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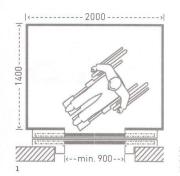
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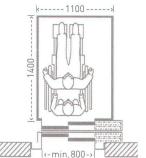
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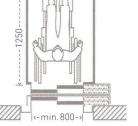
# Accessible for all

Interview: Jed Fraser Photos: Schindler Management Ltd

Engineer Dieter Mehr looks back on 35 years of experience in the elevator industry. He is a member of a working group on elevators adapted for the disabled. In a talk, he discusses the roll of vertical transport systems in the light of the requirement for "Access for all", the various directives on the subject, and Schindler's contribution to "Access for all".







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You are a recognized expert in the field of elevator accessibility. What does this term mean to you?

I share the opinion of the jury that the answer can only be "Access for all." Planning for people with disabilities means planning well for everybody. The goal of accessible building is to enable all our fellow human beings to use the built environment independently and with equal rights. My recommendation is therefore always to look first at the overall situation, which means to imagine how people with various disabilities make their way from the street to their destination in the building. This procedure sensitizes and sharpens one's awareness and makes it easier to identify potential barriers. For me as an engineer, the demands of "Access for all" mean designing according to the principle of "Design for all."

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What does that mean in practice?

The "Design for all" principle no longer focuses on measures for individual forms of disability, but instead on solutions which serve all users. The historical concept of "disabled," which has often been restricted to users of wheelchairs, must be defined much more broadly. A mother with a baby buggy and a heavy shopping bag is just as limited in her movements, and in that sense also disabled. We should also not forget that people today are living to a greater age. With increasing age, mobility and the functioning of the sense organs diminish. So these people also need more and personal assistance.

> What can an elevator specialist contribute to "Access for all"?

There is a small number of crucial points which must be taken into account:

Firstly, an elevator must provide sufficient accessible space for walking aids and wheelchairs.

Secondly, it must be possible for everyone to find the operating controls, to get to them, and to understand their purpose. This means that the controls must be reachable, and their designations must be clearly recognizable both visually and by touch.

Thirdly, everyone must be able to receive and understand all signals from the elevator. This last requirement means that the signals must be activated automatically so they can also be recognized by people with impairments to their senses of sight, hearing, or touch.

And is that enough?

Yes, even if it sounds easier than it really is. When doing these things, it's important not to let constructional or organizational barriers obstruct the path to the elevator. There are many clear practical examples of bad design as ramps, starting with a step.

> The jury mentions European regulations and their differing requirements. What is the current status in relation to accessible elevators?

It is correct that there were substantial differences in the requirements for elevators in Europe. However, in time for the European Year of People with Disabilities in 2003, a new standard was completed for the elevators which must be accessible to all persons including those with disabilities (EN81-70). This standard defines uniform binding requirements and replaces existing national regulations.

In my opinion, there were two reasons why this standard was generally accepted: firstly, it provides a choice of three different types of elevator with different sizes (see illus-



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tration); and secondly, it enables supporting measures for certain types of disability to be activated only when it is necessary and required.

What are these temporarily activated measures?

Allow me to explain that with two examples: So that people who only walk very slowly can enter and leave the elevator car without hindrance, the time for which the car doors stay open must be substantially lengthened. If this longer time is activated at every stop, it drastically reduces the transportation capacity of the elevator. By contrast with the traditional regulations, the new standard allows this longer time to be provided only when requested. For people with impaired sight, visual signals must be complemented by acoustic signals. When a visually impaired passenger arrives at their destination, this is announced verbally. If this function can be called up only when required, it avoids the irritation which is often caused by voice announcements in normal operation.

? How does such activation work in practice? Temporary activation takes place, for example, by the user pressing an additional command button on the operating panel. However, present-day technology also allows many other different solutions.

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How is implementation of the new standard progressing?

The European Standard EN81-70 describes how an accessible elevator must be designed. However, it does not specify under what conditions such an elevator must be installed in a building. That is the job of the national building laws which have to create the necessary guidelines or modify existing ones. The three types of elevator which are allowed by the standard leave enough room for adaptation to national conditions.

? What sort of adaptations might those be? As you can see in the illustration, the three elevators have different sizes so also differ in how user-friendly they are for wheelchair users. Guidelines now have to be created which specify which type of building should be equipped with which type of elevator. It is conceivable, for example, that the smallest type would be used only in small residential buildings, and the medium type for all other buildings. Less prosperous countries could perhaps also use the smallest elevator for other applications. With this possibility of differentiation, countries have sufficient flexibility to implement the standard in an economically and politically acceptable manner.

? So is everything now as it should be? Not yet. The new elevator standard gives us a good basis. But there's still a lot to do on the implementation. What's missing now are harmonized building laws. Also, in some areas, the new standard only defines goals. In many cases, the engineering solutions for achieving them still have to be worked out. Here too, I totally agree with the jury: we still have a long and difficult way ahead of us. I should also mention that the "International Organization for Standardization" (ISO) is working on a new international standard which will harmonize the requirements for accessible elevators in the whole world.

> What contribution has the elevator industry made to improving the situation?

Based on my many years of participation in European committees for accessible elevators, I can state that all elevator manufacturers have made great progress with the accessible design of their products and contributed their knowledge to the standardization process.

And Schindler?

The new standard leaves plenty of room for innovation which Schindler has made use of! Let me illustrate with two examples: Schindler was the first company to develop one of the most forward-looking control systems for elevators: the Miconic 10 hall call destination system. With this type of control, the passenger inputs his or her destination floor on a keypad on the landing before they enter  $\rightarrow$ 

1-3 The European Norm EN81-70 describes how a lift for people with disabilities must be constructed.

4-7 New operating elements improve comfort for everyone. People with disabilities benefit particularly.

8 The glazed elevators in the Eurotheum highrise building in Frankfurt are equipped with the Miconic 10 hall call destination system.

→ the elevator. As well as the benefits which this function has for normal elevator traffic, it is also ideal for supporting a passenger with special facilities or allocating a specially suitable elevator. The passenger can indicate those needs by pressing an additional button.

You must imagine that a passenger identifies him- or herself to the elevator control by means of a personal code, following which the appropriate functions are activated for the next trip. These functions are stored in the system for individual users, as well as for groups of users with similar needs. So in an office building, for example, the system knows an employee's workplace and automatically initiates a travel command to the corresponding floor. In the case of a wheelchair user, the control system assigns an elevator car with sufficient space. The floor can be voiceannounced in the passenger's native language, etc. Once the passenger has reached their destination, the system is returned to normal operation. So you see, there are no limits to what we can imagine.

I think it's obvious how well these solutions fulfill the criterion of "Design for all." Every passenger - whether disabled or not - is provided with the functions he or she wants and needs.

So we finally get away from the frequently misunderstood demand for equal treatment of people with disabilities. It's not equal treatment that helps, but rather the provision of correct, individual support, even when different individuals have conflicting needs. With the functions I have just described (SchindlerID), that is absolutely possible.

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What simple advice can you give now to architecture students for their professional future?

It is recommended to use the term "obstacle-free" instead of "handicapped-friendly" since many people associate this earlier term with "Building for the handicapped." This new term addresses the real problem in a general way. Every time a building is constructed for people, specialist building consultants as well as advisors on specific installations should be included in the planning at an early stage. In relation to elevators, Schindler is certainly a reliable partner. •

Engineer Dieter Mehr has been working with elevators for 35 years.

#### Remarks

During the European Year of People with Disabilities, Schindler was one of 12 corporate sponsors of the European Year of People with Disabilities (EYPD), which saw events across the European Union highlighting the requirements of all of us with special needs.

The innovations behind SchindlerID were recognized by the presentation of the European Commission's "Breaking Barriers Award" for the services provided to handicapped elevator passengers. This award recognizes outstanding "Design for all" achievements made by European businesses and organizations that provide improved access for people with disabilities.

For additional information: www.schindler.com, www.schindleraward.com

