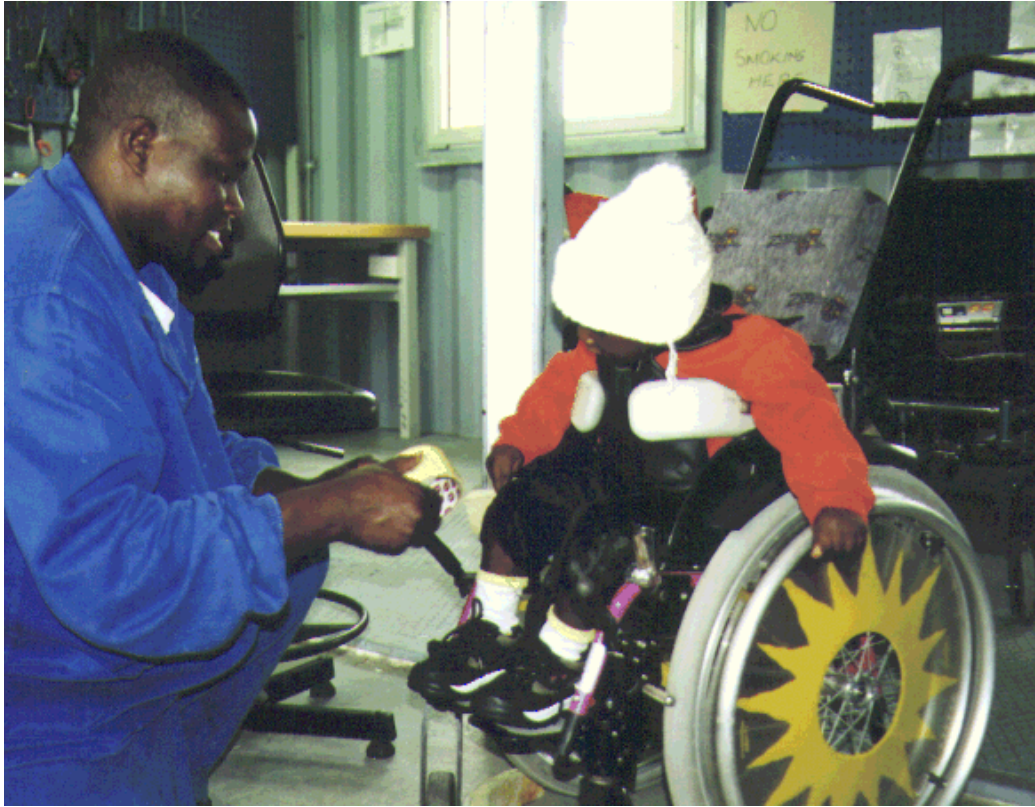


LOREWO

- a concept for empowerment, participation,
and rehabilitation for people with disabilities



Objectives

The LOREWO Concept is a flexible concept designed to assist in the implementation of the United Nations “Standard Rules for Equalisation of Opportunities for People with Disabilities” and to meet the needs in countries with limited rehabilitation services for people with disabilities. The LOREWO Concept is based on flexible modules including capacity building, establishment of a rehabilitation workshop, supply and provision of assistive devices and if possible manufacturing of assistive devices, and co-operation with existing health care services and local community based rehabilitation programmes.

The overall objectives are:

- **Empower people with disabilities**
- **Increase the opportunities for people with disabilities to participate in the community**
- **Facilitate for self-management, vocational training and education for people with disabilities**
- **Create employment for people with disabilities**

The specific objectives are:

- **Establish a Local Rehabilitation Workshop infrastructure**
- **Facilitate for local manufacturing and availability of assistive devices**
- **Capacity building and training of local personnel**
- **Establish a Service Delivery System for assistive devices and rehabilitation services in co-operation with existing national and local partners**
- **Employ people with disabilities**



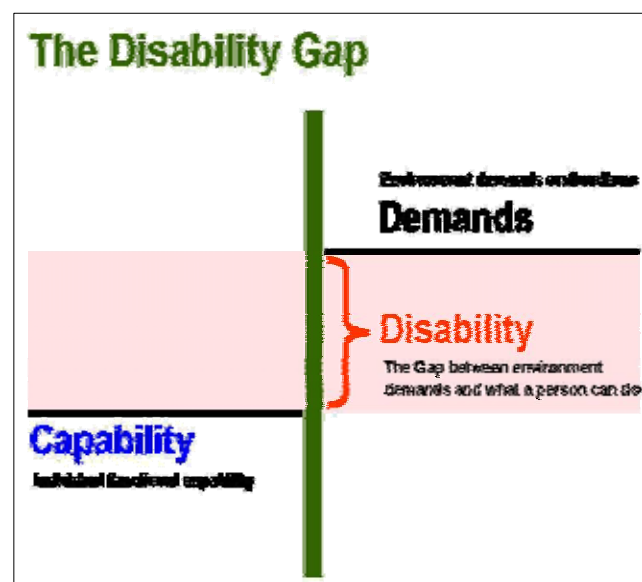
Environmental demands in rural areas in northern Namibia are different from cities in western Europe.

Philosophy

In many countries disabilities or various handicaps are associated with “diseases”, but disability is **not** a “disease”. Our philosophy is based on a functional and problem oriented definition of handicap.

- **Handicap refers to the gap between what the person can do and what the environment demands and**
- **assistive devices can be defined as any device or ergonomic solution reducing this gap**

This is important in order to understand the situation of many disabled persons, and be able to change the attitude often reflected in the society towards persons with disabilities. The project will continuously promote the changing of attitudes towards disability, and seek to provide knowledge about assistive technology among the local representatives and the public.



Background

World Health Organization (WHO) has estimated that 7 –10% of the global population has a disability, with social, educational and/or economic consequences. This means that there are around 500 million people with special needs in terms of health care, education, rehabilitation and social support to be given equal opportunities for a productive life. Furthermore, there is a clear link between poverty and disability and the number of people with disabilities is continuously increasing due to poverty, wars, conflicts, accidents and the general ageing in the populations.

In many low income countries, there is a great need for rehabilitation services and assistive devices for people with disabilities, but weak economies and infrastructures seriously hamper efforts made by these countries to concur with the ideas of the United Nations (UN) Resolution: "The Standard Rules for Equalisation of Opportunities for People with Disabilities". The UN Resolution is an important document with potentially strong impact on the future for people with disabilities, and it sets clear requirements to efforts made by states to promote equalisation:

- States should ensure the development and supply of support services, including assistive devices for people with disabilities, to assist them to increase their level of independence in their daily life and to exercise their rights.
- States should support the development, production, distribution and servicing of assistive devices and equipment and the dissemination of knowledge about them.

Assistive devices and services needed for an independent life, will release the human resources of people with disabilities, to the benefit not only for the persons themselves, but for the whole society.

Description of concept

The LOREWO Concept is a flexible concept designed to be adapted to suit the local situations, utilising existing local resources in each country for supporting people with disabilities.

The LOREWO Concept includes the following five main components:

- **initial study and planning including mapping of local resources, ensure local anchoring, assessment of local needs and local adaptations of the concept**
- **capacity building and training of local personnel**
- **establish a Local Rehabilitation Workshop infrastructure**
- **ensure availability of assistive devices suited to local technologies and economical conditions**
- **establish organisational infrastructures for a Service Delivery System providing assistive devices, rehabilitation services and counselling services**

The LOREWO Concept providing assistive devices and rehabilitation services is a part of the total rehabilitation process and need to be an integrated part of the rehabilitation policy in each country. The introduction of the LOREWO Concept is an important contribution to the continuous activity of increasing the level of independence for people with disabilities and to ensure their active participation in the society.



Lorewo Team members and Norwegian trainers in Oshakati, Namibia, lining up in front of the workshop building.

Initial study and planning

Initial study and planning including mapping of local resources, ensure local anchoring and assessment of local needs. The project group will work in close collaboration with Governments, Non Governmental Organisations (NGOs), organisations of people with disabilities, local health care personnel, technical personnel and other important contacts. This will ensure that the services are adapted to local conditions, utilising local resources in each country. The initial establishment of this co-operation is a major part of the initial study and planning.

Furthermore selection of LOREWO staff members, preferable persons with disabilities, should be initiated during the initial study.

When introducing a system for structured service delivery of assistive devices it is crucial to:

- **facilitate local availability of assistive devices**
- **provide capacity building and develop local competence within the field of rehabilitation technology**
- **support an infrastructure enabling a Service Delivery Process**
- **establish financial schemes and economical resources**

These topics need to be addressed and discussed in the initial study.

Rehabilitation Workshops infrastructure

The objective is to establish a Local Rehabilitation Workshop (LOREWO), and the proper local infrastructure. The Rehabilitation Workshop can be established in an existing building or in a new building and will be the base for the provision of assistive devices, the services, the training of local personnel and the launching of local awareness.

The LOREWO need to be equipped with the appropriate tools, machines and devices in order to perform the selected services. Detailed lists will be worked out according to the local needs, based on existing lists.

The main services provided are:

- **repair and maintenance of assistive devices**
- **adjustments and adaptations of assistive devices**
- **local assembly of selected assistive devices**
- **local manufacturing of selected assistive devices**
- **provision of assistive devices**

The locations of the Rehabilitation Workshop need to be linked to existing health care services in order to facilitate for local availability of the services. The workshop can be located at the site of a hospital, a centre for user organisations, a rehabilitation centre, a NGO and other appropriate institutions.



Outside Lorewo workshop in Bulawayo, Zimbabwe, showing the range of wheelchairs available.

Availability of assistive devices

The availability of assistive devices are often limited in developing countries and the workshop need to facilitate for local availability of assistive devices (wheelchairs, walking aids, hearing aids, visual aids etc) suited to varying technologies and economical conditions. The workshop will also make spare parts available for repair and maintenance.

Supply of assistive devices can be ensured through:

- **donations of new and second hand assistive devices**
- **assembly of assistive devices**
- **local manufacturing of assistive devices**
- **purchasing of assistive devices**
- **a combination of donations, local assembly, local manufacturing and purchasing**

Capacity building and training of local personnel

Capacity building is of major importance in order to encourage people with disabilities to participate in the society.

The capacity building activity will concentrate on:

- **raising of awareness on disability issues**
- **providing knowledge about assistive devices and rehabilitation services**
- **training and developing human resources**

The target group will be the LOREWO staff, organisations of disabled people/NGOs, professionals at rehabilitation institutions, professionals in the ministries and others.

Raising of awareness about disability issues and the use of assistive devices will be implemented through arranging seminars, spreading information and demonstrations. These activities will provide disabled people with information about their rights and their possibilities to participate in the society. In addition it will provide the society with information about the positive effects of integrating disabled people in the society and how the use of assistive devices can increasing the opportunities for people with disabilities.

Training seminars about assistive devices, rehabilitation services and the Service Delivery System will be organised for professionals in the ministries, professionals in the health care sector, at rehabilitation centres, user organisations and others.

The training of the LOREWO staff is a combination of intensive on-the-job training and organised training seminars together with collaborating partners. The training is held under the supervision of an occupational therapist, a technician and a professional responsible for introducing the service delivery system.

Special exchange programmes can also be designed in order to train the LOREWO staff and other professionals in the field from both governmental and non-governmental institutions.

Breakdown of training activities for LOREWO staff and other collaborating partners:

1. **Basic training in technical know-how and skills as**

- Mounting, repair, service and maintenance of assistive devices (wheelchairs, walking aids, crutches)
- Adapting the assistive devices to the individual user
- Production of assistive devices with locally available materials
- Recondition of second hand assistive devices
- Maintenance and cleaning of equipment and the premises

2. **Basic training in ergonomics including**

- Knowledge about some main diagnosis
- Ergonomic correct design of wheelchairs, walking aids and crutches
- The process of adapting and fitting the assistive devices to the individual user
- Seating and sitting positioning
- Manoeuvring techniques

3. **Basic training in the principle of service provision** of assistive devices including

- The Service Delivery process:
 - Identify users
 - Analyse the users needs
 - Identify potential solutions
 - Perform individual fitting and installation
 - Training of the user and their families/assistants
 - Follow up of the user and their families
 - Perform service and maintenance of assistive devices
- Basic leadership and management
- Systematic registration of assistive devices used by individual users and assistive devices on stock

The training will emphasis the principle of learning by doing and hands on experiences. The local personnel will be trained accordingly to the principle of adapting the assistive devices to the persons with disabilities, not adapting the people with disabilities to the assistive devices. It is important to stimulate and to encourage the local personnel to be creative using local materials and take into account the local cultural aspects.

Organise a Service Delivery System providing assistive devices and rehabilitation services

When introducing a system for structured service delivery of assistive devices it is crucial to:

- **Facilitate local availability of assistive devices**
- **Establish local competence within the field of rehabilitation technology**
- **Support an infrastructure enabling a Service Delivery Process**
- **Establish financial schemes and economical resources**

The project group will work in close collaboration with Governments, Non Governmental Organisations (NGOs), organisations of people with disabilities, local healthcare personnel, technical personnel and other important contacts. This will ensure that the services are adapted to local conditions, utilising local resources in each country.

Experiences from Scandinavia, Europe and developing countries have shown that provision of assistive devices to individual users should, as far as possible, be provided in the local environment of the user.

The reasons for this are:

- **assistive devices must solve problems in a particular environment**
- **must fit in with this particular environment**
- **use is dependent on local attitudes**
- **use is dependent on local follow up**

Introducing a Service Delivery System also includes capacity building and counselling services. Professionals in the health care system (occupational therapists, physiotherapists, rehab workers, social workers, nurses, doctors),

technicians and people with disabilities will be trained in the Service Delivery Process and in adaptation use of assistive devices. The counselling services will include raising awareness about disability issues and use of assistive devices to persons with disabilities, professionals in the health care system and relevant professionals in the ministries.

The content and the approach of the Service Delivery System will vary from country to country and from region to region. But the following structured Service Delivery Process will be useful in all countries and regions:

1. **Identifying potential users**
2. **Identifying user needs**
3. **Identifying potential assistive technology solutions**
4. **Individual fitting of assistive devices to the user**
5. **Training of users and their families/assistants**
6. **Follow-up of users and their families/assistants**
7. **Service and maintenance**

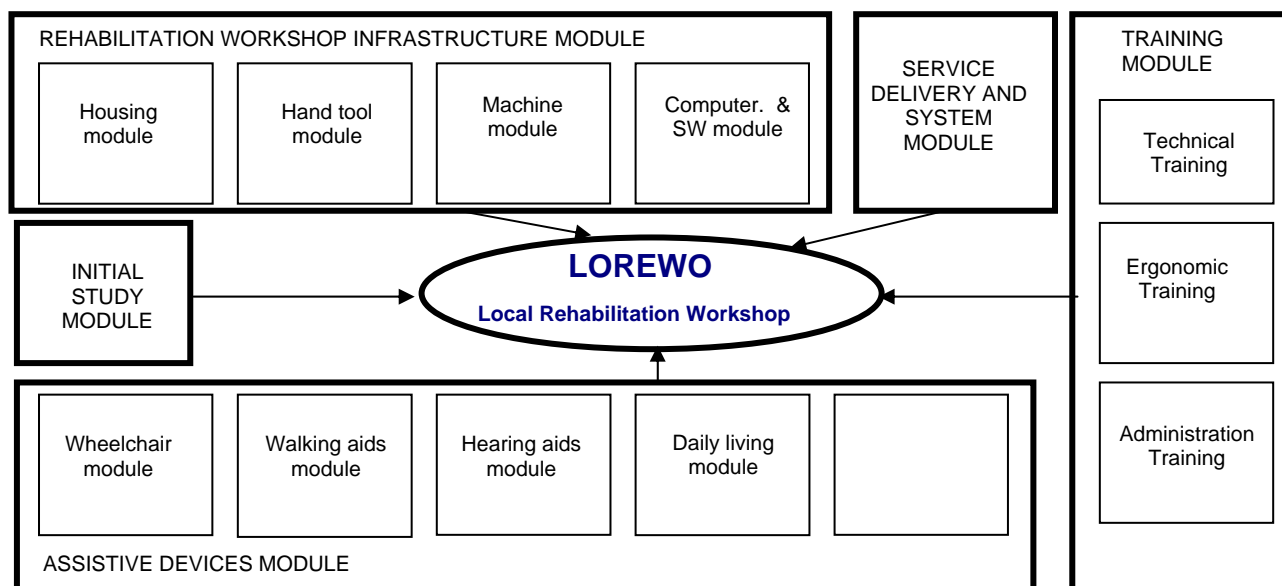
The Service Delivery System will develop step-by-step starting with the provision of the most needed assistive devices. It is usually recommended to start with assistive devices for mobility difficulties (wheelchairs, walking aids, crutches etc.).

A major problem for many countries is to establish the financial schemes and the economical resources in order to give disabled people with low (or no) income a chance to receive assistive devices. The project will look for funding, donors and other possible financial support. Furthermore it is suggested that the disabled people themselves have to make some kind of a contribution.



Lorewo Team members in Bulawayo, Zimbabwe, adapting a tri-cycle to a customer.

The LOREWO Concept



The LOREWO Concept is based on flexible modules.

LOREWO project

Since 1999 there have been established two LOREWOS:

- Oshakati in northern Namibia
- Bulawayo in Zimbabwe

Funding

- The initiation project (1999-2000) was funded by UNDP/UNOPS.
- The continuation project (2001-2007) is funded by NORAD/Atlas Alliance.

Project manager

- SINTEF Health Research, Norway

Collaborating partners

Norway

- National Insurance Administration- RTV
- Assistive Technology Centres in Telemark, Sør-Trøndelag and Nord-Trøndelag
- Norwegian Peoples Aid

Zimbabwe

- National Council of Disabled Persons in Zimbabwe, NCDPZ
- Southern Africa Federation of the Disabled - SAFOD
- National Social Security Authority- NSSA
- King George VI Hospital in Bulawayo
- Ministry of Health and Child Welfare

Namibia

- Oshakati State Hospital
- Ministry of Health and Social Services
- Ministry of Lands, Resettlement and Rehabilitation
- National Federation of People with Disabilities in Namibia, NFPDN



Lorewo Team members in Bulawayo, Zimbabwe, producing cushions for wheelchairs.

SINTEF Health research

SINTEF Health Research, with about 140 employees, is one of the major health research institutions in Norway.

Our strength is found both in our experience and extensive knowledge within the fields of health, health services and research methodology. Our ability to analyse and solve problems holistically is also among our fortes. We apply our strengths to the goals of better health and improved quality of life for all.

SINTEF Health Research is concentrated in four strategic areas:

- Medical technology
- Health services research
- Consultancy services and the management of data-registers
- Preventive health care.

Living condition and Service delivery

The department has conducted research and consultancies within the rehabilitation and disability fields for more than 25 years. Today, the scope of research has been broadened to cover health service research in general. Current projects cover rehabilitation studies, evaluations, studies of user participation, living conditions among disabled people, sexual abuse of disabled, studies of various aspects of sick-leave, analysis of health care financing etc.

Major customers are The Ministry of Health and Social Affairs, the Norwegian research council, the National Insurance Administration, Norwegian municipalities, the Norwegian Federation of Employers, the UN, NORAD, Save the Children, organisations for the disabled and industry.

Disability and assistive technology

SINTEF Health research has been the central responsible agency for developing a structured Service Delivery System in Norway, including a system of 19 Technical Aids Centres. Much effort during the last 20 years has been devoted to developing a basic framework, and a basic analytical platform for assistive technology and its role within rehabilitation. This approach has proven to be successful in reaching end-users, and in facilitating market developments in the Scandinavian countries. Other projects deal with innovation and development in co-operation with companies producing technical aids for disabled people. Our staff have extensive knowledge of ergonomic solutions for the disabled as well as technical aid products. Our department is running an Accredited test laboratory for walking aids.

Projects in low income countries

Our expertise built up over the last twenty years has taken us further afield, and we are heavily involved in various projects in Africa. Current activity covers:

- Studies of living conditions among disabled in Southern Africa (Namibia, Zimbabwe, Malawi and South-Africa)
- Establishment of workshops for production and service of technical devices for disabled people (Namibia and Zimbabwe)
- Development of a service delivery system for technical devices for disabled people and including counselling services (Namibia and Zimbabwe)
- Health promotion study (Senegal)
- Evaluation of CBR-programmes in Palestine and Eritrea
- Evaluation of capacity building programmes in Namibia

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