

Design for All



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Lourdes has participated as speaker, consultant and lecturer of accessibility, inclusion and diversity topics in various national and international forums. She was part of the Mexican committee to develop the accessible ICTs Standard. She has led the efforts to develop the first accessible tourist guide for Mexico City and, to enhance accessibility around all the nine buildings of ASUR's airports based in Mexico, among other projects.

In 2013 she was a finalist at Cartier Women's Initiative Awards. In 2015, she received the State Award against Discrimination, granted by the CODHEM, for promoting equality and non-discrimination in the workplace. She is an Engineer in electronics from the Universidad Iberoamericana and received a diploma as "Expert in Information Technology and Disability" by Creática Fundación FREE (Spain) and CETYS University (Ensenada, B.C.). She is multilingual in English, French and Portuguese, with solid knowledge of Italian.

Editorial:

"Accessibility and Universal Design for the Built Environment: A window to a fully inclusive world"

Lourdes Arreola CPABE, CPACC

In architecture, a window is an open space with or without a glass, that provides light, view, sometimes allow verbal communication or can contributes to a safe evacuation of a facility.

A window gives us the opportunity to have a first look over a house, an office, a building. It allows us to perceive if that environment is warming or cold welcome. When going into a building, looking through the window allow you also to perceive the happy or unhappy faces of people working inside.

Through windows we can have a first view of the inside of a Built Environment (BE) such as a house, a building, a theater, a supermarket, an airport, and from there perceive if it is a friendly space for us or not. As defined by the EPA⁽ⁱ⁾: "The Built Environment touches all aspects of our lives, encompassing the buildings we live in, the distribution systems that provide us with water and electricity, and the roads, bridges, and transportation systems we use to get from place to place. It can generally be described as the man-made or modified structures that provide people with living, working, and recreational spaces".

Accessibility and Universal Design are those criteria that help us identify warm welcoming accessible facilities that really allow us

to experience, to benefit from the design and from the space itself in its entirety.

Since our birth, we do benefit from well designed and accessible facilities, nevertheless not all of us perceive or understand these benefits until, at a certain moment of our life, we need it. As shared by Enrique Tovar in his articles: "Recognizing the value of accessibility is an important part of following a path where decisions are made consciously", a path where every potential need of each user that may use that space, are considered.

Creating inclusive and accessible built environments requires of accessibility professionals, like those who has collaborate with me on this issue (Enrique, Monica and Andres), who have acquired the knowledge and skills to implement built environment accessibility standards, codes, legislation, and apply universal design principles to environments in which we live, work, and play. This is the reason why the International Association of Accessibility Professionals (IAAP)ⁱⁱ, a division of the Global Initiative for Inclusive ICTs (G3ict), launched in 2020 a new credential: Certified Professional in Accessible Built Environments (CPABE).

The scope of this certification supports the development and implementation of built environment accessibility practices that enable organizations and individuals to make effective decisions to help resolve and prevent accessibility barriers, a path to build a more inclusive world.

To build a fully inclusive world, as Andres Balcazar mention in his article, there is no one single recipe. We need to drive a change in the way everyone thinks and acts towards persons with

disabilities. We all must understand and embrace our diversity so we can start building that place, that world where barriers are removed, and everyone has a real opportunity to enjoy their rights. This small collaboration with Design for All Magazine is aiming to be a window for you to start looking for a more accessible world for all.

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ENRIQUE TOVAR / EETOV

México – 1994

Eetov is a design studio focused on accessibility, sustainability and experimental design based in Mexico City.

Founded in 2019 by Enrique Tovar, architect member of the College of Architects of Mexico City, LEED Green Associate by the USGBC and Certified Professional in Accessible Built Environments (CPABE) by the IAAP.

The formal expression of his work focuses on the forcefulness and pure forms of its projects, where each of them responds to the historical, social, economic, and environmental context, seeking to create a strong identity in the relationship between the object and its user.

His work has earned him publications in media such as The Wall Street Journal, Dezeen, RTF and Architectural Digest, he has also participated in international firms where he is a member of the design team for projects of various typologies and scales

The Accessibility Debt in Architecture

Keyword: Accessibility, Universal Design, Architecture, Population, Disability



01_Unnamed_©Igor Rodrigues

In 2008, as part of the joint efforts of different sectors of society, the UN Convention on the Rights of Persons with Disabilities (CRPD) was created. This document set a precedent since article 9 was integrated into it, the specific scope of which is focused on accessibility, implying a direct relationship in the way we develop architectural and urban spaces.

During most of our history, the way we conceive the world and therefore architecture was raised by the conditions that were considered "normal". This fact caused part of the population to find barriers produced by the built environments themselves, which made it difficult and sometimes did not allow in any way to experience architecture in its entirety.

Currently, the accessibility situation has suffered a setback as a consequence of the paradigm shifts in the practice of architecture. Although there is still a long way to go. This text will give an

overview of the current situation of accessibility and universal design, as well as the challenges that may arise in the future.

Population Characteristics and Trends

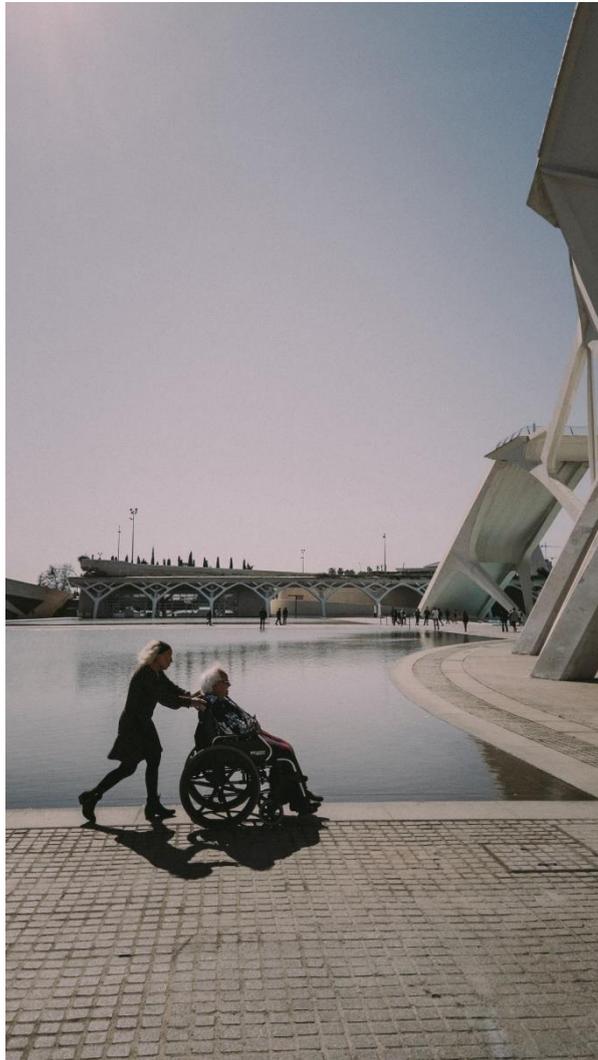
Many of the projections about the future of the human population indicate that soon our world population will have a large majority of adults. This aging of the population will require responses that can deal with the problems associated with this fact, where the main challenge will be to address mobility problems sustainably and safely where we will probably be facing a rethinking of our urban development strategies that, in addition, must be consistent with the climate agenda.



02_Time_©John Moeses Bauan

In addition to the imminent fact that our population is going through a change in its configuration by age groups, the need to understand disability through the percentage of people they represent is also present. It is estimated that currently between

10 and 15% of the population, or 650 million people, live with a disability, representing the largest minority in the world.



03_Spain_©Eugene Chystiakov

Considering that in typical design processes the user turns out to be the main axis for decision making and spatial configuration, it seems scandalous that in many cases the fact that the building in question will probably be used by a person with a disability is ruled out.

Young Architects as Promoters of Accessibility

It is clear that, although the efforts to integrate the concepts of accessibility and universal design have been present for several

years, it is important to consider that this is an extensive process that will require constant evolution through the following generations of architects.

Just as today there are in all architecture schools subjects focused exclusively on sustainable development strategies, it will be necessary to incorporate in regular courses subjects that consider as part of the training, the basic concepts to create inclusive spaces and that in everyday life turn out to be strange for professionals who are not specialized in the subject.



04_Shadow of a Man_©Nathan Mcdine

Having general knowledge could be an invaluable tool to improve decision-making in all professionals in the practice of architecture. Creating a fresh vision through the new architectural proposals that arise in parallel with the new generations will help change the panorama of accessibility and universal design, which is currently seen as an element of additional value instead of being considered as an essential element within a conscientious design process.

Understanding Disability as a Global Concept

On many occasions, the vision around accessibility is limited to thinking of a single type of disability, whose solutions are restricted to the use of ramps for horizontal circulation and contemplate elevators to solve vertical mobility. But based on this approach, the fact that there are different types of disability, which require much more complex and multidimensional approaches, is being completely ignored.



05_Unnamed_©Franzie Allen Miranda

Understand that designing for all, under a vision of universal design, not only benefits people who live with a disability, but also that its approach also encompasses the elderly, pregnant women, people of short stature, and, in many cases, individuals who have suffered a temporary injury as could happen to any of us.



06_Accessible Parking Spot_©Jakub Pabis

The architectural barriers that can be found in built environments are not synonymous with physical barriers, in many cases elements such as furniture, lighting, signage, and selection of finishes, as well as determining architectural details can be the differentiator for the inclusion of a person. Universal design is so subtle that most of the time it could go unnoticed, but it is not until we individually experience that barrier that we realize that the way we design and our decisions as architects can have an impact on others.

Recognizing the value of accessibility is an important part of following a path where decisions are made more consciously for new projects, in addition to seeking ways to achieve optimal accessibility conditions in existing buildings of high urban or historical value, supported by associations such as the IAAP whose objective is to promote and improve accessibility in its different facets through certification and the creation of networks of certified professionals on accessible build environments to jointly promote a world without barriers.

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México

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Basic Accessibility Recommendations Applied to Interior Design

ENRIQUE TOVAR / EETOV

Keyword: *Built Environment, Accessible Design, Interior Design, Universal Design, Architecture*

Have you ever stopped to think how much time of the day you spend inside an interior space? Sometimes this fact may be imperceptible, but for most of the day, we find ourselves interacting with and within a built environment.

Regardless of whether the environment in which we carry out our activities is a home, school, hospital, or workspace; The right to live and participate fully in all aspects of life is undeniable, as indicated by the Convention on the Rights of Persons with Disabilities (CRPD) in its article 9°.



01_©Ryan Ancill

This text proposes to present in a global way general strategies that we must and can follow whenever an interior space is being designed, covering not only how the space itself is conceived, but also the elements that are an active part of it.

Finishes are your Ally

One of the determining elements to endow built environments with vitality and character is the finishes, which is why architects and designers can spend entire weeks considering the materiality of the project.

Within this approach, it is necessary to consider, in addition to aesthetic issues, the technical and functional characteristics that will make it possible to eliminate barriers within the space.



02_©Marcus Chen

One of the most important premises that we can highlight in accessible design is to maintain uninterrupted and fluid circulation within the spaces we inhabit. To this end, the conscious selection of floor finishes is vital.

In most cases, it is recommended that the floor surfaces be stable and non-slip to ensure safety during transit on it. With this objective, it is important to consider not only how the material behaves under normal and ideal scenarios, such as when it is dry, but also to assess its qualities under humid environments or high traffic conditions.



03_ ©Ilyuza Mingazova

Podotactile tiles are usually one of the most well-known and recurring finishes in universal design, given their texture and color to integrate with accessible routes. This same principle of easily identifiable colors through their physical characteristics can be applied not only to tiles but also to wall finishes to create distinctions in spaces and to be able to recognize them by hand through touch or visual contrasts from the color in the finishes.

Accessories are Everywhere (And they have more relevance than you think)

Many of the elements that we design and that we integrate into the interior design project require an accessory to function properly. The accessories can be found in different typologies; windows, doors, lights, sinks, closets, and endless elements that will require that final piece so that they can be functional.

Within this concept of functionality, it is important to value that, without considering the application of the accessories, these can mean a barrier if their nature or actuation system is not adequate or turns out to be highly complex to actuate, hence the concept of usability.



04_ ©Finn Mund

What are the characteristics that could define whether an accessory is accessible or not? In most of the typologies mentioned above, we can find as a common element that most of them require a drive or ignition system to be able to carry out their function, so it becomes extremely important that these are lever mechanisms or pressure that do not require overexertion for its use.

One of the great changes brought about by the pandemic is that many brands rethought the elements or devices that are integrated into interior design, achieving that they currently have many contactless products in their catalog.



05_ ©Jonas Leupe

In addition to the drive devices, another determining factor is the way they are placed, emphasizing the height and approach area. Accessories like bathroom fixtures, door handles, and light switches can make a big difference when it comes to universal design. Thanks to universal design standards, and local and

international codes, it is possible to find a reference for the scenarios in which they can be applied.

Furniture Can and Should Be Accessible

Sometimes in the conception of society, thinking about strategies related to accessibility and universal design could suppose hypothetical solutions that are highly specialized or have complex technical requirements. But within the concept of reasonable accommodation, we can achieve barrier removal using conventional methods or items.

When we develop the layout of any space, the distribution and the way users move in it is the main axis to maintain a fluid and uninterrupted circulation. From these interior transit spaces, we can focus on the particular characteristics of each piece of furniture, regardless of whether these pieces are mobile or fixed elements.



06_@CDC

For horizontal surfaces such as bars or work tables, the main aspect to take into account is the free space at the bottom that allows the correct approach of a person using a wheelchair, always avoiding elements that may obstruct the approach, such as crossbars, plinths, and voluminous posts.

The elements adjacent to work surfaces such as auxiliary elements of kitchens, rooms, or workspaces such as shelves, or shelving, must be placed at attainable heights following the applicable regulations on the topic.

There are many furniture brands and developers that are seeking to promote inclusion, where brands such as Ikea and Steelcase stand out, which through their proposals will allow the creation of accessible spaces with a comprehensive approach, taking into account not only the elements that define the form and the functions of built environments but also those that give that final touch to each space.

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Unconscious barriers: A challenge for inclusion in built environments

ENRIQUE TOVAR / EETOV

Keyword: Barriers, inclusion, built environments, disability, accessibility

During any planning and design process, it is usually essential to take the particular needs of the client as the main premise to develop a project, but sometimes the needs of a few do not usually satisfy those of many. That is where the unconscious barriers are largely born.

When we talk about inclusion in built environments, it is essential to address the primary aspect of accessibility, such as adopting appropriate measures to ensure access for people with disabilities, on equal terms with others, to the physical environment, as indicated by the Convention on the Rights of Persons with Disabilities.

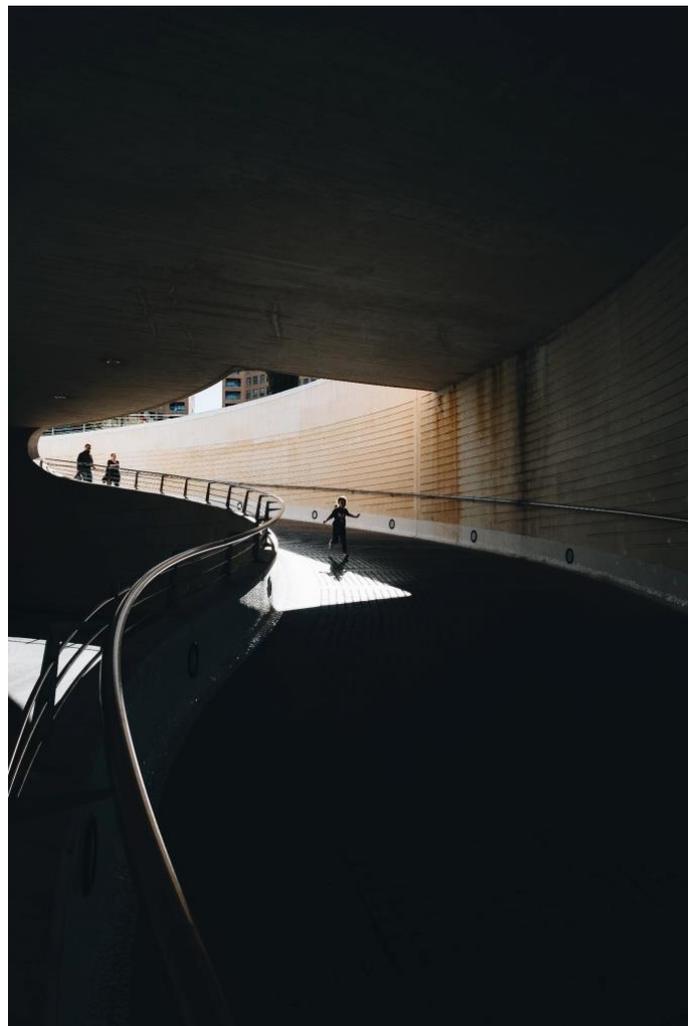
It is a fact that no one is openly or deliberately seeking to create architecture that is hostile to people with disabilities. But the consequences of the decisions and actions taken, are a determining factor to create unconscious barriers. This text will address some examples.

Assume that universal design is not required in the project

Assuming that the user for whom it is being designed in no way lives or will live with a disability is one of the most common

misconceptions. It is important to understand that accessibility benefits us all so that the decisions made today can be the inclusion of tomorrow.

In many architectural projects, it is common to have programs with extremely particular needs, which is why it is common to see projects such as “A building for the railway heritage of a small city in South America” being developed. Within the specificity of these projects, there is a false conception that it is not necessary to integrate universal design strategies since this is only reserved for large public spaces of mass assistance.



Ciudad de las Artes y las Ciencias_©Javier García

The reality is that universal design is not an independent discipline from design, it is an inherent part of built environments in the same way that structural calculations or lighting design are contemplated, so its integration in any planning process is essential for a satisfactory result.

Beyond basing design decisions on plastic or aesthetic elements of sophisticated argumentative complexity, our main premise must be the inescapable fact that we are designing for human beings in their different facets and therefore designing for everyone is the only way to ensure inclusion in built environments.

The barriers are not always the absence of accessibility (Sometimes it is its misapplication)

How many buildings have only one staircase as the only access route to the upper levels? How many times have we come across ramps whose slopes far exceed the recommended slopes? Cases like this are found recurrently in spaces whose objective is to comply beyond providing a solution.

It is not a question of compliance, but rather that the strategies must be articulated with each other. What is the point of having accessible access doors in a building if there is no way to reach them? It is necessary to understand that accessibility and universal design are a global concept that is made up of different elements that together create the necessary conditions for the access of people with disabilities, on equal terms with others, to the environment. It is vital to know the particularities of inclusion strategies to apply them effectively, recognizing the differences of individuals consciously.



Unnamed_©Vidar Nordli-Mathisen

Usability must always prevail over the need for mere compliance. To achieve this goal, a great solution is to strengthen the basic concepts of inclusion in built environments in architecture schools, so that inconsistencies in the application of inclusion strategies can be corrected from an early stage.

The accessible design appears until the building is already built

In a certain way, built environments speak and their accessibility conditions say a lot about them. It is to be expected that in buildings of the last century, conditions that would allow the inclusion of people with disabilities were not contemplated.

The real problem lies in those contemporary buildings that are still waiting for a wake-up call to implement reasonable adjustments. It is never too late to improve the accessibility of a building, but the best stage to incorporate universal design is always during the schematic design phase.

During the pre-design and schematic design stage, we will be able to ensure not only the accessibility of the building itself, laying out its basic premises, but also the best way in which we can connect with accessible infrastructure from public transport stations or simply through the better roads to approach the building from the sidewalk.



Unnamed_ ©Mufid Majnun

In subsequent stages, such as the development of design and construction documents, it will be possible to ensure that the general design of the project will be homogeneous with those basic accessibility strategies implemented by code, as well as possible additional approaches that will ensure universal design in the building.

Inclusion in built environments is not optional and it is up to us that conditions improve day by day for everyone, since a more accessible world is one of the solutions to face not only the challenges in the matter but also in favor of sustainable development goals (SDGs).

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Monica Perez Baez studied Architecture at Universidad Iberoamericana in Mexico and completed a Master's in architecture and a PhD in Design Sciences with a focus on Sustainability at Kyoto Institute of Technology in Japan.

She had collaborated on Architecture and Landscape Architecture projects and on environmental impact studies for Mexican housing companies and design studios.

During her stay in Japan, she participated in remodeling and recycling projects for apartments in housing complexes in collaboration with the KIT and did an internship at the Toyo Ito & Associates office in Tokyo.

She had published articles on Architecture, Urbanism and Landscape and given conferences, courses and presentations at congresses held in different countries as Japan, China, Mexico, Bolivia, Argentina, Panama, Guatemala, Peru and the United States.

She was Director of the Architectural Program at Tecnológico de Monterrey in Toluca, Mexico and is currently professor and coordinator of the bachelor's degree in Interior and Exterior Environmental Design at Universidad La Salle, Mexico. In addition, she also develops Landscape Architecture projects independently and teach classes at UNAM.

Housing Stock Renovation and Accessibility

-The Renaissance Plan -

Monica Perez Baez

1.0 INTRODUCTION

In Japan, high-density housing and numerous apartment complexes were built after 1955 to alleviate the severe housing shortages resulting from the massive influx of population to major cities during the period of rapid economic growth. Now, there are about 760,000 properties of rental housing stock, most of them being large-scale suburban types, where problems such as insufficient earthquake resistance, poor floor area per capita and inconvenient or unsuitable facilities and layouts for aged and handicapped people are present.

In recent years, sustainable developments have been pursued and changes from a consumption-oriented society to a stock-oriented society as well as major shifts in the focus of housing policies have become required. In the housing sector, this philosophy has been reflected in an emphasis on stock-related priorities considering the creation of good-quality, accessible, durable and maintenance-friendly housing. Therefore, to improve the overall quality of residential life, to make the most of the housing stock and to respond to the global environmental impacts, the creation of sustainable renovation strategies and technologies has become necessary.

2.0 POLICIES ON HOUSING STOCK IN JAPAN

Since 2006, The Basic Plan for Housing has been enforced by the Japanese Ministry of Land, Infrastructure, Transport and Tourism

to offer prosperous lifestyles for actual and future citizens. It established targets and measures related to the accelerated stabilization and improvement of housing and residential living standards and pursued the development of good-quality housing stocks as well as the creation of quality residential environments meeting diversified housing needs. In addition, to promote housing renovation practices and long-life quality houses development, the Act on the Promotion of Popularization of Long-life quality Houses was enacted in 2008 and came into effect since 2009.¹

As part of these plans, a new policy to promote the adaptive re-use and renovation of existing rental housing stock was announced by the Urban Renaissance Agency² (UR) in December 2007. The purpose was to initiate a restructuring process which will lead to a reduction of about 50,000 units by 2018 and about 30% of its total housing stock around 2048.³ Since then, UR has been undertaking apartment reconstructions and renewals proposing appropriate countermeasures to meet the diverse needs of Japan's falling birth rate and ageing society. It has also been conducting renovation research and technological development and carrying out several projects under the named 'Renaissance Plan'.

¹ *"White Paper on Land, Infrastructure, Transport and Tourism in Japan", Ministry of Land, Infrastructure, Transport and Tourism, Japan, 2009, pp.26 <<http://www.mlit.go.jp/english/white-paper/2009.pdf>> referred on 08/04/2011.*

² *The Japan Housing Corporation and the Land Development Corporation merged in 1981 to form the Housing and Urban Development Corporation. In 2004, it merged with the Regional City Development Division of the Japan Regional Development Corporation to form the Urban Renaissance Agency, today best known as UR.*

³ *"A Quick Look at Housing in Japan", 6th ed., The Building Center of Japan, Tokyo, 2008.*

3.0 THE RENAISSANCE PLAN

The 'Renaissance Plan' establishes concrete actions to renovate and recycle entire buildings at aging housing complexes. It is comprised of converting spatial divisions, re-fitting interiors, making housing spaces barrier-free and providing facilities suitable for the 21st century (Figure 1). Furthermore, it considers the necessity to develop continual technical advancements to perform an image renovation of the conventional stairway-type buildings creating new and attractive façades and considering environmental impacts.⁴

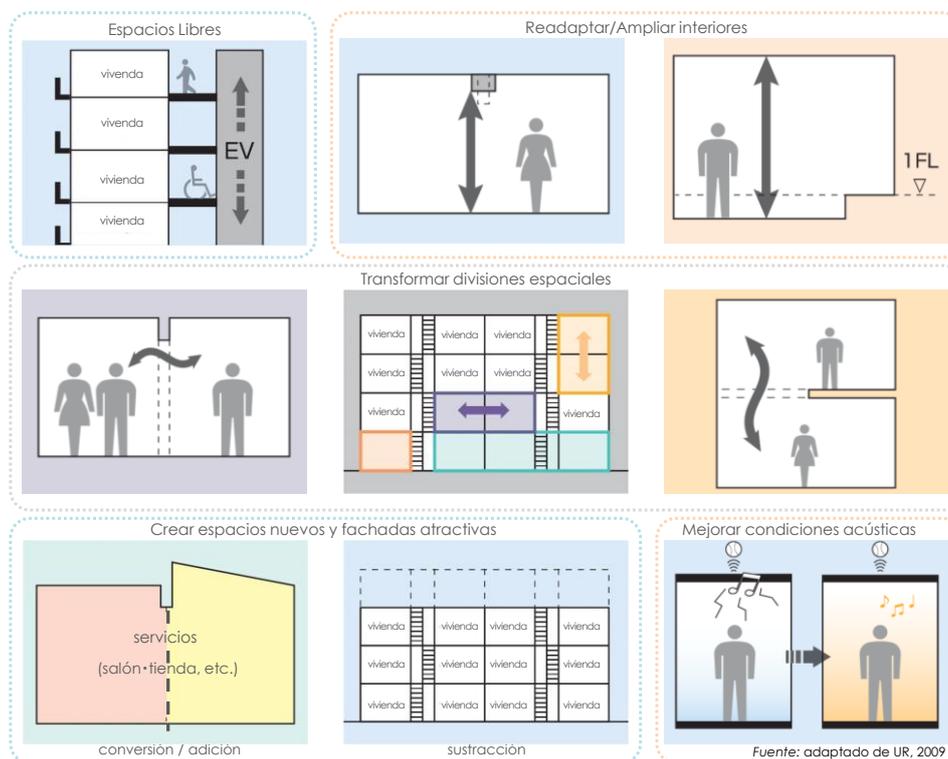


Figure 1 Renaissance Plan Principles

In 2008, UR announced the Mukogaoka Housing Complex Renovation Trial where public participation for technical proposals and cooperative research were required. The project consisted of

⁴ "The Renaissance Plan: Building Renovation Technology Development", Urban Renaissance Agency, Japan, 2009. <<http://www.ur-net.go.jp/rd/rn1/technical/pdf/01.pdf>> referred on 10/04/2011.

renovating buildings No.26, No.27 and No.28 within this complex⁵ located in the city of Sakai at the Osaka Prefecture in Japan (Figure 2). The aim was to re-organize, remodel, and improve the entire buildings' interior and exterior spaces including the surrounding green areas using the Renaissance Plan principles and mixing different construction techniques while satisfying residents' needs.⁶



Figure 2: The Mukogaoka Housing Complex. Site plan and general view before the renovation

Toda Corporation Group⁷ in association with Osaka Gas Ltd. submitted several proposals that met the basic requirements. As

⁵ *The complex consisted of 38 buildings built between 1960 and 1965. During the last years, some of them have been demolished or rebuilt and others, as buildings No. 26, No. 27 and No. 28, still remain. Buildings No.26 and No. 27 were originally four-storey buildings with 16 apartments and reinforced concrete box frame structures each one. Building No. 28 was a five-storey building with 30 apartments and a reinforced concrete frame structure. None of them had an elevator installed*

⁶ *The Renaissance Plan proposals are based on results obtained from questionnaire surveys conducted to residents in other UR complexes with similar characteristics to the Mukogaoka Housing Complex.*

⁷ *Toda Corporation Group is formed by: Toda Corporation Ltd., Wakachiku Corporation, Ltd., Kyoto Institute of Technology Suzuki Laboratory, Itsuro Hoshida Urban Research Institute, Maitani Yoshiaki Design Studio and Wada Structural Engineer Consultants.*

they added the idea to incorporate the existing landscape to the design, which gave a significant improvement to the living environment, they resulted selected and were nominated as collaborators to develop the project from its conceptualization to its construction as well as to carry on further research.⁸

4.0 RENOVATION CONCEPTS

The proposals aimed to contribute to the creation of social environments ensuring better living conditions for present and future generations. Thus, the integration of concepts of 'Function' 'Space' and 'Technology' to develop places where everyone, from elderly to young people, could enjoy a lively life for a long time was the fundamental idea for this project. Moreover, considering topics like energy conservation and resources recycling, economic activities and employment capacity, coexistence between living and natural environments as well as the creation of better societies, the following sustainable measures were assumed as important targets:

- a) *Environmental sustainability*, considering energy efficiency improvement, waste reduction and resources consumption control
- b) *Social sustainability*, considering social welfare and community regeneration, and
- c) *Economic sustainability*, considering housing management stability and economy formation and growth.

The project was designed as a whole, but a particular theme was assigned to each building to give them an own identity (Figure 3). For building No.26, the renovation was focused on the

⁸ "Mukogaoka Housing Complex Renovation Trial. Competition Overview and Selection Results", Urban Renaissance Agency, Japan, 2008. <<http://www.ur-net.go.jp/west/Renaissance/result.html>> referred on 30/04/2011.

'achievement of a sustainable community', for building No.27 'quality of life improvement' was the objective and, for building No. 28 'harmony between environment and society' was intended.

In addition, to make the most of the buildings and to take over the appeal that the apartments had 40 years ago, the policies listed below were also implemented for the renovation of the entire project.⁹

To give top priority to the renovation and improvement of basic performances.

To recover and improve comfort and quality of life conditions.

To establish precise and well-defined renovation techniques.

To take advantage of the existing structural qualities of the buildings

To propose renovation methods based on residents' needs.

To adopt the 'Open Building and Skeleton-Infill' principles as practical methods.

To consider all public and private areas as living spaces.

To get rid of the conventional box-type apartments.

To make economically feasible and profitable renovations.

To improve the methods of construction and the construction works.

To shape a renovation process and provide a framework for future research.

⁹ **"Building Renovation Proposals for the Mukogaoka Housing Complex Renovation Trial", Toda Corporation Group, Osaka, 2008.**



Figure 3: Renovation proposal image

5.0 DESIGN IMPLEMENTATION AND CHALLENGES

The tendency to demolish old buildings and start new ones rather than renovating and reusing them has existed for many years in Japan.¹⁰ However, during the last years building renovation and adaptive re-use design have been adopted as measures to save resources, to reduce waste and to achieve sustainable developments. Thus, for buildings No.26, No.27 and No.28 most of the original structure was preserved and only some improvement in terms of durability and adaptability as well as specific modifications were made to each building.

5.1 Building No.26

The creation of a multi-generational building with common spaces was planned in order to enable harmonious coexistence among

10 According to the Housing and Land Survey Results presented by the Ministry of Internal Affairs in 2003, the typical lifespan for a reinforced concrete building was calculated about no more than 30 years.

residents and to promote community formation and living environmental health.

A common green roof terrace was created by removing part of the 4th floor and installing high-inclined roofs to give thermal and water infiltration protection. The 'Mingle House' was designed considering room-sharing between young people -students or employees- who could give voluntary assistance and support to elderly people living in other apartments. A multipurpose room for meetings and studying, working or recreational activities was also included.

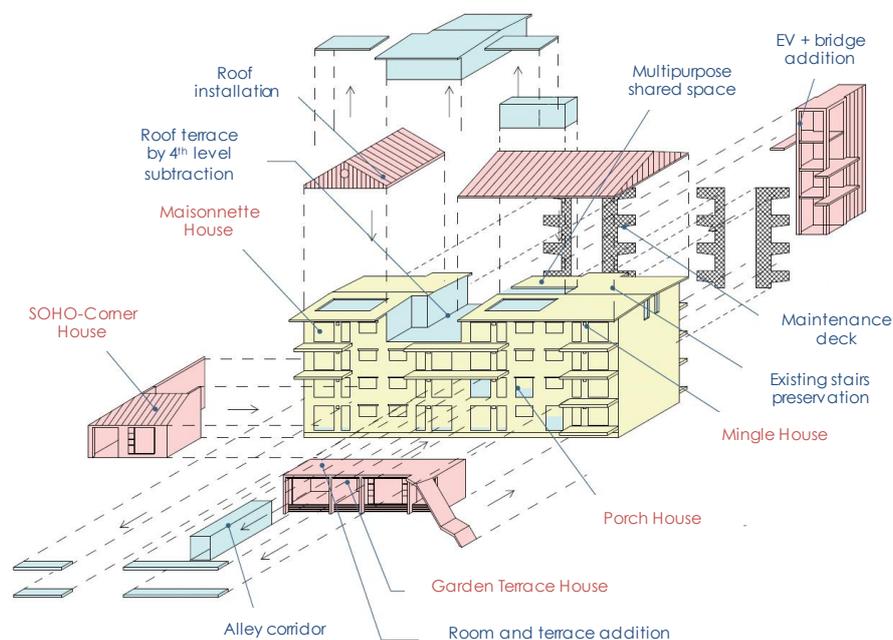


Figure 4: Building No.26 main modifications

The slab between two apartments on the 3rd and 4th floors was cut and the 'Maisonnette House' was created by joining them together and by using the existing exterior stairs as the interior connection. The 'Porch House' was planned on the 2nd floor as a two-space apartment where residents could enjoy their privacy and individuality as rooms were separated by a communal open

corridor. On the 1st floor, the 'SOHO-Corner House' and the 'Garden Terrace House' were proposed and rooms and terraces were added to be used as relaxing spaces (Figure 4).

The corridor on the 2nd floor was created by reducing some beams height and cutting or removing some structural walls. It was designed as a bridge leading to the north side of the building and as an extension of the street-connecting exterior stairs (Figure 5). Also, to make accessibility easier, especially for elderly and handicapped people, existent stair halls were preserved and re-adapted as entrances to other apartments while an elevator was installed in the north façade where pipes were concentrated and maintenance decks were integrated to facilitate equipment care and repair.

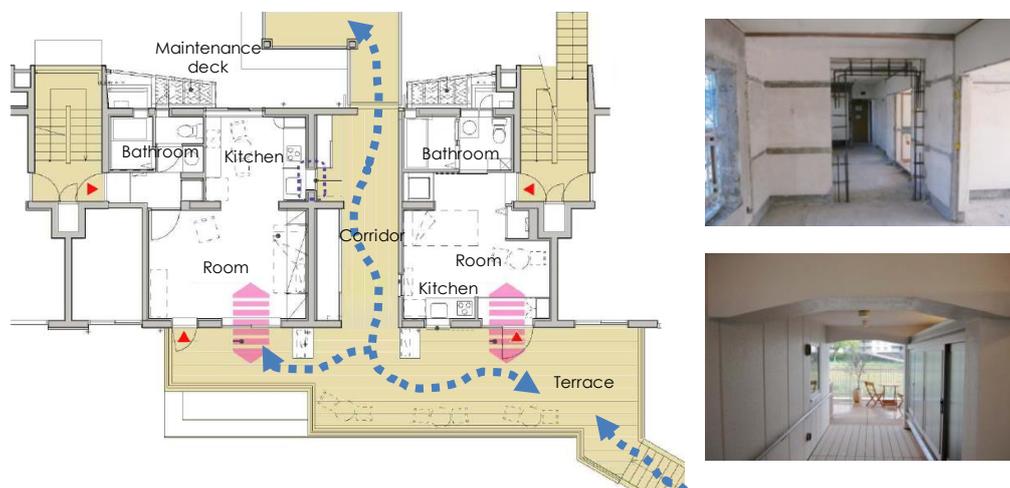


Figure 5: Corridor developed on the 2nd floor

5.2 Building No.27

By the creation of living spaces fully integrated with a comfortable outdoor environment, an improvement in the community-living performance based on the concept of 'Quality of Life' was pursued.

Some slabs were cut and inclined roofs were installed as it occurred in building No.26 (Figure 6). Maintenance decks and an

elevator were set up in the north façade and new variations to the south façade were given by extending the existing balconies on the 3rd and 4th floors.



Figure 6: Slab cuts to join apartments and install inclined roofs

Another 'Maisonnette House' was proposed and, as the elevator¹¹ was connected to the existing stair halls to access other areas (Figure 7), new inner stairs were built and a different configuration was created. Also, public rooms and offices were established to give residents the opportunity to coexist, relate and share experiences with others.

On the south façade of the 1st floor an additional space was built. This space was part of the 'Life Support and Consultation Corner' which was an apartment converted into a community support plaza where residents could receive help and assistance on daily life problems. Children indoor playing facilities were also suggested and, by the transformation of an apartment into a passage, a community deck was designed to connect and access all green open areas.

¹¹ *In order to allow residents to access their apartments while installation works were carried on, an additional structure was set up before the existing stairs were cut and once they were removed, slabs were added to connect the structure to the building and to the elevator.*

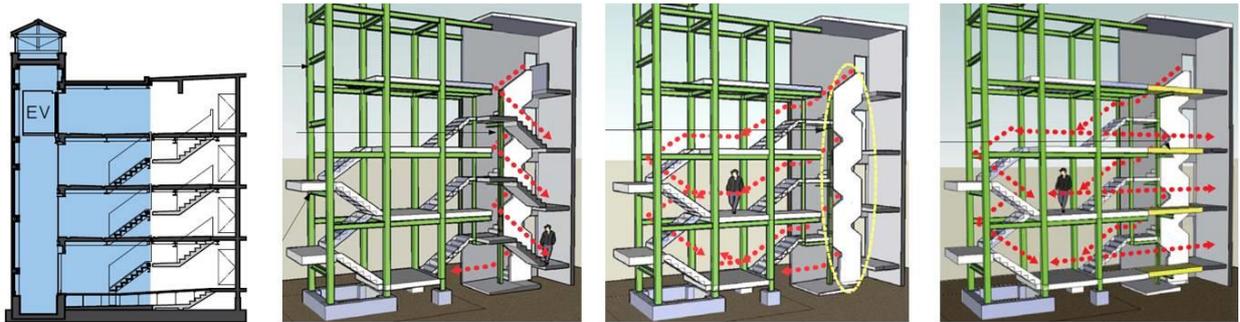


Figure 7: Elevator addition system. Installation works can be done without interrupting residents' activities (Source: UR)

5.3 Building No.28

Re-use and recycle concepts were integrated in the proposals focusing on the idea to create an 'eco-cool' building which will help to reduce the environmental impacts.

The first two upper levels were removed (Figure 8) to have a more human-scale building and, after structural seismic capacity improvements were made, high-inclined roofs with photovoltaic panels were installed and a rooftop garden was designed (Figure 9). Also, to enhance energy efficiency in the building, the 'Eco House' and the 'Re-use House' were planned on the 3rd floor. The 'Eco-House' considered a green terrace where water supply heating systems, gas equipments, rainwater collectors and domestic garbage processors were set up. The 'Re-use House' was built re-using and recycling most of the scrap materials that resulted from the renovating works in other apartments.¹²

12 The Re-use Idea Competition was carried out in 2007 by UR and some of the winning design proposals were considered for the realization of this project. <<http://www.ur-net.go.jp/reusecompe/index.html>> referred on 30/04/2011.



Figure 8: Cutting process to remove upper levels

On the 2nd floor, the 'Healthy House' was designed as a body-and-mind-friendly place where non-chemical materials were used. Therefore, cork-tile flooring, paper-covered ceilings and walls as well as a ventilation unit with humidifying and air-cleaning functions were proposed. On the east side of the 1st floor, the 'Garden House' including a little vegetable garden was established and, to improve the image of the south façade, a wood deck and a pergola corridor were built using concrete and wood waste materials resulting from the renewal works. A green-wall was proposed on the east façade and EPS insulated panels were installed to increase acoustic and thermal insulation and to reduce the necessity of air-conditioning equipments.



Figure 9: Building No.28 south façade level subtraction

5.4 Green open areas

Preserving the existing vegetation, comfortable spaces where people could enjoy nature while doing other activities were

created and, considering landscape design principles, continuity and integration between the surrounding open areas and the buildings were achieved. For the deck between buildings No.26 and No.27, public benches and tables were suggested to promote and enhance communication among residents. Along the north side of building No. 28, the 'Shade Garden' was proposed as a tall-tree area where people could rest or walk especially during sunny days. Furthermore, the 'Playing Plaza' was designed in front of the west façade of building No.27 as a place where children could play safely inside the complex and, to encourage and support the idea of urban farming, an area for planting and growing plants and vegetables was also assigned.

6.0 VERIFICATION PLAN AFTER COMPLETION

The renovation works took eight months. After the completion, a verification plan was created, and monitoring studies were executed to evaluate whether the trial achieved the intended objectives (Table 1). The plan considered not only the executability, the cost and the construction period, but the livability, the design and the profitability of the project. It also focused on future housing complex renovation practices and took into account the following points:

- **Structural repair, thermal insulation, sound isolation, living comfort as well as scenery evaluation.**
- **Living experience examination from resident's perspectives, sensations, and opinions.**
- **Cost plan and existing environmental impacts, maintenance esteem and reuse of existing materials and resources.**
- **Building technologies selection, execution and obtained results evaluation.**

Table 1: Verification points

Classification	Evaluation and verification items
Functionality improvement	1) Elevator addition during residents' occupancy 2) Buildings' entrance renovation
Structural modification and improvement	1) Structural removing (full and partial) 2) New wall openings establishment and reinforcement 3) Slab cutting and reinforcement 4) Maintenance deck addition for piping equipment external concentration 5) Beam height reduction and reinforcement
Environmental and architectural performance	1) Exterior thermal insulation improvement 2) Thermal environment improvement 3) Floor and wall sound isolation performance improvement.
Living environment improvement	1) Residents' opinion on living space 2) Scenery and design attractiveness improvement 3) Visitors' questionnaire survey
General aspects	1) Development technology (design, construction) 2) Cost efficiency 3) Living conditions 4) Green areas and buildings' indoor-outdoor relations

Once the verification concluded, the complex was open to the public, visits to the apartments were organized and a questionnaire survey was conducted in order to evaluate the renovation effects as well as to know people's opinion on the project. Furthermore, an evaluation using the Sustainable Environment Assessment Method (SEAM)¹³ was held to diagnose

¹³ This method is divided into four main evaluation fields (society, natural resources, environment and economy) subdivided into five or six specific items. The results are shown in a diagram where **segments are** highlighted using different colors w^{hich} represent the levels of sustainability. The closer the segment is to the centre of the diagram, the weaker the conditions, and the further away from the centre, the stronger.

and determine the degree of achievement the improvements had towards sustainability.

6.1 Survey results

The visits were carried out twice a day four times a week for a period of eight months from July 2010 to February 2011. A total of 3,165 visitors from all over the country attended and 2,751 (86.9%) answered the questionnaire survey. About 80 per cent of the respondents - whose ages ranged between 20 and 70 years - were male with the majority being in their fifties and 20 per cent were female with the majority being in their twenties.

Visitors were given a guided tour of the facilities and some of them had the opportunity to use some spaces (kitchen, living rooms, etc.) as if they were owners. After having visited and experienced the areas, they were asked to indicate which of the renovated apartments they like the best to live in and why they would prefer it. Most of the respondents chose the 'Maisonnette House' (33.6%) followed by the 'Garden Terrace House' (21.6%) and the 'SOHO-Corner House' (14.1%) all located in building No. 26. Among the given reasons were the possibility to have pleasant and enjoyable daily-life activities, the adaptability to an own lifestyle, the easiness to live in the apartment, as well as the new distribution, design and dimension's suitability of the spaces. The possibility to have an energy-saving life was also supported but the 'Eco House' was the only apartment with the highest number of respondents (Figure 10).

About the surrounding green and public areas, 53.1% of the visitors liked the roof terrace created after part of the slab was removed from the 4th floor of building No. 26 and 44% evaluated the community deck connecting buildings No. 26 and 27 as a

graceful and joyful space. The corridor and the terrace between the 'Porch House' were considered as places that enhanced communication and allowed easy access to the building for both visitors and residents (33.3%). Also, the fact that existing trees were preserved and integrated to the new areas was supported by 43% of the people while 35.4% agreed that having a communal garden, promoted, encouraged and provided the opportunity to practice and integrate environmental activities in their daily lives.

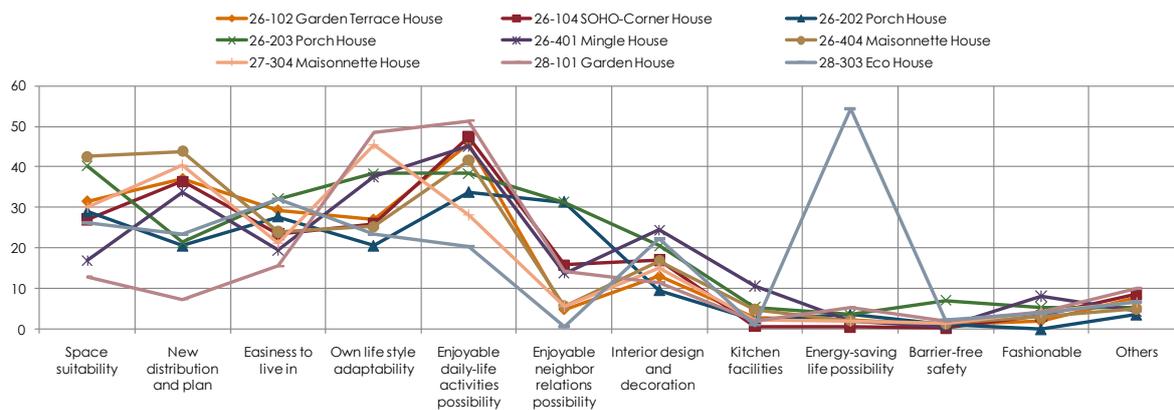


Figure 9: Respondents' reasons to live in renovated apartments

The developed technologies and their potential for future renovation projects were evaluated by about 80% of the respondents as very effective and effective methods that improved not only the living but also the environmental conditions (Figure 10). For instance, the elevators addition which enhanced the accessibility in buildings No.26 and 27 was supported by 91.7% of the visitors -with the majority being elderly people- and 90.3% agreed with the floor space expansion and the conversion of two apartments into maisonnette houses. Respondents also supported the creation of new wall openings (80.5%), the partial or total subtraction of structural elements (77.4%), and the existing balconies enlargement (73%). And, about 70% agreed that modifications to the façades significantly improved the image of the complex and added value to the urban landscape and the

local area (Figure 11) while about 75% considered roof and wall greening as well as exterior thermal insulation as good measures to reduce energy consumption and environmental problems.

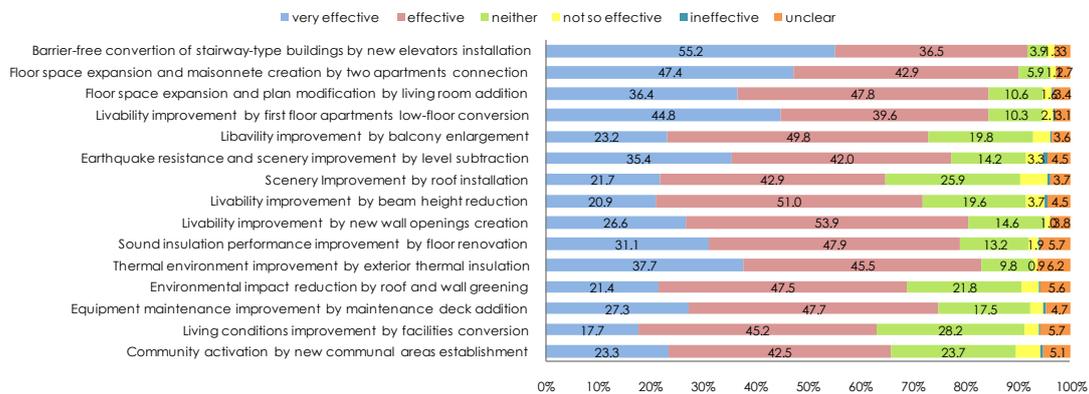


Figure 10: Respondents’ opinion about developed renovation technologies

People’s opinion and attitude towards housing renovation were also surveyed and most of the respondents (75%) supported the strategies and practical approaches of this trial (Figure 12). The majority agreed that, apart from the conventional housing renovations and renewals, new techniques and new attractive projects can be expected (86.65%), and that existing buildings reuse and renovation can help to reduce construction costs (66.8%) as well as to preserve and improve the cityscapes (67.7%).



Figure 11: Building No. 28. South façade modifications

Moreover, more than 75% believed that negative environmental impacts can be mitigated through waste reduction and that existing buildings' negative aspects could be enhanced during a renovation process while the positive ones are preserved (65.1%).

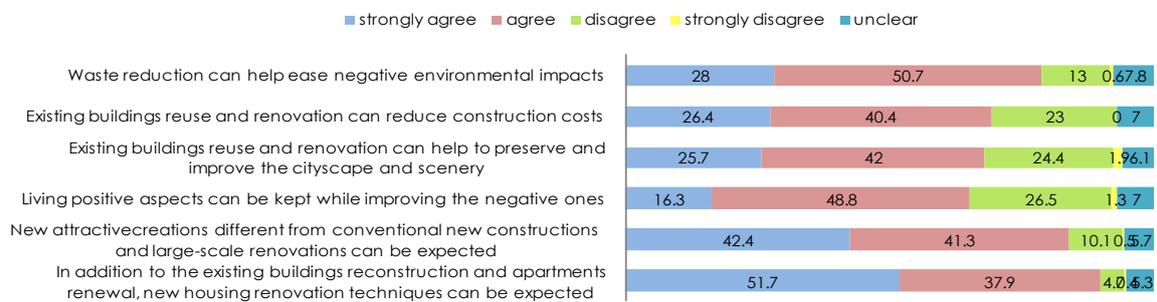


Figure 12: Respondents' opinion about housing renovation

Finally, visitors were also asked about the monthly amount they would pay for rent for the apartments and, compared to the existing value before the renovation¹⁴, the five surveyed cases presented considerable increases (Table 2). For example, the 'Maisonnette House' received the highest average amount (141,600 yen) but it had the lowest value when comparing the prices per square meter (1,520 yen). And, despite the 'Garden House' had almost the same area as the original apartment, it was given a monthly average rent that made the price per square meter increase almost 90% (2,240 yen). Younger respondents (20s or less) gave the highest values for all the apartments but the 'Eco House' and the 'Garden House' were also given high values by elderly people (70s or more) who agreed both places had suitable characteristics that matched their specific needs.

¹⁴ The rent value before the renovation works was assumed to be 50,000 yen for a 42 m² apartment (1,190 yen/per m²).

Table 2: Respondents' proposed rent values

Apartment Type	Area	Average rent	
		per month (yen)	per m ² (yen)
26-102 Garden Terrace House	65 m ²	114,700	1,760
26-104 SOHO Corner House	59 m ²	105,400	1,790
26-404 Maisonnette House	93 m ²	141,600	1,520
28-101 Garden House	35 m ²	78,500	2,240
28-302 Eco House	53 m ²	101,700	1,920

These results were also used to determine the possibilities, opportunities as well as the cost advantages and disadvantages renovation projects would have for future investment plans.

6.2 SEAM results

On the other hand, the SEAM evaluation was made before and after the renovation process and the diagrams showing the sustainability conditions for each space and for the site in general were obtained.

Specific fields and items were assigned for every space and using information obtained from the monitoring and the questionnaire survey they were individually assessed and given a score that ranged from 1 to 10 points which represented the worst and the best conditions respectively (Table 3). The average of the sum of the obtained points was the score each item received, and the average of the sum of those scores was the final result given to each of the four main fields.

Table 3: 'Garden Terrace House' SEAM evaluation

Evaluation Fields and Items			Score	
Society (7.47)	Community	The apartment layout allows family communication	9.00	8.38
		The apartment layout allows friends and neighbor visits	7.75	
	Accessibility	It is easy to move around comfortably	6.40	6.40
	Amenity & User's Comfort	The ceiling height is comfortable	9.50	8.25
		The bathroom seems comfortable and easy to use	8.75	
		The view from the apartment is attractive	8.25	
		The kitchen seems comfortable and easy to use	6.50	
Safety	The security measures make residents feel protected	6.18	6.13	
	Even if an emergency happens, safety can be felt	6.40		
	There are no worries about slip or hit accidents	5.80		
Education & Welfare	It is easy to keep an eye on children inside the apartment	8.50	8.50	
Form & Space	There is enough storage space inside the apartment	8.09	7.14	
	Each room has enough space for the necessary furniture	6.18		
Economy (6.65)	Diversity & Inclusion	It seems easy to use for handicapped and elderly people	5.09	5.09
	Employment	It is a place where a working environment can be arranged	6.10	6.10
	Costs	It seems that utility expenses can be reduced	5.33	5.33
	Social Benefits	The apartment layout seems to be wider than its actual size	8.09	8.37

		It seems that an own life style and hobbies can be realized	8.64	
	Property Strength	The desire to continue living in the apartment can be felt	8.36	8.36
Environment (8.16)	Design & Operation	The interior design is attractive	7.82	7.82
	Health	The apartment has good ventilation and is comfortable	8.50	8.50
Natural Resources (7.96)	Solar Energy	The apartment has good sunlight and daylight qualities	9.50	9.50
	Energy Efficiency	The apartment considers energy saving	6.70	6.70
	Materials	Materials considering people and the environment are used	7.67	7.67

Before the renovation, most of the segments were on the 'good' levels (4.00-6.99), with some exceptions that were near the 'not good' ones (1.00-3.99). However, after the project was completed, all the apartments presented considerable improvements and, despite the diagrams for each space were different, almost all the segments ranged only from the 'good' (5.50-6.99) to the 'excellent' levels (7.00-10.00). The 'Garden Terrace House' was the apartment with the best conditions as the diagram had the highest number of excellent (light and dark green) segments as shown in Figure 13.



Figure 13: 'Garden Terrace House'. SEAM diagrams and images

The diagram obtained for the site also showed the improvements achieved after the renovation works, and although all the segments were among the good levels, they changed to the excellent levels, except for the cost one which kept the same values (Figure 14).

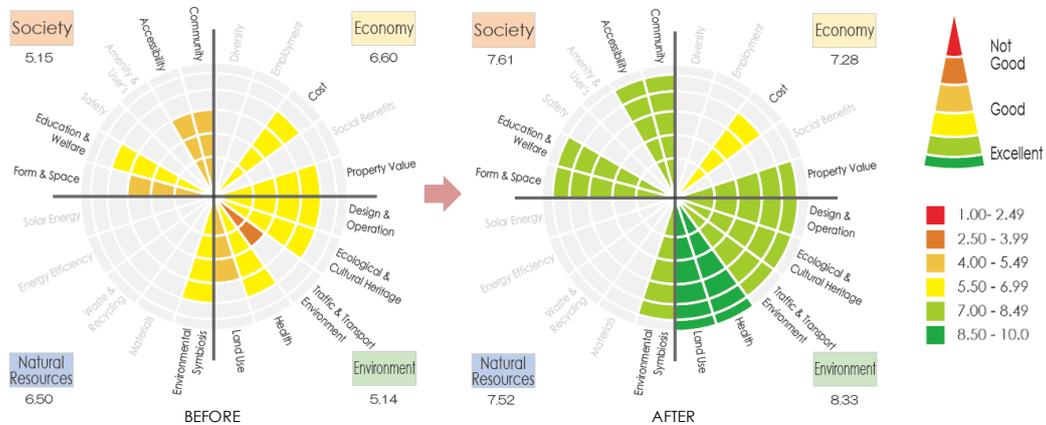


Figure 14: Site improvements. SEAM diagrams

The SEAM evaluation clearly helped to identify and determine where the project was weak and where it was strong. Therefore, all these results in combination with those obtained from the survey could be used to guide future studies and renovation proposals to focus on specific areas that need improvement in order to achieve better projects with high sustainability levels.



Figure 15: Buildings No. 26, 27 and 28. Before and after the renovation

7.0 CONCLUSION

Housing developments are facing many challenges and specific actions should be taken to make them suitable for the new and different lifestyles, including various types of family structures and occupancy patterns expected for the coming years. Building new houses would help to meet the housing demands but also by changing, renovating and improving existing properties there is a good chance that they could be met.

The renovated Mukogaoka Housing Complex is a comprehensive project that, contributing to new knowledge and practice, demonstrates and experiments with adaptive re-use and sustainable design programs which can improve and extend the life of existing buildings. Through the process of design, construction, operation and evaluation it illustrates how design guidelines and renovation practices can be achieved and how, through these measures, we can protect and enhance our environment to provide better living conditions and to meet the future by maintaining our past.

The Renaissance Plan principles also provide viable options to sustain future cities and societies. Therefore, the presented proposals and technologies represent an opportunity for the use in practice and should be considered as examples for future housing stock renewals. In addition, to support the principles and goals of a sustainable culture in planning, construction, and renovation, the framework of policy measures, interdisciplinary work approaches as well as permanent cooperation and coordination are needed, and new approaches should be combined

with the traditional techniques to achieve a harmonious coexistence between man, nature and architecture.

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Andres Balcazar

Andres Balcazar is a Mexico City based architect and consultant, currently works for the Mexican Human Rights Commission as Director of Disability Affairs. He's been accessibility and disability consultant for national and international organizations from the private, public, and civil society sectors.

Some of his publications and research include: Study about the situation of schools' accessibility in Mexico; Accessibility Guidelines for the Ministry of Public Education; Report on the Situation of Human Rights of People with Disabilities in Mexico, for the Japan International Cooperation Agency (JICA); Accessibility assessment of Bahrain's rehabilitation center for persons with disabilities project. Accessibility assessments of several public and private facilities in Mexico, Saudi Arabia and Dubai.

He has participated in international research studies on disability and accessibility, including development of guidelines and standards in Mexico and abroad.

Inclusive workplaces

Andres Balcazar

Access to work is a basic human right. The creation of inclusive workplaces contributes to the realization of providing persons with disabilities with the opportunities of being productive members of society. And the benefits are for everyone, companies, employees, and communities.

We might think that the current pandemic and technology that allowed us to work remotely for several months will change forever the workplace. That's true... but at the same time, not all positions in all industries are susceptible of remote working. Many of us will have to go back or are already working again in our traditional workplace. So, we still need to find ways to accommodate the needs of different groups that benefits from an accessible, diverse, and inclusive workplace.

I've been involved since 2007 in developing accessibility standards in Mexico, my home country, and abroad, both local and national, that are either mandatory or voluntary regulations. Since then, during this past 15 years, implementation of those standards is indeed happening, at a very low pace though.

The existence of a legal framework and availability of a set of standards for accessible built and digital environments doesn't seem to be enough to create overnight fully inclusive workplaces. Several cities and countries worldwide already have local or national regulations mandating inclusive environments, and that

doesn't seem to improve the life of persons with disabilities and their right to a decent job.

How do we create inclusive workplaces for persons with disabilities then? We already have criteria defining what makes an accessible environment, covering the built environment, products, and digital services. Large, multinational companies in big cities are more aware of the benefits for having inclusive workplaces. But medium and small businesses, in small cities or towns are not fully aware, and the reasons vary greatly.

Answering my previous question, I don't think there is one single recipe. The real challenge is still to change people's attitude towards persons with disabilities in small/medium companies and local communities worldwide, understanding the local cultural background and adapting best practices. Accessible technology and access to internet is still far of being a reality for many persons with disability worldwide, therefore, working from home is still far from being the solution.

Some actions include:

- *Building capacity by providing standards and best practices to local businesses in local languages and adapting to local cultures.*
- *Training built environment and IT professionals.*
- *Involving local groups of persons with disabilities.*
- *Developing spaces to share success stories and best practices from leading businesses from different industries pioneering the inclusion of persons with disabilities to their workforce.*



Letter from the Chairman's Desk By Sunil Bhatia PhD

One day I was watching David Attenborough's program on nature Bites where he was explaining how plants meet the requirement of deficiencies of nitrogen and other minerals by attracting and killing insects. He was showing the design of petals in such a way and explaining. The flower was in bright color and was attractive for keeping in mind specific insects. I was thinking as the designer that plant's flower is making all possible efforts of accessibility for insects by making all possible means for attraction. Once it is noticed by insects it will be difficult for it to resist and rest and sits on petals. This is the blunder and unknowingly it will proceed to the next step of trapping. It slides into the pit at the center of the flower and the design is such that it wishes to come out but it is designed for highly inaccessible from the flower. The more it struggles for coming out the more latex around its body makes it helpless and dies from suffocation. Nature promotes accessibility and side-by-side inaccessibility that has its role in nature that goes along with it for survival. Both have some purpose and nature works with accessibility as well as inaccessibility.

In ancient times people were aware of accessibility and inaccessibility and used trapping animals in hunting for food. The selection of place for trapping has high accessibility for desired animals and digging the pit such deep makes it inaccessible for

fallen animals. They never select a place that has low accessibility. They cover the pit with the favorite food of the animals for attracting them toward the trap. Once falls into a pit that is highly inaccessible because of deep enough for the trapped animal to come out.

In modern times the design of a knife with a sharp edge should not harm the users so it should be inaccessible by using a handle with such elements it is easy to hold but for preventing cut off the hand of users. Another end for cutting is accessible for use. The idea of the design of a shoe with eyelets for tying the laces is a good example where accessibility is increased till the person slips his foot and the tying of laces increases inaccessibility and reduces accessibility to a minimum to the prevention of possible inherent accidents in it. To protect from wild animals they thought of fencing that hurts those who so try for entry. It is creating inaccessibility. The design of the door is for easy accessibility for occupants and closing for unwanted people. The degree of inaccessibility is based on the degree of protection of assets in it for making impossible inaccessibility. Wherever light and fresh air should be easily accessible but the design of the ventilator is only for sunlight. When we lock the door we authorize the person who has the key for accessibility and it is inaccessible to enter the house for rest.

One day I was traveling and there was a repeated announcement "Beware of pickpockets. I was a little cautious and looking for a safe place where I can sit. The idea of sitting has struck me because a standing position where my entire body was exposed and pickpocket has easy access whereas a sitting position lowers the exposure of the body and little inaccessible for pickpocketing.

A stampede is an example where no proper accessibility is designed keeping in mind the local culture and crowd behavior and prove to be the reason for the number of people's death That is inaccessibility that is responsible for killing. The crowd rushes in a particular direction for escape and it is not properly designed to meet the requirement for such high volume and turned out to be highly inaccessible and people's pressure on the escape route proves the reason for death. Fire personnel is trained for looking for a possible accessible route for the trapped person from a highly inaccessible place engulf in fire accidents.

Elevators are the best tools for high-rise buildings and the staircase is not designed for all and is inaccessible for differently abled people. In medical sciences bypassing surgery or placing a stent in a vein for making the free flow of blood is an attempt of access bypass the clogged passage of inaccessibility. It is similar to the high current river crossing from one bank to another by using some kind of bridge for overcoming inaccessibility.

I am thankful to Ms. Lourdes Arreola Prado, Built Environment Program Manager, International Association of Accessibility Professionals (IAAP) for accepting the invitation of the Guest Editor.

Lambert Academic publication for celebration of 150th special issue by publishing a book by compiling editorials "Design For All, Drivers of Design" was translated into eight different languages from ENGLISH to French, German, Italian, Russian, Dutch, and Portuguese. Kindly click the following link for the 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

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Forthcoming Issues

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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.

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October 2022 Vol-17 No-10



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She had the opportunity to work as a designer in the industry and as a professor in several Universities and cities around Mexico.

She had experience in the Mexican design industry, government and manufacturing. She also worked in General Electric Energy for 5 years, obtaining different certifications in the meantime about quality and design.

Also, was a Co-founder and organizer for various conferences, talks and symposiums about art & design. Also was invited as a speaker in different Universities and congresses nationally and internationally.

Her Design research and development expertise is in esthetics, symbolic meanings, manufacturing process, healthcare, disability, inclusion and sustainability.

Until today is an philosophy, art and design writer since 2009 in www.designforsociety.org

November 2022 Vol-17 No-11



Prof Dr. Cigdem Kaya *is chair of department and professor of design at Istanbul Technical University (ITU), Department of*

Industrial Design. She has been the vice director of Science and Society Research Center (2014-2017) and Industrial Design Graduate Programs Coordinator at ITU (2014-2017). She has been part of I-D team of Learning Lab by Relais Culture Europe, Paris; where she co-develops content and methodology in the field of cultural innovation since 2019.

Cigdem Kaya received Bachelor of Industrial Design from Istanbul Technical University (ITU) in 2003, Masters of Fine Arts in New Genres from San Francisco Art Institute (SFAI) in 2006 and Ph.D. in Industrial Design from ITU in 2011 with co-supervision at Art and Design Center at Sheffield Hallam University (SHU) where she closely studied with Chris Rust. Kaya's research has been funded by Fulbright and Marie Curie programs. She has published many peer-reviewed articles in best design research journals. She supervised 3 PhD thesis about craft, critical making, use-share systems, all of which aim at social innovation and sustainability.

In 2020, she has been awarded with one of the most prestigious national research awards: scientific encouragement award by Middle Eastern Technical University Prof.Dr. Mustafa N.Parlar Education and Research Foundation in 2020 for her research on social innovation and sustainability.

December 2022 Vol-17 No-12



Ivor Ambrose

Managing Director, ENAT asbl.

Ivor Ambrose has worked in the areas of accessibility and disability inclusion for over 40 years as a researcher, university lecturer, project manager, policy advisor and independent consultant. Born in England, he has lived and worked in the UK, Denmark, Belgium and Greece. He holds a Master's degree in Environmental Psychology from the University of Surrey, UK and a university lecturer/Ph.D. qualification from the Danish Building Research Institute, where he specialised in User Evaluation of Environments and new Information and Communication Technologies.

In 2001 he turned his attention to accessibility in the tourism sector, which generally lacked awareness of the needs and specific access requirements of people with disabilities, resulting in inadequate provisions for these travellers. As a researcher and advocate of 'Design for All, which germinated in Europe in the late 1990s, and 'Universal Design' which took hold in the same period in USA, he was part of a movement which challenged policy makers and practitioners in many fields to re-think the way environments, products and services were conceived and designed. Through his research and observations of life, behaviour and cultures, Ivor has developed a driving ambition to make tourism accessible for everyone, everywhere.

In 2008 he co-founded the European Network for Accessible Tourism (ENAT) non-profit organisation (www.accessibletourism.org), with a group of European organisations active in the tourism industry and disability advocacy. He was elected as its Managing Director and has continued in that position since then. ENAT has become the premier membership association for about 300 organisations, business and individuals who support and want to learn more about this area of tourism development. As its director, Ivor manages ENAT's activities and projects including curriculum

development and vocational training courses for hospitality management and staff, European and international standards work on accessibility and tourism, destination management consultancy, certification and provision of accessibility information through online platforms including Pantou, the Accessible Tourism Directory (www.pantou.org). The ENAT Board also maintains links with the UN World Tourism Organisation, the EU Tourism Manifesto Group, the International Social Tourism Organisation, Blue Flag International, Zero Project and many national and regional tourist bodies.

Email: enat@accessibletourism.org

Athens, April 2022

January 2023 Vol-18 No-1



Dr. Soumyajit Bhar is currently an Assistant professor of environmental studies at Krea University, India, where he offers and coordinates a course on Design Thinking. Soumyajit straddles action and academic research with more than 14 years of experience (both volunteering and full-time) working with various environmental and sustainability issues. He holds a Ph.D. in Sustainability Studies (with a specialization in ecological economics) from Ashoka Trust for Research in Ecology and the Environment (ATREE) as part of a unique interdisciplinary Ph.D. program. His dissertation attempts to understand socio-psychological drivers and local and regional scale environmental impacts of conspicuous/luxury consumption basket in India. Soumyajit is furthering postdoctoral research at the intersection

of rising consumerism, sustainability concerns, and inequality levels in the context of the Global South. He is also keen to explore how design education can broaden students' perspectives and help them delineate pathways to a better world. He has published in international journals and popular media. He is also interested in larger questions of philosophy and ethics, particularly pertaining to environmental issues.

New Books



ISBN 978-613-9-83306-1



Sunil Bhatia

Design for All

Drivers of Design

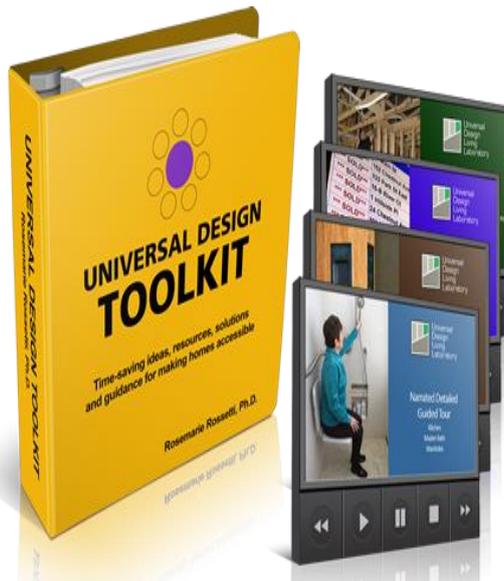
Expression of gratitude to unknown, unsung, unacknowledged, unmentioned and selfless millions of heroes who have contributed immensely in making our society worth living, their design of comb, kite, fireworks, glass, mirror even thread concept have revolutionized the thought process of human minds and prepared blueprint of future. Modern people may take for granted but its beyond imagination the hardships and how these innovative ideas could strike their minds. Discovery of fire was possible because of its presence in nature but management of fire through manmade designs was a significant attempt of thinking beyond survival and no

doubt this contributed in establishing our supremacy over other living beings. Somewhere in journey of progress we lost the legacy of ancestors in shaping minds of future generations and completely ignored their philosophy and established a society that was beyond their imagination, I picked up such drivers that have contributed in our progress and continue guiding but we failed to recognize its role and functions. Even tears, confusion in designing products was marvelous attempt and design of ladder and many more helped in sustainable, inclusive growth.

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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>

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.

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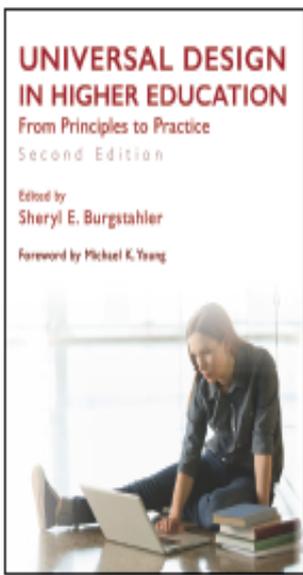
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UNIVERSAL DESIGN IN HIGHER EDUCATION

From Principles to Practice, Second Edition

EDITED BY SHERYL E. BURGSTAHLER • FOREWORD BY MICHAEL K. YOUNG

This second edition of the classic *Universal Design in Higher Education* is a comprehensive, up-to-the-minute guide for creating fully accessible college and university programs. The second edition has been thoroughly revised and expanded, and it addresses major recent changes in universities and colleges, the law, and technology.

As larger numbers of people with disabilities attend postsecondary educational institutions, there have been increased efforts to make the full array of classes, services, and programs accessible to all students. This revised edition provides both a full survey of those measures and practical guidance for schools as they work to turn the goal of universal accessibility into a reality. As such, it makes an indispensable contribution to the growing body of literature on special education and universal design. This book will be of particular value to university and college administrators, and to special education researchers, teachers, and activists.

SHERYL E. BURGSTAHLER is an affiliate professor in the College of Education at the University of Washington in Seattle, and founder and director of the university's Disabilities, Opportunities, Internetworking, and Technology (DO-IT) and Access Technology Centers.

“Sheryl Burgstahler has assembled a great set of chapters and authors on universal design in higher education. It’s a must-have book for all universities, as it covers universal design of instruction, physical spaces, student services, technology, and provides examples of best practices.”

—JONATHAN LAZAR, PROFESSOR OF COMPUTER AND INFORMATION SCIENCES, TOWSON UNIVERSITY, AND CO-AUTHOR OF *EN SURE IN DIGITAL ACCESSIBILITY THROUGH PROCESSES AND POLICY*

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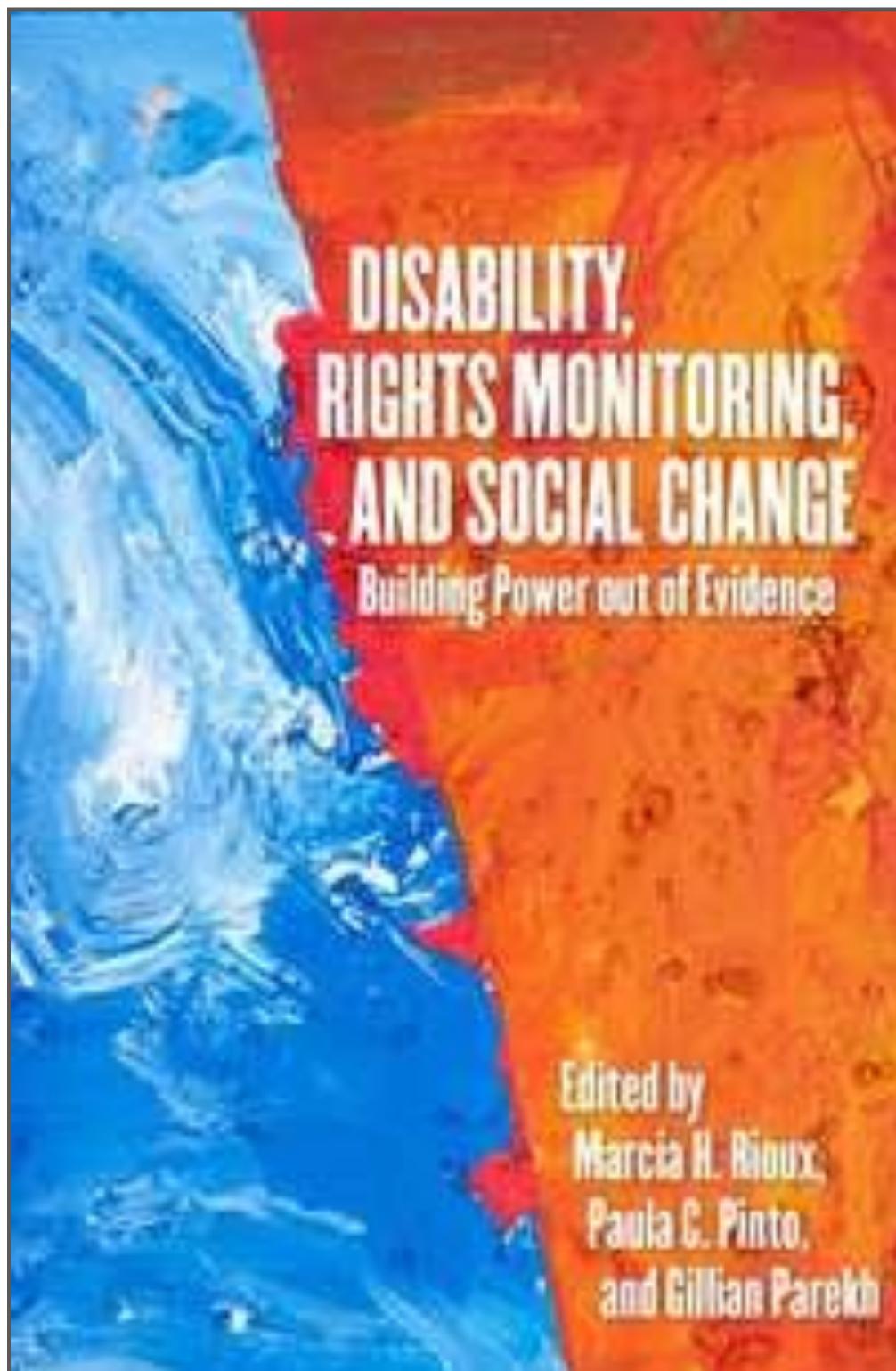
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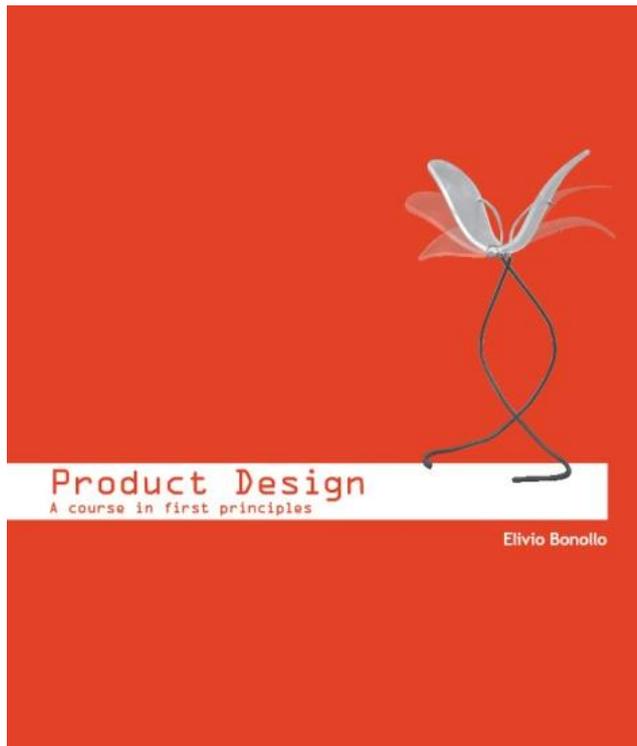
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Disability, Rights Monitoring and Social Change:



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).

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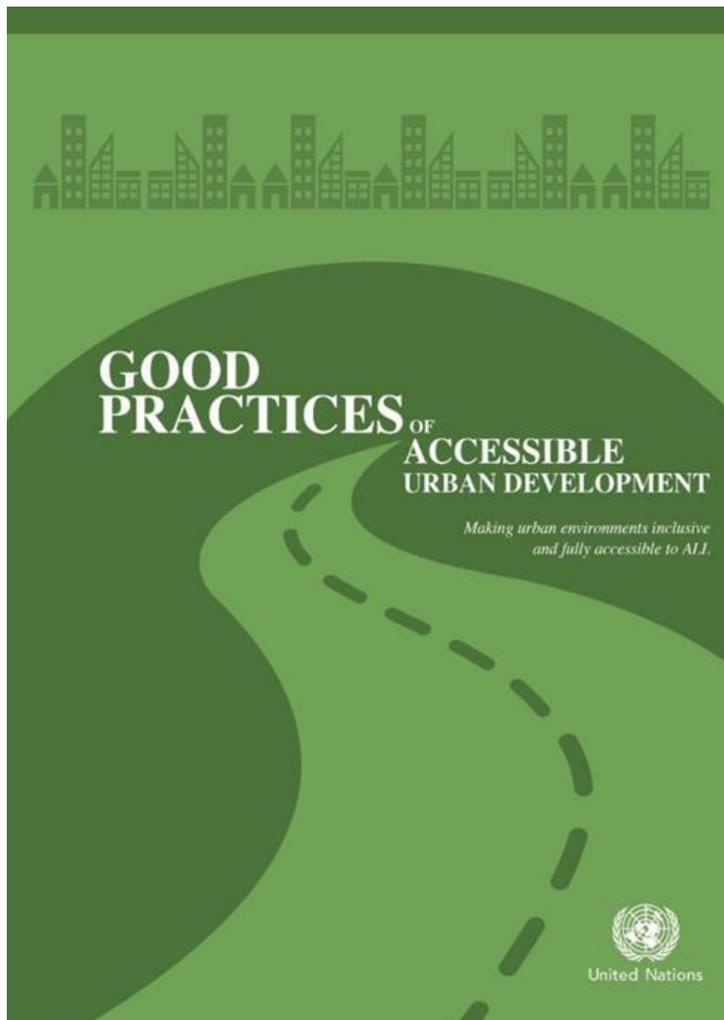
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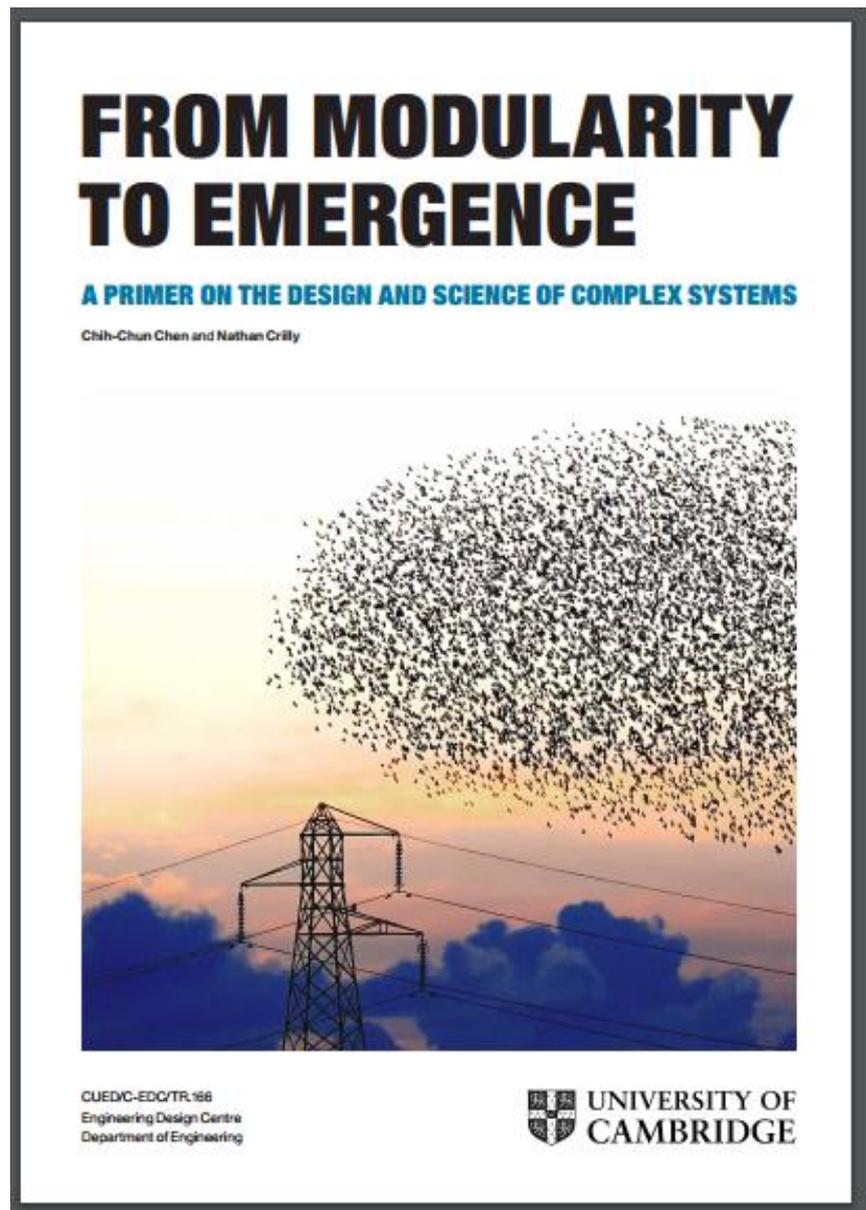


In light of the forthcoming United Nations Conference on Housing and Sustainable Urban Development (HABITAT III) and the imminent launch of the New Urban Agenda, DESA in collaboration with the Essl Foundation (Zero Project) and others have prepared a new publication entitled: "Good practices of accessible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

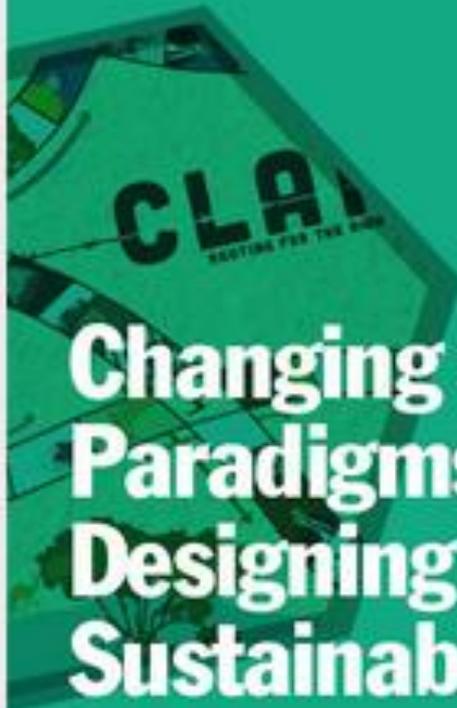
The book is available at URL: <http://complexityprimer.eng.cam.ac.uk>

Changing Paradigms: Designing for a Sustainable Future

Editors:
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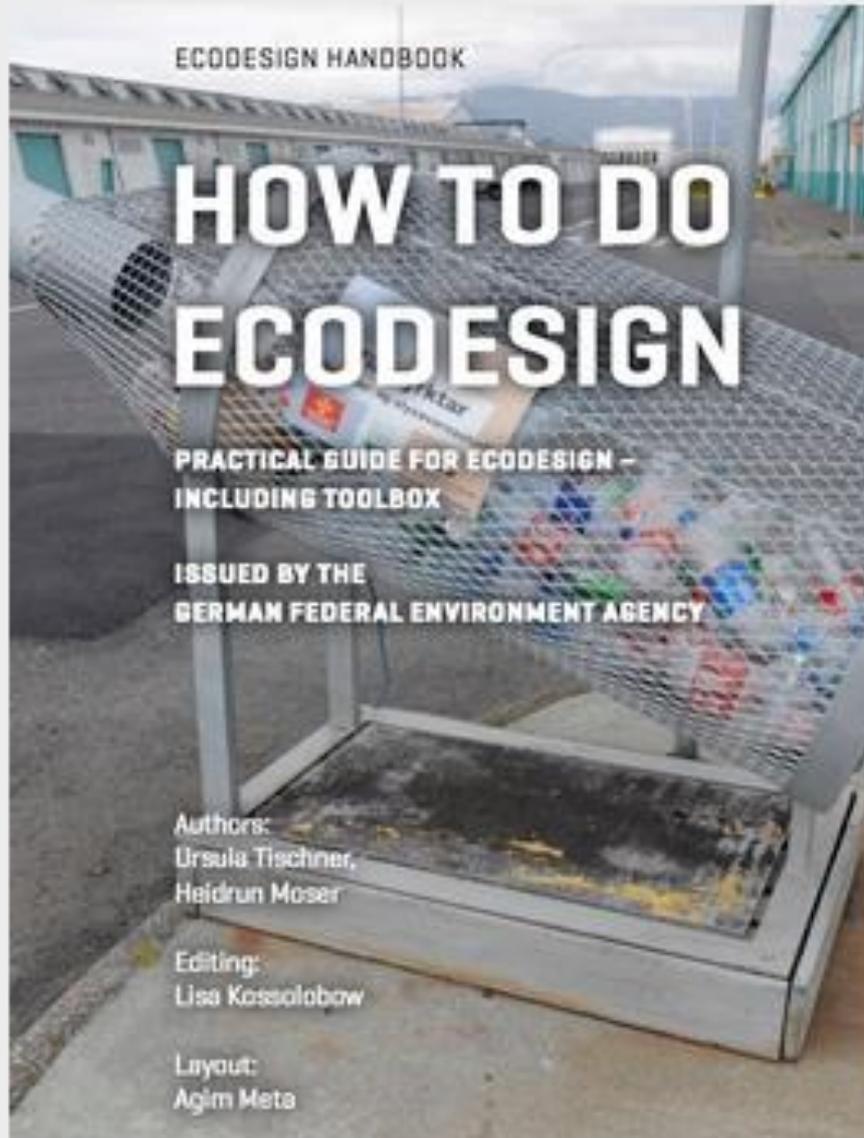
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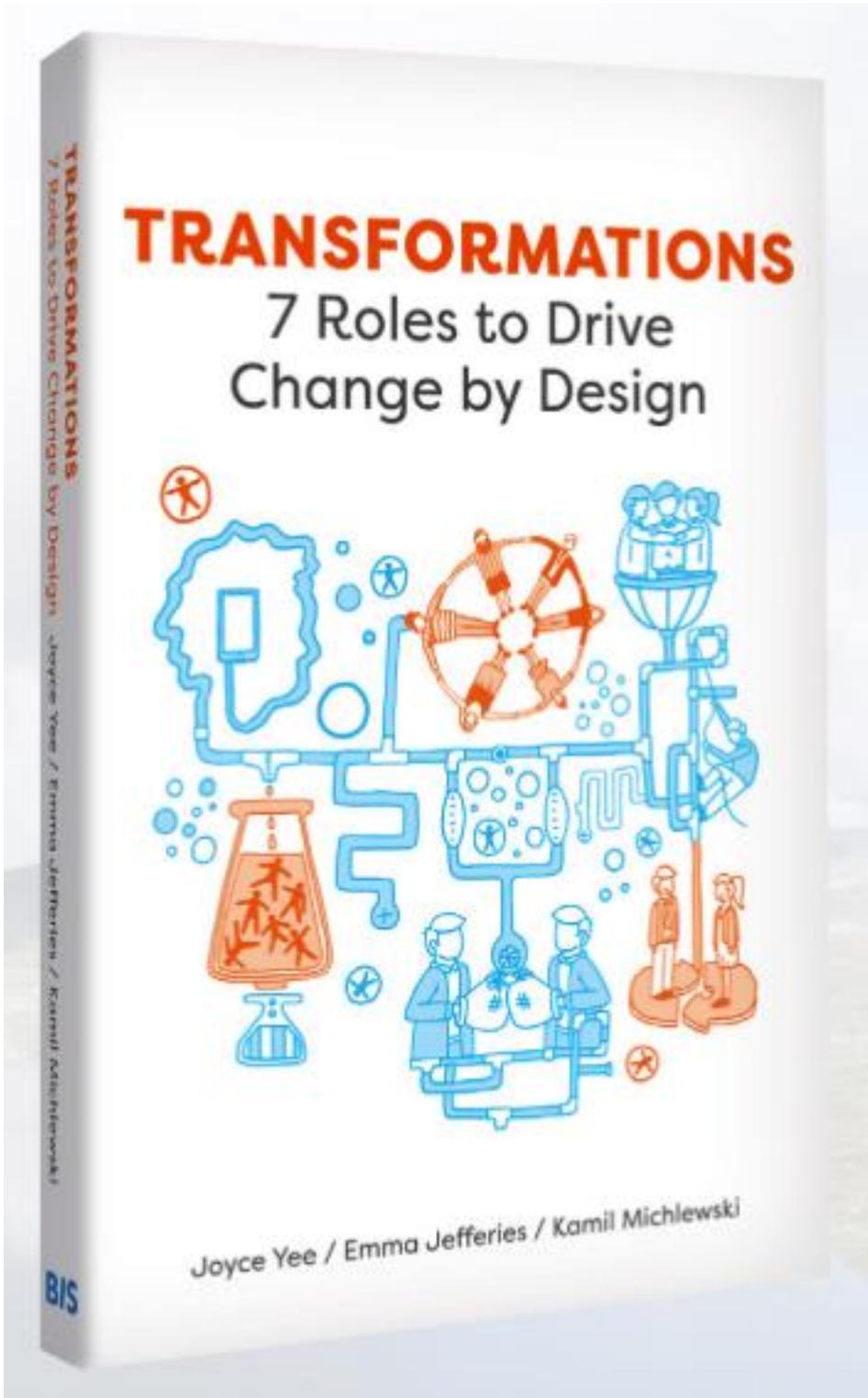


Changing Paradigms: Designing for a Sustainable Future

New iBook / ebook: HOW TO DO ECODESIGN



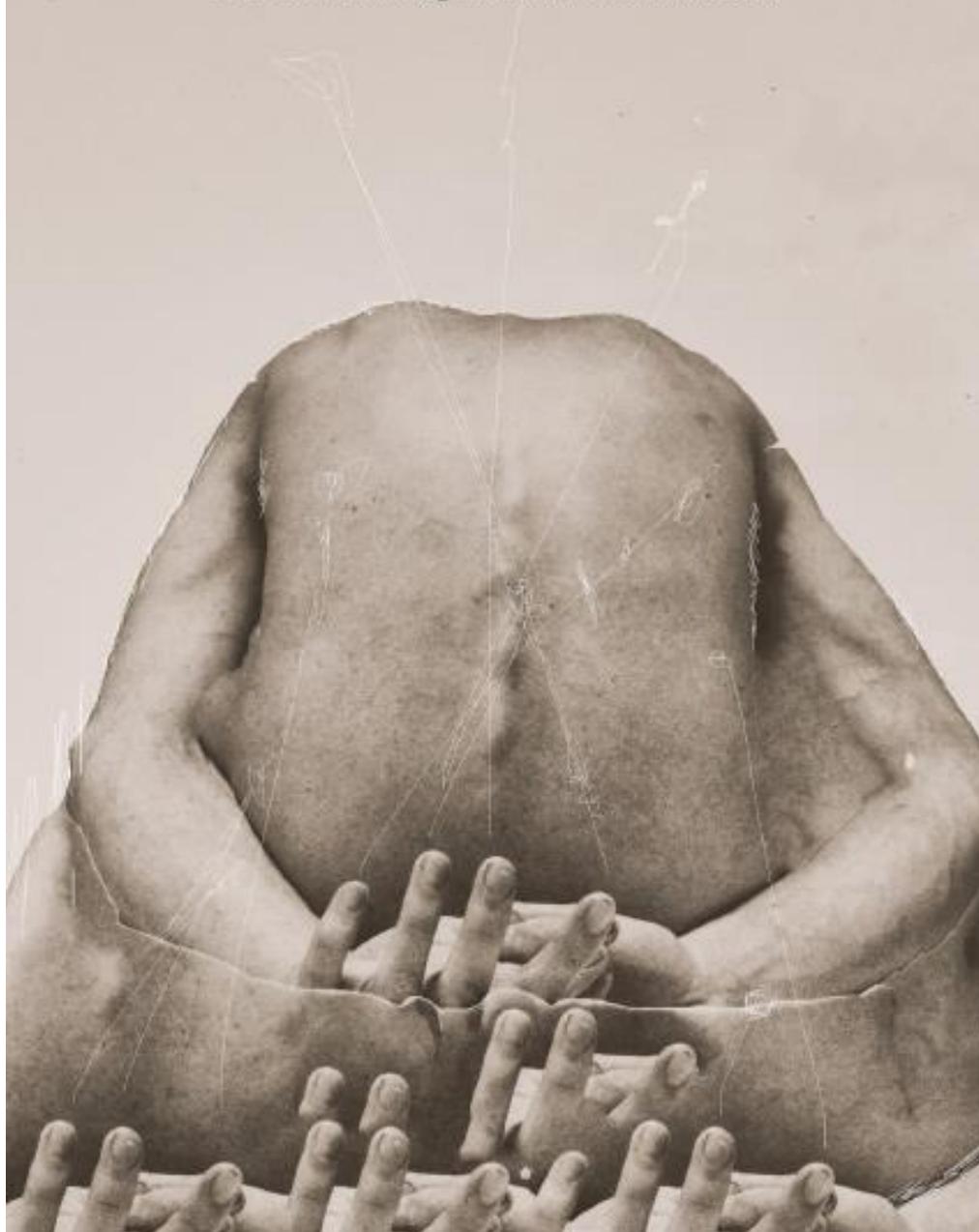
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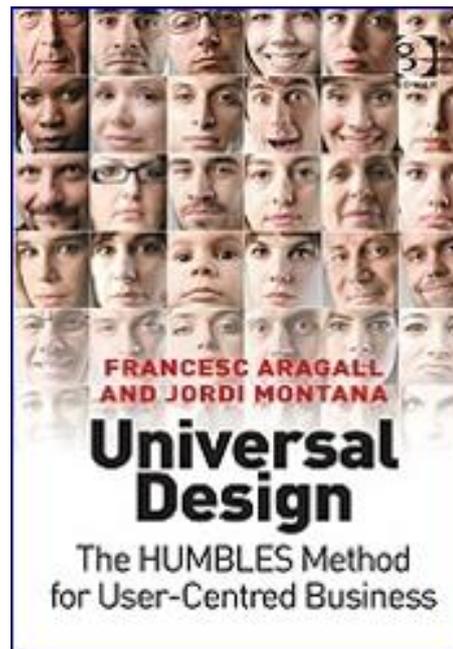
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DEATH AND GOVERNMENTALITY

Neo-liberalism, grief and the nation form



Universal Design: The HUMBLE Method for User-Centred Business



“Universal Design: The HUMBLE Method for User-Centred Business”, written by Francesc Aragall and Jordi Montaña and published by Gower, provides an innovative method to support businesses wishing to increase the number of satisfied users and clients and enhance their reputation by adapting their products and services to the diversity of their actual and potential customers, taking into account their needs, wishes and expectations. The HUMBLE method (© Aragall) consists of a progressive, seven-phase approach for implementing Design for All within a business. By incorporating the user’s point of view, it enables companies to evaluate their business strategies in order to improve provide an improved, more customer-oriented experience, and thereby gain a competitive advantage in the marketplace. As well as a comprehensive guide to the method, the book provides case studies of multinational business which have successfully incorporated Design for All into their working practices. According to Sandro Rossell, President of FC Barcelona, who in company with other leading business professionals endorsed the publication, it is “required reading for those who wish to understand how universal design is the only way to connect a brand to the widest possible public, increasing client loyalty and enhancing company prestige”. To purchase the book, visit either the [Design for All Foundation website](#)

Appeal



News

1.

Equal access: How Fort Wayne is expanding and connecting services for people with disabilities



Clif Wallace showcases the extra wide doors suitable for wheelchairs while at the AWS Foundation. Rachel Von Stroup



As CEO of the AWS Foundation, Patti Hays knows there are many organizations serving children and adults with disabilities in the

Fort Wayne region. But finding and accessing all of their resources and programs can be a challenge.

That's why one of the Foundation's projects, developed in 2018, is the Indiana Disability Resource FINDER, a directory of services, programs, and articles for the disability community. It is an online platform seeking to make it easier for those who need services to get them—especially as more and more resources emerge in Fort Wayne.

Since 2007, the AWS Foundation has been funding grants to organizations with a vision to turn Northeast Indiana into a region where people with intellectual, developmental, and physical disabilities are engaged fully and meaningfully in all aspects of community life.

To get there, Hays believes Fort Wayne has room to improve in terms of being more pervasively disability-friendly.

"It is a process, and we're en route; that's the best I can say," Hays says. "I don't know that you can ever be fully accessible, but it's an admirable goal, and as long as we keep working toward that, that's what's important."

Over the years, the Americans With Disabilities Act (ADA) has made strides toward greater access to public infrastructure and guaranteed accommodations for employment among people with disabilities. Cities and businesses have accessible developments, like signs in braille, accessible entrances, and elevators in buildings, thanks to ADA standards. Even so, the ADA focuses primarily on people with physical disabilities, meeting only a fraction of the existing—and expanding—need for inclusivity, Hays notes.

"In the 32 years since ADA, we see the incidence of autism diagnosis increasing," she says. "We see shutting down of state institutions, individuals being more community-integrated, and self-advocacy--people saying, 'I don't want to be restricted. I want the same access to a community as everyone else in my family has.'"



Clif Wallace uses the control on his wheelchair while at the AWS Foundation.

While ADA sets the minimum standards for inclusivity in communities, a more fundamentally inclusive concept, known as Universal Design, moves cities to higher levels of accessibility, Hays says. Although people tend to think of Universal Design in terms of architecture, she notes that it also encompasses an organization's experiences, programs, and staff, such as implementing inclusive hiring practices or seeking direct input from people with disabilities on projects. Hays says, locally, one of the best examples of embracing Universal Design is happening at the Fort Wayne International Airport (FWA.)

"They reached out and got input from a lot of people with disabilities," says Hays. "They spent some time talking with staff here at AWS Foundation, and then they found things on their own."



Fort Wayne, IN 46804. Exterior of the AWS Foundation, 5323 W Jefferson Blvd,

Tina Acosta, Director of Program Outreach and Certified ADA Coordinator for Turnstone Center, says the airport contacted them as they were making plans for the west terminal expansion, which is currently underway. Turnstone helped assemble groups of people with different disabilities to serve as advisors on the project.

"Each of those groups met on a separate day, and we focused just on what was important to them," Acosta says. "We started at the entrance to the airport, and we talked about the parking lot and the ease of getting to the front entrance, and then all the way to the gate."

Acosta says that the staff at the airport and the architects were very interested in what people with disabilities had to say and incorporated many of their suggestions into the final plans.

Scott Hinderman, Director of Airports for the Fort Wayne – Allen County Airport Authority, says they identified accessibility goals very early in the project planning process.

“Our architect used Universal Design and ADA as part of their architectural design process, but our entire team went above and beyond UD and ADA,” he says.

Some of the features that make the new airport terminal more disability-friendly include: Five accessible van cutouts on the terminal curbside; a curbside drop-off accessible for someone in a wheelchair with a low profile for lifting bags; high contrast signage; a linear cane trail that leads down the main concourse; a hearing loop at the gates; low profile bag scales; a sensory room; a service animal relief area; an adult-sized changing table; and clearly identifiable entrances to vestibules and boarding bridges.

Hinderman recommends that anyone in Fort Wayne planning to make Universal Design infrastructure improvements engage with local experts.

“We are fortunate to have such great organizations in our community, like Turnstone and AWS, who helped guide us through this process,” he says. “I would encourage everyone to explore any opportunities they can to make sure their facilities are accessible to all. It is the right thing to do and a rewarding experience.”



From left: John Guingrich, Moriah Backhaus, and Sylvia Adams have a work meeting at The League For the Blind - Disabled.

In addition, Hinderman applauds Joe Marana, the Director of Operations and Facilities at the airport, who he says worked as a lead for their team throughout the terminal expansion and the overall effort to make sure it is accessible to all.

“If facility owners and managers put in the time to make these changes, our community will all have a better experience as we live, work, and play in the region,” he says.

Another effort by FWA to be more disability-friendly is The Hidden Disabilities Sunflower Program. Green lanyards and bracelets with sunflowers on them are available at the Welcome Center for free. Travelers with hidden disabilities can wear these items to indicate to airport staff that they may need extra time or help getting

through the terminal. The program started at Gatwick Airport in London, and FWA is the first airport in Indiana to employ the program.

“I would like to see (organizations implementing infrastructure improvements for people with disabilities) more in the city,” says Hays. “I keep thinking every time a prospective business that's looking at Fort Wayne flies into our airport, they will say, 'Oh my gosh this must be a really caring community. Look at these elements that they've integrated. Look at what they have included to make everyone welcome.’”

Beyond the airport, making developments more accessible and embracing Universal Design is catching on in other areas of Fort Wayne, too. Visit Fort Wayne has assembled a list of resources for people with disabilities and things to do that offer accommodations or accessible features. One example is Parkview Field. Someone who uses a powered wheelchair can charge their battery while they are enjoying the baseball game.

“They built in a lot of great accessibility features when they built that stadium,” says Acosta from Turnstone. “We actually had a group of our clients who went down and tested out the accessibility features before they opened.”



Clif Wallace showcases the extra wide doors suitable for wheelchairs while at the AWS Foundation.

Acosta says that there are many organizations sponsoring sensory-friendly events, as well. The Fort Wayne Philharmonic held a sensory-friendly concert this spring. The event was designed to accommodate children and adults with sensory sensitivities by making modifications to the performance including not lowering the lights. Prior to the show, there were stations set up so audience members could play instruments. Before each piece was played, someone would describe what the music was about and what to expect in terms of types of sound and volume. And if people needed to get up and walk around, that was acceptable.

Turnstone, because of their association with the Paralympics, has

connections all over the world.

“We want people to know that we are a resource—whether you come into our agency for a service, or whether you get your service through a virtual session or a phone call,” says Acosta. “We want businesses and organizations to know that we're a resource, as well.”

One of the resources available to anyone is a video that Turnstone created to bring more awareness about treating those with disabilities, like people, first. Acosta encourages organizations to use the video as a training tool and a way to start conversations.

Acosta has an ADA coordinator certification so she has access to a lot of information about accessibility. Although the information is public knowledge, she knows how to find it quickly and can guide people on their journey to being more disability-friendly.

“We want the community to understand that making changes to be more accessible is really not that difficult, and in a lot of ways, it's not costly,” she says. “We want to be more involved in the community.”

The AWS Foundation wants to be a resource, too. Their new facility was built to be a model of Universal Design. There are extra-wide hallways and workspaces are spread out to accommodate employees who might have a service animal or be in a wheelchair. Desks are height-adjustable, and the rooms have sound buffers.

“We are anticipating possible needs so that when a person comes in, it's as if we planned on them being there,” says Hays.



Program Officer for AWS Mandy Drakeford, left, and Clif Wallace showcase how having different levels of tables available and different types of seating is important while at the AWS Foundation.

The AWS building has meeting rooms they make available to grantees and other organizations to use. Each room is set up to anticipate the needs of visitors and make accommodations for those with disabilities. There are hearing loops, cameras, enhanced microphones, and different

heights of tables and chairs.

If businesses or organizations want to see what Universal Design might look like in practice, Hays invites anyone to come to their building to see some examples firsthand. But she acknowledges that even AWS didn't get it right the first time around.

"We thought we did a great job with this building, and we had some clients from Turnstone and from The League do a walk-through, and we had to change several things," she says. "We got it wrong."

This is a good reminder to incorporate people with disabilities in your planning and evaluation process. As the saying goes, "Nothing about us without us."

As organizations, like The League, Turnstone, and the AWS Foundation, keep spreading the word about accessibility and Universal Design, Hays is hopeful Fort Wayne will become increasingly all-abilities-friendly.

"It's really exciting to see how other people are embracing (Universal Design)," says Hays. "Everybody is kind of like, 'I want to do that, too.' And some of it first came to attention with Promenade Park when the city and the parks department had that vision of, 'How do we make Promenade accessible?'"

This story is part of a series on the 8 Domains of Livability in Northeast Indiana, underwritten by AARP.

(Courtesy: Input Fort Wayne)

Programme and Events



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Hot News For Students and Educators!

We're on the Final Approach for this year's Spring Semester Student submissions. We only have a few days before the final entry deadline, so if you're interested in joining the competition, please complete the submission process immediately. You know where to find us: www.sparkawards.com

The last and final deadline is Midnight, California time, June 17. The jurors begin their judging on June 18.

We're delighted with the high caliber of entries we've seen this year. Recently schools like MIT, SVA, Art Center College, Tdelft, Pratt, Harvard, Tsinghua, RAC, Hongik, SADI, Savanna, RIT and companies such as Hitachi, Samsung, HP, Midea, Philips, Dell, Google, Fuseproject, Whipsaw & Pepsi have joined the participants. It will be fun 😊

All Best--Stay Well!

--Spark

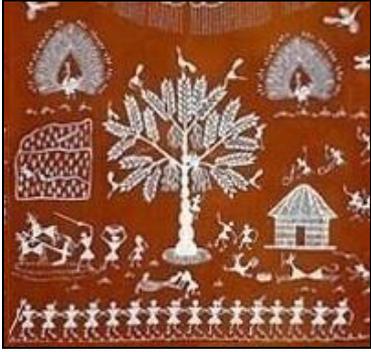
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28th & 29th October 2022

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Typography Day will be held online for the fourteenth time on the 28th and 29th of October 2022 hosted by IDC School of Design (IDC), Indian Institute of Technology Bombay (IIT Bombay) with support from the India Design Association (InDeAs) and Aksharaya.

The theme for this year's event is 'Typography for Children'



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