



ROADEX

Implementing Accessibility

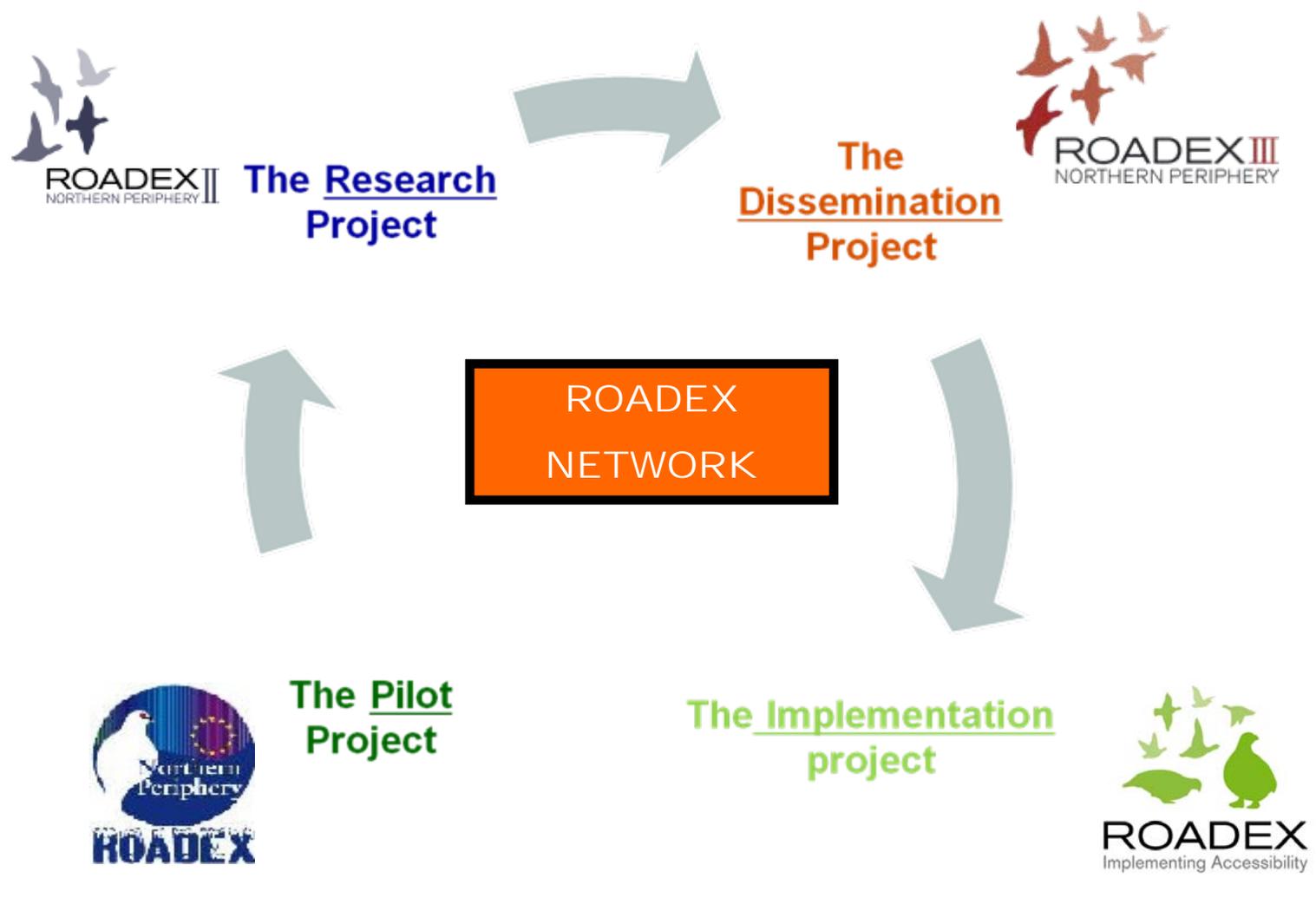
ROADEX Network Implementing Accessibility

Presentation outline

- The ROADEX phases
- Facts
- Partners
- Consultancy and Knowledge Centre
- Demonstration Projects
- Research Projects
- eLearning Design
- Graphic design and creative input
- Management of the Project



THE ROADEX PHASES



FACTS

11 partners

7 countries

3 years

July 2009 – June 2012

Total:

2,163,473 Euro

EU-fund:

1,194,205 Euro (55%)



THE ROADEX PARTNERS



Lead Partner, The Swedish Road Administration Northern Region (SRA)

The Swedish Forest Agency (SFA)



The Finnish Road Administration, Lapland District (Finnra)



Greenland Home Rule Government (GHR)



The Icelandic Road Administration (ICERA)



Norwegian Public Roads Administration ,The Northern Region (NPRA)



The Highland Council (THC)



Forestry Commission (FC)



Comhairle Nan Eilean Siar (CNES)



National Roads Authority (NRA)

Department of Transport (DoT)

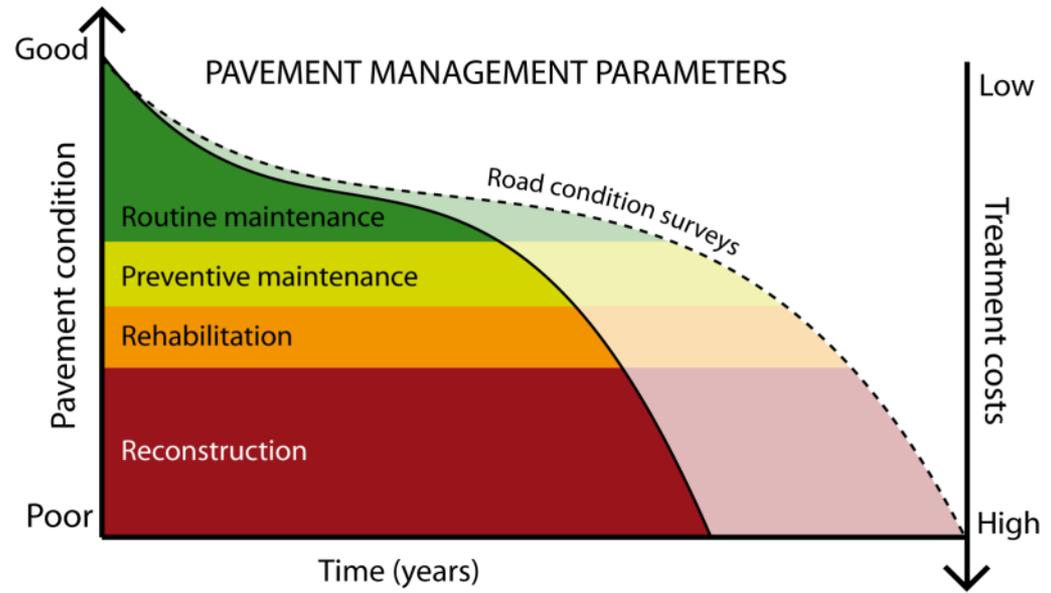
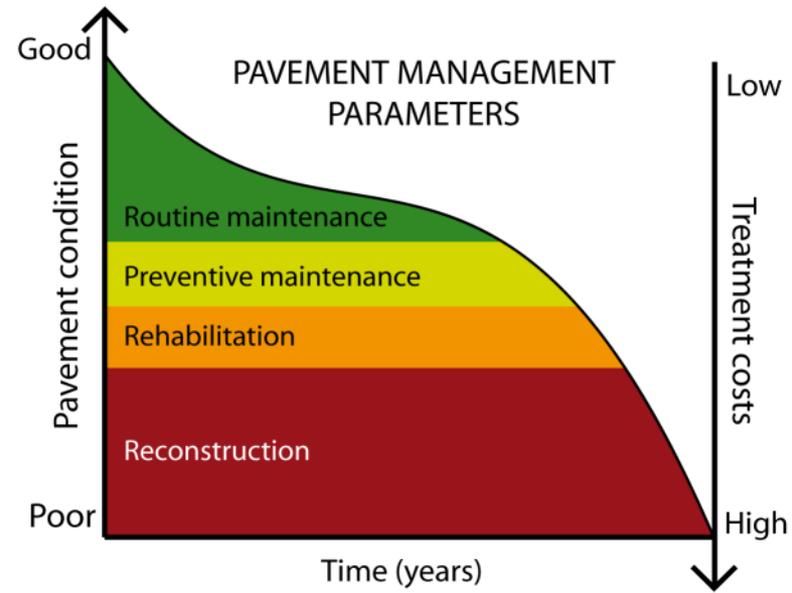


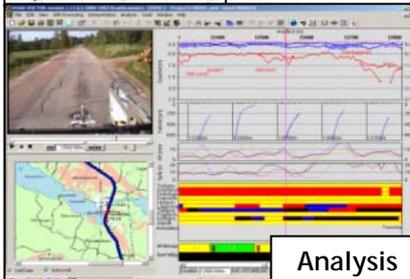
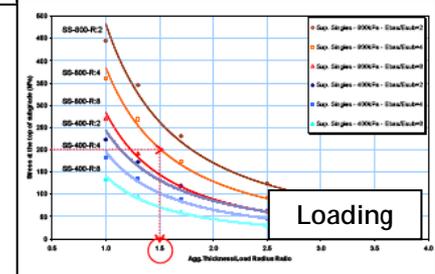
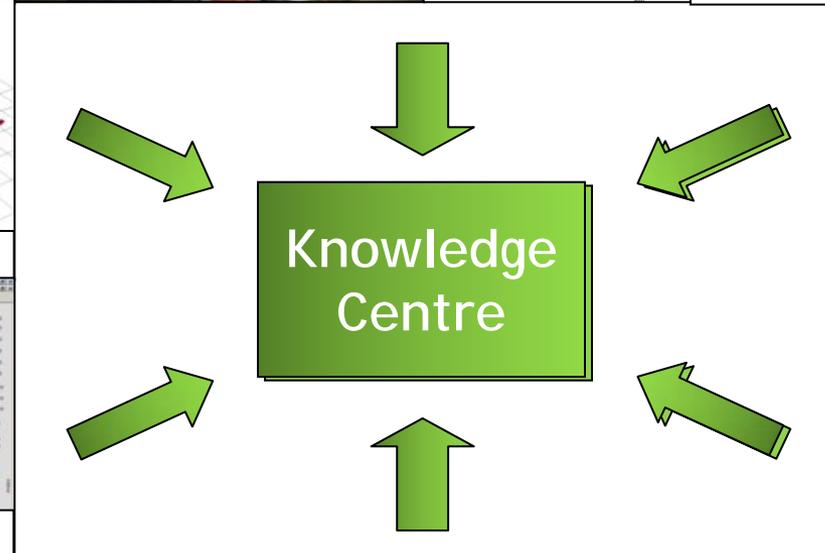
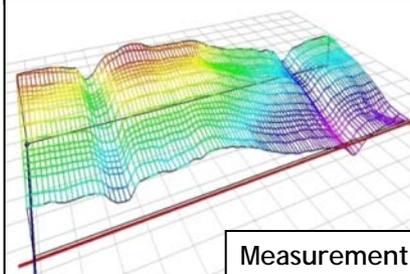
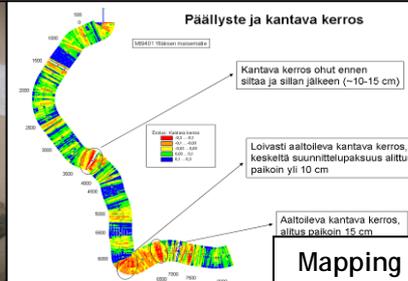
THE MISSION

”To encourage the everyday use of ROADEX techniques and innovations on Northern Periphery low volume public roads, forest roads and private roads within the framework of climate change and increasing environmental awareness”



OUR SALES ARGUMENTS: "Saving Money" and "Sustainability"

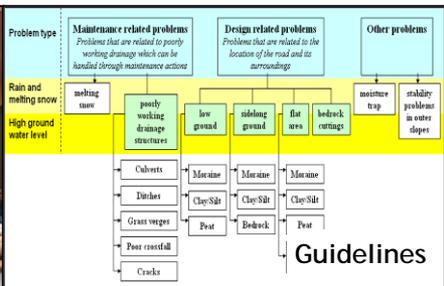




Information in one place



Seminars



Workshops



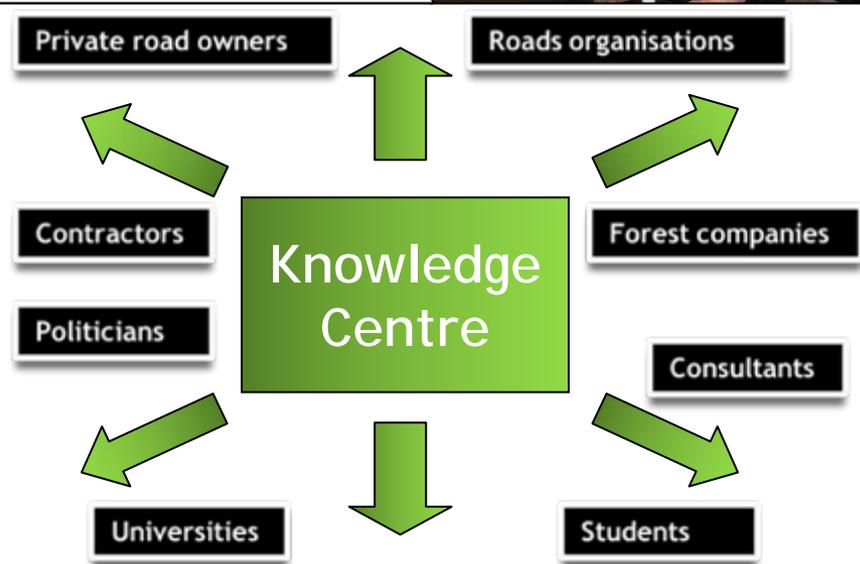
Publicity



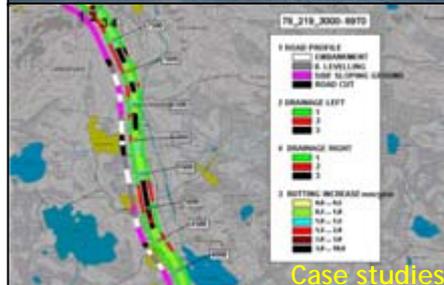
New technologies



New materials



Surveys



Case studies



Conferences



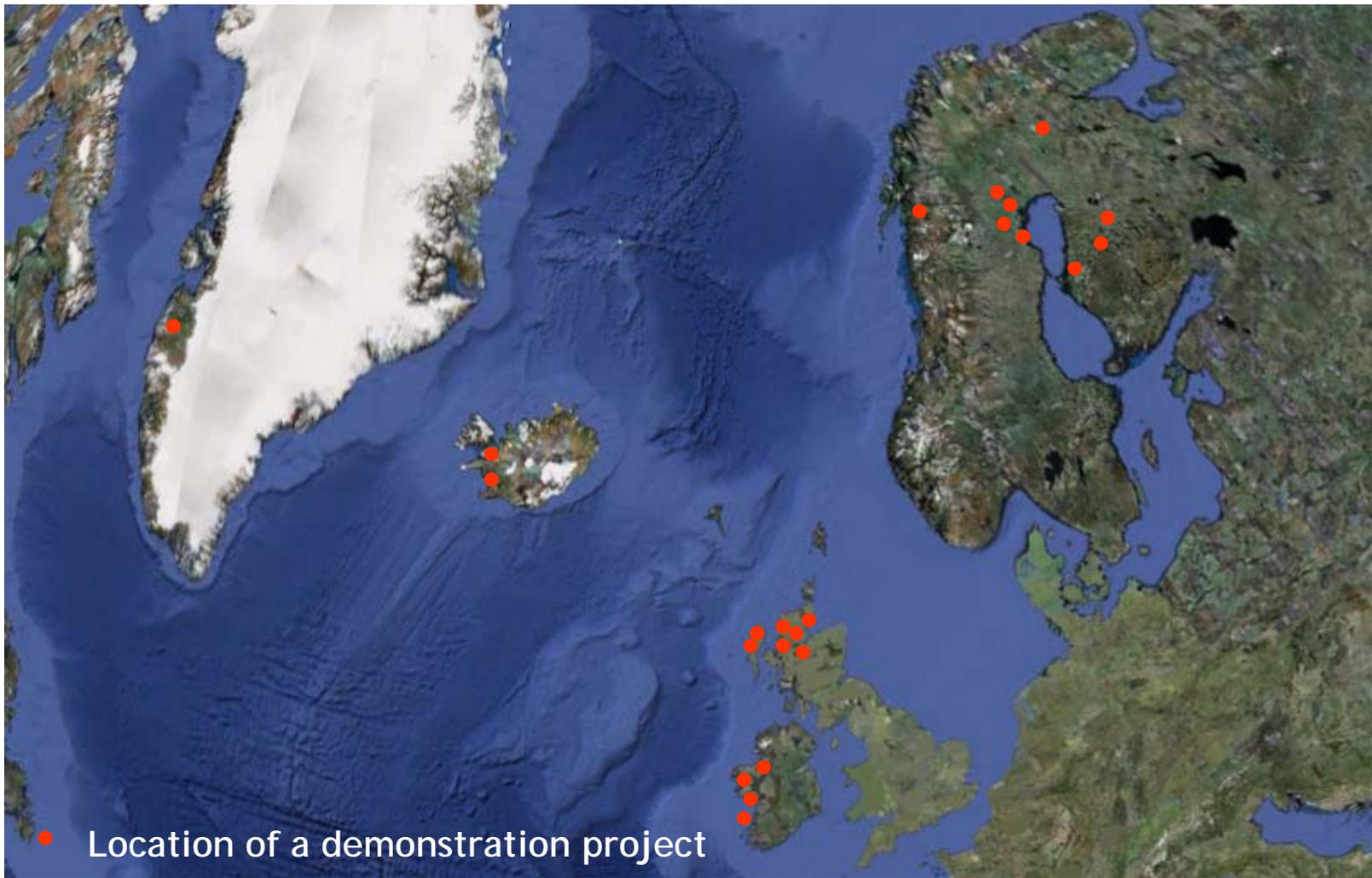
Environmental issues



Demonstration projects



Local briefings

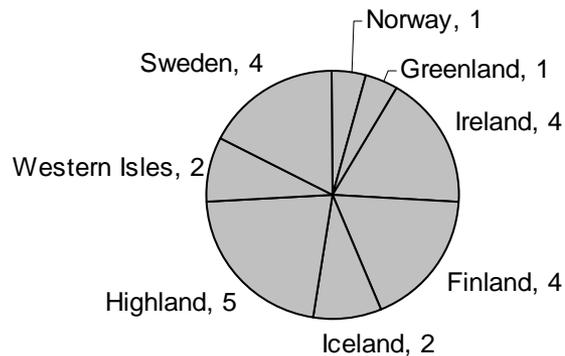


• Location of a demonstration project

The ROADEX demonstration projects

Demonstration projects

- 7 countries
- 13 Partners
- 6 categories
- 23 projects



Distribution between Partners

No	Location	Description
1	Greenland	Drainage maintenance guidelines - to be managed by Dr Timo Saarenketo of Roadscanners Oy, author of the ROADEX drainage reports
2	Ireland	
3	Finland	
4	Iceland	
5	Highland	
6	Western Isles	
7	Sweden	
8	Finland	Road friendly vehicles and CTI - to be managed by Professor Pauli Kolisoja of the Tampere University of Technology, author of the ROADEX report on permanent deformation.
9	Highland	
10	Sweden	
11	Ireland	Forest Road management and maintenance policies - to be managed by Svante Johansson of Roadscanners AB, author of the ROADEX reports and policies on the socio-economic impacts of low volume roads.
12	Highland	
13	Sweden	
14	Finland	Rutting, from theory to practice - to be managed by Professor Pauli Kolisoja of the Tampere University of Technology, author of the ROADEX report on permanent deformation.
15	Iceland	
16	Highland	
17	Western Isles	
18	Sweden	
19	Kerry	
20	Donegal	
21	Finland	Analysis of health problems due to vibration - to be managed by Johan Granlund, Vectura Consulting AB, author of the ROADEX III Task B report "Health Issues Raised by Poorly Maintained Road Networks"
22	Norway	
23	Highland	

Demonstration projects

- agree number and location with SC
- agree scope of project with local Partner
- start early 2010, end late 2011
- managed and advised by a Lead Expert
- work carried out by the local Partner
- supported by the ROADEX Consultancy
- disseminated through Knowledge Centre
- publicised locally and across NPP

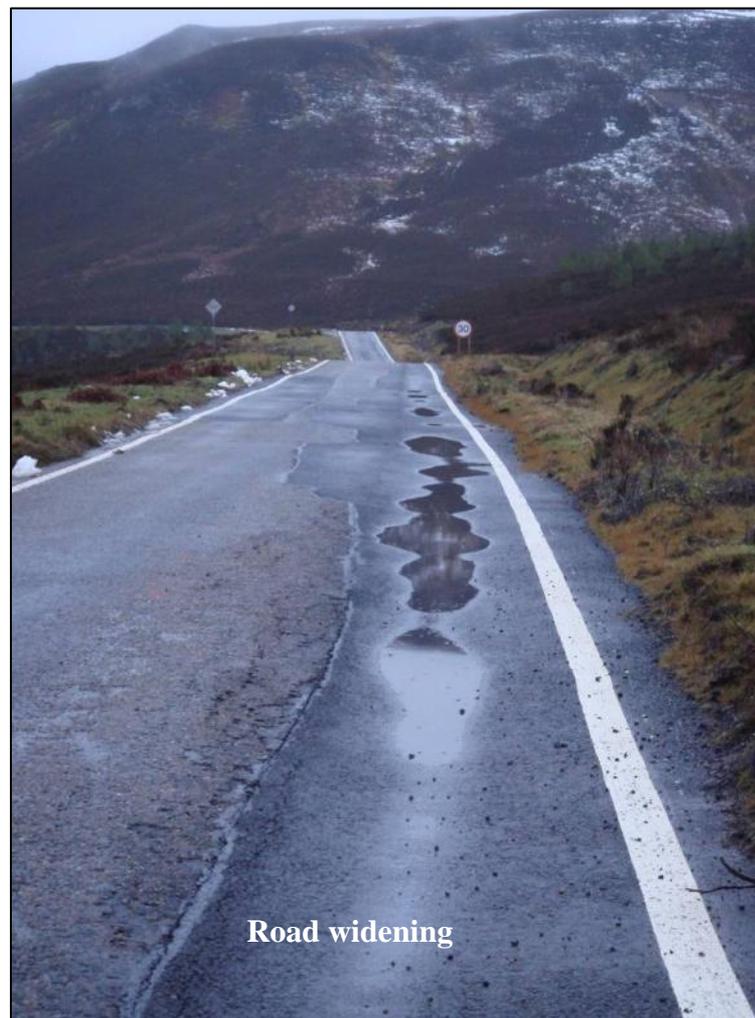
ROADEX IV	2009			2010												2011												2012					
	9	10	11	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6
Project management																																	
Project set up																																	
Website																																	
Task 1																																	
Consultancy Service																																	
Knowledge Centre																																	
Task 2																																	
Demonstration projects																																	
Drainage maint guidel																																	
- project design																																	
- Demonstrations																																	
- Monitoring																																	
- Reporting																																	
CTI																																	
- Setting up project																																	
- Demonstrations																																	
- Reporting																																	
Forest Road Management																																	
- Setting up project																																	
- Demonstrations																																	
- Monitoring																																	
- Reporting																																	
Rutting design																																	
- Setting up project																																	
- Demonstrations																																	
- Monitoring																																	
- Reporting																																	
Roads on Peat																																	
- Setting up project																																	
- Demonstrations																																	
- Monitoring																																	
- Reporting																																	
Vibration & Health																																	
- Setting up project																																	
- Demonstrations																																	
- Monitoring																																	
- Reporting																																	
Task 3																																	
eLearning																																	
- Project design																																	
- User interface design																																	
- Writing manuscripts																																	
- Manuscript translations																																	
- Final production																																	
Task 4																																	
Research Projects																																	
Climate Change																																	
- Setting up																																	
- Research phase																																	
- Report																																	
Widening of roads																																	
- Setting up																																	
- Research phase																																	
- Report																																	
Road Standards & Health																																	
- Setting up																																	
- Research phase																																	
- Report																																	
Final reports																																	
Close Project																																	

Demonstration projects draft timeline





Climate change

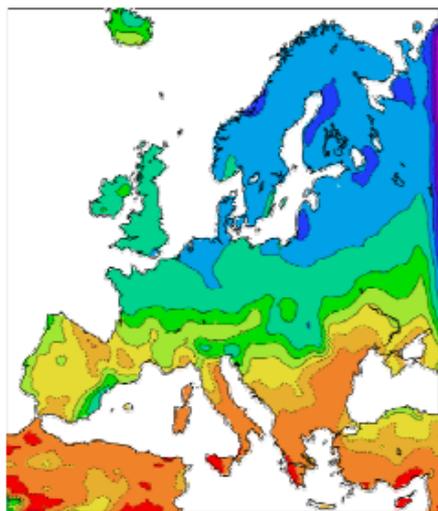


Road widening

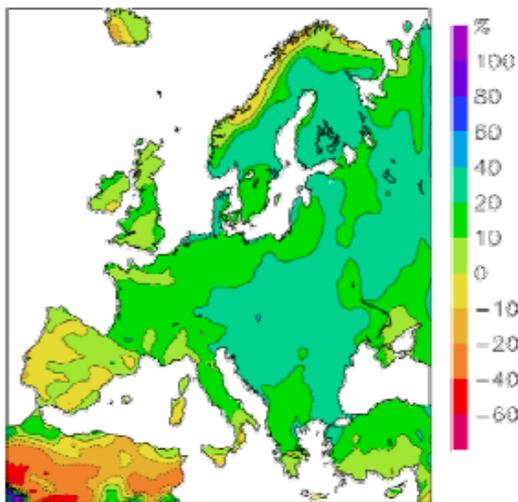


Vehicle and human vibration

ROADEX Research Projects



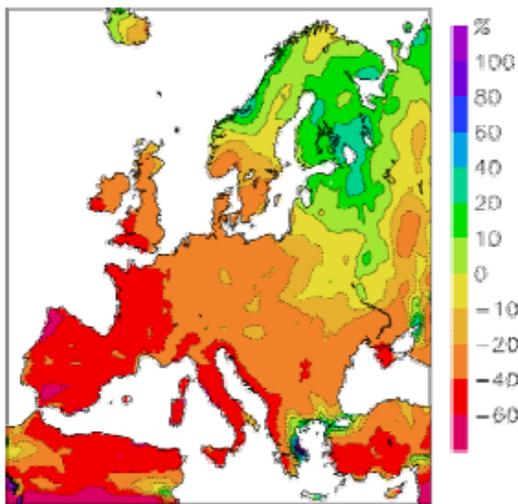
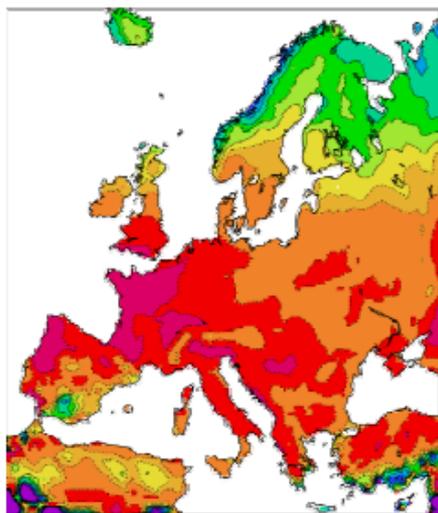
max



min

Rossby Centre Rainfall Scenarios

winter



summer

Saarelainen & Makkonen 2007

ROADDEX Research Project: Climate Change

CLIMATE CHANGE AND ROAD PROBLEMS



Special Focus:

Research will focus how to react to climate change

Instructions - Guidelines

ROAD WIDENING

Special Focus:

Why certain road widenings fail and others not.

Latest road survey technology:

3d GPR technology

High precision IR technology

Results:

New proposals for guidelines for road widening



VEHICLE HUMAN INTERACTION

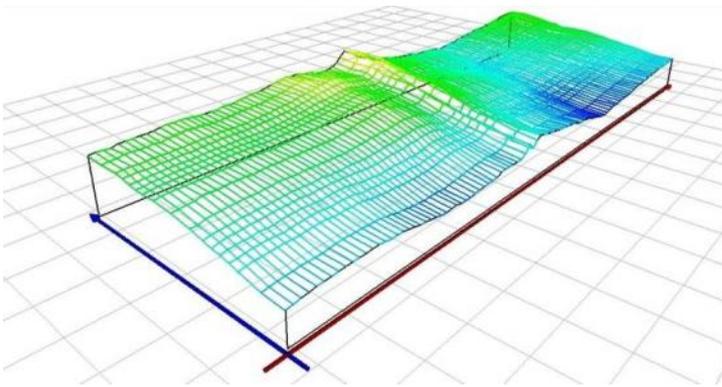


Special Focus:

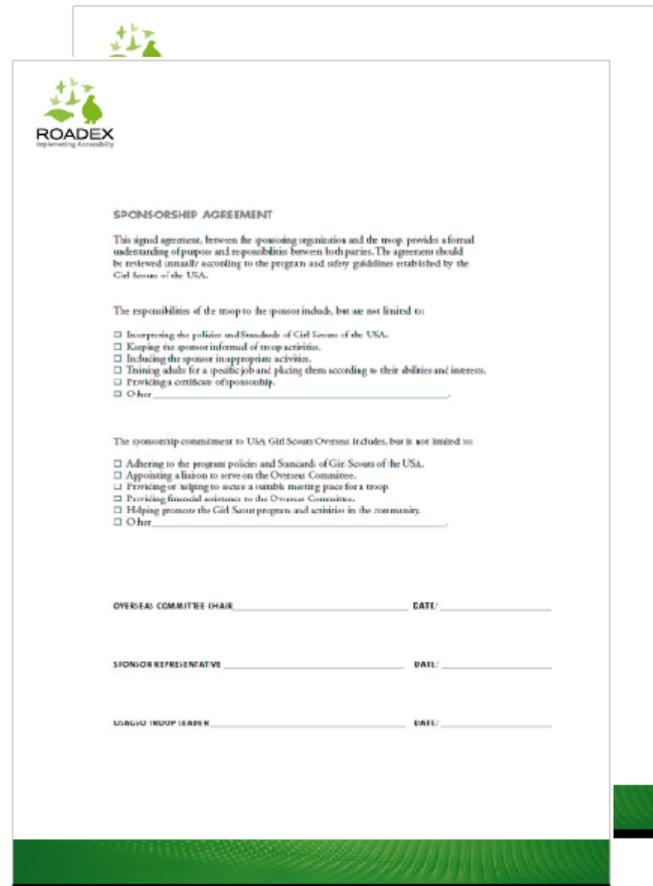
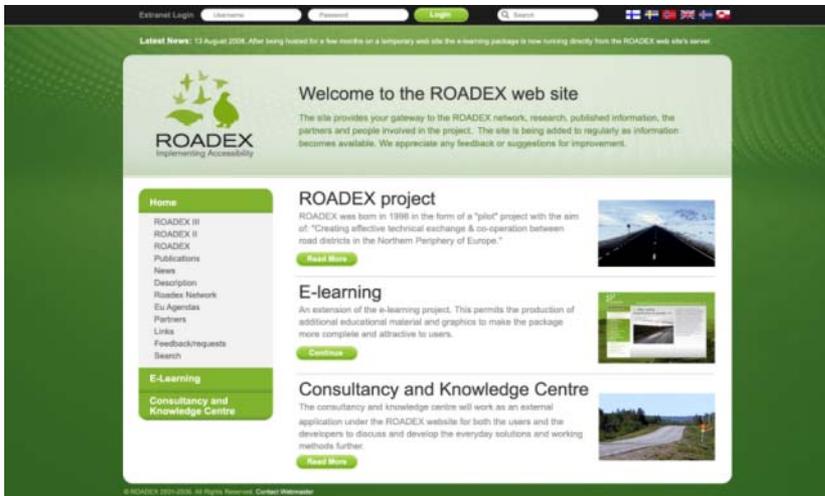
Maintenance standards vs. different vibration levels

Summer vibration vs. winter vibration

CTI systems and vibration –ie are we measuring the right parameters



Graphical guidelines / Layout samples



Website / Layout sample / homepage

Extranet Login

Latest News: 13 August 2008. After being hosted for a few months on a temporary web site the e-learning package is now running directly from the ROADEX web site's server.

ROADEX
Implementing Accessibility

Welcome to the ROADEX web site

The site provides your gateway to the ROADEX network, research, published information, the partners and people involved in the project. The site is being added to regularly as information becomes available. We appreciate any feedback or suggestions for improvement.

Home

- ROADEX III
- ROADEX II
- ROADEX
- Publications
- News
- Description
- Roadex Network
- Eu Agendas
- Partners
- Links
- Feedback/requests
- Search

ROADEX project

ROADEX was born in 1998 in the form of a "pilot" project with the aim of: "Creating effective technical exchange & co-operation between road districts in the Northern Periphery of Europe."

[Read More](#)

E-learning

An extension of the e-learning project. This permits the production of additional educational material and graphics to make the package more complete and attractive to users.

[Continue](#)

Consultancy and Knowledge Centre

The consultancy and knowledge centre will work as an external application under the ROADEX website for both the users and the developers to discuss and develop the everyday solutions and working methods further.

[Read More](#)

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Consultancy and Knowledge Centre

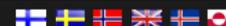
Extranet Login

Username

Password

Login

Search



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Welcome to the ROADEX Consultancy and Knowledge Centre

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Home

E-Learning

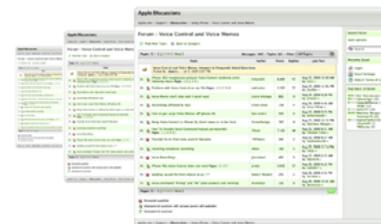
Consultancy and Knowledge Centre

- Case Studies
- Technical Reports
- Research Papers
- Feedback
- Downloads
- Partner knowledge bank
- Contacts

Search Knowledge Centre

Discuss and develop the everyday solutions and working methods further

Continue



Obtain the best up to date information

Continue

Most recent 12.9.2009

Policies for Forest Roads – Some Proposals

The importance of the road network to a society can be compared with the vascular system of a human body.

Download 4.1MB

Contact experts

Continue

Contact Partner experts, together with feed back from on-site experiences to supplement the guidance of the Consultancy.

Consultancy and Knowledge Centre

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Everyday Solutions

ROADEX | Consultancy and Knowledge Centre | Feedback | Roads constructed over peat

Roads constructed over peat

[Post New Topic](#) [Back to Category](#)

Pages: 11 - [[1](#) | [2](#) | [3](#) | [4](#) | [5](#) | Next] Messages : 945 - Topics: 161 - Filter: All Topics

		Topic	Author	Views	Replies	Last Post
		How to get it done	Author 1	6,885	57	Aug 25, 2009 12:09 AM by: ie11 »
		Have a look of this case study in Scotland	Author 2	5,507	57	Aug 24, 2009 11:05 PM by: jfairfax »
		Interesting solution	Author 1	7,161	48	Aug 22, 2009 8:31 AM by: Thicket Films »
		There is a ROADEX report written about this	Author 2	385	2	Aug 22, 2009 8:17 AM by: AndrewScaife »
		We used the same method in Ireland also	Author 3	2,632	15	Aug 20, 2009 6:22 PM by: tonk007 »
		Case study from Ireland	Author 2	385	2	Aug 22, 2009 8:17 AM by: AndrewScaife »
		Case study 2 from Scotland	Author 3	2,632	15	Aug 20, 2009 6:22 PM by: tonk007 »
		Constructing over the peat in Sweden	Author 2	241	5	Aug 20, 2009 2:42 PM by: mrtotes »
		Project completed	Author 1	102	0	Aug 20, 2009 12:01 AM by: drumstyx »

Pages: 11 - [[1](#) | [2](#) | [3](#) | [4](#) | [5](#) | Next] RSS

Answered question

Unanswered question with answer points still available

Unanswered question

Home

E-Learning

Consultancy and Knowledge Centre

Case Studies

Technical Reports

Research Papers

Feedback

Downloads

Partner knowledge bank

Contacts

eLearning/ Layout sample

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E-Learning

An extension of the e-learning project. This permits the production of additional educational material and graphics to make the package more complete and attractive to users.

Home

E-Learning

- Lesson 1
Permanent Deformation
- Lesson 2
Road Construction Over Peat
- Lesson 3
Drainage of Roads
- Lesson 4
Environmental Considerations for Low Volume Roads

Consultancy and Knowledge Centre

Lesson 1

Permanent Deformation

The importance of the road network to a society can be compared with the vascular system of a human body.

Continue
Download Lesson 1 4.1MB

Lesson 2

Road Construction Over Peat

The importance of the road network to a society can be compared with the vascular system of a human body.

Continue
Download Lesson 2 4.1MB

Lesson 3

Drainage of Roads

The importance of the road network to a society can be compared with the vascular system of a human body.

Continue
Download Lesson 3 4.1MB

Lesson 4

Environmental Considerations for Low Volume Roads

The importance of the road network to a society can be compared with the vascular system of a human body.

Continue
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eLearning/ Layout sample

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Lesson 1

Permanent deformation

The Lesson that follows is an executive summary of the 2005 ROADEX II report on "Permanent Deformation". It aims to be a working manual, defining why rutting may take place in low volume pavements. Hence, it aims to provide advice for road owners and operators about means of overcoming rutting in newly constructed or reconstructed pavements by design and about assessing the likely future rutting in existing pavements.

What is permanent deformation and why we do not like it.

In the study areas of the Northern Periphery, unsealed or thinly-sealed road pavements are very common. Typically, these road structures are constructed from one, or more, layers of crushed stone aggregate laid on top of the subgrade (Figure 1.1). The surface of these pavements is either provided by the aggregate or by a thin bituminous seal into which stones of a uniform size are rolled. In both cases, the aggregate layers provide the major structural capability of the pavement.

Compacted aggregate is a flexible material. If it is too weak, it tends to deform plastically, a little bit of plastic deformation occurring under each wheel loading. Little by little this accumulates and appears in the pavement as rutting. This type of behaviour is a feature of every layer. It is greatest if the applied stress level, under traffic wheels, is higher.

This report aims to explain why rutting occurs, the factors that influence it, and how it may be addressed by road owners and operators so that it becomes less significant.

Permanent deformation and factors affecting it

In the study areas of the Northern Periphery, unsealed or thinly-sealed road pavements are very common. Typically, these road structures are constructed from one, or more, layers of crushed stone aggregate laid on top of the subgrade (Figure 1.1). The surface of these pavements is either provided by the aggregate or by a thin bituminous seal into which stones of a uniform size are rolled. In both cases, the aggregate layers provide the major structural capability of the pavement.

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Contents

- 1 What is permanent deformations and why we do not like it
 - 1.1 Permanent deformation and factors affecting it
 - 1.2 Problems caused by permanent deformation
- 2 Permanent deformation rutting classification
 - 2.1 Why rutting classification is needed
 - 2.2 Mode 0 rutting
 - 2.3 Mode 1 rutting
 - 2.4 Mode 2 rutting
 - 2.5 Mode 3 rutting
 - 2.6 Combined rutting modes in non-frost areas
 - 2.7 Rutting modes and seasonal changes
 - 2.8 Pumping and permanent deformation

Home

E-Learning

Lesson 1
Permanent Deformation

- Lesson Test
- Feedback / Request
- Share
- Download Lesson 1 (pdf 4.1MB)

Lesson 2
Road Construction Over Peat

Lesson 3
Drainage of Roads

Lesson 4
Environmental Considerations for Low Volume Roads

Consultancy and Knowledge Centre

In the study areas of the Northern Periphery, unsealed or thinly-sealed road pavements are very common.

- Fullscreen
- Download picture (JPG, 1.2MB, 1200 x 600 px)
- Share

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Publicity and promotion

Local

- newsletters
- site visits
- Knowledge Centre
- intranet



National

- newspapers
- technical journals
- seminars
- Knowledge Centre



International

- website
- published papers
- technical journals
- conferences
 - ESME 2009
 - ISCORD 2010
 - Winter PIARC 2010
 - 10th LVR 2011





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THANK YOU!