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European Neighbourhood and Partnership Instrument

ROADEX
Implementing Accessibility

ROADEX projects actions and results during 1998-2010

Prospect implementation of ROADEX experience and know-how on the Russian side of the Barents Region

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ROADEX chronology

- **1998-2001 - Roadex I, pilot project**

  ”Creating an effective technical exchange & co-operation across the road districts of the European Northern Periphery”

- **2002-2005 - Roadex II**

  “Interactive and Innovative Road Management Practices for Low Traffic Volume Roads”

- **2006 – 2007 - Roadex III**

  “A Project to disseminate, transfer and use the new ROADEX knowledge across the Northern Periphery area”

- **2009-2012 - Roadex IV**

  ROADEX “IMPLEMENTING ACCESSIBILITY”
  “Promoting innovations in road sector to increase competitiveness of the Northern Periphery territories”

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1. THE PILOT ROADEX, 1998–2001

”Creating an effective technical exchange & co-operation across the road districts of the European Northern Periphery”

1. The ROADEX Partner network across northern Finland, Norway, Scotland and Sweden was created
2. Collaboration was started
3. The practices of the Partners in Lapland, Troms, Highland and north Sweden were benchmarked
4. The well working solutions to test the benefits of trans-national co-operation were disseminated between the districts

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2. “ROADEX II” PROJECT, 2002–2005

- **“Interactive and Innovative Road Management Practices for Low Traffic Volume Roads”**

1. **New Partners from local industries who relied on heavy road haulage to take their products to market were involved**
2. **The basic research into the unique problems of roads servicing communities in harsh climates and conditions was commissioned**
3. **The produced outputs specifically designed to improve the conditions of Northern Periphery rural roads were developed, tested and published internationally**

3. ROADEX III PROJECT, 2006–2007

- **"A Project to disseminate, transfer and use the new ROADEX knowledge across the Northern Periphery area"**

1. **New Partners from Greenland and Iceland attracted**
2. **60% of the budget of this Project was spent on dissemination activities**
3. **Over 1,000 engineers and managers were introduced to the new ROADEX technologies**
4. **Joint research by the Partners continued through 4 new research tasks of "Drainage", "Permanent deformation", "Health issues" and "Road policies"**
5. **The report on the application of the new ROADEX technologies to Greenland's first inter-town road was published**

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4. ROADEX IV "IMPLEMENTING ACCESSIBILITY", 2009–2012

1. Aims to change construction and maintenance of rural roads across the Northern Periphery by demonstrating what is possible when the new ROADEX technologies are used

2. Demonstration projects of the ROADEX methods will be carried out in the local Partner areas supported by a new pan-regional "ROADEX Consultancy Service" and Knowledge Centre. Through them, roads administrations will be able to directly experience the benefits and cost savings that are available and so encourage their adoption through their organizations

3. Joint research and development will continue in the areas of climate change, road widening and the health issues that can arise from poorly maintained roads.

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ROADEX phylosophy:

To manage low volume roads with minimum reaources means:

- Focusing efforts on **problematic road sections**, that impair mobility of users,
- Identifying the **reasons** of the problems,
- Fitting **solutions** for timely targeting on the reasons

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ROADEX: The problems of low volume roads (Western side of the Barents Region)

1. Reduction of road bearing capacity in spring
2. Absence of design solutions to improve low volume road resistance to deformations
3. Road drainage problems
4. Construction and maintenance of roads on peat
5. Road uneveness
6. Inedaquate approach to assess necessary financing of road needs in the Northern periphery based on traffic volume
7. Insufficient responsibility for decisions made in relation to financing of low volume road needs
8. Insufficient attention to keeping gravel roads performable
9. Underevaluation of the importance of environmental approcahes to low volume roads

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Problems	Roadex resources available for adoption
1. Reduction of road bearing capacity in spring	**1. Classification of spring thaw periods** as a basis for: • **Optimization of restricted traffic periods**, • **Permitted loads** • **Rehabilitation measures on roads** 2. **Recommendations for the companies transporting timber** for reduction of road deterioration during spring thaw

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Problems	Roadex resources available for adoption
2. Absence of design solutions to improve low volume road resistance to deformations	1. **The model** of mechanic behaviuor of road structure to set **optimal loads** on roads during spring thaw 2. **Design solutions** to stabilize and maintain roads on peats 3. **Methods of road treatment** aimed at reduction of road structure susceptibility to oversaturation

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Problems	Roadex resources available for adoption
3. Road drainage problems	**1. Classification of drainage problems** **2. Engineering recomendations** to eliminate poor drainage **3. Economic benefit assessment methodology** to maintain good road drainage within its life cycle **Project's conclusion: Restricted financing shall be first of all assigned to support drainage functions**

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Problems	Roadex resources available for adoption
4. Construction and maintenance of roads on peat	1. **Summarized experience** of project participant countries in solving bearing capacity problems of roads built on peat 2. **The technology** on tyre application as a road foundation in peat areas

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Problems	Roadex resources available for adoption
5. Uneveness of roads	**ROADEX model** that allows controlling of road condition on frost susceptible soils and forecasting of deterioration

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Problems	Roadex resources available for adoption
6. Inedaquate approach to assess necessary financing of road needs in the Northern periphery based on traffic volume	1. **The model of financing needs assessment** for low volume roads with other than traffic volume criteria of assessment 2. Review of low volume road maintenance practices in partner-countries **to develop management policies, road maintenance and financing normatives**

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Problems	Roadex resources available for adoption
7. Insufficient responsibility for decisions made in relation to financing of low volume road needs	Examples of interaction between road sector and executive power authorities to: •**Evaluate real needs in** road maintenance •Identifying **additional sources of road needs** financing

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Problems	Roadex resources available for adoption
8. Insufficient attention to keeping gravel roads performable	Progressing processes of ROADEX: 1. **Searching for answers to road question, ideas for road engineers** responsible for road functioning in complicated conditions and for **financial and political decision-makers** 2. **Information exchange** on new efficient methods 3. **Improving professionalism** of road and transport engineers

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Problems	Roadex resources available for adoption
9. Underevaluation of the importance of environmental	Publications that allow **promotion of best professional practices**, taking into account environmental issues when road works: 1. **Pocket book for the Northern road engineer** with environmental recommendations 2. **Handbook for road working teams** to execute road works without environmental damages

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Further steps

- Staring point of the barents Low Volume Road management project is a questionnaire of project partner representatives
- The questionnaire results are a basis for further detailed project actions plan

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