INCLUSIVE DESIGN

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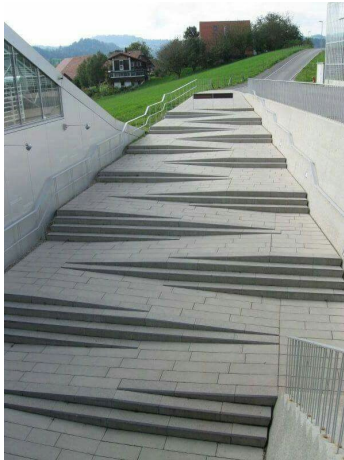Associate Teaching Professor Frank Marchak
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Definition

It is socially responsible to design products, services and systems that are responsive to the needs of most people. Such design should also be compatible with the culture of user communities and sustain their local environments. In this context, **Inclusive Design**[1] is an intentional process to involve all relevant user communities in the design process to create solutions that provide usable and meaningful access to products, services and systems for most people .[2] Successful Inclusive Design can improve quality of life amongst diverse user communities in a way that respects their local culture and protects the shared environment.

Inclusive Design can produce a single solution by integrating features to address the needs of diverse user communities. For example, this staircase integrates steps with ramps for access by users requiring wheelchair. Inclusive Design can also produce a single solution with special features to include a target user community but is also usable by other users. For example, Oxo Good Grip[3] is a utensil design with oversized handles for arthritic users to comfortably operate them, which is also comfortable for other users.[4]
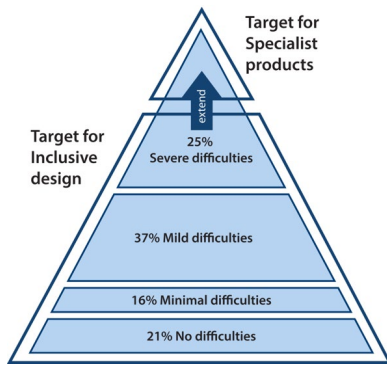
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[1] "Inclusive Design" originated in Europe and primarily focuses on the design of technology and considers all forms of exclusion. The related term "Universal Design" originated in the USA and primarily focuses on the design of the physical environment with attention to exclusion due to physical disabilities.

[2] http://www.inclusivedesign.no/practical-tools/definitions-article56-127.html

[3] https://www.oxo.com/categories/cooking-and-baking/tools-and-gadgets/can-and-jar-openers/smooth-edge-can-opener-437.html

[4] http://universaldesign.ie/What-is-Universal-Design/Case-Studies-and-Examples/Examples/OXO-Good-Grips/

Realistically, the extreme needs of some target user communities cannot always be accommodated effectively by a single inclusive product or service. If technically and economically sustainable, it may be necessary in such cases to develop specialized products that target the specific needs of a user community that otherwise has extreme difficulty accessing inclusive designs that target the majority of users.[5] Even in these cases, the Inclusive Design process can help ensure the design solution is usable amongst the diverse members within this specific user community.

Principles
The following principles create innovative solutions for Inclusive Design:

- **Seek out, recognize and accommodate contributions from excluded user communities (and contexts that limit usability)** to generate new solutions that increase benefits for all users.

- **Use an inclusive design process and accessible design tools** so diverse user communities can participate in the design process, thereby overcoming our own biases as designers.

- **Recognize diversity of user communities (and use contexts)** by providing choice and control over interaction methods, thereby creating equally meaningful experiences for all users.

- **Favor products and services that demand less of the user** by prioritizing information, simplifying interfaces (only include value), and applying design features consistently.
- **Explore opportunities to apply innovative design solutions** that can extend the benefits of a product or service designed for a specific user community to other communities.

- **Assess the impact of the design solutions beyond the target user community** to include the broader sociotechnical, cultural and environmental consequences.

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[5] http://www.inclusivedesigntoolkit.com/whatis/whatis.html#p3b

Core Competencies (and Courses)

Competencies	Courses
Systems Thinking (Analyze design needs and develop solutions with awareness of anticipated and unanticipated interactions amongst multiple agents and processes).	EIND410, EIND411, EIND513
Social Justice and Design Ethics (Develop design solutions that authentically representing the values of the designer with consideration of possible consequences – both intended and unintended).	EIND410, EIND513
Diversity Awareness (Recognize and appreciate the needs of diverse user communities in the design process and possible design solution).	EIND410, PSYX562, EIND513
Human and Social Attributes (Develop design solutions that support human needs and aspirations while being consistent with the social and cultural factors of user communities).	EIND410, EIND413, EIND513
Context and Environment Attributes (Develop design solutions that consistent with relevant use contexts and sustainable in the local environment).	EIND410, EIND413, EIND510, EIND513
Design Process (Use a rationale, systematic, and iterative process to create design solutions).	EIND410, EIND411, EIND510
Usability Engineering (Evaluate solutions and integrate user feedback throughout the design process to ensure solutions align with user needs, use context, and community culture).	EIND410, EIND510
Transformational and Community-based Research (Translating science into action to support community-based needs).	CHTH503, NSRG615

Sources
"What do we mean by Inclusive Design?" by the Inclusive Design Research Center.
"6 Principles for Inclusive" Design by L. Xiao.
"Inclusive Design Principles" by H. Swan, I. Pouncey, H. Pickering, and L. Watson.