



Inclusive Design as Consequential Innovation

26 October 2016

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An international education and design nonprofit, headquartered in Boston, dedicated to enhancing the experiences of people of all abilities, ages and cultures through excellence in design.

Design matters and matters most at the edges of the spectrum of ability, age and culture.

2 core beliefs...

If design works well for people at the edge of the spectrum, it works better for everyone.





photo: Stanley Forman

Boston City Hall
Black city attorney Ted
Landsmark being stabbed with
an American flag April 5, 1976

40 years ago the 'Athens of
America' became the racist
capital of America . . .



Boston High Schools' Valedictorians 2016

We are now a majority minority city but allowing unfettered market-driven growth is putting today's historic diversity is at risk.



The Auckland Plan – *extraordinary!*

Priority #1

Create a strong, inclusive and equitable society that ensures opportunity for all Aucklanders.

20th Century Impetus Social Sustainability

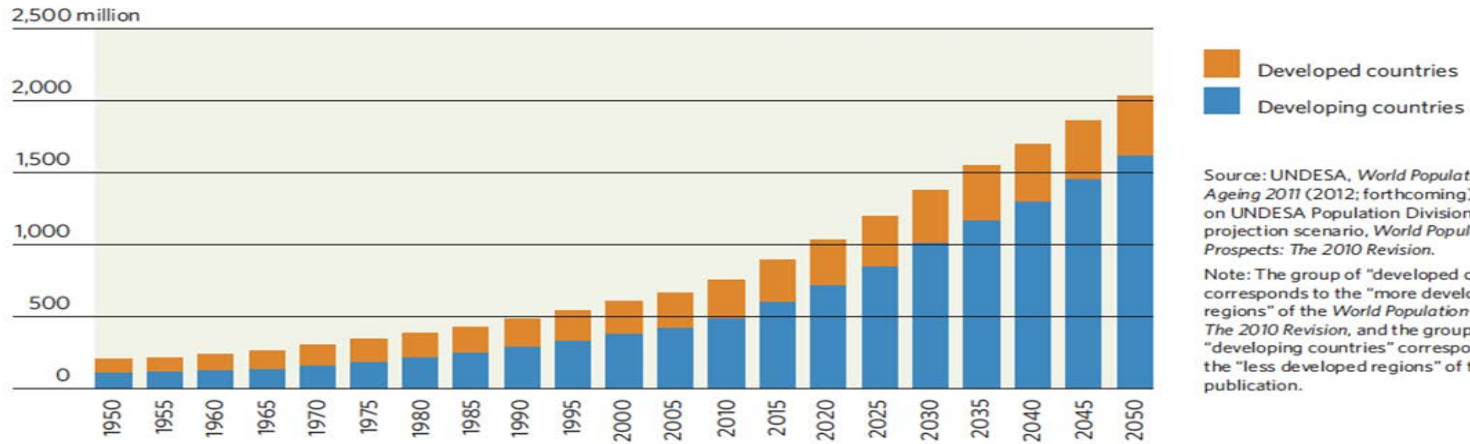
Profound *POSITIVE* impact of
human behavior. . .

We live longer and survive
more – across the globe



Global Aging

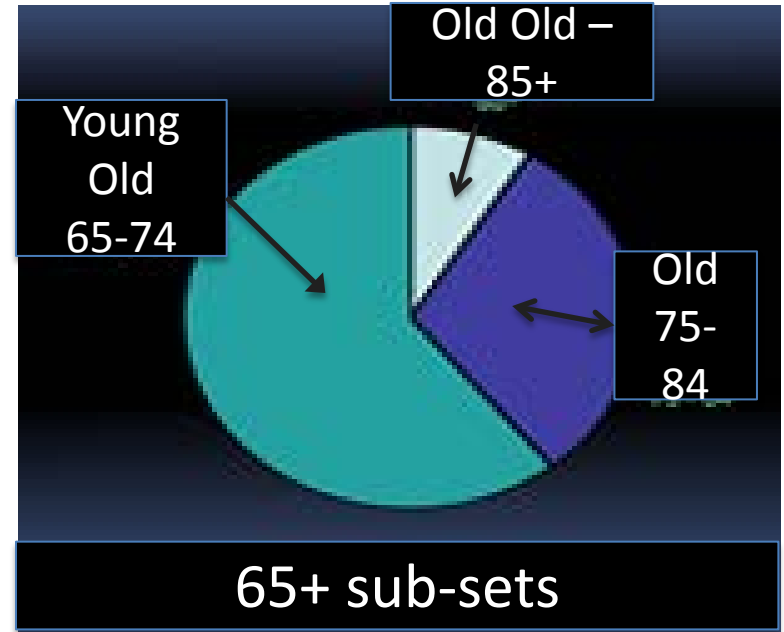
Number of people aged 60 or over:
World, developed and developing countries, 1950-2050



Source: UNDESA, *World Population Ageing 2011* (2012; forthcoming), based on UNDESA Population Division medium projection scenario, *World Population Prospects: The 2010 Revision*.

Note: The group of "developed countries" corresponds to the "more developed regions" of the *World Population Prospects: The 2010 Revision*, and the group "developing countries" corresponds to the "less developed regions" of the same publication.

Distinct sub-sets with different life experiences among people 65+





OFFICE FOR SENIOR CITIZENS
TU TAKI KAKAMATA
Administered by the Ministry of Social Development

Savvy, multi-pronged, practical

Positive Ageing Strategy

Prepared by the Office for Senior Citizens

Positive Ageing Strategy

“Positive and active ageing is critical. If we’re to tackle the challenge of population ageing and grow New Zealand’s productivity, we must enable people to stay active as they grow older and to continue contributing to society.”

***By 2050, 64 nations will have 30% over 60
Auckland hits the mark in***

Disability

WORLD REPORT ON DISABILITY

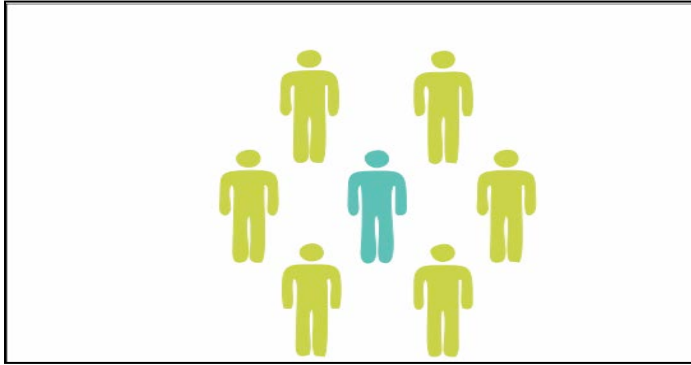


World Health
Organization



THE WORLD BANK

2014



1 in 7 people on the planet have
a disability

80% live in the developing
world

Most common reasons for functional limitation among adults

- ◆ Arthritis
- ◆ Back problems
- ◆ Heart disease
- ◆ Respiratory disease
- ◆ Sight + hearing limitations related to aging
 - ★ Number of people with difficulty walking is 10X those who use wheeled mobility



categories of functional limitation

Physical

Mobility
Dexterity
Strength
Stamina

Sensory

Sight
Hearing
Speech
Touch

Brain-based

Learning
Developmental
Mental health
Cognitive
Brain injury
Substance Abuse



Auckland regional disability rate is 19%

New Zealand's is 24%

Maori and Pacific people have higher rates of disability

BUT – Statistics on incidence and prevalence of disability are notoriously varied based on data methodology

Record-breaking, World-class Cultural Diversity



- ◆ New Zealand has experienced the highest per capita immigration rate in the **The Organisation for Economic Co-operation and Development (OECD)**.
- ◆ Immigrant arrivals at historic high since 2014 – Auckland attracts more than half.
- ◆ Auckland is also home to the largest Maori population in New Zealand at 11% of the population.
- ◆ Almost 40% of Aucklanders were not born in New Zealand

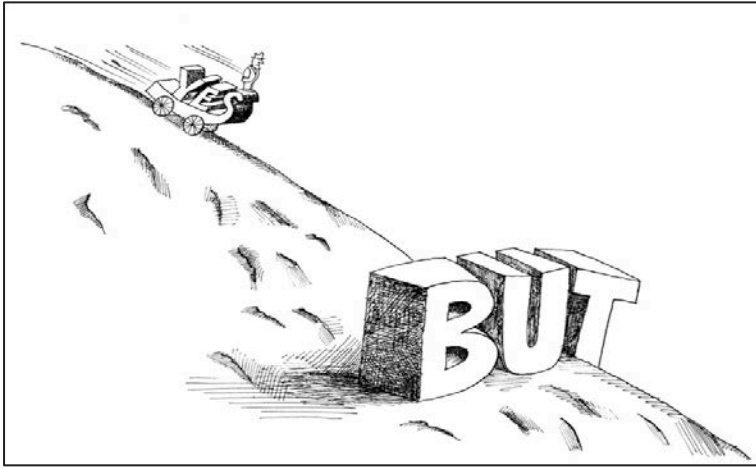


Start by pricking a few balloons





Accessibility laws and codes recognize that design is a civil and human right for people with disabilities – now nearly global.



Today two unintended consequences prevail:

- An assumption that there is a sharp line between 'us' and 'them'
- *Just tell me what I have to do.*



Design thinking...

I D E O

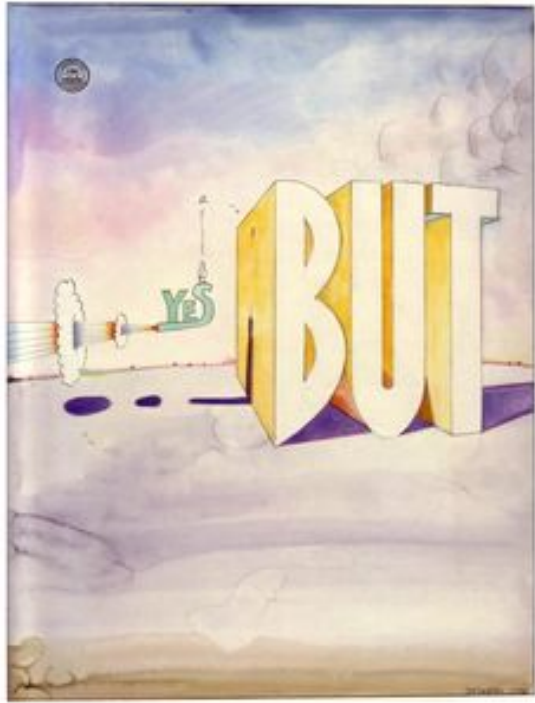
- a deeply human process that . . .
- relies on our ability to be intuitive, to see recognize patterns, to construct emotionally meaningful ideas. . .
- and to express ourselves. . .
- an overlapping process rather than a sequence of orderly steps. . .



Lessons from



- You can't lead without a great story easily told. . .
- They initiated 'design thinking' and gave it to everyone . . . Now an option for focus in business school master's programs
- So successful that they're the largest design consultancy in the world. . .



But design thinking and making 'things people want' tend toward solving all the wrong problems.

For example. . .

**The
New York
Times**

Solving All the Wrong Problems

Allison Arieff

July 9, 2016

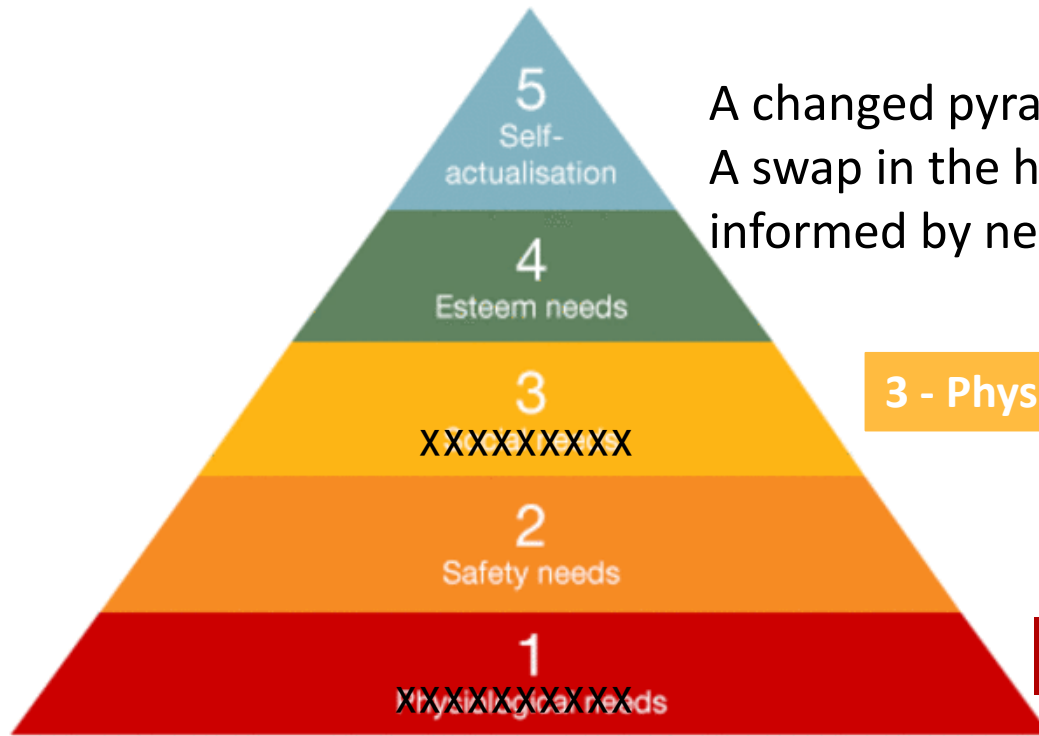
- A smart button and zipper that alerts you when your fly is down.
- A service that delivers beer right to your door.
- A service that sends someone to fill your car with gas.
- A sensor placed in your child's diaper that sends you an alert when the diaper needs changing.



Abraham Maslow



The pyramid that beguiled business



A changed pyramid
A swap in the hierarchy of needs
informed by neuroscience

3 - Physiological needs

1. Social needs

Image of Cognitive
Architecture cover
And of Ann

“The best design anticipates needs we don’t realize that we have.
In this case, satisfying the subconscious need to ‘feel seen.’



END OF
AVERAGE



Author & professor
Todd Rose

Jaggedness Human qualities, including body size, intelligence, talent, and character, are multi-dimensional and cannot be reduced to a single score or category.

Context Behavior always depends on the interaction of the person and the situation; it is meaningless to evaluate performance independent of the immediate context.

Only **equal fit** creates equal opportunity.

Promoting the principles of

INDIVIDUALITY

[LEARN MORE](#)



<http://www.individualopportunity.org>

**Inclusive Design -
A response to a changed
demographic reality**

Two architects who had polio illuminated a new way to think about designing for people



Ron Mace, FAIA - **US**

Stressed that we need to be clear about the difference between accessibility and universal design. Accessibility focuses on people with disabilities. Universal design anticipates human diversity and offers solutions at the general level. 1998



Selwyn Goldsmith - **UK**

Critiqued accessibility as “top-down” provisions for people with disabilities. He argued for a shift to a “bottom-up” way of thinking that *reframes normal* as anticipating diversity of ability. 2000

universal design...
inclusive design...
design-for-all?

...a framework for the design of places, things, information, communication and policy that focuses on the user, on the widest range of people operating in the widest range of situations without special or separate design...

Human centered design
(of everything)
with everyone in mind

Principles of Universal Design

Using the Principles of Universal Design one can better understand how good, thoughtful, design can affect all of us.

[Developed by a group of US designers and design educators from five organizations in 1997. Principles are copyrighted to the Center for Universal Design, School of Design, State University of North Carolina at Raleigh.]

1. Equitable Use
2. Flexibility in Use
3. Simple, Intuitive Use
4. Perceptible Information
5. Tolerance for Error
6. Low Physical Effort
7. Size and Space for Approach and Use



	Principles	Description
1	Equitable/ Saman	The design is fair and non-discriminating to diverse users in Indian context
2	Usable/ Sahaj	The design is operable by all users in Indian context
3	Cultural / Sanskritik	The design respects the cultural past and the changing present assist all users in Indian context
4	Economy/ Sasta	The design respects affordability and cost considerations for diverse users in Indian context
5	Aesthetics/ Sundar	The design employs aesthetic to promote social integration among users in Indian context



Redefined Disability in 2001 . . .

- ❖ Functional limitation as a *universal* human experience
- ❖ *Equalized* mental and physical reasons for limitations
- ❖ Defined disability as a *contextual* variable:
- ❖ Functional limitation becomes disabling based upon the intersection of person + environment

Environment holistically defined:

- ✓ *Physical*
- ✓ *Communication*
- ✓ *Information*
- ✓ *Policy*
- ✓ *Social/Attitudinal*



In refining disability as a contextual variable. . .

WHO recommended Universal Design as the most promising framework for identifying the “facilitators” responsive to the rising proportion of functional limitation and support independence and full community integration.

SUSTAINABLE DEVELOPMENT GOALS



Intended to ensure that economic growth is also socially just and environmentally sustainable.



We need to understand what works and what fails in real places with real people. *How? . . .*

Contextual Inquiry Research with “User/Experts” who have developed expertise by means of their lived experience in dealing with the challenges of the environment due a functional limitation.



United Nations
Programme on Ageing

*towards a society
for all ages* 

Madrid International Plan of Action on Ageing (2002)

Ensuring enabling and supporting environments

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

158 nations signed

137 nations ratified

- Respect
- Non-Discrimination
- Equality
- Participation
- Accessibility
- Universal design



A few illustrations. . .

Across the spectrum of environments

A society that gives toilets their due is a society that values life.

Junko Kobayashi, Japan's #1 toilet designer



Children's toilet room - mall



Roadside Rest Stop



Subway Station



1500+ new street benches installed





UK's Attitude is Everything improves Deaf and disabled people's access to live music by working in partnership with audiences, artists and the music industry.

Emphasis on ensuring the whole experience.

Singapore – Casa Clementi - Winner Gold UD Mark 2013



- ◆ Very dense, high-rise owned condominiums are home to 85% of the Singaporean population.
- ◆ Inclusive design throughout and include units designed for seniors integrated into the development
- ◆ Government required proportions in each development to align with the nation: Chinese/Malay/Indian. . .

Adaptive Reuse in Toronto

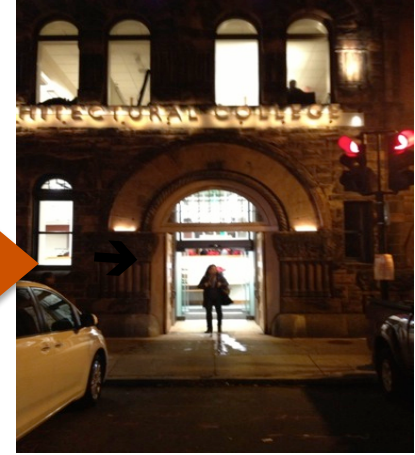


Quadrangle 

From storage space
to innovation space,
from nasty stairs
to a celebratory entrance



Balancing historic preservation, 'green' and inclusive



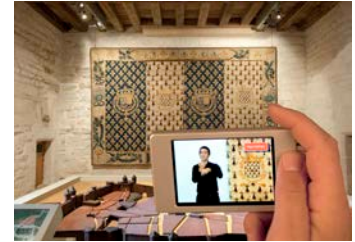
Institute for Human Centered Design

London's South Bank



Epitomizes public policy driving great inclusive urban design

CHÂTEAU
DES DUCS DE
BRETAGNE
MUSÉE
D'HISTOIRE
DE NANTES



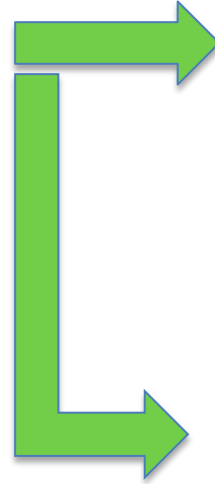
Bold inclusive and very participatory renovation of a 15th Century stone castle

THE GREEN WAY

RoseKennedyGreenway.org



Inclusively Designed



Accessible





Raises the bar on inclusive museum design

State-of-the-art App contains a fully accessible self-guided tour with audio, images, text, video, an interactive map, online ticketing + more





Bordeaux Light Rail - 3 lines, 89 stations



Tao Payoh Sensory Garden

(former car park!)



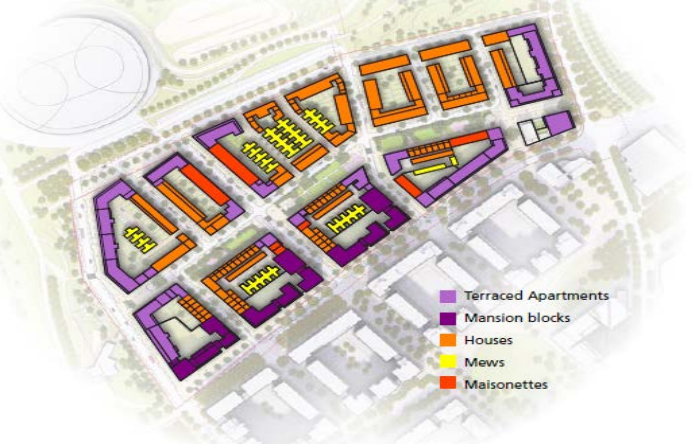
Designer: Yoshisuke Miyake, SEN, Inc.

Mayoral leadership for vital, inclusive and green – a central hub of the arts for everyone - Chicago's Millenium Park



London Lifetime Neighborhoods – A place to live for all of life

Five Principal Housing Types



Chobham Manor – 850 homes

PRP

Manisha Patel,
project director





The Auckland Plan

Priority #1

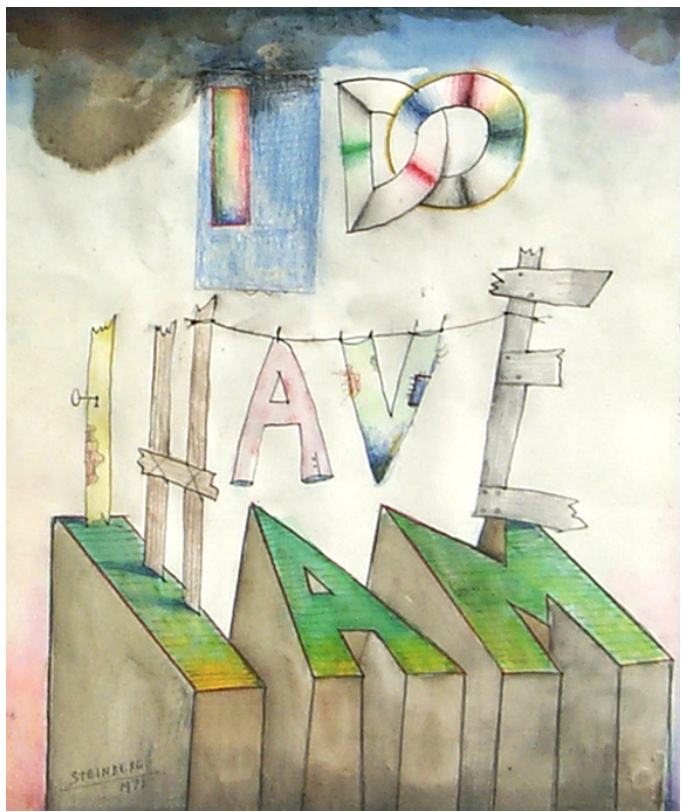
Create a strong, inclusive and equitable society that ensures opportunity for all Aucklanders.

Employ design as a tool of social equity that anticipates functional limitation and goes beyond barrier removal to enabling and facilitating environments.



Last points. . .

- You focus on getting **upstream** through policy – need to engage developers and designers.
- Think about User/Experts in design school studio - **Architects and designers create the context** of our lives.
- **Consequential design is inclusive design.**
- *Know that Auckland has the potential to be a global model – sorely needed!*



Mauruuru koe!
Thank you!