

Applying a Universal Design Approach to create more inclusive Technologies for All

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Universal Design Approach

A Paradigm Shift

Accessibility:

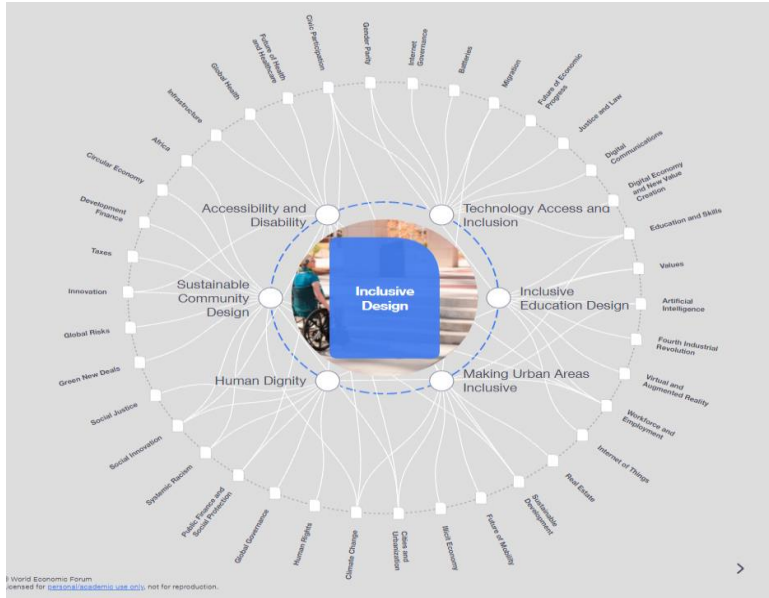
Provides basic access and usability of facilities, products and services for people with disabilities

Universal design:

Enables independence and social participation **for all** through **continual improvement**.

(World Disability Report 2011)

World Economic Forum – Intelligence Unit



Universal/Inclusive Design:

1) Technology, Access & Inclusion

2) Inclusive Education Design

3) Making Urban Areas Inclusive

4) Human Dignity

5) Sustainable Community Design

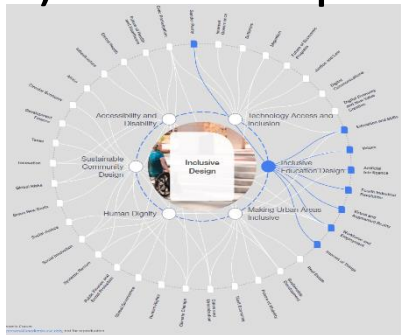
6) Accessibility and Disability

<https://intelligence.weforum.org/topics/a1G0X0000057IniUAE?tab=publications>

World Economic Forum:

8 elements of Inclusive Education Design

- 1) Education and Skills
- 2) Values
- 3) Artificial Intelligence
- 4) Fourth Industrial Revolution
- 5) Virtual and Augmented Reality
- 6) Workforce and Employment
- 7) Internet of Things
- 8) Gender Equity



9 elements of Technology Access & Inclusion

- 1) Civil Participation
- 2) Education & Skills
- 3) Digital Economy & new Value Creation
- 4) Digital Comms
- 5) Justice & Law
- 6) Migration
- 7) Batteries
- 8) Internet Governance
- 9) Gender Parity



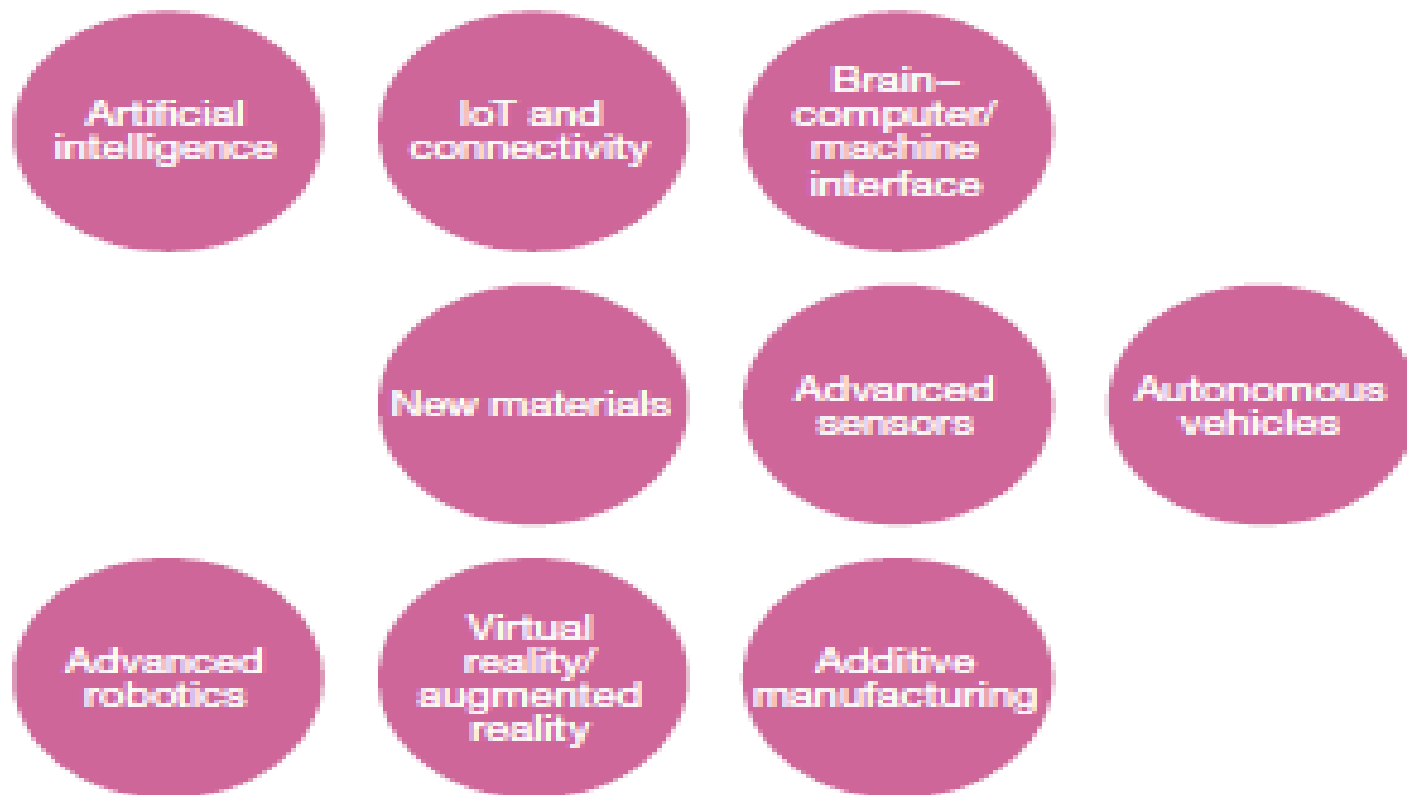
World Intellectual Property Organisation (WIPO) publication 2021: Technology Trends 2021 Assistive Technology,

WIPO state: **Universal design and accessibility** are enabling factors that complement assistive technology.

Universal Design principles, support the development of assistive technology that meets end-users' needs by foregrounding the **interoperability and standardization** of assistive technology;

The degree of implementation of these principles can also impact the range of assistive technology, **as certain standalone devices may no longer be necessary because**, for example, their function is carried out by a device in accordance with universal design principles.

(WIPO) identified nine enabling technologies which will impact the area of assistive technology

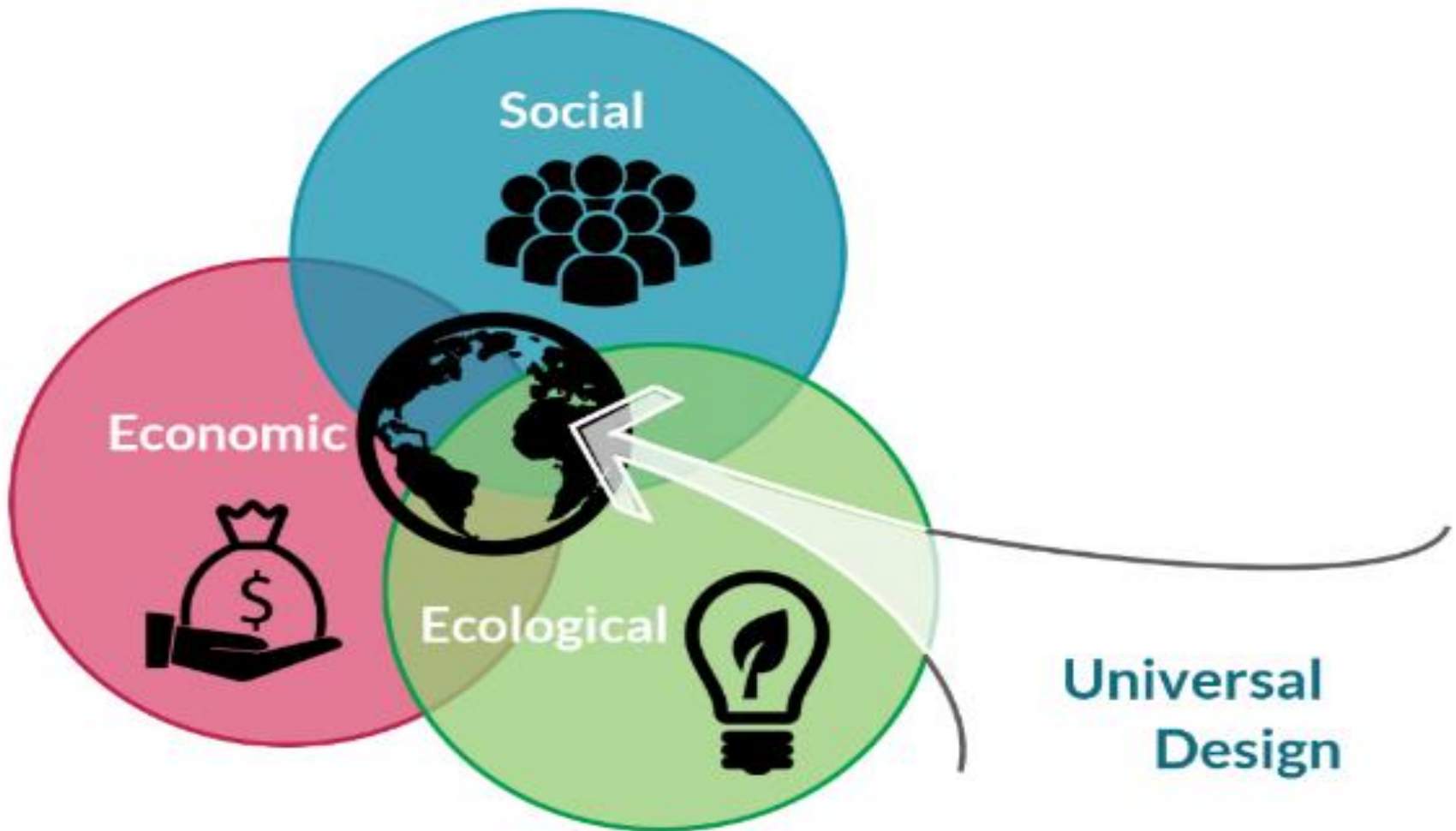


2030 Agenda for Sustainable Development



- 10 targets, 15 indicators (available at <https://unstats.un.org/>)
- Covering housing (including slum upgrading) and basic services
- Transport systems
- City & settlement planning
- Cultural and natural heritage
- Climate change, disaster resilience and preparedness
- Environmental impact of cities
- Access to green, public spaces
- Urban-rural linkages
- Support for LDCs via local building procurement

Universal Design + Sustainable Design



European Level

The EU Commission **ICT Standards Strategy** 2021. A key policy goal being “... vital that standardisation prioritising accessibility and adopts a **Universal Design approach to accessibility** in order to allow equal distribution of the benefits of technological advancement in society.”(page 5)

Europe Directive (EU) 2016/2102 on the accessibility of public sector bodies’ websites and mobile application (WAD)

EU Commission published (2021) “Union of Equality Strategy for the Rights of Persons with Disabilities 2021-2030”

Focus on promoting an **intersectional perspective**, intersection of identities (gender, racial, ethnic, sexual, religious), or in a difficult socioeconomic or other vulnerable situation.

Key to progressing the strategy is “mainstreaming the **Universal Design approach** for better accessibility and provision of reasonable accommodation for persons with disabilities **into all actions**.”

Universal Design

Standard Products/Services 2019

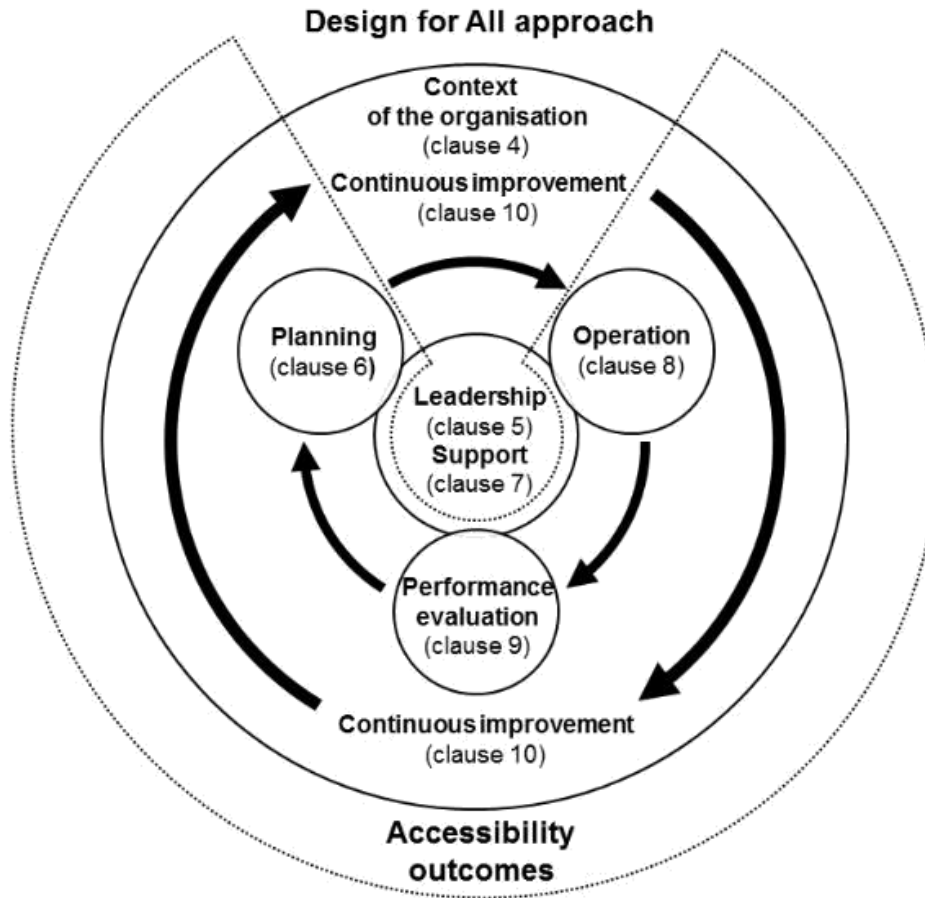
Description of EN 17161

“European process Standard about using a Universal Design (Design for All) approach at all levels in organisations to continuously improve and manage the accessibility and usability of the services and products they provide”

<http://universaldesign.ie/products-services/design-for-all-accessibility-following-a-design-for-all-approach-in-products-goods-and-services-extending-the-range-of-users/>



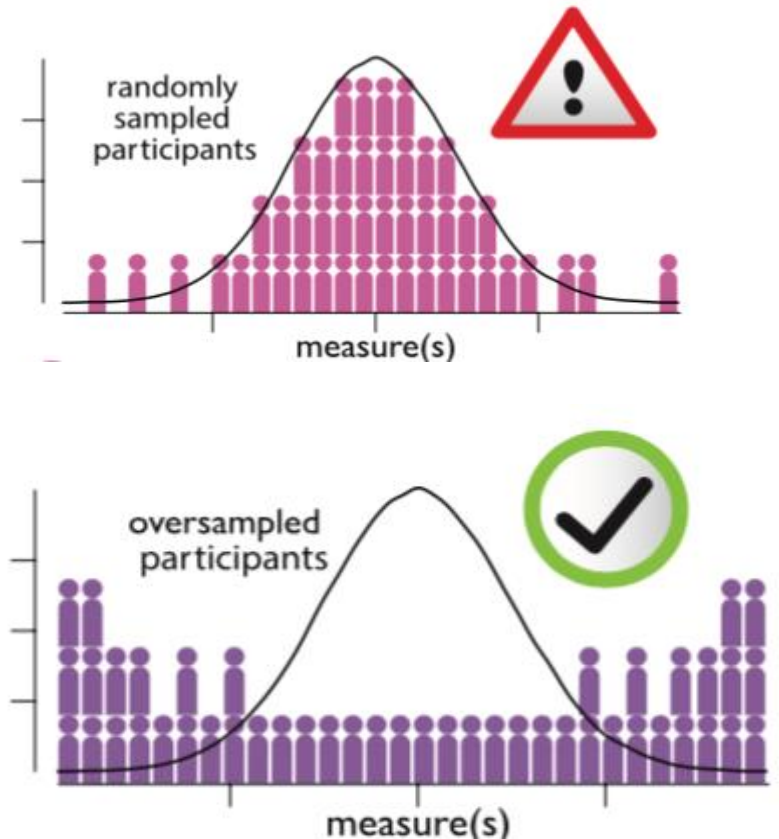
The Universal Design/Design for All approach



**Aligns with ISO 9000
Series: Quality
Management
Standards**

Universal Design – Oversampling the extremes

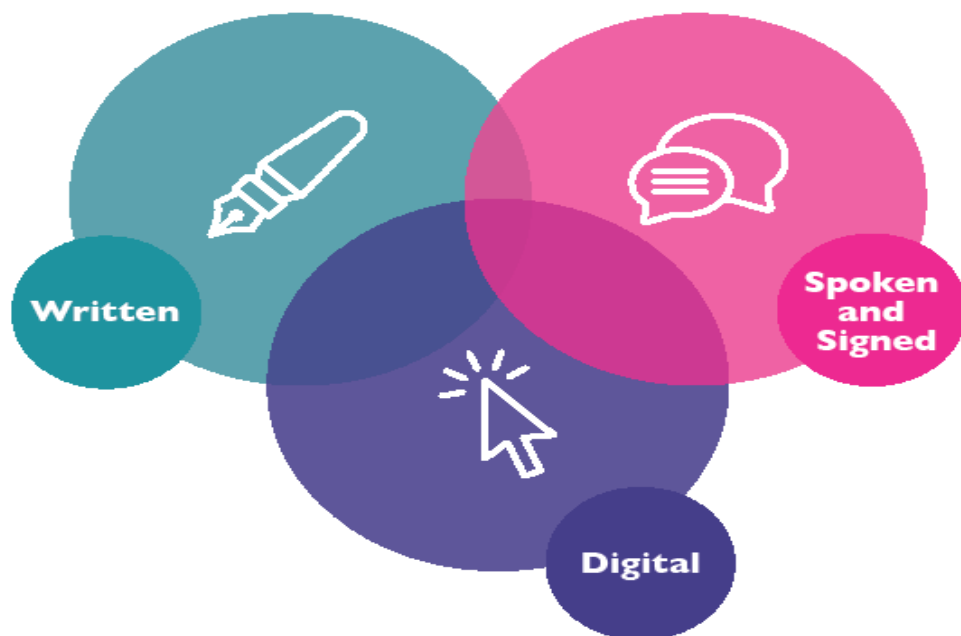
- Universal Design is closely related to other design processes such as User Centred Design and UX / CX .
- To meet the needs of the widest range of users, consider the needs of diverse user groups.
- Oversample the tails on the distribution curve when conducting user research and testing!





Customer Communications Toolkit for the Public Service

— A Universal Design Approach



**An Roinn Caiteachais
Phoiblí agus Athchóirithe**
Department of Public
Expenditure and Reform






Centre for
Excellence in
Universal Design

nda




Customer Communications Toolkit for the Public Service – A Universal Design Approach






Customer communications should be easy to:

-  access,
-  understand, and
-  use.

The toolkit sections help to inform the design of:

-  **Written,**
-  **Verbal, and**
-  **Digital communication.**

Examples, tips, checklists and links in the toolkit can be used for:

-  **planning,**
-  **training, and**
-  **informing contractors.**

Find the easy to use toolkit online at the links below.

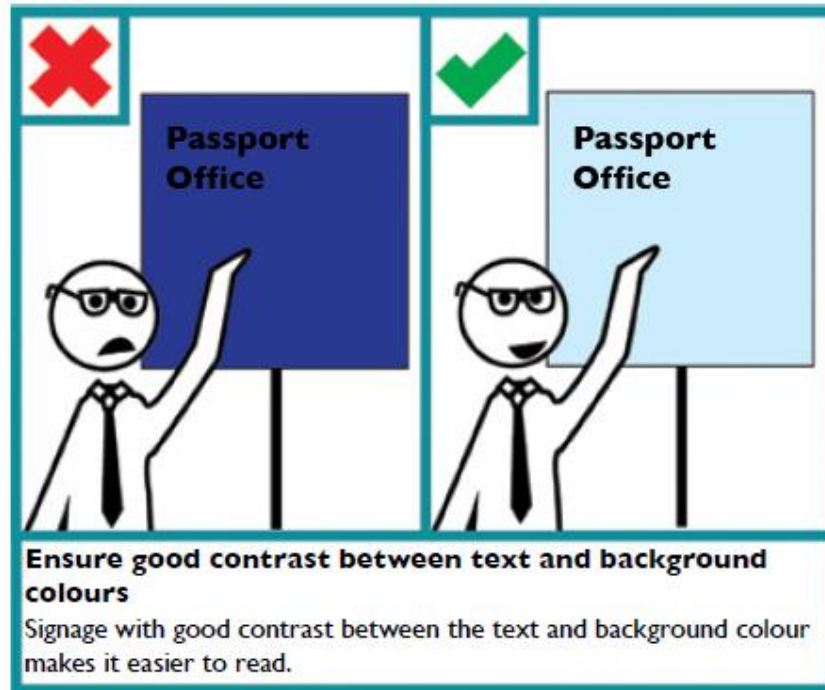
www.per.gov.ie/customer-communications-toolkit

www.universaldesign.ie/publicservice



Written Communications

Good and Bad Examples



Universal Design Approach to: Education and Training (Sept 2021)

Access

Confidential, discrete
learner-friendly registration
process accessible to all.

Technology

Design accessible websites.
Availability of Assistive Technology.

Buildings

Design buildings to ensure
accessibility by all.

Services

Design services to meet
the needs of everyone.



Thank you

Gerald Craddock

www.universaldesign.ie

