

Knowledge transfer at industrial heritage sites

Preserving and maintaining industrial monuments for future generations

Preserving and operating industrial heritage sites requires a wide range of knowledge and expertise. Many sites are currently facing the situation where the founding and older generations of workers are diminishing and their first-hand knowledge is in danger of being lost. So good knowledge transfer is relevant to the operation and preservation of industrial heritage sites for future generations.

ERIH wanted to know how member sites are dealing with this situation, what solutions may already exist to hand down knowledge and pass it on to the next generation, and also what support a network like ERIH could provide.

In March 2021, we sent a questionnaire to 419 industrial heritage sites across Europe. We received 50 completed questionnaires back.

Participants in the survey came from the following countries: Belgium (1), Germany (23), Italy (2), Netherlands (2), Norway (2), Czech Republic (1), Austria (2), Poland (2), Sweden (1), Spain (6), United Kingdom (8).

Participating sites

In order to get a more precise picture of the institutions, the questionnaire also sought information about the character of the sites, the structure of the staff and the target groups. The majority of the respondents (31 out of 50) were museums, although multiple answers were possible to the question "Who are you?". Monument was indicated 11 times, park/outdoor facility 8 times, and demonstrating factory 3 times. 16 sites identified themselves as museums and also selected the option "Other" in order to include more information. Named here were e.g.: "archive and museum", "museum and historic railroad line", "museum railroad", "heritage site with visitor center", "future site showing the transformation process", "world heritage site".

Multiple responses were also possible to the question about sponsorship, and the following picture emerged:

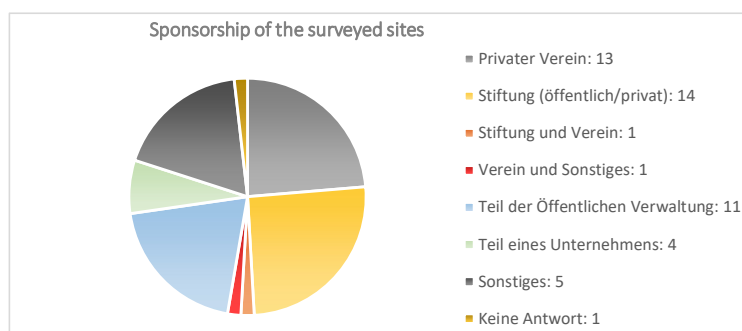


Figure 1: Sponsorship

More than 2/3 of surveyed sites report working with paid professionals, such as historians and engineers. Former employees, who may be among these professionals, work with 34% of the sites surveyed. Volunteers play an important role, with 27 of 50 sites reporting that volunteers are part of their staff.

The explanations given for "others" were: Federal volunteers, various permanent employees (merchants, advertising managers, event organizers), freelancers (tour guides, historians), administrative staff, environmental experts, archivists.

The answers do not provide any information about the share of the respective employee group in the total number of employees.

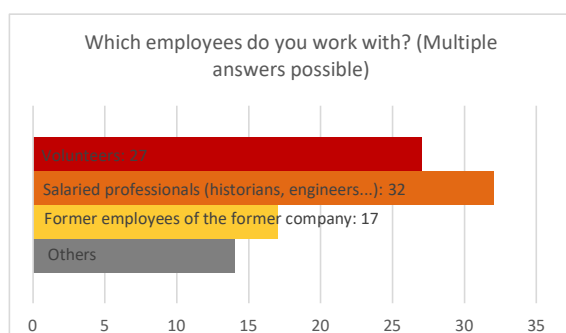


Figure 2: Staff structure

Adult leisure visitors play a role as a target group for almost all sites surveyed, as do schools and children. Almost half of the respondents indicate that certain professional groups are among the target groups. "Other" target groups include: Business travellers, families, and commercial users such as event agencies and TV productions. The answers do not make any statement about the share

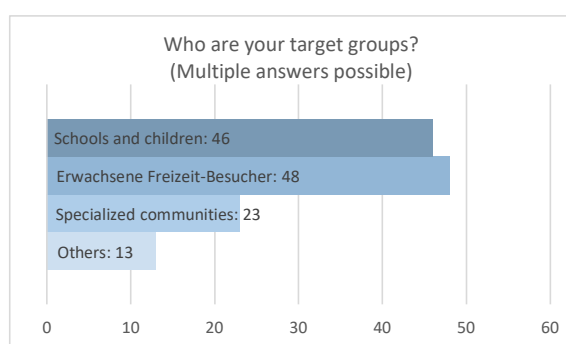


Figure 3: Target groups

of the respective target group in the visitor volume.

Specific knowledge of industrial heritage sites

The questions about the specific knowledge that is essential for operating the site were linked to questions about who has this knowledge and where it is documented. Necessary areas for action emerge here. Historical knowledge about the site's history was weighted as relevant or very relevant by 84% - 42 of 50 sites surveyed (on a scale of 1 [hardly relevant] to 5 [very relevant], the entries rated 4 or 5). Knowledge about people and their history is 74%; conservation knowledge for objects, monuments and archives is 66%. Technical-practical knowledge about operational processes and machines is weighted by 60 % of the sites with 4 or 5.

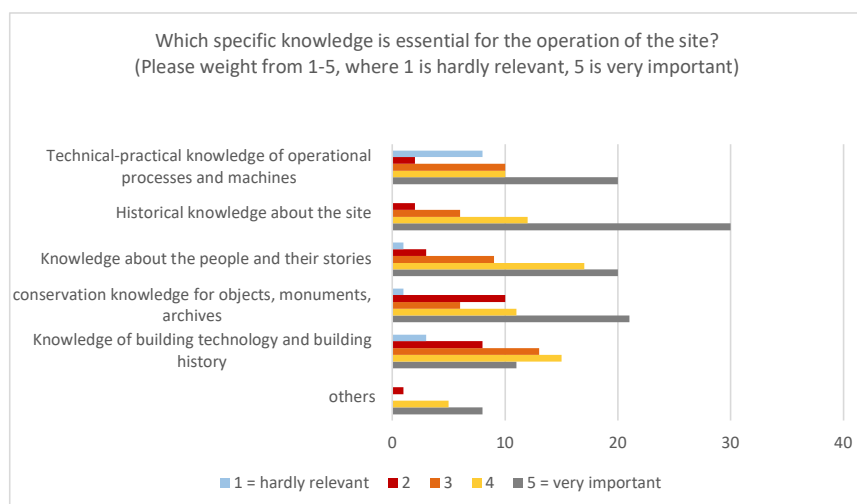


Figure 4: Specific knowledge at industrial heritage sites

Responses at "Other" Building and planning, knowledge of: Marketing, tourism, business management, visitor orientation, communication and outreach; knowledge of historical aspects/knowledge of the collection area (contextualization), archives and cultural institutions in other cities.

32 of the 50 sites surveyed indicated that important knowledge is held by witnesses/former employees and site operators; 28 sites indicated that knowledge is held by volunteers. Overlap in responses is possible. At the same time, 21 sites indicate that knowledge is located elsewhere - "Other" - than in archives, publications, databases, or operational descriptions - which means nothing more than that this knowledge is not documented. In the field "Other", there are several references to the fact that important knowledge lies "in the heads of volunteers/former volunteers/members ...", furthermore: in the experiential knowledge of volunteers and employees, in the museum collection, in oral traditions ...

The subsequent question "Where, in which areas, are these knowledge carriers threatening to be lost to you?" could be answered in a free text field. Predominantly, contemporary witnesses are

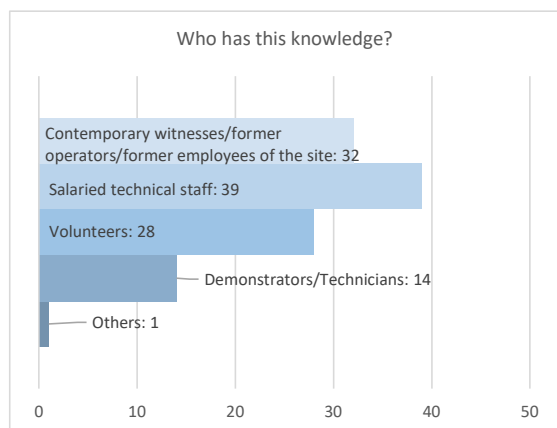


Figure 5: Knowledge carriers

Mentioned for "others": tour guides, members of the association

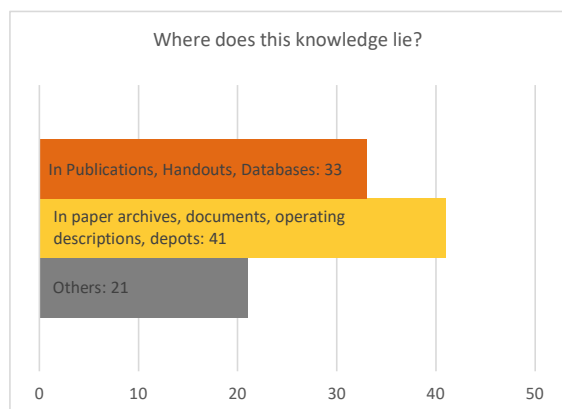


Figure 6: Documentation of knowledge

Other: in the minds of volunteers, staff and eyewitnesses, experiential knowledge, oral histories, in the museum collection, in film interviews of eyewitnesses.

being under threat.

mentioned here, and the potential loss from the collective memory of their technical and other relevant knowledge. Practical knowledge in the use of machines and systems was also mentioned several times as

The following are named as particular problems in the area of knowledge transfer: Financing of documentation and knowledge transfer (30 of 50 locations state that this is important to very important), as well as the documentation of knowledge in documents, media and databases, and the secure archiving of documented knowledge (24 of 50 locations each state these fields as important and very important). 23 sites state that finding and motivating new employees is an important or very important problem. In the online questionnaire, the item "Comprehensible preparation of knowledge for today's users" was unfortunately not completely filled out in some cases, so that not all participants gave an answer here.

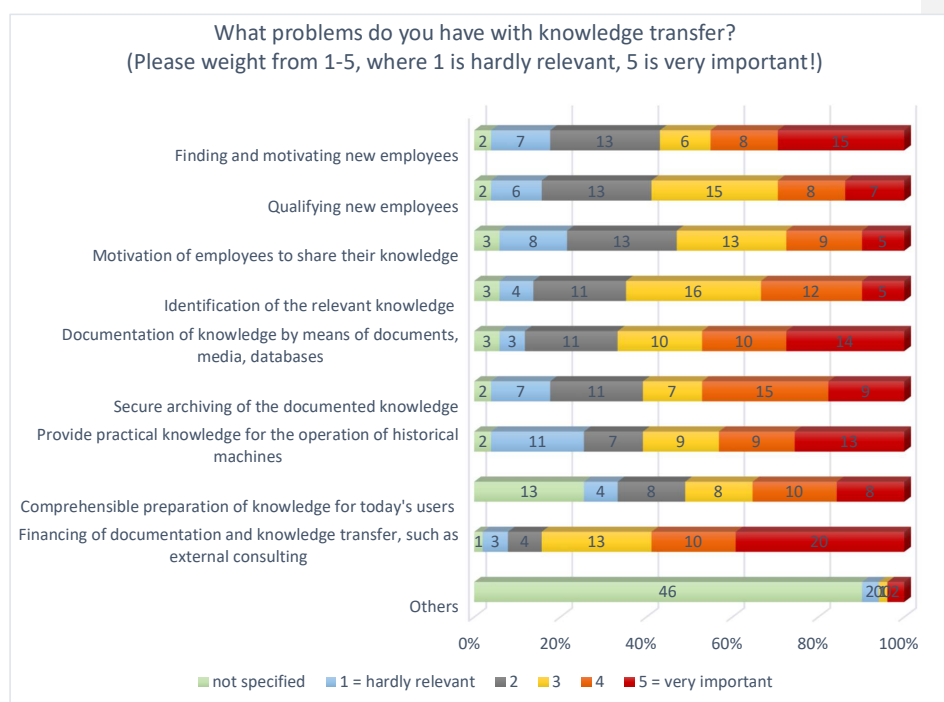


Figure 7: Problems with knowledge transfer

Details under "Other": Finding volunteers, "recognising the need to record and document memories and information before it is lost"; „The biggest problem in our sector, in our territory, is precisely that due to the public / private contributions necessary to keep the activities and offices alive. The awareness of the basic nature of conservation for the cultural transmission of historical knowledge is still very much ignored, for this reason it is always difficult to find effective funding for projects.“; „We work with volunteers so it is even more important that their skills are passed on to the next generation to volunteer with us“; „We would like to receive more collaboration from government institutions.“

Facing the challenges

The sites were also asked what solutions they had already found to the challenge of knowledge transfer; which ideas were successful and which were a failure. 48 of the 50 sites surveyed made entries in the free text field and reported - in more or less detail - on approaches to solutions, successes and failures.

Eyewitness interviews and recorded interviews, digitization approaches to collection, and training videos were named here several times. The representation of large machines in AR applications was also cited as an example. The importance of volunteers, the importance of good integration, motivation and induction of these employees into the team is also clearly evident in several responses. The Wolfen Film Museum has developed an event format with so-called "picture shows" that benefits the in-depth development of the collection and also appeals to the regional population, particularly former employees, through a participatory approach, and thus also offers potential for identification with the museum's work.

The answers highlight a clear necessity for good documentation - in databases, technical processes on video and for processes of knowledge transfer in general. – but in many cases there is a lack of human and financial resources for their implementation. Money is the aspect most frequently mentioned in the question "What do you lack for the solution". This question was again weighted on a scale of 1 to 5; if the weightings of 4 and 5 are considered together, "human resources and expertise" and the factor "time" are particularly relevant after the lack of financial resources.

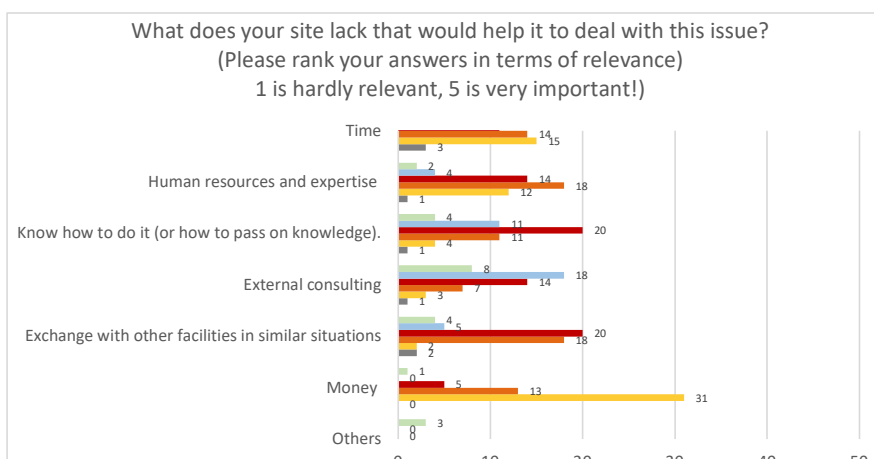


Figure 8: Resource requirements for the solution

The number of times each weighting is mentioned is indicated behind the bars.

Other: "Volunteers with appropriate knowledge or better/regularly paid guides"; "Tours should be conducted to disseminate the value of heritage to the population and provide financial support for the maintenance of key infrastructures"; "Volunteers to assist in recording/transcribing stories/memories"; "Volunteers with appropriate knowledge or better/regularly paid guides; Tours should be conducted to disseminate the value of heritage to the population and provide financial support for the maintenance of key infrastructures"; "Volunteers to assist in recording/transcribing stories/memories"; "Volunteers to assist in recording/transcribing stories/memories". "Volunteers with appropriate knowledge or better/regularly paid guides; guided tours should be conducted to spread the value of heritage among the population and provide financial support for the maintenance of key infrastructures; volunteers who can assist in recording/transcribing stories/memories".



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Meeting the challenges together: Ideas for support from the ERIH network

"How would you like ERIH to assist you? We are looking forward to your ideas and suggestions! / What could ERIH do for you? We are looking forward to your suggestions, ideas!": Suggestions and ideas on how ERIH could assist sites were solicited in the final section of the survey.

33 of the 50 sites surveyed left comments here which listed their wishes and ideas. More than half of the comments (18 responses) refer to a desire for further exchange of knowledge in the network, sharing of experiences, ideas and solution approaches. Specific suggestions include: A visit program for volunteers at other industrial heritage sites in Europe to exchange knowledge and experiences, the promotion of a "Youth section" of ERIH, exchange with other organizations and associations for the preservation of cultural heritage, or institutions with similar approaches - such as archives, restorers and digitization projects.

Another frequently mentioned aspect (13 corresponding comments), in which ERIH can support or play a central role, is the preparation and provision of information. Mentioned are: a database with best-practice-examples on different topics; the construction of a "library" of films, books, and knowledge about techno-logical processes ... with the possibility of presenting them as part of the exhibition in institutions related to ERIH. Suggested is the formation of a platform on education and training, as well as the development of their own training programs. Specifically, ERIH is asked for recommendations for action and workshop offers on volunteer management.

The proposal to make all collections and information visible via the Europeana portal in a thematic layer Industrial Culture aims at a broad awareness raising - a prerequisite to interest potential, future engaged persons in the topic Industrial Culture.

The dissemination of information on funding opportunities and lobbying at various social and political levels are also frequently mentioned requests for ERIH action.





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Recommendations for action and initial implementation of suggestions

The results of the survey make it clear that the need for knowledge transfer - at very different levels - is recognized. In order to meet the challenges, there is often a lack of financial and human resources - and thus also of expertise and time.

With regard to European and national funding frameworks, ERIH can play an informative role vis-à-vis member sites. As the „window of time“ is closing in which especially contemporary witness knowledge can be secured for the cultural memory, projects and funding programs are necessary that offer concrete support to the industrial heritage sites to actively counteract the loss of knowledge. Here, ERIH can play a lobbying role vis-à-vis potential funders to support the creation of suitable funding backdrops.

The ERIH network has the potential to develop self-efficacy forces within the network through active exchange, communication of best practices, and formats of collegial consultation.

ERIH will support this in the coming years, for example, with projects such as "ERIH on tour", in which employees from ERIH locations are brought into motion with each other and into a thematic exchange; as well as a summer school for students and young professionals in cooperation with the University of Applied Sciences in Berlin.

The ERIH website lists references to industrial culture topics and expert databases under the heading "Service" - the headings will be expanded. Here you can already find, for example, references to funding, research results and studies, best practice examples for teaching in schools and museums, for example, on the management of industrial cultural sites. A "method box" could be added here, for example, in which references can be given, for example, with regard to the implementation of oral history projects and the sustainable safeguarding of the results.

Targeted cooperation with universities can help to meet the challenges of knowledge transfer. It has not yet been possible to address the topic of "Volunteer management at industrial heritage sites" as planned in a conclusion; however, the topic will be reassigned and may yield further insight into the specific challenges in this area of industrial heritage management and concretely derived recommendations for action.

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Kommentiert [JL1]: Should this be self-help activities/programmes?

Kommentiert [JL2]: Im not sure what is meant here

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