



Interdesign 2005
Sustainable Rural Transport
Technology for developing countries
3 –1 6 April 2005

IMPORTANT NOTES ON THE INTERDESIGN ON SUSTAINABLE RURAL DEVELOPMENT

1. THE WORKSHOP STRUCTURE

The Interdesign focuses on 4 different areas of rural transport technology – Animal Drawn Carts, Bicycles and Tricycles, Alternative Modes of Transport and Communication. A group leader will lead the group of local and international designers and design students working on each focus area. An extra group of students busy with Master studies in Integral Design at the Stuttgart Academy of Visual Arts and Design, will work on the area focussing on Alternative Modes of Transport, lead by their teacher, Prof George Teodorescu.

Bart Vervceken, head of the Industrial Design department at the Cape Peninsula University of Technology, is co-ordinating and directing the complete design process during the workshop.

The following group leaders will guide the different groups:

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| Animal Drawn Carts | - | Chris Bradnum, lecturer at the Industrial Design School of the University of Johannesburg |
| Bicycles and Tricycles | - | Roelf Mulder, MD of DDDXYZ, an industrial design company in Cape Town |
| Alternative Modes of Transport | - | Prof M P Ranjan, professor in industrial design at the National Institute of Design (NID), Ahmedabad, India |
| Communication | - | Ria van Zyl, lecturer at the Department of Visual Arts, Information Design division, University of Pretoria |
| Alternative Modes of Transport (German Group) | - | Prof George Teodorescu, professor at the Academy of Visual Arts and Design, Stuttgart, Germany |

A table showing the names of the group leaders and participants is included in this document.

2. STRATEGIC GOAL AND OBJECTIVES WITH THE INTERDESIGN

As a **strategic goal**, the Design Institute wants to make use of the outcomes of the Interdesign to illustrate that good design can address and solve problems facing developing communities.

The following **specific project objectives** were formulated:

- Feasible concepts for products should be developed with real possibility of development within the local context and environment. (*Local manufacturing and materials experts will be involved to advise on this aspect*)
- Some of the concepts should be developed into real products, real businesses, and real job opportunities. (*This is an important aspect of the project even though it goes beyond the two weeks of Interdesign. Because of the involvement of the local communities and the expectations created by this involvement, the outcomes of the Interdesign must give something back in a way that will be sustainable and beneficial for rural communities in general. It also adds important meaning and direction to the project. Negotiations has already started to put structures in place that will ensure this outcome.*)
- To involve ICSID and ICOGRADA members in multidisciplinary outcomes in an environment where illiteracy and multilingualism is a factor. (*The Communication group will work with the local communities and schools to establish communication strategies and methodologies. The group will also be working with the other groups to identify crucial transport related information that should be communicated*)
- To align the project with the objectives of NEPAD - www.nepad.org. (*NEPAD was established to address the current challenges facing the African continent. Issues such as the escalating poverty levels, underdevelopment and the continued marginalisation of Africa needed a new radical intervention, spearheaded by African leaders, to develop a new Vision that would guarantee Africa's Renewal.*)

NEPAD's primary objectives are:

- a) To eradicate poverty;
- b) To place African countries, both individually and collectively, on a path of sustainable growth and development;
- c) To halt the marginalisation of Africa in the globalisation process and enhance its full and beneficial integration into the global economy;
- d) To accelerate the empowerment of women.)

3. BACKGROUND ON RURAL TRANSPORT IN SOUTH AFRICA

(Compiled from several documents prepared by transport experts in SA)

In South Africa, as is the case in other developing and emerging economies, the transportation burden faced by developing rural, peri-urban and urban communities on a daily basis is real and substantial. Mobility and access to basic social services and the economic mainstream come at a high social and economic cost.

The national statistics highlights the plight of developing communities, as well as the significant potential for low-cost mobility solutions. Whereas 50% of the population of SA is rural, the rural area contains 72% of those members of the population that are poor. More that 60 % of rural households in South Africa say that public transport is not available to them or too far away to access. Of the almost 16 million learners who travel to school every day, 76% (or 12 million) walk. About 550 000 children spend more than two hours a day walking to and from schools.

Given the above statistics, the delivery of rural transport services can be a significant catalyst for sustainable economic development, improved social access and poverty alleviation in South Africa's rural areas. The Dept of Transport has developed a national strategy regarding rural transport to guide the delivery of rural transport infrastructure and services.

3.1 National Rural Transport Strategy

The National Rural Transport Strategy document is available on the website www.interdesign2005.org.za. Only crucial issues are mentioned here.

3.1.1 Definition of "rural transport" as stated in the National Rural Transport Strategy document

“...The movement of persons and goods for any conceivable purpose [including collection of water or firewood], by any conceivable means [including walking and head loading] on various types of infrastructure [including unproclaimed roads, tracks and footpaths].”

This implies that the mode of travel does not necessarily need to be motorised or conventional, but should be **suitable, cost-effective and environmentally sustainable**. Also a **wide variety of mode choices and trip purposes** has to be considered during rural transport planning and service delivery.

3.1.2 Main challenges listed in the National Rural Transport Strategy for SA that could be meaningful for the Interdesign

To overcome the **“big jump” in access opportunities** from the village to the nearest town centre (from here public transport might be available).

To **increase and adjust the allocation of rural transport investment** – inclusive of scholar transport and various other sector-specific transport services to address special needs (e.g. the needs of HIV-AIDS patients), non-motorised transport infrastructure and services, as well as rural freight and postal services, rural logistical services and the full range of ICT-based services

To **regulate** rural transport operations and safety

Aligning rural transport and **interlinked functional areas**

To address **capacity building and monitoring issues**, especially to chart and maintain a sustainable development agenda.

3.1.3 Rural Transport Services include

Village level and intra-farm transportation

Rural passenger and small volume freight transport services to and from deep rural areas

Passenger transport services along main connector routes

Special needs transportation services – elderly, handicapped, trauma & non-emergency patients, learners and tourists

Bulk freight and multi purpose transportation

3.1.4 Non-Motorised Transport Modes (NMT) include

Walking with/without head load

Donkeys / Horses

Wheelbarrows

Handcarts

Animal-drawn vehicles

Bicycles

Bicycle trailers

Tricycles

3.1.5 Intermediate Means of Transport (IMT) include

Wheelbarrows

Handcarts

Pack donkeys

Sledges

Animal-drawn carts

Bicycles & bicycle trailers

Motorised vehicles like tractor-trailers and trucks

4. IMPORTANT ISSUES TO KEEP IN MIND DURING THE INTERDESIGN

During the Interdesign the rural transport situation should be considered always keeping the following aspects in mind:

4.1 The Wider Context –

Social aspects (individual and community problems, needs, desires, aspirations, expectations, etc)
Transport management aspects (standards, regulatory issues, licensing, safety, etc)
Sustainability (enhanced quality of life, possibilities for business opportunities and job creation – maintenance and repairs for example, indigenous knowledge, etc)
Environmental aspects (animal care, local materials, indigenous knowledge, recycling, etc.)

4.2 Important Issues -

Gender aspects – women are often the end user /driver of the transport device
Commuters – school children, pensioners, domestic workers, women as specific target group, the disabled, trauma & non-emergency patients, tourists, etc
Agricultural needs – inter-farm transport, getting produce to and from the market areas
Access to rural transport / Distances to rural transport service points
Cost – cost of transport in relation to total income, quality of delivery
Kind of Services provided / Means of transport – keeping local environment in mind
Quality of service provided – in relation to cost, social needs, safety, etc
Physical infrastructure
Travelling Time Factor
Poverty alleviation
Job creation
Possible business opportunities
Local Economic Development (LED), poverty alleviation and social service delivery programmes - tapping into existing rural transport projects with existing project plans, as well as other existing projects
Building design capacity on different levels – knowledge based as well skills based
Aspirations of communities – the community might look upon non-motorised rural transport devices as inferior and going ‘backwards’.
Expectations created by the Interdesign involvement – it might be necessary to plan for generating some short-term solutions as well
Tourism projects - During his budget speech in February, Trevor Manuel, minister of Finance, announced that the 2010 World Cup projects will receive early priority and that an additional R3-billion would be allocated for transport infrastructure and services.

4.3 Project Outcomes Wish list -

Business opportunities for rural communities
Job creation within rural communities
Feasible concepts for products with product development plans in place
Prototype(s) and final commercialised products
Showcase of the Interdesign project outcomes and process – in physical and digital format
Video / digital Documentary
Project Report on design outcomes – *a documentation of the project and its outcomes*
Project Report on benefits for the country – *to be used as a strategic tool for design promotion*

INTERDESIGN 2005 - SUSTAINABLE RURAL TRANSPORT – STRUCTURE *(as at 7 March 2005)*

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|-----------------------|---|--|---|---|--|
| Overall leader | Bart Verveckken | | | | |
| FOCUS AREA | ANIMAL DRAWN CARTS | BICYCLES AND TRICYCLES | ALTERNATIVE MODES OF TRANSPORT | COMMUNICATION PROJECT | ALTERNATIVE MODES OF TRANSPORT (Germany) |
| Group Leaders | Mr Chris Bradnum (SA) | Mr Roelf Mulder (SA) | Prof M P Ranjan (India) | Ms Ria van Zyl (SA) | Prof George Teodorescu |
| Participants | Mike Nieuwoudt (SA) Dakie Kaikai (SA) Koos Kaekae (SA) Benjamin Mabilu (SA) Paul Kaelo (SA) William Bodumele (SA) Joost Alferink (Neth) David Christer (SA/UK) Niki Dun (Canada) Mugendi M'Rithaa (SA/Kenya) Samuel Khumomotse (Botswana) | Eduardo Télles Rojas (Mexico) Angus Campbell (SA) Domenic Giuntoli (USA) William Morafo (SA) Qassim Saad (NZ) Simon Kragtwijk (Neth) Pierre-Yves Panis (Fr) | Michael Wolf (SA/Germany) Sue Fairburn (Canada) Etienne Rijkheer (SA) Yaniv Harussi (Israel) Shaleh Mujir (Malaysia) Tasos Calantzis (SA) | Mario Gagliardi (Austria) Ukpong E Ukpong(Nig) Nkosikhona Bonga-mahlubi (SA) Hetiie du Plessis (SA) Retha Claasen-Veldsman (SA) Alexander Kazarin (Russia) Anastasia Vaouline (SA/Russia) | Thomas Trapp Zhihong Chen Mathias Huntscha Klaus Kaupp Byoungsam Lee Mario Poess Linn Rodesjö Helen Wegener Martin Werner Minsun Kang |
| Students | Mark Völger (SA) Marius Botha (SA) Adriaan Hugo (SA) George Gower (SA) Berno Wellmann (SA) | Martin Boshoff (SA) Giovanni Toldo (SA) John Vermeulen (SA) Alewyn Botha (SA) Rael Futerman (SA) Fissl Dietmar (Germany) Bayram Okan Yapici (Germany) Nicholas Monday (USA) | De Wet Groenewald (SA) NicholasCollins (SA) Fritz Rauch (SA) Francoin Visser (SA) Daryn Molenaar (SA) Junko Hosokawa(USA) Jason Zawitkowski (USA) | Nomfundo Zibi (SA) Harriet Kasper (Germany) | |
| Totals | Total = 17 | Total = 16 | Total = 13 | Total = 10 | Total = 11 |
| | 12 designers; 5 students (12 x SA; 5 x International) | 8 designers; 8 students (8 x SA; 8 x International) | 7 designers; 7 students (7 x SA; 7 x International) | 8 designers; 2 students (5 x SA; 4 x International) | 1 designer; 10 students (11 International) |