maintenance to planning and buildings specifications
- More focus on road maintenance during planning



Status and progress

2007 Project definition

Project initiated and defined in cooperation with the sector

2008 Planning

Activity plans made in cooperation with the sector

2009-2010 Carrying out and establishing systems

Carrying out planned activities

Establishing systems and routines for future development of Road Maintenance Competence

2010 → 2011

Project → Process



www.vegvesen.no/kdv

Thank you for your attention