

User involvement in Swedish residential building projects: a stakeholder perspective

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Abstract One factor influencing quality in the building industry is the ability of users, such as residents, to identify and express their requirements for the product, i.e. the residential building. However, the handling of communication with users in building projects has been insufficiently specified and studied. Drawing on a study of user involvement in building project design, production, and management, this paper examines user involvement in Swedish residential projects. To map current perceptions and approaches, building industry actors met in four focus groups. Group participants were asked to reflect on the definition of users, communication handling, how information from users is used, and challenges and opportunities in user involvement. Our initial emphasis was front-end activities, but focus group results revealed that user involvement was a continuous process extending from project initiation to evaluating the finished project as a basis for future projects. Discussions indicated confusion about who constituted users in various situations but, regardless of level of experience, focus group participants agreed on the importance and potential of user involvement and on the need for specific methods to acquire useful input.

Keywords Buildings · Building industry actors · Communication · Construction · Residential projects · Residents · User involvement

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1 Introduction

User involvement (UI) in planning, designing, and assessing the built environment has attracted attention in academia and practice for more than 40 years (Richardson and Connelly 2005). The imprint of this interest is more prominent in the planning field than in other related academic areas, such as architecture (Till 2005). The present article draws on empirical research treating the perspectives of various professional fields, such as architecture, developmental and technical consultancies, and user groups, and seeks an interdisciplinary understanding of user involvement in the early stages of building projects.

The advantages of planning processes that involve users are outlined by several authors (e.g. Olivegren 1975; Lerup 1977; Albrecht 1988; Fröst 2004; Tzortzopoulos et al. 2006; Nilsson et al. 2011). Over the years, motives for users' involvement have shifted from power distribution to the collection of valuable knowledge (Granath and Lindahl 1996; Till 2005). Later, users are viewed as active participants and co-creators of products, but less so in building processes where users are still viewed as consumers (Sanders and Stappers 2008). Recent studies in the UK and Sweden have identified good examples of UI by presenting and analysing case studies in the healthcare sector (Tzortzopoulos et al. 2006; Nilsson et al. 2011). Other studies of the early stages of building design processes have demonstrated that users have difficulties in exchanging information with architects that goes beyond concrete functions and structures (Luck and McDonnell 2006). In addition, information about household lifestyles and values in housing production might have limited worth (Jansen 2012). To engage with users, professionals need conversational skills (Luck 2007a). The use of various facilitating methods and visualization tools has become increasingly important. Drawings, models, and product samples can foster interaction between building industry professionals and users (Capjon 2004; Luck 2007b). Such methods and tools used in Scandinavia include "Considerate Design" (*Design med Omtanke*), design dialogues, and Design: lab (see Binder et al. 2011; Nilsson et al. 2011; Eriksson et al. 2012).

This article examines the attitudes and experiences of building industry actors in Sweden regarding how to involve users and create a useful user involvement process. We searched in our data for experiences of UI communication processes, how users are defined, how information from users is valued and applied, and building industry actor views of the challenges and opportunities concerning user involvement. In this way, we will investigate how building industry actors currently view UI and how they consider whether, and how, UI processes can be used to strengthen the quality of the early-stage construction process.

2 User involvement: concepts and literature

User involvement can be related to the citizen participation movement, especially in connection with housing development. In 1969, Arnstein introduced the ladder of citizen participation model focusing on municipality–citizen power relationships in various processes. Arnstein (1969) suggests that if citizens are given more power, the quantity and quality of decisions will increase. Arnstein's model, though criticized for considering only power aspects (Tritter and McCallum 2006), has been widely used by academics and practitioners since its publication as a basis for introducing, analysing, and developing user involvement. Conclusions from earlier research suggest that UI should include a variety of knowledge, experience, and expertise (Tritter and McCallum 2006).

Several Swedish reports identified early project stages as especially important for the development of UI. The “front-end strategies” for UI used in early project stages are described as the “final gate” before final decisions on design and building are made, and constitute “the preliminary, pre-project stages of the design and construction process and requirement management is an ongoing activity throughout this process” (Tzortzopoulos et al. 2006, p. 660). Empirical studies have found that lack of UI in critical development processes threatens project progress (Olander and Landin 2005).

The building management literature views users as a stakeholder, defined as “a person or a group of people who has a vested interest in the success of a project and the environment within which the project operates” (Olander 2007, p. 278) and “any individual or group with the power to be a threat or a benefit” (Olander and Landin 2005, p. 321). We will return to the definition of users in the Sect. 4, since it was a main issue considered in the focus group.

The interest in and demand for user involvement should be seen in light of growing research into public participation in planning processes, which in turn can be seen as a consequence of Habermasian notions of deliberative processes (Chambers 2003; Healey 1999). One basis of deliberative theory that serves as a foundation for contemporary communicative theories is that all arguments should be heard and valued equally and that analysis should yield the “best” recommendations for future decisions (Healey 1997).

An additional perspective on stakeholder involvement refers to “ownership” in planning processes, and in this study, we use the definition of Lachapelle and McCool (2005), who argue that ownership is of three types, i.e. ownership in process, outcome, and distribution. Though Lachapelle and McCool (2005) focus on natural resource planning, we find their schema useful in any communicative planning process, for example, UI in building processes. According to Lachapelle and McCool (2005), ownership in the process means that stakeholders’ voices “are heard and considered legitimate or valid” (p. 281), whereas ownership in outcome refers to “whose voices are codified” (p. 283) and ownership in distribution refers to “who is affected by the actions” (p. 279). We will modify the third category to include those using the buildings, labelling them “users”.

This can of course be seen in terms of different grades of power (Arnstein 1969; Olander 2007) or legitimacy (Olander 2007), but we are more interested in how and when users are said to be involved, in what stages of the design and planning process, and how information gained from this involvement is valued and used. By conceptually combining the types of ownership with levels of participation, we note that merely being informed results in a low degree of ownership, whereas active involvement results in a higher degree of ownership.

3 Methods

In line with our theoretical framework, we are interested in how industry actors describe their thoughts and experiences regarding the planning process, so that we can grasp the context in which UI is understood and presented (cf. Innes 1995). As our approach is exploratory, we chose to use the focus group qualitative research method. By conducting focus groups, the researcher can gain information about experiences and thoughts in a selected group (Morgan 1998). Compared with interviews, focus groups can provide more information than is asked for. If respondents talk to each other, they can introduce new relevant topics, jointly developing lines of argumentation and responding to one another’s

statements (Fern 2001). Particular statements will be mirrored or opposed by other focus group participants.

In a residential project, involved parties belong to either the supplier side, that is, the real estate industry, building industry (which owns, manages, and builds), and technical consultants, or the consumer side, that is, clients and their customers (i.e. users and end-users). In this study, we refer to users as those living in and routinely using the buildings. The present empirical analysis focuses on how professional stakeholders perceive the lay knowledge of users and how they integrate end-user information, i.e. whether and how they are involved in information exchange with users and how the information so acquired is handled.

We conducted four focus groups, all of which were video recorded. The video recordings were transcribed verbatim and thematically analysed in a content analysis that identified key themes (Coffey and Atkinson 1996). In the present study, the moderator was also the analyst, an arrangement Krueger (1998) claims is favourable and thorough, though time consuming.

All three authors read and coded one focus group transcript, meaning that words and phrases were identified to obtain an overview of the topics discussed. Initially, we worked independently, identifying broad categories and specific themes expressed by the participants. After this initial coding process, we discussed our findings to arrive at a final, joint coding that was applied to all data. The major themes and categories identified in the coding process were organized into thematic areas.

Each of the focus groups, which were conducted in two cities in 2011, involved three to five participants and lasted 3 h. The participants comprised building industry stakeholders and actors (based on the categories formulated by the Swedish Centre for Innovation and Quality in the Built Environment), as follows:

- architects
- NGOs
- developers and contractors
- municipal employees, county council members, and authorities
- organized users and end-users
- technical consultants
- real estate owners and managers

Group creation is an important part of focus group research, since interaction and communication between participants is a key feature of the method (Bloor 2001, p. 20). Participants must have some common ground as a basis for mutual understanding as well as a diversity of outlooks to fuel discussion (Bloor 2001).

Focus group participants (FGPs) were chosen so that the groups, taken together, would represent all the above categories and create conditions for dynamic discussion. The sampling was also designed to include different sizes of organizations or companies and create balanced gender representation. The aim was to combine people with different levels of experience of the studied issue, though all were interested in working with users. FGPs were also chosen to represent both residential and commercial building production, although this paper focuses on residential projects.

The industry FGPs should not be seen as representing the building industry at large, but that part of the industry interested in the studied issue, as indicated by their acceptance of the invitation to participate. The composition of the four groups is detailed in Table 1.

Table 1 Composition of the four focus groups

Group 1, City A	
Linda	Architect
Malin	Sales manager of a real estate management company
Johan	Technical consultant
Group 2, City A	
Louise	Landscape architect
Anders	Production manager of a real estate management company
Ulrika	Representative of a user group
Cecilia	Technical consultant
Group 3, City B	
Marie	Architect
Sofie	Manager of a county-owned real estate company
Mats	Representative of network/consultancy group
Josefin	Spokesperson of a user group
Group 4, City B	
Susanna	Architect
Ruben	NGO representative
Inger	Representative of a Swedish policy coordination agency
Peter	Sales manager of a construction and real estate management company
Lena	Sales manager of a development and construction company

Some stakeholders were not represented in the focus groups, for example, municipal employees and county council members, because none of the dates fit their schedules or because of lack of interest.

Our research questions were as follows:

- What are industry stakeholders' notions and perceptions of users?
- How and when do they communicate with users?
- How is information from users valued and used?
- What challenges and opportunities arise when involving users?

Based on these questions, focus group topics were formulated and introduced throughout each session. The FGPs responded to the topics and discussed what they considered merited further exploration. The topics raised were as follows:

- current experience of communication with users
- their definitions of users
- UI challenges and opportunities
- what could be developed

Some visual aids were used to enliven the discussion (cf. Bloor 2001). For example, the FGPs were asked to collaboratively list the advantages and disadvantages of UI on separate pieces of paper and then to group or prioritize the notes (Fig. 1).

4 Results and analysis

This section presents the results of the focus groups and relates these results to the theoretical concepts. The presentation refers to the coding process in which major themes and

Table 2 Thematic areas, sub-themes, and theoretical concepts

Thematic areas	Sub-themes	Theoretical concepts
4.1 Definition of user	–	Customer, client, identifiable user, virtual user (Tzortzopoulos et al. 2006)
4.2 Modes of communication	4.2.1 Informal contacts	Modes of communication (Innes 1995; Till 2005)
	4.2.2 Formal contacts	
4.3 Reasons, advantages, and challenges	4.3.1 Users as customers	Ownership (Innes 1995; Lachapelle and McCool 2005)
	4.3.2 UI: a value-adding activity	Preferences and choices (Jansen 2012)
	4.3.3 Preferences and choices	Valuable knowledge (Till 2005)
	4.3.4 Users: a heterogeneous group with homogeneous needs?	Shared language (Granath and Lindahl 1996)
	4.3.5 Expectations and commitment	Spoken interaction (Luck and McDonnell 2006)
	4.3.6 Communication, representativity, and interpretation	
	4.3.7 Laws and regulations: representing user interests?	
4.4 Energy efficiency: a future potential for UI?	–	–

Clients' customers were mentioned as another user group, for example, when residents were also patients. Sofie (real estate manager) says:

Our customers are really those who rent and pay the money, but we think a step beyond that ... They live there, but just as many work there—they are an even bigger group, I would say, in many of our residential buildings ... It is like we have two customer groups, but they are in the same room, both daytime and night-time.

The lack of a commonly accepted term for users mirrors the building industry actors' view of them. On one hand, with no coherent view of users, joint discussion is more difficult; on the other hand, the negative associations of the term could create distance rather than fostering unity. The use of several words, such as customers, residents, or citizens, illustrates the multifaceted nature of the group that users constitute.

4.2 Modes of user communication

Communication is a precondition for user involvement and participation in planning processes (Innes 1995). Common modes of communication tend to exclude users from the processes (Till 2005). In this case, some FGPs claimed that they never met any users face to face. One comment about the early phases of a building project was that “we don't have any users then”, the phase being too early (Cecilia, technical consultant, FG2).

Later in the discussion, FGPs realized that many of their meetings actually involved interaction with users, though not in a strategically targeted way. Lena (sales manager, FG4) told how previous decisions were based on project members' thoughts about what customers wanted but that they recently started attempting to learn what customers really

Table 3 Advantages and disadvantages of user involvement (output of Focus Group 2, translations of what appears in Fig. 1)

Advantages	Notes in between	Disadvantages
Satisfied customers/users (or customers at all)	Regulations meet many of the demands of users	The level of knowledge among users
Long-term	More specific demands require user involvement	Difficulties expressing demands/questions
Feel secure		Difficult to pose questions at the right time
Participation/answer to client needs		Unrealistic expectations
Identify customer needs		Somewhat difficult to take (everyone) into account
Feeling of participation and influence		More questions after
		Too many options—lay person or expert?

wanted. Johan (FG1), a technical consultant, expressed a similar view: “Most of the times, decisions are based on what you think”. He added that he sometimes talked to friends or relatives to find out more about user needs, instead of talking to the intended user group (Johan, FG1).

Basing project decisions on nonusers’ wants may result in a lack of user ownership in the outcome, as voices other than those of actual users will likely be attended to.

In the discussions, three phases of UI were identified. First, before project planning is finalized, users are asked about their preferences. Interactions in this phase usually occur via methods such as questionnaires, in-depth interviews, and focus groups, which could be seen as forms of consultation. Second, when construction is underway and the users have already signed contracts, the interaction takes another form, focusing on surface finishes, i.e. the user is now actively involved despite not having shaped the early stages of the design process. The post-occupancy stage is the third stage, when resident involvement is used in evaluating overall conditions and the moving-in process, in order to identify areas of the existing building that need upgrading or to benefit future projects.

Two types of contacts were also identified: informal contacts and formal or planned contacts.

4.2.1 Informal contacts

To complement the above-mentioned user communication, an informal type of contact was described. According to the FGPs who were architects or technical consultants, their usual ways of contacting or communicating with users were not strategic. Informal meetings occur when visiting the work site, during which one casually questions whomever one encounters. Johan (FG1) described the first category:

When I work on energy performance certifications in schools, I walk around and talk. I pop by the teachers’ lounge and ask “Hi, do you have any problems with indoor climate?” or ... “What, in your opinion, works well in this building, what doesn’t work?”

Such consultations tend to be informal rather than strategic and planned. The level of representation is unspecified, but these informal contacts can succeed in capturing complementary information.

4.2.2 Formal contacts

Many contacts in the above-described phases are made using structured methods, either surveying a large group of users or interviewing a smaller group or individuals in depth—both classical information gathering methods. Marie, an architect (FG3), described a different approach in which all involved stakeholders, including users, met in an early phase and learned to “speak the same language” through *design dialogues*.¹ This may benefit future collaboration, creating a basis for social learning and offering a way to “turn information into meaningful knowledge” (Innes 1995, p. 185).

Inger (FG4), representing a government agency, described her experience of conducting a “walkabout” or “walk-through evaluation” (Swedish: *gåtur*)² with users. “You walk together and end with a focus group to discuss your experience. It is a quick way to pick up on deficits in the studied environment”.

Several FGPs identified a need for methods to handle UI, information exchange, and communication between involved actors.

Susanna, an architect (FG4), described a lack of “methods for proceeding—it is fairly easy to collect a lot of facts and opinions, but how do we translate those into something useful?”

In most situations in which user communication occurs in planned meetings, the industry actors met an appointed representative through whom a user group communicates. Ulrika (FG2) and Josefin (FG3) exemplify appointed user representatives who often play a more active role in the discussion and sometimes even initiate new projects.

The architect usually continues to interpret what has been said by users, guarding user interests. This is also true of the sales manager, who handles communication with the production part of the company: “My role is to look at the project through the eyes of the customer”, said Malin, a sales manager (FG1). Considering that user requirements are usually presented by user representatives at the first meeting, and then subsequently by an architect or someone else, several layers of interpretation or translation ultimately insulate the project team from the end-users. Together with the existence of a representative with little legitimacy among the larger user group, this could indicate a lack of ownership in the communication process.

Some modes of communication to increase the possibilities of understanding and of UI were discussed in the FGs. Visualization tools were one method discussed in the design process as user support for choice making (FG1):

Johan: [...] We work a lot with visualizations of our products ... not only lists, but drawings. For those who work in that room, well, there is the bed, there is the socket ... where everything is in the room. And it is very visual, and the person who will work there pretends to walk there ... it is a way to make it easier, perhaps, to evoke a picture of how it will be.

Another participant, Malin (FG1), continued by talking about her company’s use of animation as a visualization tool. The company’s website presents a tool with which users

¹ Method described in Fröst (2004) and Eriksson et al. (2012).

² Method described in de Laval (2014).

can “click on different views and the house will spin and you can see it from different angles”. Except in the case of the interior design, the user can include time-related aspects, for example, how the apartments are exposed to shadows and sunshine.

To summarize, one could say that many stakeholders become actively involved in the building process only at a relatively late stage, and it is possible to identify a resulting knowledge transfer gap between users, developers, and consultants. Feedback and communication with end-users, which might be labelled “dialogue”, is in reality handled via questionnaires and surveys, cutting into the benefits accruing from communicative action and stakeholder involvement and indicating a lack of user ownership in the process. In the experience of the FGPs, users were generally passive until asked to participate, and only in a few post-occupancy cases were user contacts initiated by the users themselves, when something went wrong, for example, when ventilation stopped working (Cecilia, FG2; Johan, FG1, both technical consultants). This indicates little opportunity for social learning, as defined by Innes (1995), as well as little opportunity for information and knowledge exchange in the communication process.

Even when users are invited to focus groups, these mostly are used for consultation: the participating user is not actively involved in the process.

4.3 Reasons, advantages, and challenges

FGPs were asked to list reasons for and against UI. Some visual aids were used to enliven the discussion (cf. Bloor 2001). For example, the FGPs were asked to collaboratively write the advantages and disadvantages of UI on separate pieces of paper and then to group or prioritize the notes (Fig. 1). All the notes were thematically sorted and themes occurring in two or more groups were sorted into categories and illustrated by quotations from the focus group discussions (Table 3).

4.3.1 *Users as customers*

The main reason to listen to users’ opinions or to involve them in product decisions was “to have future users/tenants/customers at all”. The information gained from user communication helps identify how and where people want to live. Malin, a sales manager (FG1), described how they had problems finding tenants for a project built a few years ago. Since then, thorough questionnaires and focus groups have always preceded initial decision-making about what kind of building projects to invest in and where. This view was seconded by Lena (FG4), who said that the economic risk is greater in the preceding selling stage than in the building stage of a project, which is why developers value UI early in the process, to learn what interests their customers.

4.3.2 *UI: a value-adding activity*

FGPs generally agreed that involving users gave a broader, sometimes new perspective on projects, i.e. UI can give a more multifaceted understanding of what is required and valuable knowledge (Till 2005). According to this perspective, users are consulted in the communication process and their views are considered important and useful.

If we return to Lachapelle and McCool (2005), we note that even though it is not always easy to obtain face-to-face UI, or to foster ownership that means that users’ voices are heard, communication with users is generally considered important and valid.

Another benefit mentioned by several FGPs was the long-term relationship between landlord and tenant. FGPs from the real estate industry described the costly process of finding new tenants and the advantages of having contented long-term customers. Participation and opportunities to get involved in decisions regarding a building project, its immediate environment, and the resulting homes ultimately create a sense of ownership and satisfaction among eventual residents, who will likely stay long term and take care of the premises. Ulrika (representative of a user group, FG2) highlighted the importance of communication concerning security and well-being. She also recalled that research has demonstrated that people who like their neighbourhood take better care of it.

4.3.3 Preferences and choices

Considering matters from the user perspective, Jansen (2012) singled out two important dimensions of how users make housing choices. First, there is the difference between the concepts *preference* and *choice*, preference being described as a hypothetical choice, an expression of attractiveness, and choice representing actual behaviour resulting from a complex set of factors including preferences, market conditions, availability, lifestyle, budget, and knowledge. FG2 discussed this matter and identified the importance of clarifying to users whether the question being asked concerns preferences or actual choice, in order to obtain valid answers.

Anders: You have to put some effort into how you ask the questions as well. If you ask ‘Do you want ...?’, then everyone says ‘yes’ ... Everyone wants a bigger apartment, and a bigger kitchen, and two bathrooms, but then you end up with the question of how much you are willing to pay for this—how much you are able to pay. Then it falls apart. Sometimes the customer doesn’t know what her or she wants, they would really like to have four rooms, but ...

Ulrika: Well, I would say that is not how I would put it. The customers know what they want, but they don’t know what they are prepared to pay for it. [...] And the difference is that they want, as you say, a lot—a balcony and then some. Well, ok, but if you want that, you have to pay SEK 7000 per month for your student apartment. No, no, I don’t want that. So I agree with you [to Anders].

The discussion continued by treating aspects such as the difficulties involved when users are supposed to have opinions about choices for which it is difficult to prepare beforehand. This makes it even more important to think carefully about question formulation, in order to gain useful information. Lena, a sales manager (FG4), said that customers expect or even demand involvement in decisions about their future homes. When surface finishes and kitchen appliances need to be chosen is the point at which UI typically occurs, according to several FGPs.

Several groups discussed the danger of offering too many choices, adding to an increasing and sometimes burdensome number of choices in everyday life, from pension fund investments to telephone providers. Positive results with satisfied customers were achieved, for example, by offering a choice of several colour schemes for features such as kitchen tiles (e.g. a choice of “sea”, “sky”, “earth”, or “fire” colour combinations) (Malin, sales manager, FG1). Related to Jansen (2012), FGPs also cite the difference between situations in which residents are asked about requirements and can answer freely in any way, and situations in which the only possible answers are preselected attributes on a list. We found that the informants experienced more satisfied users when options were

limited in some way. The complexity of choices might be overwhelming to users, as Linda, an architect (FG1), directly acknowledged: “I was thinking, as a user, it would be nice to reduce the pressure of so many choices”.

The group agreed that it was important to exert some influence but that having too many options can ultimately lead to more stress than having a more limited number of alternatives. A similar discussion occurred in FG2: today, we face choices and dilemmas in nearly every societal field, and not just related to indoor design. Louise concluded: “It is always like this: Did I choose the right thing, am I really satisfied?”

4.3.4 Users: a heterogeneous group with homogeneous needs?

Regardless of how the FGPs preferred to define user, a recurring discussion focused on the extent to which users were a homogeneous or heterogeneous group. It proved to be a great challenge to successfully involve such a diverse target group as users. Various communication strategies were used to investigate users’ needs and perspectives. Depending on the phase of the building process, users were treated as either a generalizable crowd or an impossibly disparate collection of individuals.

In FG3, participants objected to the generalized image of user groups as homogeneous:

Josefin: [holds up a picture of a skateboarder] When you talk about how young people want to live, you encounter a cliché of what young people are and what they want ... it is really tricky, because young people aren’t a homogeneous group. They don’t want the same things, all of them ... there isn’t one way of life they all want ...

Sofie continued with the example of elderly people: “Elderly people, if you talk about them as a group, don’t get more alike just because they turn older, rather the opposite, they get more differentiated, the older they get”.

Lena (sales manager, FG4) quite contrarily stated that “our basic requirements in a home are very similar”, and Inger (government agency, FG4) emphasized that “all individuals, regardless of disability, want to have a normal life, to go to school, to have a home, to eat, sleep, love, have a family, just like everyone else”.

There is a risk that if building industry actors regard users as a homogenous group, they will oversimplify their perceived needs. The risk is mainly that those perceived needs will reflect assumptions or prejudices rather than actual user needs. Peter (sales manager, FG4) identifies another risk: “The more you try to make the product fit everyone, the more indistinguishable it becomes”. Taking too multifaceted a view of requirements, or the fear of one, could limit or hinder the involvement of users. “If you take everything into consideration, then nothing new will be built”, said Anders (production manager, FG2), referring to differences between diverse user wishes, economic considerations, and maintenance.

Do generalizations about users result from a lack of UI or are they a way of handling information from UI? Although users are considered important, in some stages of the process, overall decisions about priorities need to be made in order to proceed.

4.3.5 Expectations and commitment

When FGPs were asked about the disadvantages of UI, one category of answers related to expectations and commitment. Several FGPs described perceived problems that could arise when users are involved in the planning process, such as unfulfilled expectations and desires, and concerns that involved users may be disappointed or harbour unrealistic

expectations resulting from poor communication about the project framework and limitations.

The FGPs also discussed the issue of commitment, the need for actual change, and user impact as resulting from UI, even though years might elapse between the decisions and actually “moving in” (Anders, production manager, FG2).

4.3.6 Communication, representativity, and interpretation

Earlier research has identified challenges in finding a shared language between building industry actors and users (Granath and Lindahl 1996). In addition, indirect communication and multi-layered communication can be problematic in spoken interaction (Luck and McDonnell 2006). The FGPs discussed the challenge to find shared language so that the parties to the discussion can understand each other (FG2, FG3, FG4). Sofie (real estate manager, FG3) put it thus: “Communication, communication, communication—do we talk the same language, what do you mean, really? To dare to ask and find the right level [of communication]”. Lena (sales manager, FG4) echoed her, saying that “to succeed you have to be a really good communicator”. Even with a good start, however, the communication process may be interrupted later when other professionals enter the scene.

FGPs spent some time discussing the need for better communication, particularly between actors in the building industry and users.

Josefin (spokesperson of user group, FG3) presented an example of communication between architects and users:

Josefin: When we met the architects the first time, there was discussion about how we looked at housing for young people, what was valued and so on. The architects went home and sketched and returned with proposed layouts and sizes of apartments—they were really big two- or three-bedroom apartments ... they hadn't really listened to us ... well at the first meeting we did not understand each other. ...

A related communication problem appears when there are many levels between the end-user and the decision maker, and information is lost or misinterpreted. The interpretation of user information was especially discussed in FG3. The result is often that an initial user contact is inherited by other members of the building project playing the role of users, users-by-proxy, or representatives, guarding what they interpret as the user needs in the project. Josefin (spokesperson of a user group, FG3) noted that the person handling the users' information plays an important role, both when it comes to direct communication with users and when interpreting the information.

Anders (production manager, FG2) illustrates another challenge by saying that “it is not unproblematic to have a dialogue with people who lack knowledge of the building process”. Tritter and McCallum (2006) suggest that a variety of knowledge and experience is important in user involvement, but in practice, this might be hard to achieve since user groups are broad and have other knowledge.

4.3.7 Laws and regulations: representing user interests?

All the FGs emphasized the role of rules and regulations and that they are designed to serve the public interest: rules and regulations often represent user needs, sometimes even eliminating the need for “live” UI, or are used as a pretext for not involving users. Nevertheless, these regulations were said to be insufficient for meeting all user or client

needs, for example, when a user's desire for sustainability exceeds the standard or when one regulation contradicts another.

Peter (sales manager, FG4) cited the example of how users wanted windows in homes for the elderly to be easily handled by those with a physical disability, but at the same time not so easily handled that a child could open them by mistake.

4.4 Energy efficiency: a future potential of UI?

Energy efficiency in the built environment has been highlighted as an area in which UI could develop further and be beneficial. Energy systems in buildings are dependent on users for their function, and several FGs touched on the subject. Johan, a technical consultant (FG1), stated that “if the user is involved earlier it could affect the building's energy use”, while Cecilia, also a technical consultant (FG2), remarked on the behaviour of passive house residents: “If it is not used right by the user, it is not a passive house”. Discussing how users handle the technical systems in their homes, Ruben commented: “Someone needs to work on the issue of user-friendly indoor climate systems” (NGO representative, FG4).

Peter (sales manager, FG4) referred to the overriding issue and motivation of saving money in relation to energy use, saying that “the more expensive the power becomes, the more interesting it is to find new solutions together with the user”.

5 Discussion and conclusions

Our aim was to capture building industry actors' perceptions and approaches to UI and to explore their view on whether, and how, UI processes can be used to strengthen the quality of the early-stage construction process. We have identified certain aspects and themes that seem important. The study was intended to focus on early phases of planning the built environment, i.e. front-end activities, and on how UI is perceived and practiced by industry actors in early stages of the building process. However, several stages of the process were addressed in the focus group discussions, and we found these interesting as well, which led to an extension of the focus to include UI in later stages of building projects

5.1 Who is the user?

It became evident that users are a multifaceted group that industry actors find difficult to deal with. The concept of “users” seems problematic, partly because it is a term that industry actors do not consistently use and partly because the group's heterogeneity appears only when these actors start reasoning about who users actually are or could be.

When user groups are not identified as constituting one or more stakeholders, their engagement and involvement become less planned and the user information tends to be less or randomly emphasized in further discussions. UI usually occurred via representatives of an identified user group. After users became involved, architects and sales managers seemed to assume the task of conveying forward user interests in later project stages. Hence, there are risks of misrepresenting original user intentions.

5.2 Acknowledge the challenges

No matter what their experience of UI, FGPs generally emphasized its importance. In addition, both those with little experience of UI and those who had been working on UI issues for years agreed on the need for development, structure, and method when fostering UI. The risks and challenges of UI were considerably higher when a process was initiated without a clear strategy or well-considered purpose: an ill-conceived and ill-managed UI process could do more harm than good, producing largely irrelevant output, damaging trust and legitimacy, and even ruining conditions for future collaboration.

When considering ownership theory, mostly with reference to communication and involvement processes, we found that users are usually involved consultatively, for example, by means of surveys. Regarding ownership of outcome, it is mainly the voices of developers and management that are codified in that, at the end of the day, their decisions are implemented. Finally, users and management share ownership of distribution in that what is implemented and built has consequences for both parties in their everyday work and life.

Many problems commonly attributed to, for example, participatory design or community building (cf. Healey 1997; Hornyánszky Dalholm 1998; Olivegren 1975) can be related to the knowledge sharing between stakeholders. It is difficult to establish a balanced relationship between building industry professionals and users, since information asymmetry will always prevail. It is important how professional actors view and handle information exchange with the users—which relates to what constitutes good UI according to FGPs.

One example of this is being aware of the difference between preference and choice, as several FGPs pointed out. There is a gap between what users say they want and what they are prepared to pay for. This phenomenon is related to what users say they want when presented with the consequences of what they will sacrifice if they get their first choice.

FGPs expressed insecurity regarding how to engage in active UI due to their inexperience in handling the above risks. They discussed the challenge of asking the right questions at the right times to obtain helpful answers. FGPs identified the importance of asking questions for the right reasons, defining participation as a means to gain information, and not an end in itself. Tritter and McCallum (2006) suggest that UI must be meaningful and have a real effect on the outcome of processes. This study found that in some cases, no communication would have been better than bad communication, in that if user knowledge and views are not going to be considered in any case, or have any real impact, it may be better not to engage users or pretend to be interested in their involvement.

5.3 Tools and methods for facilitating user involvement

There was agreement that involving users early in the planning process, as well as later on, adds value to the building process. Value is added directly to the building project (by providing additional information about expectations and requirements), by strengthening long-term relationships (e.g. between landlords and tenants), and by providing input for future projects.

Although some were pessimistic about the building industry's ability to change, the FGPs identified areas in which UI development would be especially beneficial. Energy use was a recurrently cited area with great development potential, as residents can greatly

affect the post-construction energy use in buildings. Energy system usability and indoor climate comfort were other issues where FGPs say that UI could be developed.

The obvious value of UI leads to the following question: What conditions and preparations need to be fulfilled and made for productive UI? Lachapelle and McCool (2005) note that a successful communicative planning process entails more than just producing a document. A sound process characterized by ownership involves learning, representation of diverse interests, and social acceptability. FGPs also discussed the kind of value UI produces, besides shaping the planned environment, and identified “the feeling of being included” (Louise, landscape architect, FG2) as one of its values.

There is a strong need for tools and methods supporting a correct approach to UI, so that the preconditions and context are clear and the risk of false expectations is minimized. FGPs cited several methods and tools for supporting UI, such as *walkabouts* (*walk-through evaluations*) and *design dialogues*, but these were not well known in practice and were therefore seldom used.

5.4 Conclusion

To sum up, several arguments, expressed both by FGPs and in the literature, identify the advantages of involving users in building processes, but there is less certainty about *how* and *when* to implement it. The issue of *how* includes how to identify who should participate, how to ask the right kinds of questions, and how to achieve real UI and not just user communication. Asking *when* means asking when it is possible and meaningful, from both the users’ and other building industry actors’ sides, to implement UI.

Regarding users as stakeholders could help in the identification phase and in determining how a certain group is affected by a given project. The reason for identifying and analysing users is to know who to involve, and when and why to involve them.

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