

Beneficial Design

Designing Beyond the Norm to Meet the Needs of All People

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**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

Life Function Activities

Vocational Activities

Recreational Activities

Life

Function

Technologies

Vocational Technologies

Recreational and Leisure Technologies

Balance Dimension

Balance Dimension

Physical

Intellectual

Spiritual

Physical

Intellectual

Spiritual

Sociological Dimension

Sociological Dimension

Dependence

Independence

Interdependence

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

**Evaluate
who will use
your ideas**

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

Listen ...

to what
you are being
asked to do

Let go ...

of your hold on what
first seems best
from your perspective

Let go ...

of your hold on what
first seems best
from your perspective

Gather info ...

from the best

sources of wisdom

you can find

Gather info ...

from the best
sources of wisdom
you can find

Let go ...

of your hold on what
first seems best
relative to
your own desires

Let go ...

of your hold on what
first seems best
relative to
your own desires

Let go ...

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

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

Reflect ...

on the decisions

or recommendations

you must make

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

Wait ...

for consistency
in your thoughts
and feelings

Act ...

making the best
recommendations
you can

Act ...

making the best
recommendations
you can

Clearly communicate
your outcome

Accept the consequences
of your actions

Thank you