



Universal Design

Universal Design for Public Good: Can it Deliver?

Keynote Day 1

Dr Ger Craddock
Centre for Excellence in Universal Design
National Disability Authority, Ireland

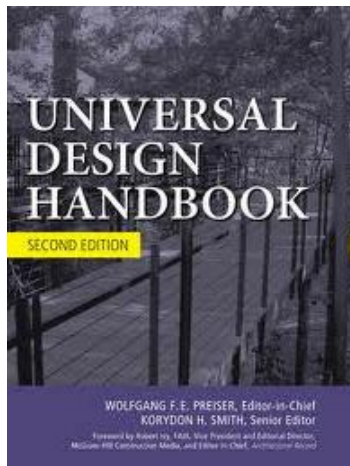
www.universaldesign.ie

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Universal Design Challenges Designers !

“Contrary to the assumption that attention to the needs of diverse people limits good design, the results of **imaginative** designers around the world reveal a wide range of applications that **delight the senses** and lifts the **human spirit** when “universal design” is **integral**

Elaine Ostroff Universal Design
Handbook 2nd edition 2011



Universal Design



Where are we on this
journey?



A Paradigm Shift – World Report on Disability (2011) – WHO + World Bank

Accessibility:

Provides **basic access** and usability of facilities, products and services for people with disabilities

Universal design:

Enables independence and social participation for all through continual improvement.

WORLD REPORT ON DISABILITY



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Trends in Universal Design Oslo Conference 2012

3 Trends

regulation to innovation.

accessibility to inclusion.

barriers to sustainability.

<http://www.bufetat.no/PageFiles/9564/Trends%20in%20Universal%20Design-%20PDF-%20lannsert%2016.%20januar.pdf>



New Terminology: Creativity and Innovation

- If creativity is the generation of new ideas, innovation is the successful exploitation of those ideas. Critically, it's design that binds the two together. It shapes ideas to make practical, realistic and attractive propositions.

CEO Design Council UK 2014



Universal + Design in 21st Century

Universal = Inclusive

Design = Exclusive

Merging of two separate worlds:
Concern that Design overpowers the inclusive?

M. Peuch (2012) (Philosopher Sorbonne)

2012 Joint 4S/EASST Meeting in Copenhagen: Panel Session

The Multi-layer Thinking to Advance Universal Design in the 21st Century

<http://michel.puech.free.fr/docs/20124spanel.pdf>



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Great Design

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Guggenheim Museum New York



Universal Design



Universal Lift Louvre Paris



Universal Design



Everyday Activities

Food preparation is shared and enjoyed among family members of all ages



Front-loading washers and dryers minimize lifting and are more convenient for seated users and children



Automatic doors benefit diverse customers





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DART LUAS RPA

Universal System – Environment/Service/Technology



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Poor Design





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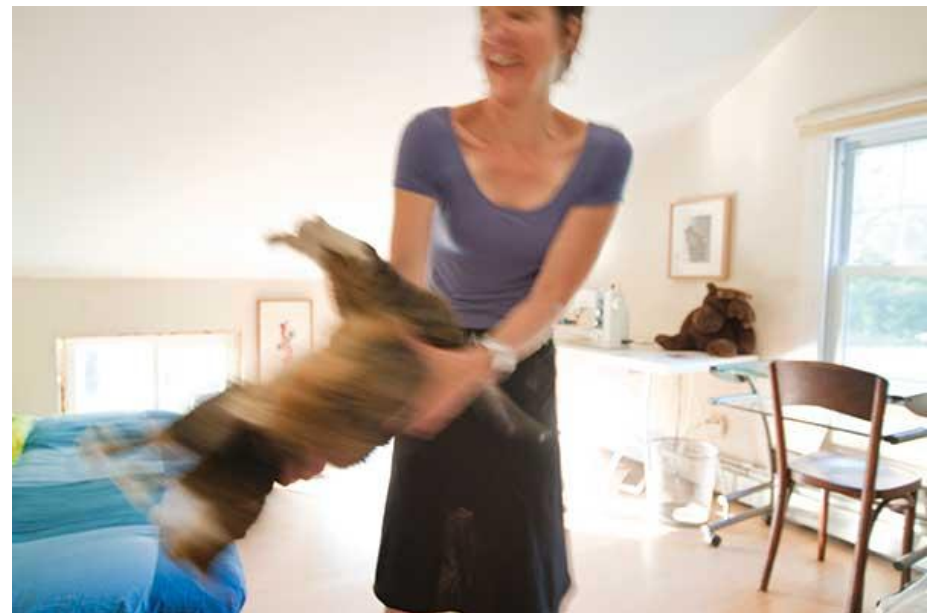


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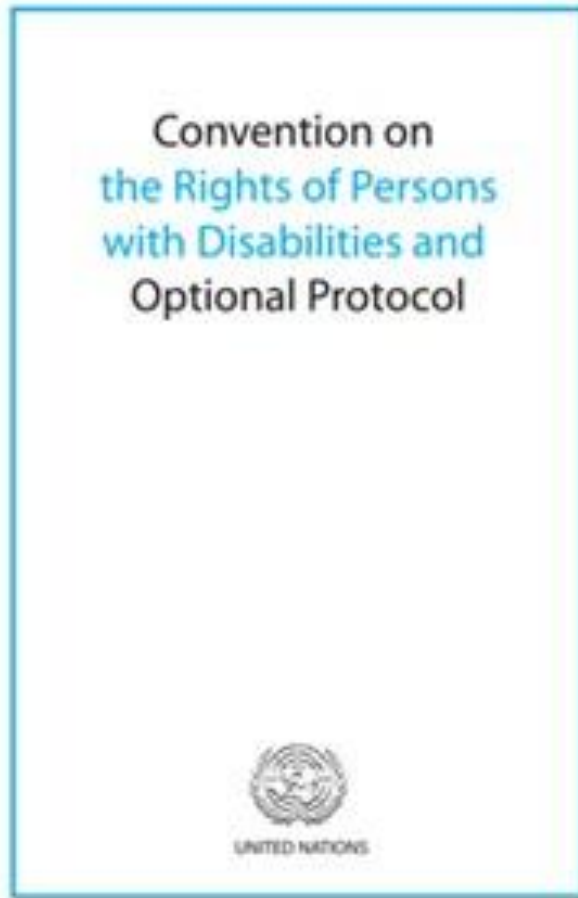
Design for? Or Design With?

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UN Convention on the Rights of People with Disabilities 2006 (UNCRPD)



Convention:

Ratifications: 147

Signatories: 158



UN Convention on the Rights of Persons with Disabilities 2006

“Universal design” means the design of products, environments, programmes and services to be usable **by all people**, to the greatest extent possible, without the need for adaptation or specialized design.”

“Universal design” shall not exclude assistive devices for particular groups of persons with disabilities where this is needed.”



UN Convention on the Rights of Persons with Disabilities – Gov Obligations:

State Parties are “to undertake or promote research and development of universally designed goods, services, equipment and facilities to promote their availability and use, and to promote universal design in the development of standards and guidelines.”



Universal Design in Irish Legislation (2005)

Universal Design is the design and composition of an environment so that it can be accessed, understood and used to the greatest extent possible by all people regardless of their age, size, ability or disability

(Synopsis of the Irish Disability Act 2005)



Age

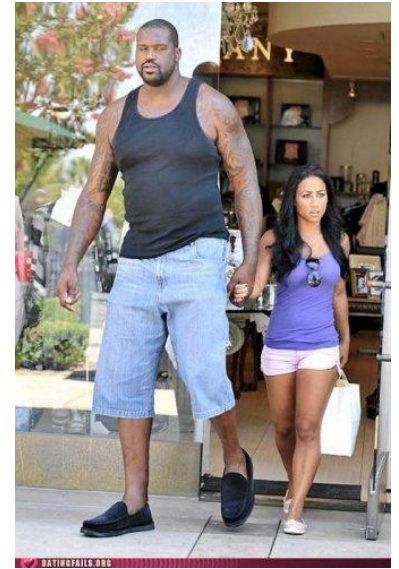


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Size



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Ability

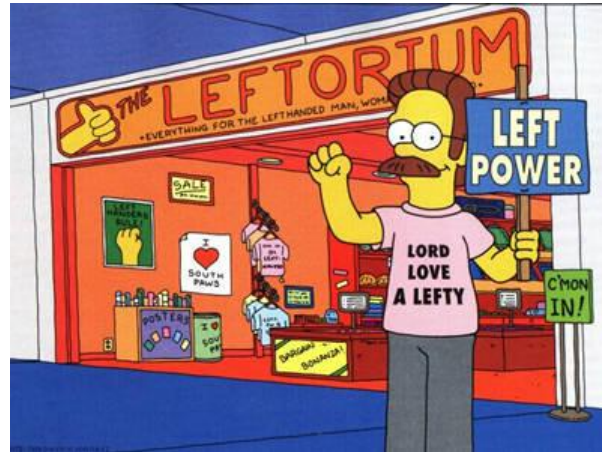
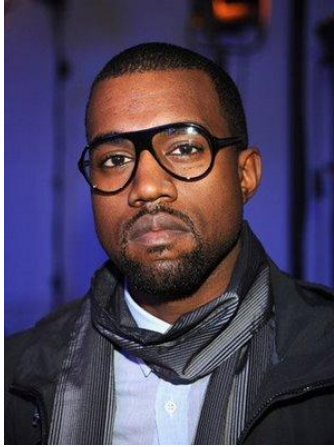


TIDH

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Disability



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Universal Design Assumes;

Every person experiences barriers, reduced functioning, some form of disability – temporary or permanent – at some stage in life



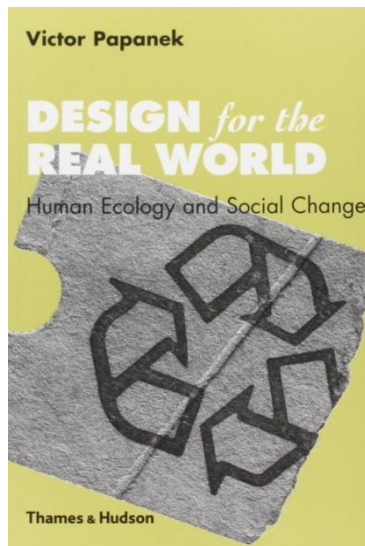
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“Design is basic to all human activities”

Victor Papanek 1986 “Design for the real world”



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Global Pressures on Public Services and Governments

More Demanding Citizen/Customer — Questioning roles of the state and of markets, in order to restore citizens' trust in both.

Increasing Social Complexity and diversity

Overstretched Resources:

Implementation gap of Gov: policies to promote transparency, efficiency and trust.

Demographic changes — older population

Change in Ratio of working population to older people

Government at a Glance OECD 2011



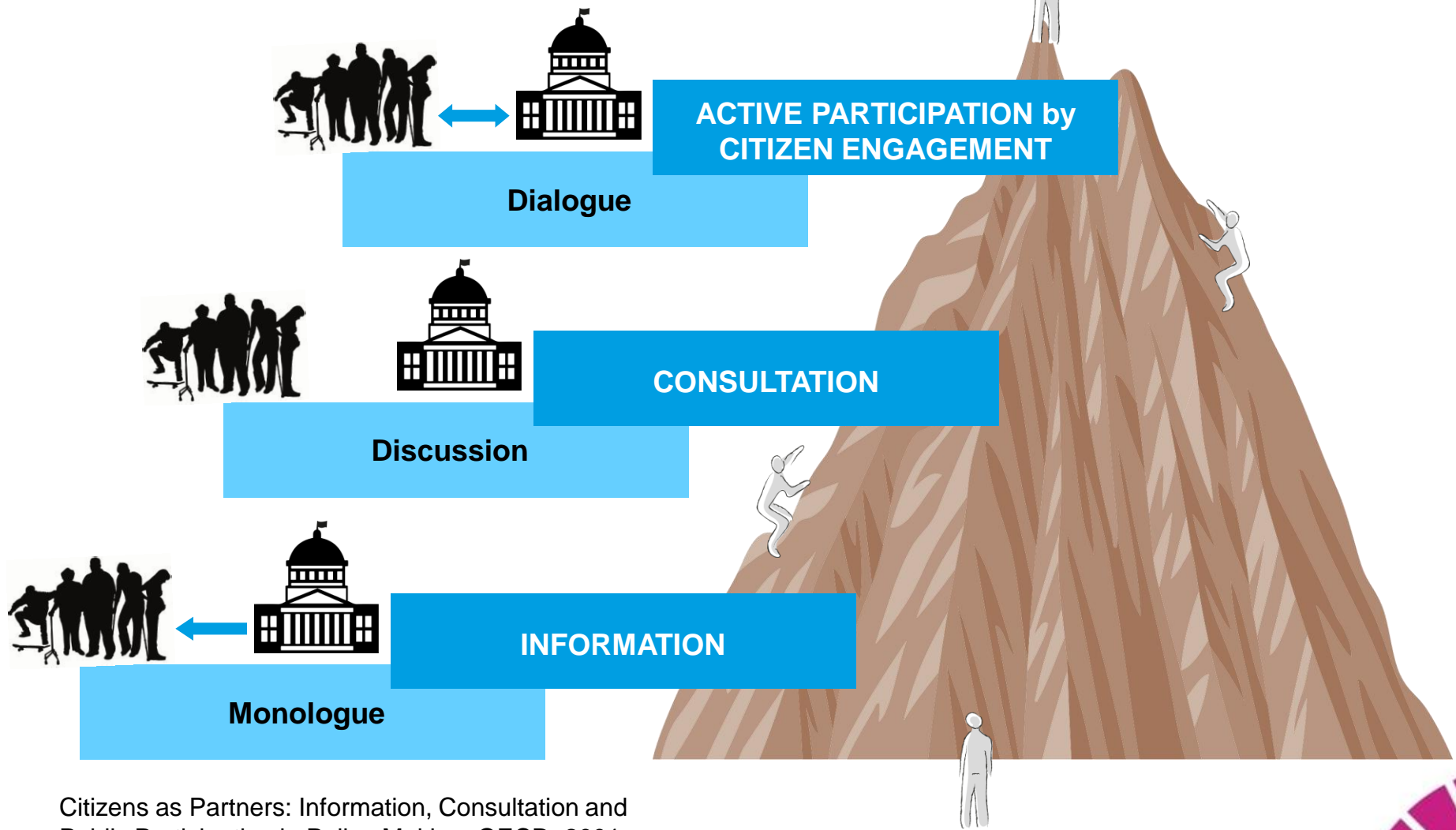
Core ingredients for Universal Design to be a Catalyst for Change:

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GOVERNMENT – CITIZEN RELATIONS (OECD 2001)



Citizens as Partners: Information, Consultation and Public Participation in Policy-Making, OECD, 2001.



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Problem Definition

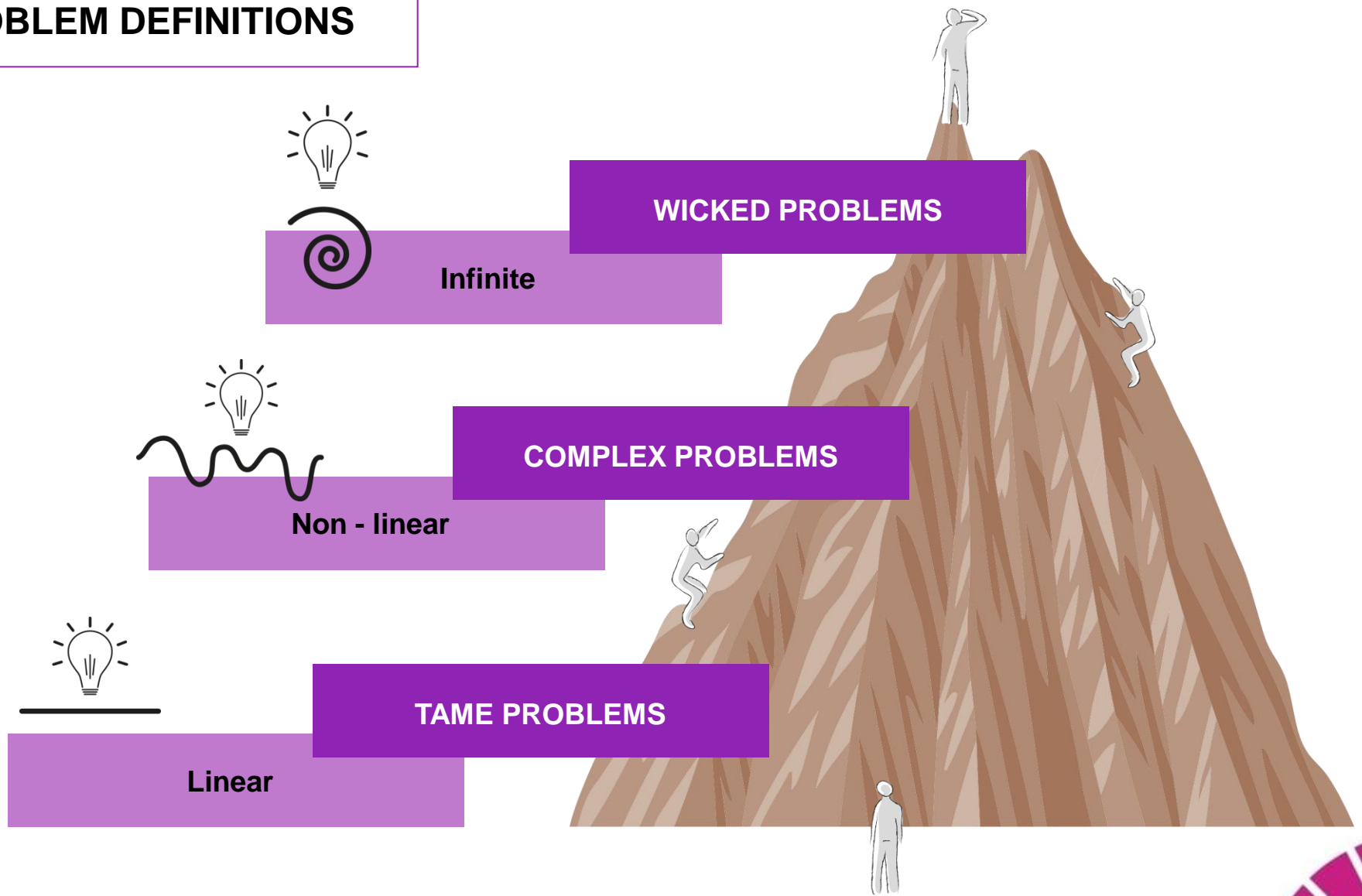
- Wicked Problems (Rittel, Webber 1973)
 - Are those where stakeholders disagree on both the nature of the problem or on its solution. – unstable and highly resistant to change
- Complex Problems
 - Are those where stakeholders agree on the nature of the problem but not on how best to solve it.
- Tame Problems
 - Are those where stakeholders agree on the nature of the problem and on the best way to solve it.



http://www.apsc.gov.au/__data/assets/pdf_file/0005/6386/wickedproblems.pdf

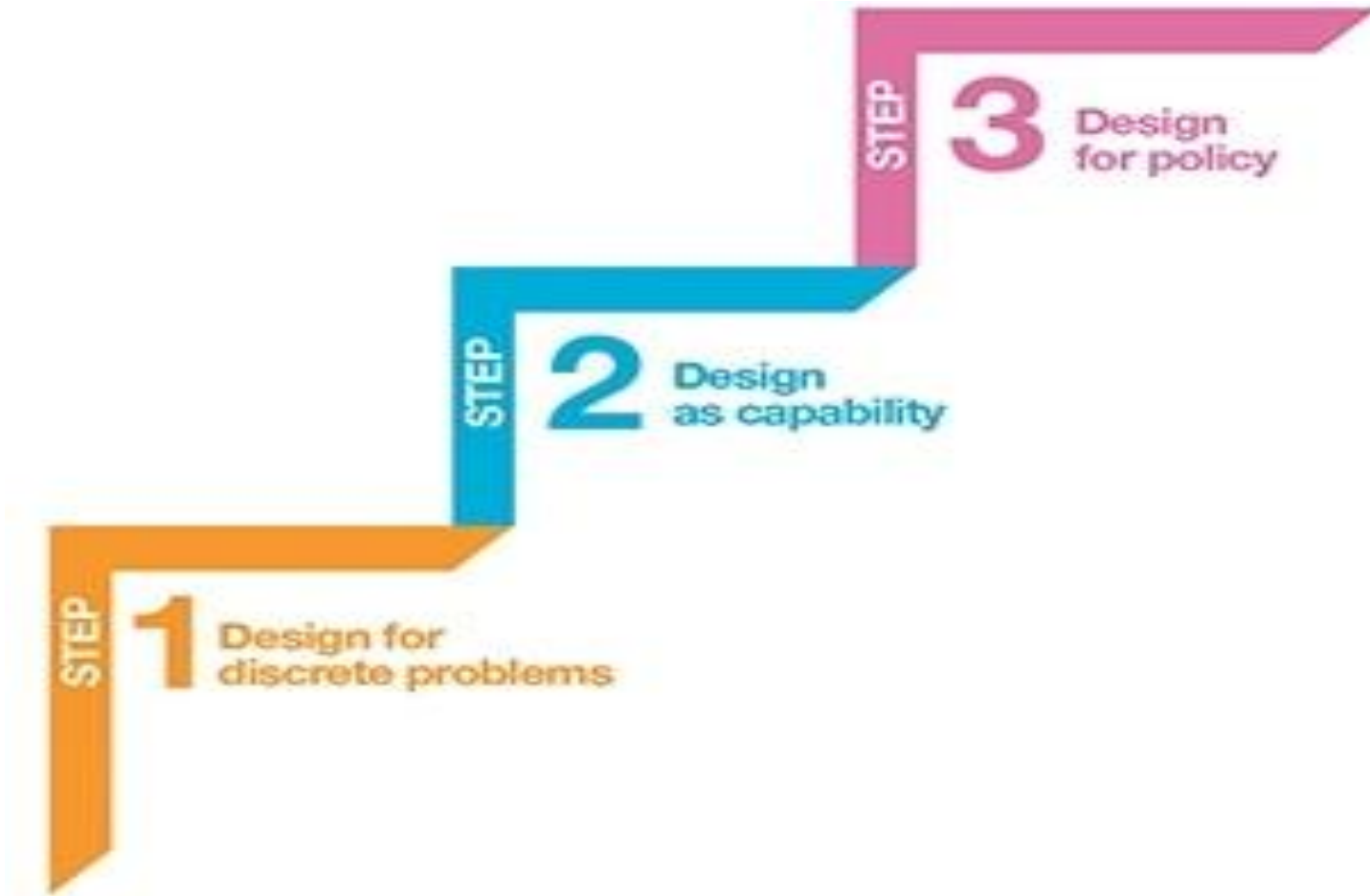


PROBLEM DEFINITIONS



The Public Sector Design Ladder

(UK Design Council 2013)

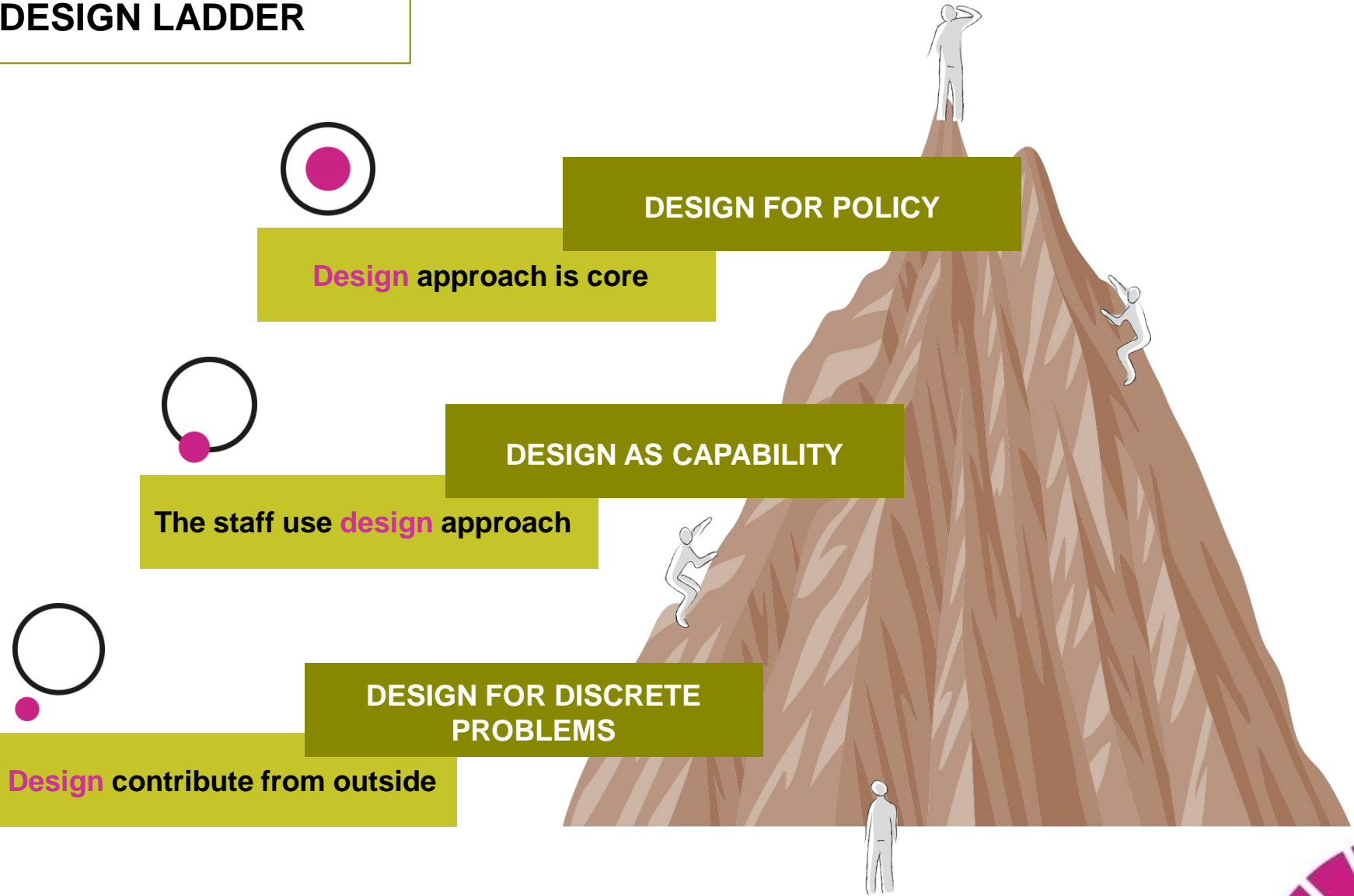


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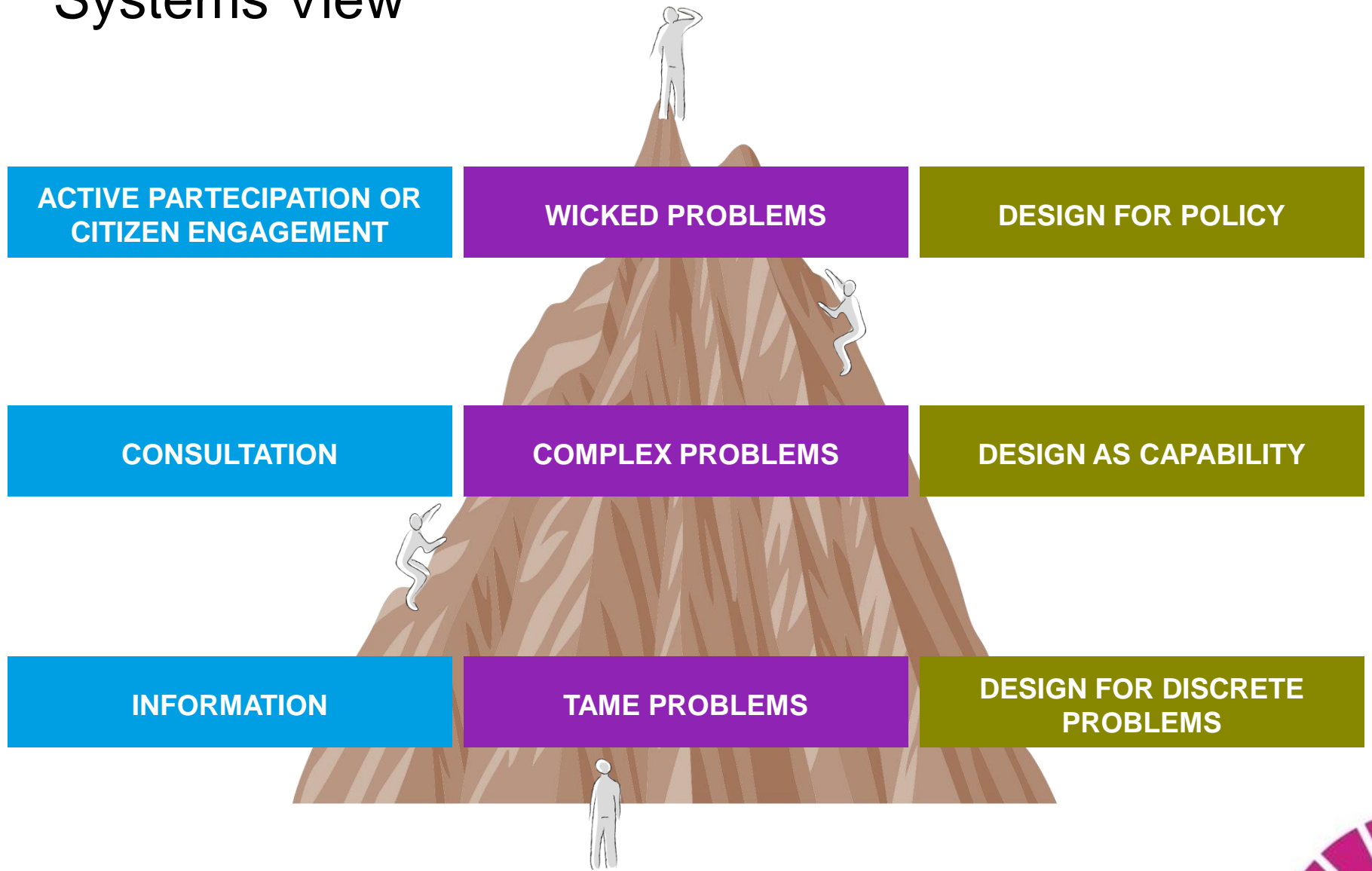
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THE DESIGN LADDER



Systems View



The Public Sector Design Ladder

(UK Design Council 2013)

- **Four key recommendations from the report**
- Use the Public Sector Design Ladder as a **tool and roadmap** for progression
- Build design thinking into government and public policy practice
- Build a strong design sector that can offer strategic and service design to the public sector
- Build the evidence base and impact measurements for design innovation in the public sector



Key Component of Systems Change:

Evidence – through Use Inspired Basic Research

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Discovery - Research:
Is it Just?

The Quest for Fundamental Understanding?



Discovery - Research:
Or?

Considerations of use?



Use – Inspired Basic Research Pasteur's Quadrant Both !!

Consideration of Use?

Search for
Fundamental
Understanding?

Yes

No

No

Yes

**Pure Basic
Research
(Bohr)**

**Use –Inspired
Basic Research
(Pasteur)**

Pure Applied
Research
(Edison)



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A Global Common Language

(Taxonomies and Classification Systems)

If we are going to tackle these societal issues then it can only begin when we talk the same language



Global Universal Design Standards

Our Manta

**Standardise Globally
Implement Locally**

i.e. Globalisation

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International Standards Organisation (ISO)

- Accurate terminology which is based on internationally agreed language is fundamental to design. This is particularly important where human involvement is expected.
- “ISO 26800:2011 Ergonomics - General Approach, Principles and Concepts”



Example:

The centre's work in relation to revision of the ISO Guide 71



Universal Design Guidance and the ICF (CEUD 2013)

Demonstrates how the World Health Organisation (WHO), International Classification of Functioning, Health and Disability (ICF) can be applied to the:
development of design guidance standards by using a set of linking rules along with related classifications to represent the interaction of human functions, activities, and environmental factors.

Is this Use – Inspired Basic Research?



ISO Guide 71 - First edition 2001

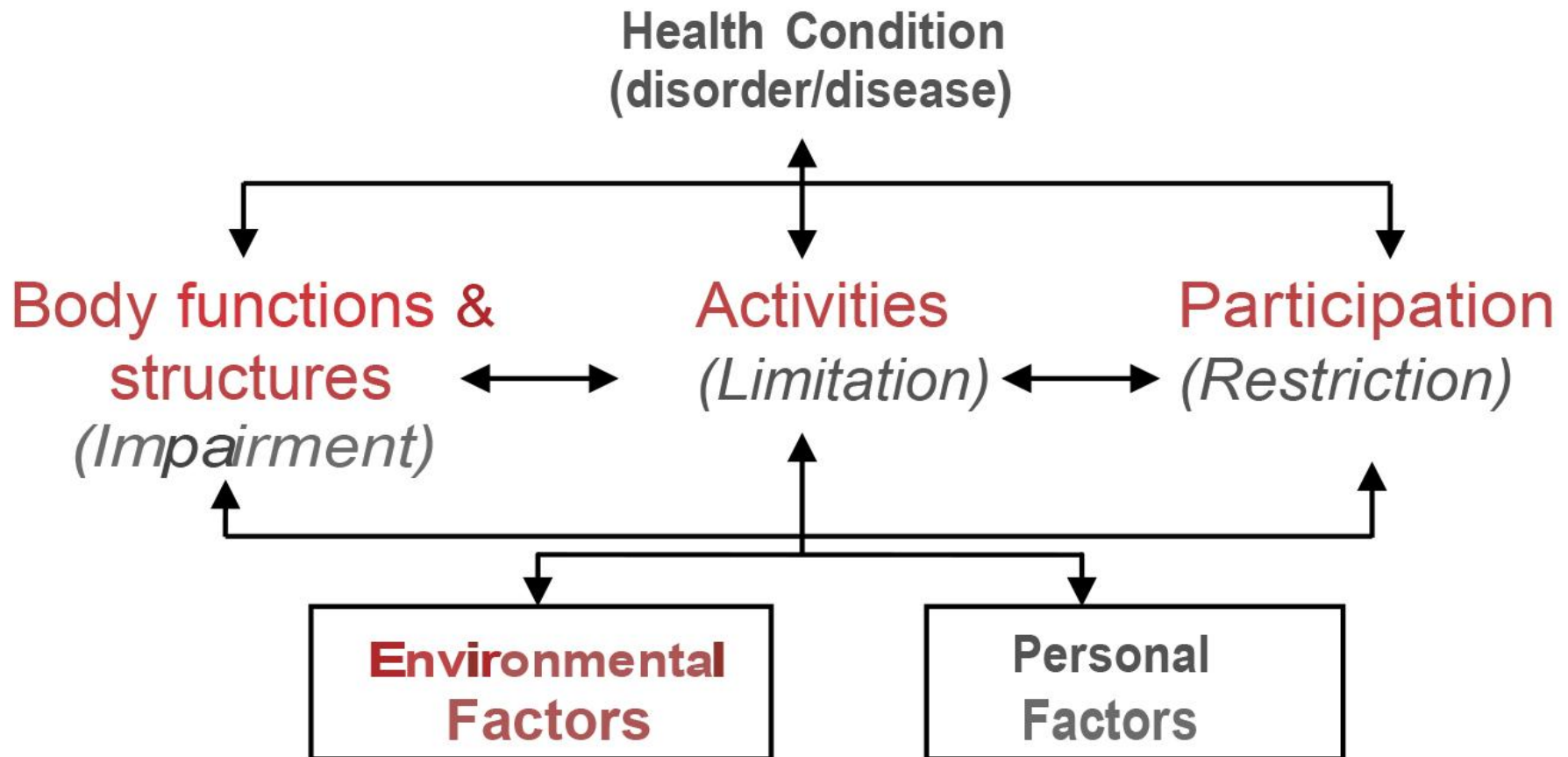
Being Revised 2010-2015?

Guidelines for standards developers to address the needs of older persons and persons with disabilities:

- a) to inform, increase understanding and raise awareness about how human abilities impact on the usability of products, services and environments,
- b) to outline the relationship between the requirements in standards and the accessibility and usability of products and services, and
- c) to raise awareness about the benefits of adopting accessible design principles in terms of a wider market.



ICF: Interaction of Concepts



ICF Framework

ICF five main components:

Body Functions (b codes);

Body Structures (s codes);

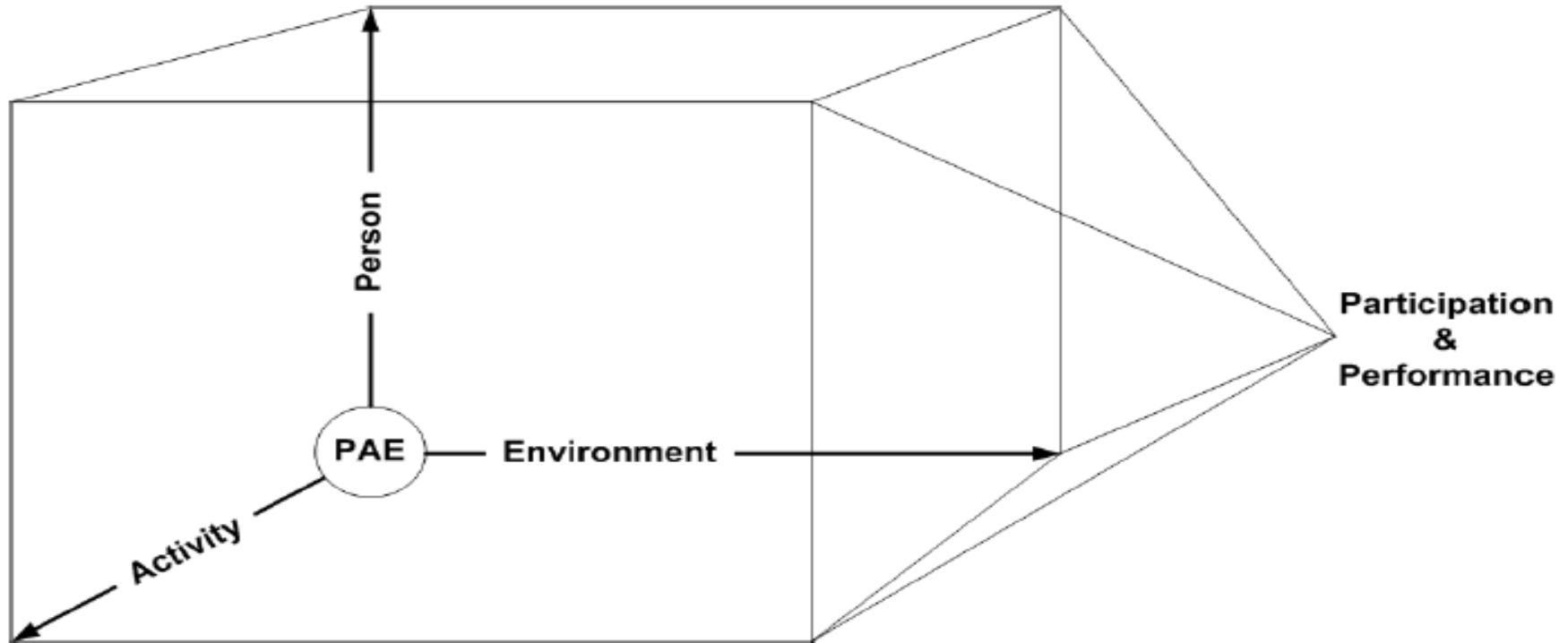
Activity and Participation (d codes)

Environment (e codes).

The fifth component is Personal Factors (pf) which are not encoded within the Classification.



The interrelationship of Person, Activity and Environment (PAE) in standards development



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Example Tap/Faucet



Leaver Handle



Round Handle



Product:

Tap/Faucet

Task or Goal:

Adjusting the flow of water

Operational Component:

Manipulating Tap/Faucet Handles

PAE Variable	ICF Domains	Source of Terms	Descriptive Terms	Code
Activity	Activities (Tasks)	ICF	Manipulating	d4402
			Reaching	d4452
			Grasping	d4401
			Turning or twisting	d4453
		Non-ICF	*	
Person	Body Functions	ICF	Joint mobility	b710
			Muscle Power Function	b730
			Control of voluntary Movement Functions	b760
		Non-ICF	*	
	Body Structures	ICF	Structure of upper arm	s7300
			Structure of Forearm	s7301
			Structure of Hand	S7302
		Non-ICF	*	
	Personal Factors		*	
Environment	Environmental Barriers	ISO/IEC TR22411	Round hard to grip faucet handle	8.12.3.1
	Environmental Facilitators (Universal Design Factors)	ISO 21542:2002⁴	Lever Style Faucet Handle	26.11

* Non-ICF and Personal Factors were not considered relevant to this example

How can we jointly gather this data ?

Big data

Strategic + Operational Partnerships

- People
- Design
- Built



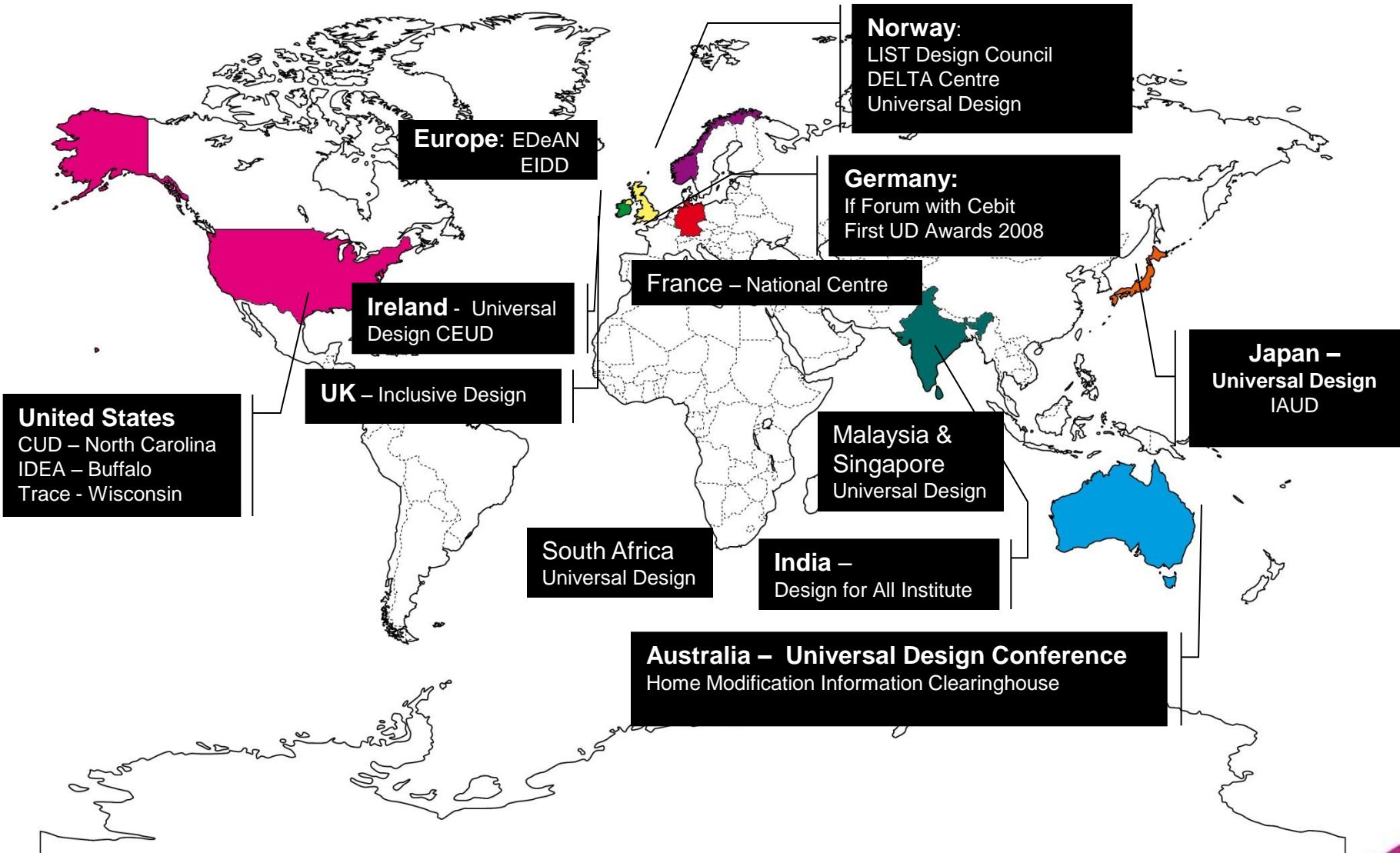
People

Global Network

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Design:

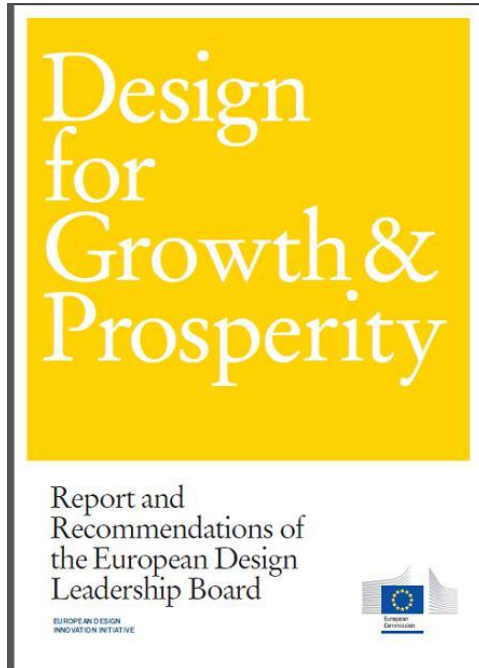
Coding Economic Design activity

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European Design Leadership Board Key Recommendation



Enforce the implementation of the current NACE Code 74:10 for Specialised Design Activities

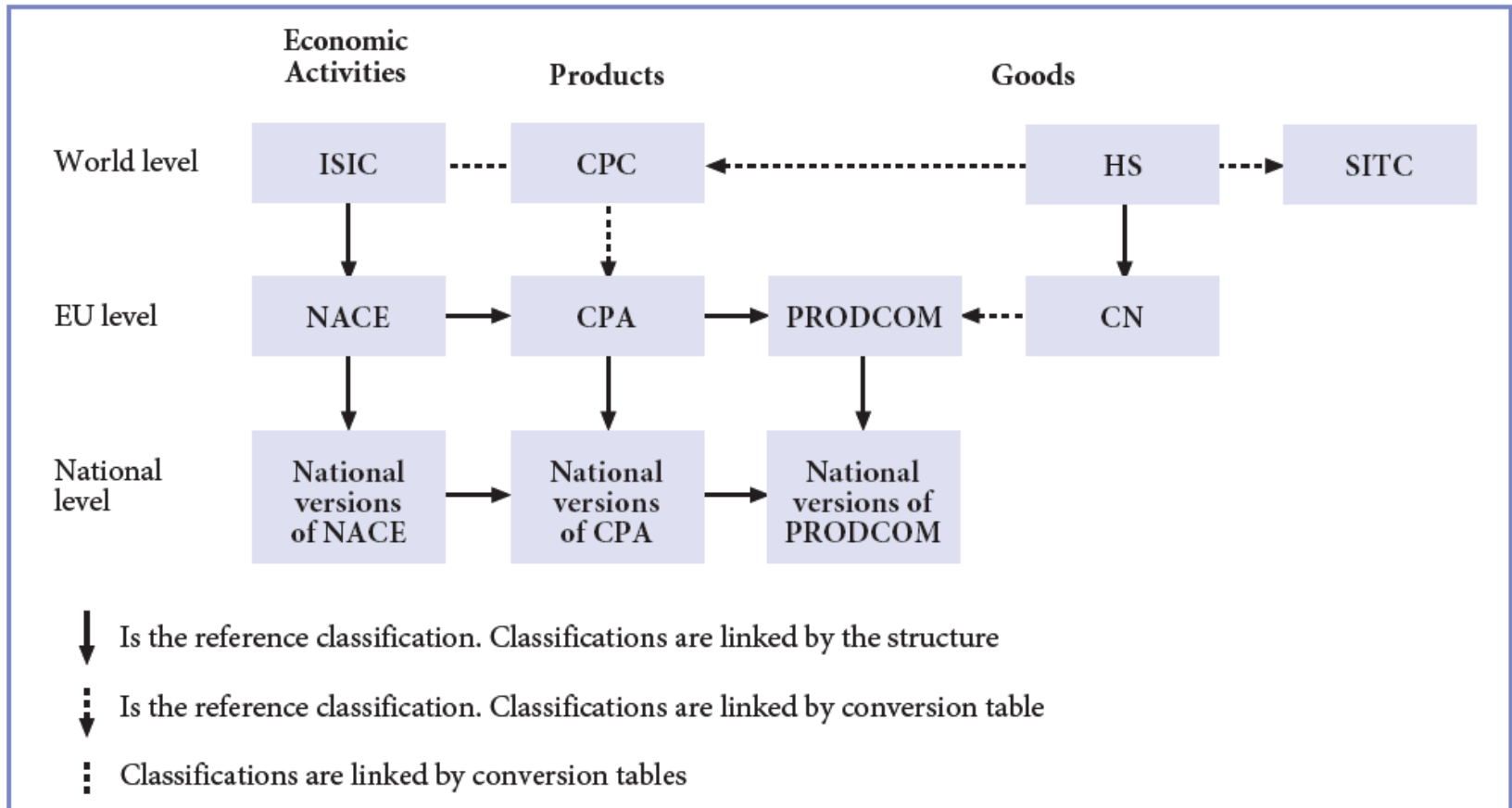
by all Member States and ensure updating as necessary for benchmarking and comparative analysis across member states.

Rationale

The lack of evidence to demonstrate design's contribution to economic activity and to prove design as an economic activity in its own right, is a weakness that hinders evidence-based design policy-making at both Member State and European levels.



International system of Economic Activities classifications



Buildings:

Coding of building products

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Whole Building Design Guide (WBDG)

National Institute of Building Sciences (NIBS).

8 Core Objectives



UD
Buffalo
University

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Whole Building Design Guide (WBDG)

National Institute of Building Sciences (NIBS).

A web-based portal providing US government and industry practitioners with one-stop access to information on building-related guidance, criteria and technology from a **'whole buildings'** perspective.

Three major categories—

Design Guidance, - Omniclass Classification System

Project Management

Operations & Maintenance



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Application:

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Use – Inspired Basic Research?

NEW European Standard on Universal Design:

How UD can be integrated as part of the manufacturing process:
EU Mandate 473: 2014-2018:

How can we present the economic value of UD?



Government



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How to Implement Universal Design at a National Level?

Knowledge Translation (KT) as a mechanism to bridge the “Know – Go”

Gap

**Gap from research to policy,
&
Gap from knowledge to action**

Ariel Pablos, director of the WHO Department of Knowledge Management and Sharing, 2004

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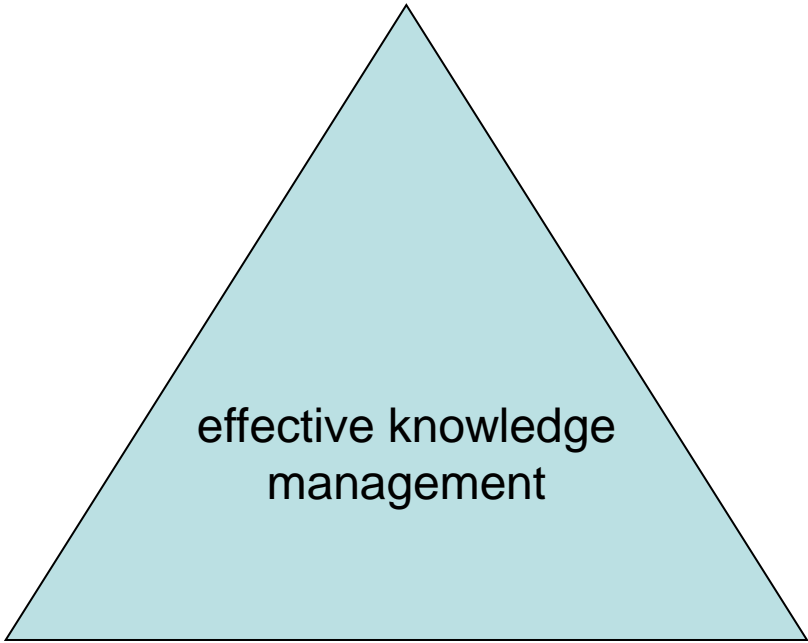
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Knowledge Translation

“Triangle that moves the mountain”

political involvement (actors).



effective knowledge
management

knowledge/evidence,

social mobilization
(stakeholders)

Prawase Wasi • “Triangle That Moves The Mountain” and Health Systems Reform Movement in Thailand

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Boundary Hoppers –Across Silos

Role of Public Servants



Hierarchy

Adopted from NSW Gov
Australia (with permission)

Policy

Legislation

Standards

Codes of Practice

Toolkits

Training & Supports

Key elements that need to be
considered when looking for
change at government level



Examples:

Energy Sector and Tourism Sector in Ireland

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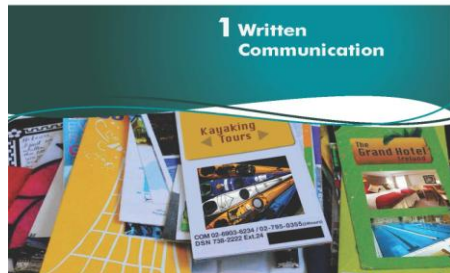
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Údarás Náisiúnta Míchumais
National Disability Authority

Tourism in the Year of the Gathering 2013



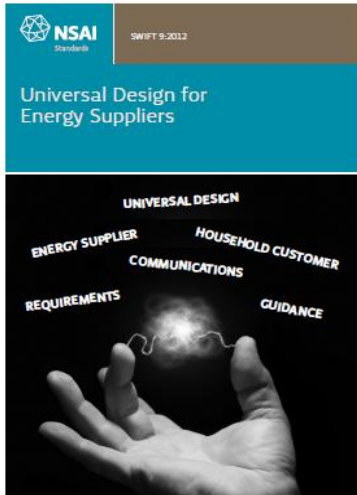
<http://www.universaldesign.ie/tourism>



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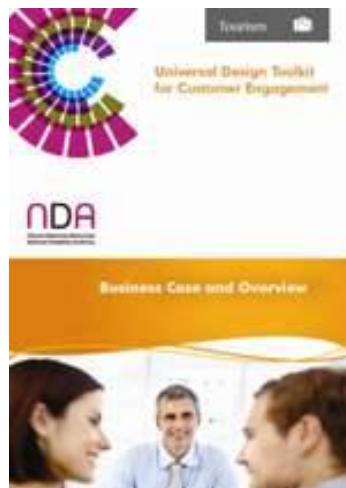
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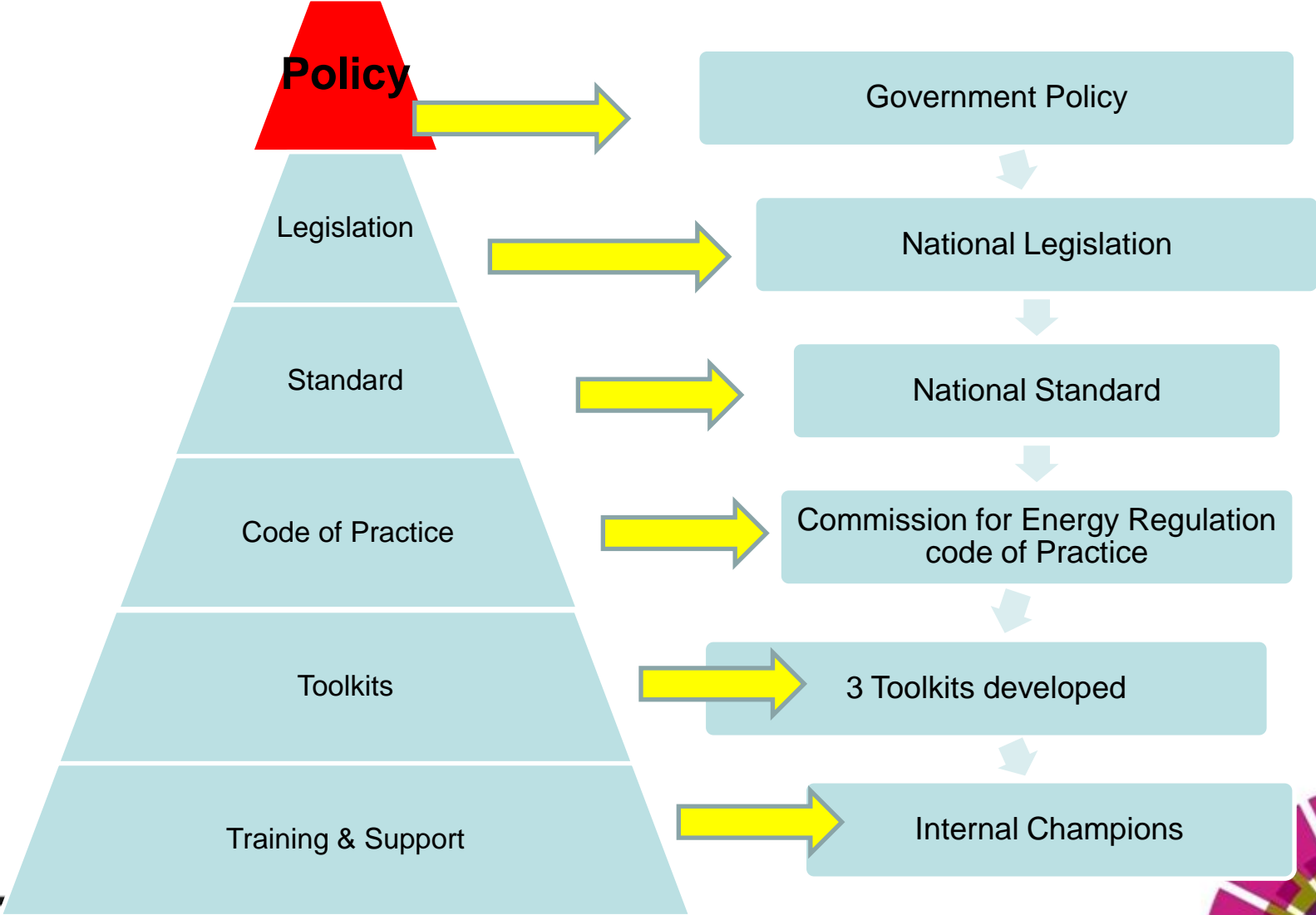
SWiFT 9 and Toolkits for Energy Suppliers

<http://www.universaldesign.ie/energy>



<http://www.universaldesign.ie/inhomedisplays>

National Hierarchy



Adopted from NSW Gov Australia (with permission)

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International Recognition



“For these remarkable achievements, Ireland’s Standard “SWiFT 9: 2012 Universal Design for Energy Suppliers” has been awarded the title “Innovative Policy 2014” by the Zero Project, an international initiative that works *For a World Without Barriers.*”

Certificate

Innovative Policy 2014

The Zero Project is proud to certify, that

Ireland’s “Standard SWiFT 9:2012 Universal Design for Energy Suppliers”

was selected as one of 15 Innovative Policies by the Zero Project’s Scientific Advisory Board composed of 28 renowned disability and accessibility experts.

The policy is exemplary in:

- Respect for the UN Convention on the Rights of Persons with Disabilities
- Endorsement by the disability rights community
- Innovation in legal approach and implementation instruments
- Implementation that delivered identifiable, measurable improvements
- Easily transferable to other countries.

“Standard SWiFT 9:2012 Universal Design for Energy Suppliers” has been developed in an inclusive, iterative and consensus-based process that enabled all key stakeholders to embrace universal design and the final outcome, with a long lasting impact on universal service delivery.



Martin Essl

Founder of the
Essl Foundation

Jakob von Uexkull

Founder of the
World Future Council

Gerry Salole

CEO
European
Foundation Centre

Where we need to go to Deliver?

The burden of responsibility for initiating, facilitating and sustaining citizen engagement falls heavily on **public servants**. The magnitude of that ‘**meaning-making**’, ‘**narrative-creating**’ task can hardly be overstated.



The Challenge

the role of the modern, **citizen-oriented public servant** is no less than:

“to provide the public with alternative visions of what is desirable and possible, to stimulate discussion about them, to provoke re-examination of **premises and values**, and thus to broaden the range of potential responses and deepen society’s understanding of itself.

Robert Reich, *Public Management in a Democratic Society*, Prentice-Hall, 1990, p. 9



Universal Design is a **roadmap** to lifelong social participation by children, people with disabilities, and older people. It also creates and satisfies a new customer base. Finally it allows for business models that are at once **economically sustainable** and **socially beneficial**.

Rolling Rains 2012

Thank you

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Normals Animation

<https://www.youtube.com/watch?v=A88E4DH2asQ&list=PLIaJvOHx4FfCOwRT8ZN9zwCH0vA-sE7H6>

