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Heritage for people

Sharing vernacular knowledge to build the future

versus plus
heritage for people

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EUROPEAN
VOLUNTEERS

MANAGING VERNACULAR KNOWLEDGE FOR BUILDERS AND DESIGNERS

Letizia Dipasquale
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Values of authenticity, identity, and cultural significance that are often associated with historical cities and heritage centres are undoubtedly linked to a continuity in traditional knowledge. Building masters have been responsible not only for keeping the tradition alive but also for the conservation of the local architecture. Based on their experience, know-how, creativity, and craft skills, the masons are able to explore the local materials and adapt them to their construction needs (Karakul, 2015).

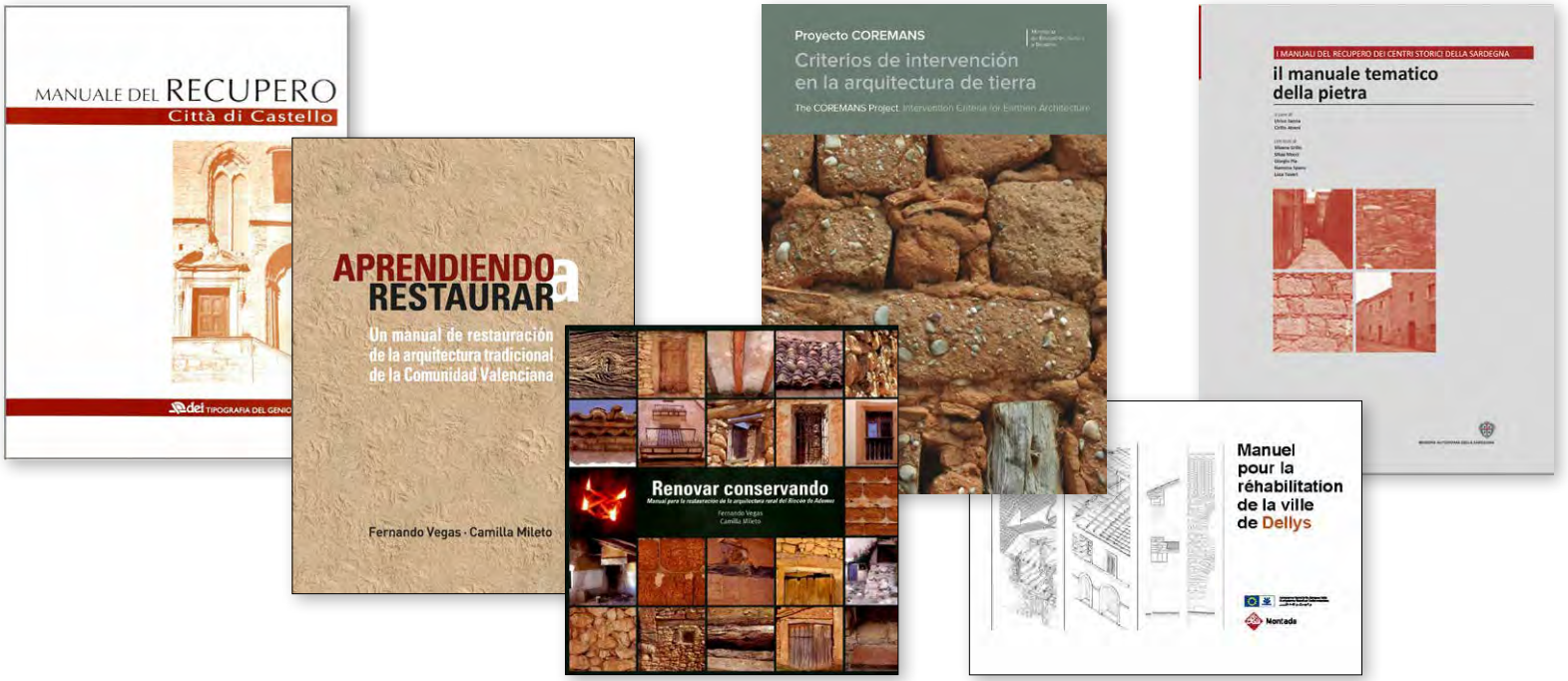
The transmission of vernacular knowledge is a practical, dynamic, and reactive process. It is usually an 'on site' apprenticeship, through observation, practice, and experiential learning. Due to the progressive loss of masters and apprentices, direct on-site transmission is not always guaranteed. In fact, especially in western countries we have witnessed a progressive loss of knowledge, know-how, techniques, and use of natural and low-impact materials for construction. To counteract this process, the role of public and private entities that try to keep traditional skills alive through the organisation of workshops, courses or training field schools is indeed relevant. During workshops and short courses architects and professionals can understand the materials and procedures, as well as the technical limits of building techniques and their implementations, all of which is useful information for a good design. For builders and craftsmen, it is essential that the experience lasts longer and can be repeated. In all these cases, oral transmission and observation are the main way of transmitting tacit knowledge.

opposite page
European Heritage Training Course *Traditional wooden fences* at the Open-Air Museum of Lithuania Rumsiskes (Lithuania)
(credits: European Heritage Volunteers)

Codifying and transmitting vernacular knowledge

Practices, actions and tools for the codification, management, organisation, and dissemination of tacit knowledge, thus making it explicit and easily shareable, remain to this day a field to be developed, strengthened and innovated, in order to ensure the maintenance of traditional know-how over time, even in the face of challenges such as climate change, as well as natural or man-made disasters.

The most consolidated tools for the codification of technological knowledge and the transmission of building knowledge are printed book: handbooks, guidelines, rehabilitation or restoration manuals (Giovannetti, 1998; Blasi, Gurrieri, 2007; Vegas, Mileto, 2007; Achenza, Sanna, 2008) intended to make the rules of good building explicit through textual descriptions, schemes, images and drawings, trying to codify a complex system of knowledge that ranges from the choice of materials, to the processes of execution, the control procedures and the most appropriate interventions to ensure the preservation of the values of traditional architecture. The elaboration of manuals or handbooks requires an



Covers of handbooks and rehabilitation / restoration manuals of traditional architecture

(Giovannetti, 1998; Vegas, Mileto, 2007; Vegas, Mileto, 2007; MECD, 2017; Achenza, Sanna, 2008; Atezeni et al., 2012)

interdisciplinary research work, aimed to represent through written codes and drawings, information regarding the material, structural, physical, procedural and dimensional characteristics of vernacular architecture. In order to understand the reasons and values of building systems and architecture, it is essential to also consider the environmental and social context, as well as the complex system of intangible values behind the evolution of a building culture.

Knowledge management and dissemination through digital tools

In the age of web and digital transmission, new possibilities have emerged for the management and dissemination of traditional knowledge, making it available to a much wider audience, while also extending the possibilities, means and forms of representation and communication.

The potential offered by the digital transition is extensive and increasing. Traditional manuals can be complemented with digital content by integrating web links, QR codes and augmented reality, thus enabling the visualisation of 3D models, and providing access to audio and video content, therefore expanding the possibilities of use, understanding and learning. Digitalisation processes of catalogues, inventories and databases make it possible to broaden the forms of access to heritage and knowledge, and to create new relationships between information, thus enabling its growth.

Advanced knowledge management tools could be applied to vernacular knowledge to ensure wider sharing and reuse of knowledge so as to support more effective conservation processes and design and planning actions. Ontology, semantic web portals (Cirinnà et al., 2007) and social media applications are examples of technologies applied to corporate knowledge management processes, which could also be extended to traditional building knowledge.

Online digital platforms are also a powerful means of dissemination, since they provide a space not only to collect and organise knowledge, but also to create networks of people (Dipasquale et al., 2022).

Furthermore, unlike dissemination through non-digital media such as printed books, digital platforms can be constantly updated and allow you to establish connections with other digital resources: social networks, specialised websites, video sharing websites, etc. Furthermore, platforms are a remarkable means to develop new didactic methodologies, curricula, entrepreneurship skills and courses for vocational training, to create jobs and revive enterprises.

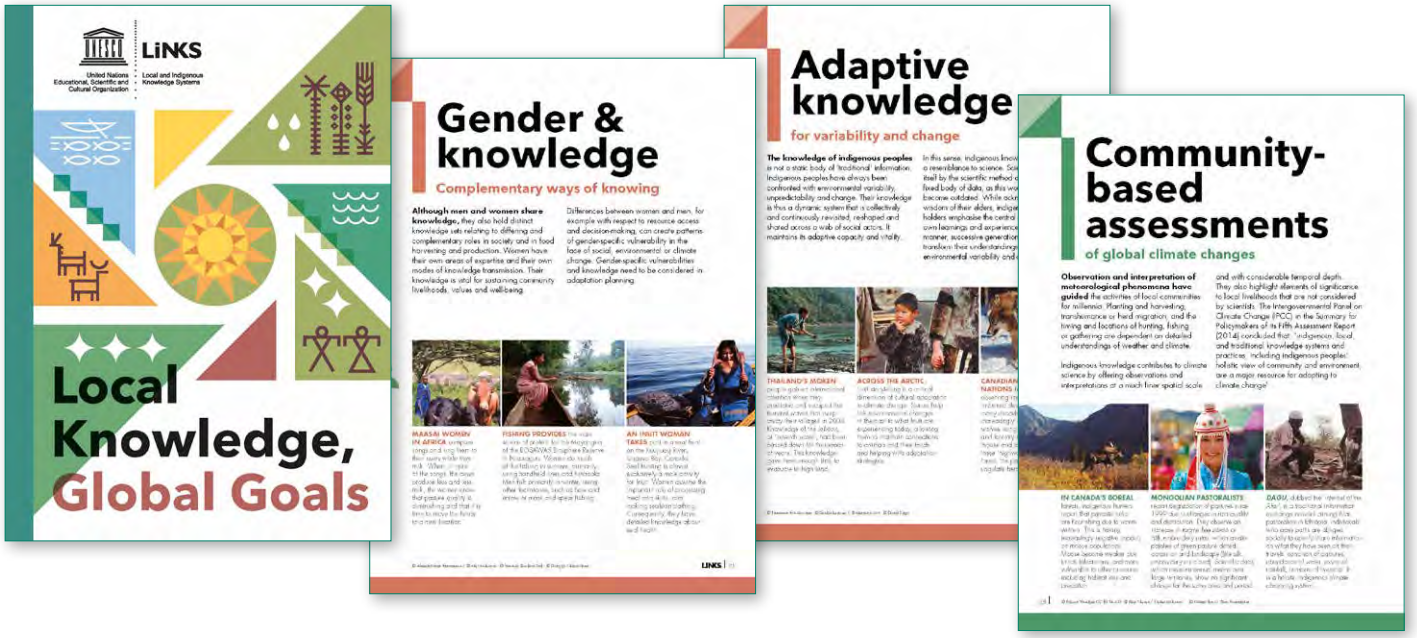
Videos and social network events, promoted by architects, engineers, students, and academics, allow the dissemination of vernacular methods of construction within national and international perspectives (Cuéllar, 2014; Correia et al., 2020). Dissemination allows the interconnection between the construction and the research fields, thus contributing to the reduction of the gap between professionals and Academia, while also stimulating the use of traditional knowledge.

There are several examples of web portals and platforms that promote the spreading and managing of vernacular know-how that can be found within the European context, highlighting the importance of preserving the intangible and tangible aspects of traditional architecture.

Developed by CRAterre, *Cartoterra* is a database for earthen architecture. Working as a participative atlas, Cartoterra allows the sharing of content regarding earthen construction around the world, and it locates it on an interactive map. *Mapa da Terra*, again as part of earthen building knowledge, is a worldwide online collaborative database aiming at sharing knowledge and experience and allowing stakeholders to interact, contribute and be inspired by the content of the platform. The platform *Lehmbau im Weinviertel*, which was developed within the project *Think Spacial!* and concerns the knowledge and enhancement of earthen architecture in the Region of Weinviertel in Austria explores the interaction with Citizen Science through the involvement of locals in the mapping of heritage as well as the management of different kinds of materials.

Another valuable example of a platform devoted to traditional knowledge is *Red de Maestros* – the Spanish Traditional Building Masters Network, promoted by INTBAU (the International Network for Traditional Building, Architecture and Urbanism). It aims to bring together people and businesses, from each of the 17 Spanish regions, especially those that stand out in the preservation and the continuation of these crafts and that carry out a work of remarkable value in different traditional building crafts.

In the framework of this project, the UNIFI team has developed a collaborative Web Application (https://heritageforpeople.unifi.it/) able to map solutions and models from vernacular architecture, and to associate them with *VerSus* sustainable strategies. In addition to physical objects (cultural landscapes, urban, typological and technological solutions), the App also maps the people involved in the knowledge management of vernacular architecture. This tool aims to make knowledge accessible and to involve people in two ways: engaging with them so that they can contribute to the Web App contents (inclusive/collaborative approach), and linking references to people (professionals, craftspeople, communities of practice, universities, etc.).



Some pages of the publication *Local Knowledge, Global Goals* contained in the platform promoted by UNESCO's *Local and Indigenous Knowledge Systems programme* (LINKS) *(https://en.unesco.org/links)*

In the field of vernacular knowledge management (not only related to architecture but in general to land management and biodiversity), it is important to mention UNESCO's *Local and Indigenous Knowledge Systems programme* (LINKS). As part of this programme, the *The Local Communities and Indigenous Peoples Platform* (LCIPP) was recently developed, with the aim of strengthening the knowledge, technologies, practices, and efforts of local communities and indigenous peoples related to addressing and responding to climate change, to facilitate the exchange of experiences and the sharing of best practices and lessons learned on mitigation and adaptation in a holistic and integrated manner.

Within the European Union, ECTP is the main platform for research and innovation joining the fields of construction technology, built environment, and energy efficiency. Founded in 2004, it now includes 140 members from 26 countries, including large enterprises, universities, research organisations, and professional associations. Its position papers reveal different issues related to the *VerSus* project (Correia et al., 2014), especially in its *Heritage and regeneration* and *Materials and sustainability* committees, such as the promotion and recognition of vernacular architecture as an inspiration for design. For example, *Build-in-wood* is a consortium joining 6 cities, that covers the entire wood value chain from the factory to the final construction. The project manages the material, components, structural systems, and façade elements, both for new buildings and restorations, develops a Design Guide, and delivers digital case studies and prototypes.*Think Nature* is another example of a project in which ECTP took part. Funded by the Horizon Programme of the European Union, among several universities and other partners, it focuses on the improvement and application of Nature Based Solutions (NBS) for the building sector, in order to work with nature, instead of building in nature. The NBS combine traditional and ecological processes, designed to bring healthier features to cities and landscapes, addressing them to consider Sustainable Development Goals.

Not only related to architecture, the *Europeana* is also an international project funded by the European Union, aimed to strengthen the cultural heritage sector and its digital approach. It develops expertise, tools and policies, in order to embrace digital changes and encourage partnerships that foster innovation. The collected data is organised in five sections (image, text, sound, video, and 3D) and shared by more than 4,000 cultural institutions. The search displays by theme, type of media, permission to use it, providing country, language, aggregator partner, institution, colour, orientation, size, and format. It has an interesting functionality for teaching and storytelling, like other open-source initiatives with a similar purpose of spreading knowledge to a wider audience.

References

Achenza M., Sanna U. (eds.) 2007, *Il manuale tematico della terra cruda: caratteri, tecnologie, buone pratiche*, DEI, Rome.

Atzeni C., Mocci S., Oggiano F., Di Simone R., Pau, B., Akretche L., Chaabani N., Sadmi A. and Casanovas X. 2012, *Manuel pour la réhabilitation de la ville de Dellys*, MONTADA, Barcelone

Dipasquale L., Ammendola J., Ferrari E.P., Mecca S., Montoni L., Zambelli M. 2022, A *collaborative Web App to foster a knowledge network on vernacular heritage, craftspeople, and sustainability*, in Mileto C., Vegas F., Cristini V., García-Soriano L., *Proceedings HERITAGE 2022 - International Conference on Vernacular Heritage: Culture, People and Sustainability*, Editorial Universitat Politècnica de València, Valencia, pp. 703-710.

Cirinnà C., Mecca S., Sandrucci V. 2007, *An ontology-based information retrieval and extraction system for the earthen architectural heritage (EAH) domain*, in *Information and Knowledge Management – helping the practitioner in helping and building: Proceedings of the CIB W102 3rd International Conference 2007*, pp. 1-10.

Correia M., Dipasquale L, Mecca S. 2014, *VerSus | Heritage for Tomorrow: Vernacular Knowledge for Sustainable Architecture*, Firenze University Press, Florence.

Correia M., Carlos G. D., Dipasquale L., Mecca S., Vicente J., Correia T. 2020, *Communication and Dissemination of Vernacular Heritage*, in Dipasquale L., Mecca S., Correia M. (eds), *From Vernacular to World Heritage*, Firenze University Press, FUP, pp 74-79.

Cuellar N. R. 2014, *Social and human aspects in the use of vernacular knowledge*, in Correia M., Carlos G., Rocha S. (eds), *Proceedings of Vernacular Heritage and Earthen Architecture: Contributions for Sustainable Development*, Taylor & Francis Group, London.

Giovannetti F. (ed.) 1998, *Manuale del recupero del Comune di Città di Castello*, DEI, Rome.

Karakul O. 2015, *An Integrated Methodology for the Conservation of Traditional Craftmanship in Historic Buildings*, «International Journal of Intangible Heritage», vol. 10, pp 136-144.

MECD 2017, *Proyecto Coremans: Criterios de intervención en la arquitectura de tierra*, Ministerio de Educación, Cultura y Deporte, Madrid.

Mileto C., Vegas F. 2017, *Aprendiendo a restaurar: un manual de restauración de la arquitectura tradicional de la Comunidad Valenciana, Conselleria de Vivienda, Obras Públicas y Vertebración del Territorio*, Valencia.

Vegas F., Mileto C. 2007, *Renovar Conservando. Manual de Restauración de la Arquitectura Tradicional del Rincón de Ademuz*, Mancomunidad de Municipios del Rincón de Ademuz, Valencia.