



**XXIVth World
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MANAGING ROAD ASSETS IN THE CONTEXT OF SUSTAINABLE DEVELOPMENT AND CLIMATE CHANGE ADAPTATION

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Managing Road Assets in the Context of Sustainable Development and Climate Change Adaptation

- **Quality of Roads and Sustainable Development**
- **Managing Assets and Sustainable Development**
- **Impact of Climate Changes upon Road Quality**
- **Road Research and Professional Training**



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NATIONAL REPORTS

AUSTRIA

- Pilot project to reuse the asphalt – technical regulations
- Waste management
- Cement concrete pavements
- Directions for research
- Climatic changes
- Preserving and developing human resources

CANADA-QUEBEC

- Importance of the road transport infrastructure in the global transportation system
- Rectifying plan for the road network
- Politics for collective transportation
- Pollution mitigation
- Climatic changes



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NATIONAL REPORTS

CUBA

- Priorities of road administrations
- Technical standardization
- Road inspection
- Preserving and rehabilitation of assets
- Sustainability

GERMANY

- Evolution of the road transportation volume
- Systematized maintenance
- Assessment of the roads technical condition
- Inspection of engineering structures
- Management systems: roads, bridges, annex buildings



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NATIONAL REPORTS

HUNGARY

- Financing the building and maintenance of roads
- National program for reconstruction
- Road management
- Climatic changes – road assets
- Practical measures in the field of ensuring pavement quality

MEXICO

- Sustainable management of assets
- Data collection – data bases
- Scenarios for allocation of budgets (HDM)
- Applications



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NATIONAL REPORTS

PORTUGAL

- Construction of the highway network
- Financing solutions: concession, PPP
- Financial and social sustainability of infrastructure programs
- Highway operation – toll collection

ROMANIA

- Management of road network – data bases
- Accelerated road testing
- Geotechnics
- Unpaved roads



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NATIONAL REPORTS

SLOVAKIA

- Climatic changes: scenarios, punctual studies, recommendations for design and construction
- Cement concrete pavements
- Protection of embankments, slopes

SPAIN

- Types of managements: concessions, users' needs
- Sustainability in the management of the road network: legislation, wastes, energetic efficiency, recycling, access limitation, low temperature technologies



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NATIONAL REPORTS

UNITED KINGDOM

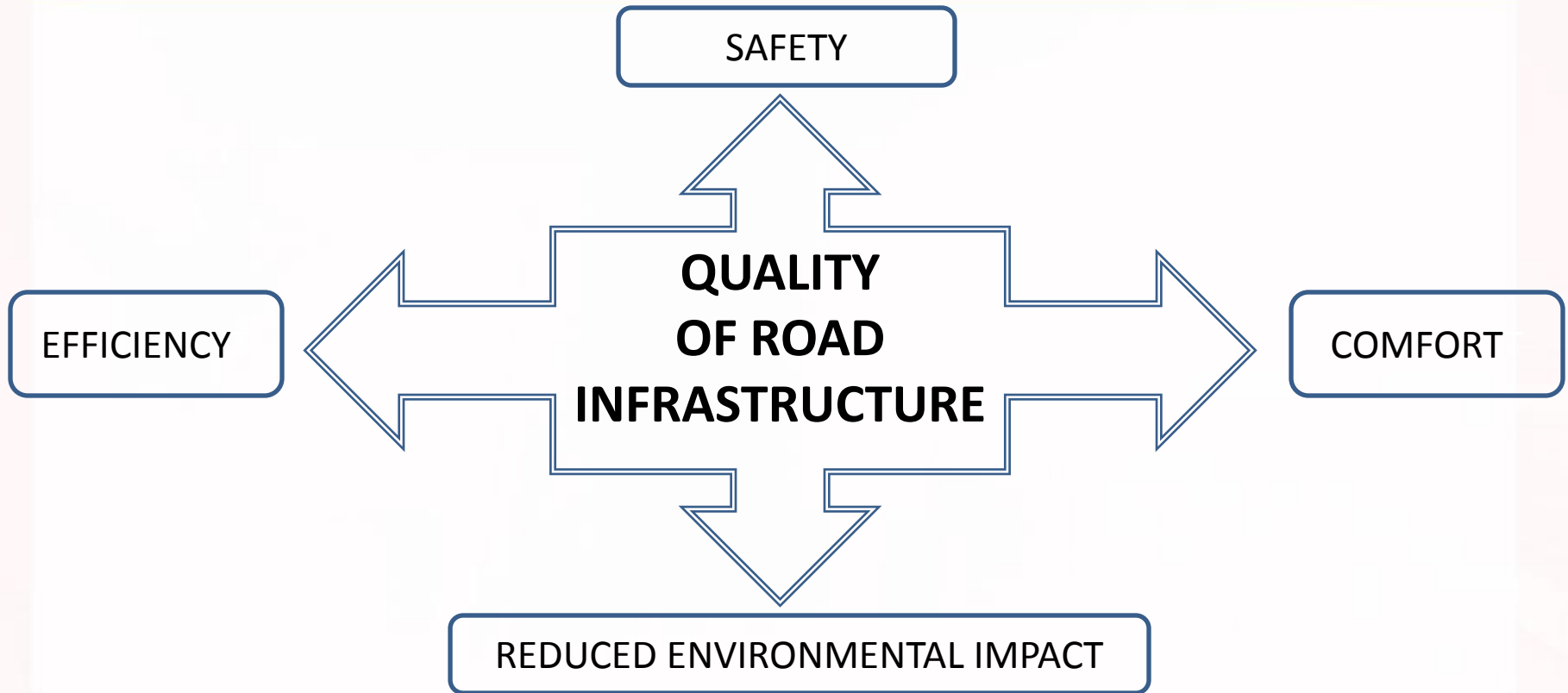
- Particularities of sustainable management of assets in England, Scotland, Wales, Northern Ireland
- Global, local transportation plans
- Environmental plans
- Updating of plans
- Innovative materials and technologies
- Legal aspects
- Professional training and research

UNITED STATES OF AMERICA

- Complex report
- Assessment of sustainability in highway design
- Abandoning a road
- Climatic changes
- Research



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QUALITY OF ROADS AND SUSTAINABLE DEVELOPMENT

- Quality of road network structure
 - Development Master plans
 - Modernization of road networks
- Technical solutions
 - Technical regulations
 - Pollution mitigation
 - Recycling of materials
- Assessment of project sustainability
- Innovative technologies
- Energy savings
- Allocation of resources
 - Investments
 - Maintenance: assessment of road condition



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MANAGING ASSETS AND SUSTAINABLE DEVELOPMENT

•DIRECTIONS OF ACTION

- Preserving and improving existing roads – valorization of assets
- Building new roads
- Maintenance and operation of road networks

•MANAGEMENT SYSTEMS FOR ROAD INFRASTRUCTURES

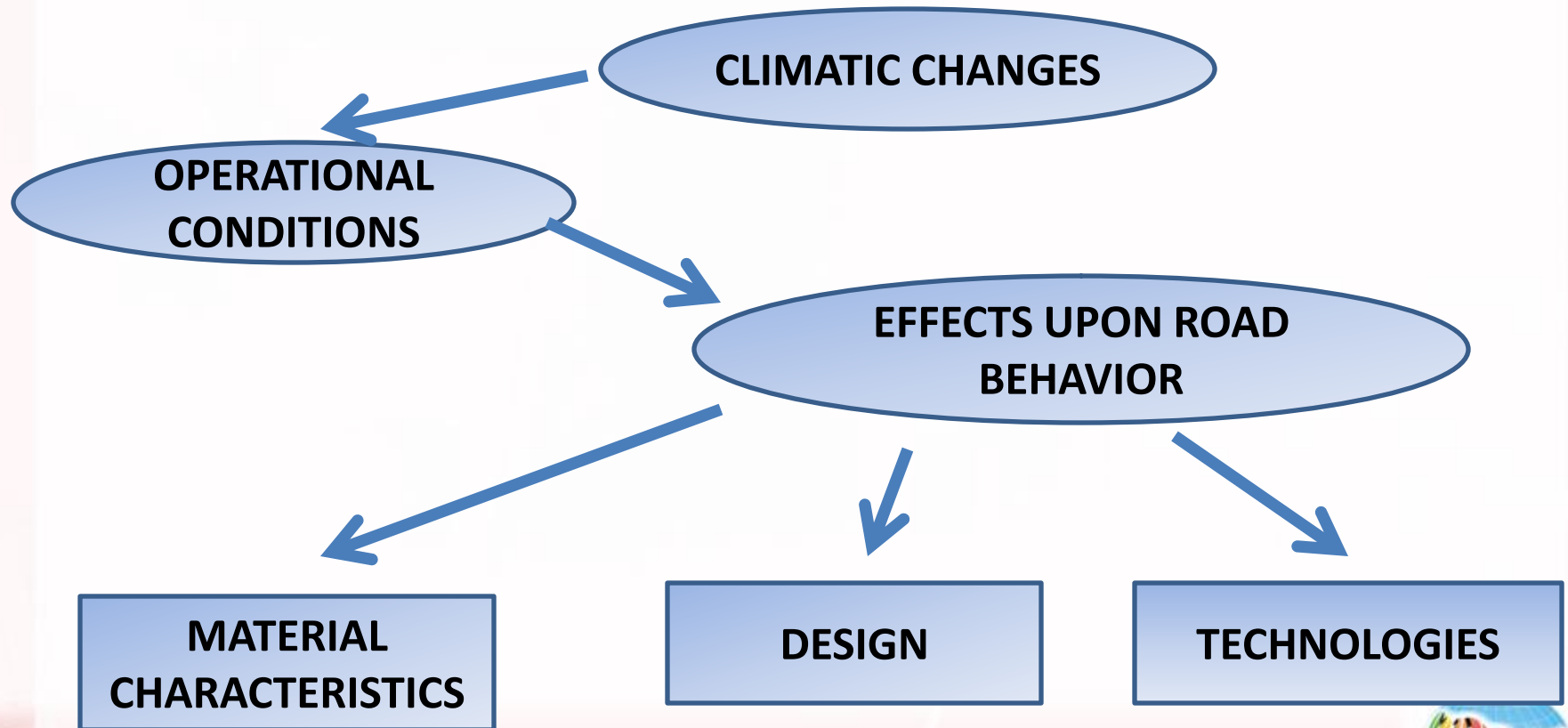
- Management of roads
- Management of bridges
- Management of annex constructions

•FINANCING THE DEVELOPMENT OF ROAD INFRASTRUCTURES

- Resources: public, private
- Optimization of resources
- Planning the resources



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ROAD RESEARCH AND PROFESSIONAL TRAINING

- **PROFESSIONAL TRAINING**

- targets
- training levels
- national training programs
- international training programs
- continuous professional training

- **ROAD RESEARCH**

- fundamental and applicative research
- increase of road quality: lanes, meeting the users' needs
- results applied in: previous studies, design, execution, maintenance, operation
- national coordination: partners
- international programs
- resources



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PROVISIONAL CONCLUSIONS

1. Quality improvement: main target of governments to meet the users' requirements in the context of sustainable development.
2. Management of assets – basic concern of road administrations, with impact upon rational resource allocation.
3. Assessment of the level of necessary budgets: optimal maintenance, balanced repartition on infrastructure categories.
4. Sustainable road structures, adapted to climatic changes, with longer lifespan.
5. Efficient management of existing bridges.
6. Adaptation of design, building, maintenance and operation of bridges to climatic changes.
7. Earthworks and unpaved roads.
8. Consumption of energy and quality of roads – regenerating energy.



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THANK YOU!

