Design for All

Year of Woman Designer 2020

Guest Editor: President Onny Eikhaug, EIDD

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Other regular features

GUEST EDITOR:

Onny Eikhaug *is the President of EIDD Design for All Europe and founder of Innovation for All AS. She was for more than 13 years Programme Leader Design for All at the Norwegian Design Council (now Design and Architecture Norway), responsible for promoting the Centre's activities in the fields of people centred, inclusive design as a strategy for innovation. She was Programme Leader for the government funded Innovation for All programme promoting inclusive, people-centred design as a practice and an effective tool for innovation in both private and public sector.*

She is committed to sustainable, people-centred design and is focused on demonstrating the potential of this approach as a powerful and profitable strategy for innovation. A key aspect of this is presenting and implementing effective methods that can easily be adopted by any organization or enterprise. She writes, publishes, lectures, facilitate workshops and curates exhibitions both in Norway and internationally, and works closely with designers, education, industry, research and government using real projects and other knowledge transfer mechanisms to achieve this. She coordinates people-centred inclusive design projects with business

and public sector applying and testing new tools and methods for user research and involvement. She is responsible for the books Innovating with People - The Business of Inclusive Design and Innovating with People - Inclusive Design and Architecture as editor-in-chief and author.

She has a broad executive experience in international marketing, sales, innovation, product development and design management in the fields of personal products, ergonomic lighting, and contemporary furniture having worked for companies such as Unilever and Luxo across Europe and the US. She was also Managing Director of a Norwegian graphic design company.

She was in 2015 appointed Inclusive Design Champion by an international jury at Helen Hamlyn Centre for Design, Royal College of Art, London at the Include conference. In 2019 she was appointed Council member of the IAUD, Japan.

Introduction

It is a great honour and pleasure to be invited to be the Guest Editor of this first Design for All India newsletter of the new year and decade. As the President of EIDD Design for All Europe since 2017, I am delighted to share with the readers information about our network and accomplishments, as well as articles from selected contributors.

EIDD celebrated its 25 anniversary in 2018 and can look back at some amazing years where a lot has been achieved since its inception. Our anniversary was celebrated with a conference in Pescara Italy with the theme Cultural heritage for All in connection with the European Year of Cultural Heritage with inspiring and informative lectures, Design for All workshops and our traveling Design for All exhibition Cities for All which you can read more about in one of the articles in this newsletter.

Our organisation is growing and developing with a very active academic working group, the Acananet. EIDD has become global this year, with 40 member institutions in 21 countries on 4 continents. We are open to new members worldwide, be it design institutions, innovation centres and of course academic institutions who are committed to and engaged in Design for All. For more information about the EIDD Design for All network and our activities, please get in touch through our website w http://dfaeurope.eu/

Design for All

Design for All is design for human diversity, social inclusion and equality.

This holistic and innovative approach constitutes a creative and ethical challenge for all planners, designers, entrepreneurs, administrators and political leaders.

Design for All aims to enable all people to have equal opportunities to participate in every aspect of society. To achieve this, the built environment, everyday objects, services, culture and information – in short, everything that is designed and made by people to be used by people – must be accessible, convenient for everyone in society to use and responsive to evolving human diversity.

The practice of Design for All makes conscious use of the analysis of human needs and aspirations and requires the involvement of end users at every stage in the design process.

The EIDD Stockholm Declaration, 2004

The Stockholm Declaration explains our mission and can be read in full many languages, also available in pdfs to be downloaded on this link.

For a historical backdrop please read our former president Pete Kercher's article - who is now also our active EIDD ambassador as well.

Onny Eikhaug

President EIDD Design for All Europe

The current EIDD Design for All Europe Board photographed at the General Assembly in Katowice, Poland 2019 (from left Pete Kercher, Nuno Sá Leal, Onny Eikhaug, Markus Haas, Terhi Tamminen,Pepetto Di Bucchianico)
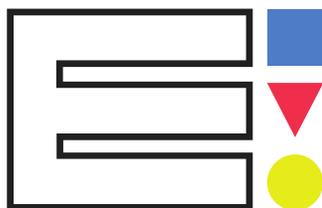
*Nuno Sá Leal,*PhD - University of Barcelona, Master in Design and Marketing - University of Minho and Degree in Equipment Design - ESAD. Researcher at UNIDCOM/IADE.

Course Leader of the BA design course at the London School of Design and Marketing LSDM.

He is a member of the Board of EIDD Design for All.

He is president of the Portuguese Association of Designers.

He is the Ambassador of "Fibernamics Green", University of Minho.

"Spotlight on the birth of EIDD and where we are now"

Nuno Sá Leal,PhD

Dublin 1989

In April 1989 the Society of Designers in Ireland (SDI) organised a conference with the title "Design for Disability: a European Conference on Design in the Service of Aged and Handicapped People", chaired by Liam Birkett.

One member of the organising committee was a man whose name stands out from among all the others as worthy of remembering: it is the name of Paul Hogan (1934-2019), designer and with a strong conscience of the role that design must have regarding diversity.

The main message channelled by this conference was the fact that we must work not only for people with disabilities, but also to create solutions for everyone, with a special focus on the issue of ageing.

Several people with experience in this field were given the opportunity to illustrate their findings and practices.

One of these, later described in the report written by the Society of Designers in Ireland as "that international doyen of design", was Victor Papanek, author of the book *Design for the Real World*, whose speech set the scene for the significance of design for diversity.

Victor Papanek

Sweden's Maria Benktzon began her paper by citing the definition of 'handicap' drawn up by the World Health Organisation.

Commenting that "a handicap is not a characteristic that some people have and others don't have, nor is it a diagnosis", she then went on to point out that "the concept of designing for all, including impaired people, means nothing more than including the needs of the impaired people as well as those of the non-disabled in the design of products, machines and environments".

Maria Benktzon

The next speaker was Bob Allen, who was neither a designer, nor an architect, but held a BSc in electrical and electronic engineering from Hatfield Polytechnic. In the Dublin conference, he illustrated a concrete vision regarding the approaches of tools to solve design-centred issues, explaining how "machines have proved helpful to those who are in a wide range of disability groups covering the areas of physical and mental handicaps".

Jim Singh Sandhu, head of the Special Needs Research Unit at the University of Northumbria in Newcastle-upon-Tyne, made an extremely important point: "clearly, a form of apartheid exists between designers of products for ordinary people and those designing for special needs. One group has the eyes and ears of the market place, designs

from the top downwards, *a priori* know what is good for consumers and often looks for marketing openings for new designs   Jim Singh Sandhu which have little to do with actual needs. The other, much smaller, group is seen as a mirror image with reverse attributes".

Speakers Dieter Berdel from Austria and UK-based access expert John Penton reiterated the principles stated by their colleagues, stressing the importance of design and architecture as vital elements of inclusion of human diversity. Other attendees included Denis Handy and Alan Pleass from the Society of Designers in Ireland.

Fast forward by four years: we are in 1993 and Paul Hogan is the man behind the decision to create an organisation call European Institute for Design and Disability, building on the establishment in 1992 of the Institute for Design and Disability as a domestic organisation in his native Ireland.

The main aim of this organisation was to disseminate knowledge and work in the direction that all the principles adopted by designers and architects should focus on creating a human-centred project throughout Europe.

To accomplish this goal, Paul Hogan invited a representative team of activists in the world of design and/or disability from all over Europe, two of whom in particular are still active today. One of these was Guida Faria, from Portugal, who had built her life around the creation of a centre in Lisbon catering for the needs of children with very serious disabilities.

Now 85 years of age, Guida only recently retired from her position as Director of the centre she established in 1954, the Liga Portuguesa dos Deficientes Motores (LPDM), and is still running the associated Liga Foundation.

Guida Faria

The other is Pete Kercher, an Anglo-German by birth who has lived in Italy for over forty years and has dedicated the latter part of his life to the cause of Design for All.

With a fantastic capacity of dialogue in several languages and being congenial to everyone, he has served as Ambassador of EIDD – Design for All Europe (www.dfaeurope.eu) since 2007, when he retired after a four-year stint as President of the association. It was under his presidency that the organisation adopted the official definition of Design for All in the EIDD Stockholm Declaration (2004) and then went on to add the Berlin Act (2005), the Waterford Convention (2006) and the Milan Charter (2007), while also changing its name from European Institute for Design and Disability (which still implied an exclusive focus on disability) to EIDD – Design for All Europe, in recognition of the holistic approach of

Design for All.

During all these years, he has collaborated with organisations and cities all over Europe, with conferences, workshops and projects, and as a teacher and lecturer, bringing to all the Europe the message that we are all equal but we are all different. Pete is the Ambassador of DfA who really puts the philosophy into practice to the service of

all people.

Pete Kercher

In the beginning – and indeed for the first 25 years of its existence – EIDD – Design for All Europe maintained its focus on European countries, gradually attracting membership from organisations all over the continent.

Today, under the Presidency of Onny Eikhaug, from Norway, the organisation has embarked on a new chapter, deciding to accept members from all continents and boosting the acceptance of dedicated schools or with design courses. Onny has also been the driving force behind a number of events that have helped spread the underlying principles of EIDD – Design for All to a very wide audience.

Onny Eikhaug

Today, Paul Hogan is no longer with us. Although he had been suffering from multiple sclerosis for over forty years, the effect had not been to stop his activities, but actually to stimulate him even more. But the end comes to us all and in November 2019 he decided to leave us after a long period of illness. His daughter and his sons accompanied their father until the last moments.

Paul leaves a legacy of the utmost importance to us all: without his original insight and the driving force of his inspired personality, the

last quarter century of work in the field of design for inclusion could never have coagulated so successfully and the world would certainly have been a much poorer place.

Those of us who follow in this footsteps will ensure that his work will continue to be disseminated all over the world and will inspire all who want to contribute to a better world, an ever more united and friendly society.

Thank you Paul.

Nuno Sá Leal

Terhi Tamminen *(CEO and entrepreneur in Avaava Ltd., Vice-President, EIDD Design for All Europe.)*

EIDD Design for All exhibition 2020: Building a better society for all by design

Terhi Tamminen

Since 2012 EIDD Design for All Europe has created a traveling exhibition which showcases a selection of remarkable Design for All processes and projects from all over Europe among EIDD members. Exhibition is illustrating how to create added value for people, business and public insitututions by means of inclusive design and strategic design thinking. Since the inauguration in Helsinki in 2012, as part of the World Capital of Design events the exhibition has been on a tour visiting almost twenty European country during 2012-2013.

At the General Assembly 2020 in June, EIDD Design for All Europe will be ready to launch a new, remarkable and updated exhibition. The exhibition will present selected examples of completed projects that are illustrating cutting-edge work and methodology in the field of Design for All. These may tackle any issue, such as the ageing population, climate change, Cultural Heritage, digitalisation and technology, as well as services, products, spaces, urban design and environment, information and communication: any topic which is design for human diversity, social inclusion and equality.

Design for All methods offer a wide range of tools for understanding human diversity – from a strategic level concerning urban systems and social cohesion to a product design level dealing with physical and cognitive accessibility.

The EIDD Design for All Exhibition is organised by the EIDD – Design for All Europe members.

People come first!

In the end, good design is all about sharing and caring, knowledge and sensitivity. Experiencer-centred design methods are based on interdisciplinary teamwork and sensitive research applications. Qualified designers apply their skills to develop the most appropriate solutions, achieving the right balance between emotional, logical, intuitive and pragmatic demands, the requirements of safety and the reality of economics.

Shared Spaces, Services and Products

Design for All processes can create added value in many different ways: improved functionality and well-being coming from better and intuitive usability, time-saving user-friendliness, successful business models based on partnering with customers and experiencers, leading to new and sustainable market and business opportunities and ultimately a better world for all.

Our exhibition features a wide variety of design applications.

Spaces: Shared Spaces – Shared Solutions

How to use strategic design and design thinking to meet complex societal challenges in interdisciplinary governmental and administrative decision-making.

European cities have a remarkable (multi)cultural heritage and a particularly challenging historical environment to respect, while

tackling today's challenges of mobility, ethnic and age diversity, accessibility and quality of life.

In the cases related to the built environment and societal systems, added value comes from many different features: inducements to social co-operation and cohesion, innovative space solutions in dignified environments, new mental welfare created by well-designed public spaces or structures and cost reduction brought about by holistic service and infrastructure planning and design.

Services: Shared Services – Shared Experiences

As good design makes life run smoothly, we often only notice the mistakes. That also applies to services: one that functions smoothly is well-designed, but unobtrusive. The challenge taken up by this exhibition is to illustrate great service design, achieved by Design for All.

Service design cases, with a focus on social inclusion and inclusive business cases, offer an exciting challenge to communication and information design: what is accessible communication in a city environment, how can we achieve better, more truly functional graphic design for our everyday life?

This category illustrates how to achieve accessible and equal experiences for all through service and information design.

Products: Shared Businesses – Shared Values

Design for All thinking can create totally new inclusive business and product innovation strategies. The examples in this category showcase the unlimited possibilities for generating new income,

business areas, brand and product ideas where design caters for challenging needs and aspirations.

By doing the right things – with design excellence and user-friendliness – a business can gain substantial reputation, new and sustainable profit margins and totally new markets... and of course happy, loyal customers.

The first EIDD Design for All exhibition in Latvia, Riga, 2012

Upcoming events in Finland: Two Inclusive Design for All Days in Helsinki spring 2020

EIDD Design for All Europe member from Finland will organize two Inclusive Design for All Days in Helsinki this coming Spring. The events are organized together with EIDD members.

The first event in March, 2020 will concentrate in the area of design, spaces, architecture and building.

The second event in May 2020 will concentrate in the area of communication and digitalisation.

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Innovating with People - The Business of Inclusive Design and Innovating with People - Inclusive Design and Architecture as editor-in-chief and author.

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Design for Inclusion in Norway

Onny Eikhaug

Introduction

Universal design is defined as the "design of products, services and environments in such a way that they can be used by all people, to the greatest extent possible, without the need for adaptation or specialised design". In 2005, 16 Norwegian ministries agreed on an action plan based on the government's vision for Norway to become a society where all people have the same opportunities to participate on equal terms. As part of many measures, the Innovation Award for Universal Design was established and is a recognition of those who have developed innovative and inclusive products, services and environments. Three award-winners are presented here.

Norway - A Welfare State

Norway can be described as a welfare state with a social model of governance based on ideals of equality and inclusion. This system is described by what economists call the Nordic model – a stable economy where a strong public sector is combined with a productive and profitable private sector. A society where participation for all has a strong foothold. The Nordic Model goes beyond the provision of basic needs to protect human rights and ensuring equality, this system of governance is particularly able to grow a Universal Design approach as many of the ideas and the ideals are the same.

Universal Design

Universal design, also known as Inclusive design or Design for All, is by the Norwegian government defined as the "design of products and environments in such a way that they can be used by all people, to the greatest extent possible, without the need for adaptation or specialised design". It is about participation on equal terms, no matter gender, age, ability, ethnicity, social or cultural background, without stigmatising any particular group of individuals. Furthermore, a universal design approach is not only about function but aesthetics, emotions and empathy too.

Universal design means focusing on human diversity involving a variety of users; lead users, based on age, gender, abilities and cultural background, in the design and development process. Also, a great variety of research techniques is applied to understand the users' and stakeholders' needs and perspectives throughout the whole process, to be sure to discover visual, audio, tactile, cognition and mobility issues. However, not only to focus on people's basic needs – but also their hopes, aspirations and dreams. These important aspects inspire and challenge designers and architects, and provide new insights and visions – fuelling creativity and driving innovation. Universal Design is a more successful and proven way of engaging with people and is set to become an important design movement in the 21st century. The resulting solutions can be more creative, innovative and user-friendly and brings new thinking to familiar challenges within business and public sector that will contribute to a better, more sustainable and inclusive society.

A Government Focus: The Action Plan for Universal Design

Universal design is founded on the principle of equality that is central to the Nordic Model of Governance. In 2005, 16 Norwegian ministries agreed on a binding action plan based on the government's vision for Norway to be universally designed by 2025. An ambitious, but possible vision where all people have the same opportunities to participate in the society on equal terms. Everyone will have access to the physical environment, transportation, information and communication, as well as other offers and services open to the public.

A cross-sector collaboration from government ministries all the way down to local municipalities make sure that there is an integrated approach with economic measures and milestone plans up to 2025 that reward universal design activities and policies. Legislation has been radically evolved to prevent future barriers and remove existing ones, and has been a key force in introducing universal design as a requirement, relevant for education, transportation, built environment, health care and information technology.

One Act, the Anti-Discrimination and Accessibility Act influences both the private and public sector, and underpins all other regulations.

Basically, this says that all providers of goods and services offered to the public should make active efforts to ensure universal design. Legal protection against discrimination is strengthened and public and private employers have to ensure equal opportunity.

One area where the legislation has had a far-reaching effect is buildings and outdoor spaces. It has been a challenge to introduce the shift with some critics assuming that these new regulations will increase costs and reduce access to housing for some groups. However, existing examples and ongoing economic studies prove this to be wrong. Universally designed solutions can actually save money and the benefits outweigh the costs on many levels – for the organisations or government that build the buildings as well as for the people who use them. In fact, universal design proves to be an effective innovation strategy that benefits society, business and the citizens.

The Action Plan stated that all new buildings have to be universally designed from 2009 and 2010 was the deadline for local authorities to work together to establish guidance for a new Building and Planning Act. Every public building will have to be upgraded by 2025, giving a long lead-time for sufficient planning and design to take place.

The Action Plan places universal design within the national sustainability strategy and the first 5-year plan had more than 200 programmes and activities within it. A lot has so far been achieved in many areas with a lot of learning, adjusting the approach as well as some regulations. Practising universal design is learning by doing and a continuous process progressing the field, based on sharing new evidence and experience. In 2015, the third 5-year Action Plan was launched with new goals and measures, following up on the ongoing activities and measures in the milestone plans. A fourth Action Plan will be launched in 2020. The Ministry of of Children, Equality and Social Inclusion coordinated the previous Action plans and in 2010 the Norwegian Design Council (now Design and

Architecture Norway) was given the task to establish an award to promote and demonstrate the value of Universal Design.

The Innovation Award for Universal Design

The Innovation award for Universal Design was established to honour companies, institutions, architects and designers who have developed innovative solutions for the benefit of everyone. It is one important measure raising awareness and communicating the value of Universal Design; that it is both profitable and effective on a commercial, public and social level. Since the launch in 2011 – there are many extraordinary projects that has received the award within 8 categories of design and architecture. The Innovation Award is very effective busting many of the myths that sometimes are connected to the notion of Universal Design – like it being expensive, time consuming, only for special groups, not focusing on aesthetics and restricting creativity. However, all these lighthouse projects tell another story and here are presented some examples from the winners in the categories of landscape architecture, architecture and transportation that can both inspire and increase the knowledge about universally designed solutions and the extraordinary results they entail.

Innovation Award for Universal Design Winner Projects

Scandic Oslo Airport Hotel

How can a new airport hotel distinguish itself in a competitive market using inclusive design?

The Scandic Hotel chain, with more than 200 hotels in Europe, aims to go further when it comes to universal design, which is not only

used for incremental improvement, but also to help establish a leadership position and demonstrate business value. When planning a new hotel at Oslo's international airport, they wanted to create a building where every single guest would feel welcome and aimed to make this as inclusive as possible. The process required close dialogue between many different partners, including the various civil architects, the property owners and the contractors.

About the process

They also worked with user groups as key consultants. The Norwegian Asthma and Allergy Association and the Norwegian Association of Disabled were involved, amongst others, giving input and sharing expertise. The materials used are allergy-friendly, the buffet is clearly allergy-labelled and there is good ventilation in all rooms, ensuring that the new hotel facilities are also suitable for people with asthma or allergies. The solutions also facilitate good cleaning practices, which minimises the use of cleaning agents. All of these solutions are part of Scandic's own accessibility standard, with (at the time) a 93-point checklist to ensure inclusion of everyone. According to one of the interior architects, Johanna Vestlin of Krook & Tjãder, realising the hotel was a comprehensive process. It required the many participants to maintain a close and continuous dialogue, as well as a project management with an eye for detail. Due to the amount of detail involved, it was extremely important to instruct, explain, listen and ask questions and have information repeated again and again - to quite simply communicate. That was something we really worked at, and perhaps one of the main reasons why we succeeded so well.

Outcome

The Scandic Oslo Airport Hotel is a chic and modern hotel with exciting details and a healthy atmosphere that is built according to universal design principles. These were integrated into the creation and execution of the building, and were not treated as an 'add-on'. Guests can enjoy well-thought-out solutions for furniture and interiors, from acoustic walls and to easy wayfinding. The building has been designed to cater for the needs of allergy sufferers, those with asthma and people with impaired vision, hearing or mobility. There is easy access throughout the hotel, excellent lighting, carpet-free rooms, adaptable counters, adjustable beds, induction loops and alarms that alert you with light, sound and vibration, to name just a few of the integrated solutions.

The staff also enjoy a better working environment. The hotel's functional and attractive design brings universal ideas to life in an innovative business idea. As a result, the hotel has gained competitive advantages in a highly competitive business field and is regarded a flagship for universal design in the tourism industry. Other more unpredictable results were lower costs for logistics and reduced sick leave among the personnel. According to the hotel manager at the time, Wendel Holdener, it was a conscious investment in the future; our hotel may still be standing here for centuries to come, so our investment in universal design costs relatively little compared with all we can expect to receive in return.

Whilst the solutions in the hotel are absolutely essential for some people, they also enrich the experience for all the other guests. This is the core of universal design – what is essential for some can be good for everyone.

Main Winner and winner of the category Furniture and Interior Design: Innovation Award for Universal Design 2011, organised by the Norwegian Design Council on behalf of the Norwegian Ministry of Children, Equality and Social Inclusion.

Credits: Scandic Oslo Airport Hotel; Utstillingsplassen Eiendom AS; Arkitektarna Krook & Tjäder, Narud Stokke Wiig Sivilarkitekter AS, TUPELO arkitektur (Architects); the Norwegian Asthma and Allergy Association and the Norwegian Association of Disabled (Consultants). Source: www.doga.no

Scandic Oslo Airport Hotel

St. Olav's hospital

How can a universally developed hospital bring nature, city, employees and patients together?

An international competition relating to the construction of the new hospital in Trondheim was announced in 1995. When Helsebygg Midt-Norge ordered the hospital, it was important that the focus would be on the patients' needs.

About the process

The idea of Universal design and a guide with fundamental principles throughout the process were established at the earliest stage. These principles were followed in the collaboration with various architects and designers who worked on the hospital. User involvement of patients and their families, as well as different user organisations and employees, was emphasised from day one and throughout the whole process. The initial user survey that was carried out with representatives of large patient groups revealed three main desires: privacy, visible and available personnel, and accessibility. Universal design was emphasised at all stages, making the entire medical district open to the neighbourhood. Landscape architects adopted the patients' perspective by designing surroundings that enable treatment and rehabilitation. There was also great focus on tactility, natural materials, colour and, in particular, an extensive and well-considered art programme.

Outcome

The layout of St. Olav's Hospital allows it to be integrated with the city. It consists of standalone new and old buildings that form a

distinct district along one of the main routes into Trondheim. The area is also a hub for public transport and brings together the city, the countryside, the Nidelva River, the hospital and the urban surroundings into one large space.

An inclusive approach to design in the city also gives environmental benefits, since it becomes easier for pedestrians, cyclists and public transport users to get to the hospital. Not least, the central location means that it is close to other public services that are also often used by the hospital.

As with many other public buildings, hospitals can come across as large and unfamiliar, with sterile décor and a complex layout of spaces and floors. St. Olavs Hospital markedly differs, with gracious volumes that allow natural daylight to enter from all directions. There is an emphasis on transparency, to achieve a feeling of nature, and once inside a building you can see continuity, and contact with the outdoors. You know immediately where you are, and can orient yourself using daylight and the natural views.

In addition, all rooms that are not subject to special requirements for hygiene or operations have been designed as completely normal rooms so that associations to a sterile hospital environment are alleviated. Hospital design involves stringent requirements for functionality, whilst at the same time the buildings must satisfy the need for a more human environment typically found in other buildings.

A great deal of emphasis was put on tactility, natural materials, colour and in particular on an extensive and well-considered art

programme, comprising around 2,350 pieces. These were selected taking the views of various user groups into consideration.

The hospital has only single rooms, eight in each ward which all have doors that open onto a central personnel workstation area. The concept combines architectural and organisational considerations, and gives increased security for both patients and personnel. This has resulted in better sleep for the patients and a better overview for the employees. The level of satisfaction is high among patients and their families, and medical students and employees, and the hospital has become an attractive gathering place for the citizens as well. The new hospital opened in 2010 and has since received international acclaim and won several awards for its innovative architecture, which brings the nature, the city, employees and patients together in an untraditional atmosphere. It is a great example of how universal design can benefit everyone.

Main winner and winner of the categories for Architecture & Landscape Architecture: Innovation Award for Universal Design 2014, organised by the Norwegian Design Council on behalf of the Norwegian Ministry of Children, Equality and Social Inclusion.

Credits: Team St. Olav (Nordic Office of Architecture, Ratio Arkitekter); Trondheimslaget (Studio 4 Arkitekter, KHR, Per Knudsen Arkitektkontor); Frisk Arkitekter (Nordic Office of Architecture, Niels Torp Arkitekter, Pål G. Kavli); Ratio Arkitekter; Asplan Viak; Helsebygg Midt-Norge. Source: www.doga.no

St Olav's Hospital in Trondheim

Bergen Light Rail

How can transportation be easy and accessible for an entire city by using Universal design?

When the planning of a new light railway in Bergen began in 2006, Universal design was not stated as a requirement. The existing guidelines were broadly based, so that specifications had to be worked out during the process, based on experience from various user groups. In order to achieve this, Universal design was set as a guiding philosophy throughout the process, right from the start.

About the process

Collaboration with the users; the Norwegian Federation of Organizations of Disabled People (FFO) was established at an early stage and the design team showed them drawings and discussed the ideas with them. This collaboration inspired many new solutions.

Representatives from FFO also took part in inspections and evaluations during the test period. Throughout the process, it was important to give priority to intuitive design that is relevant for everyone and not to create solutions for special target groups.

Bybanen Utbygging designated one member of the management group at an early stage as the person to see and understand the overall picture, and consider design aspects throughout the process.

A special feature of this project is that the management was able to coordinate all the components and the many subprojects, which, however, came with many challenges. One of these was the large amount of interfacing due to the many actors involved in the project planning and the many nationalities carrying out the projects. The track was (at the time) more than 10 kilometres long and required consideration of mast locations, illumination, current-carrying cables, train signalling, road signalling, water and electricity conduits, just to mention some of the issues.

Outcome

Bergen Light Rail is the first public transport system in Norway that utilises universal design at all levels and is one of the most successful urban planning projects after the Second World War. It has made the city accessible for everyone, and passenger numbers have grown more rapidly than expected. Bergen Light Rail has succeeded, however, primarily because it uses universal design in a way that is barely noticeable, other than that everyone finds the system extremely easy to use.

Urban environments are sufficiently chaotic as they are. Visual noise is avoided by using a very simple visual language, with one

permeating idea and development. The concept is to inspire trust and provide a sense of calm for the users, so they can concentrate on what they need to.Intuitive wayfinding is part of the security. The signature colour is orange, which is easy to recognise. The wave pattern of the light railway is also easy to recognise, and it is included in six subprojects: trade-marked items, graphic profile, uniforms, elements at tram stops, landscape architecture and carriages.

The comfort of the trams ensures that the threshold is low for people who might otherwise find travelling difficult, and it opens up the system for new users who might otherwise prefer different means of transport.

Bergen Light Rail has now achieved a high social status, and in this way become the preferred method of transport for a large number of people connecting people in the various neighbourhood and making the city accessible for everyone no matter age or ability.

Category Winner, Transport Design: Innovation Award for Universal Design 2014, organised by the Norwegian Centre for Design and Architecture on behalf of the Norwegian Ministry of Children, Equality and Social Inclusion.

Credits: Bergensprogrammet (Hordaland County Council, Bergen Municipality, Norwegian Public Roads Administration) (client); Arkitektgruppen Cubus; Fuggibaggi; Kontrapunkt; Norconsult. Source: www.doga.no

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Introduction

This article is based on a presentation made by the two authors at the RSD6, Relating Systems Thinking and Design at Oslo School of Architecture and Design in Oslo, Norway   18.-20 October 2017. This presentation and other proceedings can also be viewed on this link:

https://systemic-design.net/rsd6/plenary-speeches/#eikhaug

The next conference on Relating Systems Thinking and Design will take place in Ahmedabad, India at the Indian Institute of Design, 13th to 15th October 2020, for more information please check out these links:

www.systemic-design.net

https://systemic-design.net/rsd9-call-for-abstracts/

Democracy for All – Inclusive Design in Practice

Onny Eikhaug and Tom Vavik

Abstract

Inclusive design, also known as universal design, is a philosophy, strategy and design practice that can directly benefit society, business and the individual. This paper gives a brief overview of how the concept of inclusive design can be integrated into government policy and how countries, trade and industry can come together to work with practitioners within the disciplines of design and architecture to drive and create a more inclusive and democratic society. It also describes and reflects on how teaching the concept of inclusive design has developed the last two decades at the Institute of Design at the Oslo School of Architecture and Design (AHO) in Norway.

Keywords: Inclusive design, universal design, innovation for all, education, design

Inclusive design. A people-centred strategy for innovation and participation

Inclusive design (ID), also known as universal design (UD), is defined as the design of products and environments in such a way that they can be used "by all people, to the greatest extent possible, without the need for adaptation or specialized design" (1). However, this predicates the following questions: how can the design process be evolved to involve a variety of people; and taking this diversity

into account, what are the methods and tools that can give the designer insight into the needs and wishes of different users? These are essential questions which this paper addresses (2) (3). In this context, the terms 'inclusive design' and 'universal design' are used equally and interchangeably.

A Government Action Plan for Universal Design

In Norway inclusive design has developed based on the country's ideas of equality and inclusion across all areas of the society. The Norwegian model of social governance, also known as the Nordic Model, goes beyond the provision of basic needs to protect human rights, to focus on social and democratic ambitions. It addresses both the *essential* as well as the *aspirational*.

For nearly two decades, inclusive design has been a government focus and this has resulted in a unilateral vision for Norway to be universally designed by 2025 (4). This is an ambitious, but distinctly achievable vision, where all citizens have the opportunity to participate in the society on equal terms. Essentially, this aims for everyone to have unfettered access to the physical environment, transportation, information and communication, as well as other systems and services open to the public. Although this may be viewed as a utopia, it has created strong momentum, committing 16 ministries to reach the milestones set by the first Government Action Plan for Universal Design in 2005 (5). This type of cross-sector collaboration from government ministries at national level, to municipalities at local level, makes sure that there is an integrated approach with economic measures and target goals outlined until 2025. Importantly, these reward the creation and implementation of universal design activities and policies. Legislation has been

radically evolved to prevent future barriers and remove existing ones, and has been a key force in introducing universal design as a baseline requirement – one that is relevant for education, transportation, built environment, healthcare and information technology.

The Anti-Discrimination and Accessibility Act (6) in particular, influences both the private and public sector, and underpins all other regulations. Fundamentally, this states that the providers of all goods and services offered to the public should make active efforts to ensure that universal design is applied. Legal protection against discrimination has been strengthened and public and private employers are required to ensure equal opportunity.

Much has been achieved since the first Action Plan, and currently, the third 5-year Action Plan (7) that runs till 2019, focuses on digitalization, technology and a follow-up on the long-term projects and milestones that were initiated with the 2025 deadline in mind. This is part of the government strategy for sustainability, benefitting society, business and the individual.

The Norwegian Ministry of Children and Equality is coordinating the Plan, with Minister Solveig Horne positioned as a dedicated ambassador for the strategy. The Ministry emphasises the importance of inclusive design as a tool for innovation in both government, public and private sector – to meet the challenges being faced both nationally and internationally.

Recently, the Minister of Local Governance and Modernisation launched the New Digital Agenda (8), stating that all government communication to citizens is required to be digital by default. In

order to maintain a sense of inclusivity, the processes and the solutions must involve and focus on the complete range of citizens. To achieve this, an inclusive and people-centred design process is vital to success, and this has also become a requirement for service design innovation in government, being fronted by the same minister.

Human diversity and the inclusive design processes

To ensure citizen participation and equal opportunities across all areas of society, inclusive design is being used as the strategy to achieve this, putting people at the centre of the process when developing mainstream solutions for products, services and environments. Human diversity is key, and this goes far beyond considerations of age, gender and ability, to include sexual orientation, ethnicity, cultural and social background to mention a few other contexts of exclusion. Inclusive design processes are becoming a more successful and proven way of engaging with people, utilizing various tools and methods for involving users and stakeholders within the design and development process.

Inclusive design brings the perspective of real people to real problems, and inspires a multitude of viewpoints that can create unexpected insights. The resulting solutions can therefore be more creative, innovative, relevant and user-friendly, bringing new thinking to familiar challenges within business and public sector, and in that way, contribute to a better and more inclusive society.

The Innovation for All programme at Design and Architecture Norway, (DOGA)

The Innovation for All programme at DOGA is one of the many measures in the Government Action Plan and since 2005 has focused on promoting inclusive design as an effective strategy for innovation both the private and public sectors. Its main activities include knowledge transfer and competence-building alongside conducting pilot projects with business and third sector partners.

An ageing society is one of many global challenges, but the concept of age is changing drastically. The baby boomers are the more affluent consumers of the society today, and with positive personal equity only reached at an average age of 48, this consumer group is now considered the 'big spenders'. However, it is important not to stigmatise. Instead, one should ensure that marketing communication is appropriate for the demanding and discerning older customer. If this can be achieved, there is significant potential as this is an untapped market.

If you know who your customers really are, and what their needs and aspirations are, your offer can be adapted accordingly and become more relevant to them. The idea of the 'average' consumer is fiction. It is much more challenging and rewarding to design for 'real' people, who represent human diversity, and who will challenge and inspire designers. This is where the true innovation potential lies. Aim for the edges of the customer base, rather than the small

target in the centre and you include many more people.

Fig 1: The Bulls Eye Diagram represents the total potential market represented by a diversity of people. The average consumer does not exist. Source: Jeremy Myerson, Helen Hamlyn Centre for Design, Royal College of Art

Lead users can provide different useful insights to any design process. Visually impaired people can say something about tactility, and people using wheels (including wheelchair users and tourists with suitcases) can say something about accessibility. Children can test how intuitive a solution is and look at the strength that is needed as well as interaction with a smaller body size. Lead users challenge the performance of the products and use them in different and more extreme ways than mainstream users. They demand more of products and services and experience more barriers which in turn

can help define problem issues in any given area. They can inspire designers creatively and provide new perspectives and insights that can lead to innovation.


People with dementia can decide how intuitive and understandable a solution is.

Blind people can comment on tactile and auditory qualities

Older people can test a range of factors

People with hearing impairments can assess visual and auditory information

Adults with infants often only have one hand available

Visually impaired individuals can test visual characteristics

Children may say something about the solution being suitable for those who are smaller, and whether the solution is intuitive.

Fig 2: Lead Users are people who make greater demands on a product, system, service or environment. Source: Innovating with People – The Business of Inclusive Design, Norwegian Design Council

Besides knowledge transfer and competence building, the Innovation for All programme also leads a number of inclusive design research projects. One project looked at designing sustainable and inclusive mobility with Norwegian electric car producer TH!NK. This took place with several research partners such as the Norwegian Research Council and the Helen Hamlyn Centre for Design at London's Royal College of Art. The project partners had an ambition to look at future design scenarios that describe new paradigms and possibilities for the electric car in this century, moving beyond the design paradigm dictated by the combustion engine in the last century – and putting people at the centre of design consideration. Several creative, future-facing concepts were developed, and novel, powerful tools and methods were developed and tested in practice.

Fig 3: The Connected Car - The THINK car project 2008.

Source: Norwegian Design Council and Helen Hamlyn Centre for Design

Another inclusive, service design project took place with the Norwegian Directorate for Children, Youth and Family Affairs (Bufdir). This focused on public service innovation, looking to create digital and inclusive, people-centred solutions. The initial involvement covered competence building at leadership level for more than 2 years, followed by a pilot project delivered by a leading service design agency in Norway. The IFA programme oversaw workshops, rapid prototyping, giga-mapping and system design combined with service design thinking. Professor Birger Sevaldson at The Oslo School of Design and Architecture helped launch the project with a giga-mapping workshop at the Directorate, looking at how service innovation can help them improve their

services, become more cost effective and migrate towards the digital.

This was pronounced as a new approach for the Directorate and became a successful pioneer project looking at how service design can help them innovate and become more connected with, and relevant to their users. This pathfinder project resulted in procurement for several other projects that are still ongoing, involving several Norwegian service design agencies. A video about the pilot project is available at inclusivedesign.no (9)

Inclusive design as an approach can also be applied to urban design; enabling and empowering a diverse range of citizens to be involved in urban planning at a more comprehensive and engaging level. This evolves the traditional and not-so-inclusive ways of citizen involvement. Inclusive design tools and methods can be used when developing more people-friendly, liveable cities, but take-up of the approach is still at an early stage and is still developing. This was part of the scope of the COST Action TU1204 People-Friendly Cities in a Data Rich World (10). This four-year initiative brought research network of experts from different fields of design, architecture, urban planning and researchers in big data to investigate the alignment of the "hardware" and "software" of a city with real user needs, looking at new processes for inclusive urban planning and design. One of the outcomes was the European Charter for Collaborative Urbanism to promote well-being, good health, and a sustainable use of resources, within an evolving people-centred consultation framework for economic, social and political development. Another output was a publication named 'Citizen Empowerment and Innovation in the Data-Rich City' (11).

The Innovation Award for Universal Design was established by The Innovation for All Programme on behalf of the Ministry of Children and Equality. The goal was to honour companies, institutions, architects and designers who have developed innovative solutions that benefit everyone. It is one important measures to raise awareness and communicate the value of universal design to the wider public, presenting it as both profitable and effective at commercial, public and social levels. Since the launch in 2011 many extraordinary projects have received an award across eight categories of design and architecture that benefit many different sectors of society. The Innovation Award is very effective at 'busting' various myths that sometimes are connected to the notion of inclusive design – such as it is expensive, time-consuming, only for special groups, about assistive technology, does not focusing on aesthetics or that it restricts creativity. However, all of these pathfinding projects tell a different story and included here are some examples from the winners from the categories of landscape architecture, architecture and transportation that increase the knowledge about universally designed solutions and in a way that is inspirational. Vision of The Fjords was the winner in 2017, a universally designed sightseeing boat. It is a sustainable, hybrid-electric vehicle built from carbon fibre with a unique, innovative design that enables travel through the Unesco-protected Nærøyfjorden on the west coast of Norway. The boat builders Brødrene Aa are now considered world leaders in inclusive, sustainable passenger boats (www.braa.no).

Fig 4: The winner of The Innovation Award for Universal Design 2017, Vision of The Fjords. Source: Design and Architecture Norway, www.braa.no

The award winners from 2014 ranged from a hospital to taxpayers' website Skatteteaten.no as well as Bergen University College, to mention a few. The winner in the Architecture category was a hospital designed as a medical neighbourhood situated in central Trondheim; St Olavs hospital puts patients at the centre of the design process. A complex urban planning project that took 15 years, it has achieved national and international acclaim for its extraordinary features and amazing results that have had positive impact on patients, employees, visitors, students and neighbours.
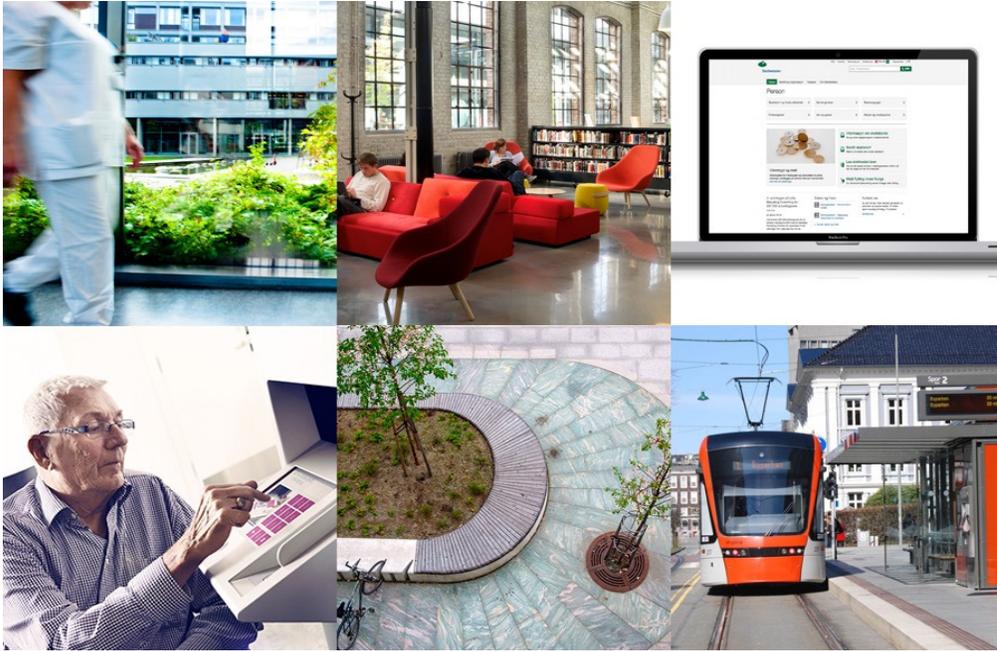
Fig 5: The Innovation Award for Universal Design category winners in 2014: St Olav's Hospital, Bergen University College, skatteetaten.no, Melin Medical, St.Olavs Hospital Public Spaces, Bergen Light Rail

A successful winner in the transportation category, the universally designed Bergen Light Rail, has significantly increased mobility and access in the neighbourhoods and city of Bergen, developing new social structures and enabling independent traveling for all.

One major output from the Innovation for All Programme is a book entitled 'Innovating with People – The Business of Inclusive Design', a practical guide and introduction to inclusive design - now sold to over 40 countries from China to Canada. We actively use it as a course and workshop material to run workshops with business, designers, academics and managers in the public sector. It demonstrates how everyone can integrate inclusive design into their practice – no matter what field, sector or discipline they work in.(2)

Fig 6: Published in 2010, available at www.innovatingwithpeople.net

Teaching inclusive design processes to design students

To achieve the governmental goal of a universally designed society in 2025 it is crucial to bring the competence, philosophy and strategy of inclusion and diversity into the education and teaching of the young design students.

Teaching the concept of universal design (UD) aims to develop appealing and accessible products and services for all, based on values of equality, human dignity, inclusion and participation. Tools and methods are focused on teaching and implementing inclusive

processes by involving lead users with various impairments in the design process.

Although it is claimed that the concept of UD "is gradually acquiring global significance in the social, the academic and the professional field", "there is not yet significant methodological frameworks to structure underlying scientific investigation, and to support related teaching and design practice." (12).

To address this, teaching in the first year at Institute of design at AHO in Oslo is based on the following model: the overall goal in the student's projects is to provide appealing and accessible products for all, benefitting both individual and society. The tools and methods we practice are enshrined in the concept of inclusive design processes, involving users with different abilities across the projects, fig. 7.
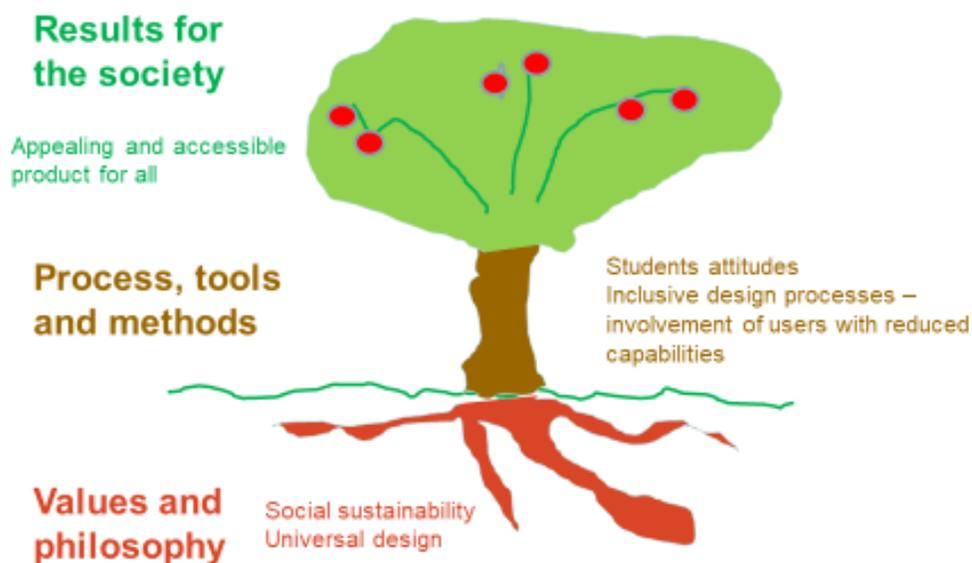
Fig 7: Concept model for teaching Universal design at AHO (T.Vavik).
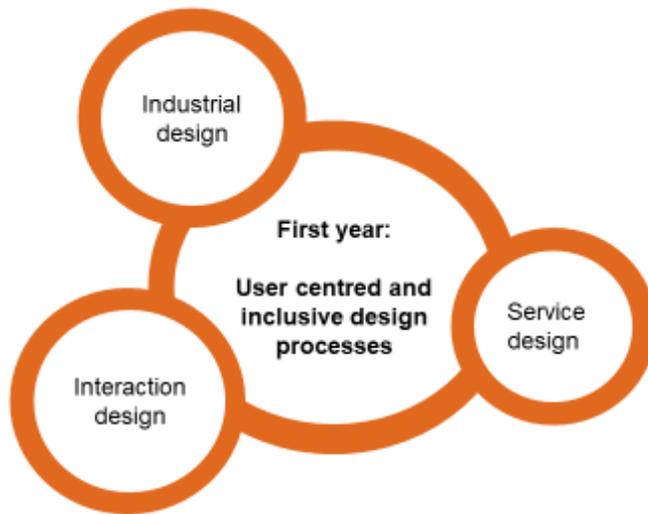
Fig 8: User centred and inclusive design processes are introduced to first year designs students at AHO (T.Vavik).

The following section describes and denotes how the teaching of the concept of UD to design students has evolved the last two decades at AHO. It outlines what the changes are and why the content of the teaching and the curriculum have changed, and demonstrates why they are necessary and important.

From second to first year curriculum

Designing for diversity used to be a second-year course, emphasizing how to take different capabilities, needs and aspirations of the population into account. Three years ago, this topic was moved into the first year curriculum and as a result, has become more central, fundamental and important.

Teaching the first-year students can be described as a privilege, but it is also a great responsibility as they are being introduced to design

thinking and design processes. Embedded in their learning is that people-centred and inclusive design processes are *the* way to work as a designer, and that this is *the* method for design projects, fig. 8.

The students experience firsthand that gathering insights into context of use as well as the needs and wishes from the end users and people with reduced capabilities is centrally important in increasing personal creativity and improving products and services. They learn that values based on equality, non-discrimination and inclusivity is the ethical base the design study is based on.

For example, when dealing with mental health amongst young people, the students were introduced to a mental hospital to identify issues to address such as improving the interior, with a focus on areas such as lighting, furniture etc. The results were presented to patients and the nurses at the hospital and comments and feedback was gathered, fig. 9.

Fig 9: Individual self-regulation of room lighting at a hospital for mental health. First year project at AHO in 2016 by design students Emil, Aurora, Hanna and Axel.

From guidelines to design processes

The curriculum has evolved from applying Ron Mace's established seven Universal Design principles and guidelines (1) in development of products, services and environments to a closer focus on the design processes itself. Teaching is now based on a more holistic and humanistic model typically associated with people-centred approaches and inclusive design processes. As an example, the students are encouraged and even instructed to involve people with a range of abilities in their projects at a deep level of engagement.

In a first-year project looking at smart electronic locks for doors to apartments for older people, wheelchair users and people with visual impairments were invited to test and assess the concepts that the students created, fig. 10.

Fig 10: Wheelchair users testing student concepts for digital door locks. A first year project for design students at AHO.

The feedback and insights from this group of people inspired the students to greater levels of creativity and resulted in new improvements and modifications to the existing concepts. By bringing people with a range of disabilities into the design process, the students gained new insights and were driven to develop better ideas that were more relevant to 'real-world' needs.

From physical to cognitive accessibilities

Living in the complex, changing digital society of today puts higher demands on everyone's cognitive and sensory abilities. Making products and services easy to perceive, understand, learn, navigate and remember, are important current and future challenges.

In the example of the electronic lock project mentioned above, the students were encouraged to design solutions that communicate through more than one sense, fig. 11.

Fig 11: A multi-sensory smart lock for apartments communicating through vision, haptics and sound by the design students Hans Kristian, Natacha, Marte and Jens. A was a first-year project in 2017 at AHO.

Going beyond vision, this project also employed tactile and haptic senses and sound, creating a multi-sensory solution to help people with reduced abilities as well the wider public, to use and communicate with their digital locks.

From functionality to aesthetics

Increasing the functionality of many products for people with reduced abilities can also be addressed by raising the level of technical functionality. For example, toilets and sinks can be raised and lowered using automation, making them easier to use for older or disabled people, especially those with reduced mobility and motor skills. However, a challenge for design students is to create product ideas that do not look institutional and stigmatizing. The aesthetic of personal products surrounds us on a daily basis, are a part of individual identity and can influence our self-respect and self-perception. Inclusively designed products that are attractive in a mainstream manner can help build self-esteem. For example, the choice of shape, materials and colour of glasses express how we see ourselves and how we want to appear to others. Glasses have moved from being a disability device to being a fashion item.

The project below, a multisensorial fire distinguisher, is demonstrating how excellent functionality is combined with attractive design.

Fig 12: An award winning student project at AHO: Fire distinguisher with multisensorial interactions by Sigrun Vik. Nominated: "Brit Insurance Designs of the Year" 2011

Conclusions

To ensure true democracy and achieve the government's ambitions for a more inclusive society for everyone, it is vital to enable participation on equal terms through inclusive design. It is important to see this approach and mindset as applicable to all sectors of society.

Inclusive Design measures and practice must be implemented at all levels, from ministry to local government, from the business to the third sector. A coordinated effort is needed, where knowledge sharing, competence building, and education are key factors.

Much has already been achieved. The field is developing due to new legislation and the government's action plan, as well as the application of inclusive design as a strategy for innovation in both private and public sector. This idea is being pioneered by decision-

makers who have foresight, as well as leading designers and architects who embrace this as a key part of their practice and see it as a unique selling point to win new business and deliver more creative, customer-relevant projects.

To progress and speed up the development further, the education of students and professionals is critical. Design education at AHO has put ID on the agenda for a long time, and the school has been pioneering a people-centred approach encompassing human diversity and social needs for decades.

Inclusive design thinking can be applied to other curricula, and is not just the province of design. One challenge is how to influence the education of architects to become even more user-centric and put ID at the heart of their endeavours. Management and business schools can hugely benefit as new ideas around creative leadership (15) and innovation training develop. Even at primary and secondary school level, inclusive design theory and practice can be introduced, allowing future citizens to benefit from the creative, empathic and personal benefits of the approach.

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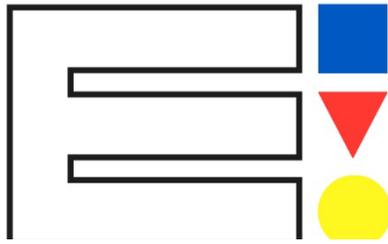
EIDD – DESIGN FOR ALL EUROPE

ENHANCING THE QUALITY OF LIFE THROUGH DESIGN FOR ALL

Pete Kercher

Names and Mission Statements: the evolving message of Design for All

"What's in a name? That which we call a rose by any other name would smell as sweet…."

William Shakespeare, *Romeo and Juliet*, Act II, Scene 2

When Sunil Bhatia invited me to write an article for this first anniversary edition of the newsletter of the Design for All Institute of India and specified that I was to describe the development of Design for All in the year 2006, I immediately found myself in a difficult situation: how should I go about crystallising the development of Design for All in one year, when that development takes such different forms from one country to another (not to mention continents…) and to all intents and purposes defies segmentation into annual bite-sized milestones?

So I started by looking back at some of the events that could be identified as milestones in the last year, in random order:

- *Activities involving EIDD and its member organisations took place in an unprecedented 22 European countries;*
- *A highly active new group was set up in Serbia: very promising for a blossoming future in south-eastern Europe;*
- *Organisations in two new countries joined EIDD;*
- *The first Work for All conference was held in Ireland and attended by top politicians;*
- *Design for All was factored into several top international design awards;*
- *New contacts were established in several countries worldwide;*
- *The European Commission showed signs of being prepared to explore an holistic rather than a sectoral approach to social inclusion.*

Most of these milestones are concerned with the organisational interests of EIDD and its allied institutes: they are significant in relation to the development of Design for All because every practical approach – and, like all design disciplines, Design for All is a practical approach, as well as a philosophy – requires an organisational infrastructure to further its interests.

What transpires immediately from a cursory glance at these milestones is their eurocentric focus: while this is natural enough, as my perspective is that of President of a European organisation, I do not want to give the impression that the relevance of Design for All is necessarily restricted to any particular model of socio-economic development. Indeed, the geographical area that we know as Europe (whatever that happens to be at any moment in time – and it is a

concept that has been changing constantly over the centuries) contains a wide diversity of models, some of which have more in common with other, extra-European counterparts than with each other.

In the case of India, of course, the establishment of the Design for All Institute of India must certainly be classified as the most important milestone in the local advance of Design for All. Congratulations are due to Sunil Bhatia and the team in India for all their hard work.

To answer the question, then, the best approach is probably to look at the significance of ongoing developments that can be expected to have a fallout effect on the discipline as a whole in due course. These developments may be self-evident, such as the adoption on 13 December 2006 of the UN Convention on the Rights of Persons with Disabilities, which has at long last included disabled people in the recognised pattern of enshrinement and endorsement of civil rights. Exactly what the material effects of such a laudable piece of international paper will turn out to be in the long term is of course a moot point: if the model of the United Nations Assembly's recognition of human rights is anything to go by, then the adoption of a Convention could well be interpreted by future historians as a danger signal. How many civilians and military (and one man's freedom fighter has always been another man's terrorist) have been killed quite senselessly and for the greater glory of self-aggrandising politicians of whatever hue since human life was declared to be inviolable (by the same politicians or their representatives) in the Universal Declaration of 1948? As Tommasi de Lampedusa wrote in his great novel about the Italian Risorgimento, *The Leopard*, all

things must change (apparently), so that nothing changes in reality...

So perhaps it is more pertinent for me to look at apparently much more modest developments that have taken place within our own field of competence, as a closer study reveals them to be indicative of a groundswell of massive change.

One such development took place in the course of 2006, with ramifications that are far more extensive than its apparent organisational motives. In May 2006, in evident disagreement with the sentiments expressed by the Bard and quoted at the beginning of this article, EIDD changed its name. This is how the name change was reported on the EIDD website (www.design-for-all.org) on 20 May:

EIDD changes its name: "EIDD - Design for All Europe":

Reflecting the development in its core business since foundation thirteen years ago, the EIDD Annual General Meeting 2006 made the major decision to change the Institute's name: from today, the Institute shall be known as "EIDD - Design for All Europe", with the abbreviations "EIDD" and "European Institute" continuing in use.

This decision reflects the Institute's longstanding focus on Design for All as a path towards the achievement of social inclusion following an holistic methodology. At the same time, the Institute's new name maintains a clear reference to its roots as the European Institute for Design and

Disability, thus maintaining a cultural continuity of essential importance to any complete understanding of Design for All.

The discussion about how to take this momentous step had been under way for several years, punctuated at irregular intervals by (less emotionally charged) amendments of the Institute's mission statement, which has gradually evolved from the first 1993 version

"A non-profit making foundation contributing to the participation of people with disabilities through the application of design"

through such intermediate phases as the 1995 version

"Contributing to enhancing the quality of life of all citizens by promoting the ideal of barrier-free design"

and the 1998 amendment

"Contributing to enhancing the quality of life of all citizens by promoting the ideal of Design for All."

to its current version of

"Enhancing the Quality of Life through Design for All".

EIDD did not "invent" Design for All: the Institute was originally established because design and its practising professions, which can make such an important difference to the quality of everyone's life, were nevertheless often leading the way in manifestations of appalling complacency and ignorance. Something had to be done about improving design's track record in the area of disability and the founders of EIDD succeeded in gathering together the necessary

critical mass from several European countries to establish the Institute in 1993.

Almost immediately (at the Bonn symposium in December of the same year), EIDD started discussing Design for All, as it was rapidly apparent that there were (and still are) two ways of applying the practice of design to improving things for disabled people. Let's call them, for the sake of argument, the straightforward approach and the complex approach. In design parlance, we might distinguish them as "Design for Disability" and "Design for All", though their ramifications in practice indicate that they are perhaps best described as "design for the inclusion of identified categories", or "exclusively inclusive design", and "design for holistic social inclusion", or "inclusively inclusive design". The one is straightforward, because it avoids the many and varied issues of human diversity and the ethical responsibilities of creativity applied for utilitarian purposes, preferring to aim straight at the objective of a clearly-defined and sometimes narrow (these days often increasingly narrow and highly specialised) target; the other is complex, for the very reason that it is built on the synergic concomitance of these and many other factors, influences and variables: in short, like nature, the world and life itself, it is complex, though not necessarily complicated.

The straightforward approach

The straightforward approach is the one that could reasonably have been expected of any competent designer, architect or other exponent of the creative professions already at the time when EIDD was established. The first step is to identify a problem, which may be in the way a product is used (usability), the way an environment

or building is accessed (accessibility) or the way a communication system is understood (comprehensibility). Having identified the problem, a competent professional should next explore the range of potential users of the product, environment or communication system, then start drawing up targeted design hypotheses to respond to the identified challenges.

In this respect, the individual disabled person, with an identifiable life situation requiring improvement, and the community of disabled people sharing comparable life situations both constitute rather clearly identifiable targets for the design process. The result is that designers have developed a series of specialisations that have first related rather closely to the sciences of rehabilitation and have tended more recently to develop synergies with information and communication technologies (ICTs), as tools for enhancing the quality of life for identifiable disabled groups.

Of course, the process of catering for an identified need with a clear design process is not (and never has been) quite that simple in the real world. Numerous other factors have a bad habit of getting in the way, factors that range from the realistic to the patently absurd (but not less influential). The stresses induced by the perceived need to shorten products' time to market have made it increasingly difficult for designers to take the necessary time out to ponder their creations, consider their subsidiary effects (unplanned usages, like using a pen as a telephone dialler or a back-scratcher, for example) and involve real focus user groups in preliminary and ongoing development evaluations… and this is a realistic development that we are expected to accept in respectful silence, because it is dictated by curiously ineffable "market forces". But the influence of the

patently absurd is also there for all to perceive: one example for all is the restaurant owner who resists adapting his premises to make them wheelchair accessible out of an illogical and rather disgusting prejudicial fear that disabled patrons would scare his "normal" able-bodied clients away. These are different problems which require different answers. In the first case, there is a real need for the methods and advantages of good design to be taught not only to future designers and architects, but also to those whose decisions dictate the scope of their activities: marketing, management and public administration are fields that spring to mind immediately. In the second case, the need is for more useful education from infancy onwards, whose purpose must be to reduce and eventually eliminate prejudices.

The straightforward approach has actually had a rather good innings in the last fifteen to twenty years. It has achieved major milestones of its own, particularly in Europe and the United States. Since the war, advances in medical science have made it possible to live longer and healthier lives despite having a permanent disability. Also, the writing has been on the wall for Europe and North America ever since the post-war baby boom: sooner or later, the population was going to get old, so some form of allowance had to be made. The European Union responded by gradually factoring elements of specialised research for disabled and elderly applications of existing and future ICTs into its framework research programmes (1 January 2007 saw the launch of the seventh of these, known in jargon as FP7). The result has been the growth of a rather large research community with a focus on "special needs" solutions that has done some magnificent work in facilitating everyday life for many categories of people, by generating everything from advanced

prostheses and implants to improved low floor buses and more user-friendly advanced consumer electronics. In the United States, the human rights legislation embodied in the Americans with Disabilities Act moved the architectural profession to come to terms with the challenge of access to the built environment. In both cases, as indeed elsewhere in the world, notably Japan, another society that is having to learn to cope with ageing, such thinking has led gradually to the development of a design approach that attempts to broaden the scope of potential users of its end products, starting from the principle of including disabled people.

Design for All

The complex approach, or Design for All, has a parallel history. As the EIDD's Stockholm Declaration© 2004 (reproduced in full in the first issue of the Design for All Institute of India Newsletter, in February 2006) states:

> *"Design for All has roots both in Scandinavian functionalism in the 1950s and in ergonomic design from the 1960s. There is also a socio-political background in Scandinavian welfare policies, which in Sweden in the late 1960s gave birth to the concept of 'A society for all' referring primarily to accessibility."*

It is no coincidence, obviously, that the authority for this statement comes from Finn Petrén, Vice-President of EIDD since 2003, who has long played the leading role in the socio-political development of Design for All in Scandinavia, until quite recently as Director of the Nordic Council on Disability Policy, then as President of EIDD Sverige

and co-ordinator of Sweden's major national Design for All programme.

The first and fundamental difference between the two approaches is the attitude taken towards the world and its inhabitants. Though both approaches aim at achieving inclusion, the straightforward approach developed from a matrix of design for disability, which leads it to tend to continue targeting inclusion by identifying categories to be included and dealing with them, one by one or group by group, as the need is perceived to arise, while Design for All developed from a socio-political matrix in which the foremost emphasis has always been on social inclusion as such, rather than on one or more identifiable groups of people to be included, and design has been found to be the most efficient and effective tool to achieve this purpose.

No simple label is perfect and Design for All is no exception: its detractors have long enjoyed repeating the remarkably persistent, though eminently foolish myth that Design for All must fail in the attempt to make "one size fit all", demonstrating an avoidable tendency to attribute literal meanings to words, rather than study the messages they convey, and a somewhat obstinate refusal to study the discipline and its aspirations. Be that as it may, this criticism was already answered in the statement adopted by the EIDD's Bonn Symposium in December 1993:

> *"[...] there will always be a need for design directed towards meeting special needs."*

The approach adopted by the complex approach, or Design for All, may appear when first studied to be quite similar to that of the straightforward approach. Once again, the first step is to identify a problem, followed by exploring the range of potential users, consulting with them and then drawing up targeted design hypotheses to respond to the identified challenges. The difference lies in the definitions attributed to the terminology being used.

Identifying the problem

There is no substantial difference between the classical methodology used by design in general and that used by design for disability. The "problem" may be a car's poor fuel performance, the difficulty in cleaning a household kitchen device, a building whose only access is by stairs or a road sign that needs to be read and understood rapidly. Or it may be a manufacturer's need to create something new so as to keep his market share and stay in business. The purpose is generally identified before the designer is called in to deal with it. As a result, major decisions pertaining to the framing of the relevant questions have already been made before the intervention of design and its methodology.

In the case of Design for All, the "problem" is approached from a different angle. The first major difference is that it is never seen as a problem at all, but as a challenge to the creativity of design. This may sound like semantic hair-splitting, but it makes a world of difference to the thinking involved in the course of the entire design process and so also to the eventual results. So, now that we have established that we are never dealing with a problem, but always with a challenge, how do we start tackling the challenge?

Here the vital element of difference lies in the moment when design expertise is involved: Design for All requires that, from the very beginning, the analytical skills which the design professions are trained to exercise must be applied to the definition of the parameters. If design is essentially a problem-solving methodology (or, to put the more positive spin on it, a challenge-tackling methodology), then it needs to have an important say in the definition of the problem and hence the challenge. Unlike politicians and diplomats, whose millennial culture has led them to build us an increasingly faceless world of meaningless (and essentially contentless) compromises based on a dreary series of lowest common denominators (though the language used to depict them is redolent with high-flown phraseology, whose aim is to strike a chord with ordinary human aspirations), designers, architects and other professional creatives are more akin to entrepreneurs, whose essential function is to generate a win-win situation for everyone concerned. Notoriously, that is never achieved by adopting the platitudes of lowest common denominators.

Exploring the range of potential users

This brings me immediately to the next stage: that of identifying the potential users. In the classical design scenario, the user is the person whom we identify as the end user, i.e. the one who has to interact with the object as it executes the function for which it was made. But this approach leaves us many lacunae. The most obvious is the whole series of people who are involved in the object's life cycle upstream and downstream of its actual usage, from those involved in its physical manufacture, supplying the raw materials and energy, shipping, wholesaling, distributing, retailing and

delivering, to those concerned with its maintenance during its life cycle and those others whose task it will one day be to dispose of it responsibly and sustainably.

In addition to this, we need to question the basic assumption of the object's user: is our user base – and hence our customer base – correctly defined? When defining the users of a simple object like a chair, for example, what limitations have we set to our thinking? Are they merely anthropometric and ergonomic? Have we started out by describing the object as a "chair", or more broadly as "seating"? Have we considered the different ways that different cultures use seating, or the adaptability expected of every product that becomes a familiar and so trusted feature of the home or workplace?

But that still only tackles the expectation that seating will be used for sitting. Before we go any further, we also need to explore the potential unplanned applications to which the object might be subjected in its lifetime. Chairs may be made for sitting, but they are often also used for climbing, for example, to reach a high shelf, or, when combined together, as ad hoc adventure playgrounds by children... All of these are potential users, though purist designers may frown on such unworthy applications of their earth-shattering masterpieces...!

The principle here is inclusive thinking: when defining who is a user, every conceivable actor and every conceivable scenario should be taken into consideration. And then we should always remember to make allowance for others: because there certainly will be more!

Consulting

The consultative process is a direct development on the previous stage of identifying the range of users. To those of us who talk about this every day, it is a natural requirement to consult the users of every design at every stage in the design process, from framing the brief to marketing. But there is a very strong tendency out there in the real world to cut corners... and the more that economic pressures are perceived, the more corners end up being cut.

So perhaps it is necessary to reiterate the principle that consultation is not a corner available for cutting. For example, if a company decides to reduce its costs by eliminating secondary product packaging, it will need to consult with a wide range of actors/users if it is to get it right and so achieve its purpose. Those actors include the shippers, the distributors, the retailers, the marketing experts, a cross-section of consumers, whose reactions to the change must be positive, the manufacturers of packaging materials, who will be called upon to create the alternatives, and so on. Because the aim is to cut costs, not the manufacturer's own throat!

The example I have chosen is apparently commonplace and hardly germane to the field of social inclusion, but I chose it intentionally: the practice of consultation makes sound business sense and it is only by applying the practices of good economics and business that Design for All can expect to have a lasting impact on society.

This is what the EIDD Stockholm Declaration© says about consultation:

> *"The practice of Design for All makes conscious use of the analysis of human needs and aspirations and requires the*

involvement of end users at every stage in the design process."

Drawing up design hypotheses

It is only at this stage that the team of practitioners applying the methodology of Design for All will venture into creating actual design hypotheses. Again, those of us who work in this field may feel it is superfluous to reiterate the obvious, but the most blatant error made repeatedly at this stage by designers, architects and other creatives the world over derives from the tendency to design for themselves, rather than for the target audience, or, even worse, to design for a dream-like idea of what they would like to be. Which is why we have so many products, buildings, environments, services and systems that seem to be made for a brand of humanity that is never born, never gets pregnant, never has a day's illness, never breaks a leg, never ages, never... exists! It is a world of perfectly healthy males, aged about 25, who probably spring fully-grown from a pod, or are manufactured in Ridley Scott's *Blade Runner*. It is a very impoverished view of the world... and also a very unflattering view of the imaginative capacities of the people who created it, whether they be exponents of design or marketing.

But we are diverse! As the Stockholm Declaration© already established in 2004:

> *Across Europe, human diversity in age, culture and ability is greater than ever. We now survive illness and injury and live with disability as never before. Although today's world is a complex place, it is one of our own making, one in which we therefore have the possibility – and the*

responsibility – to base our designs on the principle of inclusion.

And we should be celebrating the cultural and human wealth that derives from this wonderful gift of human diversity, rather than stolidly obliging humanity to conform to rigid standards. Which is why the actual design stage should shun the easy recourse to compliance with standards and checklists that ascertain *ex post factum* that a given design will suit a given arithmetic average. Standards have a very sensible purpose: to ensure that plug X fits into socket Y or that a mobile telephone will communicate within a given bandbreadth. Human beings are neither plugs nor mobile telephones and should not be categorised as if they were.

The metamorphosis in thinking

Practically since its inception and as a result of the increasing synergy between the community of social inclusion actors and that of Design, the EIDD has been providing the platform for a gradual metamorphosis in thinking about design, its scope, its potential and its future.

This metamorphosis has received considerable stimuli from many sides, among which the need to improve design's track record for disabled and ageing people is a very important one, favoured by the advancing age of the continent's population, as I mentioned before. Similarly, other socio-environmental factors have exerted further major stimuli on the metamorphic process around design. Primary among these is the enormous ethnic variety that is now commonplace in European societies: the first waves came as southern Europeans (mostly from Italy) migrated to the mines of

Belgium and France between the world wars. Then came the return of colonial administrators from newly independent states shortly after the last World War, who brought the acquired taste for foreign exotica back to dreary war-torn societies. These were closely followed by the first immigrants from those same countries, although they confined their interest to the ex-colonial powers (broadly speaking, these were France, Great Britain, Belgium, the Netherlands and Portugal). The economic boom in the fifties brought more intra-European migration, as first Italians, Spaniards ands Portuguese, then Greeks, Turks, Slovenes, Croats and Serbs migrated to Germany. Economic migration from the Maghreb and West Africa then turned former sources of migration into destinations for immigrants, as Italy and Spain had to learn to deal with an unfamiliar phenomenon. The collapse of the Iron Curtain, the economic development favoured by the European Union and the rise in perceived insecurity in many countries, leading to an influx of asylum seekers who only want to be allowed to live their lives in peace, out of the reach of rapacious politicians, then made migration a significant factor in the few remaining countries in Europe where it was previously unfamiliar: Scandinavia as a whole and, more recently and to a quite staggering extent, Ireland.

Europe is not today's melting pot, because different cultures are not being forced to melt into one indistinguishable mass (regardless of what the detractors of the process of European integration claim in their simplistic rhetoric), but maintain their respective independence; as a result, it certainly provides a challenge of social inclusion that is worthy of the finest design minds.

Another factor that contributes to the metamorphosis in design thinking is the realisation of the discipline's potential for social change. And yet, when most members of the public are asked to describe their instinctive reactions to the word "design", the adjectives they cite tend to be related to the spurious, the frivolous, the superfluous, the ephemeral, the costly, the unnecessary. This opinion is compounded by the attitudes adopted by the many of the world's "star designers", most of whom are more deserving of the epithet "artist" than of that of "designer". By publicising their own egos as being of greater importance than the intrinsic values of their products and intimating that those products are worthy by demanding exclusively high prices, these individuals do a favour to nobody at all except themselves. They certainly have a hugely detrimental effect on the reputation of design in the mind of the general public and, as a consequence, in the opinions of decision-makers the world over, who are liable to write it off with the same set of negative adjectives.

While public opinion considers design to be relevant to nothing but expensive clothing, exclusive furniture and hugely expensive architectural creations – at least, that part of public opinion that can afford the luxury of thinking about design at all – thus perpetuating established mindsets among middle-level decision-makers (who are, after all, members of the general public), the design community itself continues to publish the expensive and the ephemeral, the fleeting and the superfluous, making a tremendous fuss about its tendencies, its aesthetics and all the other terms that are more at home in the writings of an art critic.

And yet, as those of us who have devoted our energies to the ethics of this admirable discipline know only too well, design can do a lot more than generate the latest superfluous frippery. When Britain set up the Design against Crime initiative, for example, it showed one of many ways forward. Much minor criminal behaviour can be avoided at source by "designing it out" of the context: design can be applied to ensuring that the potential for crime does not exist in the first place.

It is in this vein that Design for All applies design methodology to ensure that the potential for social exclusion – regardless of whether it is based on ethnic origins, culture, lifestyle, gender, social or sexual preferences, temporary or permanent disability, illness, or whatever other conditioning factor – does not exist in the first place. States the Stockholm Declaration©:

> *"Design for All aims to enable all people to have equal opportunities to participate in every aspect of society. To achieve this, the built environment, everyday objects, services, culture and information – in short, everything that is designed and made by people to be used by people – must be accessible, convenient for everyone in society to use and responsive to evolving human diversity."*

Where we come from…

In the dawn of human prehistory, our ancestors lived in a hostile environment. It is impossible to exaggerate the importance of this fact: the history of human evolution is the history of humanity's ability to adapt to the vagaries of that hostile environment. Indeed, the ability to adapt has become so engrained in human mindsets as

to develop almost into a part of our psychological DNA, as no longer an ability, but an obligation to adapt.

While this was certainly a very favourable propensity on the part of our ancestors, one that ensured that we would survive until the present day as a species, the time has now come to question whether, like the human appendix, it has largely outlived its usefulness and deserves a quiet retirement.

The fact is that recent generations have witnessed the development if a new paradigm in humanity's relationship with its host planet. Paradigms do not generally change overnight, but take a long time to do so and this one, being a paradigm of such primary importance, is certainly no exception. Until the middle of the last century, the majority of humanity still lived in relatively close contact with the land: the first major paradigm change come with mankind's increasing urbanisation. But of primary interest to us here is not so much the fact that humanity now lives in sprawling conurbations, as the fact that those sprawling conurbations were not of course created by nature, but built by the humanity that inhabits them. Here, then, is the major paradigm change, which calls for a major change in humanity's instinctive thinking: although we inhabit a landscape of our own making, we still instinctively expect ourselves and others to adapt to the hardships, obstacles and often mind-boggling stupidities imposed on it by bad design.

At EIDD's establishment in 1993, the Institute's first President Paul Hogan coined the simple slogan that encapsulates the essence of design's responsibility and potential, when he stated that

"Good design enables, bad design disables."

In 2004, the EIDD Stockholm Declaration© provided an equally simple, immediate definition of Design for All:

"Design for All is design for human diversity, social inclusion and equality."

Now, in response to the need for a clear statement about the methodology to be adopted in our practical approach to targeting and achieving social inclusion, the EIDD Waterford Convention©, adopted at the conclusion of the 2006 Annual Conference on the topic of Work for All, established that:

Design for All "insists on the vital importance of a seamless rather than a sectoral approach to social inclusion".

Conclusion

I started this article by explaining that I believe it to be impossible to single out any one event or milestone that can be described as the most important to have affected the discipline of Design for All during the course of 2006.

Although considerations of length (this is, after all, an article and not – yet – an outline for a book) induce me to summarise many factors in a manner that I fear leaves more to be explained than I have succeeded in clarifying, I trust that I have conveyed a few vital impressions:

1) *The essence of Design for All derives from socio-political rather than from design roots;*

2) Its approach is therefore essentially holistic, based on the real need to cater for the wealth of human diversity, rather than focused on restricted groups of users, however deserving in the short to medium term;

3) Design for All constitutes the methodology that lends itself best to achieving a seamless rather than a sectoral approach to social inclusion;

4) It therefore also constitutes the methodology that lends itself best to translating fine sentiments into hard, tangible facts: really making this world into a better place for everyone and not just talking about it.

© Pete Kercher, President, EIDD – Design for All Europe, January 2007

Letter from the Chairman's Desk

By Sunil Bhatia PhD

It is the human's basic nature for expansion and I do not know what makes the unit cell to expand by mutation and design face, body, leg and mind and ultimately create such human structure that can live for 100 years or more but suddenly expansion seizes and contracts everything and refused to function and in simple word we call death. It is not only confining to the humans but witness in every creature of the cosmos. I do not know the reason at cell level but I observe the bees working for beehive in most coherent manner and knowing their responsibility in advance and create such a beautiful structure that is amazing and one day find they abandon and go to another place in search of beginning of new life. The working of bees and creation of cells with such perfection make in believing honeycomb cells are under some unknown guiding force. Who is guiding for movement of life. Why do we keep experimenting when comfortable in one place? Is expansion for enjoying liberty and freedom?

At the human level it is in built character for expansion and in specific situations contracts. It is mainly governed by brain and contraction is defense mechanism in built system control by reflex actions. Why do we have such system in our body and who governs for it is mystery but it is not confined to humans but plants as well it is visible in animal kingdom also. Nature encourages exploration

because it has element of expansion and experimentation that is the reason it is visible in various varieties and forms. Human used it for breaking barrier of limitations and keep experimenting beyond survival and rest of living beings are using this limited to survival. Why do humans dare to break his limitations and explore beyond and that gradually turned to thought process?

Every living being has memory but unsure about what humans enjoy the imagination character in other beings as good as humans. Memory and imagination that is great gift to human by nature but it sets in establishing individual limits and the same encourages for adventurous people experiment for what lies beyond limitations and majority lives with what they have. Physical limitations can be varied little with art of practice by an individual but imagination with base of past memory in us take to another level in breaking our limitations where surprise element surfaced and that makes us pleasurable. That surprising elements of giving pleasure is the real crux that makes someone special in man created world at social level but remains same just like others in the eye of nature . Flight of imagination and capacity of recalling past memory defines the nature of limitations of an individual and as some expands for beyond what they have that prove reason of breaking the limitations. The best part in humans is that man designed the devise for storing more data in brain by designing formulas, graphic as performing arts and other means for passing data stored in memory for future generations by books and art and coming generations need not to struggle for definition of problems or even some extend idea of solving approach . I have not noticed in other living beings where they left unsolved problems for future generations. Civilization or modern world has come to the existence because of

experimentation with limitations for expansion and why do we experiment is mystery. Some people are saying dynamo of the progress is selfishness but if you ignore the commercial world then base will be nothing but experimentation with his limitations and overcoming.

It is possible that man was born an individual and survived because of love, affections and care of parents that is also witness in animal kingdom but humans moved further from it and animals remain in same state of helplessness. Animals are cared by parents till stand on their feet for survival where in humans it is not over with survival but till educate for live for betterment that helps the society and that learning period is almost his complete life and parents never miss a chance of not keeping watch till their death. It is not possible for other living beings and it might be possible some were succeeded in defining the crucial problem and solved it in their lifetime but does not invented devise for the mechanism to pass to future. It is high probability that that knowledge dies with their death. It might be possible an individual human realized the limitation of his body to meet the unforeseen challenges of environments and needs extra powerful body parts for overcoming such situations and looked for ways for expansion of hands, eyes or organs that would help in his alerting in advance for better survival and over power the adverse forces and that laid the foundation of better world. This is visible in animal herd but they learned of protecting the new life of being not to prey and countering never struck in their collective minds and surrender to hunter for foods without resistance as their survival instinct collapse. They prefer to live in under their capability and cannot afford the risk that might prove winner and save life. Other side humans used the natural instincts for countering the attackers

and exploited their weakness in optimum for winning and consolidating position. They might have understood the noise confused animals' mind they devised technique of confusing by using stick for disturbance and wait for weakest moment where they can over power. Even designed human's voices as noise for hunting for confusion for food and allowed to not act for survival instincts and that very moment helplessness surfaced and that was the weakest moment for killing, later that noise helped in designing the drums. They understood in early life of design of tools for overcoming enemies. Real power came to hands of humans with discovery of fire and its management. Where animals or other living beings are helpless and could not designed any tools for countering fire.

Every living being has basic natural tools in their body and initially man used that basic for survival as well later on experimentation for expanding limitations. Man has capacity of pulling or pushing by hands and aware that pushing or pulling in same direction increases the strength and opposite lowers. They used this natural concept for breaking the tinders by applying force either for pulling or pushing and as found it is not working then look for alternative and kept the log over thigh and pressed with both hands in jerk for breaking. In some cases log was thick designed axe for cutting and as demand arises for proper cutting designed saw.

Nature encourages the person to grow, expands and simple example there are plants that grow with seeds as well seedless and has potential of making new life. Grain, wheat and rice are propagating new life with seed but cane sugar, bamboo grows with roots and is seedless. Both groups are from grass family and man was with no

choice but follows what nature has provided and that designed different method of growing by designing various tools. Seeds or seedless grows only when gets conducive environments otherwise live in hibernation for preserving the life within for waiting signal for process of life and expands. Who is guiding for slip to hibernation for save the new life and who is signaling for right time for grow for new life? Cane sugar was uprooted by jerking or cut with axe where wheat or rice needs proper handling for separating otherwise it will spill out of cover and difficult to manage as foods. A simple reason of seeds or seedless plantation has taken to different civilizations. Plucking is natural and applied when a unit as in apple, mango or nothing will scatter as in bunch of banana where unit is packed nicely with skin or it is just attach with stem and a slight force separate with slightest jerk and it is the simplest design where force is applied for pulling and we witness that nothing much has progressed in improving plucking. It is century old technique of pulling with jerk or tweezing with twist and pulls the fruit with hand or first tool was design with long stick with attach collecting basket for creating jerk by little force . Grafting is ancient technique similar to what seed does but used where life cycle of reproduction through seed for new life is extremely long and lowering life of reproduction man devised this technique. Is it use of parasite in nature was observed in plants that was use for grafting? Potential of propagating new life of plants by grafting induce the idea of grafting the new healthy skin taken from other parts of the human body for repairing the damage one.

Man has expanded his limited vision by design of binocular or telescope for seeing far things lying beyond his sight. Where ever defective eyes needs correction invented design of medicated eye

drops or specs. His limitations of physical strength for running and helped in transporting weight was overcome first by design of manual transportation by designing wheel to animal driven cart to modern fuel based automobile . Hand's limitation of lifting the items was thought of overcoming by designing leaver for lifting the heavy items with plank/ log and stone by exertion of physical power at one end to chain pulley to automobile fork lift to cranes. Earlier man was digging the earth by using fingers but designed the spade observing the functionality of nails for designing plough equipments. Entire medical science has come to the existence for extending the limited life span. How come our blood has memory of storing the information for signal of enemies attack for killing even vaccination is done at the infant stage inspite of knowing body blood is changed by new within 3 to 4 months ? Some are debating that water has memory. Challenges and great challenges help the humans for expansion or great expansion for breaking limits. Wild animal control is challenge and is possible by tying a rope around neck and tied with peg properly fixed in ground or hanging plank with the neck or putting nose ring or even lock in cage and bigger challenges of mankind are control by atomic or biological or space war.

Voice: It was natural for us to call the distant person by stressing normal pitch into high pitch voice and if it does not work we place our both hands around our mouth for focusing shout directing toward person and tried with calling him by high pitch voice. When natural system of our body fails, then look for artificial means by designing a tubular shape with long and broad leaf or roll of paper in shape of cylinder with opening at both ends for amplifying our voice. Later on it turned out to be mechanical loud speaker. They even use the dry hollow stem for amplifying the voice that later turned out to

be flute. Use of dead animal skin for transmission of voice in sign language of sound was marvelous step and later picked up by Marconi for Morse key. In modern time we have technology where we can transmit voice from one continent to another or one planet to another.

How can group of people sing in synchronized manner in chorus? They stand or sit in group and sings in such a beautiful way it appears as one voice. Is it not amplification of voice by chorus?

Invention of electromagnetic system has revolutionized our voice even our photo can be transmitted to person sitting in other continents. This journey took new turned with design of microphones, audio recording techniques, photographic techniques and ultimate it reached to the height with film techniques. Graham Bell in reality laid the foundation of transmission of voice.

Locking or security of modern gadgets and devices are on voice recognition concept.

Eye: Human eye size remain constant from the birth to death and has retina that has unique pattern like finger print and used for establishing identity of an individual . It has tear glands that lubricant by releasing the gland every time blinks. Absence of tear glands irritates the eyes so keep lubricant we adopt artificial means of eye drops. That has given idea of lowering the friction by lubricants as well abrasive gives us the idea of rough surface by sand paper or filing. Every human has limited sight for seeing clearly up to specific distance and beyond that everything turned out blur or difficult to figure out . Ancient man realized that for looking at distance it should be obstruction free and the simplest solution of

their design was to climb the mountain or hilltop or tallest tree. Later on they designed artificial tower as watch to keep eye on enemies. They also devised the mechanism of round the clock vigil by designation of few people as watchman and in modern times it is replacing with CCTV camera for surveillance. In early stage of human life they understood the use of color for making visibility difficult for hiding by wearing such color that helps assimilating with environments and difficult to distinguished and other side used for prominent visibility by choosing red or yellow or green color for and easily get notice from even from quite distance. Adapting the color of environment by changing color of skin is visible in some animals as well in plants. This concept is still in practice and dress of army personnel is designed in such a way it should not be easily identified by enemy and desert people wears gaudy color of red, green can be visible from distance and should not match with color of sands.

They designed camera for function in day as well in dark. As technology improved camera, satellite and drone are replacing for sight. How come someone thought of light by burning oil with wick is unknown to us. Fire has heat as well light and dry tinder to huge log burning for light or heat can be understand but imagination of earthen lamp for light is beyond thinking. Torch can be understand by holding the one end of burning log by keeping himself safe not to burn.

Specs or goggles are designed for correcting the sight as well for protection from sun rays. Later found rays has UV so designed the goggle with UV coated for protection? Binocular or telescopes are extension of our eyesight. If some problem with retina and technology was improper to operate for correcting they designed

chemical that can cure the problem. The moment Laser was designed many applications for correcting the sight surfaced.

Ear: If sound is not properly in audible frequency we cannot hear. Similarly sound is more than our limitations of bearing sound it can damage our ear. To protect from damage from loud sound we have natural instinct of placing the hands over ear not to allow the high density voice damage ear. Even we use artificial means by plugging with cotton ball or ear plug. Listening and speaking helps us in proper communication. Ultra sound cannot be heard by humans but it helps us in designing various products like diagnostic tool for medical science or insect repellants. Hearing aids were designed for impaired people. Balance of humans is possible because vestibular system of ear. In certain cases like in ship or airplane where traveler's eye and ear sensory submits the confusing signals and that is the reason of experiencing dizziness or nauseous.

Nails: Nails protect our end of finger from accidental damage But humans used it for digging and realized it was painful process so designed spade that can dig in place of nail and later helped designing agriculture as well construction equipments. Nail polish is design for decoration. Nail cutter for up keeping the size of nails in proper manner. Health of nails is indicator of the health.

Legs: Running is physical exercise and limited to our physical strength. Every human has limited strength and for expansion they designed physical training for optimum running. As realized it is not helping what they wished , designed human carrier sedan chair carried on four shoulders of people . This design was limited to physical strength of man . As looked for artificial means for overcoming limitations the first design surfaced was wheel and that

helped in designing manual cart for transportation to animal driven cart and ultimately automobiles. Idea of flying by airplane came to overcome the limitation of running. Can any one run to moon? But modern scientists have succeeded in overcoming the limitation of running with design of rocket or space technology.

Brain: Idea of overcoming the use of limited brain capacity by design of system of educating for performing for desired result and what is the problem inside the brain were diagnosed by observing the behavior of the person. Brain processes the information from inputs from other parts of the body parts and sometime pain signal of such information can be blocked by pain killer or confused by applying ointment in another local area that irritates the skin and submits the signal that helps in diversion from real pain. Mirage is one kind of confusion of mind. Designer used confusion for design of moving film where film frames are static by movement in certain speed confuse the brain and gives the impression as things are moving. Brain has its own safety valve and acts when unbearable pressure or stressed is witnessed by person and person faints or fell in defense mechanism and his body shakes as under epilepsy attack.

Hands: Design of tools of trowel is extension of hand for even spreading. Design of rake tools in gardening is in shape of hands with fingers. Exercise for hand movement is by pressing hard rubber objects. Designer never forget the way human holds the things and one of the principle of universal design is focusing on this concept of holding/ gripping. Evolution of thumb separated from rest of the finger has made the human different from rest of the animals where in animals thumb as well fingers closes and opens simultaneous and human enjoys the special privilege of circular motion. Finger prints

are unique for everyone and that was used for identification of person as long people were not literate for signature. Showing thumb is presented as token of denial. Keyboard is designed keeping in mind the limitation of function of fingers.

Eyelid: Idea of covering of anything has come from this concept of functioning of eyelids. It protects us from foreign elements that can damage our eyes. It is pathetic that some street performer earn livelihood by entertaining the audiences with impossible task of fixing ball attach with rope tied with brick for lifting.

Nose: Smell sensory is in nose and bad smell disturbs the human psychology and other side good smell enhances the mood. This has given the birth of extraction of natural perfume or oil and incense burning items. Smell instigates action in us. Foul smell also helps in locating the decomposed body. It is unwanted foul smell of our body forces us for cleanliness and hygiene. The moment people understood that closing of nose and mouth blocks the air supply and died with suffocation used for mass killing like gas chamber or using pillow over face .

Menstruation: It is natural in group of women staying in place for long time their menstruation cycle synchronized and more a less appears in same date. It means while designing the women's hostel the sewerage line design should match with load of menstruation of group of staying women. I take special care of design of window by placing them inside the wall for maintain the privacy of women otherwise outside window covers wide angle of visibility of inside room. If the pad is not properly disposed off it attracts dogs and cats and eating of blood stain napkin turned them violent in need of more blood and can attack the people around. Earlier sewage system was

designed in keeping in mind the load of execration but modern time we also consider the possible chances of flushes out the sanitary napkins and to avoid choking.

Beard: It lent man's face gravity and majesty and in older man it reflects wisdom and vast experiences of life. It also reflects the left leaning philosophy and majority are trimming for maintaining for the management of beard. Sometime cutting of beard was one kind of punishment. There is many research claiming the benefits of beard but how do explain and argue those do not have .It is natural to man and jokingly I say underline the nose moustache and underline the face by beard. Man with beard and moustache have difficulty in drinking or eating and it has to pass through the hairs around lips that is dangerous and has to wipe before gulping. Shaving tools were designed in modern times but primitive it was used as tools to scare the enemies. Facial hair was sign of rough and uncouth man. Many animals posses beard and it is visible in male goat is the sign of fertility.

Breast: Breast is milk glands and releases for newly born child for food but it is an asset for woman for attraction when not lacting. Nipple design with rubber to silicon for feeder bottle for infants is nothing but an attempt to recreate the breast. I do not know at what stage in human development realized woman that breast is an asset and hanging flash needs special care for management so idea of tying with plane cloth or design of bra helps in better handling. Bra has hooks for holding the bra that is really nice design. If you think button with hole or zip or knots for closing then it does not have flexibility to match with contraction and expansion of muscles changing shape while working but hooks has mechanism to absorb

the flexibility and place the breast in its place and never opens in its own and needs human intervention. Milk glands of breast activates with pregnancy and if woman does not do breastfeeding it swells and pain in chest till she relives by extracting by feeding or artificial way by pumping.

Hair: Body hair was not shame but the introduction of modern razor has changed this philosophy and made the feeling it is unwanted ,unhygienic and allow to remain with body is sign of unhealthy and people started shaving of hairs of face, armpits, private parts and later on switched to use of hair removal chemicals. In modern time young generation is using laser technology for permanent hair removal. Woman long and thick head hair is sign of indication of fertility just like beard of man. Grey or white hair is sign of maturity and aged woman for infertility. Tying of hairs by rubber band or to keep in place clips and bands are designed. Even gel and oil were used for up keeping the hair for longevity and healthy. Hairs helps in not penetrate the UV rays and keep the head cool.

Some places people are using the animal hairs for weaving the warm clothes and helps in designing various brushes for many applications.

Early years of surgery used horse hair for stitching and even used bear hair for painless cutting the mole of skin by tying tightly.

Bone: Our basic structure is made of bone and muscles and it can damage with little carelessness or accident and understood early stage of human life that broken or fractured bone set in proper place with massage and natural growth heals the fracture by restricting the moments of that body parts , designed slings, plaster of Paris for

fixing for controlling the movements for faster recovery. The same concept helps in designing the strong stable house with RCC by using iron bar for strength.

Bone is used as discoloring agent for making white sugar.

Thigh: It is natural in human to place the hands within the thighs for warmth at the time of sleeping. I do not know how this funny idea of rolling the cigar while filling the tobacco over the thigh of young woman struck but it has added the habit in smokers before lighting they smell the cigar as imagine the rolling of lips over thigh. Amputee knee needs artificial support and designer think of thigh as strong support for tying the artificial leg.

Squatting is possible because of strong muscles of thigh. It helps in recline, sitting and getting up. No designer can ignore the significant roles of thigh while designing human centric products. Leg room is defined by size of normal human thigh.

A hard thing can be break by keeping over thigh with sudden jerk in one direction simultaneously with both hands.

Foot: It is the most important part while standing because it has contact with earth. It is also believed that specific germs enter in our body through sole of foot and shoes or slipper prevents that also. Shoe were designed for protection of feet but for avoiding shoe bite designed socks and by product is give warmth and cushioning. A normal step distance was used for measurement of length where spread palm from thumb to end of little finger was used for small distances. Kicking is designed to harass by inflicting pain others and it is natural act. We use the kicking in our football sport. Foot is part of leg and used optimum in driving for making functional the

accelerator, clutch and break where hands are busy in controlling the steering wheel. Sewing machine is initially design keeping the role of hand but it was with short comings of difficult in handling high volume of stitching so design foot pressure for rotation and hands for direction of cloth.

Neck: It is the most venerable part of human body and all the weapons are designed for separating by cutting with sharp weapon in one stroke from the body as well armors are designed for the protection as well for aggressive attack on enemies. Reason the head has most of the sensitive organs for life and once the neck is broken all actions are paralyzed and in few moments person will die. Every animal attacks the prey focusing only on neck for instant killing for food. Capital punishment is based on breaking of neck for instant death. Art of swimming has come to existence to keep the heaviest body part of neck keep above the water because rest of the body is light and can float.

Back: It is the body part that does not have any sensory organs for vigil and it is strong enough for carrying heavy load. Labor class uses back for carrying gunny bags. The real reason of back pain we think is age and is posture but reality is something different and it is the wrong functioning of hands and thumb.

Shoulder: Hands are fixed with shoulder by ball and socket and it is strong yet very fragile but helps in carrying items. All hand free design is possible because of shoulder and it is clearly visible in design of carry bags. Design of sleep for proper resting of back is that mostly we rest by taking side sleep and body weight comes on shoulder bone. In absence of transport system noticed that father

carries infant on shoulder for long distance where child cannot travel.

Hip: Hip bone is strongest and helps in standing, walking, running as well for sitting on it . How long a person can sit? After few hours body ache and relaxes when sleeps. That is the reason long journey more than five hours are taxing in chair car or long sitting position needs where person can relax by sleep. What we call hip bone it is known in woman as pelvis and narrow bone creates difficulty in childbirth. If the healthy child is in womb and woman pelvis bone is narrow only option left with medical science is to scissor. Some are establishing the attraction factor by waist and hip ratio.

Wrist: The role of the wrist in prehension is to place the hand in the appropriate orientation to allow it to perform the grasping and manipulation. It is used optimum in design the product. The wrist has two degrees of freedom- flexion/extension and ulnar/radial deviation. The third degree of freedom is pro/supination, which is properly a function of the forearm and not the wrist. All the knobs or utensils for cooking are designed keeping in mind the movement of wrist. Wrist watch is also good example of free hand movement. Twisting of wrist by force is painful and used as mild punishment.

Knee: The most complex joint in the body and put it between two huge levers—the femur and the tibia and that to bear body weight as well has movement of forward and backward. Use of knee is at most in sports where its role helps in winning the game by proper skill for use of functioning.

Eyebrows: Similar to our fingerprints, everyone has a different eyebrow shape. So the landmark that is our unique eyebrows can

contribute to specialized facial recognition algorithms but it is not treated as primary like retina shape because it can be alter with very low technology, but can now even be used to unlock mobile device. One thing admirable about eyebrows that gives symmetry to the face if properly cared and people are using powder, pencil and even going for injection for shaping.

Recent research, however, suggests that eyebrows in humans developed as a means of communication and that this is their primary function.

Eyelashes: Eye is exposed organ and highly vulnerable to infections and to protect we have eyelashes .Primary function is to protect the eyes from small particles such as dust, sand or debris from entering and harming the eye but there is no clear mechanism for understanding this phenomena . Highly sensitive to touch, they provide a warning that an object may be too close to the eye. It works under involuntarily mechanism for closing with eyelids but switches to reflexive as sense emergency. Brush motor brush is developed keeping in mind the shape of eyelashes. Designers has limited knowledge of lashes limited to beauty and design the product of beauty aid of false eyelashes , painting etc. and beyond that can be exploited when we have depth knowledge of function of eyelashes.

Head: It is the hardest portion of the human body and ancient people used that for transportation by keeping over it one place to another. I have encountered woman in rural area of walking with great speed without holding the item placed on head. Head is most delicate part and to protect from accidental damage designed helmets. High blood pressure is reason of brain hemorrhage and to

protect doctor advices for medication and change lifestyle for keeping it under control. Idea of protecting the head from unforeseen forces is the reason of survival of human beings from most adverse situations proves cause of progress of society. Art of swimming is nothing to keep the heavy head afloat.

Head has mind and dementia is old age related problem and designers should keep this problem in while designing the products or follows the universal design concept that helps in lowering the pain in this problem

Skin: It is the largest organ of the human body for regulating temperature by scattered sweating glands in it but weak as wax paper but keep intact everything of the body in order. It has self healing with use of blood clot or stitches help in faster repairs of wound. It is the most accurate register of aging. It becomes dry, thin, loses flexibility with age and takes longer time of healing the wound. Injections are designed with needle for administering drugs directly into blood for fast and better healing keeping the property of skin of self healing in mind. Concept of bathing is recent phenomena and it helps in removing the dead skin of upper layer and lowers the chances of fungal or bacterial infections. Healthy life begins with cleaning the skin with utmost care. Animal skin has protected us and helped in meeting the challenges of weather and design of shoes and dresses. Use of animal skin for design of drum for producing sound for confusing the haunting animal is ancient practice. Animal skin dress was armor for protection from arrow strikes. Animal dead skin was used for carrying water and known as mushk.

Idea of thermostat has come from functioning of skin.

It has helped designing belt, bags etc and it was possible after tanning the animal skin for leather. How come the idea of tanning strike by drying under sun, soaking in urine water and covered with dung for making the leather is still mystery.

Lips: It is the sensitive part of the body and has many role of closing and opening of mouth, item is hot or cold and even size of eatable for mouth. Infants hold the nipple with lips for feeding by sucking. In adult design of straw was possible because of sucking of liquid by lips. Lips help in resonance of different sound in speech and helps in enhancing stammering. Tumbler/ glass /cups/ spoon is designed for drinking because of role of lips was thought extensively. Color of lips helps in medication of patient and sign of indication of body problems.

Tongue: Sucking habits can be witness in fetus after 6 to 7 weeks and tongue role is crucial in performing for speaking. It helps in sliding the foods in food pipe, has taste buds, sensitive for temperature, control in breathing. Coloring of tongue helps in indication of health and medication. Design of beads and crib are use for Correction of tongue at the time of resting and swallowing. I have noticed in post office in absence of glue or not bother if it is somewhere around licks the stamp for pasting. How come showing tongue out of mouth tuned sign of aggravation or derogatory or rude or childish? Color of tongue is indicator of health.

Teeth: We need teeth for lifelong because it makes the facial expression voice modulation and helps in crushing the foods in mouth for manageable for food pipe. So much research and product has designed for maintaining the original system with daily using toothbrush with design of stem and crushed one end for making

brush for cleaning, toothpastes with natural ingredients a well with chemicals or mouth fresheners by chewing certain leaves as we do in beetle leaf or artificially made with chemicals, mouth washers were initiated with the use of salt in water and started rinsing mouth with salt water. Use of spices like clove or clove oil for relieve from toothache. Even gargle was designed for throat problems by using with mixing some antibacterial and pain reliever natural ingredients boil in water.

Teeth are not properly cared a pale yellow color develops and for discoloring designed various techniques as well for prevention from further damage.

Earliest use of teeth was for tearing the meat from the haunted animal and to use as weapon for generating pain for escape from clutches or for killing others as tool was known from ancient times. Wild animal uses nails as well teeth for killing and eating of foods. Simplest use of design of teeth helped in designing of comb and even special knife also. Need transfer of power in slower or faster manner designer design the gear box that has sprocket in shape of teeth over wheel of different sizes. Barbed wire is extension of teeth .Later the same teeth concept was used for designing the zip and excavator bucket teeth.

Face: Face is mirror of our inner emotions it blushes and hatred is reflected, anger and love expression surfaced . It attracts, generates aversion, and expresses our anger of bellicose etc. Symmetrical face was considered beautiful and do not know the reason why do we call beautiful. A face establishes human identity and has major organs like eyes, ear and mouth. Face changes shape over time. Covering of face by veil or mask was designed. Face powder and cream are

designed for maintaining moisture and preventive for aging and prevent from tanning some cream has UV protection for wrinkles.

Private parts: Anatomy of female and man is slightly different in this area and needs different handling. It is also human body outlet section and we can say the sewage system of human body where other organs are as for inputs for body. Some woman says nature has created vagina as hastily packed suitcase where lots of functions are packed in unorganized manner like menstruation, pleasure part, pregnancy, urine and many more. In early stage of human life realized that private parts are not allowing for better performance but essential part for reproduction and left with only option of management and devised the technique of covering or in simple word tied with something in direct contact to the skin for keeping it in place. Role of pubic hair in evolution for standing is crucial in woman and role of urine and stool needs proper dispose and it initiated and control by rigorous discipline of proper time to act.

Birth control mechanism was known to humans in early stage with understanding of human body and earliest one was to withdraw at the time of ejaculation or when woman has safe intimate period and still failure elements was in it and thought of taking help from external force by hitting on abdomen and later turned to specific massage or specific seeds for inducing artificial abortion. Even inserted fine sharp bamboo stick in the vagina for puncturing the layer for liquid around the fetus. We have rubber condoms, tablets for prevention, copper T and many more, pregnancy test kits and safe natural delivery to cesarean birth.

Woman private part is so complex that there is dedicated department of gynecology and andrology is dealing medical issues

pertaining to male reproductive system and designers have designed various products. It is not cared properly it can affects mental as well physical health and satisfaction for meeting the needs of sex in absence of partner many products are designed and artificial stimulate the mind for releasing the hormones. Masturbation is the ancient practice and man was aware about benefits of practicing in early days of mankind. A day comes when cow or dog or cat shout loudly day and night for need for male partner for conceiving by intercourse and flower blooms for attracting the bees or insects for pollination. Why do we feel to leave behind our genes and subconsciously aware one day this body will seize and destroyed? Is desire to live more compel for expanding for breaking our limitations and aware dispelling contraction is nothing but continuity of life and failing in anyone is death?

President Onny Eikhaug, EIDD has accepted our invitation for Guest Editor of inaugural issue of January 2020 of Declared Women Designer year2020 and kept her words inspite her busy schedules.

Happy Republic Day (26ᵗʰ January 2020)

With Regards

Dr. Sunil Bhatia

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Forthcoming Issues

WOMEN DESIGNER YEAR 2020

February 2020 Vol-15 No-2

Sharmistha Banerjee is an industrial designer with an experience in working in collaborative innovation and sustainable product design. Currently I am working as Assistant Professor at Department of Design, Indian Institute of Technology Guwahati. My area of PhD research is Design for Sustainability in the arena of agricultural equipment design. I did my bachelor in Industrial Design from IIT Guwahati and a master in Integrated Product Design from Technical University of Delft, Netherlands.

I have co-founded the Sustainability and Social Innovation Lab at Department of Design, IIT Guwahati. The lab focusses on creating systems for sustainable human consumption and production through a complete revamp of the consumption structure with our design interventions. We are part of the global network on sustainability, the Learning and Education Network in Sustainability (LeNS) consisting of 150+ global universities. Currently a large part of our

sustainable product-service development projects are in the domain of agriculture.

At IIT Guwahati I teach courses like System Design for Sustainability, Usability Engineering, User Research Techniques, Product Detailing, Interaction Design, Product Design, Design Management, Plastics and composites and Design Semantics. I have also developed a MooC course on System Design for Sustainability which had more than 600 subscribers in the academic year 2018 - 19. In the past few years, I have worked in India, Bangladesh and Netherlands with companies like Philips, Infosys, MIDCO, VU Medical University Amsterdam, Conpax Verpakking, Beat Belly, Botanische Tuin Delft, ACC Ltd, educational institutes like IIT Guwahati, MIT Institute of Design Pune, IDC, IIT Bombay and L'Ecole de Design (Indian Operations), Nantes-Atlantique, France and NGOs like International Development Enterprise Bangladesh.

March 2019 Vol-15 No-3

Archana Bade Shrestha completed her Bachelor in Architecture in 2008 from Khwopa Engineering College, Bhaktapur, Nepal. I have completed my MSc. in Urban Planning in 2013 from Institute of Engineering, Pulchowk Campus, Lalitpur, Nepal. After completion of B. Arch I worked in a private consultancy named Tekton Consultancy, Lalitpur, Nepal for 5 years. Currently I am a full time faculty working as senior Lecturer in Khwopa Engineering College. I take design studios (housing + residential design), Vernacular Architecture, Building Construction-II, A- cad,

Interior Design as the course subjects. My field of research is in analyzing the socio-economic status of Apartments in Urban areas of Nepal.

April 2020 Vol-15 No-4

A Doctorate qualification in the fields of: interior architecture, architecture and urban design **Dr Dolly Daou** has 18 years experience in: teaching, research, quality assurance, and leadership, specialised in multi-disciplinary design projects. Currently the Director of Design Lab: New Eating Habits at L'École de design Nantes Atlantique, France. Previously, the Director of the Association of Interior Designers in the MENA region, an external reviewer to many international educational quality assurance agencies and the Program Director of Interior Architecture and Master of Interior Design at Swinburne University of Technology, (Australia and Hong Kong). Also, was the Treasurer of the Board to the Interior Design Educator Association (IDEA) for Australia and New Zealand. Author of co-edited book Unbounded on the Interior and Interiority.

May 2020 Vol-15 No-5

Having been a wheelchair model from an early age, **Samanta** has always felt frustrated by the lack of luxurious clothing available for disabled people. Working as an advocate for inclusion within the fashion industry, Samanta

has decided to join forces with some of the most innovative emerging designers to develop her brand, 'SB' – a unique line of clothing based on the principle that "its not about being disabled, but about feeling beautiful and comfortable whilst in the siting position".

Born in Brazil, Samanta moved to London 10 years ago and has since dedicated her life to improving the lives of people living with disabilities. She hopes that her collection will open people's minds and hearts. Samanta is a former Brazilian no. 1 wheelchair tennis player winning a doubles silver medal at the ParaPanAm Games in Rio de Janeiro in 2007 & representing Brazil in three World Team Cups.

"We must be seen to exist" – Samanta Bullock

June 2020 Vol-15 No-6

Debra Ruh is a Global Disability Inclusion Strategist, Market Influencer, internationally recognized keynote speaker, published author, branding expert, successful entrepreneur, and an exceptional mother. Debra is host of popular program: Human Potential at Work (Audience in 84 countries).

Debra Ruh received her call to action when she was told by so-called "experts" that her daughter, Sara, who was born with Down Syndrome (Trisomy 21), would never walk or talk. She refused to accept the prognosis and perception of this condition. Driven by her unshakeable faith in the power of human potential and the love for

her daughter, Debra was determined to dedicate her life to create a path to empowerment and the success for all those with disabilities.

Debra had built a multi-million-dollar firm focused on ICT accessibility. Debra was convinced that "the real disability is being unable to see human potential" formed Ruh Global Communications. This new firm focuses on Global Disability Inclusion Strategies, Digital Marketing, and Branding among many other services.

Debra consults with Multi-National and National Corporations and the United Nations. Debra is now internationally renowned global keynote speakers and travel the world inspiring and advocating for governments and corporations to include people with disabilities.

Debra Ruh is an active public figure she was invited to address the United Nations General Assembly at the Conference of State Parties 9th session (COSP9) by the President's office of the UN on May 13, 2016. More recently Debra was selected as the North American representative for the United Nations (UN), International Labor Organization´s (ILO), Global Business and Disability Network (GBDN). Additionally, in 2018 the U.S. State Department selected Debra Ruh as a global speaker and ambassador for the United States when visiting foreign nations and speaking on inclusion and disability. Selected as a Global Goodwill Ambassador in 2018.

Debra is a recognized global influencer, frequently interviewed by various media outlets and she has gathered a significant presence on many social media platforms, with over 300,000+ followers across all mediums. Co-founder of the award winning #AXSChat the second biggest tweet chat in the world with a reach in the billions. Debra was also named in the "Top 5% of Social Media Influencers"

and "Top 0.1% of people talking about Disability Inclusion and Accessibility" by KLOUT. Named #15 in Digital Scouts Top #100 Global Digital Influencers in Sept 2018.

July 2020 Vol-15 No-7

Jani Nayar , Executive director of the SATH (Society for Accessible Travel & Hospitality), a tireless advocate and effective educator on travel & disability.

August 2020 Vol-15 No-8

Maria Luisa Rossi, Chair and Professor, MFA Integrated Design Maria Luisa's work at the College for Creative Studies Graduate Studies brings her entrepreneurial, globally-focused, and empathetic cultural approaches to the next generation of designers. She focuses on the seamless capacity to deal with the tangible and intangible aspects of people's experiences. At CCS she is preparing & quot; facilitators & quot; capable of addressing global-local grand challenges, focusing on social innovation. Her projects are concentrated on research, co-creation and people-centered processes.

Maria Luisa's professional career has been independent and international. She attended the premiere master's program in industrial design at the Domus Academy in Milano, thanks to a European Scholarship she won from designing the first wearable

computer. The project was featured in the prestigious Domus magazine and gave her a lot of visibility around Europe and the design world. The wearable computer project "The Walking Office" can be found in the Henry Ford Museum Permanent Design Collection.

Following her studies, she founded the design consultancy Iavicoli & Rossi, working on various models varying from interior architecture to tableware.

Maria Luisa's interdisciplinary attitude, design strategy knowledge, and business acumen brought her to be hired in the team that launched the new Graduate Program at CCS in Detroit, where she set standards of excellence for MFA Integrated Design.

Her effort to provide meaningful teaching experiences is validated by a successful alumni job placement in corporations and design consultancies. Throughout her career, Maria Luisa has conducted workshops and lectures in Singapore, Los Angeles, Mexico City,

Istanbul, Ankara, São Paulo, Shanghai, Gratz, Brasilia, and Taiwan. Her specialties are Design Strategy, Experience Design, Scenario Design, Service Design, Interdisciplinary approach, with an in-depth knowledge of American, Asian and European culture and markets.

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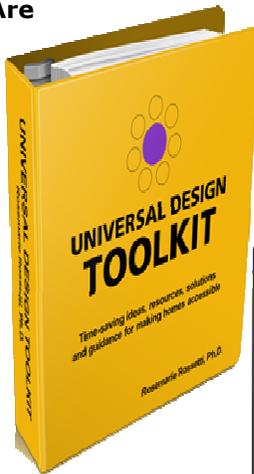
Are you looking for housing options that are safer and more accommodating for independently aging in place? Do you want to enjoy comfort, accessibility, safety and peace of mind – despite your disabilities, limitations and health challenges? The help you need is available in the Universal Design Toolkit: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

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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!

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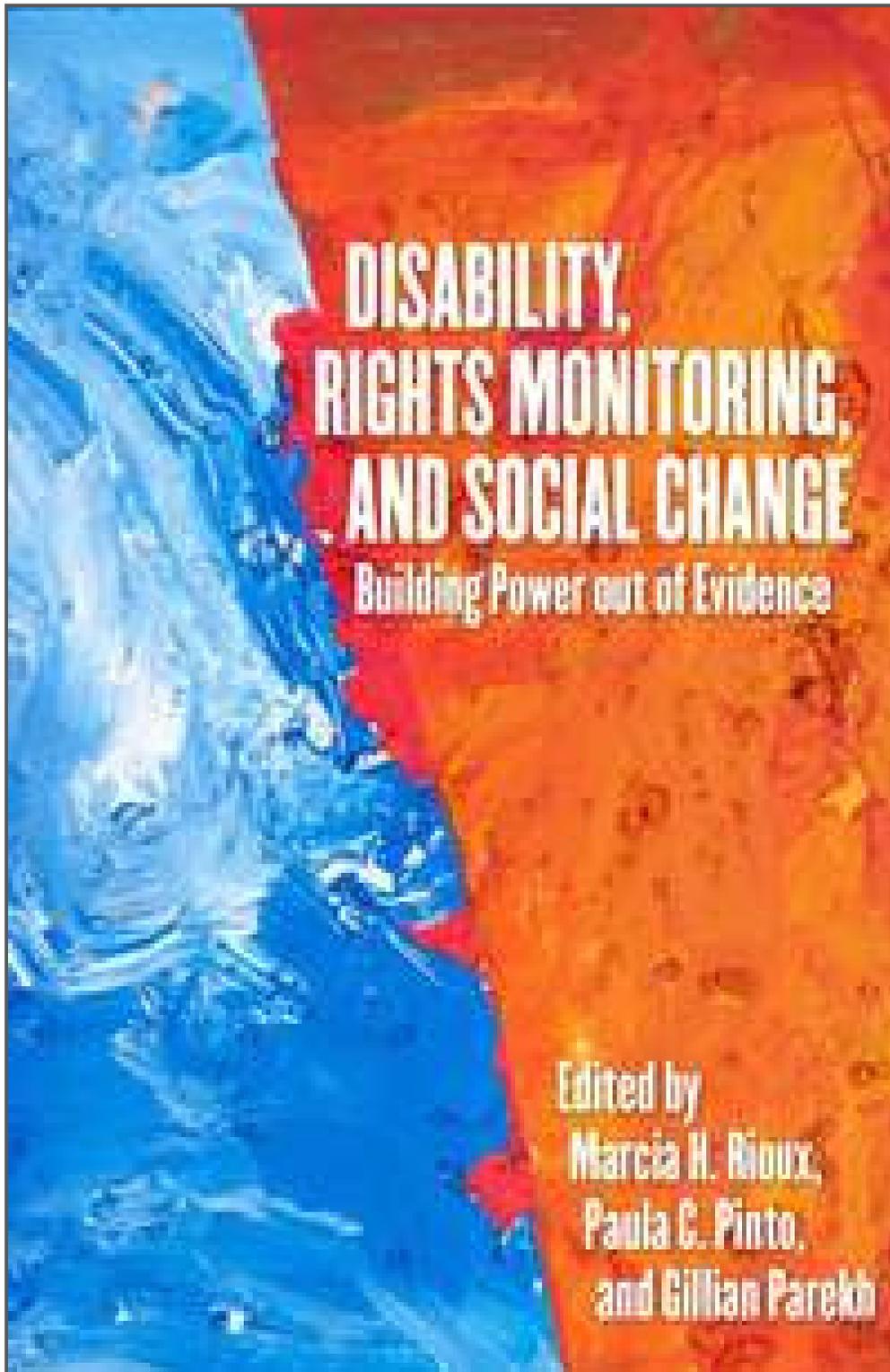
New Update: ELIVIO BONOLLO (2015/16) PRODUCT DESIGN: A COURSE IN FIRST PRINCIPLES
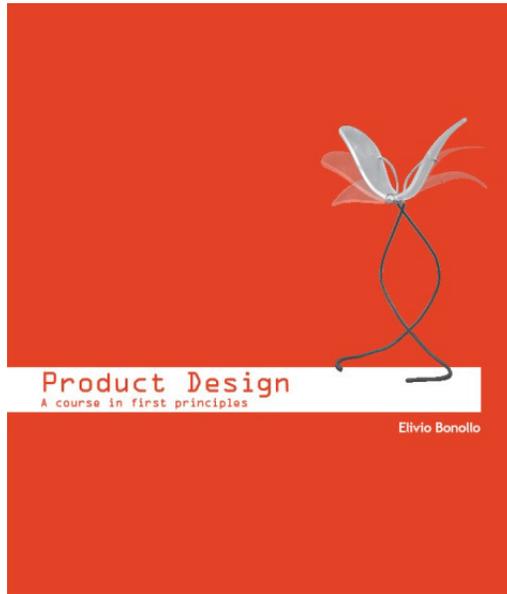
Available as a paperback (320 pages), in black and white and full colour versions (book reviewed in Design and Technology Education: An International Journal 17.3, and on amazon.com).

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DEBRA RUH

INCLUSION

BRANDING

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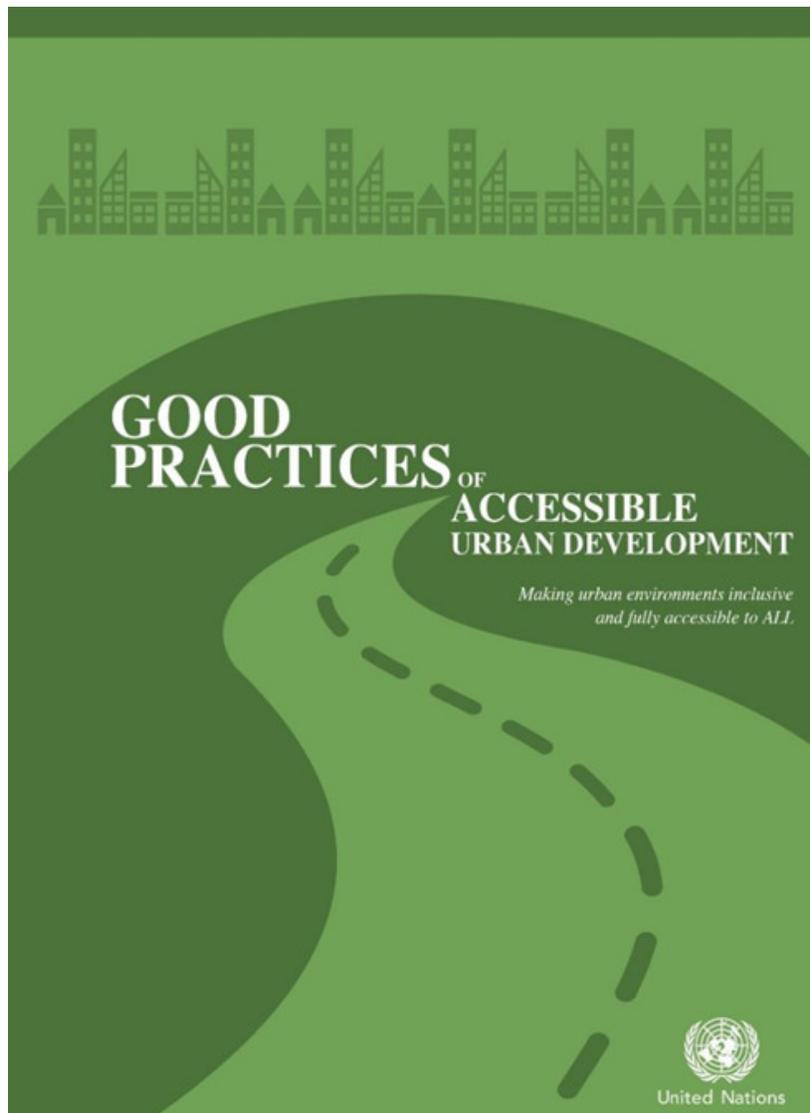
In light of the forthcoming United Nations Conference on Housing and Sustainable Urban Development (HABITAT III) and the imminent launch of the New Urban Agenda, DESA in collaboration with the Essl Foundation (Zero Project) and others have prepared a new publication entitled: "Good practices of accessible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

FROM MODULARITY TO EMERGENCE

A PRIMER ON THE DESIGN AND SCIENCE OF COMPLEX SYSTEMS

Chih-Chun Chen and Nathan Crilly

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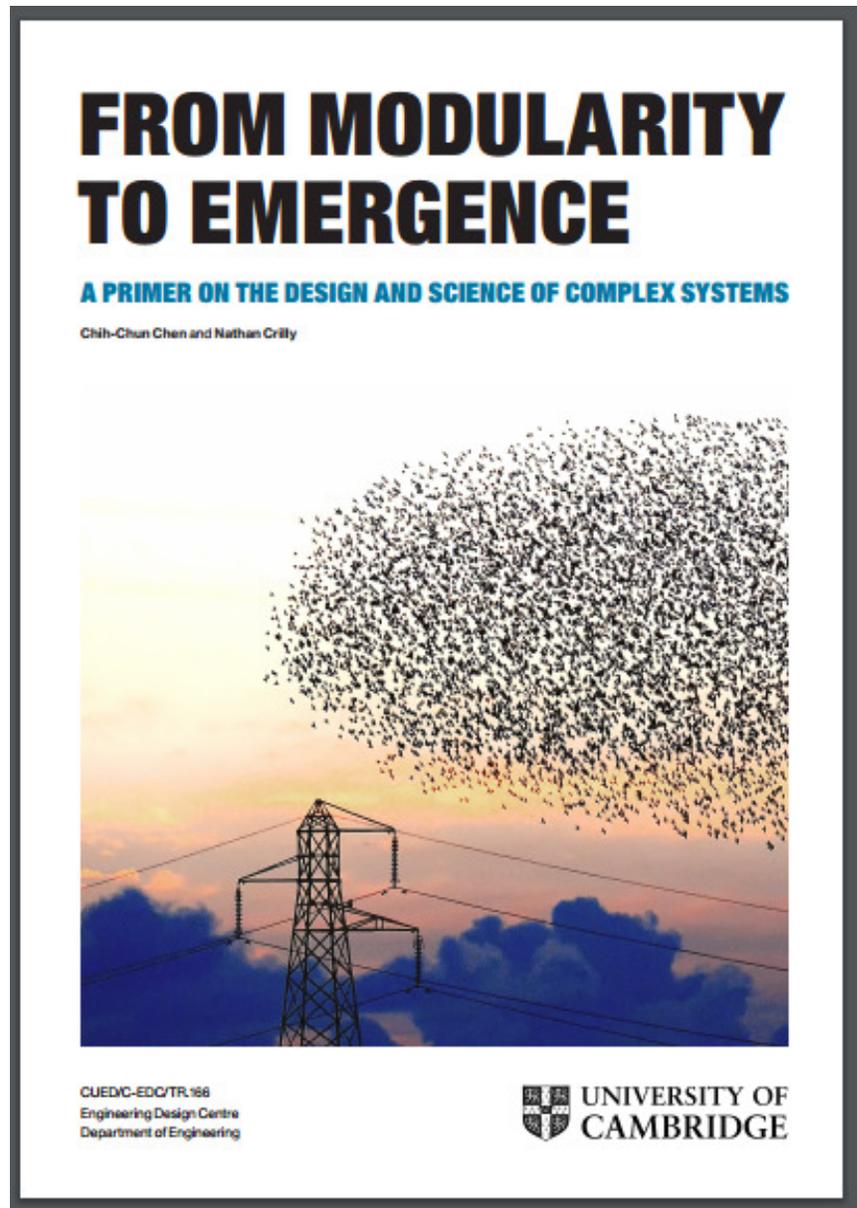
Dr Chih-Chun Chen and Dr Nathan Crilly of the Cambridge University Engineering Design Centre Design Practice Group have released a free, downloadable book, _A Primer on the Design and Science of Complex Systems_.
**This project is funded by the UK Engineering and Physical Sciences Research Council (EP/K008196/1).**
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

ECODESIGN HANDBOOK

HOW TO DO ECODESIGN

PRACTICAL GUIDE FOR ECODESIGN – INCLUDING TOOLBOX

ISSUED BY THE GERMAN FEDERAL ENVIRONMENT AGENCY

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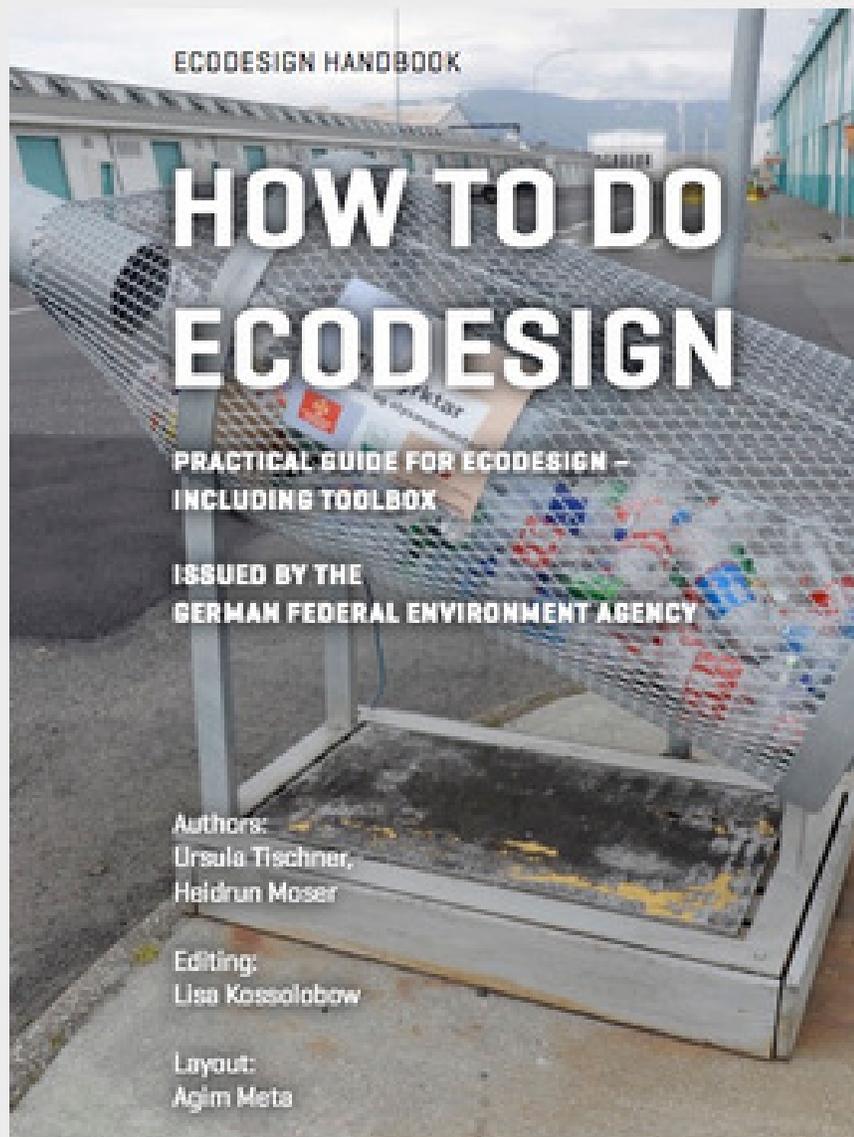
Practical Guide for Ecodesign – Including a Toolbox
Author: Ursula Tischner

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**
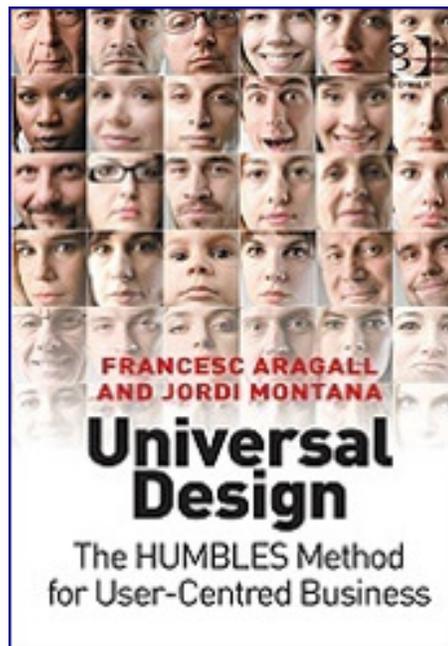
"Universal Design: The HUMBLES Method for User-Centred Business", writtenbyFrancescAragall and JordiMontañaandpublishedbyGower, providesaninnovativemethod to supportbusinesseswishing to increase the number of satisfiedusersand clients andenhancetheirreputationbyadaptingtheirproductsandservices to the 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**
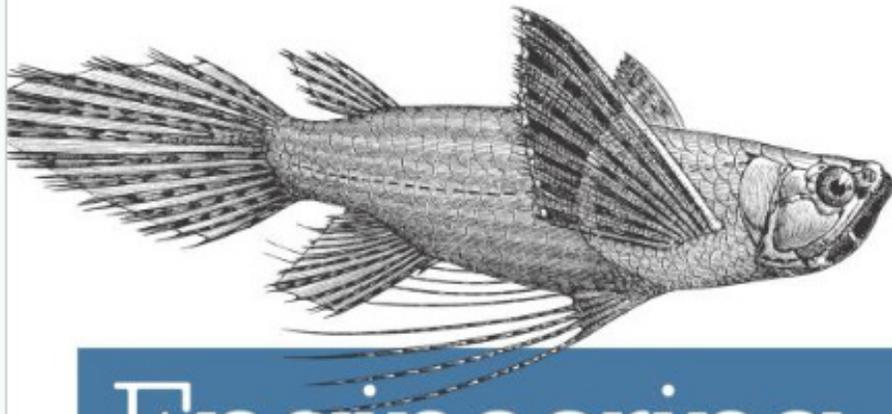
I have a new book that presents fundamental engineering concepts to industrial designers that might be of interest to you. This is the link:
https://www.amazon.com/Engineering-Industrial-Designers-Inventors-Fundamentals/dp/1491932619/ref=sr_1_1?ie=UTF8&qid=1506958137&sr=8-1&keywords=engineering+for+industrial+designers+and+inventrs

News

1.

CES 2020: Reverse Microwave Cools Beer Faster Than You Skull One

Elliot Nash

The next stage in cooling technology may hit stores this year with Californian start-up company unveiling the Juno 'reverse microwave' capable of rapidly chilling a bottle of beer in just 1 minute.

Showcased at CES 2020, and currently available for pre-order on Indiegogo for an early bird price of A$290, the Juno will retail for A$582 when it ships in Q3 2020.

Beyond just chilling alcohol, the Juno is capable of icing your coffee, turning a hot cuppa into iced tea and making your next can of soda ice cold.

According to Forbes writer Pete Pachal, the Juno is 'the holy grail of consumer refrigeration'.

Designed for your kitchen countertop, the Juno works like a traditional wine cooler, with an insulated container where you place your drink of choice into.

Sporting a universal design, the Juno can accommodate drinks as large as a bottle of champagne, right down to a small can of coke.

An LED status bar on the outside will visually notify you when your drink has been cooled down, with no downtime between cooling.

Three programmable buttons on the outside come present for perfect wine temperature, which can then be customised to your preferred level.

The MATRIX-powered thermoelectric cooling engine works by rapidly spinning chilled water around the beverage to quickly lower its temperature.

A water-release valve allows users to replace the water if desired.

The main benefit of this device, other than rapid beverage cooling, is that the device does not use traditional refrigerants like Freon, reducing risk of dangerous chemicals leaking into the environment.

(Courtesy: Channelnews)

Programme and Events

The Fifth International Conference on Universal Accessibility in the Internet of Things and Smart Environments

SMART ACCESSIBILITY 2020

March 22, 2020 to March 26, 2020 - Barcelona, Spain

International conference on 'Designing for children' with focus on 'Play and Learn'

ASSETS 2020
Athens, Greece.

Monday, March 2, 2020, 5 p.m. PDT - Mentoring request deadline

Friday, July 24, 2020 - Acceptance decisions for:

FIFTH INTERNATIONAL CONFERENCE ON UNIVERSAL DESIGN

June 15 - 17 2020 at Dipoli, Aalto University, Espoo

Photo by:
The Royal Agricultural Society of Victoria (RASV)

16.06 - 19.06.2020

Rome, Italy

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Deadline extended! Good Practices 2019

February
21

You can submit your project, product or service as Design for All Good Practice until <u>Friday February 21 2020</u> opting to the International Awards Design for All Foundation 2020

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IAUD Award 2019: Call for entries

IAUD
INTERNATIONAL
DESIGN AWARD
2019

XXVII Compasso d'Oro: the visual project

The selection for the

ADI graphic project invites to present a graphic project proposal for the cycle of publications related to the XXIII Compasso d'Oro ADI: ADI Design Index 2020,

3rd **ICDPCA**

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a quest for authenticity

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exploring experiential knowledge

6, 7 & 8 \ MARCH 2020

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25 NOVEMBER 2019

For more details, visit
www.thanima.co.in

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THE 2020 GLOBAL SEARCH FOR EXCELLENCE IN DESIGN AND INNOVATION

ENTRIES CLOSE 27 MARCH

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Good Design Australia is calling for Australian and international entries to the 2020 Good Design Awards. Through the annual Good Design Awards program, we recognise and celebrate excellence in cutting edge design and breakthrough innovation.

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1.Job Opening

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With regards
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