

## Summary

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### **Universal Design in New Housing Projects**

The experiences of the construction industry

NIBR Report 2007:14

The Norwegian State Housing Bank wanted to know more about “why it is taking so long to achieve universal design in the greater part of the building stock and in outdoor areas”. In this study of four recently completed large apartment projects a sample of senior officials from each of the projects was interviewed in depth by us personally. These officials were affiliated to contractors and project architects and engineers, construction companies and contract engineers. Their views and perceptions, interests and opinions supply the key explanatory variables.

The idea of universal design is perceived by many to be relatively vague and woolly, signifying almost everything and nothing. The lack of precision is considered a handicap in that it makes it difficult to define expectations or set priorities. “Don’t think many people really know what it means ... it only surfaced this year ... it’s on everybody’s lips nowadays,” said one of our interviewees. But universal design is firmly on the agenda. It could be said to be going through its first practical stage of development and testing; many feel like they’ve embarked on a particularly steep learning gradient.

Barriers have mainly to do with (perceptions of) undesired consequences or implications in terms of outlay, land use, engineering issues, mutual incompatibility of purposes and goals, policies and values etc. The absence of reliable, tailored products is a real problem for many, and, last if by no means least, doubts are still lingering about the wisdom and value of committing oneself to the each of the universal design principles. While it might violate the action plan’s basic thesis that special arrangements shouldn’t be necessary, several

of our interviewees believe that many of the principles could be “accommodated after the event”, that is, whenever the need crops up. Universal design is mainly seen in connection with the disabled community and their particular needs, although universal thinking about needs is increasingly colouring perceptions. Awareness is concentrated mainly on factors to do with mobility disability, followed by visual disability, asthma and allergy. No one mentioned the hard of hearing.

From our interviewee accounts it is evident they are in the invidious position of having to balance and weigh several concerns. These we see as the *management of responsibility, capital, technical standards and time as a resource*. The reason it is taking such a long time to get universal design adopted in the majority of homes is connected to these dimensions and the degree to which our interviewees find establishing a priority among them a source of conflict. The management of responsibility is about what they perceive to fall within their remit (common areas and outdoor areas more than apartments, what can't be changed later more than what can be modified), and safety requirements, and which groups/needs they feel most responsibility for. The management of capital reflects the razor sharp competitive climate in the construction business. The resulting inequalities between companies in terms of expenditure on universal design are perceived as another barrier. Capital expenditure is balanced against other qualities and construction considerations, as well as demand and saleability. Based on spending alone, most interviewees say it is unreasonable to expect universal design in all new housing projects. The management of technical standards comes into conflict with their sense of responsibility and professional pride, or sense of professional excellence and freedom to assess technical problems and make decisions. The management of time is always in the forefront when time is money, but is particularly critical when new ideas, designs, procedures and partnerships are being forged and tested. It was stressed that universal design takes time to plan and supervise.

The steep learning gradient and increased appreciation of universal design will probably help remove some of the barriers associated with these management dimensions. And new aspects of role management may emerge, such as whether/when the management of technical standards should include the management of universal design.

The descriptions of the construction projects allow us to appreciate the factors associated *specifically with role performance and interaction in the process* and their potential to promote universal design. One

necessary component here is that someone has to “volunteer” to play the role of advocate; there also needs to be people that are enthusiastic and willing to learn, inspire others, take part in the process, point things out, ensure things are done, check things and help people stay “on the ball”. The climate or culture in the organisation will also affect the advocate’s role performance. Some ways of doing things, which include compiling check lists and standards, supervisory routines, knowledge and experience sharing, self-assessment, etc. appear to facilitate ongoing learning and opinion (re-)formation.

Interaction with people on the outside is another important factor, i.e., how the professions involved in the construction process affect one another. The mindset of the construction client is all-important. Interaction between client and project team in the early stages must include attention to universal design. Interaction with the Housing Bank as an external party appears to have a significant impact on the projects in which the bank is involved with loans or grants. The role and purpose of the Housing bank are described in terms of being a source of encouragement and motivation, acting as a trigger, support, counsellor, “quality controller” and awareness raiser.

There is little agreement on whether legislation is the best way to promote universal design, despite the accent on fair treatment and equal distribution of costs. Some see legislation as the only feasible way forward for universal design to be incorporated in the majority of homes. There are alternative methods, say others. One of them is to build motivation by setting a good example, organising training programmes and compiling inspiring information – i.e., promoting knowledge building. Setting a good example is considered particularly valuable in this sense. “You need to sell a good universal design project for all it is worth!”, said one of our interviewees. Another concluded that universal design requires “... creativity, common sense, resolve and a big heart.”