A monthly Publication of Design for All Institute of India
December 2022 Vol-17 No-12
ISSN: 2582-8304

Design for All

Access to Cultural Tourism
Perspectives on Policies and Practice

Guest Editor: Ivor Ambrose,Managing Director
European Network for Accessible Tourism (ENAT)

ISSN: 2582-8304

ISSN: 2582-8304

December 2022 Vol-17 No-12

Other regular features

ISSN: 2582-8304

ISSN: 2582-8304

Guest Editor

IVOR AMBROSE

Position: Managing Director, European Network for Accessible Tourism (ENAT) non-profit association.

As the delegated Managing Director of ENAT, it is my ambition to make tourism accessible for everyone, everywhere. Together with a number of organisations engaged in tourism management and disability advocacy, public authorities, access consultants and a Web services company, I helped to co-found ENAT in Brussels in 2008. The association grew out of a successful project with some of the same partners on "Mainstreaming Disability in the European Tourism Sector", funded by the European Union. Over these past 15 years, ENAT has become the premier global membership association for organisations, business and individuals who support the goal of accessible and inclusive Tourism for All and also for those who wish to learn more about this area of tourism development.

We have around 300 ENAT members in more than 50 countries world-wide. So, while our base is in Europe, we have a global outlook, seeking to share experiences and develop accessible

tourism policies and practices with our members and partners from every world region and destination.

My daily work, in addition to managing ENAT, includes consulting, policy analysis and project management, and supporting national and regional Destination Management Organisations, tourism operators and public bodies in Europe and overseas.

Born and educated in England, I have lived and worked in the United Kingdom, Denmark, Belgium and Greece. I hold a Master's degree in Environmental Psychology from the University of Surrey, UK and a Ph.D./University Lecturer qualification from the Danish Building Research Institute. For over 40 years I have been active in the areas of design, evaluation and interpretation of natural and built environments, and the social inclusion of people with disabilities and older people, with particular interest in user experience, Design for All, Universal Design and the application of Information and Communication Technologies. My work on accessible tourism since 2002 has also brought me into the fields of customer service design and customer relationship management which, I believe can benefit enormously from applying "Design-for-All" thinking in a lifetime perspective.

Email: enat@accessibletourism.org

Web: https://www.accessibletourism.org

..

ISSN: 2582-8304

Access to Cultural Tourism. Perspectives on Policies and Practice

IVOR AMBROSE

Keywords

Accessibility, Accessible Tourism, Cultural Heritage, Disability, Design-for-All, Universal Design

The United Nations World Tourism Organization (UNWTO, 2018) has estimated that cultural tourism accounts for around 39% of all international tourist arrivals and, before the Covid-19 pandemic, was still increasing. This report also stated that 89% of national tourism administrations include cultural tourism in their policies. One of the most globally accepted definitions of cultural tourism is that adopted during the 22nd session of the UNWTO General Assembly in 2017: "Cultural tourism is a type of tourism activity in which the visitor's essential motivation is to learn, discover, experience and consume the tangible and intangible cultural attractions/products in a tourism destination". [1]

Article 30 of the UN Convention on the Rights of Persons with Disabilities (CRPD), provides that States Parties recognise the right of persons with disabilities to take part on an equal basis with others in cultural life, and must take all appropriate measures to ensure that persons with disabilities:

- ***Enjoy access to cultural materials in accessible formats;***

- ***Enjoy access to television programmes, films, theatre and other cultural activities, in accessible formats;***
- ***Enjoy access to places for cultural performances or services, such as theatres, museums, cinemas, libraries and tourism services, and, as far as possible, enjoy access to monuments and sites of national cultural importance.***

States Parties are required to take appropriate measures to enable persons with disabilities "to have the opportunity to develop and utilise their creative, artistic and intellectual potential" (Article 30, paragraph 2). [2]

Enabling citizens with disabilities and those with specific access requirements of many kinds to participate in cultural activities and visit cultural heritage venues remains a "work in progress" (to use a well-worn euphemism), both in terms of enactment of appropriate policies and policy implementation. There is also need for practical interventions and supports, both in destinations as a whole, and at the level of thousands upon thousands of individual cultural heritage sites. This lack of accessible provisions impacts local citizens and visitors alike.

As we have written elsewhere, the terms Accessible Tourism, Inclusive Tourism, Barrier-free tourism or simply, Tourism for All, should be understood not as a separate type of tourism but as a set of preconditions for every type of tourism. People of all ages and abilities, including persons with disabilities and other tourists with specific access requirements, experience many barriers to participation in tourism throughout the whole "visitor journey". This is largely because products, services and the built environment are

not designed to be accessible to the widest range of users. These visitors may require certain accommodations when travelling, staying overnight or visiting a venue. information design, environmental design, equipment or services and a welcoming attitude, ensuring they have a safe, comfortable and fulfilling experience. [3]

Fundamentally, there is lack of disability awareness and knowledge about how to achieve accessibility among many cultural tourism providers, but here we will focus on positive examples and good practices which, I believe deserve wider exposure and appreciation by scholars, decision-makers and practitioners in the cultural tourism sector.

Design-for-All (DfA) and Universal Design (UD) have contributed considerably to the creation of accessible buildings, environments, products and services over the past 20 years and these related approaches have also influenced design teaching, spreading from the environ-mental design fields to service design and information and communication sciences. Design standards based on UD principles provide ease of access not only for persons with physical impairments but also for the general population, who benefit from more comfortable and safer environments. [3, op cit.]

In keeping with the mission of "Design for All India", the scholarly articles presented in this edition serve to inform readers about some of the latest research and practice in Design for All. In this case, we draw on the international experience, analysis and insights from

eight European and one Japanese expert working in the fields of architectural and urban heritage.

As an aside: whether we use the terms "Design-for-All" or "Universal Design" – and what each of these entails – is a discussion that may be left for another day. In my view, what both these design approaches aspire to is to design for the greater good of all people, based on the wide diversity of human conditions.

The five instructive articles presented below give substantive examples of design and evaluation methods and processes that are applied in the context of heritage conservation, building rehabilitation and accessibility, ranging across the continuum from concept, plan and detail design to the implementation and maintenance of the monument, building or environment. Each contribution addresses at least one heritage site that is internationally or nationally recognised (and, indeed, "protected"), where temporary or permanent accessibility features have been introduced with the aim of enhancing the accessibility of the structure to enable people with disabilities or those with specific access requirements to experience the heritage environment and its artefacts.

Besides these well-described and detailed examples of technical innovation and skill, the authors also raise and discuss significant questions about the dynamic interplay between the need to respect and conserve the material heritage and the values associated with a building or object, on the one hand, and the desire, on the other hand, to make such places and objects accessible to citizens who

may be excluded due to inherent access barriers or inadequate and insufficient provisions in the form of accessibility measures.

In the context of improving access in heritage buildings, Alberto Arenghi and Carlotta Coccoli (Article 1, below) note that it is widely presumed that there is "…a need to balance the two values underlying the accessibility and conservation of cultural heritage: its use and its protection". The authors point out that such values "…are often, wrongly, regarded as opposites, or as incompatible. The reason for this contrast originates in the way of understanding ancient architecture and in the value of the relationship between architecture and people." Their salutary case study refers to "The Denied Ramps at the Church of San Salvatore in the Santa Giulia Museum in Brescia", Italy. Here, I suspect that many readers will feel themselves drawn into an uncomfortable conundrum where process and power eventually take precedence over some rather ordinary access ramps, leaving a sense of regret and disbelief. The case study indicates, that cultural values and access present not only technical challenges but also raise fundamental issues of community identity and democracy.

In the second article, Francesca Morandini of the Brescia Museums Foundation gives an inspiring, illustrated description of the many measures, carried out over several years, to make Brescia's heritage inclusive and accessible to everyone. These include the adoption of relatively ordinary paths and tools that guarantee various degrees of access to all members of the public, to the design and implementation of inclusive strategies, avoiding distinct itineraries and experiences in line with the basic principles of Universal Design.

Particular examples are shown addressing physical access, access to cultural information access and audience awareness, and the value of cultural appreciation for human wellbeing.

The third article, by Professor Emeritus Satoshi Kose, gives a clear exposition of the particular situation concerning the preservation of heritage buildings in Japan and considerations regarding their accessibility. It is noted that the oldest traditional building construction techniques used wood rather than masonry and therefore the buildings that survive are often very fragile and unsuited to major structural interventions. Some are shrines or religious buildings which lack space for any modern facilities such as accessible toilets. The creation of reproductions of buildings and monuments is one method of enabling visitors to understand the building features and styles associated with these cultural heritage sites and objects. In some situations, the need for earthquake safety measures and improved accessibility were combined in innovative solutions to save the buildings from collapse and provide accessible services. Some accessibility interventions were boldly implemented before the buildings were listed as heritage sites, although this is not usually the case.

The fourth article by Christian Ebbesen and Marianna Brenna presents a case study of the accessibility measures carried out at Akershus Castle, Oslo, situated beside the fjord, where fortifications were built in a succession of buildings, walls and ramparts since the 12th Century. Renovation, re-purposing, extensions and adaptations are part of the history of this listed monument. For many years the castle has functioned as a museum

and also as a venue for hosting government functions, royal baptisms and other events of national importance. Several years ago, Norway introduced planning legislation that requires Universal Design of buildings and services and, therefore, it was decided to address the architectural access barriers in the castle's main representative areas. The title chosen for the project was "Improved Accessibility" in recognition of the challenges involved. The authors explain how stakeholders including representatives of people with disabilities participated in the planning process. The distinction between the concepts of accessibility and universal design was an important clarification of expectations at the beginning of the project. Nevertheless, it was an ambition that the measures chosen should be as close to universal design as possible.

Guiding principles were agreed among the stakeholders concerning, for example, equity and dignity (independent access and use of the entrances and building interiors); types of materials for structural elements, equipment enabling access; (a new lift, a platform lift, handrails, doors, handles, etc.) and finishes.

The fifth article selected for this edition of the Design for All India journal is by Spanish architects, specialising in accessibility of heritage environments: Delfín Jiménez Martín, Alba Ramírez Saiz, and Miguel Angel Ajuriaguerra Escudero. Their article addresses "Urban Accessibility in World Heritage Cities", with particular focus on challenges and solutions in the design of accessible pedestrian routes. Their opening statement frames the issue succinctly:

> ***"In Spain, fifteen cities have been declared World Heritage Cities by UNESCO. This implies a responsibility to conserve all the heritage wealth of these places. However, what is the point***

of heritage if it cannot be known and visited? In order to be able to do this for all people, in equal and inclusive conditions, it is essential to consider Accessibility and Universal Design principles. This is a challenge that requires a personalised study in places that were precisely built with the idea of being inaccessible."

From their study of six historical quarters in the heritage cities the authors have established a series of criteria and indicators that can be used as a guideline, described as "keys to consider in the intervention on pedestrian routes in historic centres". These keys address issues of mobility, location, orientation, understanding, and other factors, enabling an holistic consideration of accessibility as a fundamental principle for all people, and in particular for the growing numbers of older people who need an accessible environment that is easy to use. Thanks to their systematic and analytical approach and rich use of examples, the authors have provided a valuable resource for academics and practitioners, who may wish to apply this method in historical cities of all scales and ages.

Article Credits

- ***Adapt** — remix, transform, and build upon the material*
- ***The licensor cannot revoke these freedoms as long as you follow the license terms.***

All articles were originally published in:

Proceedings of the Sixth International Conference on Universal Design (UD2022) "Transforming our World through Universal Design for Human Development".
I. Garofolo et al. (Eds.) ©The authors and IOS Press.

I extend my thanks and appreciation to all the authors of the selected articles, and to the editors of the entire UD 2022 Proceedings for their willingness to share their work with the worldwide community of scholars, practitioners and stakeholders in cultural heritage and accessible tourism. I hope that this edition of Design for All India will foster ever-closer bonds between all those who design and build environments for the greater good of all.

References

[1] Melanie Kay Smith (2022) "Cultural Tourism". In: Buhalis D. (Ed.) Encyclopedia of tourism management and marketing. Elgar Online. pp. 716-719.
https://doi.org/10.4337/9781800377486.cultural.tourism

[2] Tatic, D. (2015) "Access for People with Disabilities to Culture, Tourism, Sports and Leisure Activities: Towards Meaningful and Enriching Participation" Council of Europe, Geneva.

[3] Ambrose, I. (2022). "Accessible and Inclusive Tourism". In: Encyclopedia of tourism management and marketing. Elgar Online. pp. 35-39. https://doi.org/10.4337/9781800377486.accessible

ISSN: 2582-8304

ALBERTO ARENGHI

Civil Engineer and Associate Professor in Technical Architecture. Civil Engineer and Associate Professor in Building Technology. Director of the BrAL Interdepartmental Laboratory "Brixia accessibility lab. Accessibility to Cultural Heritage & Wellness" Member of the Scientific Committee of the Center for Studies on Neuromuscular Function and Adapted Motor Activity. Member of Scientific Committee of the Research Center on Neuromuscular function and Adapted Motor Activity; Rector's Delegate for Disabilities (University Commission for Disabilities).

Address: Department of Civil, Environmental, Architectural Engineering and Mathematics, University of Brescia, Via Branze 43, Brescia, Italy.

E-mail: alberto.arenghi@unibs.it

CARLOTTA COCCOLI

Carlotta Coccoli, architect, holds a Ph.D. in Conservation of Architectural Heritage and is a specialist in the restoration of monuments. She is Associate Professor of Architectural Restoration at the University of Brescia. Her main field of research is the protection of cultural (mainly architectural) heritage in the event of armed conflict. In particular, she studied the organization of the 'Sub-commission of Monuments, Fine Arts and Archives' in Italy and Japan during the Second World War, from the time of her Ph.D. thesis, holding two fellowships at Italian and Japanese Universities.

Address: Department of Civil, Environmental, Architectural Engineering and Mathematics, University of Brescia, Via Branze 43, Brescia, Italy.

Email: carlotta.coccoli@unibs.it

ISSN: 2582-8304

Does Pure Contemplation Belong to Architecture? The Denied Ramps at the Church of San Salvatore in the Santa Giulia Museum in Brescia

Alberto Arenghi
Carlotta Coccoli

Abstract

This paper addresses the issue of balancing the two values underlying the accessibility and conservation of cultural heritage: its use and its protection. These values are often, wrongly, regarded as opposites, or as incompatible. The reason for this contrast originates in the way of understanding ancient architecture and in the value of the relationship between architecture and people.

This issue is considered by presenting a recent case concerning the Museum of Santa Giulia in Brescia, a multi-layered complex that preserves evidence ranging from the prehistoric to the contemporary age, housed in a monastic complex of Longobard origin.

The recent failure to build some ramps proposed for increasing accessibility to the church of San Salvatore, an integral part of the museum's itinerary, offers an opportunity to reflect on the need for better integration between different, and only apparently opposed, instances.

The topic is dealt with by referring to the most recent disciplinary reflections in the field of conservation carried out in Italy with

respect to the issue of accessibility to the cultural heritage, without neglecting juridical-normative aspects and international documents, such as the Faro Convention.

This multidisciplinary reading aims to highlight the main significance of accessing cultural heritage, with reference also to the objectives of sustainable development and the human development of the individual and the reference community.

Keywords

Accessibility, Conservation, Santa Giulia Museum in Brescia, Faro Convention, Individual and Community Rights

1. Introduction

Among the most recent European documents on accessibility is Bogdan Andrzej Zdrojewski's *Report on structural and financial barriers in the access to culture* [1].

This is the first comprehensive report of the Committee on Culture and Education presented as a motion for a resolution to the European Parliament. The document – recalling the importance of an active and accessible cultural sector for the development of an inclusive democratic society – stresses the need for "the promotion and achievement of inclusive and meaningful access to culture as one of the priorities on the political agenda".

Although a relatively recent topic in Italy [2, 3], accessibility to culture is not primarily a technical issue ('*how* to make culture

accessible?'), but a response to the question '*why* make it accessible?'. The answers are manifold and can be found on several levels. The Universal Declaration of Human Rights (1948) states in Article 27 that: "Everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and its benefits" [4].

Moreover, Italian legislation on the protection of cultural heritage and landscape (2004) also includes in the objectives of 'enhancement' those activities aimed at "ensuring the best conditions for public use and enjoyment of the [cultural] heritage, including by people with disabilities, in order to promote the development of culture" (Article 6) [5].

In 2005 the Faro Convention introduced the definition of 'heritage community' as a group of "people who value specific aspects of cultural heritage which they wish, within the framework of public action, to sustain and transmit to future generations", and emphasised its collective profile in the right to benefit from and respect the common European cultural heritage (Articles 2b and 4) [6].

A careful reading of the Faro Convention reveals an important legal significance, in that the focus has shifted from the rights of the individual to those of the community in which individuals live. We are, therefore, talking about a collective right whereby the community takes responsibility for all its members so that no one is left out, thus strengthening the right of the individual under the 'umbrella' of the community.

Furthermore, considering the issue of tangible and intangible barriers to culture, it should be remembered that:

1. ***barriers prevent the full participation of communities in cultural processes and cultural ecosystems, thus automatically inhibiting their potential development;***
2. ***any form of barrier introduces inertia into the business ecosystems that could result from cultural and creative industries;***
3. ***any form of (direct or indirect) access limitation introduces resistance to the pursuit of an inclusive society and an inclusive growth process;***
4. ***barriers represent an overall degradation of the cultural ecosystem, excluding the potential value of implementing cultural and creative industries.***

Promoting the development of culture is therefore an operation that acquires social, anthropological and identity connotations that no one can or should renounce. This is an assumption that has direct repercussions for the project of the reuse and accessibility of the built heritage, and that has long been accepted in the most advanced circles of debate within the discipline of architectural restoration. In fact, as early as 1998, Amedeo Bellini wrote: "We have [...] insurmountable difficulties imagining a monument that has not been produced for people, that is protected and preserved in itself, as an abstraction, and not to be enjoyed; [...] it appears to us as something that bears witness in a more complex way to qualities that belong to all experiences, and therefore to all" [7].

More recently, the role of culture and cultural heritage is also present in the Sustainable Development Goals (SDG) of the 2030

Agenda. In particular, the term 'culture' appears explicitly in SDG 4, target 4.7; SDG 8, target 8.9; and SDG 12, target 12.b and the term 'cultural heritage' appears in SDG 11, target 11.4, and in many other SDGs culture and cultural heritage are underlying themes [8].

This means that culture and cultural heritage impact on several areas such as law, heritage studies, education, urban planning and tourism that are drivers for the development of a society that connects inclusion and sustainability, based on a conception of accessibility to heritage communities as cultural law. There can be no real sustainable development without strengthening the conditions of inclusion and the active participation of the entire local community. In turn, an inclusive community will generate a sustainable growth effect compared with the social impact of the above-mentioned areas.

From this perspective, three main themes can be considered as "cross-cutting issues: cultural transformation and adaptation (1), access (2) and participation and governance (3)" [9].

The three cross-cutting issues can be considered the keywords present in the proposed definition of museum by ICOM in 2019 [10]. They recall the Faro Convention that redefined accessibility as a collective right, making the role of social memory fundamental, and finding their practical and modern application in the principles of Universal Design.

2. The case of the Church of San Salvatore in the Santa Giulia Museum in Brescia

The case under examination concerns a recent event of 'denied accessibility' involving the monastic complex of San Salvatore and Santa Giulia in Brescia that houses the City Museum and which – with the Roman Archaeological Park – has been included in the UNESCO World Heritage List in the serial site "The Longobards in Italy. The Places of Power (568–774 CE)" since 2011.

The Santa Giulia Museum not only houses important permanent collections of historical and artistic evidence that tell the story of the city, but is itself the result of centuries of stratification in which there are Roman domus; the Longobard basilica of San Salvatore with its crypt; the Romanesque oratory of Santa Maria in Solario; and the Renaissance Nun's Choir.

A sufficient accessibility degree is guaranteed for almost all the spaces of the complex of the Santa Giulia Museum – considering its wide extension. Exceptions are the crypt, the side chapels and the sacristy of the Church of San Salvatore, and the lower sacellum of Santa Maria in Solario. Obviously, in such a complex of historical buildings, accessibility does not always meet the standards for independent use of the spaces. In some cases, in fact, users have to cover complex and long stretches leaving the 'natural' museum paths. The museum's accessibility, however, is mainly aimed at people with limited mobility (especially wheelchair users), and only in recent years have pilot projects been initiated that include sensory accessibility.

In addition to the permanent collections of the City Museum, the monastic complex also hosts temporary exhibitions of international standing, which are usually held on the top floor of the museum building in spaces specially equipped for this type of event. However, some temporary exhibitions have been specifically hosted in the most significant and fragile places of the ancient complex, with the intention of establishing a comparison and dialogue between the historical context and the objects on display. For example, Juan Navarro Baldeweg's recent exhibition (September 2020-April 2021) was set up, at the explicit request of the architect, in the spaces of the Renaissance Nun's Choir and the Church of San Salvatore, including its side chapels, the sacristy and the crypt. The latter three are among the few spaces in the entire complex that are not accessible, especially to wheelchair users.

However, the exhibition gave rise to much discussion about the appropriateness of using such a fragile and partially inaccessible site as an exhibition space, preventing a wider public from fully enjoying it. Shortly after the opening of the exhibition, in fact, the question of accessibility was highlighted with some clamour – especially in the local press – while the sensitivity of the location as an exhibition space remained in the background.

The controversy stimulated the museum's management to find solutions to make Baldeweg's exhibition fully accessible, either by making videos of the objects on display and using augmentative reality (in the case of the crypt, which is physically impossible to reach for those with limited mobility, especially wheelchair users), or by building two reversible ramps to make the side chapels and the sacristy of the church of San Salvatore accessible.

These interventions, of course, went beyond the contingency of the show, and were intended as an investment in full accessibility for the future. It is precisely in this context that we are interested in contributing to the debate on improving the future usability of the City Museum.

Considering that making certain parts of the monastic complex physically accessible (the crypt of San Salvatore and the lower sacellum of Santa Maria in Solario) would imply heavy and unacceptable changes from a conservation point of view, we are interested here in discussing the project for the accessibility of the side chapels and the sacristy of San Salvatore.

At present, these richly decorated spaces are already included in the permanent museum itinerary, housing some exhibition showcases. However, in order to reach them, one has to climb a 17-centimetre-high step, which makes them effectively inaccessible to people with impaired mobility.

For the Baldeweg exhibition, where the northern chapels and sacristy housed some works, permanent but removable ramps were proposed to overcome the height difference: two 'mirrored' ramps for the chapels and one 'isolated' ramp for the sacristy.

Both ramps had 8 percent slopes and were made of high-density polystyrene, with the walking surface and sides in phenolic plywood, their colours recalling those used in the design of the museum. In particular, the floor was designed in so-called 'Santa Giulia blue' and the sides in light grey (Sarnico stone colour). The ramps' small

dimensions and their integration with existing elements of the permanent installation, guarantee minimum impact in terms of the perception of the church's space. With steel bars inserted into the polystyrene, the ramps would not be fixed to ancient elements, but to existing elements of the exhibition design: to the metal grids of the chapels' floors and to the balustrade in the sacristy.

This type of installation would, therefore, have ensured a conservative intervention that respected the material integrity of the ancient architectural elements. Moreover, being a particularly light material, polystyrene ensures that it does not put too much weight on the original stone paving and that it can be easily handled to remove ramps when necessary, restoring the existing situation (Figures 1-2).

Figure 1. The side chapels: the current situation (top) and the project with a photo-insertion of the ramps (bottom).

Figure 2. The sacristy: the current situation (left) and the project with a photo-insertion of the ramp (right).

For the reasons stated above, in our opinion the proposed solution represented a good compromise both formally and functionally between the requirements of protecting the ancient monument, of usability extended to as many people as possible in view of Universal Design, and of managing the operations of setting up and maintaining the museum spaces. Moreover, the elements could have been retained not only for the temporary exhibition, but permanently.

Since the complex is a listed building under Italian law, any intervention must be authorised by the competent Superintendence

of Archaeology, Fine Arts and Landscape, to which the ramps project was submitted in November 2020.

The analysis of the Superintendence's opinion – which arrived a few days before the closure of the temporary exhibition – offers interesting food for thought on the delicate balance between the need for conservation and the need for inclusion in such a fragile context as this UNESCO site.

From the point of view of protection, the Superintendence emphasises its utmost interest in guaranteeing the full enjoyment of the historical, archaeological, architectural and artistic values of the church of San Salvatore, without it being debased by exhibitions that have nothing to do with its thousand-year history. It recalls, moreover, that the entire monastery complex is already equipped with numerous other more suitable spaces for this purpose, which it would be a contradiction not to use. On this basis, the Superintendence authorised the construction of the ramps and their permanence only for the duration of the Baldeweg retrospective (i.e., for a few days), reserving the right to decide whether or not to authorise any future temporary exhibitions in San Salvatore, in order to protect the monument's decorum. Only if permission is granted can ramps be put in, and then only for the duration of the event. The issue was then reduced to the need for only temporary accessibility, which led to the acceptance of the ramps as long as they were removed as soon as possible.

In our opinion, the main issue has not been addressed, namely that these spaces are already included in the permanent exhibition

itinerary of the museum, as evidenced by the presence of the display cases.

While it is true that in some cases it may not be possible to achieve the accessibility of cultural heritage unless unacceptable transformations are made to ancient buildings (as in the case of the crypt of San Salvatore), we believe that this is not the case in the example under consideration. In most cases, in fact, careful and conscious design can achieve the objectives of protection and enhancement, and of accessibility, through acceptable or even qualifying solutions. Of course, balancing different needs is not always easy, but it cannot be *a priori* considered impossible.

In the case of the Church of San Salvatore, it is a matter of overcoming a difference in height of a few centimetres to reach the side spaces. This would make it possible not only for everyone to fully enjoy the permanent museum itinerary but also allow for complete immersion in the spatiality of the church, fully perceiving its historical and architectural values.

In the context of projects for the reuse of ancient buildings, some Italian scholars have proposed adopting a multi-criteria grid as a tool to balance various needs from the very beginning of the design phase [11, 12]. These include the need to maximise the conservation of the building's ancient material; structural consolidation; the usability and accessibility of spaces in relation to the planned routes; thermo-hygrometric and lighting issues and those related to safety management; maintenance during operation; and so on. These needs

all have to be combined into an architectural project of great formal quality.

This way of organising the reuse project avoids dealing with issues that were not taken into consideration when the work was completed, and which are often necessarily resolved *a posteriori* using less than optimal solutions.

The case under consideration is a testimony to the fact that the issue full use of the Church of San Salvatore was left out of the initial project. However, the solution now proposed for overcoming the step – integrating into the existing layout with minimal impact on the perception of the ancient spatiality – is presumably the optimal one that could have been chosen from the outset.

Therefore, we believe that, in situations of this kind, an effort should be made to overcome the overly abstract concept of protection, in order to favour greater inclusiveness.

3. Conclusions

The case of 'denied accessibility' in the Church of San Salvatore in the Santa Giulia Museum in Brescia is instructive from several points of view. Firstly, it is evident that if the requirement of accessibility is not solved from the beginning, an *a posteriori* solution can become a real problem from the point of view of design and function, in relationship to managing the paths for visits, and attaining permission from the competent bodies.

Secondly, as is more evident when considering a multi-criteria grid in the reuse project of historical sites, none of the various issues involved can assume such a weight that all the others are not satisfied.

Finally, today's national and international documents confront the topic of accessibility not so much as the fulfilment of the right of the individual person (with disabilities), but – more correctly – as a way of affirming the value of culture as an expression of the memory and identity of communities to be passed on to future generations. From this perspective, accessibility to culture and cultural heritage is to be understood as synonymous with democracy and sustainability.

Acknowledgement. ***The authors wish to thank Mariachiara Bonetti for the photos and the photo-insertions of Figures 1-2.***

References

[1] European Parliament. Report on structural and financial barriers in the access to culture. 2018 [Internet]. [cited, 31 March 2022]. Available from:
https://www.europarl.europa.eu/doceo/document/A-8-2018-0169_EN.html
[2] TeMa 1998, (1). Le barriere architettoniche nel restauro, Monographic Issue. Italian.
[3] Agostiano M., Baracco L., Caprara G., Pane A., Virdia E., editors. Linee Guida per il superamento delle
barriere architettoniche nei luoghi di interesse culturale. Roma; Gangemi Editore; 2009. Italian.
[4] United Nations. Universal Declaration of Human Rights. Paris; 1948 [Internet]. [cited, 31 March 2022]. Available from: https://www.un.org/en/universal-declaration-human-rights/
[5] Italian Legislative Decree of 24.1.2004 n. 42 (Code on Cultural and Landscape Heritage). Italian.
[6] Council of Europe. Convention on the Value of Cultural Heritage for Society (Faro Convention).2005.
Available from: https://www.coe.int/en/web/culture-and-heritage/faro-convention
[7] Bellini A. La pura contemplazione non appartiene all'architettura. TeMa 1998, (1): 2-4. Italian.
[8] United Nations. Transforming our world: the 2030 Agenda for Sustainable Development (A/R/70/1).
New York: 2015.
[9] Maus S., Schmermer F. What's Culture Got to Do with It – An Introduction. In: von Schorlemer S., Maus S., Schmermer F., editors.

UNESCO World Heritage and the SDGs – Interdisciplinary Perspectives, 2020.

p. 1-15. [Internet]. [cited, 31 March 2022]. Available from: https://tu-dresden.de/jura/unesco-beitraege.

[10] ICOM. ICOM announces the alternative museum definition that will be subject to a vote. 2019 [Internet]. [cited, 31 March 2022]. Available from: https://icom.museum/en/news/icom-announces-the-alternative-museum-definition-that-will-be-subject-to-a-vote/

[11] Della Torre S. Dislivelli e percezione della città storica: il caso del Broletto di Como (con un post-scriptum sulla collocazione della Pietà Rondanini di Michelangelo al Castello Sforzesco di Milano). In: Arenghi A., editor. Edifici storici – Turismo – Utenza ampliata. La gestione dell'accessibilità nelle città d'arte. Como; Edizioni New Press; 2000. p. 79-105. Italian.

[12] Della Torre S., Pracchi V. Valutazioni multicriteriali per il progetto di restauro. In: Arenghi A., editor. Design for All. Progettare senza barriere architettoniche. Torino; UTET; 2007. p. 195-99. Italian.

FRANCESCA MORANDINI

Comune di Brescia - Fondazione Brescia Musei.

https://www.bresciamusei.com/en/museums-and-venues/

Francesca participated in the creation of the City Museum of Brescia and takes care of the ancient collections and archaeological areas (Domus dell'Ortaglia and Capitolium area). She has taken part in numerous archaeological investigations with Italian and foreign universities in Roman centres of northern Italy and is a speaker at conferences in Italy and abroad, with contributions on ancient material culture, enhancement of cultural heritage, museum communication and museology. She has curated numerous temporary exhibitions and her most recent studies are concern Roman ceramic materials and residential construction, with particular attention to decorative elements. She the contact person for the Municipality of Brescia for the UNESCO project.

Email: morandini@bresciamusei.com

ISSN: 2582-8304

World Heritage-Universal Heritage. The Commitment of Brescia Museums Foundation and Brescia Council to Enhance Museums and Public Archaeological Areas

Francesca Morandini

Abstract

Brescia's museums network has adopted and developed in the last years a wide number of ways to make its heritage inclusive and accessible to everyone. Via the creation of different tools and initiatives, Brescia Museums Foundation, that manages the network, is at constant work to ensure the possibility to all members of the public to fully experience the cultural heritage.

Keywords

Heritage, Accessibility, Universal values, Inclusion, Cultural dissemination, ICT

1. Introduction

Brescia's museums comprise a heterogeneous heritage which extends from the third millennium BC to contemporary art, housed in historic buildings that distinguish the city's urban centre and cultural life.

The museum network contains an archaeological area, with monumental buildings of primary importance for northern Italy including the 1st century BC sanctuary, 1st century AD *Capitolium*

temple (Figure 1), Roman theatre (1st – 3rd century AD) and additional Roman furnishings and statues. An 8th – 15th century AD monastic complex covering more than 11,000 m2 (Figure 2) houses the City Museum, which exhibits thousands of objects and artworks in the historic monastery premises; the Tosio Martinengo Gallery features an art collection on display in an aristocratic residence, and Brescia Castle is also home to the Arms Museum and Risorgimento Museum.

One of the main objectives of Brescia Museums Foundation's mission, also on behalf of Brescia Council, is the widest possible public accessibility to this heritage – a large part of which was listed as a UNESCO World Heritage Site in 2011. This commitment began in Brescia in the early 18th century and the tradition continues today, sharing projects and achievements with local inhabitants and the wider public.

Figure 1. Capitoline temple (I century AD)

Figure 2. Santa Giulia Monastery, aerial view

2. The Path to the Culture of Accessibility

The approach to inclusiveness developed over the years in Brescia has undergone progressive evolution, determined by various factors including a nationwide increase in awareness regarding this question, the specialized training of staff involved in museum heritage management and activity planning, and the increasing availability of inclusive tools and strategies applicable to cultural matters.

Projects and activities have been aimed in many different directions, reflecting the diverse characteristics of the heritage, the museums, and the needs of inhabitants and tourists, as well as particular difficulties that might impede a correct and guaranteed availability to everyone.

A considerable driving force for the development of inclusive projects was also provided by the membership of certain Brescian museums of thematic networks which share common objectives and

operating methods and have encouraged the spread of good practices and greater sustainability – in particular the network of Lombard sites, listed as UNESCO World Heritage in 2011, which focuses most of its projects on accessibility issues, also stimulating local projects [1].

The projects carried out by Brescia Museums Foundation have thus evolved successively, from the adoption of relatively ordinary paths and tools that guarantee various degrees of access to all members of the public, to the design and implementation of inclusive strategies, avoiding distinct itineraries and experiences in line with the basic principles of Universal Design.

2.1. Accessibility and Physical Barriers

Although Brescia's heritage consists of outstanding monumental structures, historic buildings and museums, over the years it has proved possible to successfully overcome the architectural barriers posed by these historic constructions that range in date from the 1st century BC to the 18th AD (Figure 3).

Thanks to specialist advice and operations carefully designed with great sensitivity, in collaboration with the government departments responsible for conservation, over time numerous barriers have been overcome. At first, specific devices were installed in pre-existing visitors' itineraries in order to remedy certain shortcomings they presented. Subsequently, starting from at least 2013 in the archaeological area, single routes were designed to be shared by all visitors, with excellent results that have been described in previous publications [2].

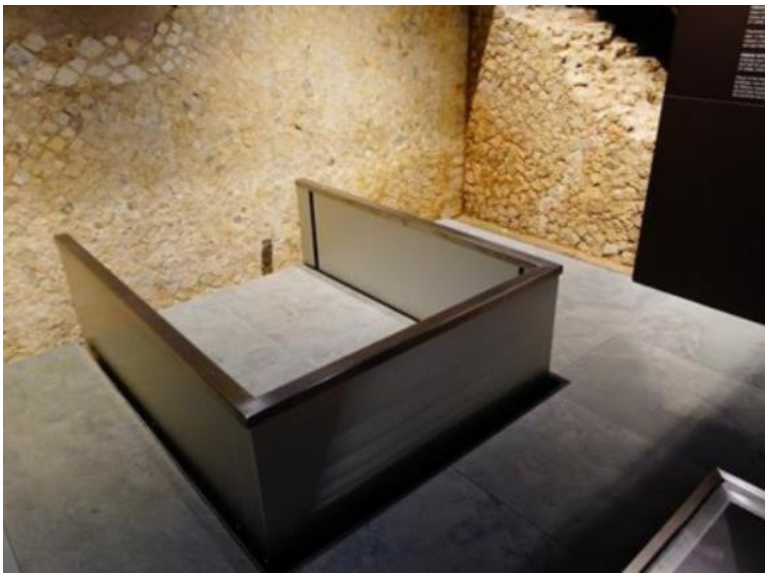


Figure 3. Accessibility in the republican sanctuary (I century BC).

Visual impairment was first tackled in isolation, on the occasion of a proposal external to the museum, which resulted in the creation of a concise itinerary (*Ariadne's string*) based on the choice of two themes and featuring high-definition replicas of four works, made of the same material as the originals (marble and bronze) and placed right next to them. Close collaboration with the Brescia section of the Italian Union of the Blind and Visually Impaired and special staff training at the Homer National Tactile Museum in Ancona made it possible to focus on the main possibilities and potential of an inclusive approach, by developing itineraries for heterogeneous groups of visitors – sighted, blind and partially sighted – who today undertake shared tactile paths that have become permanent parts of the museum's educational and cultural facilities.

The archaeological section of the Santa Giulia Museum, established in 1998, is currently being refurbished and it has been decided to

allow the tactile exploration of all the original works – mainly in stone – not kept inside display cases, as well as making audioguides available for all visitors.

The museum participated in the creation of a tactile exhibition on the monuments of exceptional universal value registered in the World Heritage Serial Site "The Longobards in Italy. Places of Power (568-774 AD)" (Figure 4). This is called "Getting in touch with the Ancient Lombards" (Brescia, Santa Giulia, March-May 2022) and features models of Lombard buildings and the surrounding areas; an audioguide connected to each one accompanies visitors on their tactile exploration, providing cultural information – which is also translated into Italian sign language (LIS) and accompanied by videos.

In addition, members of the educational services staff able to interpret LIS can accompany deaf visitors on thematic itineraries which may be adapted according to needs and requests.

Figure 4. Temporary exhibition "Getting in touch with the Ancient Lombards"

2.2. Information and Communications Technology Devices

In 2013 Brescia Museums Foundation began experimenting with new technologies to carefully evaluate their effectiveness for communicating and making accessible items permanently on show and temporary exhibitions, involving both experts and stakeholders in these evaluations. These tools undoubtedly have an important role, but their effectiveness is often undermined by indiscriminate use that is not calibrated to actual situations and concrete requirements.

The application of these technologies has focused in particular on the objectives of information availability and physical access to places.

Wearable devices that offer augmented reality (*ArtGlasses*) were first introduced in the archaeological area, then in the Santa Giulia Museum complex; shortly they will also be available for the Arms Museum in the Castle. These are GPS-positioned glasses with transparent lenses connected to a multilingual audioguide and may be worn during the visit; visitors are guided to and through the most significant places and items with audio cultural information, and augmented reality images are available at numerous points on the itinerary. This added facility can illustrate changes over time (for example showing what something was like before restoration or reconstruction work), artist's reconstructions, especially useful for archaeological heritage (e.g. 3D reconstructions that portray how an area or monument is thought to have looked in antiquity), or videos and interviews with specialists. The devices are user-friendly; on

request, subtitles can also be activated for those with hearing difficulties [3] [4].

A further use of technological tools has enabled virtual, immersive visits to the only two places in the Santa Giulia monastic complex which – despite numerous joint assessments by experts and protection bodies – cannot be entered by visitors with limited walking capacity or confined to a wheelchair. These are the crypt of the Lombard church of San Salvatore, an area of great architectural importance where holy relics were kept and worshipped within the monastery, and the lower chamber of the Romanesque church of Santa Maria in Solario, where the monastery treasure was conserved. These two places are important monumental contexts where it would be inappropriate to perform architectural alterations or install special devices to overcome the architectural barriers they present due to their very nature and conformation.

It was therefore decided to create 360° immersive videos to permit anyone who wants to experience a virtual visit to these two highly significant locations in the monastery, guided by an expert archaeologist who illustrates them and their special features.

The videos are available from the Brescia Museums Foundation website, and may be employed for remote use (and visits). For visitors in wheelchairs, special holders have been prepared in which personal smartphones can be inserted, guaranteeing direct vision of the videos at the entrances to each of the two inaccessible zones; these are freely available at the museum entrance.

As has become particularly evident during the recent pandemic period, the use of technologies can greatly facilitate art and culture's role as shared heritage, allowing items of special interest to be truly accessible to all. Their proximity to users means that visits can be accompanied by relevant information and active interactions can be established with all visitors – in this case via the museum curator who becomes an exclusive guide, with a particular attention to providing accurate information and interesting details.

2.3. Cultural Information Access and Audience Awareness

As part of the work aimed at eliminating all types of barriers to the museum and within the museum itself, we devised and implemented initiatives designed to create inclusive hospitality, also targeting potential audiences who might feel distant from museums for reasons of presumed inadequacy. Brescia's museums are trying to develop an environment based on active participation, to foster social exchange and propose museums as places based on differences – beyond any educational, cultural or socioeconomic barriers – where comparison between different viewpoints and cultures and otherness are constantly stimulated, not in order to defend or justify any in particular but rather to encourage open-mindedness.

Brescia Museums Foundation has adopted *Easyguide*, a simple multimedia guide that can be used directly from a smartphone. Access to content is immediate and is implemented by scanning a QR code which is given to visitors when they purchase their tickets. The texts, images, videos and other multimedia contents available in Italian and English remain usable throughout visits to the individual

museums. The web app can also be used by the deaf thanks to the presence of written text as well as audio.

Easyguide, developed by MuseumMate, is a genuine visitors' mentor, which everyone can take with them and use when they wish.

Each guide includes various different itineraries, including a "guided tour" to the most important exhibits. The presentation of certain items is further enriched by multimedia features such as short videos with explanations by the curators of the collections and other specialists.

An "At your own pace" trip is also available, designed for those who prefer to build their own itineraries by selecting the items they wish to explore each time, using the numbers indicated on the museum labels. In all the museums there is always a "Children's visit" designed for children (6 years plus) who – like little detectives starting from the details – have to search the rooms for certain objects and listen to their fascinating stories.

Lastly, the "Activities" section is dedicated to initiatives that are available permanently or for a long period in the individual museums. This tool's flexibility permits its progressive expansion with constantly updated contents and facilities.

For the youngest visitors and their families, from 2022 *Geronimo Stilton. Brescia Musei Adventures* is active. This is a museum app-game for children; guided by the well- loved journalist mouse, they can take part in three exciting adventures in Brescia's museums.

Between amulets, amphorae, paintings and armour, Geronimo guides his young adventure companions to discover the museums' history and their heritage with the help of augmented reality that transforms some museum pieces into 3D images which can be examined, manipulated and enlarged – so that even the smallest details may be appreciated and familiarity with heritage is enabled via different channels for maximum accessibility (Figure 5).

2.4. Well-being and Culture

It has been amply demonstrated by contemporary neuroscience [5] that art and beauty nurture and caress the brain. This places museums on the front line in the promotion of psychological well-being, and the prevention and cure of numerous pathologies.

Brescia's museums are proposed as places where – through specific activities and with proper guidance – it is possible to develop awareness of how important it is for our mental health and psycho-physical balance to be in contact with beauty and to be able to enjoy it. And at the same time the museum thus sheds its mysterious historical aura and ventures into unusual domains, meeting special visitors.

For a number of years Brescia Museums Foundation has been engaged in significant activities together with social and health organizations and institutions operating in the town.

Twentieth-century Protagonists **is the title given to activities dedicated to aged persons who live in nursing homes. Encounters with history, art and culture have proved to bring about profound**

and regenerative well-being; meetings are thus organized in which works of art and film projections awaken personal memories and stories that, intertwining together, give life to moving memories.

In recent years we have collaborated with the Residenza Vittoria di Korian Italia e RSA Casa Industria; since 2018 annual meetings have been held for residents, operators and assistants and which are also open to other interested parties. Museum visits have been planned as well, to see the works discussed in real life – and visit Brescia's most significant artistic and historical localities.

Again for the elderly, two parallel projects have been launched in collaboration with Brescia Council's Social Services and Family Policies Department, as well as a number of parishes and daycare centres in the city.

After the positive experience of the pilot project inaugurated in 2018, an agreement has been made between Brescia Museums Foundation, the Children's Hospital and the schools operating within it (Benedetto Castelli Institute of Higher Education and Istituto Comprensivo Centro 3 of Brescia). The project includes a series of interactive educational activities (especially workshops) aimed at introducing and developing knowledge of the artistic heritage contained in Brescia's museums and on the temporary exhibitions organized in the museums.

In recent years, the educational services have collaborated with therapeutic communities and day centres for psychiatric rehabilitation on specific projects intended to familiarize patients

with the museums' historical and artistic heritage, with the aim of involving participants in stimulating visits and activities that increase their knowledge of Brescia's history and encourage them to feel part of it.

During the health emergency period, the focal points of emergency activities were chosen in order to communicate serenity, trust and hope by means of heritage values, through two projects in particular.

The photography exhibition *Mirabili radici* - Il sito UNESCO di Brescia nelle fotografie di Alessandra Chemollo (Brescia, Fondazione Poliambulanza, 8 May – 26 September 2021) gave Brescia Museums Foundation the opportunity – thanks to a fruitful collaboration with the Poliambulanza – to enliven the hospital's central wing with texts and images made available those who were there for treatment, to assist relatives or in order to exercise their profession. The photographs, of Brescia's UNESCO heritage and accompanied by short texts, were intended to solicit reflections on the meaning of time in its various manifestations, in search of marks it has left on the monuments – but also, in a different sense, on mankind.

The Azienda Speciale Pro Brixia, with Brescia's Chamber of Commerce, the ASST degli Spedali Civili and Brescia Museums Foundation, in collaboration with Brescia Council, inaugurated a new project to enhance Brescian culture at one of the largest vaccination centres in Europe, located in the Fiera di Brescia. The project involves the decoration of some public areas in the vaccination centre and the creation of a narrative that can be accessed by users

through their mobile communication devices (smartphones or tablets), with the aim of accompanying and entertaining those undergoing the vaccination experience with the positive values of culture.

Brescia's Winged Victory became a protagonist, a symbolic link between the concepts of "curing" and "culture". In addition to the large graphic applications designed by Paolo Tassinari, special QR codes on the floor connected those awaiting vaccination to the Winged Victory's website, featuring moving videos and accounts of the statue's artistic qualities and its new setting.

In the post-vaccine period it became possible to schedule a visit to Brixia. Roman Brescia's Archaeological Area and obtain a cut-price ticket by registering for the Brescia Museums Foundation newsletter.

Lastly, safe guided tours of *Brixia. Roman Brescia's Archaeological Area* are being tried out in which visitors include patients with stable cardiological and neurological conditions, cancers and long COVID. These were designed by museum curators and educational services staff together with medical specialists and guarantee both physical and psychological safety.

3. Conclusions

The current working method used in Brescia Museums Foundation's planning and operational processes has led over time to the development a number of different standards, which allow us to measure the achievement of several diverse objectives. Numerous

interdisciplinary collaborations have increased our ability to work in large, heterogeneous groups, with the consequent growth of specific skills and the staff's general professional abilities at various levels. Over the years there has been a progressive increase in the number of visitors, which is certainly due to a combination of factors. Firstly, the activities described above have also contributed to expanding the services provided for everyone, intercepting a greater range of interests and interested parties. The museum areas have also acquired a stable reputation for hospitality and familiarity, which has encouraged members of the public to make return visits. Lastly, highly inclusive proposals have satisfied the needs of those who do not find hospitality and provisions for their requirements – including those concerning disability – in all museums.

Figure 5. Young visitors enjoying AR with the Vittoria Alata

References

[1] Morandini F, Stovali M. Turisti consapevoli sulle orme dei longobardi. In: Brasioli T, Esposito V, Ferroni AM, Patrignani S, editors. Legge n.77/2006 Libro bianco. Soveria Mannelli: Rubbettino Editore; 2018. p. 98-103.

[2] Arenghi A, Bonetti M. Architectural Heritage. The Perspective of Inclusion. In: Diaconescu O, Duminicaˇ C, editors. Architecture and Design - Design and Architecture/ Interferences 15FAI_International Scientific Session_Proceedings; 2018 Nov 8-10; Bucharest. Bucharest: "Ion Mincu" Publishing House; 2019. p. 88-103.

[3] Morandini F. Brescia-Brixia (Italy). Travel across the ancient landscapes: Museum of the City and its archaeological area between research and enhancement. In: Vavouranakis G, Katsianis M, Papadatos Y, Mouliou M, Petridis P, editors. Digital pasts for the present. Proceedings of the 2nd Conference on Computer Applications and Quantitative Methods in Archaeology, Greek Chapter (CAA-GR); 2016 Dec 20-21; Athens. Athens: Department of History and Archaeology – National & Kapodistrian University of Athens; 2017. p. 117-21.

[4] Morandini F, Delbarba N. Augmented Realty in Brescia: Evaluation questionnaires in San Salvatore basilica. A joint process between managers, Public and University. Archeostorie. Journal of Public Archaeology. 2019;3:71-84.

[5] Lemarquis P. L'art qui guérit. Paris: Hazan Editions; 2020. 191 p.

SATOSHI KOSE

Satoshi Kose is Professor Emeritus at Shizuoka University of Art and Culture, Japan, where he was a professor from 2003 to 2014. He is a highly commended scholar and teacher in human factors, safety and environmental psychology in buildings. He has a distinguished career of more than 40 years as researcher in building design and use, with a focus on life safety, human factors of older persons and designing for an ageing society. He has formerly held positions as Director of several Divisions at the at the Japan Building Research Institute, including Building Design and Use Division, Housing and Building Division and Urban Design Division. He is active in international standards on accessibility of the built environment and is a frequent contributor to research colloquia on accessibility and universal design.

Address: Shizuoka University of Art and Culture, 2-9-4, Higashi-shinbashi, Minato City, Tokyo, 1050021 Japan.
E-mail: skose@gakushikai.jp

ISSN: 2582-8304

How Can We Ensure Accessibility of Cultural Heritage? Toward Better Utilization of Existing Assets in Japanese Context

Satoshi Kose

Abstract

How can we ensure accessibility of historical buildings that were built before the idea was ever dreamt of? Important historic monuments such as World Heritage have come to be made to some extent accessible with due consideration of their historical value (in extreme case, no accessibility is available, and replicated models or virtual reality is alternatively in place). Many buildings that are currently in use pose problems because they have to be usable by everyone. To what extent the historical values can be sacrificed for accessibility and usability? This paper tries to propose some ideas to meet both needs of historical significance and accessibility/usability through examination of several Japanese examples.

Keywords

Cultural heritage; buildings; usability; conversion of use; refurbishment; built environment; accessibility; priority

1. Introduction

Discussion on the importance of cultural heritage preservation started focusing on especially important ones, (such as National Treasure or Important Cultural Property in the case of Japan) whose

historical and cultural values are utmost as discussed in The Athens Charter for the Restoration of Historic Monuments, 1931 [1] and International Charter for the Conservation and Restoration of Monuments and Sites - The Venice Charter 1964 [2]. In this context, it was quite often that the original purpose of buildings is that of the past, disregarding the accessibility and usability of diverse users/occupants. Even during the days when the two Charters were established, the existence of people with disabilities was mostly invisible and rarely noticed.

However, regarding the buildings, the discussion on accessibility along with historical preservation gradually shifted toward ones that are currently in use. Accessibility is more on functionality and usability rather than aesthetics, and when the buildings are still in use, they must be usable by everyone in the first place, not just by visitors but also by persons who work there as staff. Denying people with disabilities from being employed is a grave violation of human rights as stipulated in documents such as the UN-CRPD (and quite likely with legal requirements in respective countries arising from its ratification). Therefore, cultural values should not be given the priority.

How can the potential conflicts be solved? In this paper, the author compares historical context, and will argue the directions to follow.

2. Historical buildings

2.1. Conservation movement

The modern conservation movement that started with Athens Charter gave higher priority on cultural authenticity, and usability for all is put aside in most cases.

Historical monuments that people visit and see as the record of the past might be left as they are, without extensive intervention for accessibility. A typical example is the Japanese castle, which has ceased its function as a fortress during feudal years. Access to its top floor is only possible with steep stairs difficult to climb even by a robust armored warrior, but introduction of an elevator is beyond question.

In 2010, Gomez Robles [3] referred to eight values for assessing the importance of a building to be preserved as a cultural heritage: Typological value; structural value; constructional value; functional value; aesthetic value; formal value; historical value; and symbolic value. If the building is to be seen with the surrounding environment, two more values need to be considered: Landscape value and overall value. Unfortunately, even the paper does not refer to the core value of accessibility and usability. In a sense, the idea of historical preservation can be adverse against access and use, the crucial value of UN CRPD and Disability Discrimination Acts and ISO Standard on accessible built environment [4, 5]. There must be a shift of emphasis in this regard.

2.2. Masonry or timber

In countries where the masonry structures are the standard, their life quite often extends beyond several hundred years. Many walled cities in the European continent have such a long history, and their buildings can be also very old. If they survived the passing of the

time, their change of use is not rare. For example, many museums in Western cities are converted buildings from their original purpose: Musee du Louvre in Paris originally started as a fortress and then a palace, before it was designated to be a museum.

In Japan where timber was the only structural component, in contrast, only a small number of buildings survived more than hundred years with careful maintenance, and most of them are shrines and temples that have had religious importance as place of worship. In that sense, the idea of universal design for tourism will generally apply, i.e., to introduce accessibility to the extent practicable with due consideration of the cultural value – destroying it would damage everything. For timber structures, even access ramps made of any material might look awkward/strange.

Masonry and reinforced structures in Japan are just around 150 years old since their introduction, and most of them are already destroyed, partly due to their structural fragility against earthquakes despite of their significance. Only recent years, such non- timber structures have come to be recognized as historically important, worth preserving. However, such buildings generally lack accessibility - smaller ones did not have an elevator (it was a luxury until recently for two storied buildings), and even larger ones were often designed with grand staircases at the main entrance, denying access for people with reduced mobility. They also lacked accessible toilets for convenient use.

2.3. Ensuring access

How can we ensure access and use along with historical values? We can assume that detailed examination of both the heritage values

and the needs for accessibility and usability will be conducted. Critical argument will be held between these two viewpoints, and final agreement will be reached in real settings. The deciding factors will be practicality with due consideration of economics, i.e., how much funds can be used in the current context including maintenance cost – degree of affection/attachment of people involved might affect the argument. When buildings are still used, with or without change of use, to fully utilize them is most important from sustainability viewpoint as well. DOCOMOMO is active in trying to document and conserve modern buildings. However, such buildings are often demolished against people's wishes.

3. Examination of Japanese preservation efforts

To find out the shift of emphasis from preservation to accessibility, some examples in Japan (mostly in Tokyo area) are examined and compared. These buildings, all built after the Meiji Restoration, i.e., after 1868, are listed in Table 1 with chronological order. Some are timber structures, but most are masonry or RC.

The first example, the Concert Hall of the Tokyo Music School (Fig. 1) was used for its original purpose until around 1980. Handed over to the Taito City in 1983, it was moved to its present position nearby. Major restoration was again done in 2018, but no means of access to the upper floor was provided where the audience seats are situated. There is one place for a person with a wheelchair, but no elevator is available. Since its significance is its pipe organ, whose performance is integral with the hall itself, and primary purpose of a concert hall is to have audience there, the lack of easily usable

access features would be a serious flaw. The author asked how one can reach there – the answer from the manager was that a special stair climbing facility will be arranged by a designated company upon request, who will operate the machine. The cost must be borne by the person with a wheelchair (or by the concert organizer).

Figure 1a&b. Concert Hall, Tokyo Music School, and the wheelchair space in the hall

Three examples in the list were originally built as residences, and all are now open to public along with the garden. Both the former Iwasaki Residence and former Furukawa Residence are designed by a British architect Josiah Conder, who was one of the invited foreign employees in Meiji era Japan, to teach at the University of Tokyo.

Table 1. Buildings discussed in detail. Building name; purpose of use, structural system, year of construction and year designated as the Important Cultural property (if applicable).

Building name	Original use	Structural system	Year of Construction /Designation as a National Heritage	Wheelchair accessibility

Concert Hall, Old Tokyo Music School	**School**	**Timber**	**1890/1988**	**No**
Office of the Ministry of Justice	**Office**	**Masonry*1**	**1895/1984**	**Yes**
Former Iwasaki Residence	**Residence**	**Timber**	**1896/1961**	**Partly Yes*2**
Bank of Japan	**Office**	**Stone & Masonry**	**1896/1974**	**Yes**
Hyokeikan, Tokyo National Museum	**Museum**	**Stone & Masonry**	**1908/1978**	**Yes**
Akasaka Detached Palace	**Residence/Palace**	**Stone/Masonry**	**1909/2009**	**Yes**
Former Imperial Guards Building	**Office**	**Masonry**	**1910/1972**	**Partly Yes*3**
Tokyo Station	**Railway station**	**Steel Masonry**	**1914/ 2003**	**Yes**
Former Furukawa Residence	**Residence**	**Masonry**	**1917/ -**	**Partly Yes*2**
Mitsukoshi Department Store	**Retail**	**SRC**	**1927/ 2016**	**Yes**
Mitsui Bank	**Office**	**RC/SRC**	**1929/1998**	**Yes**
National Science Museum	**Museum**	**RC/SRC**	**1931/2008**	**Yes**

Former Prince Asaka Residence	**Residence**	**RC**	**1933/2015**	**Yes**
Takashimaya Department Store	**Retail**	**SRC**	**1933/2009**	**Yes**
Meiji Insurance	**Office**	**SRC**	**1934/1997**	**Yes**
Tsukiji Honganji Temple	**Religious**	**RC/SRC**	**1934/2014**	**Yes**
Former Kenban, assignation office for geisha	**Office**	**Timber**	**1936/ -**	**Yes**
National Diet Building	**Parliament**	**SRC**	**1936/ -**	**Yes**
Tokyo National Museum Main Building	**Museum**	**RC**	**1937/2001**	**Yes**
Former Institute of Public Health	**Laboratory, Education**	**RC**	**1938/ -**	**Yes**
Former Museum of Modern Art	**Museum**	**Steel**	**1951/2020**	**Yes**
Kanagawa Museum of Western Art*4	**Museum**	**RC**	**1959/2007**	**Yes**
Asian Gallery, Tokyo	**Museum**	**RC**	**1968/ -**	**Yes**

National Museum*5				
Museum of Modern Art, Tokyo*5	**Museum**	**RC**	**1969/ -**	**Yes**
National Crafts Museum, Kanazawa*6	**Offices**	**Timber**	**1898 & 1909/ -**	**Yes**

***1 Base isolation is introduced to withstand earthquakes.**

***2 No access to upper floors.**

***3 Stair climber was installed at the main entrance when gallery was housed.**

***4 Designed by Le Corbusier, with ramp inside.**

***5 Both designed by Yoshiro Taniguchi.**

***6 Two former Japanese Army buildings were moved and connected for the new purpose.**

Although the former Furukawa Residence is not designated as an Important Cultural Property, the difficulty of arrangements seems to prevent it from installing an elevator.

The former Prince Asaka Residence had been occupied by many through the years after the war, being finally handed over to the Tokyo Metropolitan Government, which decided to use it as a museum, and when a new wing was constructed as a major extension, a half-independent elevator was added, making the most part of the building accessible although a minor step difference on the second floor could not be eliminated.

Three museum buildings at the Tokyo National Museum give good examples of ensuring accessibility in Museums. The first one, Hyokeikan (Fig. 2) was designed with a grand staircase at the front,

and it is not easy to make it accessible. It was decided to add a glazed elevator at the back with an access ramp, demonstrating that the building façade is intact but ensured a compromising full access. The Main Building (Fig. 3) is designed with a grand carriage porch, where one can drive a car through. There are additional steps to enter afterwards, and ramps were added on the left side, which everyone can choose to walk in lieu of steps. The Asian Gallery (Fig. 4) was designed to be stepless entry with elevator access to upper floors. With an atrium in the center, the exhibit spaces were made as skip floors, which unfortunately made the original elevators without full access to every floor – left side gave access only to odd number floors and the right side only to even number floors. Renovation in 2012 added a glazed elevator within the atrium – with access to all floors. It has doors on two sides, enabling access depending on the floor layout. By the way, elevators with two-side doors were not allowed until 2000 according to the regulation of the Building Standard Law.

Former Imperial Guards Building had been used as the Crafts Gallery of the Museum of Modern Art Tokyo between 1977 and 2020, and it had a stairlift at the entrance (Fig. 5a). The Gallery moved to Kanazawa and changed its name as the National Crafts Museum. Utilizing two old timber buildings of former Japanese Army, it is now fully accessible with long ramps (Fig. 5b).


Figure 2a&b. Grand staircase at the front of Hyokeikan and glazed elevator at the back.


Figure 3a&b. Tokyo National Museum Main Building carriage porch and long ramp to the entrance.

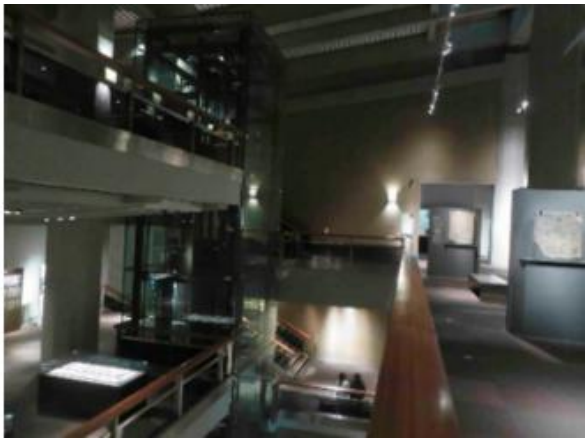



Figure 4a&b. Asian Gallery and the glazed elevator added in the atrium.


Figure 5a&b. Crafts Gallery, Museum of Modern Art Tokyo and the new National Crafts Museum.

Two buildings owned by the Minato City, Tokyo, seem worth mentioning regarding accessibility provision. The Kenban (Fig. 6), originally built as the assignation office for geisha had been used as accommodation for port workers after the war. Valuing its historical significance as a surviving timber structure, the city obtained the building and renovated it to become a new Center for Traditional Culture. Using the adjoining land lot, a small building was built to house an elevator to be connected to the old timber structure. Designed to be a timber house next door, the annex just looks as if it has been in existence long since.


Figure 6a&b. Kenban with elevator annex on the left. Stair guard was added inside.

Another example, the former Institute of Public Health building became vacant after the Institute moved out of Tokyo. Since the building was in fairly good condition (built after the Great Kanto Earthquake with the donated funds from the Rockefeller Foundation), the Minato City decided to convert it for several functions including the Local History Museum. Structural reinforcement and accessibility provisions were extensively introduced (Figs. 7 and 8).

These buildings are not designated as the Important Cultural Property, and it was much easier to arrange these changes. They are the Registered Tangible Cultural Property, but the restriction is less complicated compared to Important Cultural Property.

Figure 7a&b. Former Institute of Public Health. Long ramp on the right side, and structural reinforcement.

Figure 8a&b. Vertical lift at several places, and guardrail to prevent stair falls.

4. Discussion

Demolition is quite often the case in Japan for economic convenience of the owner/developer, but buildings cited in the list seem to have been in use for years, surviving the risk of redevelopment. These buildings of historical significance were saved through continued efforts of people involved.

It seems that the timing of the designation as an Important Cultural Property affected the decision whether an elevator can be added or not for smaller scale structures. Once it has become the Important Cultural Property, to change the status quo is rather difficult – the negotiation with the Cultural Agency becomes more complicated – emphasis on conservation is given priority. The Concert Hall of old Tokyo Music School was trapped with this problem. Although the primary purpose of the building is to be open to public of music performance, keeping the cultural values (original appearance) along with potential cost of installation of elevators may be preventing the move toward accessibility. In comparison, the former Kenban building, also a timber structure, had annex built next to it, enabling accessibility without destroying the appearance. Not yet designated as a National Heritage helped to introduce more positive choice. Still, different route needs be taken for wheelchairs to enter, which arises from the existence of two steps and another one at the original entrance.

The former Museum of Modern Art Kanagawa seem to have taken a clever approach – people tried to restore the building to the original design, but to ensure structural safety as well as accessibility, they not only reinforced the structure with new knowledge but

also arranged an elevator and a more accessible toilet. The former required some modification in the plan layout (a deviation from the original, but hardly noticeable in reality), while the latter did not cause any significant changes. The designation as the Important Cultural Property was done after the restoration/modification was done. If the timing was the other way round, it could have been more difficult.

It is interesting to note the different approaches taken by the museum organizers regarding the renovation of Taniguchi designed buildings (neither is designated as an important cultural property). The Asian Gallery (Fig. 4) of the Tokyo National Museum basically kept the original floor plan layout, but the Museum of Modern Art Tokyo employed a more drastic approach. Originally, the building was designed with skip floors, but void inside was completely eliminated for structural integrity against earthquakes. It is now impossible to try to imagine the original arrangement. Only a tiny photograph showing the previous arrangement is displayed.

The experiences of the National Diet Building could provide useful information [6]. Built in 1936 after 17 years of construction, it faced an urgent need to make it wheelchair accessible to accommodate new members of the House of Councilors elected through proportional representation in 2019. Only a few weeks were left to do a quick fix, then plan and implement a longer strategy was conducted. Ramps and elevators were needed, and space was squeezed out despite physical limitations. Argument against touching historic designs was raised, but equal rights as a member was utmost important, and accessibility was ensured as far as

practicable, which was greatly appreciated from all sides. The reality that the problem was clearly visible helped to push through accessibility provision. The decision to avoid being designated as an important cultural property turned out to be a good choice.

5. Conclusion

Careful examination of examples of preservation of historical buildings in Japan through comparison gives valuable lessons for intervention toward accessibility, which is becoming urgent needs to be fulfilled. Presently, the Japanese access legislation gives exemption for existing buildings as long as the status quo is maintained. Without strong legislation on access rights in Japan, movement toward ensuring access is almost always struggling a difficult battle.

References

[1] Athens Charter for the Restoration of Historic Monuments, 1931 https://www.icomos.org/en/resources/charters-and-texts/179-articles-en-francais/ressources/charters- and-standards/167-the-athens-charter-for-the-restoration-of-historic-monuments

[2] International Charter for the Conservation and Restoration of Monuments and Sites (The Venice Charter 1964) https://www.icomos.org/charters/venice_e.pdf

[3] Gomez Robles, L. Los valores del monumento restaurado. -Una aproximación a la restauración científica-. Revista ph Instituto Andaluz del Patrimonio Histórico, no 75, agosto 2010, pp. 80-93

[4] ISO 21542 2021 Accessibility and usability of the built environment ISO, 2021

[5] Kose, S. Accessibility and Usability Standards on Built Environment Design: Struggle Toward Agreement in the Global Context, C. S. Shin et al. (Eds.): AHFE 2021: Advances in Industrial Design

pp. 275–280, 2022. https://doi.org/10.1007/978-3-030-80829-7_34

[6] https://www.sangiin.go.jp/japanese/barrierfree/barrierfree-j.html (in Japanese only)

CHRISTIAN EBBESEN

Arkitektskap AS, Torggata 33, 0183 Oslo, Norway

E-mail: ebbesen@arkitektskap.no

MARIANNA BRENNA

Former employee at The Norwegian Defense Estates Agency, Oslo, Norway. Recently appointed in the Department of Historical Rehabilitation and Heritage, Architecture and Design at WSP, a Norwegian consultancy in construction, consulting and project management.

Marianna holds a Masters' degree in Architectural Conservation and a Bachelors' degree in Design, Interior Design and Furniture Design. During her career she has built up a solid competence in working with listed and listed buildings and facilities, both as a consultant and designer. She has experience in the design of antiquarian restoration and rehabilitation, of historic interiors and of accessibility measures (universal design). She has drawn up management plans and been responsible for application processes and dialogue with the conservation authorities. She considers that making cultural monuments and environments accessible to as many people as possible is an a particularly meaningful task.

Marianna states: "Working with cultural heritage means that you are never taught, but constantly have to seek new knowledge and familiarize yourself with new things. What I find particularly interesting about older and listed buildings is that you have to deal with the framework that the building provides. Finding the balance between the building's tolerance limit and the opportunities that nevertheless lie there is an exciting challenge, especially in a time when buildings must be reused and transformed for new use in order to reach the climate goals."

E-mail: marianne_brenna@hotmail.com

ISSN: 2582-8304

Values-Based Conservation in Practice: Accessibility at Akershus Castle, Oslo

Christian Ebbesen
Marianne Brenna

Abstract

Akershus Castle is one of Norway's most important historical monuments and is listed with the highest grade of protection. The earlier medieval castle from around the year 1300 is an arena for the Norwegian state and in use for such as government dinners and receptions. The castle is also an important tourist destination and is used for public events like concerts, etc. Until today, people in wheelchair have had to be carried into the buildings due to stairs and differences in levels inside. In the autumn of 2021 five measures that make large parts of the castle accessible, were completed. Making public buildings accessible has high priority in Norway. Having achieved this at Akershus Castle is of great symbolic value. During the process of defining the projects extent and measures the method *values-based conservation* was applied. This was done through involving several stakeholders in assessing and quantifying an array of values and criteria. On this basis it was possible to define the project, achieve the permits from the heritage authorities and get acceptance from the organisations representing people with disabilities. The result has been very well received by the public, stakeholders and by the cultural heritage authorities.

Keywords

Accessibility, Cultural Heritage, Equality

Introduction

Akershus Castle and Fortress is located at the seaward approach to Norway's capital, Oslo (Figure 1), and is one of the country's most important historical monuments. The fortress has been in continuous use for more than 700 years and is defined as a national monument. Today, the Norwegian government uses Akershus Castle for, among other things, government dinners and state visits. It is also a tourist destination receiving about 55,000 visitors a year. The castle also houses the Norwegian royal family's burial chamber. In the castle church, which is the Norwegian Armed Forces main church, services, baptisms, weddings, and concerts are held on a regular basis.

Until now, people in wheelchair have had to be carried, due to stairs and differences in level. It has not been a worthy solution. Ever since the turn of the millennium, various solutions have been studied to improve the situation. In the autumn of 2021 building works with five improvements were completed, giving improved accessibility to the most important parts of the castle (Figure 2).

Figure 1. Akershus Castle and Fortress. (Photo: Erik Selmer/The Norwegian Defense Estates Agency)

1. Akershus Castle and Fortress

Akershus Castle and Fortress was erected as a medieval royal castle around the year 1300. In the 17th century, the castle was rebuilt into a Renaissance castle surrounded by bastions. After only a few decades, the castle began to decay, and was later used as military storage and archives. When Norway became an independent kingdom in 1905, the idea arose that Akershus Castle could become a symbol for the nation, and an extensive restoration was initiated to make the castle a place of representation for the Government. One of the most famous Norwegian restoration architects of the time, Arnstein Arneberg, was assigned to lead the work in the 1930s. Arneberg left his clear architectural signature on both the restored parts, and in his own interpretations when rebuilding parts that had been demolished throughout history.

2. Accessibility to a castle listed with the highest grade of protection

Akershus Castle is listed with the highest grade of protection. In Norway, all permanent cultural monuments dated before the Reformation in 1537, such as buildings, are automatically listed due to age value. It is not permitted to alter, move, excavate, cover, or conceal an automatically listed cultural monument without permission by The Directorate for Cultural Heritage. At Akershus Castle, the protection applies to the castle's exterior, interior, and courtyard as well as a protection zone around the castle. The extensive restoration of the 20th century is also defined as cultural heritage in the listing. All interventions required a dispensation by The Directorate for Cultural Heritage, and groundwork had to be supervised by an archaeologist.

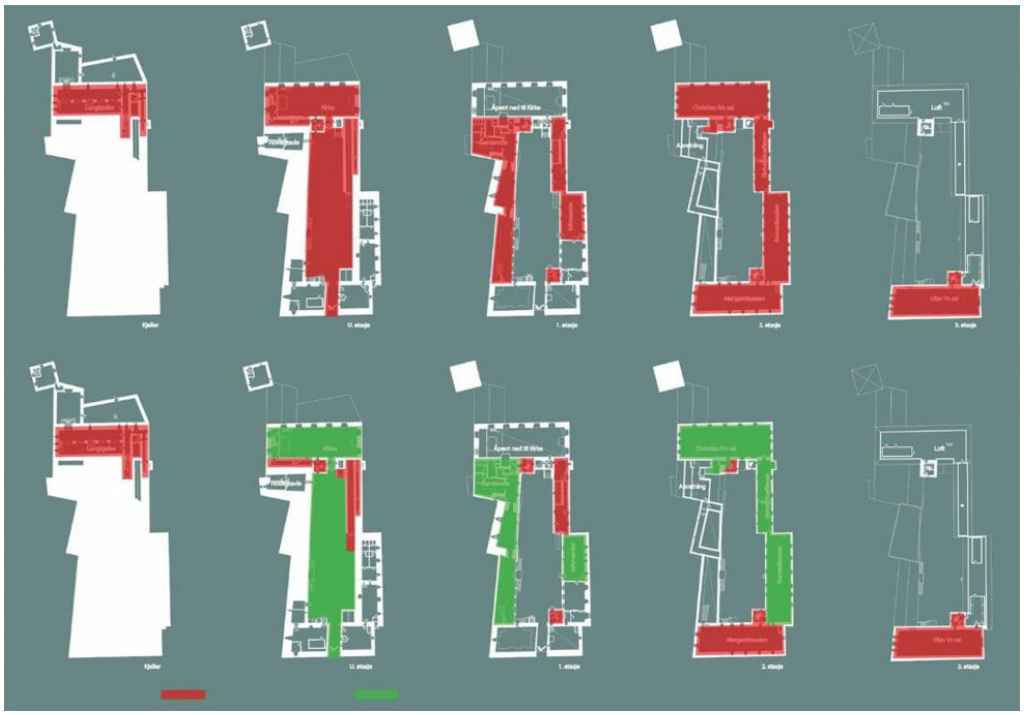


Figure 2. Areas that were inaccessible before measures shown with red hatches. Areas that became accessible after measures shown with green hatches. (Illustration: Arkitektskap AS)

3. Universal design (UD) vs. accessibility

In universal design (UD) the aim is that a main entrance and main functions should be accessible by everyone in an equal manner, and that no alternative entrance or special solutions should be necessary, such as wheelchair ramps and stair lifts. The project at Akershus Castle chose the working title "Improved Accessibility" because it was considered impossible to achieve a complete universal design in an historical environment as this, with the limitations the building and the Act concerning the cultural heritage presented. The distinction between the concepts of accessibility and universal design was an important clarification of expectations at the beginning of the project. Nevertheless, it was throughout the process an ambition that the measures chosen should be as close to universal design as possible. It was also emphasised that visitors

should be able to move about without the need of assistance. Equality and dignity were therefore two of several value criteria that were listed at the beginning of the project and were given major importance.

At Akershus Castle the symbolic value in that all guests can use the same entrance and pass through the same doors is very strong, because the governmental ceremonies are linked directly to the core values of democracy. The Directorate for Cultural Heritage therefore allowed major alterations, to enable the main entrances and official rituals to be accessible to all guests attending official dinners and receptions.

4. User participation

Pursuing UD in listed buildings and cultural environments lies in an intersection between the consideration that everyone should be able to participate in society in an equal manner and the protection of cultural environmental values. When a cultural monument such as Akershus Castle is to be made accessible, there are two different special acts that are important: Equality and Anti-Discrimination Act and Act concerning the cultural heritage. The Equality and Anti-Discrimination Act allows exemptions if the consequences of measures may entail a disproportionate burden, which includes protection of cultural heritage values. The cultural heritage authorities have an ambition to make cultural monuments and sites as accessible as possible, but without significant architectural or cultural-historical values being lost. Good measures that enable cultural monuments and environments to be experienced by more people, also add extra value to the cultural monuments.

In the project at Akershus Castle, it was important to involve a wide range of stakeholders to achieve the best possible solutions, that all parties could accept. This included among others disability organizations, organizations within the cultural heritage field with a commitment to the castle, authorities etc. The involvement of the disability organizations was particularly important to safeguard the quality of the measures where requirements or guidelines in the legislation could not be achieved.

Figure 3. L.h.s: One of the halls before intervention. R.h.s.: A lifting platform is integrated in the floor. (Photo 1: Oslo Byggentreprenør AS; 2: A.M. Malkenes Mathiesen/The Norwegian Defense Estates Agency)

5. Method

In the process, principles from the value-based conservation method were used [1]. The purpose of the method is to be able to compile and weight different criteria through a participation process, in order to make objective choices to the highest possible extent. The process started with identifying all stakeholders who were affected, and then mapping what was important for each stakeholder. A feasibility study was then conducted, in which owners, staff and user of the castle, as well as the organizations mentioned above, were

invited to participate. The study ended up with a total of 28 different measures for solving stepless access to different areas of the castle, as well as improvements for people with visual impairments. The next step was to make the values measurable. The list of values and criteria, which included both concrete values, some of which are easily measurable, and intangible values, which are more subjective, were: functionality; ease of use and capacity; dignity; equality; extent of visual changes; extent of irreversible measures; impact on fire safety and evacuation; durability, operation, and maintenance; cost and risk.

5.1. Functionality

It was a goal that all solutions should be intuitive in use, and that they should facilitate orientation, so that visitors should feel safe. Few of the guests invited to the formal events know the castle well, and many will be a little nervous and excited when they arrive at a government dinner. In such a situation, it becomes especially important to avoid situations that can feel unpleasant or stigmatizing, and thus impair the experience of the visit.

It was also important that all guests, regardless of functional level, should follow the same route and be able to participate on equal terms during formal events, such as dinners and receptions as well as ceremonies in the church. It was a goal that there would be no need for special assistance to be able to use the installations. Another important aspect was that the technical installations or interventions chosen should not appear unappealing or have a negative impact on the castle's architectural qualities and interiors, nor be perceived as stigmatizing for those who must use the specific

installations. It was therefore crucial that all interventions were to be executed with the highest quality in design, materials, and craftsmanship (Figure 3 and 4).

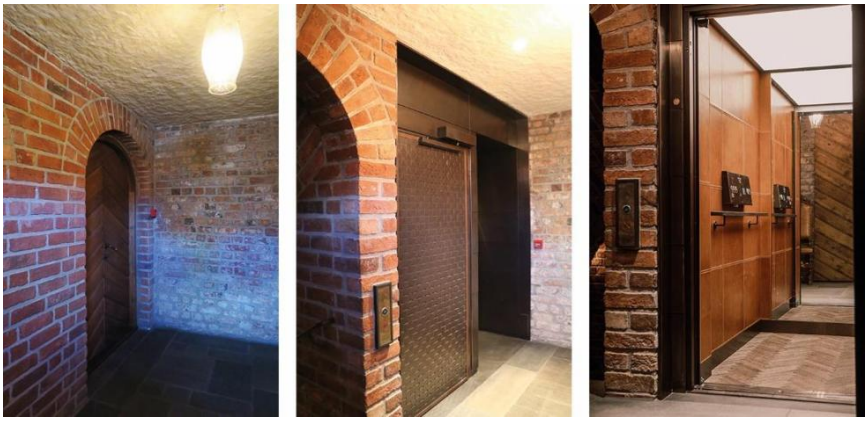


Figure 4. L.h.s.: The hall in the second floor before intervention. In the middle: An elevator has been fitted inside. R.h.s: Elevator interior. (Photo 1 and 2: Marianne Brenna; 3: Anne-Margrethe Malkenes Mathiesen/The Norwegian Defense Estates Agency)

5.2. Heritage values

Values associated with cultural monuments are not static but will always be influenced by contemporary views and by context. Taking on a project of this complexity today, the approach and theory applied differ from those that were the dominant ones in the 1930s, when the last major change at Akershus Castle took place. In the feasibility study, therefore, the castle's cultural-historical values were analysed and assessed again, in the light of today's understanding of the castle, its history, symbolic values and cultural heritage values in general.

In the feasibility study, two specific criteria were applied to assess the impact on the castle's cultural-historical values: the extent of irreversible interventions and the extent of visual changes. Irreversible interventions, look at the consequences of having to demolish and make interventions in existing structures –

emphasizing the importance of avoiding interventions in masonry and structures from the Middle Ages, as far as possible. Visual changes, look at how changes and additions would affect the castle's architectural and historical values and could potentially impair the overall appearance, as well as aesthetic qualities, documentation value, historical timelines, experience value etc. Today's need for new functions should not be hidden, but instead carried out with such high quality that they add new values to the castle.

5.3. Technical conditions

When choosing technical solutions and materials, special emphasis was placed on durability and the possibility of being able to easily carry out maintenance and obtain new parts for replacements. This applied both during implementation and after completion. It was also important that future repairs can be carried out without the needing structural interventions. It was essential that the solutions chosen would not require much supervision to be operational. It was also an absolute requirement that the interventions should not imply restrictions on escape capacity and thus affect fire safety.

Figure 5. L.h.s.: The courtyard before intervention. R.h.s.: An elevator tower has been established in connection with the new stair. (Photo 1: Arkitektskap AS; 2: M. Brenna)

6. Accessibility vs. cultural heritage

The five main measures which have been completed are two elevators, two lifting platforms and one ramp. In addition, modification of several doors and various improvements for people with visual impairments have been carried out. Throughout the project, assessments have been made to balance the consideration between the UD and the cultural heritage protection.

Making then main entrance accessible is an example. The monumental and symmetrical limestone stair in the courtyard had to be dismantled entirely (Figure 5). The new stair was erected in an asymmetrical shape with a horizontal part connecting the elevator. The new stair had to be wider, and the landing higher than the original. All the old limestones in the front and railing where reused and adapted to fit the new shape. Due to the new hight an additional iron railing had to be mounted.

One of the most important alterations, however, was erecting the new tower, containing the elevator, in the courtyard. This represents a major change from a heritage perspective and the courtyard´s appearance (Figure 5). Thus, it was imperative to find the right balance making the elevator functional, easily visible, and as prominent as the main entrance – and making the addition blend into the historical environment. The result combines use of traditional materials such as limestone, bricks, and iron, but with a contemporary interpretation. The new tower is placed on the footprint of the first medieval tower at Akershus, but it has a clear contemporary character, and represents an addition to the castles long history of alterations.

The church entrance is an example where the limitations in the existing castle and heritage values limited the possibility for accessibility interventions. In spite of expanding the entrance hall, there was not enough room for an elevator and a stair (Figure 6). The result was fitting a lifting platform integrated in the stair (Figure 7). To obtain the overall architectural quality, the platform is covered in the same marble as the stair, making it almost invisible, when not in use. When it is in use the stair is not blocked for others, so the entrance complies fully with the aim to accomplish equality and dignity.

Figure 6. L.h.s.: The church's entrance hall before intervention. R.h.s.: The church's entrance hall after intervention. (Photo: Oslo Byggentreprenør AS)

Figure 7. A lifting platform is integrated in the stair in the church's entrance hall. (Photo: Anne-Margrethe Malkenes Mathiesen/The Norwegian Defense Estates Agency)

7. Summary

Based on the overall assessment, five interventions were selected for execution. Furthermore, the process also defined the premises for how the new elements were to be integrated and appear in the listed castle.

The results of the feasibility study and the documentation from the participation process, were used to a full extent in the application process towards the different authorities involved.

The process clarified the complexity of improving accessibility in such a special cultural monument as Akershus Castle, and at the same time, giving everyone involved an insight and a greater understanding of the needs and special interests of other stakeholders. For everyone involved, there was a significant learning factor in participating in the process. There was also an

acknowledgment that all interests cannot be fulfilled in a monument as important and complex as Akershus Castle.

The result has received very positive response from stakeholders and the public, and the accessibility measures at the castle have been included in the Directorate's collection of examples of successful improvements in listed buildings [2].

References

[1] Mason, R. (Issue 1995) Assessing Values in Conservation Planning: Methodological Issues and Choices. Assessing the Values of Cultural Heritage. 2002: p. 5-30.

[2] Riksantikvaren. (2022, 06.20). Heistaॅrn paॅ Akershus slott [Lift tower at Akershus Castle]. Riksantikvaren.no. Heistaॅrn paॅ Akershus slott - Riksantikvarens Eksempelsamling (ra.no)

DELFÍN JIMÉNEZ MARTÍN

PhD in architecture (Urban Planning and Accessibility), CEO of EQAR - Planning, Building and Accessibility company and President of ASEPAU, Spain. Expert in Universal Accessibility in the physical environment.

Delfín participates in several international standards on Accessibility for the Spanish Standards organisation, UNE, ISO and the European Commission. He has extensive experience as a Universal Accessibility consultant with entities such as ONCE Foundation and ILUNION. He collaborates with the French Standards organisation, AENOR as an expert in certification audits in Accessibility.

Delfín is also professor of the Master of Accessibility at the University of Jaén and lecturer in numerous other courses at UPM, COAM, Ayto Madrid. He has published on accessibility in the physical environment and has participated as a speaker at numerous international conferences. And he is also a board member of ASEPAU (Spanish Association of Professionals of Universal Accessibility) and IAAP (International Association of Accessibility Professionals).

Email: d.jimenez@eqar.es

ISSN: 2582-8304

ALBA RAMÍREZ SAIZ

Urban planner and architect, PhD candidate in DUyOT (Technical University of Madrid, Spain) about universal accessibility and design for all in urbanism.

Alba holds a Masters' degree in Architecture from the Rey Juan Carlos University, Spain. Together with Prof. Andrea Alonso Ramos and PhD Delfín Jiménez Martín, she recently organised the IV edition of Accessibility Seminars "Accessibility beyond the senses" as part of the Science and Innovation Week 2022 by Comunidad de Madrid, held at Universidad Politécnica de Madrid. She previously worked at the Madrid Borde Sur research group, which aims to promote social and economic development in the southern arc of Madrid, creating new strategic urban lines.

Email: albaramirezs@outlook.com

MIGUEL ANGEL AJURIAGUERRA ESCUDERO

Ph.D. Architecture, Visiting Professor, Polytechnic University of Madrid.

Miguel obtained the Extraordinary Prize for his doctoral thesis at the Polytechnic University of Madrid. His professional career has been developed in the construction and consulting sector. Currently he is a Visiting Professor within the Degree of Fundamentals of Architecture in the Area of Geographic Analysis. He is also a tutor for Architecture degree students and Master's degree students in Architecture. He currently carries out his research work in collaboration with private public entities in relation to the following research lines: The historical heritage of architecture and urbanism. Environmental protection and Urban Facilities. Socioeconomic development through urban and territorial planning. These three lines of research are related to economic, social and heritage policies in territorial and urban development. In addition, he works on promotion and environmental conservation together with the

development and inclusion of the most disadvantaged citizens. He is a founding member and principal investigator of the Madrid Borde Sur research group. He also belongs to the competitive research groups of URJC Santander Presdeia and Icono 14. He is a member of the Association of Friends of the Hispanic Society of America.

ISSN: 2582-8304

Urban Accessibility in World Heritage Cities. Accessibility Considerations in Pedestrian Routes in Historic City Centres

Delfín Jiménez Martín
Alba Ramírez Saiz
Miguel Angel Ajuriaguerra Escudero

Abstract

In Spain, fifteen cities have been declared World Heritage Cities by UNESCO. This implies a responsibility to conserve all the heritage wealth of these places. However, what is the point of heritage if it cannot be known and visited? In order to be able to do this for all people, in equal and inclusive conditions, it is essential to consider Accessibility and Universal Design principles. This is a challenge that requires a personalised study in places that were precisely built with the idea of being inaccessible. In particular, the study of the urban fabric and pedestrian itineraries are the determining spaces that this article develops.

The aim of this study is to determine the keys and possible guidelines for the definition of urban accessibility indicators in the routes of historic city centres. For this purpose, significant routes have been sought in historic centres from the accessibility point of view: areas of high pedestrian traffic (in many cases for tourist reasons). Thus, six of the fifteen historic quarters of the World Heritage Cities in Spain have been selected for the study, with examples of good accessibility practices and difficulties that can be

identified in their itineraries. For this analysis, an initial study of the existing documentation on the subject (secondary information sources) is carried out, in addition to a direct analysis (primary information source) of the graphic documentation compiled in each of these places. Subsequently, a complementary analysis will be made of some examples of good practice in pedestrian routes in historic city centres in cities in other countries.

On the basis of this preliminary analysis, a comparison will be made to establish common points and singularities among the different case studies first, and then with other cities. This diagnosis provides results that are identified as "keys to consider in the intervention on pedestrian routes in historic centres". These keys not only address issues of mobility, but also location, orientation, understanding, etc., thus addressing a holistic consideration of accessibility as a fundamental principle for all people, and in particular for the elderly sector, which is one of the groups that is clearly growing and which, without necessarily having to have a severe or recognised disability, needs an accessible environment that is easy to use.

As a main conclusion, it can be said that the results of this study do not only have an internal application for these cities but can be perfectly extrapolated as a basis for the elaboration of specific indicators for any historic city centre in any city in the world, considering the necessary adaptation to the specific characteristics of each city.

Keywords

Urban Accessibility, Accessible Heritage.

1. Heritage and Urban Accessibility; Introduction

Heritage is our legacy from the past, what we live with today, and what we pass on to future generations. Our cultural and natural heritage are both irreplaceable sources of life and inspiration [1]. But in order to experience this heritage it is essential to be able to access, understand and enjoy it independently. And for this, Accessibility plays a decisive role.

Among the different heritage elements, Historic City Centres (HCC) are a specific typology to be considered. In addition to the difficulty of coexisting with this historical legacy, "among the complex problems of the roads in historic centres, we can highlight the difficulty of coexistence between vehicles and pedestrians" [2]. And another relevant factor is the tourist character associated with the condition of Heritage, which entails the visit of this space by a large number of people, who are also unfamiliar with it: how it is understood, how it is used. So, HCC have specific accessibility characteristics that differentiate them from other urban spaces. The historical heritage with which they coexist, as well as tourist activity, plus the urban activity itself (cars, commercial areas, administrative facilities...) are determining elements in their study.
In Spain there are 15 cities declared World Heritage Cities[3], and in all of them these characteristics are evident. An in-depth study of the accessibility of these spaces must therefore take these singularities into account. The definition of these singularities is the objective of this study.

2. Singularities in historic city centres; Goals and Methodology

For the analysis, the tourist has been considered as a study user, as this is a real scenario for all HCCs and, unlike residents, tourists do not know the place and are more sensitive and vulnerable to accessibility conditions (a resident already knows the existing difficulties and can avoid complicated situations and anticipate alternatives).

Among the existing Heritage Cities in Spain, the following have been selected for this study as being the most significant in terms of the results: Avila, Cáceres, Córdoba, Salamanca, Santiago de Compostela and Toledo. Subsequently, a non-exhaustive, complementary comparison is made in order to highlight the relationship of similarity or differentiation with other cases (national or from other countries).

In the study of the accessibility of the urbanised public space, a multitude of elements are analysed [4][5], which are translated into a large number of indicators, corresponding to pedestrian routes (for walking, crossing, or staying) and urban elements (pavements, urban furniture, urban pedestrian signage...). From among all these urban accessibility indicators [6], we select in this article those in which historic centres coincide, and which in turn differentiate them from other urban spaces.

These urban accessibility indicators which characterise HCCs can be structured according to their scale of consideration. This

classification highlights the need to consider urban accessibility from different perspectives:

1. ***Approaching*: *The first objective is the possibility of accessing to HCCs. To know its characteristics, including its location in relation to the rest of the city and the possibilities of choice if users have any specific difficulty.***

2. ***Touring*: *Once inside, the next basic action is to walk through the HCC. The analysis of the different interior routes.***

3. ***Arriving*: *The third basic action to be considered is the relationship with the short-distance environment and with the arrival at the destination.***

2.1. Approaching

- **Possibilities of Access**: ***This first indicator assesses the possibility of access to the HCC. Whether it can be reached from a single location or from several options, and whether their characteristics allow it to be considered as accessible pedestrian routes within the urban fabric.***
- **Connections:** ***This indicator refers to the difficulty or ease of connection (distance, location…) with relevant elements in the city for visitors: transport infrastructures (stations…) [7] hotel areas,…***
- **Existence of alternatives***: This indicator considers whether there are alternatives for people with some difficulty to the main accesses considered, both in terms of public transport*

(bus, taxi) and alternative accessible routes (e.g., taking a detour, using an urban lift…).

2.2. Touring

- **Orientation:** *Existence of landmarks in complex urban patterns (sometimes mazes) as well as directional signage designed for pedestrians (or wayfinding).*
- **Distances and slopes***: These are the two most decisive characteristics of accessible pedestrian routes at an intermediate scale, and which can determine the choice of one route or another. [8]*
- **Coexistence with vehicles***: [9] Some conflicts can be found in both crossing points, as particularly sensitive places (perpendicular traffic), and shared streets (parallel or interlaced traffic). Bicycles and personal mobility devices should also be considered here.*

2.3. Arriving

- **Pavements***: Although they are generally very relevant in any urban space, the heritage character of HCCs often translates into historic or representative uneven pavements or excessive separation between pieces (e.g., cobblestones), along with difficulties of intervention (e.g. TWSI layout).*
- **Resting points***: In areas of tourist interest where long distances are covered and where not everyone has the same stamina or capacity for effort, the existence of resting points is necessary, which must be different from restaurants terraces (private areas where it is necessary to consume in order to be*

able to rest). Their provision and characteristics need to be considered (bench height, backrest, armrests...).

- **Identification of resources***: Once we have arrived, we must be aware of our arrival and understand exactly where we are. Signposting together with clear and easily understandable information about the place are also determining factors in this study.*

3. Urban Accessibility at different scales; results

At this point, the results lead us to identify these different basic actions of the indicators (Approaching, Touring and Arriving) with a triple analysis of the accessibility of HCCs from three different scales of study[10].

1. **Global scale***: where accessibility is considered at a city level. Relating to the Approaching indicators: Access possibilities, Connections and Existence of alternatives.*
2. **Intermediate scale***: where the element of analysis is the street or square and its relationship with the rest of the urban whole. Corresponding to the Touring indicators: orientation, Distances and slopes and Coexistence with vehicles.*
3. **Detail scale***: where the specific characteristics of the different urban elements are considered: pavements, street furniture, signposting, etc. As a result of the Arriving indicators: Pavements, Resting points and Identification of resources*

3.1. Global scale

From the analysis of accessibility on a global scale, it is worth highlighting the great similarity of the situations in terms of the existence of structural problems, which cannot be solved, but where

the solutions are aimed at reducing their incidence or improving the situation for better coexistence. Among the problems detected, the following stand out:

Regarding the possibilities of access, the case of Ávila is noteworthy, where the wall limits the points of entry to the HCC. It is important on an urban scale to locate these strategic access points. Generally speaking, in the six cases analysed, a river runs close to the HCC, creating a barrier with the new city where the points of passage are limited to bridges[11], and in many occasions making it necessary to make detours. The case of the river Guadalquivir as it passes through the city of Córdoba and the entrance via the Roman bridge (now only for pedestrians) is perhaps the most relevant case (Figure 1).

Figure 1: Access Barriers: the medieval wall of Avila and the Guadalquivir River in Cordoba [source: GoogleMaps]

With regard to connections with significant elements of the city, it should be noted that in most cases transport infrastructures (e.g.,

train station) are far away. From the analysed cases, the most disadvantageous situation would be Segovia, with the station six kilometres from the HCC, and the most favourable in the case of Cordoba, with the station 1.5 km from the HCC. The hotel and commercial areas, however, tend to be close to or even overlap with the HCCs themselves.

Regarding the existence of access alternatives, it should be pointed out that in all cases there is the possibility of entering the HCC with an accessible taxi and in almost all cases there is a city bus service (with accessible buses) with stops inside the HCC. Topography is a handicap in several of the cases, which is especially relevant in the case of Toledo where the installation of escalators, although they are not elements that solve accessibility barriers, do represent an improvement for many tourists (e.g., elderly people who do not have to make a great effort to go up to the HCC) (Figure 2).

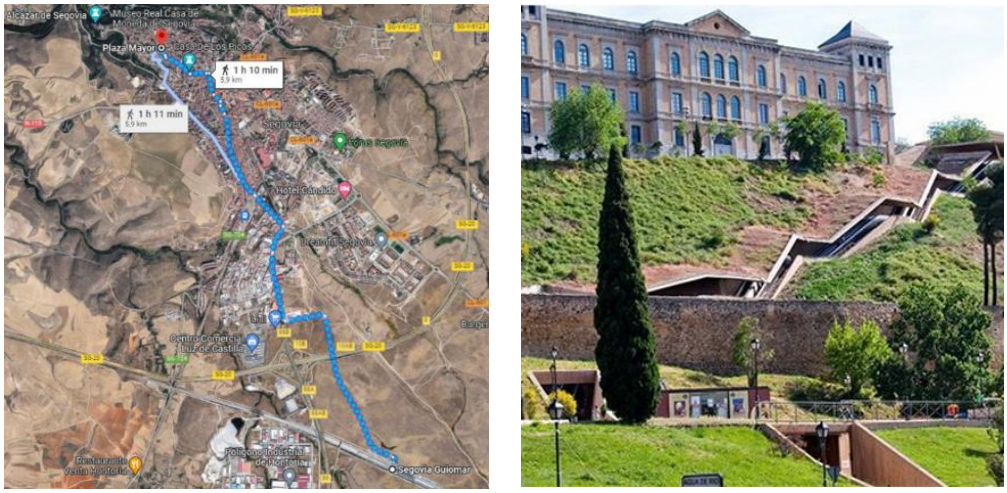


Figure 2: Barriers to connection: the problem of the distance to the train station in Segovia, and the help of escalators in the face of the topography of Toledo.

3.2. Intermediate scale

On an intermediate scale, the most determining factor in terms of accessibility is the possibility of being able to walk and find one's

way around the streets of the HCC. In this case, the most significant findings have been:

The difficulties of orientation in these complex urban areas, especially those with an Arab layout (Cordoba and Toledo) where there are no clear urban references to facilitate orientation and there is a great dependence on signposting (in many cases insufficient or inadequate) or other aids (maps and orientation apps). Many tourists are forced to suffer situations of feeling lost in the middle of an urban maze.

With regard to the slopes of the streets and the detours to be made, the few difficulties in Salamanca (direct routes without steep slopes) should be highlighted, as opposed to the need to tackle steep slopes, negotiate steps or make long detours in the city of Toledo. The Cordoba initiative is very interesting, with the creation of an accessibility map of the HCC in Cordoba, with details of the slopes of the streets in order to be able to organise the interior routes according to the abilities of each person (Figure 3).

In terms of coexistence with vehicles, it is worth noting that in some cases the HCC is practically pedestrianised, as is the case in Santiago de Compostela, where vehicles remain on the perimeter and therefore do not generate major problems (Figure 4). In contrast, the cases of Salamanca, Ávila and Toledo present difficulties in terms of coexistence with vehicles: narrow pavements, dangerous crossing points or poorly designed shared streets.

Figure 3: Labyrinthine crossroads in Cáceres. Steeply sloping street in Toledo.

Figure 4: Slope plan at the HCC in Cordoba. Pedestrian street at HCC Santiago Compostela.

3.3. Detail scale

The close relationship with the elements and materials that make up the urban space is evident at close range. In the cases studied, the most relevant results in these indicators are:

On the pavements, the existence of cobblestones or stone slabs with large joints between pieces that generate discontinuities and balance difficulties is widespread. This is also a problem for wheelchairs and pushchairs [12]. In view of this situation, it is worth highlighting the provision of strips with suitable smooth paving in Cáceres or Santiago de Compostela (Figure 5). Regarding the installation of TWSI strips, there are significant difficulties with the issue of colour contrast, which sometimes conflicts with the heritage character of the space (in Avila, the use of red on HCC pavements was prohibited) and the lack of continuity in the tactile routing strips (something common not only in HCCs).

Figure 5: Accessible paving strips in areas of historic paving in Santiago de Compostela and Cáceres.

Regarding the resting points, their major weaknesses lay in the lack of provision of benches (or inadequate ones without a backrest or armrest) or the inexistence of accessible public toilet cabins. This situation often forces some users with less resistance capacity to

use the facilities of private businesses (bars, restaurants), forcing them to pay to be able to rest (sit down or go to the toilet).

Concerning the identification of places, although in general it does not seem to be a relevant difficulty, there are many users who need better signage or additional information (pictograms, QR information, etc.) to better understand what they have in front of them. Most of the analysed cases have pedestrian signage, but it is insufficient.

In both indicators (rest points and identification of locations), all analysed HCCs are deficient, which is significant compared to other urban spaces in the city where there are not so many pedestrians and where pedestrian signage is complemented by signage for drivers.

4. Conclusions

All the urban accessibility indicators considered characterise HCCs. However, while in some of them several cities have already promoted solutions, even if only partial, in other cases the evidence of the problem reflected by the indicator is widespread. Making a final comparison after the study with other external cases, it is worth highlighting some examples of good practices in relation to the analysis that has been carried out:

Globally, urban accessibility in historic areas is a need that has been worked on for many decades. A good example is the Santa Justa lift in Lisbon, created to connect two consolidated neighbourhoods, and which has now become one of the city's tourist attractions. Another interesting example is the cable car in Dubrovnik (Croatia) to access the HCC.

On an intermediate scale, several cities have undertaken interesting initiatives on accessibility, as is the case of Venice (Italy) and accessibility through its bridges (with their difficulties and facilities), or the urban support elements in Vitoria (Spain) that provided travelators and lifts to reduce the effort on certain HCC routes.

On a smaller scale, interesting intervention initiatives are the grouting of the access pavement in Versailles (France) or the accessible pavement strips in the streets of the HCC in Tallinn (Estonia).

This confirms the need for special consideration of HCCs in terms of accessibility, compared to urban accessibility in general in other places (e.g. new growth), and identifies some of the most relevant indicators to be considered in their study.

References

[1] UNESCO, World Heritage Convention. "About World Heritage". http://whc.unesco.org/en/about/. Accessed on 6 April 2022.

[2] JIMÉNEZ MARTÍN, Delfín. (2015). "The rehabilitation of Historic Centers in terms of accessibility. The problem of the single platform for coexistence". Transcription of the presentation of the conference: "Accessibility in Roads and Public Spaces". FEMP Spanish Federation of Municipalities and Provinces. http://femp.femp.es/files/566-1891archivo/delfin%20jimenez.pdf. Accessed on 6 April 2022.

[3] UNESCO. World Heritage List. http://whc.unesco.org/en/list/&order=country#alphaS. Accessed on 8 April 2022.

[4] AVILA CITY COUNCIL (2008) Book of Proceedings: Conference on Universal Accessibility to Heritage to Heritage. Department of Accessibility

[5] NBA, NATIONAL DISABILITY AUTHORITY. (2011). Access, improving the accessibility of historic buildings and places. ISBN 978-1-4064-2319-8. Government of Ireland.

[6] JIMÉNEZ MARTÍN, Delfín. (2017 & 2021). "Strategies for intervention in protected spaces" and "Pavements in Historical Centres". Studies presented at the Courses on Accessibility and Heritage. ETSAV (School of Architecture of the University of Valladolid).

[7] POPIEL M. (2014) Paving the way to accessible tourism on the example of Krakow. European Journal of Tourism, Hospitality and Recreation. Polytechnic Institute of Leiria. Portugal

[8] LHAC LEAGUE OF HISTORICAL AND ACCESSIBLE CITIES. (2013) A best practice guide for the planning, design,

implementation, and marketing of accessible routes in historical urban environments. EFC European Foundation Centre

[9] GUTIÉRREZ PUEBLA, J. (1995). Movilidad, medio ambiente y patrimonio histórico-artístico en las ciudades históricas. Anales de Geografía de la Universidad Complutense, 15, 375. https://revistas.ucm.es/index.php/AGUC/article/view/AGUC9595220375A. Accessed on 8 April 2022.

[10] JIMENEZ D & IGLESIAS C. (2014). Beyond Urban Barriers. A new approach to the accessibility of urban spaces. Design for All Institute of India. Vol 9, n 10. Desi

[11] TATANO, V & GUIDOLIN, F & PELTRERA, F. (2017). Urban accessibility of historical cities: the Venetian case study. International Journal of Social, Behavioural, Educational, Economic, Business and Industrial Engineering. 11. 1159-1165.

[12] JIMENEZ D, DE LA FUENTE Y & HERNÁNDEZ-GALÁN J. (2018). Diversity of "Pedestrians on Wheels", New Challenges for Cities in 21st century. Transforming our World Through Design, Diversity and Education. G Craddock et al. IOS Press

ISSN: 2582-8304

Letter from the Chairman's Desk By Sunil Bhatia PhD

One day I was watching a video on youtube where a dog's leg was amputated and the pet owner made an artificial leg with the help of a wooden rod one end tied with the strap of the dog`s body and another end of the rod attached with a wheel rolling on the ground. It was a local genius arrangement serving the purpose of comfortable movement of the dog. In absence of an artificial leg, the dog was jumping and limping with the help of three legs for movement but it was restricted movement.

Another video was where a mother monkey was hanging holding the inside parapet of the well and desperate for saving the life of her baby monkey that fell into the well's water. She was trying hard for the baby to hold her tail and after a few minutes of struggle baby monkey caught the tail and she succeeded in pulling the child out of the well.

It made me think that every living being has the inbuilt character of saving others who are in trouble. It is not restricted to humans but to everyone with every living being. Another feature of movement from one place to another is for their survival except for the plants those stand in one place and no movement is required for survival. Smooth movement and it should be effortless is the idea of humans but nature has its way of designing the random surface.

Humans took complete advantage of the special character of movement for hunting for food and some time for leisure. As technology improved the dependency on hunting is reduced and the idea of farming at a special design place of animal farms and agriculture farms lowered the action of movement for food. Animals are still surviving on extensive movement from one place to another in search of prey. In this process sometimes prove prey and sometimes succeed in getting food by killing others. Men are more secure in food but the only problem with humans is an unequal distribution of food. Thanks to women who initiated the idea of agriculture and made males not too dependent on hunting. This idea of hunting was based on physical strength and male-dominated where agriculture is soft and the risk factor is lower compared to hunting. Earlier who were not competent was left alone and died. As our society matures we started taking care of those who are challenged because of our caring and sensitivity in us.

Men are useful to nature as long as he has not fulfilled the demand of propagating the generations that nature wishes from them. Nature takes all possible for recovery for allowing him to live for fulfilling the need of generations for propagating. As the man reaches a stage where nature finds him irrelevant and worthless it's all his focus on taking back to normal life stops supporting and he dies. Birds or snake when they found no more capable of survival they select a place where they leave food and does not have strength for defence and turned to prey on someone. Pigeon flies and suddenly falls from the air and strikes the ground which proves the reason for their death. Other side humans are so advanced that

never permit abortion for terminating the child and put all efforts into supporting extending the life.

Humans have devised techniques of extending life by knowledge and help in taking out from critical stage with medicines and surgery, and even if this fails he uses assistive technological supportive tools. Eyes sight is weak, he designed specs, legs or hands or any body part is amputated for some reason they have designed assistive technologies for extending life.

Once a differently abled person is alive and has the facility for movement they demand every possible place for accessibility so that they can do what normal humans do.

The area of the traveling business has flourished with the commercial angle. It wishes to flourish and tried to attract every person for maximum commercial gains. They attract with little more investment for a differently abled person.

Every person feels handicapped at one stage in his life and designers' efforts for removing that hurdles are real power for making every human normal remarkable quality. I remember when the scooter was designed it was designed keeping in mind male power and introduced the kick for start. Females were experiencing handicapped with that powered-equipped technology. Later they enfold women by adding extra features with a little amount of battery by turning the keys with that change she can start the vehicle and easily drive for movement. No more physical strength is required to start the vehicle. Later they introduced the sidecar for making it useful for differently abled people.

Initially, a wheelchair was designed with physical hand strength for movement by rolling the wheel. It was tiring and the sitting person moves at a limited distance but the introduction of a battery-

powered wheel chaired made the person moves a long distance in a short time.

I am thankful to Mr. Ivor Ambrose, Managing Director of ENAT for accepting our invitation for a Guest editor for concluding the special issue of completing the 17th year of publication without missing a single issue since its inception in 2006. He has invited authors of his choice and represented the issue of accessibility from different parts of the world. He made our publication in the true sense an international publication. Once again thanks for bringing such a wonderful special issue.

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

Merry Christmas and Happy Prosperous New year 2023.

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

With Regards

Dr. Sunil Bhatia

Design For All Institute of India

www.designforall.in

dr_subha@yahoo.com

Tel 91-11-27853470®

ISSN: 2582-8304

Forthcoming Issues

January 2023 Vol-18 No-1

IMMA BONET

After high education in Pharmacy in the University of Barcelona, she developed her professional carrier in the field of healthcare, associations, education, accessibility and Design for All.

From 1975 to 1980, she was Head of the Haematology Department at the Hospital San Juan de Deu (Barcelona) and from 1994 to 1997 representative of the people with mental disabilities sector in the Governing Council of the Institut Municipal de les Persones amb Disminució de Barcelona.

From 1995 to 2000 she was responsible for the External Relations in the Resources Centre for Personal Autonomy that belongs to the Barcelona Province Government.

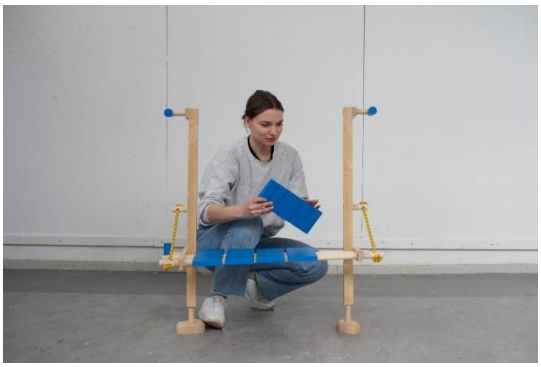
From 2001 to 2021, she became Executive Patron of the Design for All Foundation where she is responsible for the general management.

She has been responsible for the development of many national and international projects in her position as: Design for All in Spanish Universities, The Flag of Towns and Cities for All, Museum for All, Society for All, Auditing system for the use of Design for All in companies and has coordinated the participation of the Design for All Foundation in the European project IDeALL (Integrating Design for All in Living Labs) on processes of co-creation with users.

She has been also lecturer in several Spanish Universities, design schools and congresses.

From 2022, she is currently a freelance Design for All consultant working for organisations like Design for All International, Moventia, City of Oslo, Avanti-Avanti Studio and ProAsolutions among others.

February 2023 No-2



Amelia Dray

"Amelia is a designer exploring childhood, play, and democracy. Her interdisciplinary practice works across fields such as leadership

development, organisational change, service design, and child culture design. Her work aims to explore local forms of democracy alongside, with and for children.

Amelia is a strong advocate for children's play, how children lead, and how they offer new perspectives and wisdom. These concepts infuse her work across multiple contexts; working on large organisational change programmes overseas and in the UK, led design work with schools, charities and local + central government, and continuously developing her material practice as a designer."

March 2023 Vol-18 No-3

Meghan Preiss

Meghan is currently a Manager of CX Design Integration at Delta Airlines where she creates design strategies to prioritize the customer experience and infuse design thinking into the corporate culture. She is an instinctive translator traversing between complex details and big picture ideas. Meghan's passion to provide new paths for future generations to impact the world around them is becoming more of a reality with each new role she takes on. It was this passion that led her to become the youngest board member of the

World Design Organization (WDO) in their 60-year history. Previously the United States female representative in WDO's inaugural Young Designers Circle, Meghan has worked with global communities to elevate design education and gender equality design initiatives. In the United Kingdom, she taught 12- to 18-year-olds how to merge design, engineering, user research, and business, while also mentoring them through different phases of life. Meghan's devotion to giving back has led her to volunteer and/or guest lecture within her favorite communities: Industrial Designers Society of America, SHiFT Design, Auburn University, Columbus College of Art and Design, Lehman College, Western Michigan University, and more.

After graduating Savannah College of Art and Design with degrees in Service Design and Industrial Design, she gained experience in both consulting and corporate design roles. She spent a few years working as a Lead Design Research and Strategist at a design consultancy in Los Angeles where she had the opportunity to work through a variety of challenges with companies like LEGO, Boston Scientific, Hamilton Medical, BMW, Honda, and more. Working on large strategy problems from the outside, Meghan soon became interested in how she could potentially make a larger impact by working in-house, moving her career to work for Ford Motor Company and IBM.

ISSN: 2582-8304

April 2023 Vol-18 No-4

Prof Dr Rachna Khare

Dr. Rachna Khare is full Professor and Head of Department of Design at School of Planning and Architecture Bhopal, a Government of India Institution of National Importance. She served the institute in several administrative positions like Dean (Research) and Head of the Departments (Architecture, Landscape and Conservation). Starting her career in the early nineties, Rachna is a dedicated teacher and keen researcher for last twenty two years. Rachna's research interests in the field of 'Universal Design' and 'Designing for Special Needs' have earned her grants and awards nationally and internationally. She is recognized as 'Inspired Teacher' by Hon'ble President of India and stayed Scholar-in-Residence at Rashtrapati Bhavan in 2016. She is also two times winner of Fulbright Fellowship (2022 and 2007) and availed those at George Washington University, Washington DC and Georgia Institute of Technology, Atlanta. Rachna has done several sponsored research projects with All India Council of Technical Education, University Grants Commission and Design Innovation Center Project of Ministry of Education in India. She has lectured worldwide on Inclusive Design and has more than 50 papers in various National and International

journals and conferences to her credit. She has authored 3 books, 12 book chapters and edited more than 15 refereed journals. Rachna is well known as an activist and is a founder member of 3 NGOs working for the upliftment of vulnerable populations in India. Other than her regular teaching and research at her institute, Rachna founded and chairing a Centre for Human Centric Research (CHCR) that aims to build a body of knowledge that responds to the design needs of diverse human population otherwise marginalized in the past design practices.

June 2023 Vol-18 No-6

Debra Ruh CEO Global Impact

| Executive Chair, Billion Strong | Host of Human Potential at Work AXSChat Co-Host

Talks about #inclusion, #tech4good, #accessibility, #digitalinclusion, and #disabilityinclusionTalks about hashtag inclusion, hashtag tech4good, hashtag accessibility, hashtag digitalinclusion, and hashtag disabilityinclusion

Rockville, Virginia, United States

ISSN: 2582-8304

***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

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.

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

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

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

Proven, realistic tips for finding the right home.

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

Handy home checklists and assessments.

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

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

Valuable resources to save you time, money and energy.

Helpful sources of funding.

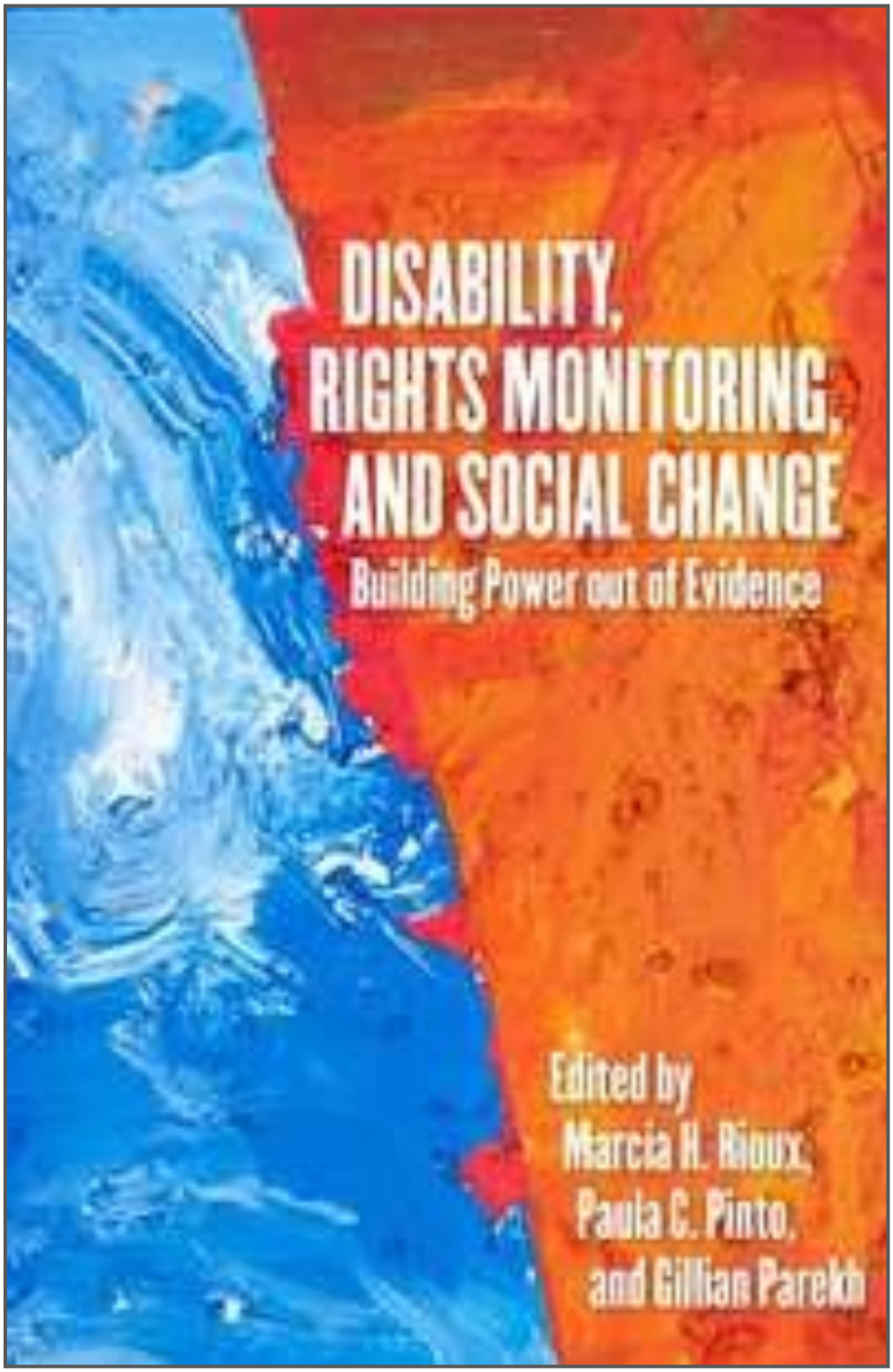
Space planning dimensions for access using assistive devices such as wheelchairs andwalkers.

And so much more!

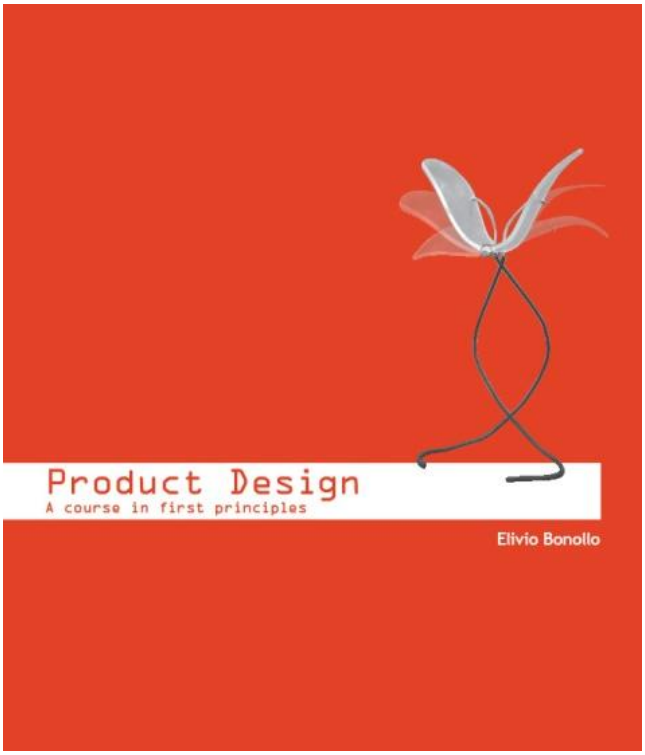
If you want useful, dependable advice and easy to implement ideas from respected experts who know the ropes, you'll love Rossetti and Leder's perspective. As a speaker, author and consultant who uses a wheelchair, Rossetti has helped hundreds of people design their ideal homes. Now her comprehensive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

Get the Universal Design Toolkit now to start your project!

Disability, Rights Monitoring and Social Change:

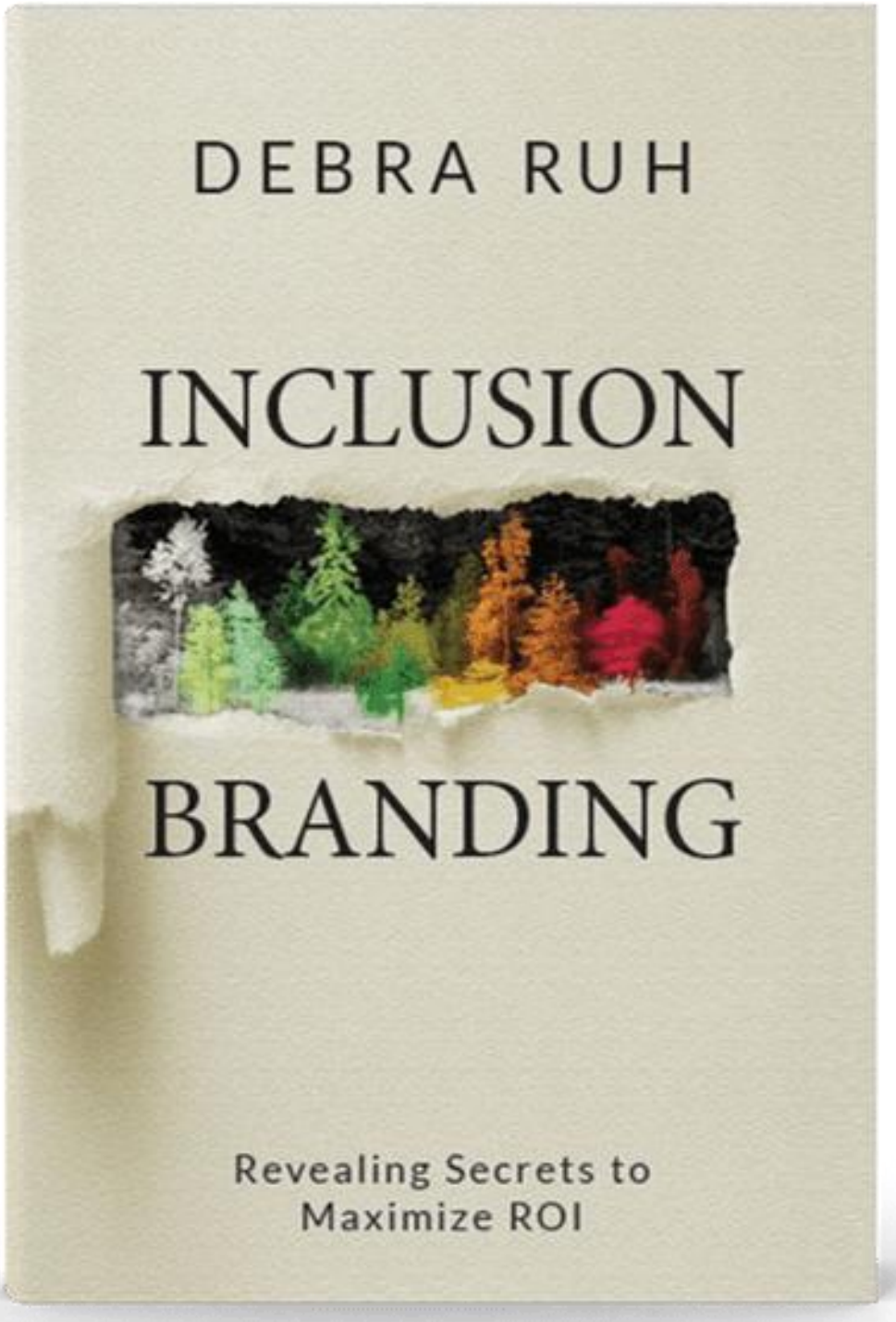


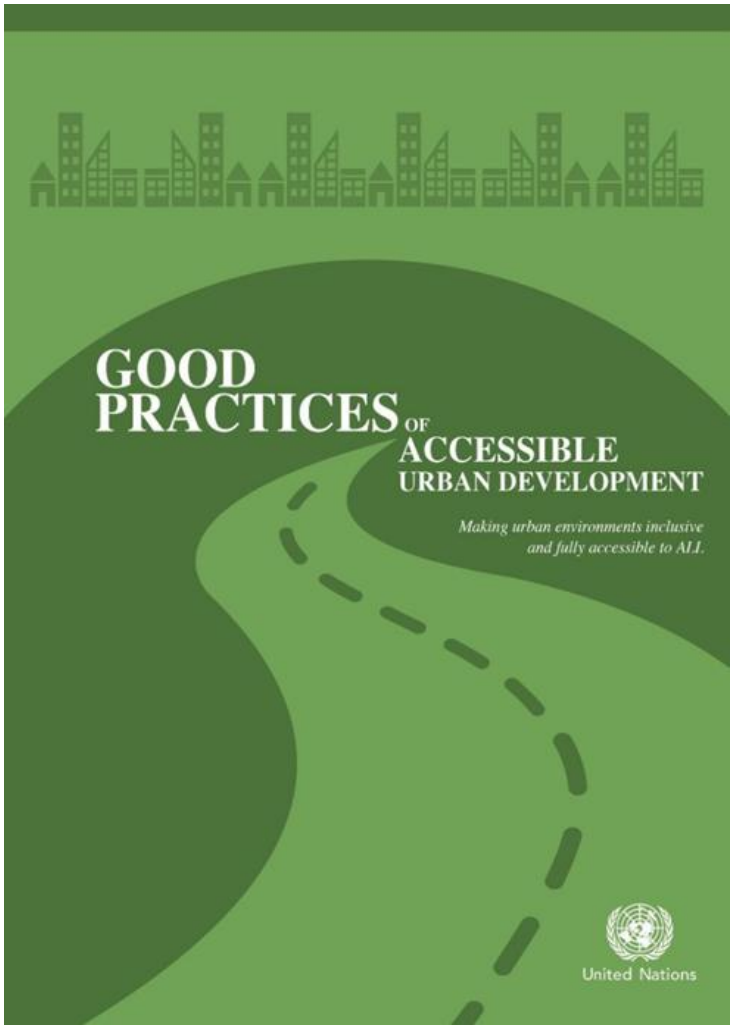
New Update: ELIVIO BONOLLO (2015/16) PRODUCT DESIGN: A COURSE IN FIRST PRINCIPLES



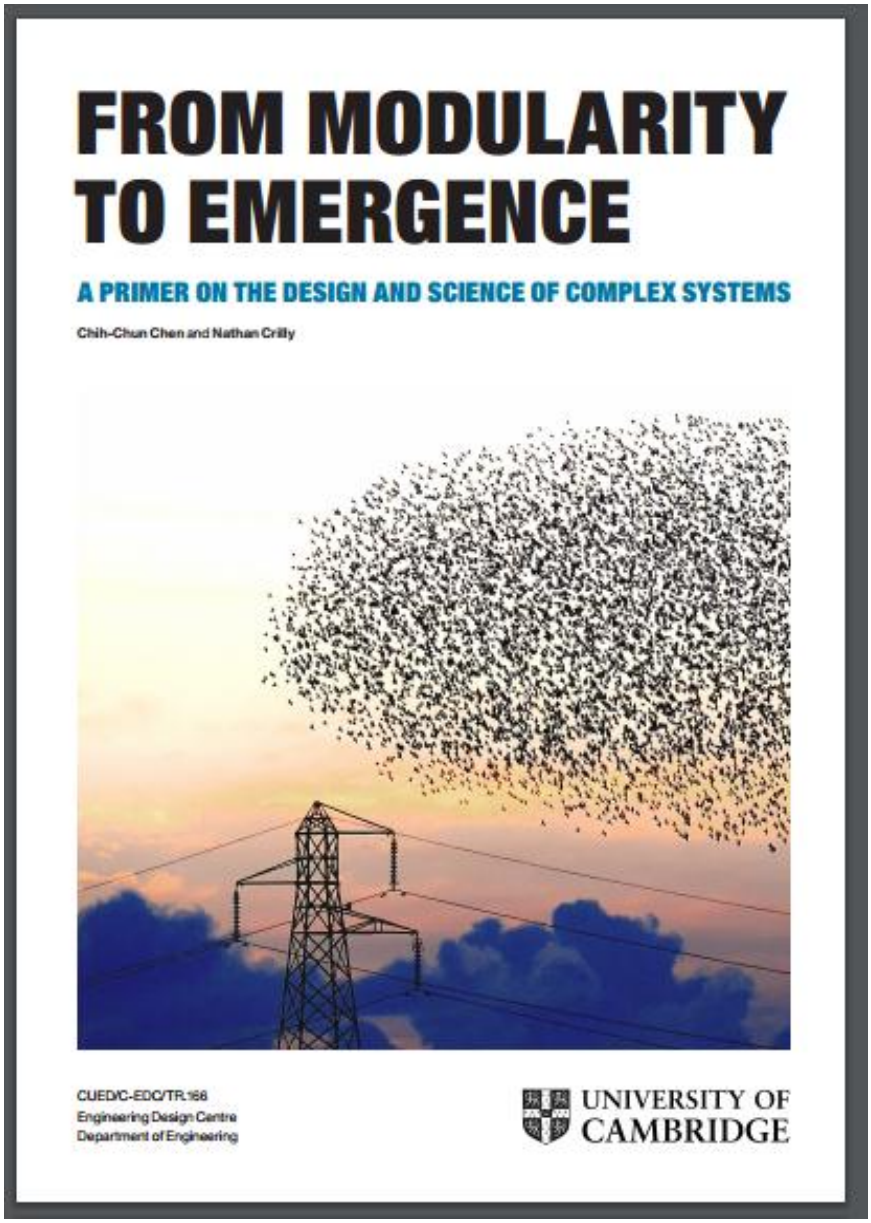
Available as a paperback (320 pages), in black and white and full colour versions (book reviewed in Design and Technology Education: An International Journal 17.3, and on amazon.com).
The 2018, eBook edition is available in mobi (Kindle) and ePub (iBook) file versions on the amazonand other worldwide networks; includingon the following websites:
ePubversion:www.booktopia.com.au
https://www.booktopia.com.au/ebooks/product-design-elivio-bonollo/prod9781784562946.html
mobi (Kindle versions):www.amazon.in
https://www.amazon.in/Product-Design-Course-First-Principles-ebook/dp/B07FNV2F4L/ref=sr_1_1?ie=UTF8&qid=1532999395&sr=8-1&keywords=Product+Design%3A+A+course+in+first+principles
www.amazon.com
http://www.amazon.com/Product-Design-course-first-principles/dp/1784562939/ref=sr_1_sc_1?ie=UTF8&qid=1456434322&sr=8-1-spell&keywords=Bonollo+Product+Design%3A+A+course+infirst+principles
www.amazon.com.au
https://www.amazon.com.au/Product-Design-Course-First-Principles-ebook/dp/B07FNV2F4L/ref=sr_1_fkmr0_1?ie=UTF8&qid=1532497383&sr=8-1-fkmr0&keywords=Product+Design+a+course+in+first+principles
READING HINTS: ePub files can be read with the iBook app on Apple MacBook/iPad devices; ePub files can also be read on Desktops PCs, Laptops and Surface devices using readers such as the Microsoft *freda*ePub reader. The Kindle (mobi file) reader isflexible and suitable for reading the eBook on PCs; Kobo readers can also be used to read ePub files on MacBook and iPad. All formats are very interactive with very good navigation.

ISSN: 2582-8304





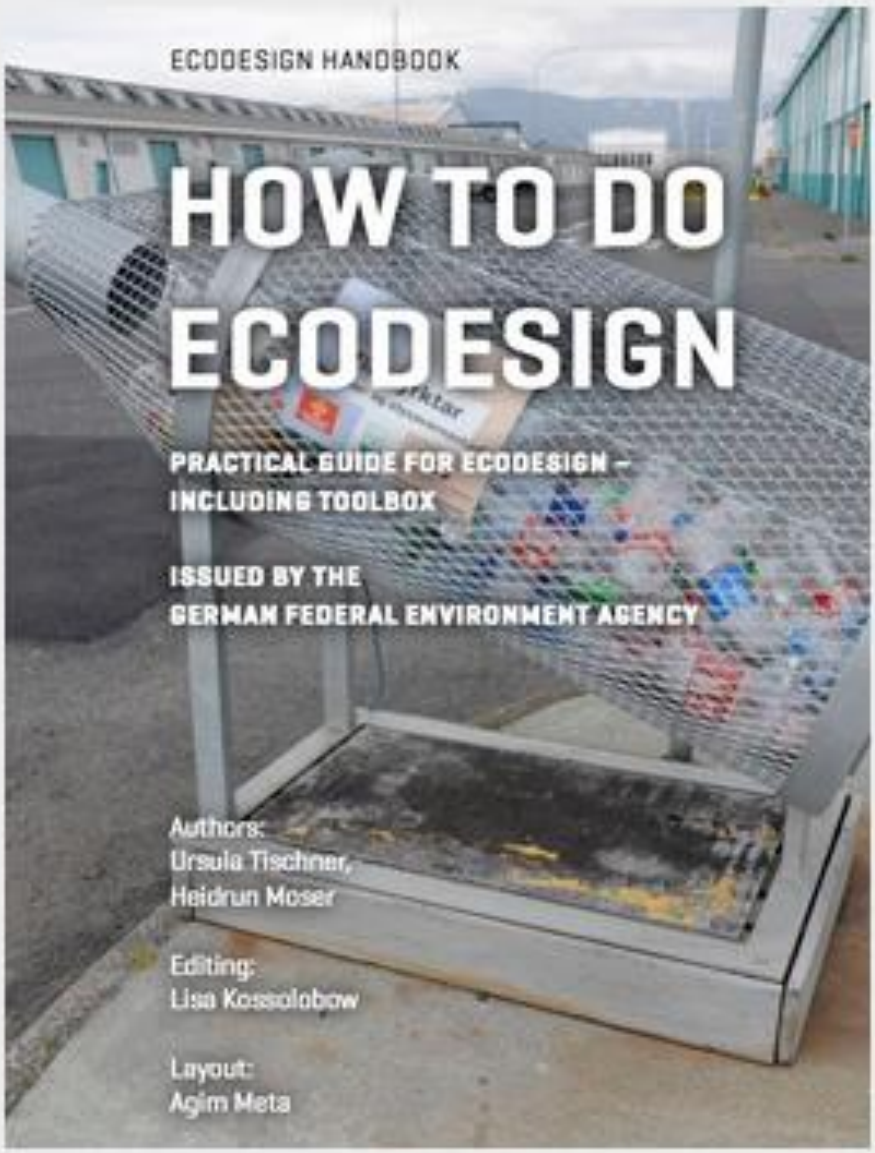
In light of the forthcoming United Nations Conference on Housing and Sustainable Urban Development (HABITAT III) and the imminent launch of the New Urban Agenda, DESA in collaboration with the Essl Foundation (Zero Project) and others have prepared a new publication entitled: "Good practices of accessible urban development".
The publication provides case studies of innovative practices and policies in housing and built environments, as well as transportation, public spaces and public services, including information and communication technology (ICT) based services.
The publication concludes with strategies and innovations for promoting accessible urban development.
The advance unedited text is available at:http://www.un.org/disabilities/documents/desa/good_practices_urban_dev.pdf



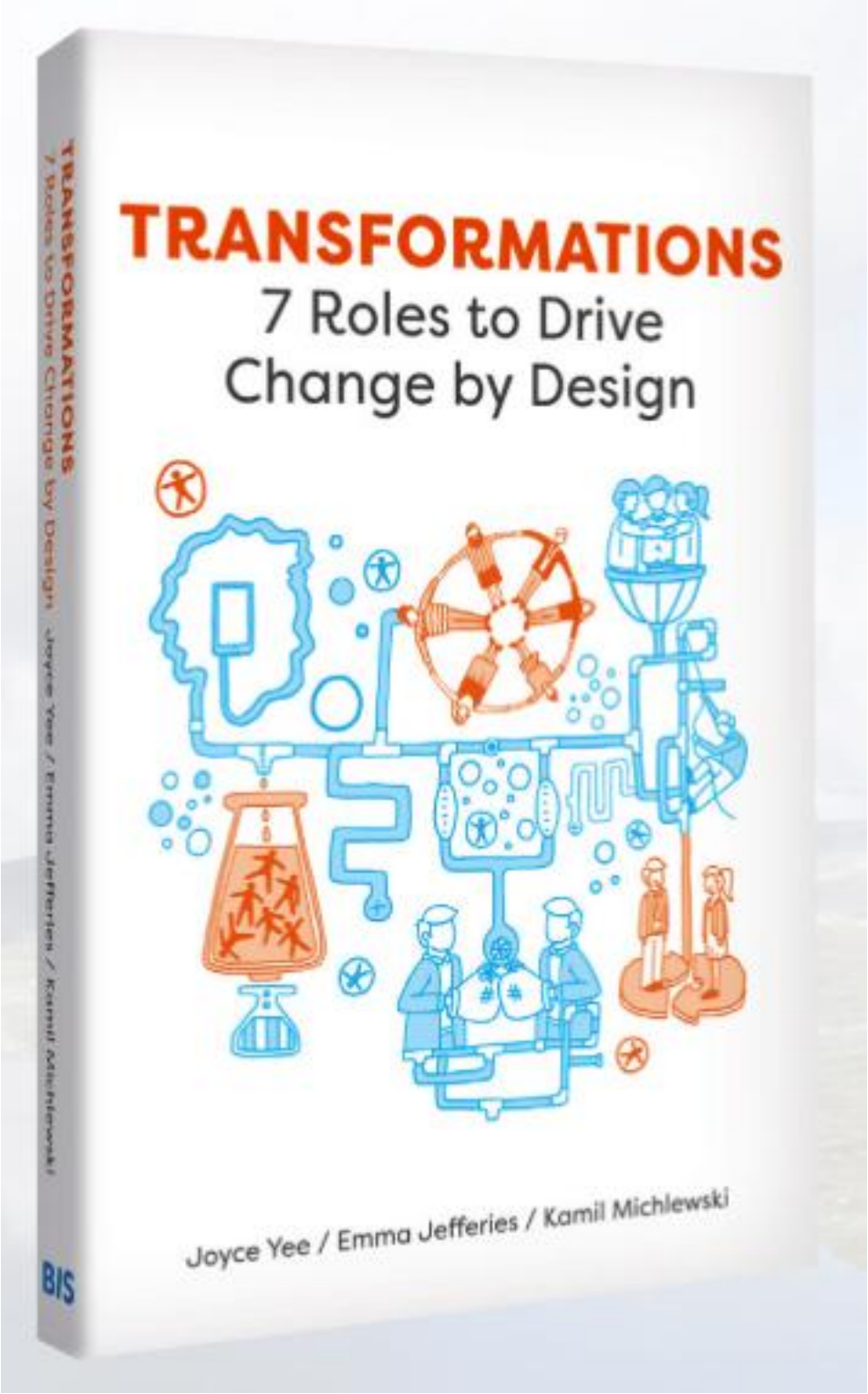
Dr Chih-Chun Chen and Dr Nathan Crilly of the Cambridge University Engineering Design Centre Design Practice Group have released a free, downloadable book, _A Primer on the Design and Science of Complex Systems_.
This project is funded by the UK Engineering and Physical Sciences Research Council (EP/K008196/1).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

Changing Paradigms: Designing for a Sustainable Future

New iBook / ebook:
HOW TO DO ECODESIGN

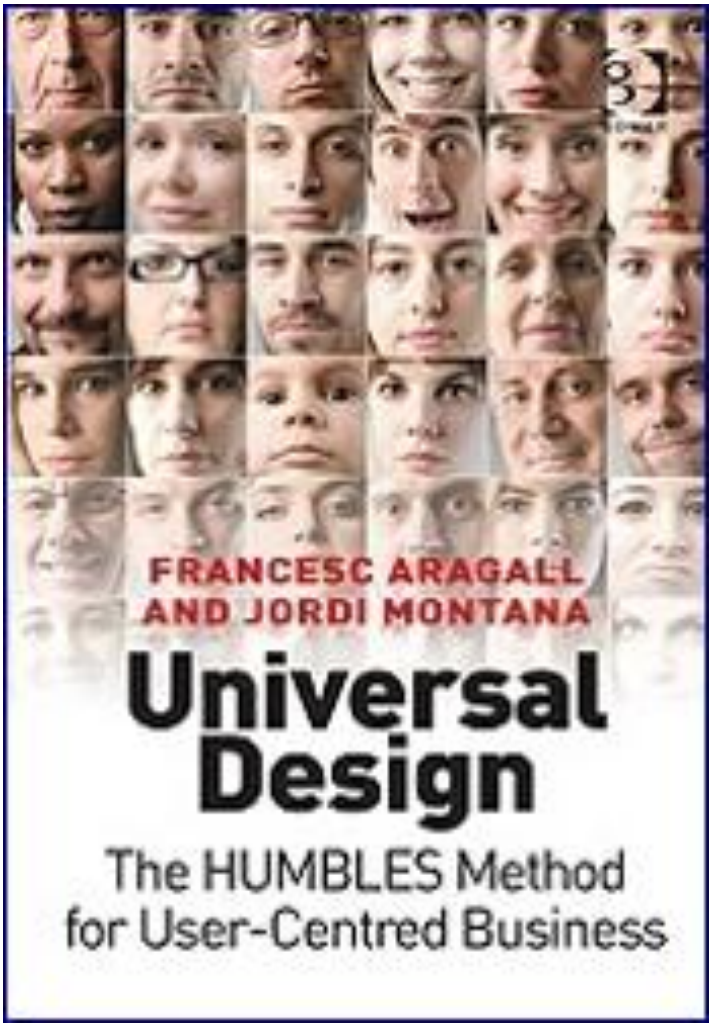


Practical Guide for Ecodesign – Including a Toolbox
Author: Ursula Tischner


TRANSFORMATIONS
7 Roles to Drive Change by Design
Joyce Yee / Emma Jefferies / Kamil Michlewski
BIS


Arnar Árnason and Sigurjón Baldur Hafsteinsson
DEATH AND GOVERNMENTALITY
Neo-liberalism, grief and the nation form

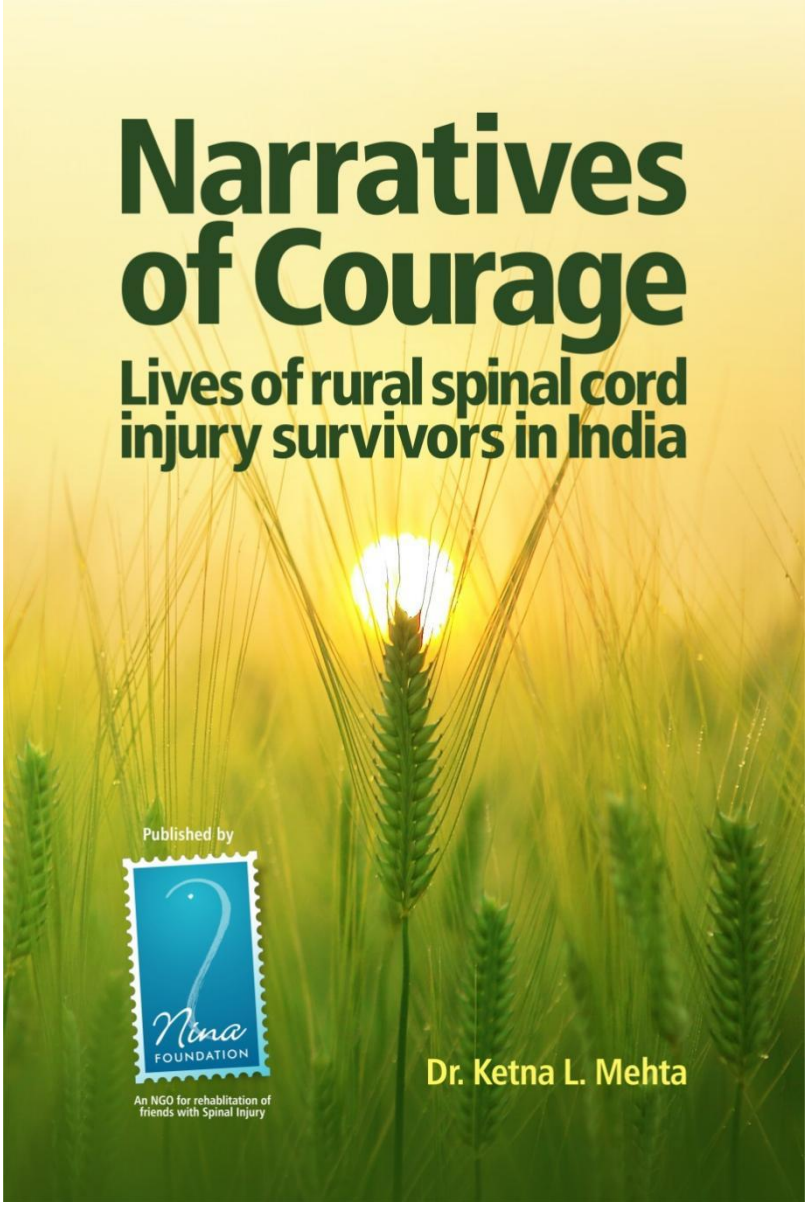
Universal Design: The HUMBLES Method for User-Centred Business



"Universal Design: The HUMBLES Method for User-Centred Business", writtenbyFrancescAragall and JordiMontañaandpublishedbyGower, providesaninnovativemethod to supportbusinesseswishing to increase the number of satisfiedusersand clients andenhancetheirreputationbyadaptingtheirproductsandservices to the diversity of their actual andpotentialcustomers, takingintoaccounttheirneeds, wishesandexpectations.
The HUMBLES method (© Aragall) consists of a progressive, seven-phaseapproach for implementing Design for All within a business. Byincorporating the user'spoint of view, itenablescompanies to evaluatetheirbusinessstrategies in order to improveprovideanimproved, morecustomer-orientedexperience, andtherebygain a competitiveadvantage in the marketplace. As well as a comprehensiveguide to the method, the bookprovidescasestudies of multinationalbusinesswhichhavesuccessfullyincorporated Design for All intotheirworkingpractices.
According to SandroRossell, President of FC Barcelona, who in company withotherleadingbusiness professionals endorsed the publication, it is "requiredreading for thosewhowish to understandhow universal design is the onlyway to connect a brand to the widest possible public, increasing client loyaltyandenhancing company prestige". To purchase the book, visiteither the Design for All Foundation website

Nina Foundation's latest E Book has been Published on following online platforms. Now you have more options to download and read Amazon's Kindle;
AMAZON INTERNATIONAL EDITION -
https://www.amazon.com/dp/B09WR78DN7

AMAZON INDIAN EDITION -
https://www.amazon.in/dp/B09WR78DN7
Other online platforms with a choice to read on any device (mobile, laptop, tablet, PC etc):
Scribd, Hoopla, Barnes& Noble,Tolino,Vivlio,BorrowBox,Apple,Kobo, Baker & Taylor, Bibliotheca, OverDrive.



ISSN: 2582-8304

News

1.

Starkloff
Disability Institute

Colleen Starkloff Retires After 50 Years Advancing Disability Rights

Founder and Board of Directors Member Colleen Kelly Starkloff has announced her retirement from the Starkloff Disability Institute effective immediately. The commitment she and her late husband Max have exhibited on behalf of the rights of the disabled over the last 50 years has been transformative for St. Louis and the disability community.

Read More About Colleen's Impact

Make a Gift to Honor Colleen's Legacy

The Starkloff Disability Institute will continue our mission to build inclusion everywhere we live, learn, work, and play through disability-led programs under Lori Becker, interim CEO. A graduate of the Starkloff Career Academy, Lori joined SDI in 2013 as Director of Development and Communications and, for the last five years, has guided our programs as Chief Operating Officer.

On behalf of the Board of Directors and the staff of the Starkloff Disability Institute, **we extend our best wishes and sincere appreciation to Colleen and her family for all they have done to promote the rights and dignity of the disability community.**

Steve Degnan
Chairperson, Board of Directors
Starkloff Disability Institute

2.

Design Week's biggest exhibition stories of 2022

Our most popular exhibition stories of 2022 spanned "the beautiful game", a glass lift in Battersea Power Station's chimney and the notion of "uncivic space".

Inside the Design Museum's blockbuster football exhibition

As the FIFA 2022 World Cup draws to a close, with viewing figures approaching 5 billion despite this year's controversies, it may be unsurprising that the Design Museum's Football: Designing the Beautiful Game was one of our most popular exhibition stories of 2022.

Exploring how design has always been a integral part of football's story, the exhibition's five sections covered performance, identity, crowds, spectacle and play and looked into the design of the ball itself, the stadiums, kits, branding and more.

However, the exhibition also explored more "informal" design outputs, as curator Eleanor Watson called them, such as Liverpool supporter Peter Carney's banners, as well as unusual items such as the carefully crafted "hooligan calling cards", designed by rival teams to be dropped at the site of brawls.

Interactive elements included an area for children to design their own football kit by Lima studio, and an immersive half-time room by the exhibition's 3D designers OMMX where visitors can take a rest on tiered seating and watch clips from classic matches. OMMX director Jon Lopez explained that the contradictions of stadium interiors, which feel open despite being enclosed, influenced the look and feel of the exhibition, with its mesh room separators and undercurrent of crowd noise.

Inside Battersea Power Station's Lift 109 experience

Earlier this month, we looked at Battersea Power Station's new Lift 109 experience. Installed in one of the building's recognisable chimneys, the circular glass lift rises to 109 metres, ending at the top of the chimney to offer visitors a 360-degree view over London.

Spanning the before, during and after of the journey in the lift is an interactive exhibition designed by Ralph Appelbaum Associates (RAA) with media design from Squint/Opera.

It explores the history of the power station through different strands, looking at the technology through which it made power, the design of the building, the stories of its former workers and its wider cultural influence – long visible on the London skyline and used as a backdrop for music videos and concerts.

Elements such as an interactive table, LED screens, a large light installation, an immersive waiting room and choreographed sound and lighting in the lift itself all work together to create a narrative for the exhibition – with the moment visitors pop out the top of the chimney the "emotional crescendo" explained Phillip Tefft, director of RAA.

Inside the Barbican's Our Time on Earth exhibition

In May, we looked at the Barbican's exhibition about the Earth's future – and the role art, design and science will play in shaping it – curated by FranklinTill and designed by Universal Design Studio with graphics by Hato.

"There is more scientific evidence than ever demonstrating the amplitude of the climate emergency," explained Franklin and Till. "Science is essential – there's no doubt about that – but art, design and culture have the power to move us [into taking action]."

Among the "radical visions" for a sustainable future were a video installation about the life of trees, an interactive installation looking at how to improve life in cities while simultaneously fighting the climate crisis, and a piece from indigenous-led Brazilian collective Selvagem about connecting to the living environment.

The exhibition design was similarly ambitious. Each space of the exhibition was shaped by modular plywood structures, fitted with panels of experimental materials designed to mirror the themes and content of the exhibition. Examples included corrugated sheet panels made from hemp fibres before being bound in sugar-based resin, and a leather-like material made from the inner bark of pine trees.

British Library exhibition explores five centuries of breaking news

In April, we reported on the British Library's exhibition Breaking the News, which looked at five centuries of the news industry, from physical newspapers to the age of social media.

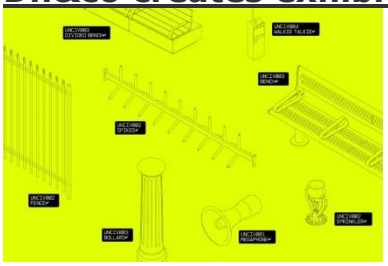
With a range of items on display, covering pamphlets on the English Civil War as well as Brexit memes, the exhibition also touched on how narratives can be politicised and the question of the media's

trustworthiness. As the exhibition's lead curator Luke McKernan told Design Week, "there has never been a time when news has been so hotly debated, so sought after and so diverse in its forms."

2020's Stay Alert lockdown campaign and Marie Colvin's report on Homs in 2012 were stories featured in the exhibition, which each "tell us something different about why the news matters", McKernan said.

2D and 3D design by Northover&Brown looked to evoke a "news environment" while also using an underlying grid to anchor both physical items and the more ephemeral digital content on display.

Dn&co creates exhibition to explore "defensive design"



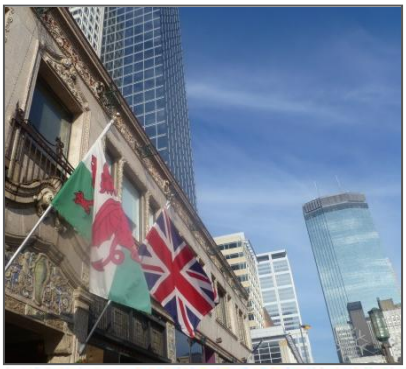
Dn&co was behind the concept and design of the Uncivic Space exhibition at the London Festival of Architecture, which explored the subject of "defensive design", or "hostile architecture" – where design seeks to manipulate how a space is used and deter some people from using it.

Covering the varied forms defensive design might take, the show was split into five sections: noise, surveillance, light, pain and obstacles. Featured designs ranged from pigeon spikes to the blue light used in public toilets to make veins less visible for drug users, to the Camden Bench, which may have "won a lot of different awards", Patrick Eley, Dn&co creative director commented, "but it was designed so that the homeless can't sleep on it".

Eley explained that although defensive structures such as medieval castles or the Great Wall of China have displayed this form of architecture, its current form is "more insidious and less visible".

(Courtesy: Design week)

ISSN: 2582-8304



Programme and Events

THE 2023 COMPETITION IS OPEN!

Architecture Designed for Aging

Tell all undergraduate architecture students

Submit essay proposals by November 1

WWW.BERKELEYPRIZE.ORG

ISSN: 2582-8304

GOOD DESIGN NEWS

Rewarding Design Excellence

Hyderabad Regional Chapter of IIID (Institute of Indian Interior Designers), is hosting the fourth edition of its flagship event "IIID Showcase Insider X 2022

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, Honglk, 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


THIS YEAR'S TOPIC:
ARCHITECTURE DESIGNED FOR AGING
THE BERKELEY UNDERGRADUATE PRIZE FOR ARCHITECTURAL DESIGN EXCELLENCE
1998
THE ARCHITECT MEETS THE NURSING HOME
The First Berkeley Prize 1998-99
ARCHITECTURE IS A SOCIAL ART
The BERKELEY PRIZE supports the study and teaching of the social art of architecture. The online, two stage Essay Competition (in English) is open to undergraduate architecture majors in accredited schools of architecture throughout the world. The Travel Fellowship Competition is open to the Essay Competition semifinalists.
PURSE
Essay Competition: 35,000 USD; 8,500 USD first prize; Multiple prizes
Travel Fellowship Competition: Stipend and airfare; Multiple prizes
2023 JURORS
The Berkeley Prize Committee
In honor of the 25th Anniversary, this year the members of the Berkeley Prize Committee will select the semifinalists, the finalists and the overall winners.
SCHEDULE
Competition opens: September 15, 2022; Stage One entries due: November 1, 2022.
For more information go to www.berkeleyprize.org
• EXPLORE ONLINE: WWW.BERKELEYPRIZE.ORG
Please forward this message to undergraduate student message boards, newsletters, any and all electronic platforms, and to those who might be interested. Download PDF for full size image to post.


NCPEDP
25 YEARS
EMPOWERING THROUGH INCLUSION
HELEN KELLER AWARDS

DEAwards seeks entries with educational influence on Design

DEAWARDS CALLS FOR 2023 ENTRIES

Competition 'Design Educates Awards' (DEAwards) goes a step further as it combines architecture and design with an educational impact. The aim is to push aesthetics to reach and obtain a lasting, informative influence on society. Visual arts have always been perceived and used as means of expression socially and politically, but the competition seeks to change this through original concepts and ideas revolving buildings or products that can be implemented for their function and effectiveness. Renowned Architects like Toyo Ito and Anna Heringer make part of the jury panel that is set to select the outstanding projects based on implementation, aesthetics, feasibility, and quality of the informative layer.

To join the Awards and register click the link here before it's too late! **Deadline for submissions is February 2, 2023.**

GOOD DESIGN NEWS

➔ Announcing the 2022 Victorian Premier's Design Awards Finalists

ISSN: 2582-8304

Job Openings

ISSN: 2582-8304

Contact *Design for All Institute of India*

Advertising:
To advertise in digital Newsletter
advertisement@designforall.in
Acceptance of advertisement does not mean our endorsement of the products or services by the Design for All Institute of India
News and Views:
Regarding new products or events or seminars/conferences/ workshops.
News@designforall.in
Feedback: Readers are requested to express their views about our newsletter to the Editor
Feedback@designforall.in

Forthcoming Events and Programs:
Editor@designforall.in
The views expressed in the signed articles do not necessarily reflect the official views of the Design for All Institute of India.

Prof Dr Ravindra Singh, Delhi Technological University, India
Email: ravindra@dtu.ac.in

Special Correspondent:
Ms. Nemisha Sharma,
Mumbai, India
Nemisha98@gmail.com
Address for Correspondence:
13, Lodhi Institutional Area,
Lodhi Road, New Delhi-110 003India.

This journal is published monthly for free for benefits for readers, by Design for All Institute of India,/ 70 Sector-18 Rohini, Delhi-110089 (INDIA) and publisher name Dr. Sunil Kumar Bhatia, address A/2/70 Sector-18 Rohini, Delhi-110089 Tel: +91-11-27853470 ,E-Mail: dr_subha@yahoo.com

This publication is completely free .We do not charge anything for published items in this journal from contributors .

Web site: www.designforall.in

Special request should be addressed to
Dr_subha@yahoo.com

ISSN : ***2582-8304***

(Cover Photo: Tactile sculpture exhibit, Louvre Museum. Ivor Ambrose)