
Beneficial Design

Designing Beyond the Norm to Meet the Needs of All People

Peter W. Axelson, MSME

Beneficial Designs, Inc.

Minden, Nevada

www.beneficialdesigns.com

When is Design Beneficial?

Universal Design
Adaptable Design
Adaptive Design

Mainstream Products

Applying Universal Design Principles to Products

Designing Products for Adaptability

The Control Interface

The Seating Interface

Development of Adaptive Technologies

Use of Technology to Enhance and Create Experiences

Personal Technologies

Activity-Specific Technologies

Environmental Technologies

Personal Technologies

Things that you wear

Activity-Specific Technologies

Environmental Technologies

Things that do not move

Experiential

Balance Dimension

Sociological Dimension

Experiential Dimension

Life Function Activities
Vocational Activities
Recreational Activities

Balance Dimension

Physical
Intellectual
Spiritual

Sociological Dimension

Dependence
Independence
Interdependence

Need

Function

Interests

Preferences

Meeting Peoples' Needs

Whose Needs?

Average person
5 foot something
75 kilograms

Functional Assumptions

Mobility
Vision
Hearing
Grasp
Endurance

Long Term Disabilities and Impairments

Aging Related Disabilities and Impairments

Shorter Term Disabilities and Impairments

Understanding the Limiting Process

Pathophysiology
Impairment
Functional Limitation
Disability

Quantify User Function

Strength
Cognitive Function
Skills Required
Economic Resources
Mobility Requirements

Intuitive Sense
Balance Requirements
Coordination
Patience

Identify and Evaluate Interests

Businesslike - Playful
Inconspicuous - High profile
Luxurious - Utilitarian
Robust - Delicate
Expensive - Low budget
Macho - Sensitive
Recreational - Career oriented
Masculine - Feminine
Sexy - Dull
Sporty - Dignified
Functional - Fanciful
Conventional - Innovative
Versatile - Specific use

Re-Creation Preferences

Competitive vs. Non-competitive
Active vs. Passive
Individual vs. Group
Dependent vs. Independent
Integrated vs. Segregated
Modified vs. Unmodified Rules

Design Process

- 1 Listen
- 2 Let go
- 3 Gather info
- 4 Let go
- 5 Reflect
- 6 Wait
- 7 Act

Listen ...

to what you are being asked to do

Let go ...

of your hold on what first seems best from your perspective

Gather info ...

from the best sources of wisdom you can find

Let go ...

of your hold on what first seems best based on your own desires

Reflect ...

on the decisions or recommendations you must make

Analyze ... with your mind

Listen ... to your heart

Talk ... to someone greater than you

Wait ...

for consistency in your thoughts and feelings

Act ...

making the best recommendations you can

Clearly communicate your outcome

Accept the consequences of your actions

Beneficial Designs Inc.
P.O. Box 69
Minden, NV 89423
775.783.8822
775.783.8823 fax
peter@beneficialdesigns.com