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THINKING CITIES LOOKING AT INCLUSION

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Other Regular features

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RETHINKING CITIES FOR PEOPLE

JESÚS HERNÁNDEZ GALÁN

At the end of winter 2020 our lives came to a standstill... the SYSTEM was blown up... We found ourselves locked up in our homes, restricting our activity to the bare minimum... we reconsidered essential questions regarding family, work, interpersonal relationships, spaces, ...

We had been in a model for some time for which any change required a process of adaptation and settlement that caused a slowdown, provokingin many cases that these projects of internal changes in society ended up in failure.

Only the digitization of processes at a global level, presupposed some immediacy, making technologies the immediate bastion of change or change to immediacy.

Suddenly all the processes were speededup so adaptation periods started to get shorter and shorter. Nevertheless, technology was relegated to a secondary role overnight after the appearance of COVID19, but it could appear with other "nicknames", why not?... And this new main actor, who has inevitably shortened those periods of adaptation to change, also definitely raises the need of society to immediate change if we really want the human race to endure...

Of course, in this necessary and immediate change, digitization played a fundamental role – it is one of its main intrinsic characteristics, is in its DNA – but it is not the only area whose resizing should be considered. Our cities, our homes, our

buildings, our relationships, our culture, our leisure, our tourism, our economy, our projects...

Almost 80% of European citizens live in cities. The cities have become centers of exchange and cultural, political, social and economic development, depending on them the rest of municipalities and regions, in the case of Spain. One of the greatest challenges that cities face in order to be innovative is the need to be designed according to the requirements of their inhabitants and visitors, taking into account their diversity: age, gender, functional capacities, cultural level, country of origin...And, especially to ensure that those who are at risk of exclusion have additional guarantees in order to fully enjoy their rights and participate in economic, social and cultural events in equal conditions.

People with disabilities and, due to similarity in their functional characteristics, the elderly, belong to this group of people at risk of exclusion.
For this reason, it seems clear that the public administration must be required to urgently promote several lines in order to "minimize" this possibility of exclusion due to disability:

- ***To promote the development and adaptation of normative and technical regulations considering universal accessibility in all areas, from the approach of "normalizing" accessibility to the environment, products and services so that they can be used and enjoyed by all citizens;***
- ***To effectively implement universal accessibility in the different areas defined by the General Law on Disability as a mechanism to guarantee the social inclusion of people with disabilities;***

- ***To apply the transversal management of universal accessibility in the planning, execution and evaluation of public policies;***
- ***To promote research on universal accessibility and design for all people and spread knowledge of this subject in the professional field and among citizens as a whole.***

Without this boost from public administrations, it will be difficult to carry out this necessary change from the previous model. A change based on people and their needs. A change in all areas of life that does not replicate mistakes made in previous changes.
We have a new challenge in front of us. The resizing and redesign of cities and spaces allowing their use and enjoyment to all people. A challenge in which we "should" have been involved for a long time, but now it seems urgent to recover city spaces for citizens. Spaces that are dimensioned for the different activities that people carry out in the city and that meet the different needs that people may have throughout their lives.

Our houses are like our stronghold, where we find refuge from any type of invasion or attack. Proof of this is the lockdown to which we were doomed for months. It is the space where people should feel more protected and isolated, but, are houses really prepared to assume the new functions arisen from this type of situations? The lack of versatility caused,in many cases, by their dimensional limitations, means that current homes are clearly not prepared for this kind of situations and for many others. This field needs to be rethought to adjust to the needs of sustainability, efficiency, health, ... and accessibility.

It is time to ask ourselves many questions regarding to different areas of our lives such as tourism, culture, diversity, management,... It is time to rethink goals, means and tools. Now

more than ever we will have to develop our projects and initiatives thinking 100% about people, placing the persons at the center of them, to protect them from attacks similar to COVID19 or others that could come, to ensure their integrity and not discrimination.

Even so,we don´t need to go crazy developing new rules and regulations to "resize" our society. Possibly we already have them, let's just think and redesign them.

We have strategies to face all these questions and challenges, such as the 2030 Agenda or the CSCAE's 2030 Observatory[1], which are fundamental tools to address these problems jointly through alliances between the different actors involved. Let's take them as a roadmap to work on the social inclusion of all citizens and the sewing of existing urban gaps and accessibility problems that generate unacceptable inequalities in the cities of the 21st century.

Now, more than ever, it is people´s moment, by and for people.

[1] ***CSCAE's 2030 Observatory_ http://www.observatorio2030.com/***

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During this time, he has been consultant for different public and private entities in the implementation of actions in urban, architectural and natural areas. He has also been a member of different European standards committees as well as Master coordinator and lecturer, and speaker in several conferences and seminars on accessibility (heritage sites, protected natural areas, Design for All, etc.), both at national and international level.

Borau has also participated in different accessibility and Smart Human City projects (Colombia, Ecuador, Qatar, among others) and in a multitude of projects on accessibility in urban planning, building, transport, tourism and social policies. He is also author of different publications on different accessibility areas (natural areas, Design for All, labor environment, urban design, etc.).

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1. #CanonMetroYMedio (#MeterAndAHalfCanon): resizing society after Covid-19

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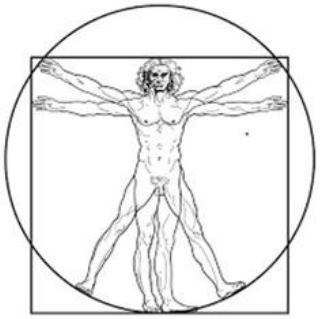
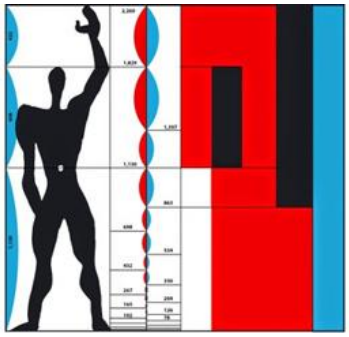
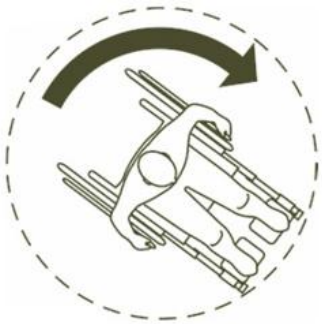
Author: MARIAN PALÁNQEX VALLES







Our society is changing. Or it must change as a result of this global pandemic and health crisis caused by Covid-19.

150 cm… 150 cm have never been so fashionable… even many years ago it was proposed as the standard measure to build spaces which could be used by wheelchair users or white cane users, parents with baby trolleys, and in general everybody regardless their specific needs. How curious! Now the *meter and a half canon*appear again… a meter and a half that was previously proposed as a measure to allow everybody to enjoy, move around and use the built spaces, has become a meter and a half of security against a lethal enemy. A meter and a half that was though to allow everybody to enjoy their life on equal terms, has become a meter and a half that allows you… to live? Has a new design canon appeared?

#CanonMetroYMedio (#MeterAndAHalfCanon).

A new dimension appeared that may mark the definition of environments like when the Vitruvian man or Le Corbusier's

Modulor appeared. After all, those canons marked a revolution in the architecture´s world.

Overnight, technology has been relegated to a secondary role after a new protagonist has entered the scene, health and safety.

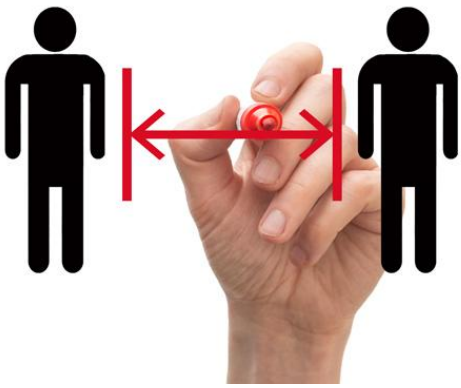
This time of change is similar to the one produced in society by the industrial revolution, the automobile revolution or the technological revolution. It is time for a global revolution whose primary objective is to protect human beings against possible attacks such as the one suffered by Covid-19 or others that may come. A revolution that brings to light the ability of the human being to adapt to new situations and that places the resilience of the species as the objective of each person.

Resizing our cities, our living space...

There was dispute during the lockdown about time slots, permitted and banned spaces, safety distance... How many times have we heard in last months the minimum safety distance to prevent transmission of the virus? Surely the entire population knows that the distance of one and a half meters is what the health authorities propose as a minimum to avoid contagion between people.

We have seen how during lockdown streets in our cities were crowded by people walking or playing sports, using spaces that surely few months before they barely used to access their private vehicle or to do some nearby shopping. The space intended for running vehicles was occupied, people complained about the narrowness of the sidewalks, the situation of their pavements, the maintenance of the gardens and their invasion in transit areas, the danger of the pits unprotected... Never before those 150 cm had been missed so much, free of obstacles, without projections on the pavement, with a stable surface...

We have a new challenge in front of us: resizing of cities and spaces allowing their use and enjoyment to all people. A challenge in which we "should" have been involved for a long time, but now, with the appearance of this new variable of sustainability and health security of the human species, there is no time for delay.



Resizing our public buildings, our shared spaces

Also that *#CanonMetroYMedio* should be the measure that establish the design and adaptation of buildings for public use to ensure the use and enjoyment of them by all people in the maximum conditions of usability, safety and comfort.

Buildings have been rethought to meet the safety and hygiene measures not only for their workers but also for their visitors.

Meeting and crowded spaces need to be resized from that meter and a half, as well as the way of interacting with its different elements avoiding direct contact.

Traditional support elements need also to be rethought. Elements such as handrails, electronic terminals, relief maps or elevator buttons, how can they be activated and manipulated safely nowadays? Innovative technologies should be the main allies of these "more traditional" elements. Without forgetting that the use of these technologies should not be a barrier but available to everybody.

What about elevators? These are essential elements to allow vertical communication in buildings, especially in high-rise buildings for people who cannot use stairs. Will #CanonMetroYMedio be the new design pattern? Understanding that, in many cases, due to obvious dimensional limitations, it will not be possible, it will be necessary to look for alternatives.

The case of elevators needs a deeper reflection. Its limitations in existing buildings will pose a problem for people to use. Since the implementation of the #CanonMetroYMedio seems difficult, it will be necessary to restrict its use to people who really need it. Other measures should be complementing the size to minimize the impossibility of collective use such as sanitation systems, materials to be used, activation systems...

Resizing our homes, our safest space and where we should feel more protected

Housing is the space in which people should feel more protected but are they really prepared to assume the functions imposed by this type of situation? Who has not set up a corner in their house to be able to work from home while children were playing or doing their homework? All of us have had to redistribute the spaces of our home to adapt to this situation.

Once again: will it be necessary *#CanonMetroYMedio* to be used for the design of new houses? I doubt that this pattern can be used for the houses themselves, but of course for the common areas. The houses themselves must be considered as multipurpose spaces, with the possibility of adapting to the needs of the people who inhabit them, due to whether temporary, permanent, caused by a limitation of skills or movements or by their own aging.

A new challenge has been arisen to ensure that homes are adapted to the life cycle of their inhabitants, with inclusive spaces and away from situations of unchosen solitude, to enhance interaction in coexistence, preventing confinement from entailing a loss of autonomy or difficulty at receiving assistance.

Resizing our transport networks

Another area in which the immediate challenge of downsizing is clear is public transport networks, both at the urban and interurban levels. Both the management of these networks, as well as the physical infrastructure or rolling stock, must be reconsidered (with the #CanonMetroYMedio?). It is necessary to take innovative measures to ensure the use of transport by all

people in the maximum conditions of comfort, safety and usability. The entire chain of the travel cycle must cover these three aspects to the maximum, therefore, the various issues that affect this process must be reconsidered.

Perhaps the time has come to question if the urban means of transport will be able to continue to function as they did until now. Appearance of Covid-19 must be the most absolute confirmation that it is not.

The same happens with intercity and international connections in transport elements crowded with seats with little space to move during the journey and disabling their use for many people for this reason. Perhaps the time has come to rethink whether the transport business should take precedence over usability, comfort and safety. Of course, global sustainability will have to be put in the balance, but for this, innovative initiatives must be launched to ensure that global sustainability in parallel with the issues that really satisfy the people who use these means of transport.

#CanonMetroYMedio existed for many years. Let's use it now to protect, ensure usability and inclusion of all people in this "new" society

Resizing our way of working

Workspaces as we have known until now are going to cease to exist?. What is clear is that Covid-19 has annihilated the adaptation time that digitization required of companies or organizations for its definitive implementation. The most obvious example is telecommuting. A way of working remotely that was gradually entering our working life (although in many other countries it was more advanced) and that suddenly has made a

hole in our homes and in our lives. In a certain way, teleworking (for those of us who are lucky enough to be able to do so) has protected us from the attack of the virus.

But, just as I indicated when referring to the adaptability of our homes, our equipment, communication networks, virtual platforms... must be accommodated for usability by all people in the maximum conditions of comfort and safety. And here we refer to security against other types of viruses and threats against users.

This area will also have to be resized and redesigned... not with the meter and a half canon this time, but with all the necessary measures to avoid the digital gap.

Resizing our activity and our customs

We are listening everywhere to changes in society, changes in customs and uses, what is clear is that something is going to change and needs to change. And not only what affects the most superficial (but no less important) such as security against contagion, but also in what has to do with the core of activities, the why and what for of things.

But to do so, it is not necessary to start developing new rules and regulations from zero, just let´s rethink what we already have. By way of example, #CanonMetroYMedio have existed for many years. Let's use it to protect as while ensuring usability and inclusion of all people in this "new" society.

#CanonMetroYMedio? Has a new dimension appeared that should mark the definition of environments like when Vitruvian man or Le Corbusier's Modulor appeared?

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Graduated as technical architect by the Universidad Politécnica de Madrid. She started her professional work as a construction director and as a structure calculator. She has been working at Fundación ONCE for 25 years in the field of Universal Accessibility, carrying out actions aimed at promoting design for all people, specific awareness and training activities at national and international level. She also has written several publications, coordinated awards and organized accessible events and presence in fairs, like Construtec, Hostelco, Sima or Cevisama. Carmen is part of the teaching team of the Master in Accessibility for Smart City, the Global City at the Universidad de Jaén, the Universal Accessibility Course at the Colegio Oficial de Arquitectos de Madrid and different MOOCs. Since 2013, she organizes, coordinates and participates in the training project "Design cities and towns for all people" at the national level.

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ACCESSIBILITY AND INTELLIGENT BUILDINGs

Author: CARMEN FERNÁNDEZ HERNÁNDEZ

BUILDING ORIGINS

In ancient times, the first shelters used by man were transitory and mobile due to the nomadic lifestyle of that time and easily transportable materials were used. Later, permanent constructions started to be built, as humans began tobe settled down. Stone, baked clay bricks and dust mixed with water, began to be used, followed little by Little,by iron, steel and reinforced concrete and finally different polymeric materials were introduced. But a main element has been common along all ages regarding to the spatial organization of peoples, which gave rise to architecture, it is the idea of shelter. The concept of shelter has been present in the subconscious of past societies, marking their culture to present day.

In our cities and rural areas, we can see very different buildings, in general we are going to classify them into two types, buildings for residential use (housing) and buildings for non-residential use (health, educational, recreational, administrative, cultural, commercial, religious use, etc.). Perhaps buildings for non-residential uses are evolving and revolutionizing architecture the most, so the most innovative, avant-garde, accessible and sustainable materials, techniques and technologies are being used, but in looking at the situation of lockdown,this article is focused on buildings for residential use.

Buildings for residential use are those used as permanent accommodation for people and where all day-to-day activities are carried out. When we were little and we used to play tag, when

someone was about catching you, you used to say "home" and there you were safe until a partner came to rescue you. Today in an unprecedented crisis and health emergency, we have been told to "stay home", as the most effective measure to combat this epidemic. For all these reasons, housing is the vital unit.

Human beings who live in these homes are diverse by nature, heterogeneity is innate, but there are also many people with disabilities who have to stay locked up in their homes on a daily basis. The existence of obstacles and the lack of elevators prevents them from go out into the street and just like in the tag game, they have to wait for someone (relatives, neighbours, Red Cross assistants, health services...) to come and rescue them so they can go to the street to carry out daily tasks (such as doing shopping, going to vote, going to the doctor, managing a procedure in a public body, going for a walk, etc.). In this context, accessibility takes a special relevance, it must be considered as the key element and constitute the fundamental pillar in the design to adapt to the needs of its users and not the other way around. At the same time, technology is the tool that serves as a basis for accessibility to reduce dependency situations and increase the autonomy of people with disabilities.

Accessibility is a fundamental right of people and not an option that can be chosen based on the capacity, disability, sensitivity, mentality or commitment, and to be so it is protected and collected by law: at international level by the Universal Charter of Human Rights in its articles 1 and 2 and by the International Convention on the rights of Persons with Disabilities of the UN in its article 9; At European level, the European Council is the one that has bet the most for the need to harmonize rights and obligations in relation to diversity with the approval of

conventions and recommendations (European Strategy on Disability 2010-2020: a renewed commitment for a Europe without barriers), at national level by the Spanish Constitution of 1978 in its articles 9, 14 and 49 and more specifically by Royal Legislative Decree 1/2013 (of November 29th, which approves the revised text of the General Law on the rights of people with disabilities and their inclusion social), which consolidates the Law of Social Integration of the Disabled, of April 7th, 1982, Law of Equal Opportunities, Non-Discrimination and Universal Accessibility 51/2003, of December 2nd, 2003 and Law 49/2007 (of December 26th , which establishes the system of infractions and sanctions in terms of equal opportunities, non-discrimination and universal accessibility for people with disabilities), by Royal Decree 173/2010, of 19th February, which modifies the Technical Building Code, in terms of accessibility and non-discrimination of people with disabilities (Security of Use and Accessibility Basic Document) and by Royal Legislative Decree 7/2015 of October 30th, which approves the consolidated text of the Land and Rehabilitation Law that consolidates the Land Law and Law 8 / 2013 Urban Rehabilitation, Regeneration and Renovation, also at regional and municipal level.

Technology is the application of science to serve us, with significant progress in recent years, its main objective has been to make our lives easier, more comfortable, and safer, solving everyday problems. Specifically, for people with disabilities, it is an important stimulus to increase their autonomy, promoting independent living and improving their quality of life.

ACCESSIBILITY IN INTELLIGENT BUILDINGS AND HOME AUTOMATION

The origin of home automation dates to the seventies, when the first automation devices appeared. In the late 1980s and early

1990s, SCE (Structured Cabling System) began to be incorporated into buildings to facilitate the connection of all types of terminals and peripherals to each other, using cables and sockets distributed throughout the building, these were called intelligent buildings. Later, the automatisms intended for office buildings, and others, began to be applied to private homes, giving rise to home automation.

Home automation is therefore integration of automatisms related to electricity, electronics, robotics, information technology and telecommunications, with the aim of ensuring the user an increase in comfort, security, energy savings, communication facilities, possibilities of entertainment and increase of accessibility level could be added. Home automation seeks to integrate all the appliances and devices in the home, so that they work in an orderly manner and with minimal user intervention, being manipulable both from inside and outside the home.

All the installations that can be carried out in a home automation system provide home users with infinite number of benefits. These are some examples: activating the light, raising and lowering the blinds, installing a video intercom that identifies faces and tells you who is calling through the mobile, having a digital peephole to report on the computer or mobile phone who is ringing the bell, having a digital lock that does not need keys to enter and can be activated by mobile phone or that identifies you and lets you in, locating presence detectors, detectors of emergency (smoke, water, gas), activating alarms via streaming, warning the firefighters, closing the stopcocks, or connecting entertainment systems through various platforms.

The benefits these systems can provide are related to:

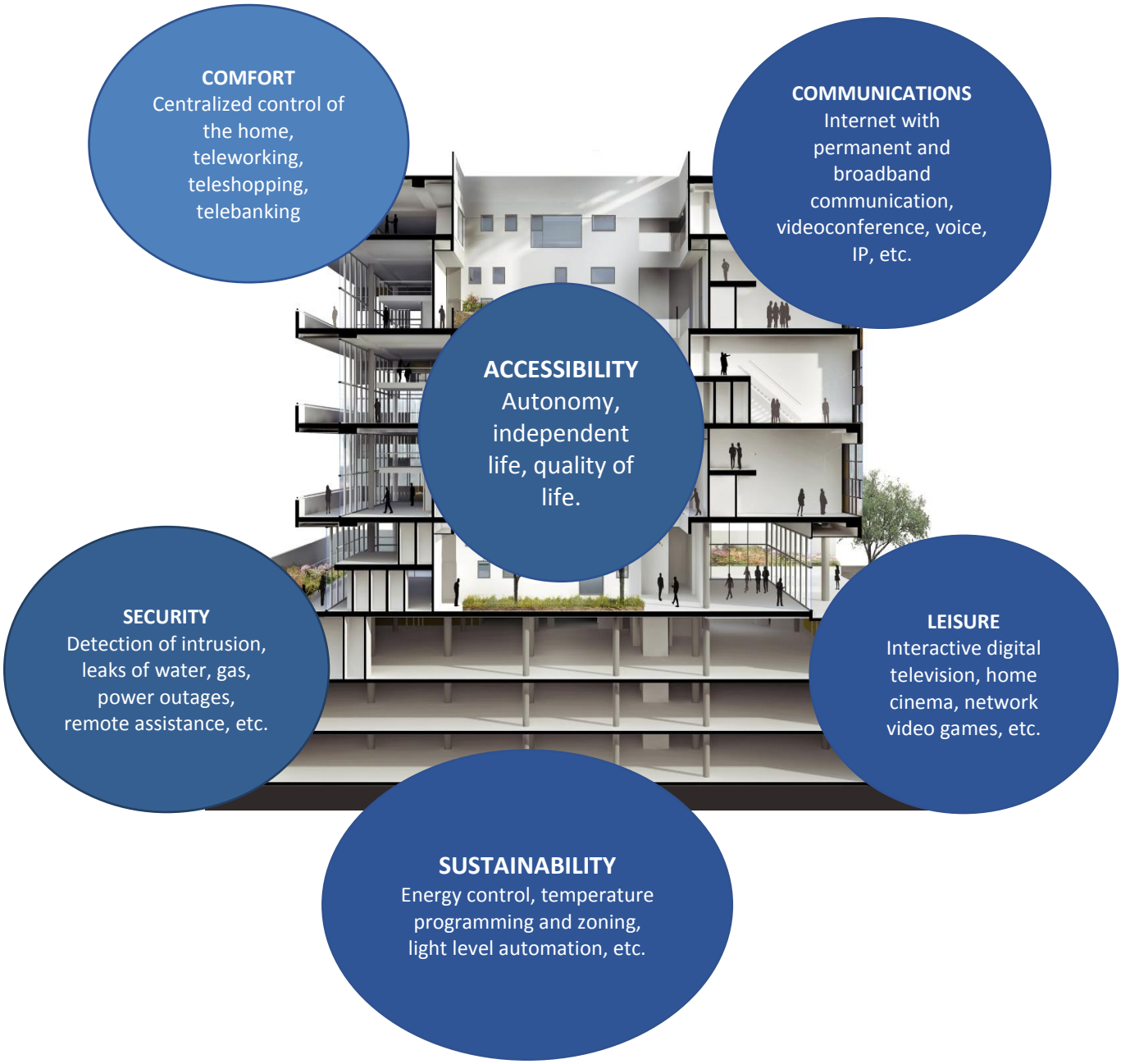
- ***Comfort**. It maximizes quality moments at home, adapts to the changing needs of users and improves living conditions.*
- ***Health**. It guarantees good environmental conditions and rest time, protects from dangerous situations and warns of abnormal situations.*
- ***Savings**. Greater energy, time, money and worry savings are achieved by knowing what happens at home when you are away from it.*
- ***Connectivity**. There is continuous communication with the home and its inhabitants, which allows to act quickly and remotely control from anywhere.*
- ***Privacy**. Protection against inclement weather, ensures privacy with respect to people outside the home and ensures safe access.*
- ***Aesthetic**. Fewer mechanisms on the walls, maximum functionality in less space and maximum use of lighting to create different environments to experience sensations.*
- ***Sustainability**. Better consumption of energy and natural resources, less environmental pollution, changes in environmental habits, visibility of consumption to make users aware of their actions at home.*
- ***Accessibility**. It offers the ability to manage the home autonomously, reduces the degree of dependency since with a single interface (control, computer, tablet, telephone, etc.) all devices in the house can be controlled (lights, temperature, music, windows... even a transport crane). This possibility improves mood, self-esteem and empowerment since all the elements can be managed from the remote controlusing voice recognition commands, blowing, blinking*

or even with the movement of the iris. Confidence is also accentuated because warnings and/or alarms can be sent in case of emergency, communication with the outside world (friends, co-workers, etc.) is encouraged, intercommunication with relatives, assistants, telecare services and home helpers is facilitated, and costs in assistance services are saved.

- ***Future. Automation is adaptable and expandable according to the inhabitants´ needs and the circumstances of society, such as the current moment in which we live, so it can be prepared for teleworking and online shopping, compatible with the IoT and wearables, ready for eHealth and medical care through distance and prevented for possible energy, health, security crises, etc. as well as possible legislative changes.***

Home automation for people with disabilities is more than a luxury, it is a help tool, and even a necessity to be able to develop and carry out daily activities autonomously and independently. Technologies offer real and effective answers and solutions and contribute to the process of social, educational and employment integration. Enjoying a home without obstacles is the dream of many people with disabilities and home automation is the tool to make it possible, without forgetting the digital gap that can occur. Accessibility is necessary to be includedin the design of devices, their cost, the ease of interaction, handling and understanding. Accessible home automation must be designed for all people, easy to usewithout great skills, intuitive, flexible, easy to handle with error tolerance and affordable.

HOME AUTOMATION APPLICATIONS



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Best practices in assisting people with disabilities during an emergency

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People with disabilities and with other special needs such as advanced age, tend to be more vulnerable than others during an emergency. This is due to multiple interrelated factors that includethe nature of their disabilityas well as the social and physical environment surrounding them. Barriers such as stairs, narrow doors or unleveled floor transitions increase the vulnerability of people using wheelchairs making it difficult for them to escape a building during a fire (ESCAP, 2014; Saunders, Aurenche and Scherrer, 2015).

A recurring problem affecting by people with disability is that they are generally perceived as a people that exists on the outskirts of society, with realities and needs that have little to do with the rest of the population. These perceptionscan be dangerous because they feed stereotypes that can lead to serious repercussionsthat can have a severe impact on the lives of these people. For example, it can contribute to make them invisible to society, and to leave their needs and concerns out of product and service design including emergency preparedness plans and protocols.

Another problemis that people with disabilities are not viewed as a diverse group(Kim, 2019). While many of their differences are obvious, there is a persisting belief that they face are the same problems, have the same needs and therefore require the same solutions or services or to be treated the same way. In fact,

people who share a disability can have very different needs.Thus, when offering assistance to someone with a disability it is important to keep in mind that they may not fit your idea of a person with a disability.

For example, people with vision disabilities are generally divided into two groups: blind people and people with low vision. While it is true that blind people cannot use their sight to navigate their surroundings, see images or read texts, their needs and choice of aid or assistance can vary greatly.For instance, Braille is a tool commonly used among blind people to get access to information but there are a large number of persons who do not know Braille either because they didn't have the opportunity or the means to learn it. Screen readers require a learning curve, and to be familiar with computers or hand held devices not everyone has access to or the ability to learn how to use them.

People with low vision are even more diverse. There are several types of low vision that generate different needs and abilities. Some people have central vision loss which makes it difficult for them to see the objects in the center of the field of vision. Others have peripheral vision loss. In other words, they have difficulties seeing things out of the corner of their eyes. There are people with low vision who have nocturnal blindness, color blindness, blurry or hazy vision or see things with a yellow tint on it.

Depending on the severity of their loss, some can navigate a street or a space without help or see images and read texts using assistive devices. Others however, need white canes or guide dogs in order to move around particularly at night or in low light environments.

With hearing impaired people, the situation is similar. This disability affects people in many ways, depending on the degree

and type of loss. Some people have very little or no hearing.Others have residual hearing, which varies significantly from person to person.As a result, they use many forms of communication which can include sign language, oral language or both depending on the situation and needs. There are people with profound hearing loss that are not familiar with sign language.

Furthermore, contrary to popular belief, not all hearing-impaired people read lips and not all situations are suitable for lip-reading. If there is not enough light, the person has their mouth covered, their heads lowered or is looking the other way, reading lips is difficult (CNSE, no date).

Also, not all people with hearing disability use hearing aids or cochlear implants, and those who do wear them don't have them on all the time. These devices cannot be used under water or wet environments such as in a shower. They may also run out of battery or be damaged during an emergency.

Regarding people with mobility disability, there is a tendency to view them solely as wheelchair users. While a lot of them do use wheelchair, this disability encompasses various limitations that can affect different parts of the body and has levels of severity that vary depending on the situation (Disability Observatory, 2016).

Some people lack the ability to move a part or an entire limb. Others are able to move their limbs to a certain degree but require the use of mobility aid such as crutches, canes, walkers, etc. These people may have a slower gait than others and have difficulty going up or down stairs.

People with reduced mobility in the upper limbs may find it difficult to carry out many basic tasks. For example, lifting,

carrying or moving objects or making fine motor movements. This means they may have issues opening doors, windows, and operating fire extinguishers, among others.

People with intellectual disabilities are another highly vulnerable group. This disability is very broad and complex and affects the ability to learn, solve problems or react appropriately to different situations. In addition, people who have it may face difficulties communicating or correctly interpreting what is happening around them (Plena Inclusión, s.f.).

People with advanced age can also be highly vulnerable during an emergency. While not all of them have disabilities, they may have similar needs. In fact, a single person can face several limitations that are similar to those with disabilities as a result of the age. For example, low vision, hearing loss, mobility or memory difficulties due to cognitive decline.

Barriers in an emergency

Some of the most common barriers people with disabilities face during an emergency are the following (NFA, 2016):

- ***Not being warned or alerted about an emergency;***
- ***Inaccessible emergency warning and communication systems. For example, visual alarms or sound alarms without an alternative, communication with emergency services available by voice calls only.***
- ***Emergency exits hard to find***
- ***First responders and other emergency personnel with no proper training on how to communicate or provide assistance to a person with special needs***
- ***Emergency exits and routes with barriers (long distances, stairs, doors or windows hard to handle, etc.)***

- ***Shelters that do not comply with accessibility standards***
- ***Inflexible emergency or evacuation protocols***
    - ***failing to rescue guide dogs,***
    - ***forcing people to leave their assistive devices behind,***
    - ***failing to inform about the ongoing emergency protocol,***
    - ***not knowing how to properly guide a blind person out of the emergency,***
    - ***being overprotective with people who can fend for themselves***

Best practices in an emergency

1. ***If you are trying to get a person's attention without much success, consider the possibility that the person is not hearing or seeing you. Try lightly touching their shoulder.***
2. ***If you approach a person with the intention of offering assistance, tell them your name, your position and role in the emergency. Some people may not be able to see or to recognize your uniform.***
3. ***If you notice that a adult person has a disability, do not treat them as a child, and always speak directly to them even if they have an assistant.***
4. ***Avoid using abstract language when giving instructions. Use phrases such as to your left, to your right instead of here or there. People with vision disabilities will understand you better if you are precise in your instructions.***
5. ***Provide a sound or a visual alternative to emergency messages conveyed visually or through sound. People who do not see or do not hear will receive the information.***
6. ***If your mouth is covered, such as with a half mask, people with hearing disability may not understand you. In the event of communication difficulties, try to leave your face uncovered. If you cannot do it because of safety concerns,***

use hand gestures or write down what you are trying to communicate.

7. ***If your job is to establish a shelter or an evacuation route, keep in mind the physical, sensorial or cognitive needs of the people you have to protect and provide assistance***
8. ***Some people with disability require assistive devices to carry out basic tasks, such as wheelchairs, crutches, hearing aids and others. When evacuating someone with a disability, make sure they have these devices with them. Keep in mind that guide dogs need to be rescued along with their owners.***
9. ***If you have to guide a person with a disability and you don't know how to do it, ask them directly. For example, blind people will need to put their hand above your elbow to walk a step behind you to detect your movements. You may also provide descriptions of the path you must follow.***
10. ***If you offer digital or printed safety related information about an area, make sure it is accessible. For websites, follow Accessibility Guidelines for Web Content, defined by the W3C. If the information is printed, use a large font size (minimum 12 points) and make sure the contrast between the font and the background is adequate.***

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EVOLUTION OF REGULATION REGARDING TO UNIVERSAL ACCESSIBILITY IN BUILDINGS_ SPAIN CASE

Author: FRANCISCO JAVIER CREMADES FERNÁNDEZ

INTRODUCTION

"*Laws have been made for the good of citizens*." Marcus Tullius Cicero

Normative regulation of the building activityexists from the first known legislative texts[2], in order to guarantee minimum conditions of safety, usability and quality of the built object.

Legislation on the built environment has undergone major changes over time, incorporating new aspects and modifying pre-existing standards according to society demands for better safety, comfort, respect for heritage values (generators of identity of towns and cities), caring for the environment, and developing as well new ways of using public space and buildings.

Universal accessibility becomes part of this evolutionary process throughout the 20th century. Initially linked to the disability´s medical-assistance approach, accessibility started to be recognized by the international community[3] at the beginning of the 21st century, as one of the fundamental pillars to guarantee equal rights and opportunities among all people. This fact has had

[2] Hammurabi's code (1750 BC) dedicates six of its laws to regulate the construction of houses.

[3] Convention on the Rights of Persons with Disabilities, approved by the General Assembly of the United Nations, in session on December 13rd, 2006. Signed by Spain on March 30th, 2007 and ratified on November 23rd, 2007 (publication in the BOE nº 96, of Monday, April 21st, 2008).

a direct and decisive impact, in the conception of built environments (design and execution) and their specific regulations.

In the Spanish territorial model, the legislative power related to accessibility is transfered to the autonomous entities, so each of them approves its own regulations on universal accessibility to the built environment. However, the State, as guarantor of equal rights and opportunities among all citizens, has developed a national legislative body that establishes the minimum accessibility conditions that all built elements must meet, and to which all the regulations developed by the rest of the Public Administration must comply.

The aim of this article is to review the evolutionary process of the Spanish legislation, at a national level, in terms of universal accessibility. To this end, the regulations that directly regulate accessibility conditions in buildings and their adjoining spaces have been studied, in chronological order of publication in the Official State Gazette (BOE).

General laws regarding the rights of persons with disabilities have been included in this set, as it is considered that their enactment has had a decisive influence on the evolution of normative texts on accessibility to the built environment.

CHRONOLOGICAL EVOLUTION OF SPANISH REGULATIONS ON ACCESSIBILITY IN BUILDINGS

Accessibility to the built environment made its appearance in Spanish legislation in the last quarter of the 20th century[4], being

[4] The Council of Ministers approved, in its session on September 27th, 1974, the program prepared by the Interministerial Commission for the Social Integration

the first normative that establishes specific accessibility conditions for buildings the Decree 1766/1975, of 20th June, on accessibility features for disabled people in officially protected housing.

This Decree was followed, one year later, by the Resolution of the General Directorate of Social Services approving the rules on the removal of architectural barriers in buildings belonging to the common services of the Social Security dependent on the General Directorate of Social Services.

This growing concern of society for the integration of people with disabilities, was also echoed[5] by the Spanish Constitution[6].

The Royal Decree 355/1980, of 25th January, on the reservation and situation of officially protected housing for the disabled, established the number and location of the adapted housing that must be contained in the new social housing developments, but did not set the characteristics that must be met.

As a development of the previous norm, the Order of the Ministry of Public Works and Urbanism, of 3rd March 1980, published the characteristics of the accesses, elevators and interior conditions of the houses for people with disabilities projected in social houses.

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of the Disabled, which would serve as the basis for the regulatory development in terms of accessibility to the subsequent built environment.

[5] Article 49 established that "The public powers will carry out a policy of precision, treatment, rehabilitation and integration of the physically, sensory and mentally handicapped to whom they will provide the specialized attention they require and will protect them especially for the enjoyment of the rights that this Title (Title I of fundamental rights and duties) granted to all citizens".

[6] Ratified in a referendum on December 6th, 1978.

A year later, the Order of the Ministry of Education and Science was published in 26th March 1981, approving the needs´programs for the drafting of construction and adaptation projects of special education centers.

The Law 13/1982, of 7th April, on the social integration of the disabled, allocated the first section of its Title IX to the built environment, in order to guarantee mobility and the elimination of architectural barriers.

The Royal Decree 1634/1983, of 15th June, about the classification standards for hotel establishments, determined the minimum number of adapted rooms that each establishment must have, referring to the accessibility parameters included in the Order of the Ministry of Public Works and Urban Planning, dated 3rd March 1980.

The dispersion of criteria generated by the approval of different regional legislations on universal accessibility, made necessary to publish the Royal Decree 556/1989, of May 19th, by which minimum accessibility measures are arbitrated in buildings. The application of this norm is compatible with the Order of the Ministry of Public Works and Urbanism, of 3rd March 1980, and supplementary to the regional regulations.

The Law 10/1990, of 15th October, on sports, established that all new sports facilities promoted by the State Public Administrations must be accessible to people with reduced mobility and the elderly, but it did not set the parameters to be met.

Law 38/1999, of 5th November, on building planning, established that the accessibility conditions necessary to allow access and

movement through the building to people with reduced mobility or communication are part of the basic functionality requirements expected from any building, "in the terms provided in its specific regulations".

After 20 years of the enactment of the Law of Social Integration of the Disabled (1982), an update was necessary to accommodate the new ways of understanding disability. For this reason, Law 51/2003, of 2nd December, on Equal Opportunities, Non-Discrimination and Universal Accessibility, was enacted. Although this legislative text did not establish particular conditions regarding to accessibility in buildings and urbanized spaces, it established, for the first time in Spanish regulations, the concept of "reasonable adjustment" for already built environments.

The entry into force of Law 51/2003, promoted the approval of two normative texts that regulate the conditions of universal accessibility in buildings: Royal Decree 366/2007, of 16th March, which established the conditions of accessibility and non-discrimination of people with disabilities in their procedures with the General State Administration; and Royal Decree 505/2007, of 20th April, which approved the basic conditions of accessibility and non-discrimination of people with disabilities for access and use of urbanized public spaces and buildings.

The following year, Order PRE/446/2008, of 20th February, was published, which determined the specifications and technical characteristics of the accessibility and non-discrimination conditions and criteria established in Royal Decree 366/2007, of 16th March.

Likewise, and as it was established on the Third Additional Provision of Royal Decree 505/2007, the Royal Decree 173/2010 was published, amending the Technical Building Code, approved by Royal Decree 314/2006, in accessibility and non-discrimination of people with disabilities. This modification included a Support Document to guarantee the effective adaptation of accessibility conditions in existing buildings.

PARAMETERS REGULATED BY THE SPANISH LAWS ON THE ACCESSIBILITY CONDITIONS OF BUILDINGS

		Decree 1766/1975	Directorate of Social Services	Public Works and Urbanism	Ministrerial Order of Education and Science	Royal Decree 556/1989	Order PRE/446/2008	Royal Decree 173/2010
Publicationyear		**1975**	**1976**	**1980**	**1981**	**1989**	**2008**	**2010**
Scopeofapplication	**General**					**X**		**X**
	Specific	**X**	**X**	**X**	**X**		**X**	
	New construction	**X**	**X**	**X**	**X**	**X**	**X**	**X**
	Existing		**X**				**X**	**X**
Outdoorspace	**Parking**		**X**					**X**
Access	**Door**							**X**
	Ramp		**X**	**X**	**X**	**X**		**G**
	Difference in height	**X**	**X**	**X**	**X**	**X**		**X**
Horizontalflow	**Corridors**	**X**	**X**	**X**	**G**	**X**		**X**
	Doors	**X**	**X**			**X**		**X**
	Pavement						**X**	**G**

Verticalflow	**Ramps**		**X**	**X**	**X**	**X**		**G**
	Lifts		**X**	**X**	**X**	**X**		**X**
Rooms	**Doors**			**X**	**X**			**X**
	Monoeuvrespace			**X**	**X**			**X**
	Furniture			**X**			**X**	**X**
Toilets	**Door**	**X**	**X**	**X**	**G**		**X**	**X**
	Monoeuvrespace		**X**	**X**			**X**	**X**
	Toiletelements		**X**	**X**	**X**		**X**	**X**
	Supporteleme nts		**X**	**X**	**G**		**X**	**X**
Various	**Signing**	**E**	**E**	**E**			**X**	**X**
	Lighting						**X**	**G**
	Facilities		**X**				**X**	**X**
Fireprotectio n	**Signing**						**X**	**X**
	Evacuationele ments						**X**	**X**
	Refugezone						**X**	**X**

E: outside the building. G: general condition, not specific to accessibility.

CONCLUSIONS

Although the regulations on accessibility to the built environment in Spain can be considered very recent, the evolution of the concepts and regulated parameters has been intense and incessant. Throughout these forty-seven years, universal accessibility has turned from an accessory element to the State's medical-assistance work, into one of the fundamental aspects to guarantee the independent life of people with disabilities (since 2003).

The normative regulation has been becoming more ambitious, increasing its scope of application, from real estate promoted by the general administration of the state (official protection housing in 1975 and 1980, or socio-sanitary establishments in 1976 and 1981) to be extended to all buildings, both new and existing, regardless of their use or ownership (in 2010).

Parallel to this growth in the field of application, there has been a significant increase in the number of regulated elements, going from certain parts of the horizontal circulations in 1975, to the vertical circulations and toilets for social-sanitary buildings in 1976 and for social housing in 1980, up to evacuation routes in case of emergency and their signage in 2010.

Likewise, the legislation has evolved from an approach focused on physical disability, mainly on the spatial needs of wheelchair users, to the incorporation of elements designed to facilitate ambulation, apprehension, communication and orientation of all people, regardless of their abilities. Along these lines, it is significant to see how some of the parameters regulated by the first accessibility regulations have become mandatory, regardless of whether it is or not an accessible element or space.

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Sense recovery: From Pompeii to the Sustainable Development Goals

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It is time s to reflect on a key issue for the present and the near future, the new city and housing models centered on the person.

Something was changing in the world of urban design, and the pandemic came to speed it up. A friendly city model that promotes relationships between people and the spaces in which they carry out their day-to-day activities is making its way to leave behind the old model of city isolation. Time to avoid individualism and short-termism has arrived: we are nothing when we stop being a community. We need to park the cars and explore the city, promote sustainable mobility and practice personal relationships. Urban designs must be implemented understanding the physical and virtual relationships that take place in the city, avoid unnecessary travel to carry out daily activities and take advantage of innovative Information and Communication technologies.

We are talking about urban design centred on people. Far from thinking of cities as a set of buildings, monuments and infrastructures, the important thing defended by David Sim, author of the book "Soft City", one of the pioneers of the idea of urban design centered on the person, is to promote relationships between people and spaces, with nature and between one person and another. The person-centered urban planning model is based on three key concepts: connectivity to achieve a better integration of space, accessibility to guarantee inclusion, and value generation to strengthen identity and urban heritage.

Cities require new approaches that maintain "small" scales to strengthen the compact city, as this provides benefits for both the public and private sectors, to be more easily managed, increase the quality of life of people, decrease traffic and reduce pollution. From this point of view, a friendly or "soft" city would be one that makes all these connections possible.

How can we know if we live in a soft city? Pay attention to a series of details: Do you have shared spaces, such as squares, parks or patios where you can interact with other neighbour's? Is it easy to meet people on the street or do you rather live inside the house? Do you have to drive to get to the nearest cafeteria or supermarket? Is it full of cars or is it easy to cycle or walk? Are there places where you can sit? Can you speak to the person at the kiosk who sells the newspaper? Can the retailer recommend you because he knowsyour tastes?

Citieshave to be fair to their citizens, and to do so they must evolve at the same time as societies. We are at a moment when comfort and adaptation of the environment to the different needs of citizens is essential. People with disabilities, the elderly and children must be taken into account in the new city designs so all of them can experience the city with a feeling of belonging.
If a city is designed for children, the elderly and people with disabilities, then it will be "friendly" to all its inhabitants. Mobility inside and outside the home is also key when detecting the friendliness of a city. We must promote inclusive environments so that all generations can enjoy.

Perhaps we don't have to invent nothing new, we just have to recover empathy and apply common sense. If we look back and think about...

On October 24th, 79 AD. Pompeii, one of the most prosperous and best organized cities of Roman civilization, was submerged in a blanket of ashes, lava and dust by the eruption of Vesuvius; This caused life and infrastructure to freeze as they were at that precise moment. Approximately 1,500 years later, the site was excavated and, in addition to important infrastructure, hundreds of buildings and well-connected networks of streets and highways were discovered. The first "pedestrian crossing" appeared in the streets, made up of large stone blocks, designed with the users in mind, to allow people to cross the streets on the same plane as the pavement without having to step on the road. There were also layouts so when cars had to pass where people were crossing, they had to slow down. Will the same thing happen in the current situation?

We are all human beings, but we are also urban beings, as it can be seen in Goal 11, Sustainable Cities and Communities, of the United Nations 2030 Agenda for Sustainable Development. It is clear that cities will play a very important role in achieving these Sustainable Development Goals, but to do so we must consider the person as the center, the strengthening of interpersonal relationships, the relationship between planning and urban design, the inclusive city, integrating the city and sustainability by developing landscape infrastructure as a primary asset. Green areas, public spaces, buildings, transport, services, etc. will be accessible, inclusive and safe for women and children, the elderly and people with disabilities in particular and for all citizens in general.

According to data from the World Bank, more than half of the world's population live in cities and this proportion will reach 70% in 2050[7]. To ensure that cities provide opportunities for all, it is essential to understand that the concept of inclusive cities involves multiple factors: spatial, social, and economic. When

[7] "***Migration and Cities, new collaboration to manage mobility", International Organization for Migration,***

these factors interact in a negative way, they trap people in poverty and marginality. On the contrary, if the interrelation is positive, they can improve people's lives and reduce exclusion.

In 2015, around 3 million people were migrating to cities every week and urban built-up land was doubling. Today, given the socio-political situations in many countries, this figure is skyrocketing. In order not to exclude anyone, it is essential not only the physical environment to be inclusive and empowering, but also virtual and social environmentsas a result of co-creation and Design Thinking.

We need to see the environments that surround us in a different way, the most important thing is people and they must always be at the center of any action or policy. But together with the requirements and needs of people, we must consider the limits that Mother Nature sets for us, and thus respect the slopes of volcanoes, coastal limits, river beds and banks, avoid runoff areas or areas of extreme temperatures among other natural issues, as they are essential to monitor uncontrolled urbanization, which in addition to lack of accessibility and exclusion, affects the mental health of the inhabitants.

Facing this reality can cause problems and challenges, but we must not forget that in many cases innovation is the solution and progress, and true progress must have a social component, which responds from the design of cities to all people, regardless of their abilities, seeking a safe and inclusive urban planning.

ISSN: **2582-8304**

Letter from the Chairman's Desk By Sunil Bhatia PhD

Greetings for Merry Christmas and prosperous New year 2022.

I was standing at the side of the road for a friend to pick me up in his vehicle and found school girls and boys were cycling, wearing school dresses and a bag was resting on their back and body parts -mind, hands, and legs were synchronized in such a manner for making cycling possible. They were chirping as usual young students should do and their behavior of carefree and full of energy was justifying the character of a generation of future but subconscious mind was trained for achieving their respective goals effortlessly.

An idea struck me that design of 'coordination' that helped in performing the desired task of cycling. I imagined the way they will sit in class to attend lectures needs coordination for proper learning. In recess, they will eat food from their lunch boxes that is kept in the schoolbags, and in playtime, they will coordinate with other body parts for perform for preparing for a win in games. The role of coordination is so significant in design that we have made a separate area focusing on it is called interface design. We have learned the art of coordination with mental ability, other senses and focused not to tax our body and never compromise for extraction of maximum output.

Our country was independent in the year 1947 and bullock cart was in practice for transporting the load from one place to another and roads conditions was not good. That time the design of cartwheel was very poor and professional approach was completely missing . It was with big iron wheel without consideration of role of frictionless and the major load was born and dragged by an ox/ bullock on their neck. Sometimes the load was so heavy that their neck broke and injured or died on the spot or was not possible to pull with their physical strength and above that driver kept lashing for inflicting physical and mental pain for dragging. Our prime minister brought a bill in parliament and passed the legislation that the iron wheel of a cart is prohibited and replaced the iron big wheel with an air-filled tyre and tube of automobile of light weight vehicles and should have ball bearing for smooth frictionless dragged motion . The next major point was permissible horizontal load on the neck of an ox should not exceed ten kilograms for avoiding physical torture. The problem came to the minds of people when realized the limitation of the power of coordination for pulling loaded wheel carts by ox and people were sensitive enough to realize the pain of animals.

A street helmet seller was repairing the eye flap by tightening the screw and I observed that one hand was holding a screwdriver for fixing at the head of the screw and conveniently turned for opening and closing. The other hand was holding the helmet for fixing the movement. The way he was sitting by folding his leg on the ground for performing his task where coordination role was clearly visible to me. I was so engrossed in observing his job of repairing my senses failed to notice the arrival of my friend and he kept blowing the horn of the vehicle for my attention. As I realized some horn is blowing for me, attention shifted and with a smile, I opened the door and sat

in mechanical, effortless in the usual manner without taxing my brain .

Life is not designed for performing very heavy jobs but human minds are capable of it. Our fingers or legs or hands or back has limited strength for performing the job. When humans learnt of holding and carrying the weight by body parts it was very small weight can be carried. The use of the shoulder or head further enhanced the capacity of carrying the load. Carrying on bend back and holding the bag not to slip using taking hand backwards for holding by finger was the ultimate a man can carry. The desire for carrying more load was reason of the use of other external means and later in modern time it turned for logistic system. It is the coordination for carrying optimum load forced for designed for various transport means.

I encounter a small child that reminds my days. One day I found a child attained the age of taking admission in school and mother worked for preparing for basic behaviors for learning in discipline manner at home. She makes the child for focus on what she is doing and expects the imitation of her behavior by child. That will make the art of coordinate the body parts for sitting and writing in class. I recalled my eligible age for going to school and my mother gave me a pencil and paper for writing. She used to write and spoke loudly for my attention for immitation. As a child my mind was fickle and she was trying for stability for focusing on writing. Somehow I hold the pen but the writing was difficult because of a lack of coordination on my finger for holding the pencil, the hand was not moving on paper as I was wishing because of lack of coordination. She used to hold with her hand over my holding of pencil and makes me to write and wherever I go wrong she corrects . As I grew realized perfect coordination in my writing and after attaining maturity I was so perfect in writing that I could write the same word in a similar but repetitive without

committing mistakes and it turned out to be part of establishing my identity and known as the signature. Attending school helps in learning discipline for civilized life . I call discipline is nothing but coordination of body ,mind and meeting expectation of society.

Training of coordination led to discipline and man lives with it throughout life to proving civilized. As age progress, the muscles refuse to work as our mind directs and aged people lost control over the discipline and urinate or saliva drips out of the corner of the mouth . That is a social embarrassment and to avoid it designers have designed adult diapers. Similarly young girl who is facing her difficult days of menstruation and using and disposing her used sanitary napkins. Alzheimer's patients suffer from a lack of coordination of body parts with the mind.

Everyone is an inborn designer and uses this trait for performing jobs. Lack of coordination leads to clash. Clash leads to a hurdle for sequential progress for reaching the desired destination. It was clearly visible in mechanical design where various levers were designed after designing a sequence of steps performing one after another and handing over the performed designed job for the next stage for concluding final steps. Wherever clashes surface and do not move to the next steps designers were thinking of removing clashes. I remember a story where a man was killing the animals and making leather for covering the entire earth from avoiding sole from burning from heat while walking. A sage asked him ` why are you killing so much animals?' He replied 'I face heat on my sole while walking naked feet .Killing animals for the laying of their dead skin for covering earth surface. Sage replied 'there is another and easy way of avoiding clash by designing shoes for the protection of your sole'. The moral of the story is that avoid clashes with intelligence and minimum resources. Any task has naturally inbuilt of hurdles because of inheritance of clash character in it. I admire the caveman who

used the clash for protection by using a large stone for keeping in front of the entrance that was larger than the size of the entrance for clash for reducing any possibility of slipping enemies in the cave. In modern times it turned out the design of doors, windows, and ventilators where clashes are deliberately designed for proper safety and help in guiding of opening. and closing. Clashes helped in designing the simplest design of latches where deliberate attempt of reaching strong clash for protection.

Coordination needs utmost balance in achieving desired objectives and lack of it leads to clash and over coordination creates problem of holding at a particular point and delay in handing over or never allow to move to next level. We need perfect balance in coordination .In the simplest manner when an athlete participating in a relay race needs a perfect mechanism in receiving as well as handing over the baton and performing his/her area of assigned area with perfection and efficiently for proving a winner in the race. Any mistakes by any group member makes a loser.

Sometimes handing over process between two stages creates a shocking or fear of damage is possible at receiving end. The designer creates a delay or buffers mechanism for absorption of that experience. A stabilizer or electric motor starter is designed for meeting such challenging situations and creates smooth coordination.

One day my water pipeline was leaking and the plumber used the galvanized pipe for repairing and fixing the joint. I noticed there was a very minor leakage and informed the plumber. He said 'do not worry , it will fix after a few days and there will no drip'. I found a rusting because of continuous water presence around that area closed the minor opening and his words came true of not dripping. It was his experience of creating coordination with the

galvanized pipe that rusting is natural and creates proper fixing because of natural rusting.

Child tries for standing on feet but failed in establishing coordination with other body parts and keeps falling. As we allow for learning the child for establishing coordination by using a walker or with human support this for support exercise helps for learning the art of standing and walking without falling and hurting. In the old age experience lack of coordination of losing muscles or mental strength and need support for avoiding any possible eventualities that time support of walking stick or wheel chair is required .

When I hold the piece of cloth in hand that simplest design of coordination amazed me. I can understand the drawing of thread from the natural cotton and arranging threads vertically and passing thread horizontally by lifting vertical thread leaving one after another for giving proper strength. Later on, handloom was designed for making this work easy and less time-consuming. This design of loom indicates that the person was easing his physical pain and wished to complete it in less time. That was the beginning of the idea of automation.

Before the warp and weft interlaced technique, I think weaving was just an extension of knots and braiding was the first step of weaving and the next level surfaced with the use of the device of two simple horizontal bars that can be maneuvered by holding in hand for designing knots. The design of the crochet device shocked me where a simple turn at the head of the holding device and simple process of knotting can create a cloth design.

Entire film industry is based on coordination of different departments and actors are coordinating extremely well for creating natural scene of movie. Perfect coordination helps in taking us to natural world and our body experienced the same

what film was supposed to react. In circus the players are jumping in air holding one another and shifting from one bar to another in such a beautiful coordination it amazes us and in return we experience entertainment. When a dancer uses body arts in perfect coordination in such a specific fashion it makes us entertain.

My mother cooks with complete ease and comfort that attain proper taste of the food. It is possible because of her long experience. Experience is nothing but that function slips into subconscious level for guiding for proper coordination for executing for perfectly specific task . One day my mother informed that she has hired a experienced driver for vehicle. Immediately I realized experienced means the driver should have that much experienced for anticipate the possible eventualities and avoid accident while driving the vehicle. It is possible only when his mind is tuned to subconscious level for coordination his body and mind for performing task.

I am thankful to Dr JESÚS HERNÁNDEZ GALÁN, Director of Universal Accessibility and Innovation at the ONCE Foundationfor accepting our invitation for innagural special issue for January 2022 and he did complete justice as Guest Editor and invited authors who has contributed great articles. Each article is reflection of hard and sincer efforts and hope our readers will enjoy and learn a lot from their knoweldge .

Lambert Academic publication for celebration of 150th special issue by publishing a book by compiling editorials "Design For All, Drivers of Design" translated in eight different languages from ENGLISH into French, German, Italian, Russian, Dutch and Portuguese. Kindly click the following link for book. "Morebooks", one of the largest online bookstores. Here's the link to it:

https://www.morebooks.de/store/gb/book/design-for-all/isbn/978-613-9-83306-1

With Regards

Enjoy reading, be happy, and work for the betterment of society.

Dr. Sunil Bhatia

Design For All Institute of India

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Forthcoming Issues

February 2022 Vol-17 No-2

Colleen Kelly Starkloff, Founder

Starkloff Disability Institute

Colleen Kelly Starkloff is co-founder, with her husband Max, of the Starkloff Disability Institute. During the 1970's, she co-founded Paraquad, Inc. in St. Louis in conjunction with Max.

Ms. Starkloff has worked in the field of disability rights since 1973. She has extensive experience educating and training the disabled and non-disabled communities on issues related to employment of people with disabilities, independent living; developing new program initiatives; and coordinating activities that promoted the successful implementation of the Americans with Disabilities Act (ADA). She served two terms as the United States Organizer of the Japan/USA Conference of Persons with

Disabilities. In 1999, she joined a citizens' advocacy group responsible for the establishment of the Affordable Housing Commission in the City of St. Louis, which oversees a $5M Affordable Housing Trust Fund. She ensured that housing created by the Trust Fund must include Universal Design features. She served as Founding Chair of the Commission. She is the creator and Organizer of 6 national Universal Design Summits which train architects, designers and builders on uses and benefits of Universal Design in home and community design.

In 2005 she introduced Disability Studies into the curriculum at Maryville University and also taught a course on Universal Design in 2010. From 2005-2010 she collaborated with the Missouri History Museum to create a 1,000 square foot exhibit focused on Disability History. Titled "The Americans with Disabilities Act: Twenty Years Later", this exhibit remained open and free to the public for 19 months. An estimated 163,000 visitors saw this exhibit. In 2011 she established the Max Starkloff Speaker Series, to educate the public on the need to create a world that welcomes all people with disabilities. In 2011 she was presented a Doctor of Humane Letters by Fontbonne University. In 2013 she began consulting and training on issues related to employment of people with disabilities in mainstream, competitive jobs. In 2014 she was responsible for organizing advocacy efforts in Missouri to encourage Senate ratification of the Convention on the Rights of Persons with Disabilities.

In 2016 she began a new venture, "Colleen Starkloff Talks Disability", as a public speaker on disability issues. A university Commencement Speaker, and general speaker, Ms. Starkloff is sought after to speak nationwide on a variety of subjects related to employment of people with disabilities, disability history, the Disability Rights Movement, Independent Living and the emancipation of all people with disability. A 1993 graduate of

Coro's Women in Leadership Program, she has won numerous awards for her work in the Field of Disability. She is also a St. Louis "Woman of Achievement" for 2017. (Watch the award ceremony here.) She was awarded an Inspire Award by the BiState Development Agency in 2018. In 2019, she received the Saint Louis University Alumni Merit Award for the Doisy College of Health Sciences.

Her life story is captured in Max Starkloff and the Fight for Disability Rights, a biography about her late husband. The book is available in print, at the Missouri History Museum and as an ebook through Amazon.com; An audible book can be downloaded at Audible.com.

March 2021 Vol-17 No-3

Dr. Christopher Lee

I have a Ph.D. in Education with a specialization in Instructional Design, a Masters of Fine Arts in Writing and Poetics (MFA) and a Masters in Education (M.Ed). My research interests center on Universal Design for Learning. I love to write and teach. Whenever teaching I learn a little more about what Universal Design for Learning means and how much students enthusiastically embrace its principles. My philosophy of education centers around the learner. As an instructor, I am much like a coach and so, strive to listen to what students are saying and then facilitate their learning as much as possible. As an administrator, I listen to students, staff and everyone I work with

to learn more about Universal Design and how I can be a part of helping to make life better for all. I love technology and the doors it opens for everyone. I love hiking, reading, writing, weight lifting, and most of all, being with my family.

April 20-22 Vol-17 No-4

Dr. Shatarupa Thakurta Roy
Designation: Assistant Professor, Department of Humanities and Social Sciences & Design Programme, Indian Institute of Technology Kanpur, India
BFA Kala Bhavana, Visva Bharati University 1997 MFA Kala Bhavana, Visva Bharati University 1999 PhD Department of Design, IIT Guwahati 2014
Research Areas: Graphic Art, Art History, Art Criticism, Design Theory, Design History, Methodology of Visual Research, Visual Culture, Visual Communication, New Materialism in Visual Art, User Interface Design, Graphic Novel and Graphic Medicines.

]

May 2022 Vol-17 No-5

Sugandh Malhotra, Ph.D.

Associate Professor,

Coordinator: Mobility and Vehicle Design program,

IDC School of Design, IIT Bombay, India

Dr. Sugandh Malhotra has over seventeen years of professional experience in industrial design and automotive design industry. He has worked on design projects for marquees in the industry that include Honda R&D, Hero Global Design, Hi-Tech Robotic Systemz Ltd., SETI Labs Berkley, Aprilia Motors Italy, Bombardier Canada and most of the leading automotive and consumer brands of India. He has worked on over 75 projects and has been instrumental in design of over 23 techno-commercially successful launched products at a pan India level. He has won many International and National level design awards. Dr. Malhotra takes keen interest in teaching design and had been mentoring students from many leading institutions such as IIT Delhi, IIT Roorkee, SPA Delhi, Lady Irving College, IILM, Pearl Academy among others.

Since 2016, Dr. Sugandh Malhotra is working as an Assistant Professor and the Coordinator of MVD program in IDC School of Design at IIT Bombay.

His research interest areas include design research methods, future design possibilities, trend research and design forecasting and intelligent mobility systems.

June 2022 Vol-17 No-6

Lourdes Arreola Prado

Built Enviorment Program Manager

International Association of Accessibility Professionals (IAAP)

G3ict : The global Initiative for Inclusive ICT's , USA

August 2022 Vol-17 No-8

Prof. Dr. Jurgen Faust, PhD

Professional Experience

2021 – current Professor SRH Mobile University, Germany

2013 – 2020 President Macromedia University Munich, Germany

2010 – 2013 VP for Academic Affairs and Research, MHMK Munich, Germany

2008 – 2013 Dean, MHMK, Munich, Germany

2007 – 2021 Full Professor Media Design and Communication, Macromedia University Munich, Germany

2009 - 2012 International Strategic Advisor, Istituto Europeo di Design (IED) Group, Milan, Italy

2007 - 2009 Chief Academic Officer, IED group, Milan, Italy

2007 – 2009 Professor Monterrey Tecnologico, Monterrey, Design and Theory, Mexico

PhD, University of Plymouth, Planetary Collegium, England

Thesis title: Discursive Designing Theory, Towards a Comprehensive Theory of Design

Supervisors: Prof. Dr. Derrick De Kerkhoeve, Prof. Roy Ascott, Prof. Antonio Caronia, Prof. Mike Phillips

1982 - 1984

Postgraduate Studies, Free Academy in Nuertingen, Germany (painting/graphic and sculpture), Fine Arts degree

1979 - 1982

Undergraduate Studies, University of Applied Sciences, Reutlingen in Cooperation with

University of Bremen, Germany, Diploma in Chemistry (Dipl. Ing.)

Jurgen Faust (born 1955 in Germany) is a design professor, researcher who has worked in four different countries, US, Mexico, Italy and Germany as a Professor for Design, Theory and Media as well as an administrative Dean in four countries. He is a co-founder of a private university in Germany, as well as a developer of many undergraduate and graduate programs in a variety of fields in design. His PhD research was about designing design through discourse within the design community. His research work let him to create a comprehensive theory describing design processes and models.

Over the past decades he has specialized in managing through designing and published about the idea of transferring design methods and processes into the management field.

He was as well teaching design and design theory. He contributed to a variety of books and publications. In addition, he is a practicing researcher, designer, and artist, who showed in many places, including museums and galleries in Europe, Germany, France, England, Italy, Poland and Slovakia as well as the United States.

Jurgen Faust was the President Macromedia University of Applied Sciences in Munich for 8 years and since March 2021 he is a professor at SRH Mobile University Germany where he currently develops a new Design School Design focused on distance education with the master programs in Design Management and UX & Service Design.

New Books

it is available on **www.morebooks.de** one of the largest online bookstores. Here's the link to it:
https://www.morebooks.de/store/gb/book/design-for-all/isbn/978-613-9-83306-1

ISSN: **2582-8304**

The Ultimate Resource for Aging in Place With Dignity and Grace!

Are you looking for housing options that are safer and more accommodating for independently aging in place? Do you want to enjoy comfort, accessibility, safety and peace of mind – despite your disabilities, limitations and health challenges? The help you need is available in the Universal Design Toolkit: Time-saving ideas, resources, solutions, and guidance for making homes accessible.

This is the ultimate resource for individuals and professionals who want to save time, money and energy when designing, building, remodeling or downsizing a home. The Universal Design Toolkit will help you take the steps to design homes for your clients or yourself while eliminating the costly trial and error challenges you'd inevitably encounter if faced with this learning curve on your own.

Rosemarie Rossetti, Ph.D., teamed with her husband Mark Leder in creating this unique Toolkit. They bring ten years of research, design and building expertise by serving as the general contractors for their home, the Universal Design Living Laboratory– which is the highest rated universal design home in North America.

Within the Toolkit's 200 richly illustrated pages, you'll find: Insights that distinguish *essential* products, services and resources from the *unnecessary*.

Proven, realistic tips for finding the right home.

Home features you need to look for. Nothing is assumed or left out.

Handy home checklists and assessments.

Interview questions to help you hire industry professionals with knowledge and experience.

Photographs that provide a frame of reference to inspire, clarify and illuminate features andbenefits.

Valuable resources to save you time, money and energy.

Helpful sources of funding.

Space planning dimensions for access using assistive devices such as wheelchairs andwalkers.

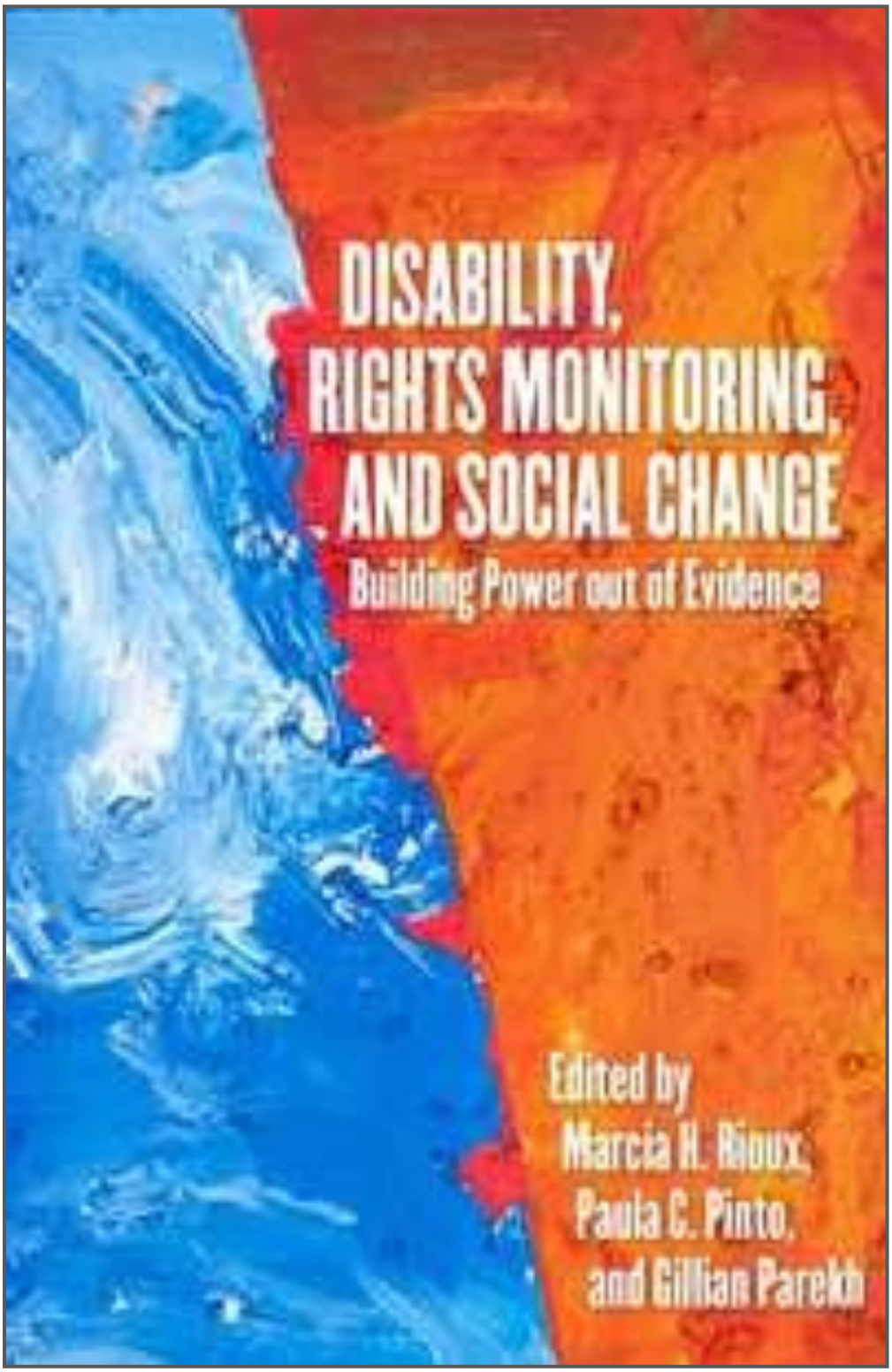
And so much more!

If you want useful, dependable advice and easy to implement ideas from respected experts who know the ropes, you'll love Rossetti and Leder's perspective. As a speaker, author and consultant who uses a wheelchair, Rossetti has helped hundreds of people design their ideal homes. Now her comprehensive Toolkit is available to help and support you!

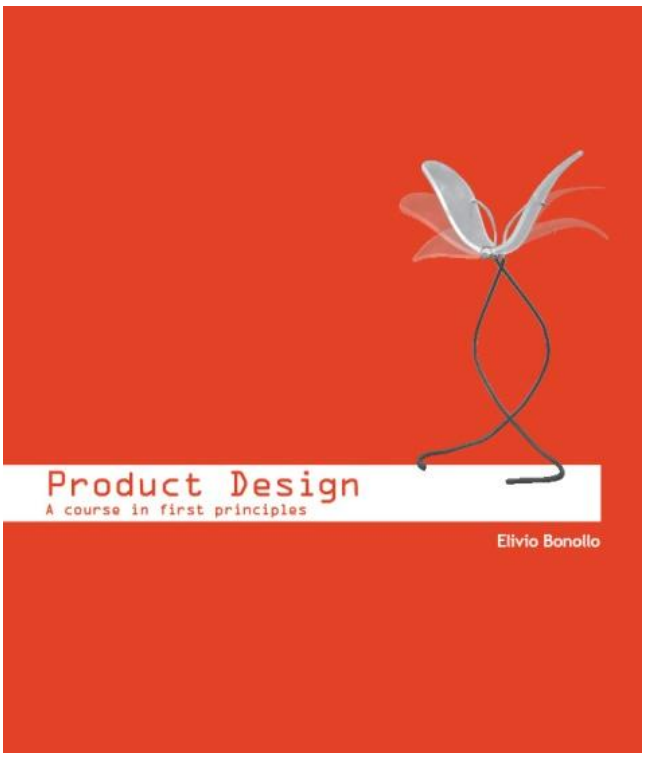
Get the Universal Design Toolkit now to start your project!

Disability, Rights Monitoring and Social Change:

ISSN: **2582-8304**



New Update: ELIVIO BONOLLO (2015/16) PRODUCT DESIGN: A COURSE IN FIRST PRINCIPLES



Available as a paperback (320 pages), in black and white and full colour versions (book reviewed in Design and Technology Education: An International Journal 17.3, and on amazon.com).
The 2018, eBook edition is available in mobi (Kindle) and ePub (iBook) file versions on the amazonand other worldwide networks; includingon the following websites:
ePubversion:www.booktopia.com.au
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READING HINTS: ePub files can be read with the iBook app on Apple MacBook/iPad devices; ePub files can also be read on Desktops PCs, Laptops and Surface devices using readers such as the Microsoft *freda*ePub reader. The Kindle (mobi file) reader isflexible and suitable for reading the eBook on PCs; Kobo readers can also be used to read ePub files on MacBook and iPad. All formats are very interactive with very good navigation.

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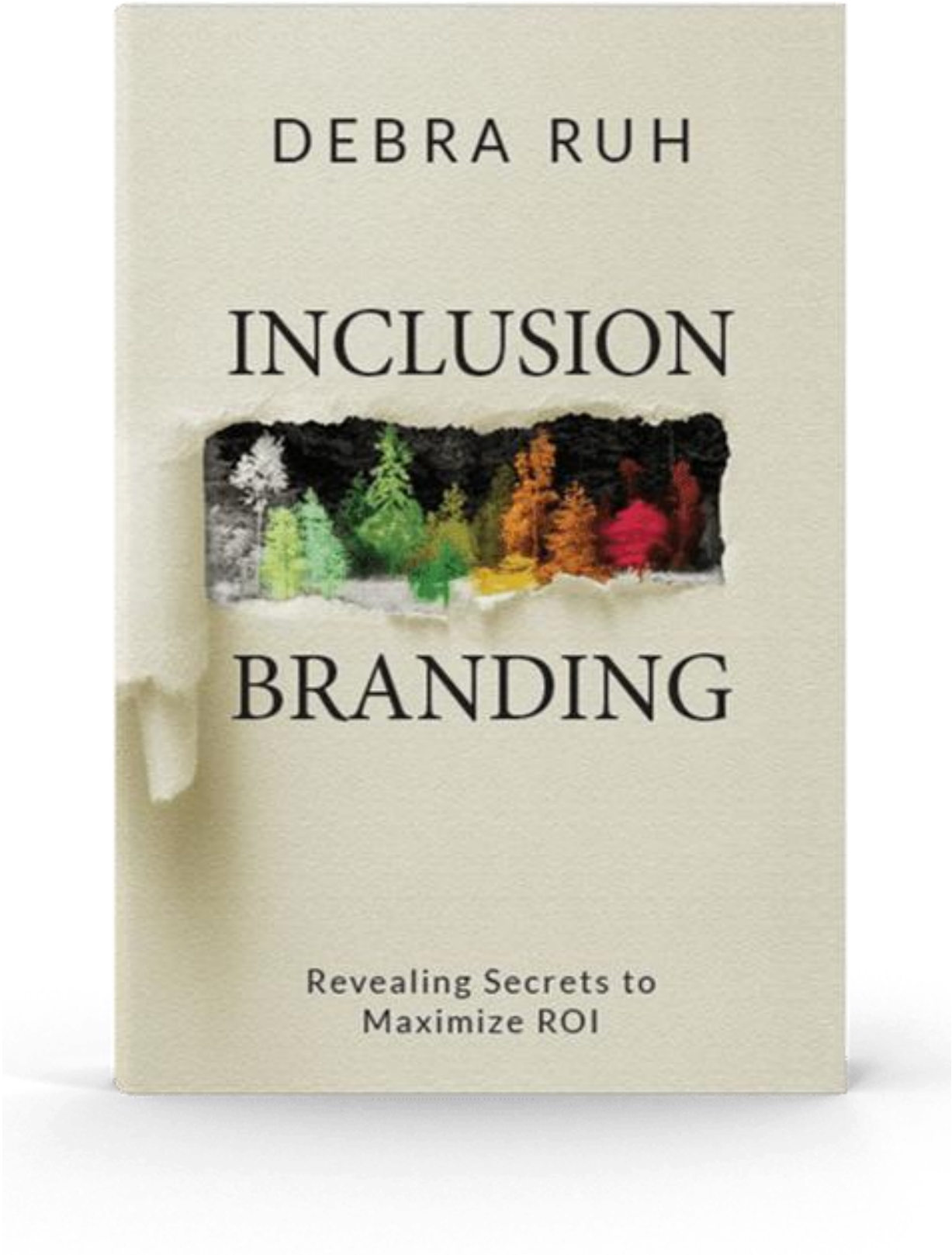
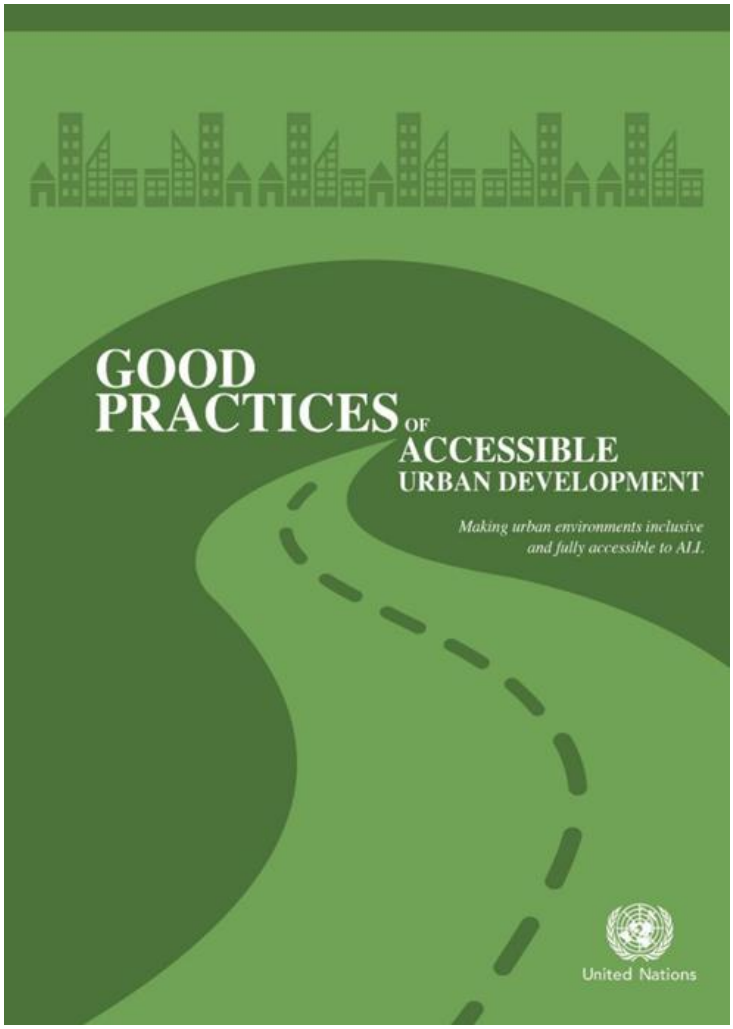
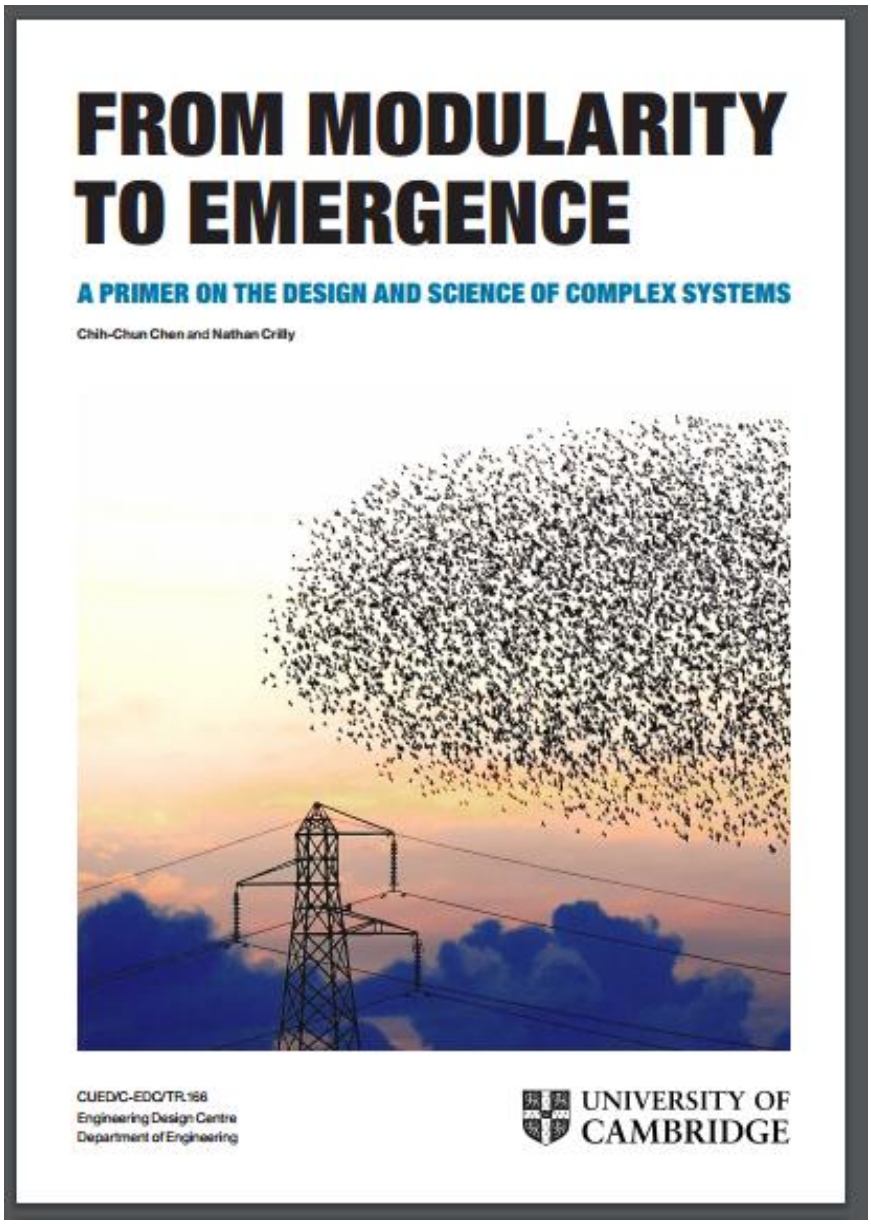




In light of the forthcoming United Nations Conference on Housing and Sustainable Urban Development (HABITAT III) and the imminent launch of the New Urban Agenda, DESA in collaboration with the Essl Foundation (Zero Project) and others have prepared a new publication entitled: "Good practices of accessible urban development".

The publication provides case studies of innovative practices and policies in housing and built environments, as well as transportation, public spaces and public services, including information and communication technology (ICT) based services. The publication concludes with strategies and innovations for promoting accessible urban development.

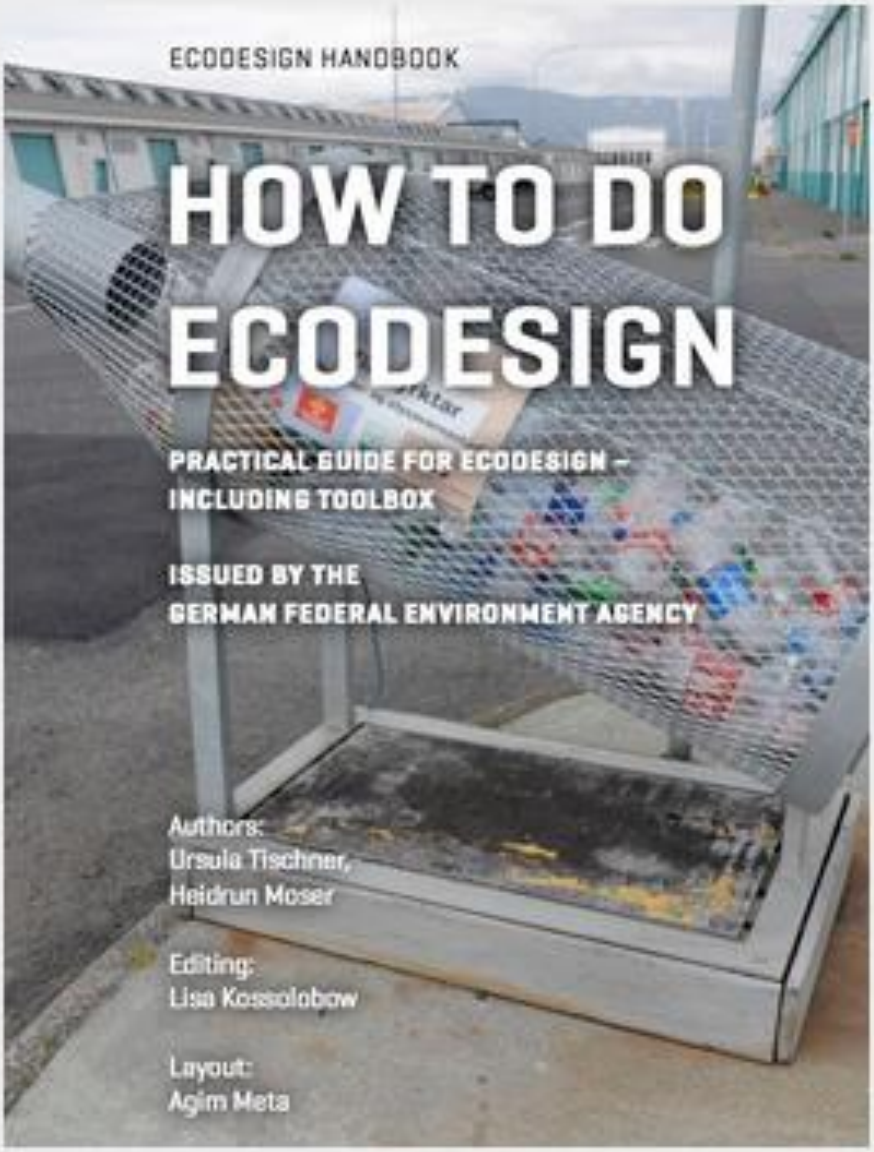
The advance unedited text is available at:http://www.un.org/disabilities/documents/desa/good_practices_urban_dev.pdf



Dr Chih-Chun Chen and Dr Nathan Crilly of the Cambridge University Engineering Design Centre Design Practice Group have released a free, downloadable book, _A Primer on the Design and Science of Complex Systems_.
This project is funded by the UK Engineering and Physical Sciences Research Council (EP/K008196/1).
The book is available at URL: http://complexityprimer.eng.cam.ac.uk

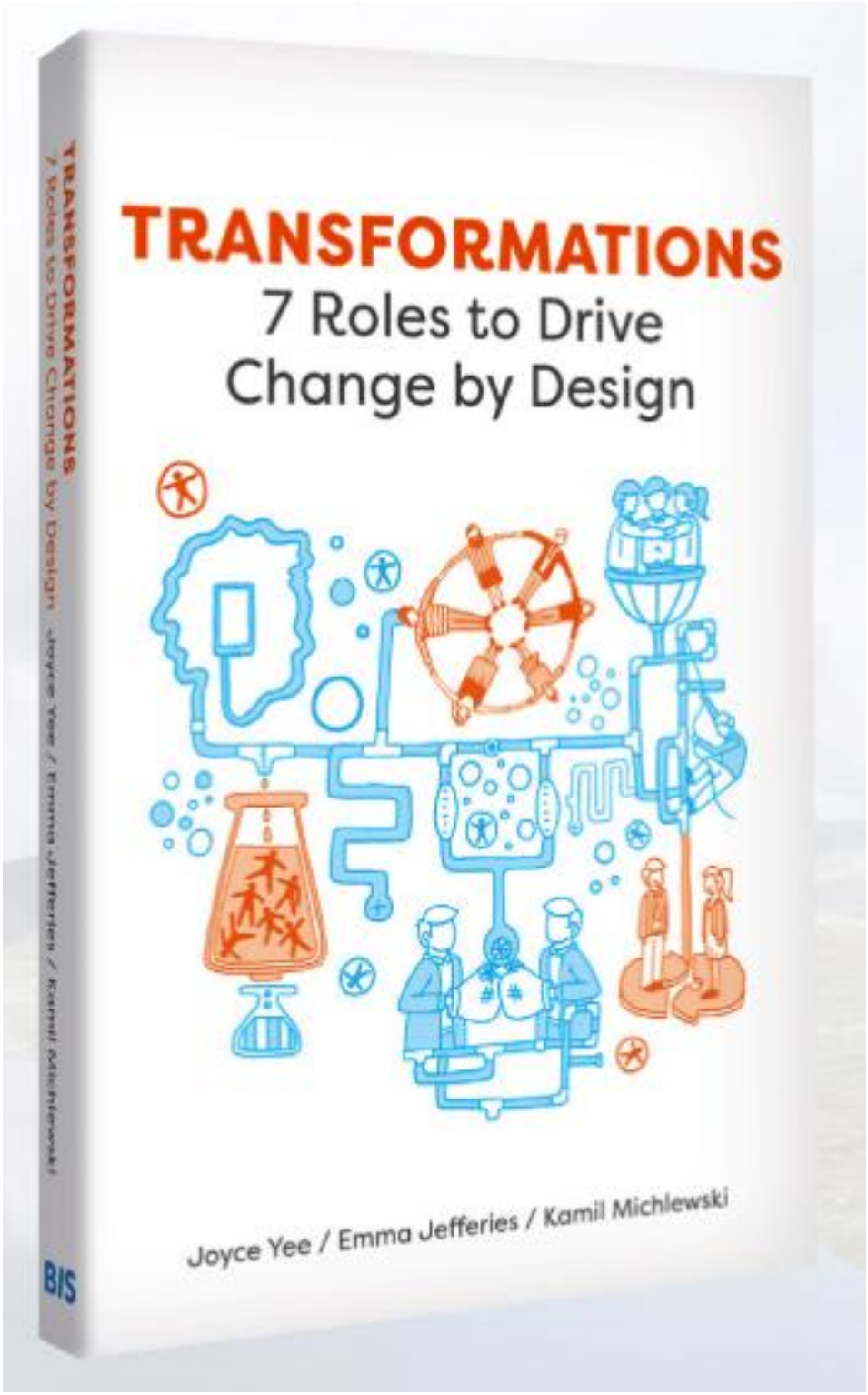
Changing Paradigms: Designing for a Sustainable Future

New iBook / ebook:
HOW TO DO ECODESIGN

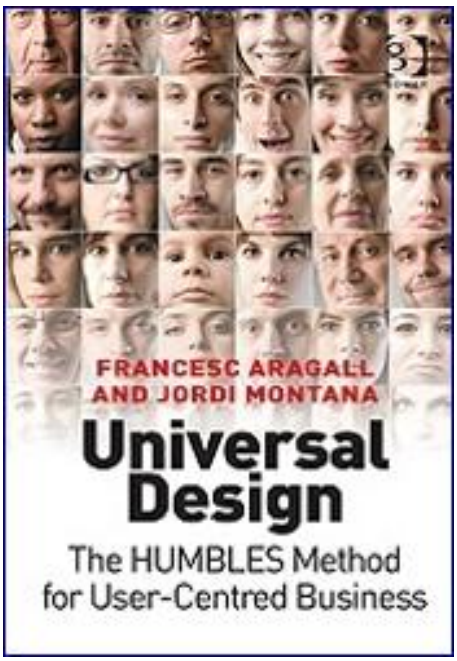


Practical Guide for Ecodesign – Including a Toolbox
Author: Ursula Tischner

ISSN: **2582-8304**



Universal Design: The HUMBLES Method for User-Centred Business



"Universal Design: The HUMBLES Method for User-Centred Business", writtenbyFrancescAragall and JordiMontañaandpublishedbyGower, providesaninnovativemethod to supportbusinesseswishing to increase the number of satisfiedusersand clients andenhancetheirreputationbyadaptingtheirproductsandservices to the diversity of their actual andpotentialcustomers, takingintoaccounttheirneeds, wishesandexpectations.

The HUMBLES method (© Aragall) consists of a progressive, seven-phaseapproach for implementing Design for All within a business. Byincorporating the user'spoint of view, itenablescompanies to evaluatetheirbusinessstrategies in order to improveprovideanimproved, morecustomer-orientedexperience, andtherebygain a competitiveadvantage in the marketplace. As well as a comprehensiveguide to the method, the bookprovidescasestudies of multinationalbusinesswhichhavesuccessfullyincorporated Design for All intotheirworkingpractices.

According to SandroRossell, President of FC Barcelona, who in company withotherleadingbusiness professionals endorsed the publication, it is "requiredreading for thosewhowish to understandhow universal design is the onlyway to connect a brand to the widest possible public, increasing client loyaltyandenhancing company prestige". To purchase the book, visiteither the **Design for All Foundation website**

ISSN: **2582-8304**

Appeal

ISSN: **2582-8304**

News

1.

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I am thrilled and honored to be a Jury Member for this Year's iF Design Award 2022 in Berlin.

#ifdesignaward2022#iFJuryMember2022

https://ifdesign.com/if.../jury/profile/ricardogomes/10524

INTERNATIONAL DESIGN EXPERTS FROM THE JURY OF THE iF DESIGN AWARD 2021

This year, the international, independent iF jury panel consists of a total of 98 high-profile design experts from over 20 nations.

Their task and challenge are to award the submitted contributions with the most innovative power – and perhaps to find the next rising star in the design industry.

WHAT IS iF DESIGN?

Founded in 1953 as Die Gute Industrieform e.V., iF Design and the iF DESIGN AWARD have been a symbol of excellent design around the world ever since.

Every year, an international jury panel of 100 independent experts honors achievements in product, packaging, communication and service design, architecture

and interior architecture as well as professional concept, UX, and UI.

iF Design also contributes to the international design community by organizing the iF DESIGN TALENT AWARD for young designers and the iF SOCIAL IMPACT PRIZE for social projects

https://ifdesign.com/en/if-design-award-and-jury/jury

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2.

Get certified in accessibility

Anyone who has ever tried navigating a curb on crutches, a shopping mall with a migraine, or a public bus with a baby stroller knows something about the kinds of accessibility challenges people with disabilities face every day. It's one of those things most of us don't really think about — until we have to. And then, when we have to, the resulting frustration, physical limitations, exhaustion and sense of alienation can be overwhelming.

"According to Angus Reid Institute research, almost 50 per cent of adults have or have experienced a permanent or temporary

physical disability, or live with someone who has," said Kevin Ng, Acting Director, Rick Hansen Foundation Accessibility Certification™. "Canadians struggle every day to access the places where we live, work, learn and play because of physical barriers to accessibility."

It doesn't have to be that way.

Universal Design principles for accessibility were first introduced back in the 1970s and have evolved alongside society's understanding of the scale and scope of disabilities, related challenges and what it means to design for inclusivity. In the early days, accessibility solutions took a strictly utilitarian approach. Mobility aids and accessibility supplements were artificially inserted into spaces, not designed for them. The well-intended focus on making built environments purely accessible overlooked the unwitting consequence of segregation and shame.

The Rick Hansen Foundation Accessibility Certification™ (RHFAC) training program aims to make the built world a better place for people with disabilities by teaching participants to identify and eliminate or innovate to minimize social and physical barriers by design.

RHFAC training advances the big-picture as a standard. "Using a holistic and consistent approach to measuring accessibility in the built environment, RHFAC provides a common language and methodology and offers a framework for design professionals to innovate beyond regulation to meet the access needs of people with disabilities."

There's a lot of knowledge packed into this certification program, including the impact of social and physical environments on people with disabilities, the relevant legislation, regulations and standards associated with planning and executing an RHFAC rating, and of course, the principles and standards of Universal Design.

The prerequisites for program participation reflect equally high standards. This training program is intended for professionals in the areas of architecture technology, engineering, urban planning, those with a Journeyman Certificate of Qualification in a designated construction trade, or with a minimum five years' related experience. That explains why SAIT is providing a partner portal into the RHFAC-delivered program. It's a natural fit with a shared interest in growing job capacity while supporting industry.

Those who complete the certification program and pass the subsequent RHFAC Professional exam will be qualified to conduct RHFAC ratings of existing buildings or new construction drawings, and provide recommendations for improvement to building owners and operators.

It's a valuable certification to have in the industry.

"Design professionals will have the necessary tool — the RHFAC program — and bring an accessibility lens to new and existing built environment projects, contributing to an accessible and sustainable world for everyone everywhere," said Ng.

Learn how to empower people with your design skills and register today, classes start in March.

Author: Julie Sengl

(Courtsey SAIT)

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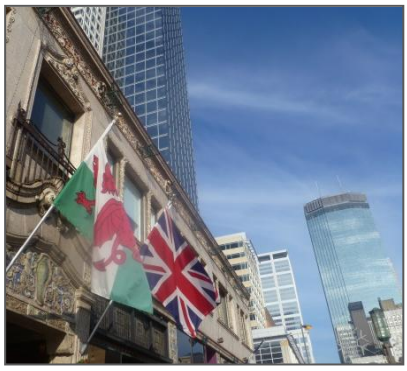
Programme and Events



berkeley prize

BERKELEY PRIZE 2022 LAUNCHES IN ONE MONTH

This year's topic:

DESIGN GUIDED BY CLIENTS' NEEDS:

Applying Social Factors Research to Architecture

A NEW QUESTION ON THE SOCIAL ART OF ARCHITECTURE AND A NEW OPPORTUNITY TO CONSIDER THE WHY OF DESIGN

AS ALWAYS, THE POTENTIAL FOR UNDERGRADUATE STUDENTS TO WIN CASH PRIZES IN THE ANNUAL ESSAY COMPETITION

AND, FOR THE SECOND YEAR, A CHANCE FOR PRIZE SEMIFINALISTS TO RAISE MONEY AND RECEIVE A STIPEND TO PARTICIPATE IN A LOCAL COMMUNITY SERVICE PROJECT RELATED TO THE TOPIC

IT ALL STARTS ON SEPTEMBER 15

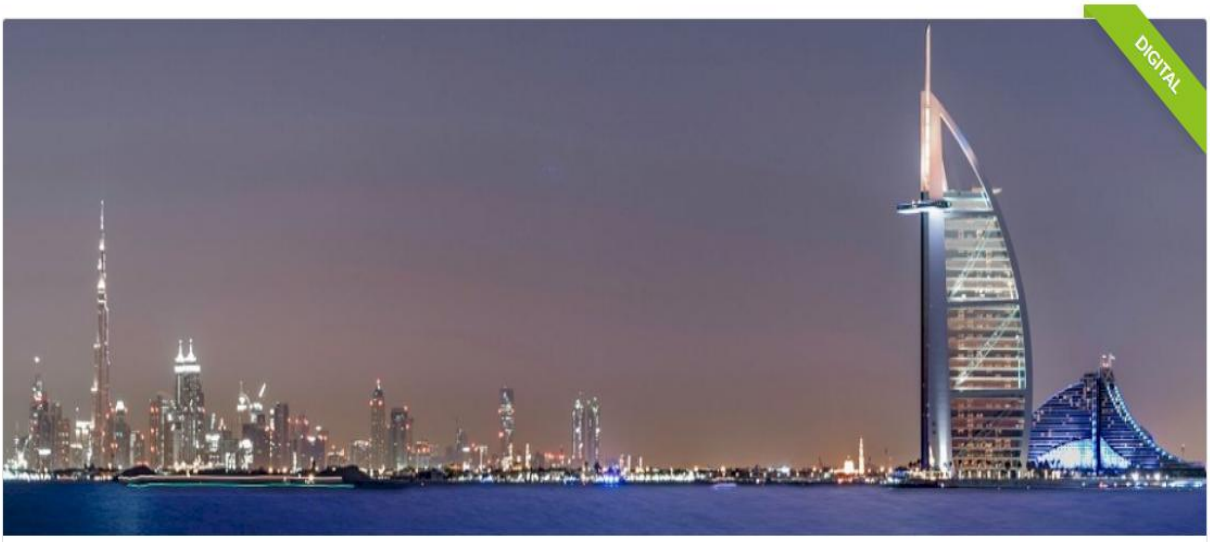
TELL FRIENDS, STUDENTS AND FACULTY - FORWARD WIDELY

ICPDPD 2022: 16. International Conference on Product Development and Product Design

March 03-04, 2022 in Rio de Janeiro, Brazil

ICPID 2022: 16. International Conference on Product and Industrial Design

April 07-08, 2022 in Dubai, United Arab Emirates



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Job Openings

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