

State of Affairs in Universal Design in Europe

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This paper outlines the status of the development of Universal Design (UD) in Europe. The term “Design for All” is used instead of the term “Universal Design” in Europe. Design for All relates to practical applications that can be used by people with the broadest possible spectrum of abilities and was divorced from the idea of design for people with disabilities. Therefore, in addition to Design for All, special solutions like those from design for disabled people must be generated at all times. But at present, research on the subject of UD has already progressed at astonishing speed toward the societal and demographic situation. UD projects are already initiated in European countries, and standardization concerning UD is planned to secure opportunities to access new international markets for barrier-free products and services in Germany. This paper describes the driving force behind UD and the status quo in the development of UD in Europe.

1. Introduction

Carl Borgward was a brilliant German automobile designer and an individualist. In the 1960s, his Borgward “Isabella” was one of best and most interesting German cars, praised by all the experts for its elegance and driving comfort. There was only one point that critics kept returning to: the driver’s seat was so low that even average-sized people had difficulty fitting their knees under the steering wheel. The reason was simple: Carl Borgward was a small man, but a giant when sitting, and he constructed the driver’s seat exactly according to his own body measurements and proportions. So the seat was in fact suitable only for people of his stature. In spite of the criticism, however, he never wavered on this particular matter.

Universal Design (UD) is the exact opposite of Borgward’s approach to design. UD focuses on the following question: To what extent can products used by the general public be designed in such

a manner as to allow the greatest number of people of varying physical and mental capacities to use them safely and without hindrance; that is, without having to overcome mental, psychological, and physical barriers?

Until recently, the idea of UD played a rather minor role in Europe. But over the past few years, it has attracted a lot more interest. This development took place in two phases. Initially, efforts were made to put UD in the public consciousness, to kindle the attention of the target groups for the subject in the first place — the media, politicians, entrepreneurs, and designers — and to sensitize them to the concept of UD. The European Institute for Design and Disability (EIDD) played a decisive role in this process. This initial phase also involved the fundamental issue of finding a definition. The decision had to be made whether to use the term “Universal Design,” or “Design for All.” As it turned out, most Europeans preferred the term

“Design for All.” The difference between these two terms lies in the fact that UD suggests a comprehensive philosophy, whereas Design for All relates to practical applications. A crucial factor in this initial phase was that the term “Universal Design” was divorced from the idea of design for people with disabilities and projected onto design in general. Two political initiatives by the European Commission demonstrate this: e-Europe and e-Accessibility. Both initiatives aim to assist people in optimally adopting their role as European citizens and enhancing their quality of life through access to the new electronic media, networks, and appliances that will penetrate all aspects of daily life.

Design for All (UD) is a design process for products (appliances, environments, systems, and processes) that can be used by people with the broadest possible spectrum of abilities in the broadest possible spectrum of situations (environments, conditions, and circumstances).

2. Driving force behind UD in Europe

This section describes the driving force behind UD in social and marketing aspects.

Demographic censuses and prognoses for Europe indicate that in 2020, over half of the population will be over 50 years old. Also, life expectancy will have risen significantly: “People who are 60 today will stand a good chance of living until 90” (Prof. Dr. Arthur E. Imhof).

In other words, in the future a growing percentage of the population will have to live with more or less limited physical and mental abilities, or even with a disability. To ensure that the years gained are also fulfilling years, individuals must be empowered to organize their lives independently with the help of technology. The work put into UD is devoted to this problem. This does not mean, however, that UD is only for older people. Even amongst the younger generations, there are many who cannot, or prefer not to, use the products and services of our times because of

psychological, mental, or intellectual barriers. So UD is a subject that affects a far larger segment of the population than just the “silver generation” of the 60-plus.

The development of UD has two motives: a social motive and a marketing motive. The social motive is to enable and support the participation of everybody in social and political life. The special focus of this motive is on older people with limited abilities or concrete disabilities. The purpose behind this special focus is to give these people an independence that will maintain their individual personality for as long as possible.

The marketing motive is aimed at the market potential of people over 60 years of age and their high purchasing power because Design for All is naturally also connected with sales to all: a large market is calling. The demand for such products is definable and objectively present as a result of the demographic change.

First and foremost, the focus is mostly on the products in communications technology. The areas of application are computers, tele-learning, tele-working, the Internet, household appliances, and technical products such as ticket vending machines and other appliances in public spaces.

UD intends to create solutions without access barriers; that is, solutions for everyone. These can only come about when design and technological development of the products and services are geared to everyone’s needs. Merely improving and facilitating the practical functions of machines will not suffice; rather, for market acceptance and success, it is just as important to meet the aesthetic needs and expectations of the largest number of people possible.

However, the idea that UD can dissolve all boundaries is absurd. Life experience and market realities contradict this. In addition to UD, special solutions like those from design for people with disabilities must be generated at all times. In this case, one should at least aim for compatibility.

3. Activities for realizing UD concepts

This section describes political, professional, organizational, and scientific activities in contemporary Europe in order to realize and implement UD concepts.

3.1 Senior Club's principle: organize (accommodate) instead of repairing

Already 10 years ago, a concept was developed in Germany that foresaw the idea of "barrier-free design." The basic idea was to design houses and apartments from the start in such a way that they could be altered according to the needs of the residents. The premise for this concept was to enable senior citizens to continue leading a self-determined life by the intelligent organization of their daily environment rather than simply removing the problems that older people encounter in everyday life and removing physical and mental weaknesses through surgery. This concept originated in housing, but it also included design of products. Initiator and promoter Werner Herrwerth, who came from advertising and marketing, had the social and anthropological aim of maintaining as best as possible the dignity of older people. But he also saw the marketing aspect. In striving to implement his ideas, he always used the buying power of the "silver generation" in the industrialized world as an argument. He founded the Senior Club, whose magazine propagated the idea of "aging in freedom and dignity," and he tried to use political means to anchor this concept in society.

3.2 Research Institute for Technology in Aiding People with Disabilities^{1),2)}

The Forschungsinstitut Technologie-Behindertenhilfe (Research Institute for Technology in Aiding People with Disabilities: FTB) is a leading research center for UD, particularly focusing on the use of facilities such as buildings and apartments for people with visual disabilities. They also research how to improve the usability of

Internet communication technologies, for example, computers and tools for tele-working and tele-learning.

3.3 The European Institute for Design and Disability (EIDD)³⁾

The EIDD was founded in Dublin in 1993 with the aim of promoting better design for people with disabilities.

This institute is devoted to the promotion of better design for people with disabilities. The basic idea is to improve their life through design. The EIDD is the umbrella organization for national organizations engaged in rehabilitation and works together with the European Disability Forum (EDF). National organizations exist in Denmark, Finland, Norway, Sweden, Ireland, U.K., Spain, Portugal, Italy, Belgium, and The Netherlands.

3.4 The Royal Society for the Encouragement of Arts, Manufactures and Commerce⁴⁾

This society is promoting the idea that a humane and prosperous society needs both the benefits of technology and science and the benefits of art and similar creative forces within our culture and society. Therefore, it is supporting the development of new concepts for social improvement, including design concepts that are apt to improve the everyday life of average people.

4. Design projects already initiated

4.1 Industrial Forum Design Hannover (iF): The German House

Japanese visitors to Germany are frequently pleasantly surprised and impressed by the lifestyle they find there. Houses, furnishings, and everyday culture are often of a much higher quality than they expect and considerably more advanced than in the average Japanese family. This cultural difference is being used as a platform to organize an interesting, unusual

exhibition in Japan.

This exhibition will feature typical German single-family dwellings in urban centers such as Tokyo, Osaka, and Nagoya. Just how many houses there will be will directly depend on industry's willingness to build them. The locations have not yet been determined, and discussions with partners in Japan are still in progress. As far as their quality is concerned, the houses will be built to standard quality or on a graded scale from middle to top quality. All the houses will have a modern but not extravagant design: they are meant to reflect conditions in Germany as they really are today.

UD, a concept that is very popular among Japanese, should also play a special role. This concept focuses on barrier-free building and decorating; that is, products that can be used ideally by children, older people, and people with disabilities equally well without being specifically designed for any of those groups. There are still many deficits in Germany in this field, particularly as far as older people are concerned.

These houses will be walk-in exhibits of German residential culture, but should definitely appear lived-in. People in Japan will be able to visit the houses during "German Year," which starts in April 2005, to get a realistic impression of a German single-family dwelling. Whether or not these exhibits will be displayed for the exact period of 12 months, concurrent with "Germany comes to Japan," will be left up to the individual locations.

4.2 Living Space for the Elderly - Visions for the Year 2050⁵⁾

Living Space for the Elderly - Visions for the Year 2050 is a competition for students on the theme of UD and architecture.

In this competition, students deal with the questions:

- 1) How can older people's lives be organized so they have the best possible combination of personal, social, and health care conditions

while living together with younger people under a single roof?

- 2) How can we provide older people with a well-appointed living space with good serviceably and suitably designed products, social contacts, and care when desired?

4.3 Royal College of Arts (RCA), London: DesignAge Competitions 1994 to 98, Design for Our Future Selves^{4),6)}

The theme of these competitions was "Design for an ageing population." One hundred case-study concepts, prototypes, and design scenarios were presented. Some of the designs were advanced challenges to the future, for example, a road to the underwater world that surpasses current common systems such as systems for cars and yachts.

Most studies focused on supporting daily tasks such as shopping, housework, medical care, and residential care.

Innovate 1 is a research and development journal published by the Small Business Programme of the Helen Hamlyn Research Centre at the Royal College of Art. The first edition of this journal — Innovate 1 — covered the Design Business Association's Design Challenge competition.

There were four design teams in this competition, and their case studies were as follows:

- 1) Factory: Packaging to replace Tetrapacks.
- 2) Design House: A broadband sports-based Internet site.
- 3) Renfrew: A vehicle-driving interface.
- 4) Priestman Goode: 3D imaging for images from Internet shopping sites.

4.4 Design for All in public transport⁷⁾

In 2004, a conference called "Design for All in Public Transport and Design for All in Education" was held in Stockholm to discuss public transport and education policy. At the conference, designers and architects developed initiatives on a national, Nordic, and European level. The conference was organized by the Nordic Council on Disability Policy and supported by the EIDD Sverige.

4.5 Culture for all — in the footsteps of Frida Kahlo⁸⁾

The Mexican artist Frida Kahlo had polio in her childhood and was badly injured in a train accident when she was 20. Nevertheless, she struggled against the odds and became a famous artist. The Swedish Handicapped Institute thought that her work could serve as an inspiration to help other people overcome their disabilities so they can create their own art and participate in other forms of artistic education.

The motivation for the Swedish Handicap Institute was the influence of art on our personalities and mental strength. Mental strength to live and prosper also brings culture and artistic creation. Also, to cope with life, recreation for the mind is essential.

4.6 EIDD: Enhancing the quality of life through Design for All. The Modern Journey³⁾

Design colleges and professional designers in the Nordic countries were invited to a Nordic design competition run by the Nordic Council on Disability Policy called “The Modern Journey.” The aim of this project was twofold: 1) within the colleges and among professional designers, to increase awareness of and commitment to the importance of public transport systems designed according to the concept of Design for All and 2) to evaluate the outcome and elicit proposed concepts for the solution of various problems that people with disabilities have when they travel.

4.7 Design for All: featured project/product⁹⁾

The Haus Rheinsberg hotel north of Berlin in Germany was created by Mahmoudieh Design and is the first hotel designed completely accessible to all users. It was consequently designed according to the UD principle. The design criteria were equitable use, perceptible information, tolerance for errors, low physical effort, size, and space for approach and use.

4.8 Independent Living Institute¹⁰⁾

Self-determination, self-respect, and dignity are values that most people take for granted; however, this is not true for people with disabilities. To an alarming degree, people with disabilities are marginalized through inaccessible infrastructures, discriminatory attitudes, and the stigmatization of special solutions.

The Independent Living Institute, a non-profit private foundation based in Sweden, is trying to alter this situation by making people more aware of the kinds of discrimination that people with disabilities experience in their daily life. Because people with disabilities are the best experts on their own needs, most of the Institute’s employees have disabilities themselves. The Institute is financed by the Swedish government and private sponsors.

The Institute’s projects include:

- 1) Taxi for All
- 2) Radio Independent Living
- 3) Fashion Freaks European Centre for Excellence on Personal Assistance
- 4) Contributing to Equality from Independent Living (CEIL)
- 5) KARMA II
- 6) Interactive Web Services
- 7) Library
- 8) Disability Ombudsman Report Service
- 9) Vacation Home Exchange
- 10) Personal Assistant Referral

5. Activities of standardization and certification concerning UD

Use of standards and standardization serves to establish UD in areas such as healthcare, safety, transport, telecommunications, services, and housing. The current focus in standardization should be to concretely apply the legal codes in all areas, including the design professions. This could be the most effective way to implement UD and introduce change for the benefit of a large segment of the European population.

Implementation of the United Nations Standard Rules on the Equalization of Opportunities for Persons with Disabilities and the Amsterdam Treaty covers the issues of discrimination and unhindered access to the media.

The Ministry of Economic Affairs, Transport, Agriculture and Wine-growing of the State of Rhineland-Palatinate, Germany, is planning an information and further training initiative on the subject of "barrier-free design" in cooperation with the Institute for Technical Living Space Planning (T.L.P.e.V.). This initiative is geared especially towards small and medium-sized enterprises in the Rhineland-Palatinate. The aim of this initiative is to secure opportunities to access new international markets for barrier-free products and services. The Rhineland-Palatinate "Barrier-free" initiative provides a round-table discussion; workshops for further training and exchanges; events to promote sensitization; in-depth information through literature; and parallel consultations with institutions such as the T.L.P.e.V., BRAIN, and the European Panel Service Centre. This initiative also makes it possible to receive the European "DIN barrier-free" certificate through DIN-CERTCO.

6. Conclusion

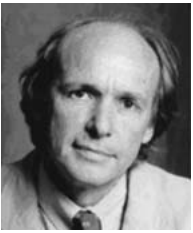
Outlook, expectations, prognostications, chances and benefits, and lessons to learn:

- 1) Universal Design (UD) and Design for All do not play a major role in current discussions among the general public or among designers, even in Europe.
- 2) Research on the subject of UD and the treatment of the subject with regards to systematization and norms has already progressed at astonishing speed. A number of mostly politically and socio-psychologically motivated projects have been launched that show a great deal of promise.

- 3) There is undoubtedly a need for products manufactured with UD in mind. However, the European market has not yet broached the subject.
- 4) The manufacturers who are first to enter the market with products manufactured according to thoroughly thought-out design ideas and designed consistently according to this concept, will most probably meet with success.
- 5) Helping the subject of UD along to a breakthrough in practice and developing marketable, successful products does not require a special creative tour de force or explicit innovations. Basically, the UD idea does not represent a new demand. In principle, it corresponds exactly to what functionalism, properly understood, already demanded in the last century: products that respond to the strengths, dimensions, and senses, as well as the needs and expectations of (most) people. When designers contemplate their role as the "consumers' barristers" and orient themselves towards the current societal and demographic situation, they will, by necessity, create products in the UD mould.

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