Rural Transport Research Needs: An International (mainly African) Perspective

Low Volume Roads Symposium
Cairns, Queensland, Australia
25 - 27 November 2013
Introduction

• Perspective
• Research v Knowledge Management
  – Holistic approach
• Sustainability of Research
• Institutional Needs
  – Coordination of and accessibility to knowledge sources
• Capacity Needs
• Technical Needs
  – Consistency of information and knowledge
• Value of Research
• Conclusions
Supporting Infrastructure

IT

Innovation
Supporting Infrastructure

Financial Control

Have a good time
Framework for Managing Research & Knowledge Transfer

Knowledge Pool

Problem Identification

Research Project(s)

Outcomes & Findings

Knowledge Transfer

Implementation

Impact Assessment

All Stakeholders

Government & Industry

Research Partners
Africa Research & Knowledge

- Africa-specific knowledge fragmented
- Consolidation of international best-practice
- Sources of Knowledge and Information
  - TRL Overseas Road Notes
  - S Africa Manuals & Specs
  - SADC LVR Guideline
  - SEACAP
  - National knowledge sources
  - Donors
  - Australian Standards & Specs
  - ASTM/AASHTO/BS
- Variability of information
- AFCAP role
Knowledge Needs

- Improved decision making
- Reduced risk
  - Policy Development
  - Planning strategies
  - Material Selection
  - Design Options
  - Construction & Maintenance
  - Transport Service Provision
  - Safety & Environment
- Based on appropriate or customised African research and knowledge
- **Not** inappropriate, inherited International Practice
- Ownership critical
Knowledge Management

- Priority for Developing Countries
- Improved access to information
- Coordinated structures and links required
- Web based
- National Research Centres’ responsibilities for populating and updating of information databases
- Personal information sharing
- AFCAP Community of Practice
  - Linkedin
Framework for Sustainability

• Countries have to take responsibility for research
• Driven through National Research/Knowledge Centre
• Partnerships between national governments and research partners such as AFCAP
• Projects managed by Research centres
• Mentorship & Capacity Building by experienced individuals and organisations
• Regional Coordinating structure
Development Approach

Regional Coordination

Knowledge Generation

Knowledge Transfer

National Outcomes

Regional Coordinator

Regional Research Hub

National Research Centre

Knowledge Pool for Sub-Saharan Africa

Links to International knowledge sources

Links to Regional knowledge sources (eg Libraries, Universities & Industry bodies)

Reports, Manuals & Guidelines

Papers for Conferences & Journals

Newsletters

Workshops, Seminars & Conferences

Updated Academic curricula

Web site updates

Improved Standards & Specification

Improved decision making and management

Improved transport services

Improved access for rural areas

Improved decision making and management
Capacity Building

- Research & Knowledge Management capacity in Africa is limited
  - Some better than others
  - CSIR in S Africa exception
- Image of research
- Soils & Materials Laboratories
- Regional hubs with specialist equipment
- Role of international research organisations
- Technical Assistance & Mentorship
- Linkage to Tertiary Institutions
Technical Priorities - Infrastructure

- Materials for LVRs
  - Alternative waterproofing agent for seals
  - Alternative surfacings
  - Non-standard materials
  - Demonstration sections
  - Materials databases
- Designs for Low Volume Roads
  - DCP method
- Performance models
  - RUCs, HDM4, RED etc
  - Life-cycle costing
  - Maintenance strategies
- Contractor Performance & Productivity rates
Technical Priorities - Other

- **Transport Services**
  - Cost-benefit models
  - Social impacts
  - Access indicators
  - Planning of services & Regulation
  - Technical compliance of vehicles
  - Overload control
  - Conflict areas

- **Safety on LVRs**
  - Improved data collection and statistics
  - Community Involvement

- **Climate Change**
  - Impact of changing weather patterns

- **Other environmental issues**
  - Dust
Value-for-money

• Research provides good returns – already quantified
  – $1 invested = $3 return
• Research partners have to justify investment
• Competition for scarce resource
• Rigorous evaluation process
• Better performance measures needed
• Joint funding
• Coordinated programmes between donors
Conclusions

- National government must take responsibility for research and knowledge management
- Mentorship and capacity building will become critical
- Role of established research organisations and experienced individuals critical
- Strategic move by AFCAP funding to support the development of sustainable national research centres
- Technical and regional priorities established by a coordinated institutional structure
- Value-for-money
Thank you