Beneficial Designs

Designing beyond the norm to meet the needs of all people.

Rehabilitation Technologies
by Peter Axelson

Beneficial Designs, Inc.
Minden, NV
Denise Axelson, Director of Research, coordinates the research at BD and assists with technical writing and grant proposals. She loves to play volleyball.

Peter Axelson, Founder and Director of R&D, leads BD and spends much of his time traveling throughout the world to attend meetings and present our work. He's also a pilot and avid mono-skier.
Tools for Life

Connecting the World with Assistive Technology
Tools for Life

To provide information on people and organizations that facilitate the provision of adaptive seating and mobility equipment to persons with disabilities throughout the world where these technologies are not readily available.
Tools for Life

world / global / assistive technology
people / network / information source
database / information / connecting
working together / helping / empower
sharing / giving / mobility
Leg for Lenna Benefit

Prosthetic Leg for Lenna Fagan
Community event at St. Gall’s Church with
Silent Auction and Raffle Prizes
raised $20,000 toward a new leg
Database Project

Objective: To develop a database of people and organizations that provide assistive technology to people with disabilities in developing countries
Appropriate Technology for Developing Countries

Special Interest Group within RESNA

Beneficial Designs managed the RESNA Sore Butts Cushion Contest for several years

Facilitated interaction between Wheeled Mobility Providers
Wheelchair Distribution Issues

Appropriate Wheelchair for the Environment
Provision of a Seat Cushion
Assessment, fitting and training
Follow up and repair
Consensus Conference on Wheelchairs for Developing Countries

6-11 November 2006, in Bangalore, India.
Wheelchair Provision in Developing Countries

Local Wheelchair Manufacture

Vs.

Distribution of Charity Wheelchairs
Appropriate Wheelchair Development
Manufacturing and Distribution

Whirlwind Wheelchair International
Motivation - Worldmade
Hope Haven International
ROC Wheels
Wheelchair Distribution by Charities

Wheels for the World
The Wheelchair Foundation 560k
Hope Haven International
The Free Wheelchair Mission 150k
Wheels for Humanity
Definition of an appropriate wheelchair: A wheelchair is appropriate when it meets the individual’s needs and environmental conditions; provides proper fit and postural support based on sound biomechanical principles; is safe and durable; is available and can be accessed, maintained and sustained in the country at the most economical and affordable price.
User involvement: “It is about the user, not just about the wheelchair”. Wheelchair users should be involved in all aspects of wheelchair provision
Services: The aim of wheelchair services is to ensure that the person in need of a wheelchair receives it together with the necessary information and support. The wheelchair should meet the individual’s needs in terms of mobility, comfort and ability to carry out activities of daily living and to exercise basic human rights.
Acquiring wheelchairs: When determining whether to acquire wheelchairs via import or local production, decision makers are advised to balance a variety of factors. These include needs of the local population, quality and variety of wheelchair models, purchase price, cost of repair and replacement, effect on local employment and wheelchair production, and national policies and strategies, including health care.
**Distribution**: Wheelchairs are to be provided following a provision process that meets or exceeds internationally agreed minimum requirements for service provision, including requirements for assessment, fitting, user training and follow-up; and that wheelchairs are repairable in the region of the country where they are provided.
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Production Standards and guidelines: All wheelchairs, whether locally produced or imported, and whether made in small, medium or large scale enterprises should meet or exceed ISO standards.
RESNA Technical Standards Board

Wheelchairs
Wheelchair Related Seating and Transportation
Adaptive Sports Equipment
Personalized Golf Cars
RESNA American National Wheelchair Standards Committee

Testing of Manual and Powered Wheelchairs

Testing of Playground Surface Materials – ASTM Standard
Hope Haven International

Hope Haven International and Children’s Medical Ministries bring used wheelchairs to Guatemala, as well as to various other countries around the world, where volunteers refurbish and build wheelchairs and then distribute them.
Guatemala

In rural and poverty-stricken Guatemala, many of the Mayan people believe that a disability is a curse from God. Adults are shunned. Children are abandoned. An already poor health care system offers no help at all.
“It’s real important to position children correctly, so they can grow upright and can breathe right and function.”
Students from the College of Health and Human Sciences were in Guatemala from Aug. 2 to Aug. 10 2007, fitting children for wheelchairs and other assistive devices.
Developing nations have a higher percentage of children with disabilities than North America.
Inmates from the South Dakota State Penitentiary Manufacturing the ROC Wheelchair.
Hope Haven Kids Chair

Sioux Falls South Dakota Inmates provide Community Services support for sewing, upholstery and carpentry.

Haywarden Iowa production facility donated and staffed by local retired farmers provides fabrication, bending, assembly.
Refurbish and Distribute a Wheelchair

Used wheelchairs are cleaned and refurbished, you can sponsor a life changing gift of dignity and hope for $50 to $75

Sponsor a Wheelchair – Transform a life
Build and Deliver a Hope Haven Kids Chair

Designed to provide customized seating and support for children and adults with mild to moderate seating issues

Fabricated with volunteer labor in the U.S. Plans for fabrication in country

Made and delivered with innovative materials using no welds for $150
Wheelchair Distribution needed in Guatemala City

Project team typically includes 10-12 Rotarians, Physical Therapists, Occupational Therapist, Rehabilitation Technology Suppliers

Distribution length is typically 7-9 days with 4 to 5 working days
Typical Hope Haven Wheelchair Distribution

25% Kids Chairs
25% refurbished tilt chairs
50% Adult chairs
200 wheelchairs distributed
Distribution every 2 months in Guatemala
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Thank you Sue Mohling – Wells Fargo Bank for today invitation

Working toward universal access through research, design & education