USEtool
EVALUATING USABILITY

METHODS HANDBOOK

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PREFACE

This methods handbook is developed in the research project Usability – Methods and Tools (original Norwegian title: Usability – metoder og verktøy), conducted during the two-year period from 2007 to 2009. The objective of the research project was to develop methods and tools for mapping and evaluating the usability of buildings.

The project was a Gemini Centre joint SINTEF and NTNU research project commissioned by Sør-Trøndelag County, The Directorate of Public Construction and Property (Statsbygg), and Statoil.

A key product of the research project was a process description, detailing how building owners and facilities managers can gather user experience from existing buildings as a basis for improving them, as input when designing new buildings, or as a reference when choosing new premises. The objective has been to develop a set of tools that are easy to use but that yield both an overview and more in-depth knowledge. The descriptions of methods and tools in this toolbox were developed in cooperation with our clients. The methods were also tested and developed in different buildings during the project period. We focused on developing methods and tools that the project partners could utilise on their own. Qualitative methods that are easy to use are given emphasis, and at the same time they provide knowledge about the most important factors that have an effect on usability.

The REBUS (User-oriented Benchmarking for Usability in Real Estate) project, financed by Erabuild, has provided a Nordic superstructure for the theme of building usability. REBUS has made Nordic networking possible, and has financed the production of scientific articles based on findings in the Usability – Methods and Tools project and related research projects.

This methods handbook contains a process description for mapping and evaluating usability in existing buildings. The support tools described in the handbook focus on educational and office buildings. The methods and measurement parameters can be refined and adapted for the mapping of usability in other types of buildings.

We would like to thank our contact persons in Sør-Trøndelag County, Statsbygg, and Statoil, who were actively involved in defining the project's final product through their participation in a series of workshops. We also take this opportunity to extend our appreciation to our partners in REBUS and CIB W111 for joining professional discussions and providing constructive input to our project. In addition, we thank Senior Researcher Kirsten Arge for providing quality assurance and Statoil, Anne Kristin Stenersen (NTNU) and Catriona Turner for assistance in translation.

On behalf of the research project Usability – Methods and Tools

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HOW TO USE THE HANDBOOK

This methods handbook describes a systematic approach to mapping the usability of buildings for an organisation. It presents a systematic review of the various stages in a mapping process and contains guidelines and advice for best practice when organising and implementing the various steps in this process.

The recommended process for mapping usability consists of five logical stages and culminates in the drafting of an action plan for improved usability for the organisation involved. The implementation of these stages is described. For each stage there is a general introduction, followed by a description of the goals of that stage, the methods used, and the expected results. In addition, relevant tools that can be used to implement the activities of each stage are recommended. These are described in the CD that accompanies the handbook.

In principle, we recommend implementing all five stages in order to obtain the best possible contextual knowledge about usability in relation to the different building categories/user groups. However, it is also possible to use separate segments of the mapping toolbox. This will depend on the desired focus and the scope of the mapping in each case.

Templates for recording findings summarise important points from each stage. We recommend that these be used as a checklist during the planning phase and as supporting material when conducting the mapping.

Further reading is listed in the Literature section at the end of the handbook.

USABILITY

Buildings are seldom an end in themselves. Rather, they are tools that support the activities taking place within them. Depending on how well they support the users' activities, buildings contribute to efficiency, effectiveness, and satisfaction in the user organisation. This is what we call the 'usability of buildings'.

Buildings are constructed for a purpose: for education, as workplaces, for living, or leisure and entertainment. How well a building supports the user organisation varies. In recent years SINTEF and NTNU, in collaboration with universities from a number of European countries, have devoted efforts to understanding how buildings enhance or inhibit value creation in various user organisations. We have worked on developing methods for evaluating the usability of buildings for the purpose of improving existing buildings and their functionality and in order to acquire knowledge that can be used in the planning of new buildings.

Usability is defined as 'the extent to which a system can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use' (ISO 9241-11:1998). This ISO standard defines the usability of a building or a product based on the following three factors:

- **Effectiveness** describes whether users can achieve the intended result. Effectiveness is about value creation and doing the right things, and should be related to the strategic level in an organisation.
- **Efficiency** expresses how long it takes to achieve the intended result. Efficiency is about doing things right, being productive, having enough space and equipment, and having a sufficient support system.
- **Satisfaction** is a function of the users' experiences, emotional responses, and attitudes in relation to the product or the building.

To date, those who work in the building industry have not been sufficiently interested in evaluating the use of buildings they have helped to create. Does the building function as intended? Are there problems related to function or room use? How efficiently is the building utilised? How satisfied are the users? By not evaluating the use of buildings through asking such questions, vital opportunities for improvement and for coming up with new solutions have probably been missed. The goal of the Usability – Methods and Tools project has been to rectify this situation by developing methods for evaluating buildings in use. This has resulted in the present handbook, which emphasises the use of methods that are easy to implement.

By considering a building as a tool, we should be interested not only in how the building itself functions, but also how the building impacts value creation in the user organisation. The user organisation should ask itself: What do we want to achieve? What do we want the building to contribute? Can our premises create

added value for the organisation? We have seen that many user organisations have little awareness of those aspects. Instead a building is merely seen as floor space or workplaces, without much consideration of what the returns are on the rent they pay. For instance, a business that wants to stimulate cooperation and learning should be interested in how their office solution supports these goals. As another example, a kindergarten that wants to encourage involvement by the children should consider how the building and its furnishings promote or restrict their mastery of their environment.
For building owners and users, an increased focus on usability represents both a challenge and an opportunity. The challenge lies in the fact that the user organisation may want quick changes and a high degree of customization to achieve maximum effectiveness. If not handled wisely, this may result in unnecessary tailoring for tenants, which can drive costs up and be difficult to change later. In this type of situation it is essential that solutions are flexible so that they can readily be changed as needs change. At the same time, an increased focus on effectiveness represents an opportunity for building owners and facility managers, as having expertise and premises that can contribute to increased customer satisfaction may be a competitive advantage.

Operationalising the concept of usability
How can we understand the concept of usability in a way that makes it manageable for assessment and evaluation? In the Usability – Methods and Tools project, where the objective has been to develop a methodology for evaluating usability, we have seen the need to operationalise the concept of usability in order to make it easier to understand and discuss. The definition of usability focuses on:

- specified users who use a product (the building) to achieve **specified goals**
- the importance of **context** – in other words, the relationship between building and users
- the **efficiency, value creation,** and **user satisfaction** that contribute to achievement of the specified goals.

A building's usability is never dependent just on the building itself. Its usability should be seen in the light of the relationship between building and user. This is essential for understanding the concept of usability. The users have their own history, experiences, and perceptions in relation to the building and the activities that take place there. Further, the way they perceive the building will always be influenced by both individual and psychosocial considerations that have little to do with the building itself.

While working on the evaluation of usability, we have focused on the following questions: **What** do we want to achieve, and for **whom**? In office buildings the user organisation often formulates objectives related to learning, branding,

or shared premises for units that should cooperate more. In addition there are different user groups that will often have different user perspectives. In a kindergarten it may be desirable to have chairs and other furniture of a size that is suitable for children, but this will not provide an optimal working position for the adults who work there. Moreover, the perspective may vary depending on whether the context is the preferences and satisfaction of individuals or the effectiveness of the organisation as a whole. For instance, an increased focus on knowledge sharing may require individuals to share their knowledge with others in the organisation, which many employees may find demanding. In order to communicate this more clearly, we have focused on who, what, where, and why questions.

For what?
The definition of usability emphasises the fact that there are specified objectives to be achieved. Further, we have seen that there is a need to define the activities that are to take place. Thus, the question 'For what?' is multifaceted:

- Which **objectives** are to be realised?
- Which **activities and workprocesses** are to be conducted?
- Which **work methods** are to be used?

When evaluating usability it is essential to consider what factors **enhance** or **inhibit** the effectiveness or performance of various activities.

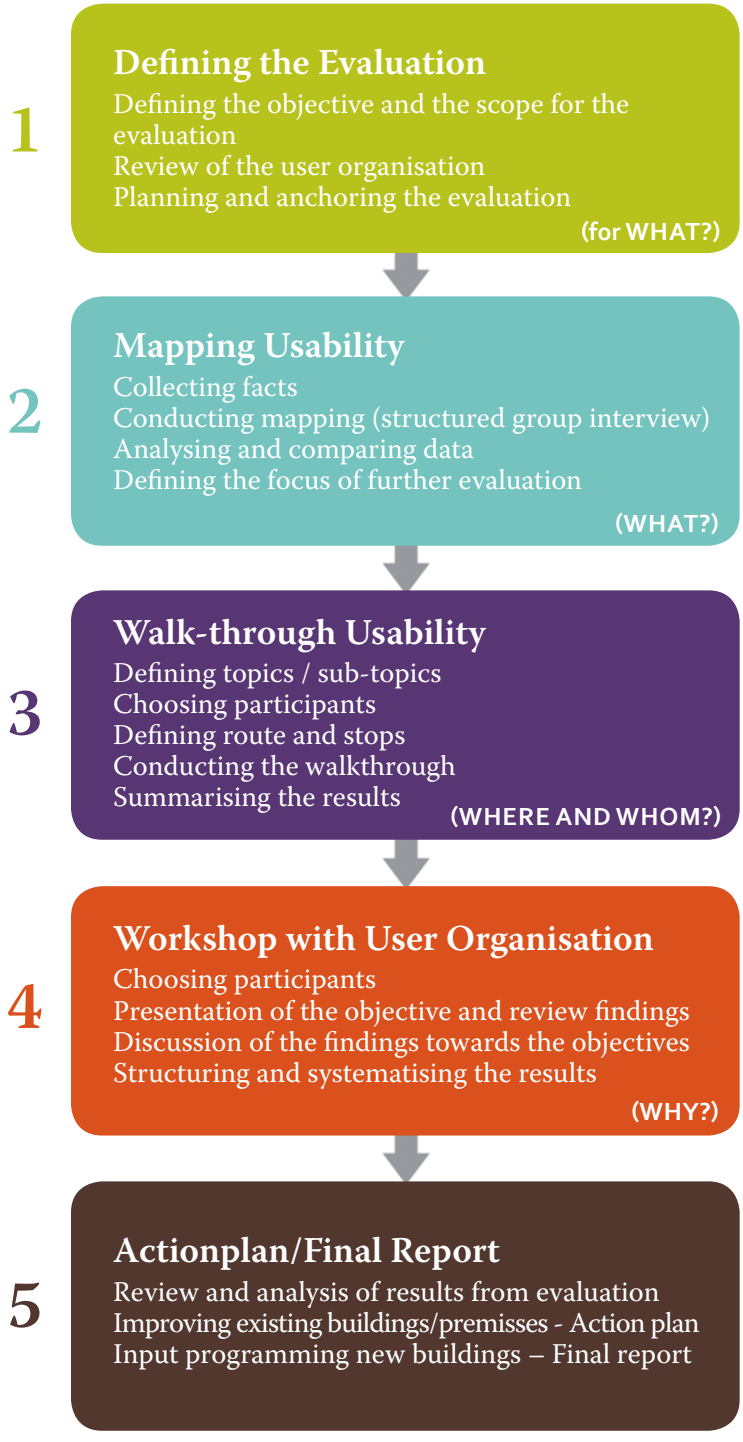
For whom?
The next question is: Whose objectives should be met? Should it be the objectives of different individuals, of certain user groups, or of the user organisation as a whole? We have focused on the need to define both the **user level** (individual – group – user organisation) and the **type of user** (user group). As the definition of usability designates specified users it is important to define which user groups are in focus. Are we evaluating usability from the perspective of a teacher, a pupil, or a school librarian? In some cases, and for certain aspects of usability, different user groups may have divergent or even conflicting views of usability. For this reason, we have been intent on understanding how usability is evaluated by different user groups.

Where?
In order to obtain useful knowledge about a building's usability, the users' experiences should be related to room or place. Some places or rooms are well-suited for defined users and activities, while others are not. What functions well in one place for some people may not function equally well for others in another place. Thus there will always be a connection between activities, different user groups, and the physical surroundings. In the toolbox we have highlighted the walk-through method, which focuses on particular places (stops) to relate the user experience to the physical surroundings.

Why?
Discovering factors that enhance or inhibit effectiveness is not sufficient. Hence, the next step in our approach is to understand **why**. As there will always be circumstances related to a building, the user organisation, the individual user, and how the use of a building influences user experiences, it is beneficial to discuss the circumstances that influence the evaluation of usability. Why is a particular group room for students experienced as good or bad? Why does a certain office solution inhibit collaboration? By discussing such questions it is often possible to conclude that the reason a room works well or does not work well is not necessarily a function of the room itself, but of other circumstances such as the way the room is used, location or other aspects. Understanding of situation and context is essential when acquired knowledge is to be applied to later projects or used to improve an existing solution.

This handbook presents a toolbox for mapping and evaluating usability. A combination of different methods is needed when gathering information. This handbook has been designed as an active tool that property owners themselves can carry out using internal resources.

The methodology in the handbook is presented as a process with clearly defined stages and steps.


1
Defining the Evaluation
Defining the objective and the scope for the evaluation
Review of the user organisation
Planning and anchoring the evaluation
(for WHAT?)
2
Mapping Usability
Collecting facts
Conducting mapping (structured group interview)
Analysing and comparing data
Defining the focus of further evaluation
(WHAT?)
3
Walk-through Usability
Defining topics / sub-topics
Choosing participants
Defining route and stops
Conducting the walkthrough
Summarising the results
(WHERE AND WHOM?)
4
Workshop with User Organisation
Choosing participants
Presentation of the objective and review findings
Discussion of the findings towards the objectives
Structuring and systematising the results
(WHY?)
5
Actionplan/Final Report
Review and analysis of results from evaluation
Improving existing buildings/premisses - Action plan
Input programming new buildings – Final report

1: Defining the evaluation

Stage 1 – Defining the evaluation
In stage 1, the objective of the evaluation or mapping is defined, as well as how it is organised. In terms of usability, it is primarily the effect of the building, what it contributes, which is the most important.

In the initial phase it is wise to interview representatives from the top management of the user organisation, in order to ascertain what visions, goals, and strategies they have for the organisation, the principles of organisation, whether they have particular areas of focus in relation to how the building can boost effectiveness, and what their general impressions are, based on their use of the building. During this stage, the planning and implementation of the evaluation should be clarified.

2: Mapping usability

Stage 2 – Mapping usability
We recommend conducting a general mapping process in stage 2. The objective at this stage is to establish an overall picture of the usability of the entire building or certain parts of it based on a set of predefined parameters. This is done by conducting a structured group interview and by collecting available information. During the group interview, questions should be asked on how or at which degree the building supports activities, work processes, about adaptability, universal design, architecture, floor plans and layout, the indoor climate and support and services.

If the objective of the evaluation is to examine specific topics or problems, the structured group interview in stage 2 can be omitted, and stage 3 initiated as soon as the relevant information has been collected.

3: Walk-through

Stage 3 – Walk-through
The general mapping process yields an overview of different usability parameters, but does not provide any in-depth information. The objective of stage 3 is to gather user experience related to selected topics from stage 2 in order to attain a better understanding of why solutions function well or poorly. The mapping process will generate a picture of where problems occur, or particular topics which may be worth gathering in-depth information about. Such topics can be explored using a walk-through (stage 3). A walk-through is conducted as an inspection tour of the building, with designated stops and with selected users, in order to gather their experiences in relation to the topic in question. In some cases, there may be several topics to gather in-depth information about, and it may therefore be necessary to conduct several walk-throughs, focusing on different topics and involving different stops and different participants.

In cases where the required answers are provided by the mapping process, there will be no need for more in-depth information, and one can proceed direct to stage 4 (the workshop).

Stage 4 – Workshop with the user organisation
In stage 4, the results from the mapping process and walkthrough are summarised and discussed in a workshop with the user organisation in order to evaluate usability in relation to the organisation's objectives and goals. This is the time to explore why physical solutions are experienced as good or bad. The 'why' question is important in order to determine what knowledge can be transferred to other buildings and what knowledge is linked to the interaction between user and building in each actual instance.

4: Workshop with the user org.

Stage 5 – Preparing an action plan/final report
Stage 5 consists of drawing up an action plan, or communicating the results of the investigation by other means. The way these results are reported will depend on the objective defined in stage 1. The results from the evaluation can be used to improve solutions and existing facilities, in the planning of new buildings, and to increase knowledge about the relationship between a building and its users.

5: Preparing an action plan/final report

STAGE 1. DEFINING THE EVALUATION

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The goal at this stage is to create a sound foundation for implementing the evaluation process.

A crucial component in all mapping processes or evaluations is defining the objective: What is the evaluation going to be used for? Who and what should it include? Which kind of criteria and parameters should be used?

Stage 1 includes a review of the user organisation in terms of visions, strategies, objectives, organisation, and activities. All of these aspects should be clarified by the top management in the organisation that is to be evaluated.

1.1 Defining the objective and the scope of the evaluation

The first step during this stage is to define the objective of the evaluation. This is a management decision and responsibility that should be carried out either by the user organisation or by the building owner or facilities management.

It should be clear whether the objective is a general mapping of the organisation/buildings for benchmarking, or an evaluation with a view to improving the existing premises/buildings, or information for input in the planning and designing of new buildings.

The scope of the evaluation should also be defined at an early stage in order to determine the amount of resources required. The scope may be limited to certain user groups, topics, areas, or problems to be investigated.

The results of this step are summarised in a PowerPoint presentation **(Template 1a – Defining the evaluation).**

The scope and focus of the evaluation should be finalised at the latest after completion of stage 2.

1.2 Review of the user organisation

An important foundation for an evaluation is knowledge about the building's user organisation.

The organisation's visions, strategies, and goals should be described, as well as its organisational structure and physical location. These elements are summarised in a PowerPoint presentation **(see Template 1b – Description of the user organisation).**

The objectives of the facilities management/support functions in relation to user needs and requirements should also be identified.

This review of the user organisation is carried out using available documents/descriptions (e.g. mission statements, annual reports) and by interviewing people at administrative level in the user organisation and in facilities management **(see Templates 1d and 1e–1f Interview guidelines)**. These interviews should be summarised in writing **(see Template 1g - Summary of interview, presentation).**

1.3 Planning and anchoring the evaluation

The third step in stage 1 entails planning and anchoring the evaluation process itself.

The planning process should be based on the objective and focus of the evaluation if these have already been defined. It should outline the activities to be performed, when they are to be carried out, and what resources are required for performing them. The factors involved are time, costs, and personnel. When these factors have been stipulated, an activity and progress plan is drawn up **(see Template 1c – Plan for implementing the evaluation).**

The evaluation should be defined as a project that must have a strong backing within the user organisation. It should be headed by a process manager with responsibility for this function, and who has received training in how to manage the process. For example, this role can be assigned to a person at strategic level from property management, or a person with experience of and an interest in designing building use. Processes of this type often impact on various user groups in the organisation at different levels. The administration should identify all those involved and ensure that the objective of the mapping is communicated and understood, and that those involved set aside sufficient time for participating in the project.

TEMPLATES, INTERVIEW GUIDES, and GUIDELINES

All templates and guidelines can be found on the CD included with this handbook:

1a. Defining the evaluation
1b. Description of the user organisation
1c. Plan for implementing the evaluation
1d. How to conduct an interview
1e. Interview guidelines - Administrative leader in the user organisation
1f. Interview guidelines – Administrative leader, facilities management
1g. Summary of interview, presentation

STAGE 2. MAPPING

STAGE 2. MAPPING

The objective of this stage is to establish an overall picture of the usability of the entire building or certain parts of it based on a set of predefined parameters. In order to attain this objective, facts about the building and the original function/programme requirements of the user organisation should be collected.

Many organisations already have surveys of customer satisfaction, HSEs, operating conditions, etc., that can provide useful background and supplementary information. This information should be included at this stage, which also involves a structured group interview on usability.

The reason for establishing an overall picture of the building's usability is to define the focus of further evaluation, to increase the contextual understanding, and for possible benchmarking in relation to other organisations/buildings. This focus may be within particular topics, such as accessibility, cooperation across or based on specific building categories, and areas of use or activities, e.g. schools, office buildings, meeting rooms, quiet rooms, project work, and customer contact.

2.1 Fact collecting

This step involves collecting relevant facts about the building **(see Template 2a – Fact collection)**. This will provide a basis for analysing the actual use of the building, and can also be used as a basis for comparison with the original function/programme requirements of the user organisation. Facts about activities and work patterns are gathered during this stage. Key figures about the building that should be recorded include space use per person, the building's available area and programme area, and any relevant gross/net factors. These key figures, which describe area efficiency, are crucial factors to keep in mind when analysing the output from stages 2 (mapping), 3 (walk-through), and 4 (workshop).

There may also be a need for other relevant key figures, such as the ratio of workspaces per employee, meeting rooms per employee, and group rooms per student. Which key figures are needed will depend on the theme and scope of the evaluation.

It is advisable to gather data from any other investigations that have been carried out, such as HSE, user surveys, and customer satisfaction, as these can supplement the collected data and also be used for comparison. There may also be information from operating logs, records of complaints, and other documentation that may be applicable and relevant.

2.2 Conducting mapping (structured group interview)

Step 2 consists of conducting one or more structured group interviews with designated user groups. The objective is not to gather as much data as possible, but to conduct enough interviews to have a sufficient foundation for further analysis. In general, the respondents should represent different user groups, as experience has shown that usability is assessed from the individual's perspective and context. It is recommended that the participants in advance should receive a list of those topics that will be discussed in the group interview in order to enhance the quality of the interview **(see Template 2c – Preparations for the group interview)**. When conducting the group interview, the process manager makes 26 different statements which the participants are asked to comment on **(see Template 2d – Structured group interview)**. At the conclusion of each round, these statements are evaluated on a scale from 0 to 5, where 0 indicates a low degree and 5 a high degree of agreement with the statement.

The process manager records the score for each participant and the reasons for the score. The objective is not for the group to reach a common agreement on the evaluation of usability for the various parameters, but rather to determine whether the different respondents agree or disagree and why **(see Template 2b – Conducting a structured group interview).**

An important outcome of the group interview is the learning effect when the participants (respondents) gain insight into each others' needs and requirements and the corresponding evaluation of usability from these perspectives.

2.3 Analysing and comparing data

The group interview is conducted using a list of predefined statements. The Excel worksheet could be used to generate and display the interview results, both the total for all respondents and for the various categories. Comments on and reasons for scores from the group interview may provide useful information and a better understanding of the data.

When analysing the results, the data should be considered in the light of certain important perspectives:

- in relation to various user groups
- in relation to different primary topics and subtopics (cf. the interview questions)
- major deviances/differences in scores between the respondents
- topics with particularly high scores
- topics with particularly low scores

The results from any other investigations that can supplement the results of the analysis should also be included.

After the mapping has been completed, the work should be summarised in a memorandum. This memorandum should contain the results of the analysis and how they were arrived at **(see Template 2e – Mapping summary).** When summarising and presenting the data, the big picture and the main points of the analysis should be emphasised. It should be remembered that the data presented should be relevant and related to the objective of the evaluation.

A presentation of the results should be drawn up for further use in stages 3 and 4 of the evaluation process. This presentation should be comprehensible to individuals from various backgrounds and occupations.

2.4 Defining the focus of further evaluation

In this step, the focus of further evaluation in stage 3 (the walk-through) is defined **(see Template 2f – Focus area for the walk-through/workshop)**. This should be done in collaboration with upper-level management and be based on step 1.1 (defining the objective of the evaluation) and step 2.3 (analysing data from the group interview). The results from stage 2 primarily indicate which physical solutions work well or not. However they do not provide many answers as to why.

TEMPLATES and GUIDELINES

All templates and guidelines can be found on the CD included with this handbook:

2a. Fact collection
2b. Conducting a structured group interview
2c. Preparations for the group interview
2d. Structured group interview
2e. Mapping summary
2f. Focus areas for the walk-through/workshop


3
2

STAGE 3. WALK-THROUGH USABILITY

STAGE 3. WALK-THROUGH USABILITY

The objective of this stage is to gather user experience about specific topics from stage 2 and to gain a better understanding of where and why solutions function well or poorly. Usability in relation to what and for whom will be crucial questions at this stage. The goal is to attain contextual knowledge of how various solutions work and to avoid repetition of unsatisfactory solutions in other projects and user organisations.

'Walk-through' is a generic term for a method using on-site inspection of a building for evaluating various aspects of its usability. There are different ways in which a walk-through can be conducted, ranging from a completely open structure with evaluation based on spontaneous, subjective evaluations by random participants then and there, to predefined stops and evaluation criteria with selected participants. The selection of participants should be considered in light of the objective of the walk-through, as this may influence the findings. An important effect of the walk-through method is the learning effect when participants gain insight into each others' needs and requirements and the evaluation of usability related to concrete physical solutions.

3.1 Defining topic / subtopic

The topic or focus area for the walk-through is determined in step 4 of stage 2. The simplest way to map usability during a walk-through is by evaluating positive and negative considerations in relation to each topic and stop, and making suggestions for improvement.

It is advisable to formulate subtopics in order to limit and focus the mapping process so that it will correspond as closely as possible to the objective of the mapping and the object of the walk-through **(see Template 3b – Walk-through form).**

3.2 Choosing participants

Both the number of participants and the types of interest groups to be represented should be chosen based on the objective of the walk-through and the selected focus areas/topics.

The number of participants in a walk-through should not exceed 8–9 persons. It is possible to conduct different walk-throughs to examine different topics, or several walk-throughs on the same topic with different user perspectives represented. As the evaluation of usability depends on the perspective of the individual, it is important to choose participants that represent different user perspectives. In a school, for instance, teachers, pupils, parents, caretakers, and members of the administration could all be relevant participants.

As a minimum, participants should be included from the user group that uses the facilities/building on a daily basis. It may be useful to supplement the group with experts/consultants or representatives of various user organisations if relevant to the topic of investigation.

3.3 Choosing stops

Stops in the walk-through are chosen in cooperation with upper-level management in the user organisation, based on the objective of the walk-through. These stops, which are chosen on the basis of the focus areas/topics defined in stages 1 and 2, should provide sufficient data/information on the topic of investigation. If the decision-makers are very familiar with the building, the stops can be chosen using blueprints or floor plans. If not, the stops should be chosen by means of a joint on-site inspection of the building.

The number of stops in the walk-through should not exceed 8. A walk-through with a great number of stops, combined with a high number of participants, yields a vast amount of information. As a rule of thumb, a greater number of stops can be permitted when there are few walk-through participants than when there is a large number of participants.

For instance, when the topic is universal design, stops can be chosen that represent a logical progression from the building entrance via shared spaces to the workplace. However, if the topic is the design of premises for a study programme, it would be natural to choose the premises that are used by the programme, including shared functions. In such cases it is essential to investigate logistics and connections between the different areas.

3.4 Conducting the walk-through

Before conducting the walk-through, the participants should be brought together for a joint presentation of the objective of the walk-through and the topic of investigation. The purpose of this introduction is to ensure that the participants 'put on the right glasses', as well as to explain how the walk-through is to be conducted (whether it is to be a quiet walk-through, an on-going discussion, or a combination of the two). The time to be spent at each stop is announced, as well as the total length of the walk-through **(see Template 3a – Introduction to the walk-through presentation).**

In a 'quiet walk-through', the participants take notes on their **walk-through forms**, while the process manager guides them to the correct stops, keeps track of the time, and is responsible for photo documentation. The time spent at each stop should be determined according to the number of stops and the total length of the walk-through. A minimum of 5 minutes should be set aside per stop **(see Template 3b – Walk-through form).**

If the walk-through participants, in addition to taking notes, are to have discussions at the stops, more time will need to be allocated for each stop. A minimum of 10 minutes per stop is recommended, comprising 5 minutes for quiet reflection and individual note taking and 5 minutes of plenary discussion. In addition to guiding the participants to the correct stops and keeping track of the time, the process manager leads the discussion and should be accompanied by another person who can take notes and be responsible for photo documentation.

3.5 Summarising the results

The purpose of this step is to summarise the results from the walk-through in a suitable, clear manner so that they may serve as a good foundation for the next stage in the evaluation process.
It is advisable to systematise the results according to stop, subtopic, and user perspective. The summary should explain why certain solutions are considered workable or non-workable according to function and user. Combining text and photos from the various stops provides useful, comprehensive documentation that is easy to understand. This documentation is compiled in a separate walk-through booklet **(see Template 3c – Summarising the findings of the walk-through).**

TEMPLATES and GUIDELINES
All templates and guidelines can be found on the CD included with this handbook:

3a. Introduction to the walk-through, presentation
3b. Walk-through form
3c. Summarising the findings from the walk-through

STAGE 4. WORKSHOP WITH THE USER ORGANISATION

A workshop is a structured work method where people with different backgrounds jointly address a designated topic or issue.

The purpose of the workshop is to discuss the findings from stages 2 and 3 in relation to the user organisation's overall vision, strategies, and objectives.

It is important to find out why solutions work or do not work and to relate the evaluation of usability to the strategic level in the user organisation.

The workshop should focus on matters/areas where more knowledge is needed and should shed light on both positive and negative experiences of usability.

The workshop may have several objectives, but its primary purpose should be to provide a basis and input for drawing up an action plan or final report.

4.1 Choosing participants

The process manager, who is responsible for planning and conducting the workshop, draws up a list of proposed participants. A workshop can be used to develop new knowledge to create a shared understanding of an issue, or as a strategic tool for setting priorities. The choice of participants should reflect the objective of the evaluation and the purpose of the workshop.

The workshop is a forum for examining and discussing the results from stages 2 and 3. Representatives from the administrative level in the user organisation, the local facilities management, and user representatives should all be involved in the workshop. The participants' roles and mandate should be endorsed by the top management of the user organisation.

4.2 Presentation of the objective and review of the mapping and walk-through

It is essential that the workshop opens with a presentation of the objective of the entire evaluation, the overall vision, strategies and goals of the user organisation, and the results from stages 2 and 3 **(see Template 4a – Conducting the workshop and presentation of findings).**

Similarly, the purpose of the workshop itself and the participants' roles and mandate should be communicated. Thorough preparation is essential so that the information is structured and clearly communicated.

4.3 Discussion of the results

An important objective of the workshop will be a review and discussion of the results of the evaluation in the light of the overall goals. The object is to instigate reflections on designated topics from the mapping and walk-through. It is critically important that the discussion is structured and well led. Discussions focusing on why physical solutions are more or less satisfactory provide a valuable basis for identifying knowledge that can be transferred to other buildings.

The topics/issues to be discussed should be designated in advance. The first phase of the workshop should be open and allow different viewpoints and perspectives to be freely expressed. During this phase the objective is not to reach a consensus, but to shed as much light as possible on the topics at hand.

4.4 Structuring and systematising results

There are a number of tools that can be used for structuring and systematising points that emerge during the workshop, and the choice of tools should reflect the objective of the workshop. For example, it may be useful to systematise the evaluation of various conditions according to their significance or consequenc-

es by using various techniques for numerical rating or weighting. As a second example, it may be relevant to map and analyse the strengths and weaknesses of processes and projects in order to identify areas for improvement. In such cases, combining a SWOT analysis with other tools may be of useful **(see Template 4b – SWOT analysis).** To give a third example, there may be a need to discuss the question of cause and effect in relation to a problem, in which case a fishbone diagram (Ischikawa diagram) may be useful **(see Template 4c – fishbone diagram).**

In order for the results of the workshop to be useful for further work on an action plan or for knowledge or experience transfer, the discussion should be led well and points that emerge should be systematised for further use.

1: Defining the evaluation
2: Mapping usability
3: Walk-through
4: Workshop with the user org.
5: Preparing an action plan/final report

TEMPLATES and GUIDELINES
All templates and guidelines can be found on the CD included with this handbook:

4a. Conducting the workshop and presentation of findings
4b. SWOT analysis
4c. Ischikawa / fishbone diagram

STAGE 5. PREPARING AN ACTION PLAN/FINAL REPORT

STAGE 5. PREPARING AN ACTION PLAN/ FINAL REPORT

The objective of stage 5 is to document and summarise the most important experience gained during the evaluation process.

Findings/information should be structured in an appropriate manner so that they can be retrieved for use and aggregated to a higher level of knowledge through subsequent projects.

If the objective of the evaluation is to obtain new knowledge about buildings in use, a final report would be a suitable format.

If the objective of the evaluation is to make improvements to existing buildings or to provide input for designing new buildings, an action plan would be a more appropriate format.

The action plan should describe necessary measures, responsibilities, resources required, priorities, and any prerequisites/contingencies that should be taken into account, in direct correspondence with the objective of the evaluation and the visions, goals, and strategies of the user organisation.

5.1 Review and analysis of results from the evaluation

Stage 5 begins with a review of the reports and analyses that have been produced earlier in the process. Usability mapping is based on an evaluation from different user perspectives, and the results of the evaluation will be influenced by the respondents' roles, tasks and responsibilities, work places, preferences, and so forth. During this step the results of the evaluation should be analysed in relation to the overall goals with a view to relevant experience and assessments. The results from the workshop will often provide a particularly important basis for drawing up the action plan.

5.2 Drawing up an action plan

An important objective of mapping and evaluating usability is the development of knowledge and the improvement of existing buildings/premises. In order for an action plan to function effectively, it should be structured and realistic in relation to the implementation of relevant measures.

While some measures are easy to implement, others require further work before they can be realised. First, the measures should be sorted according to which ones can be implemented directly and which ones require further adaptation. Further, the measures should be ranked according to priority, taking into account importance, time, and costs.

TEMPLATES and GUIDELINES
All templates and can be found on the CD included with this handbook:

5a. Action plan form
5b. Experience gained/summary of findings

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