Charter

EUROPEAN CULTURAL
HERITAGE SKILLS ALLIANCE

Report: **Identifying gaps and needs in the educational and training programmes**

Deliverable D3.4

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Index

1. Introduction 7

1.1. Scope of the analysis and methodological approach 8

2. Gaps and needs in education and training 10

2.1. The CHARTER Education & Training database 11

2.2. Workshop on gaps and needs of competences in the labour market 12

2.3. CHARTER survey on training needs and emerging/innovative occupations 13

3. Skill needs analysis using vacancy data 17

3.1. Introduction 17

3.2. Previous studies 17

3.3. The analysis of vacancies in the heritage sector in Europe 18

3.4. Preliminary reflection 20

4. Data sources and case studies 21

4.1. The Milan and Sibiu CHARTER workshops 21
4.1.1. Analysis and findings 23

4.2. The National Centre for Heritage Training: how to fill in gaps and needs in the Dutch restoration and construction sector 25

4.3. The architectural profession in Europe 30
4.3.1. Main findings 31
4.3.2. The architectural profession in cultural heritage 32

4.4. Skills needs in the museum sector in Europe 33
4.4.1. Main findings 34

4.5. CHARTER's Meet the Young Cultural Heritage Professionals 38
4.5.1. Main findings 39

4.6. HERITAGE-PRO camp 40
4.5.1. Main findings 41

4.7. Future analysis 42

5. CEDEFOP Skills Intelligence: What is its Use for the Cultural Heritage Sector? 45

6. Conclusions 49

5.1. Transversal skills 50

5.2. Digital dimension 51

5.3. Sustainability 52

5.4. Learning paths 53

5.5. Visibility and job market dynamics 54

7. References 56

Annex I 59

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Abbreviations

CEDEFOP	European Centre for the Development of Professional Training
CPD	Continuing Professional Development
CET	Continuing Education and Training
E&T	Education and Training
EQF	European Qualifications Framework
ESCO	European Skills/Competences, Qualifications and Occupations
EU	European Union
HE	Higher Education
IET	Initial Education and training
ISCED	International Standard Classification of Education
LLL	Lifelong Learning
NACE	Nomenclature statistique des activités économiques dans la Communauté européenne
NOC	National Occupational Classification
NQF	National Qualifications Framework
VET	Vocational Education and Training
WP	Work Package

1. Introduction

Deliverable 3.4 *The identification of gaps and needs in the educational and training programmes* aims at identifying what is missing in the skills (including transversal skills like management, mediation, sustainability...) and competences transmission in relation to the needs of the cultural heritage labour market.

It grounds in the analysis on educational and training offers and needs performed previously in the CHARTER work package 3, also considering the results of work packages 2 and 4. In addition to the data processed within CHARTER, other documents were also essential for the elaboration of this deliverable, such as the Skills Intelligence analysis and forecast data provided by CEDEFOP, the EU agency that supports the development of European vocational education and training (VET) policies. These and other assessments were mostly taken into account for checking and comparing possible convergences of the main findings, so as to elaborate proposals that are in line with a broader panorama of studies conducted at European level.

It is important to emphasise from the outset that the gaps and needs in the cultural heritage educational and training programmes, which often lead to a mismatch with the needs of the related professions, are tightly connected to the role that this sector, more broadly, holds in the society[1]. The lack of recognition of the role of these professions and the unclear boundaries of the related job profiles has an impact on the education and training programs, thus generating gaps in the educational offer. The fact that cultural heritage occupations and activities often are not included in statistical surveys, especially with regard to the recognition of their economic impact, is reflected in the capability of tailoring *ad hoc* learning outcomes and in the quality of education and training design and delivery. Such a lack of specific information prevents, by consequence, an adequate analysis and forecast of the cultural heritage sector, bringing to a misunderstanding of skills' needs and gaps in both the initial and continuing education and training. This aspect should not be underestimated as, also according to the *European skills agenda for sustainable competitiveness, social fairness and resilience*, «skilling for a job» should be one of the guiding principles to be taken into consideration in the EU paradigm-shift on skills[2].

It is therefore in this context that the investigation presented in this Report fits in.

Already in 2019, the Council of the European Union conducted a study to understand how to 'fostering cooperation on skills, training and knowledge transfer in cultural heritage professions'[3] (hereinafter, the 'OMC 2019 Report'), whose results were compared with the analyses conducted

[1] See European Commission, *European skills agenda for sustainable competitiveness, social fairness and resilience*, July 2020, esp. p. 3: «Providing people with the right skills allows them to work more effectively and take advantage of advanced technologies, eliminates the major obstacle identified to business investment, prevents labour market mismatches and lays the ground for research and development (R&D) and firm-based innovation».

[2] Ibidem, p. 4: «skilling for a job» means starting from a mapping of each individual's skill set, delivering targeted training which meets specific up- and reskilling needs, and helping the individual find a job in demand on the labour market.

[3] European Union, Report of the OMC (Open Method of Coordination) working group of member states' experts *Fostering cooperation in the European Union on skills, training and knowledge transfer in cultural heritage professions*, 2019.

by the CHARTER work packages. Thanks to the analysis of practical examples and good-practice case studies shared by national representatives from 22 Member States, the OMC report identified emerging skills and training needs in the tangible, intangible and digital heritage field[4].

In terms of strengths, the OMC 2019 Report highlighted the existence of strong and established formal curricula for the training in traditional cultural heritage fields (such as restorers and art historians), as non-formal training programmes for building management professions, museums, and traditional crafts[5]. In addition, another element of strength might be seen in the existence of national systems of recognition, validation, certification and qualification for arts, crafts, and museums. As already mentioned, in fact, this is even more necessary to be able to have formal descriptions of heritage professions.

The data developed at the European level in 2019 also made it possible to highlight a number of weaknesses in the skills, training and knowledge transfer in the cultural heritage profession's panorama, which, as described in this Report, are still present today. More in detail, the analysis of educational and vocational pathways revealed some traditions and traditional skills in intangible cultural heritage to be at risk, even near extinction. As far as 'educational gaps' are concerned, already in 2019 at European level, the training for cultural heritage professionals was assessed as too theoretical, not sufficiently multidisciplinary and, finally, not able to provide those skills required by the labour market[6].

Among the whole spectrum of the educational offer, particular attention should be paid to vocational and educational training (VET), to enable it to be a driver for innovation and growth and to be agile in adapting to job market change[7].

To conclude, all this evidence needs to be addressed and analysed, so as to evaluate the state of the art of the educational and training programs in the cultural heritage field as today, to bring attention to some critical aspects, and to identify current gaps and needs.

1.1. Scope of the analysis and methodological approach

The ultimate aim of the identification of gaps and needs in the educational and training sector for cultural heritage is to provide policy makers, E&T providers, heritage institutions and the wider network of CH stakeholders with indications on the **priorities of interventions to have CH professionals adequately trained to operate in a well-functioning CH ecosystem**.

[4] See the Conclusions of the Council and of the Representatives of the Governments of the Member States, meeting within the Council, on a Work Plan for Culture (2014/EC/436/02), Priority Area B: cultural heritage, p.11.
[5] See EU, *Fostering cooperation in the European Union on skills, training and knowledge transfer in cultural heritage professions*; quoted above, p. 24.
[6] Ivi, pg. 25.
[7] As described by Joachim James Calleja, in his presentation given during the CHARTER workshop held at Helsinki on March 21, 2023, «vocational and educational training helps people in employment continuously upgrade their skills; it enables them to adjust to the changing demands of the working world or negotiate job changes; and t helps unemployed people acquire the skills they need to re-enter the labour market».

CHARTER WPs 2, 3, and 4 collected from 2021 up to now several data for different scopes and on different occasions (surveys, regional workshops, interviews, reports and deliverables) looking at the different perspectives and challenges for the current and future development of the CH sector at European level.

For the compilation of the present report, WP3 capitalised such a huge amount of information and reviewed it under the lens of gaps and needs. Both qualitative and quantitative data were collected through document reviews, surveys, semi-structured key informant interviews and focus group discussions, with a mixed method design approach[8]. Consequently, **the method used in the analysis is qualitative** and is essentially **based on data, analysis, experiences and workshop results produced within the CHARTER consortium**. Finally, this Report is **focused on identifying meaning or finding correspondences** rather than providing statistical data. The results achieved so far may also be further analysed (by the scientific sector, by comparing the CHARTER findings with other studies) in eventual updating of the report.

The main aim of this report is **to highlight the areas in which there is a greater need for improvement of the E&T provision for cultural heritage professions** and to foster the culture of a continuing and learner-centred education and professional development, meeting the personal characteristics, needs and interests[9], as well as the societal and market's needs.

The methodology followed by WP3 is **consistent with the approach adopted by other Erasmus+ Blueprints/Sectoral skills alliance projects**[10] in which the objective is to identify areas in which the training is most needed ("as is") and eventually to provide indications on training programmes and policy recommendations ("to be").

At the same time, the scope of CHARTER is so wide to cover the whole cultural heritage sector and hence the extremely large variety of different professions, jobs, experts' profiles and institutional environments. In this context, the analysis presented in this report focuses on identifying sectoral **common trends** emerging from different sources, rather than specific gaps or needs in education and training for specific professions or education level.

The report also provides an evaluation of the studies that the Skills Panorama elaborate to verify if they are suitable for matching CH supply and demand in capacity building mechanisms.

[8] According to Creswell (2009) "mixed methods research gives a researcher the opportunity to combine qualitative and quantitative data into one large database whereby the results are used to reinforce each other where the qualitative material supports the quantitative results".
[9] Cf. UNESCO-IBE (International Bureau of Education) (2013), *Glossary of Curriculum Terminology*, p. 35, p. 47. Online version available at https://unesdoc.unesco.org/ark:/48223/pf0000223059.
[10] Full account of the approaches adopted by the other EU projects can be found in Baatz, W. De Luca, M. Dorina, D. Hofland-Mol, M. Iancu, M. Marcuccio, M. Mei, E. Mignosa, A. Piccininno, M. Postăvaru N. Riegler, K. Sani, M. Ştefan, C. Tăut, O. van Leeuwen, J. Valentini, A. Speteanu Vasiliu, A. (2022). Report: *Report on existing quality standards and certification schemes*. CHARTER Consortium, available at https://charter-alliance.eu/wp-content/uploads/2023/01/D3.3.-Report-on-existing-quality-standards-and-certification-schemes.pdf; Baatz, W. De Luca, M. Drda-Kühn, K. Hofland-Mol, M. Lavarello, C. Marcuccio, M. Musso, S. F. Piccininno, M. Pirri Valentini, A. Riegler, K. (2022). Report: *Benchmarking analysis of innovative/emerging curricula*. CHARTER Consortium, available at https://charter-alliance.eu/wp-content/uploads/2022/08/D3.2.-Report-Benchmarking-analysis-of-innovative_emerging-curricula_FINAL.pdf.

2. Gaps and needs in education and training

One of the scopes of WP3 is to identify the skill needs of cultural heritage workers across Europe in order to devise workforce ready formal education and training programmes and formal and non-formal upskilling/reskilling opportunities.

We may explain the sense of **gaps** in E&T provision in cultural heritage as the difference between the current (or needed) level of knowledge, competence, or performance and the ideal or desired one. Essentially, gaps in education and training are the representation of a problem and can be both at the individual and organisational levels.

In the CHARTER context, we consider gaps in E&T in terms of:

- knowledge (insufficient/inadequate knowledge-transfer);
- competence (insufficient/inadequate competence acquisition);
- performance (insufficient/inadequate skill practice in the educational paths).

Gaps may also be related to other spheres of the professional practice like motivation (lack of motivation to advance the knowledge or skills) or communication (lack of competences in communicating knowledge and expertise). Moreover, opportunity gaps may be due to the uneven or inequitable distribution of learning opportunities and to the need for improvement of the E&T provision.

In the context of this deliverable, we consider **needs** as the result of gaps related to the education received, that may cause a lack of knowledge, competence or performance, or even to the personal professional development and the informal education, in particular as far as the interdisciplinary and social skills are concerned.

Identifying gaps and needs in the educational and training programmes with open methods is the scope of task 3.4.

In light of the above, this Report aims to offer some insights with respect to the aforementioned gaps and needs by considering the results of some experiences carried out within the CHARTER project (such as some regional workshops held over the past year), and other specific sector surveys. This approach, not claiming to be exhaustive, thus fits into the broader context of the CHARTER Consortium and, also for this reason, is characterised by the transversality of geographical and thematic references.

With respect to the composition of the Report, the next few paragraphs (2.1 - 2.2 - 2.3) are intended to highlight what are the data and tools already developed by CHARTER at other deliverables that offer starting tools for understanding what are the gaps and needs in the CH educational and training programmes. These, therefore, will be briefly summarised with a view to highlighting some procedural steps that preceded the specific investigation that is the subject of this Report. The other paragraphs, instead, are aimed at illustrating some specific experiences and examples that, although they might appear distant and disconnected from each other, help to understand-each for

its specificity-what are possible mismatches or connections between the education and training sector and the labour market in the vast and diversified CH sector.

2.1. The CHARTER Education & Training database

The first step to understand what are the gaps and needs in the CH educational and training programmes, it's a mapping of the programmes in E&T for the cultural heritage professions and jobs across Europe in order to get an overview of essential parameters that reflect their development and sustainability. This approach recalls the Voices of Culture report proposing a holistic vision of the expert, mediator and policy maker fields[11], and to the recommendations of the OMC group on key development moments.

The CHARTER E&T database[12], developed in Task 3.2, has been already extensively described in the deliverables D3.1 (Report on transmission mechanisms of knowledge and non-linear pathways to qualification)[13] and D3.2 (Report on the benchmark analysis of innovative/emerging curricula)[14].

In March 2021 WP3 started to work on the database proposed in the application in task 3.2 "Main typologies of CH schools, training programmes and educational methods". To this end, WP3 developed a methodology of data collection of existing cultural heritage training providers and programmes to serve for further analysis in the framework of CHARTER and the research on cultural heritage studies in general. Within this context the database has been **instrumental in identifying those programme parameters which are essential for characterising and comparing curricula**. This approach was particularly useful for developing the indicators for benchmarking curricula of various programme types (HE, VET, HE/VET, CET) and EQF levels.

The challenge was to develop a suitable and user-friendly database which combines the whole spectrum of educational possibilities and varieties for cultural heritage, i.e. covering a wide range of dimensions such as HE, VET and HE/VET as well as the educational formats of formal/non-formal/informal learning, learning outcomes, information of educational and employment classifications (ESCO, ISCED, EQF, NOC) and EQF/NQF levels.

Hence, the database is a tool to identify the E&T gaps provided that the information is collected with an adequate level of granularity.

[11] VoC (2017). *Skills, training and knowledge transfer in cultural heritage professions*, Report available at: https://www.anpal.gov.it/documents/552016/586456/report_previsivo_Excelsior_2022-26.pdf/33487145-b93d-8594-46be-f65b1f26b75d?t=1644593762030.
[12] https://charter.visuelles.xyz/.
[13] Baatz, W. De Luca, M. Marcuccio, M. Piccininno, M. Riegler, K. (2021). Report*: Cultural heritage education & training – pathways to qualifications. CHARTER Consortium*. Available at https://charter-alliance.eu/wp-content/uploads/2022/07/D3.1_FINAL_V2-UPDATE-28-9.pdf.
[14] Op. cit. nt. 10 (Benchmarking analysis).

2.2. Workshop on gaps and needs of competences in the labour market

Consistently with the project proposal, during the first CHARTER General meeting in presence (Vienna, Austria, 5-7 July 2022), WP3 organised a milestone workshop aiming at identifying gaps and needs in the cultural heritage education. It took place on the 6th of July 2022. This was the context where to discuss the results of the **survey on highly innovative and/or highly emerging curricula** conducted by WP3[15]. The latter permitted to identify 39 curricula which were considered by CHARTER experts as being *innovative* and *emerging* in different areas or functions[16]. A qualitative analysis was then conducted on such curricula to identify the most common keywords used in presenting the training curricula, also in relation to the keywords "Innovative" and "emerging". The first results showed that the **most frequently occurring words** in connection **with the term "innovative" were "multidisciplinarity" and "teaching format", followed by 'Digitalisation', 'Global challenges', and 'Sustainability'. As regards the term "emerging" the most frequently occurring word is 'Interdisciplinarity'**, followed by 'Widening of the field' and 'Challenges'.

Another activity carried during the workshop was to **match the training needs of a fictive "persona" with the best suited of three given curricula deriving from the survey and from the E&T database**.

Workshop handout part 1 contained the description of one persona (alternatively, "Laura", the senior conservator, or "Paul", the young archivist) specifying age, education and current occupation. The respective skills found in the ESCO description were related to the six CHARTER functions and rated using a spiderweb matrix with a scale 1 – 10[17]; this gave a picture of how the occupation is positioned in the cultural heritage ecosystem. Furthermore, the learning needs of the persona to gain a position upgrade were described and followed by the description of three curricula, extracted from the E&T database, potentially serving this scope and corresponding to the different ways the professional can reach his/her own goals. Workshop handout part 2 contained the description of the real task that, starting from the described learning outcomes, was to score (1 – 10) the capacity of the course to cover the specific needs in terms of ESCO skills and competences of the profile by using a spiderweb organised on the six CHARTER functions (fig. 1).

As a result, the curriculum could be compared to the spiderweb concerning the competences and skills involved with the envisaged occupation of the persona.

[15] Op. Cit. nt. 10 (*Benchmarking analysis*), pp. 10-14. Finding comprehensive definitions for "innovative" and "emerging" was pretty hard and tricky. Therefore, WP3 didn't state one, but rather listed elements describing the different aspects of both concepts.
[16] The aim was to represent different aspects of the training offer (ex. duration, country, target, etc) rather than having a statistical consistent representativeness of the curricula provided.
[17] The six CHARTER functions of a cultural heritage professional are: Management; Research and Development/Education; Governance and Policy making; Recognition; Preservation and Safeguarding; Engagement and use. For more information and their application in a spiderweb matrix cf. https://charter-alliance.eu/cultural-heritage-competences/.

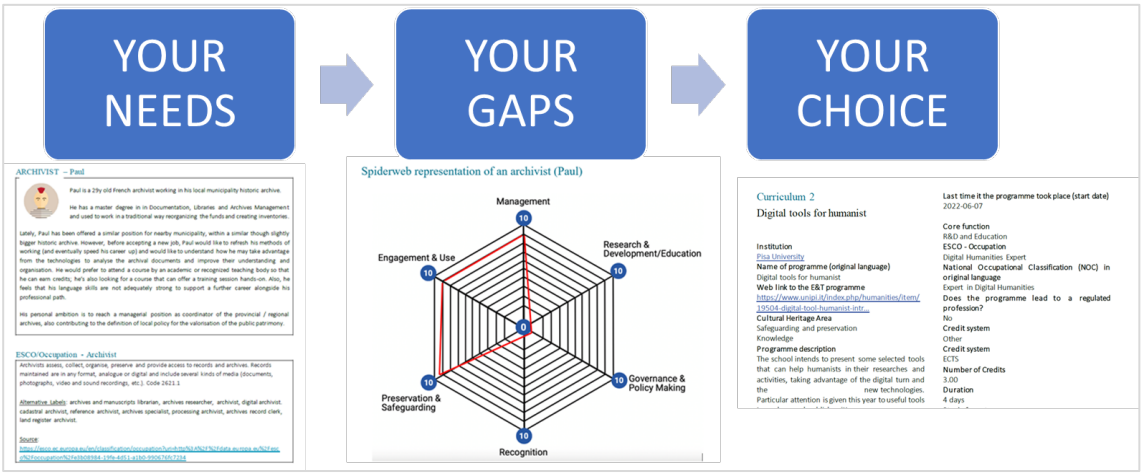

Fig. 1 - The Vienna exercise to map gaps and assess the needs. Starting from the archivist's bio and the description of ESCO occupation Archivist Code 2621.1, participants mapped the competences in the self-assessment spiderweb and then analysed and chose the most appropriate E&T programme to fill the gaps based on the learning outcomes.

Next question was whether the programme was innovative or emerging.

It turned out that none of the programmes offered fulfilled the aims of the personas fully, so each group chose the closest. Lastly, this exercise has shown that the E&T database setup allows for characterising a programme sufficiently for the purpose of identifying the suitable E&T offer to fill the gaps and that the participants were able to compare the given professional profiles with the curricula and learning outcomes offered, using the CHARTER spiderweb.

Consistently, a preliminary finding was that this tool and **this methodology can be used by professionals/experts of the cultural heritage sector to identify their own training needs for a professional development and choose for the better suited education and training offer for upskilling and reskilling**.

2.3. CHARTER survey on training needs and emerging/innovative occupations

The "CHARTER survey on training needs and emerging/innovative occupations" report, released in March 2023, presents the results of a survey performed in the framework of CHARTER - WP3 with the aim to contribute to the development of proposals of Vocational and Educational Training (VET), Higher Education (HE), and Lifelong Learning (LLL) guidelines for innovative/emerging occupations.

The **47 interviewed experts** represent five different "clusters" (HE, VET, Heritage venues, Private sector, Governmental/Institutional sector) across 13 Member States. The consortium members identified national experts who could give a relevant outlook on the sense of innovation in the E&T

provision and collected the responses during the first quarter 2023. The sample has no statistical value, but it rather provides qualitative inputs.

The interviews gathered experts' opinions on the characteristics of education/training courses/programmes in order to respond to innovative and emerging training needs/gaps. The ultimate **aim** of the survey was twofold: on one hand, **to further focus the training needs** compared to the findings that WP3 had gathered in the previous period; on the other hand, **to characterise the envisaged E&T offer of innovative/emerging courses in terms of educational subjects, target audience, duration, format of provision, educational level, as well as other variables influencing the quality and impact of the training at economic, social and institutional context** in which the E&T is offered.

The survey covered 4 main parts, including Current Heritage E&T Offer: i. Gaps and Needs; ii. Content and Provision of the Innovative/Emerging E&T; iii. Target Audience and Participatory Experience; iv. Governance and Quality assurance.

As regards Current Heritage E&T Offer: Gaps and Needs, the survey highlighted that the 6 functions identified by the CHARTER project are indeed confirmed as being core functions for CH and to be interconnected with each other. Respondents recognised that almost every and each profession in the CH may be required to develop more or even all functions to different degrees (fig. 3 and 4).

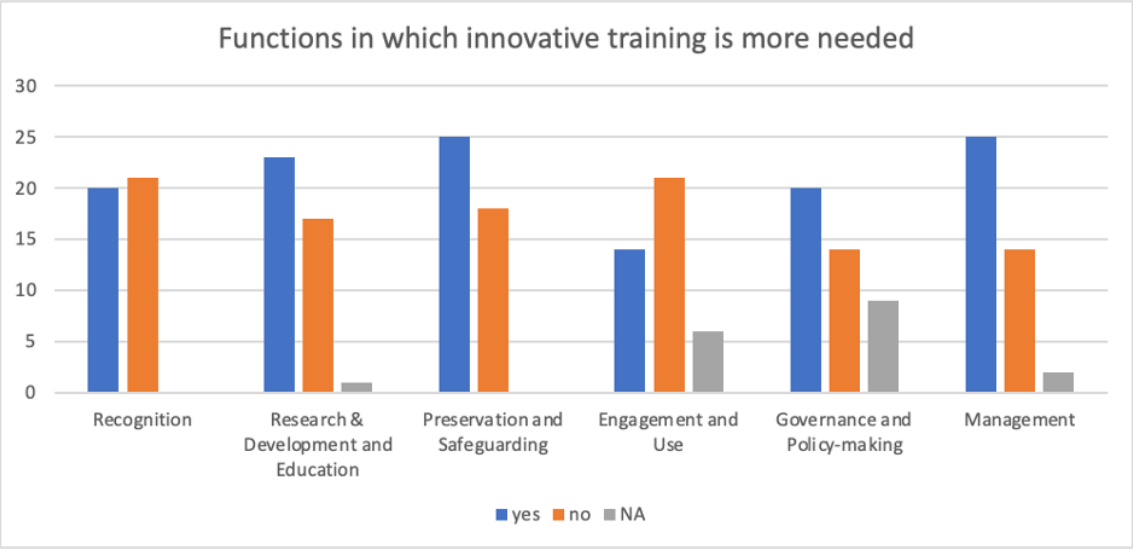

Fig. 2 - Perception of the need of innovative training in the six CHARTER functions.

Fig. 3 - CHARTER functions for which innovative curricula are most needed.

The capacity to "translate" the CH in the current society is recognised as "core" transversal skill to all the CH functions. Depending on the function and/or the profession, this communication skill may imply to develop new "meanings", including creating new languages and processes and tools (also using digital tools) not only to communicate (one-way) but also to engage (two-way) a wider group of stakeholders. Today the cultural heritage professions are more and more connected to many others and thus there is the need to interact with many stakeholders concerning different aspects.

In summary, there is a general common plea to continue to provide and even enhance the training for these functions, independently of the fact that there is a perceived gap in training provision or not.

In addition to core skills, the transversal skills identified by the CHARTER project[18] are considered relevant by the respondents. Amongst them, **skills related to social development are extremely important for the training**. This includes **managerial skills, entrepreneurial skills, communication skills, digital skills, skills related to the sustainable use of resources, etc**.

All the types of education and training are considered to be important, slightly in favour of **higher education** (as primary/basic source of education) **combined with continuing education to cover specific training needs and updating, including on new technologies/methods/materials or norms/protocol**.

[18] Corr, S. Marçal, E. McMahon, P. Mignosa, A. van Leeuwen, J. (2021). Report: *A new landscape for heritage professions – preliminary findings*. CHARTER Consortium. Available at: https://charter-alliance.eu/wp-content/uploads/2022/08/D2.1-WP2-FINAL_V3.pdf.

In order to be considered **innovative/emerging**, the courses/programmes would need to include the following dimensions:

- Include **work-based** learning opportunities;
- **Transcend disciplinary boundaries** and foster a wider understanding of heritage;
- Be **relevant for the society**;
- Include **sustainability** issues;
- Address **technological changes** and/or **digitalisation**;
- Include **innovative teaching/delivery formats**;
- Be developed or implemented in **cooperation with different institutions**.

In general terms, people are in favour of a mix of all the training formats, also depending on the age/experience and objective of the training. The **part-time training is considered an ideal format, as it permits to continue working** or managing the time with more flexibility. At the same time, **for the basic education/training a full-time course/programme is most suggested** as it implies a full-time engagement for reaching a viable knowledge. The **part-time training is more useful for upskilling, reskilling or professional updating**.

Innovative/emerging E&T in the CH is needed for all age target audiences, for young students and also for people with 3, 5 or even more years of professional experience as it is fundamental to be informed on technological, societal or regulatory innovation/updating.

The **practical learning**, both in terms of workshops/laboratories and as working experience, is considered **fundamental** f**or most roles/jobs where crafts skills are required.** At the same time, the respondents agree on the need to have a **formal recognition of the training/qualification** and to establish an appropriate working environment that encourages the **training on the job**.

In conclusion, the survey highlights that the current education and training offer in the CH sector provides a sound basic education and does **not really need to be "innovative" in the content, but it is sometimes outdated or not aligned with market/societal needs**. To overcome this, in addition to focusing on the content/functions as depicted above, the survey also highlighted that it is really **important to engage the larger possible group of the stakeholders, also representing different sectors and points of interest, in the design and/or the provision and/or evaluation of the training**.

3. Skill needs analysis using vacancy data

Across 2021 and 2022, CHARTER has developed a pilot phase of the cultural heritage sector's job vacancies analysis and is developing an in-depth second phase analysis.

This analysis, which is part of CHARTER's broader responsibilities and actions, is of interest in understanding the gaps and needs in the CH educational sector that is proposed in this Report. It is therefore with the intention of better understanding what the expectations and demands of the job market in the CH sector are that the results of this analysis are presented in the following section.

3.1. Introduction

Job vacancies provide a cross-section of currently requested jobs in the market and offer information on required skills and experience, as well as on the conditions offered by employers in the sector. Consequently, vacancies, which are an easily acquirable source of data, provide useful information on job market conditions. **By analysing them, this research aims to identify whether professionals and future professionals have acquired through education and experience, the skills that the market demands**. In a broader perspective, this study can contribute to a better matching of labour demand and supply in the heritage job market.

There are various approaches to analysing the heritage labour market, each offering unique insights into the sector's skill gaps and needs. While focus groups and expert interviews provide in-depth understanding of how current challenges impact the heritage sector and the resulting implications for skill gaps and needs, this research has chosen to examine naturally occurring data such as job vacancies to minimise data manipulation as much as possible.

3.2. Previous studies

There is a significant body of literature that employs vacancy data to assess skill needs in the labour market. A study on the **Italian creative industries**[19] analysed job postings to determine the extent to which digital skills were in demand, they also reviewed CVs to ascertain if the workforce possessed the required skills. They found that **digital hard skills were in high demand** and that there was a **shortage of digital and managerial skills within the creative workforce**. Additionally, the authors concluded that **emerging jobs in the creative sector blurred the boundaries of NACE categories, which weakened the European classification system and highlighted the need for its**

[19] Ascione et al., 2022. Cf. also Colobo et al., 2019; Mirski, 2017.

update. This study is a relevant reference for our study because of the similarities in methodology and sector of analysis, although the heritage sector is distinct from the creative industries.

Another interesting study on job vacancies in the field of culture[20] correlated cultural occupations within the Online Job Adverts database by CEDEFOP with cultural employment retrieved from Eurostat to determine whether the information collected from vacancy data corresponds to statistical data. The Online Job Adverts database is a vast dataset of over 150 million vacancies in various countries, providing information about occupation on ESCO level, required educational level, and salary conditions[21]. The authors found that vacancy data differed from employment data and presented different aspects of the labour market. For example, they discovered that certain groups, such as professionals and managers, had a higher number of vacancies compared to jobs requiring self-employment, such as those within the craft sector. This suggests that online vacancies are not widely used in these subsectors to find future employment. Similarly, they found that there was an overrepresentation of vacancies in northern and western European countries, indicating that informal job advertising might be more prevalent in eastern and southern Europe. Although the paper did not focus on skill requirements but rather on educational level and contract conditions, the findings of this research are relevant references for our study.

The review of the relevant studies prevails that there is growing interests in vacancy data to analyse the job market and that matching the information from vacancies with European statistical scheme helps to make sense of the data on the one hand, on the other however, gives the possibility to test the European classification system and find its limits and points of improvement. The review also showed that **vacancy analysis specifically focusing on the heritage sector has not been accomplished yet**, which this research aims to do.

3.3. The analysis of vacancies in the heritage sector in Europe

Our investigation started with a pilot phase in 2022. Over a period of two months, we collected job vacancies in the heritage field in Germany, France, the Netherlands, Slovenia, and the UK. Except for the case of France, the data gathering was not systematic but rather exploratory. We scanned different heritage occupations to see what kind of data could be gathered and how the information was structured. In various meetings, we collaboratively discussed how to analyse and make sense of the data.

The most structured data gathering was carried out by our French partners of Université Sorbonne Nouvelle/Paris 13 who gathered over 1,000 job vacancies in a three-month timeframe, revealing interesting preliminary findings. The majority of heritage-related job adverts were concentrated in the Paris region (80%), with the **most advertised occupations being in the art market sector such as art galleries and auction houses (38%), followed by culture and heritage (25%). The most requested skills were computer skills, English language proficiency, and soft skills such as teamwork** (fig. 4).

[20] Sanjuan et al. (2023).
[21] Chapter 5 discusses the relevance of the OJA for the CH sector.

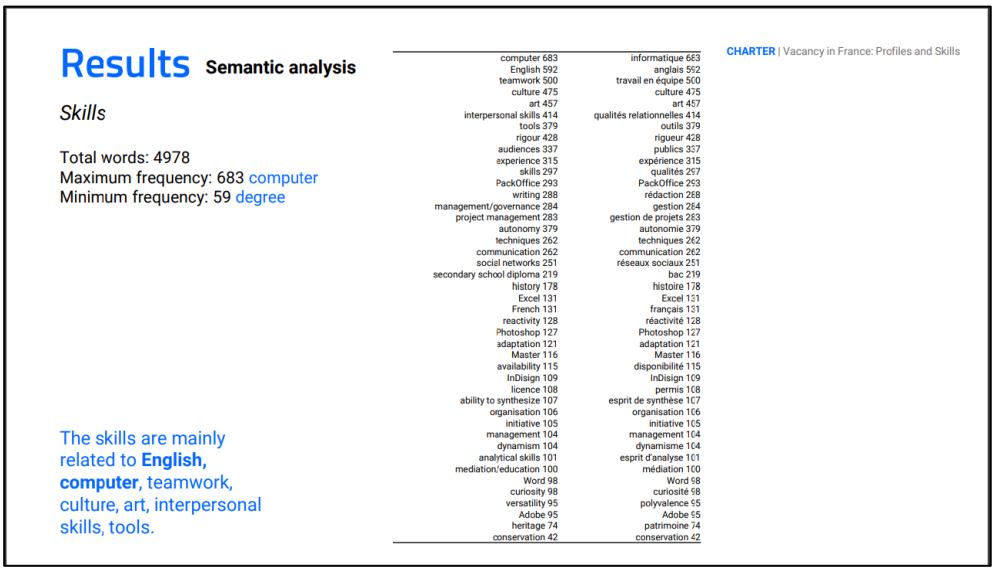

Fig. 4 - Research "Vacancy in France. Profiles and skills", 2022, by V. Gobbato, Université Sorbonne Nouvelle/Paris 13, Labex ICCA.

Internships (33%) and permanent positions (21%) were the most common types of contracts offered. Although the methodology of the research has been updated since the pilot phase, these preliminary results from France highlight how job vacancies can provide valuable insights into the labour market and skill needs within the sector.

After several discussions with CHARTER partners, it became obvious that the evidence-based categories we had come up with are too ambiguous and more systematic classifications are needed to analyse the data. To ensure consistency in the collection, categorization and interpretation of the data, we developed a codebook that references our data to ESCO, EQF, and NACE categories. Building on the work of WP2[22], we use a sub-sample of these European classifications that are relevant to the heritage sector. This grounded the second phase of the analysis.

We also systematised the process of identifying relevant job platforms. Before beginning the data gathering process, we conducted a mapping analysis to identify the most suitable platforms for heritage vacancies. Partners consulted their respective networks to identify appropriate websites for job postings and job seekers. The mapping identified relevant platforms in almost all participating countries, focusing on those specific to cultural occupations. When sector-specific platforms were not available, we utilised public occupation platforms that could be filtered for cultural jobs or more generic job advertising sites, which we filtered using specific heritage-relevant keywords.

We have also developed a standard procedure for data collection and analysis. We use a web-scraping tool to weekly retrieve data from the platforms. The data is then cleaned and standardised using a script specifically developed. The script extracts information such as: job title, employer,

[22] *Op. cit.* nt. 17, p. 23.

location, occupation, required educational level, and required skills, and stores it in a structured format.

At present (March 2023), we have ten participating countries that began collecting data in March and will provide all job advertisements from the mapped platforms over a three-month period. The regional labour markets currently analysed include Belgium, Finland, France, Germany, Italy, Latvia, The Netherlands, Poland, Spain, and Sweden.

The expected outcomes from the vacancy data analysis are diverse. Firstly, we aim to understand **which occupations are required and if some are more requested than others**. Then we seek to examine **which qualification levels and skills are required** in the heritage sector for various occupations, and **which skills are the most relevant**. We intend to analyse the findings cross-country to identify differences among them. We also aim to identify any emerging occupations in the dataset that cannot be unambiguously classified under a certain ESCO code. Similarly, we want to test if the selected heritage-relevant NACE codes are sufficient to classify the sectors encountered in the vacancies or if there are occupations that cannot be easily classified under one economic activity.

3.4. Preliminary reflection

Although the data gathering has only just begun, some preliminary results from the mapping analysis are worth sharing. The mapping analysis revealed that, on the one hand, not all countries have heritage or culture-specific vacancy platforms where information is collected. Instead, vacancies are scattered across public vacancy platforms, social media, and sector-specific association websites. On the other hand, not all regions use vacancy platforms to advertise job openings. For instance, our Baltic partners reported that most job postings in the heritage field are advertised within the organisation's own network (their own website or social media accounts) without making them public on a vacancy platform.

The mapping analysis also revealed that **certain occupations such as craft occupations or freelance jobs are not visible in vacancy platforms**. This may lead to unequal opportunities and, within certain sub-sectors, affect the mobility of professionals in the EU. While the European platform for vacancies, **EURES**[23], aims to contribute to the mobility of labour within the EU, **it is not particularly useful for the heritage sector as it filters too many irrelevant results under the arts, entertainment, and recreation category, such as fitness instructors.**

In conclusion, the study contributes to CHARTER project's aim to understand the heritage sector better. These findings should contribute to a better match making between job demand and professional supply in the heritage sector.

[23] https://eures.ec.europa.eu/index_en.

4. Data sources and case studies

While the E&T database, the methodological exercise and the CHARTER survey described in paragraphs 2.1/2/3 addressed the identification of gaps and needs in E&T qualitatively,

CHARTER consortium members also conducted quantitative analysis throughout different project activities. In doing so, the following peculiar aspects and biases need to be taken into consideration:

- The **local dimension** (the participants to the CHARTER regional meetings in Sibiu and Milan and the Dutch conservation/restorers programme). The considered case studies can give a perspective on the evaluation of how and to which extent the sectoral dynamics are influenced.
- The **professional profiles** (European architects, European museum professionals). Investigating gaps and needs of professions that traditionally are more defined (or even recognised, like for the architects) and described in statistics, gives an overview of how these sectors are evolving in reaction to today's challenges.
- The **professional seniority** (European young professionals from ICOMOS, HeritaGeeks, HERITAGE-PRO project). The CHARTER project has always considered the young cultural heritage professionals' perspective as a valuable indicator of the gaps in the education and training offer in this sector. Moving the first professional steps to enter in the job market is the real moment when we can evaluate how effective the educational path was in terms of acquisition of knowledge, skills and competences.

The following paragraphs are aimed at illustrating the occasions and the project activities during which CHARTER members were able to collect more quantitative data proving to be useful in the understanding of gaps and needs in the CH E&T sector.

4.1. The Milan and Sibiu CHARTER workshops

This report analyses and summarises the 53 handouts collected in the 2022 CHARTER workshops in Sibiu (28-29 April 2022) and Milan (23-25 April 2022). The handouts aimed to help practitioners in the heritage sector understand the challenges they face and develop the necessary skills[24] to make their work future-proof. They resulted to be now an interesting source of information from the CHARTER stakeholders' community made up of local cultural heritage ecosystems, including heritage practitioners, managers, policymakers, and academics. All six CHARTER functions were represented by participants' occupations present at the workshops. For Milan, the bulk of functions

[24] In the workshop exercise, hand-outs draft and in this analysis the term skills are used interchangeably with competence. When working with focus groups it was decided to keep language in terms so that the participants easily grasp what is being asked, and in fact terms such as "competences", "skills" or "tasks" are very interchangeable in people's perception. Basically, what is important is to collect descriptions of "what one is able to do".

were R&D/Education, Management and Preservation and Safeguarding, while for Sibiu they were Management and Preservation and Safeguarding.

The handouts collected information on participants' occupations and tasks, current and future challenges, trends in the sector, and skills desired to address these challenges and changes in the CH field. The information about occupations, challenges, and desired skills is of particular importance for this analysis.

Two approaches were used for the purpose of coding the answers regarding challenges and desired skills: six drivers of change and the EU Council's key competences for lifelong learning (Literacy competence, Multilingual competence, Mathematical competence and competence in science, technology and engineering, Digital competence, Personal, social and learning to learn competence, Citizenship competence, Entrepreneurship competence, Cultural awareness and expression competence.)[25].

The handouts asked participants to list the primary challenges they either face now or that they will experience in the future, and to which they must answer in their professional practice. Multiple challenges could be provided. These challenges characterise a cultural heritage sector undergoing constant and notable changes that impact the cultural heritage occupations. To categorise the various answers, an adjusted assortment of **six primary drivers of change** that WP2 developed by analysing those ones identified by the Blueprint for Textile, Clothing, Leather and Footwear and existing research on the topic[26]. Although all these six drivers could account for all relevant handout answers, however, on closer inspection, some improvements resulted to be necessary to have a more streamlined set of drivers (Table I).

Table I. Final list of Drivers of Change used, including comments on what the amended drivers entail.

Proposed Drivers of Change	Comments
Globalisation and Political environment	Policy, conflict, geopolitical barriers, etc.
Sectoral and Organisational Management	Presence and management of employees, resources, associations, etc.
Knowledge and skills transfer	
climate action	
Technological shift	
Demographic, social, and cultural changes	These cover their ensuing changes in social, cultural, and political values, consumption behaviours, identities, etc.

[25] Council recommendation of 22 May 2018 on key competences for lifelong learning (Text with EEA relevance) (2018/C 189/01) https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018H0604(01)&from=EN.
[26] European Environment Agency, *Drivers of change of relevance for Europe's environment and sustainability*, EEA Report No 25/2019. Available at https://www.eea.europa.eu/publications/drivers-of-change. Ipsos Global Trends 2023. Available at https://www.ipsos.com/en-us/global-trends.

Participants were asked to list **skills they desired for their future practice, and which would be necessary to tackle the previously identified challenges**.

To code the diverse answers, the EU Council's list of eight key competences was used**. According to the EU Council's recommendation, these competences are necessary for lifelong learning, and successful participation in society and mobility within the labour market**. Due to slight nuances in the answers collected, the allocation to the most suitable competence(s) was supported by the analysis of the participant's profile and answers. The EU Key competences allowed categorising most skills. However, a **few answers did not fit within this Competence framework, and required the addition of another category**. A few participants noted the need for skills and competences that were specific to their heritage field of expertise, such as how to create an exhibition or technical conservation skills. These answers necessitated the addition of "**Position-specific skills & expertise**".

While the EU Key Competences framework is not able to capture details within each competence, it allows for an overview of the type of skills desired.

4.1.1. Analysis and findings

The tables aggregating all the results on drivers of change and skills needs can be seen below in Table II and III).

Table II - Drivers of Change identified using the workshop respondents' and Moderator and Rapporteur (M&R) "Future Challenges" answers. As with Table. 1, participants could provide multiple challenges.

Driver of Change	Milan (n = 17)	Milan (%)	Sibiu (n = 10)	Sibiu (%)	Milan (M&R)	Milan M&R (%)	Sibiu (M&R)	Sibiu M&R (%)
Globalisation and Political environment	5	8,20%	17	35,42%	8	38,10%	7	24,14%
Sectoral and Organisational Management	6	9,84%	9	18,75%	1	4,76%	7	24,14%
Knowledge and skills transfer	10	16,39%	8	16,67%	2	9,52%	3	10,34%
Climate action	5	8,20%	1	2,08%	6	28,57%	1	3,45%
Technological shift	27	44,26%	1	2,08%	2	9,52%	6	20,69%
Demographic, social, and cultural changes	8	13,11%	12	25,00%	2	9,52%	5	17,24%
Total	61	100,00%	48	100,00%	21	100,00%	29	100,00%

Table III - The submitted desired skills to tackle future challenges by Milan and Sibiu workshop participants and those interpreted by moderators and rapporteurs (M&R. Participants could submit multiple skills, leading to more skills than participants (n) listed.

EU Key Competencies	Milan (n = 31)	Milan (%)	Sibiu (n = 11)	Sibiu (%)	Milan (M&R)	Milan M&R (%)	Sibiu (M&R)	Sibiu M&R (%)
Digital	38	29,01%	0	0,00%	7	25,00%	0	0,00%
Personal, social, and learning to learn	31	23,66%	2	8,00%	4	14,29%	2	25,00%
Entrepreneurship	34	25,95%	15	60,00%	7	25,00%	5	62,50%
Multilingual	4	3,05%	0	0,00%	3	10,71%	0	0,00%
Cultural awareness and expression	6	4,58%	0	0,00%	1	3,57%	1	12,50%
Citizenship	2	1,53%	7	28,00%	2	7,14%	0	0,00%
Position-specific	6	4,58%	1	4,00%	1	3,57%	0	0,00%
Literacy	8	6,11%	0	0,00%	3	10,71%	0	0,00%
STEM	2	1,53%	0	0,00%	0	0,00%	0	0,00%
Total	131	100%	25	100,00%	28	100,00%	8	100,00%

It is evident from Table II that each workshop identifies a different driver as most prevalent: **Milan participants identify "technological shift"** as the most important driver of change, while **Sibiu's focus is on "Globalisation and the Political environment" and to a lesser degree "Demographic, social and cultural changes"**. These answers are mostly corroborated by the desired skills distributions in the following section: **for Milan, the most desired skill was "Digital competence", while for Sibiu the most desired skill was "Entrepreneurship competence"** and the second most desired competence was "Citizenship", a competence which refers to the understanding of political and global developments and structures. This is interesting as many desired skills are related to lobbying and influencing legislation and policy changes for the benefit of the cultural heritage sector in Romania. Each workshop underlines a different driver as the most prevalent in their fields. This can be explained by the differing circumstances of each nation and region, such as demographics, funding, needs and wants, and so on, which lead to differing pressing challenges and drivers identified.

Regarding desired skills, it is visible in Table III that **Sibiu participants primarily desire entrepreneurship skills**. The related EU key competence refers to identifying opportunities and proactively engaging with them to create value, however, also to management and proficiency of economic processes. This competence is relevant for those that seek skills related to the management of the financial side of an organisation or individual initiative, such as the commercialisation of activities or discovery of new revenue streams. For Sibiu, some answers coded as this competence are "how to finance" and "how to concentrate on fewer goals, to give them proper allocation of resources". Further, for Sibiu and Milan (albeit tied with digital competence), moderators noted that skills linked to entrepreneurship competence were most frequently mentioned in discussions.

While entrepreneurship competence accounts for 26% of answered skills in Milan, it is not as desired as digital competences. Sibiu, however, has no listed desires for digital competence.

The digital skills desired by Milan participants vary drastically, such that some are "social and internet competences" and "digital marketing" while others are "3D digital data managing" and "VR/MR" (Virtual Reality and Mixed Reality). This highlights a wide spectrum of possibilities provided by digital tools and solutions that have been identified. **Digital competence's absence in Sibiu points towards digital tools either having already been implemented and managed to a satisfactory degree or not deemed necessary.**

The least frequently cited desired skills are Science, Technology, Engineering and Mathematics (mentioned twice) and Multilingual competences (mentioned four times), both of which are only desired by Milan participants. **The little desire for STEM competence in the cultural heritage sector may be unsurprising, as these are skills typically confined to hard sciences. However, the absence of need for multilingual competence is interesting. This is potentially caused by the participants, such as those in Sibiu, not expecting to have to interact with an international audience and are more focused on addressing Romanian audiences**.

Each workshop has resulted in different identified drivers of change and desired skills because of the different backgrounds of the participants. **These local specificities can be attributed to many factors involved, such as the territorial and social and political context the participants are active in, their respective professional fields, and their social values and priorities.** However, as to the need of transversal competences, Sibiu participants are clear on not needing certain competences found necessary in Milan, such as digital and literacy competence while they request citizenship competences far more frequently than Milan, highlighting the importance they place on knowledge on and skills dealing with the legal and political side of the cultural heritage sector.

The workshops indicate **although major drivers of change in todays' society are a global matter, their impact is local and affects individual professionals in a local matter**, and therefore so are the needs felt and the expectations for solutions.

4.2. The National Centre for Heritage Training: how to fill in gaps and needs in the Dutch restoration and construction sector

The shortage of professionals working in the restoration and construction sector, specifically with regard to traditional material and cultural heritage, is a trend which is common in many EU countries[27] and also emerged during the CHARTER meetings and workshops at national and regional level.

[27] The EURES, Report on labour shortages and surpluses 2022 (Report on Labour Shortages and Surpluses 2022) highlights that the first 2 occupations with the most severe occupation in Europe are Bricklayers and related workers and Carpenters and Jointers. Also, the Research Report "Employment and labour markets. Tackling labour shortages in EU Member States" commissioned by Eurofound (Tackling labour shortages in EU Member States) reports that the vacancy rate data combined with business sentiment indicators demonstrate that labour shortages have increased significantly between 2013 and 2019 across the economic sectors of construction, manufacturing and services. The highest increase was registered in the construction sector, where the vacancy rate increased from 1.3% in the third quarter of 2013 to 3.6% in the third quarter of 2019.

In one of partner's countries of the CHARTER project, the Netherlands, this issue led to the creation of a new organisation. **The case is presented here with the aim to provide ideas and an example on how training needs in the CH sector have been faced in this EU country.**

In 2017, the Nationaal Centrum Erfgoedopleidingen (National Centre for Heritage Training, NCE)[28] was established to secure the future of restoration vocational education and training (VET) in the Netherlands. This happened after various industry organisations in the restoration, construction and education sector in the country sounded alarm about the decline of restoration craftsmanship in the country. As a consequence, the Ministerie voor Onderwijs, Cultuur en Wetenschap (Ministry of Education, Culture and Science, OCW) earmarked 2 million euros for the development and organisation of restoration training programs.

It is devoted to educating the future professionals in the heritage sector and increasing future generations' awareness on career opportunities in restoration and the heritage sector. NCE, indeed acts as a platform, an intermediary, and a booster for the Dutch heritage and restoration education sector.

The NCE aims to create an insightful and sustainable educational infrastructure for training at all levels in the cultural heritage sector, where professional knowledge and skills are central, and innovation can take place. **Not only practical knowledge but also support for professional development is provided.** To undertake initiatives to strengthen the position of sustainable heritage education and to prevent the loss of restoration craftsmanship in the country, in the period 2018-2023 NCE **has developed new restorations courses, electives and study modules** for twelve professional disciplines in collaboration with twenty sector organisations (representing **the labour market)**. The training programs are provided in **collaboration with education institutions and industry groups and take into account regional needs in terms of disciplines or specialisation required**. are hence small scaled and tailor made in order to maintain professionalism.

In the 2022-2023 school year, a learning/working trajectory - the 'NCE Heritage School' - has been introduced in the North Brabant-Nijmegen region. The school is run in collaboration with recognized restoration construction companies, ROC's Regionaal Opleiding Centra (regional education centres, ROC) and Bouwmensen/Bouwschool[29].

The NCE aims to help interested young people and cultural heritage professionals with making their choice from the wide range of training and courses on offer in the Netherlands. For this purpose, an overview of the institutions providing cultural heritage education in the Netherlands, as well as an overview of the existing cultural heritage programs, divided by education level in NQF-level[30] and professional discipline, are illustrated on an interactive map included on the NCE website (fig. 5).

[28] https://www.erfgoedopleidingen.nl/index.
[29] Bouwmensen/ Bouwschool is a cooperative association of construction and infrastructure training companies, which provides and tests construction courses throughout the Netherlands with regional training centres.
[30] The European Qualification Framework (EQF) makes the comparison possible and relations visible (European Commission, 2008). However, as educational systems differ among various countries, this remains a particularly challenging undertaking (Schneider, 2008). Therefore, European countries have developed their own national qualification framework (NQF).

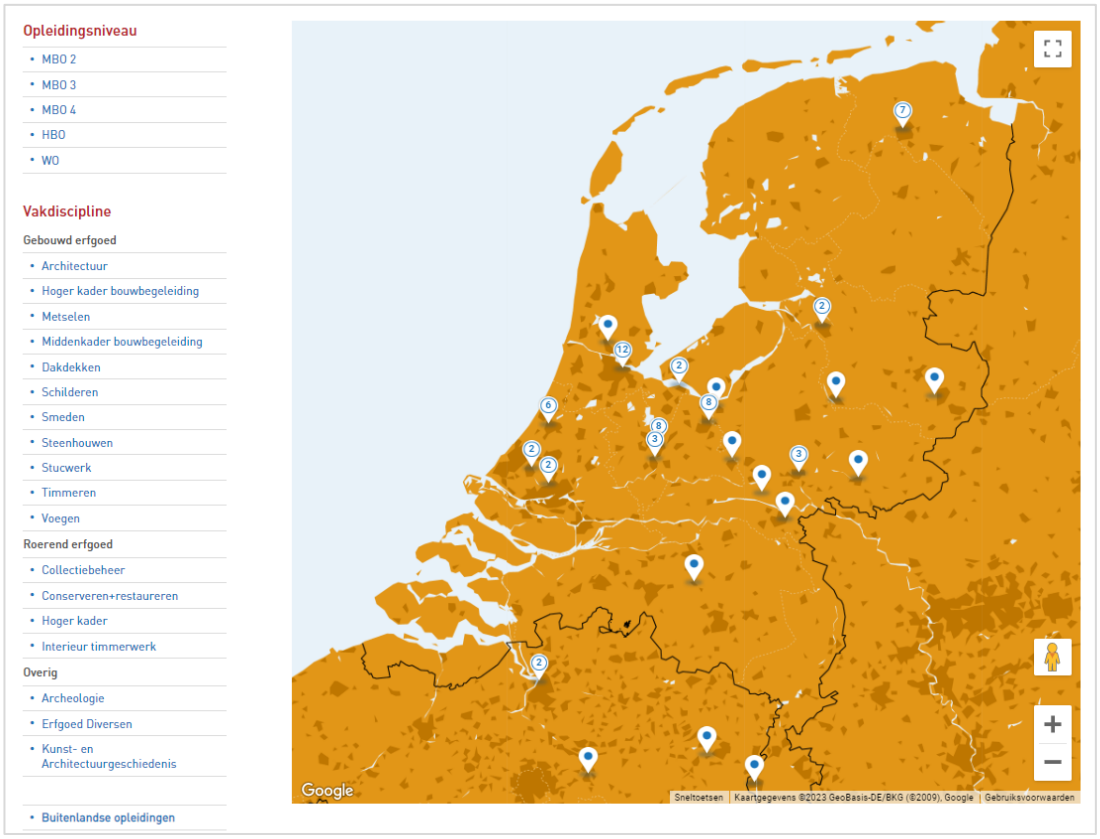

Fig. 5. Interactive map of all cultural heritage education programs in the Netherlands (not only NCE).

Finally, the NCE acts as a booster by **informing young people aged 12 to 18, and their parents about the possibilities of becoming restoration crafts workers** through a social media campaign titled 'Future in Heritage'.[31] Short professional films can be viewed on the NCE website and are also regularly shown to young people through social media channels. In doing so the NCE aims to help to understand if the heritage sector is suitable to develop an interesting career. The NCE provides an exploratory test on the website to help assess whether a person is suited to work in the sector. The way of operating of NCE is based on a **strong collaboration with heritage stakeholders**. First of all, the Ministry of OCW, which is behind the creation of the NCE and whose employees (specifically those of the Cultural Heritage Agency of the Netherlands – RCE) share their knowledge in education and training courses organised by the NCE.[32] Another important partner of the NCE is the National restoration Centre (NRC): since January 2023 the two organisations have formed an administrative union.

The cooperation with industry groups and educational institutions is the basis to realise the NCE's aim. The benefit is mutual. On one hand, the NCE can get a widespread and thorough knowledge of the needs of the heritage sector in the country by getting information at the micro level. **This way the courses organised are capable of addressing very specific needs and NCE ensures their feasibility as well as their quality**. On the other hand, the educational institutes

[31] See: https://www.erfgoedopleidingen.nl/nce-opleidingen/toekomstinerfgoed.
[32] See https://www.cultureelerfgoed.nl/onderwerpen/opleiden-en-ontwikkelen/opleidingen.

affiliated to NCE can improve their organising ability, didactic skills, and general knowledge. The industry gets the possibility of having a constant influx of young professionals who have the knowledge and skills necessary to satisfy the job market needs. NCE's partners realise that professions in the heritage sector are small-scale, specialised, and unique and are willing to experiment and think to find the right solutions to the specific needs of the sector. The collaboration with the heritage sector is ensured by the direct involvement of various organisations in the NCE. The organisations that support the activities of the NCE from the start are included in the Sector Group Consultation and, in this way, remain actively involved in the developments of the NCE. The Group meets twice per year to discuss the needs of the sector, education, and quality issues. A member of the Cultural Heritage Agency also joins these meetings.[33] **The industry is involved not only when discussing the needs of the sector but also to design the courses on offer.** A more active involvement has been designed for the pilot project of the NCE Heritage School, where several organisations and companies provide a space for students to practise what they learn.

The analysis of this case is based on document analysis. The starting point is the website of the Centre as well as NCE's documents (e.g., its vision). Other websites are also useful sources of information to better understand the role of the Dutch Ministry for OCW in the creation of the NCE and also the variety of stakeholders involved and their respective roles. The analysis also refers to articles and publications to better understand the effects of the activity of NCE. The NCE offers eighteen courses (Table III) in a wide variety of topics as well as timeframes varying from full programs, for example the Specialist Restoration Carpenter and Bricklayer program, to a one-hour training such as the Toolbox Safety in Restoration. The programs are mainly offered in a vocational training and education (VET) setting, whereas some courses have higher education (HE) focus. Next to that, since none of the NCE tracks are part of the Dutch legal education offer, **the NCE programs and courses are considered non-formal learning formats**. **Still, all tracks provide successful students with a certificate, which is recognized by the branch**[34] or as part of an accredited minor.

When we look at the eighteen courses provided and relate them to the six CHARTER functions it is evident that the focus is first and foremost on heritage Preservation and Safeguarding. Fifteen of the tracks provided by the NCE mainly focus on restoration and the recognition of damage to prevent heritage decay. One course, Restoration Build Heritage Ethics focuses on Governance since in this course students get acquainted with recent developments regarding theory and policy in the fields of restoration and restoration. Next to that, the Inspector Built Heritage course, and the one-year program Professional Restoration are related to the Management function. The course guide on the NCE website explains that after finishing the latter program the student is able to guide restoration projects, advise monument owners, and set up restoration or renovation plans as well as being able to enforce and monitor permits and performance conditions.

[33] For a list of the organisations involved see: https://www.erfgoedopleidingen.nl/branchegroepenoverleg.
[34] The NCE is a member of the Nederlandse Raad voor Training en Opleiding (Dutch Council for Training and Education, NRTO) a branch organisation for private education institutions with 900 members. Having the NRTO quality label gives students from the NCE certainty on matters such as general conditions, a code of conduct and a solid complaint mechanism.

Table IV - Overview of the programs and courses provided by the NCE. Source: Inventory by the author based on the NCE website.

Course	*NQF level*	*Sector*	*Type*[35]	*Duration*
Specialist Restoration Carpenter	4	VET	CET & IET	1 year
Specialist Restoration Bricklayer	4	VET	CET & IET	1 year
Restoration Slater	3	VET	CET & IET	2 years
Restoration Plumber	3	VET	CET & IET	2 years
Heritage Thatcher	3	VET	CET & IET	3 x 2 days
Restoration Grouter	3	VET	CET & IET	6 x 2 days
Heritage Painter	4	VET	CET & IET	3 years
Heritage Glazer	4	VET	CET & IET	2,5 years
Historic Green Gardener	4	VET	CET & IET	4 years
Restoration Zinc worker	3	VET	CET & IET	12 days
Base Restoration carpenter*	3	VET	CET & IET	4 days
Base Restoration carpenter*	3	VET	CET & IET	4 days
Professional Restoration	4+	VET	CET & IET	2 years
Inspector Build Heritage	4	VET	CET & IET	7 x 2 days
Restoration Build Heritage Chemistry	6	HE	CET & IET	3 days
Restoration Build Heritage Documentation	6	HE	CET & IET	2 days
Restoration Build Heritage Ethics	6	HE	CET & IET	4 days
Toolbox Safety in Restoration	n.a.	n.a.	n.a.	1 hour

With its specialised education portfolio, the **NCE focuses mainly on VET education with practical programs and courses for specific heritage crafts**, mainly developed in close cooperation with various branch organisations, education institutes and companies working in the cultural heritage sector. A good example is the pilot NCE Heritage school which started in the school year 2022-2023. During their regular VET NQF level 3 program, carpentry and bricklaying students are offered the opportunity to follow three specially designed minors related to restoration and renovation in the cultural heritage sector. The pilot with the Base Restoration Carpenter and Bricklayer education

[35] In this case study the abbreviations CET stand for Continuous Education and Training and IET for Initial Education and Training.

programs are developed in cooperation with several VET institutes in the south and east of the Netherlands joined by dedicated cultural heritage companies to provide the students apprenticeship places and interesting cultural heritage projects to work at.

When looking at the offer, it would be noted that **NCE covers the gaps and needs related to professions which existed but have been disappearing in the Netherlands or are difficult to sustain due to the lack of influx of young culture heritage professionals**.

NCE is an example of how the gaps and needs regarding professions in the cultural heritage sector are tackled in the Netherlands.

First, by **developing craft related education tracks for specialised cultural heritage professions in collaboration with various stakeholders** and in a flexible way. NCE provides courses to address quickly and concretely the needs of the sector, including very specific short courses.

Second, the **NCE is a platform** that provides information regarding all cultural heritage courses in the Netherlands and acts as an intermediary **between youngsters and the cultural heritage sector**. By using its website, social media campaign, and information sections the NCE helps attract people to work in the heritage sector and shows an interesting and challenging career path to the next generation of heritage professionals.

4.3. The architectural profession in Europe

The following analysis is based on the edition 2022 of the report "The Architectural Profession in Europe - 2022 Sector study"[36], the research that The Architects' Council of Europe (ACE) commissions to investigate the status of the architectural profession across Europe.

While keeping in mind the bias regarding professional profiles mentioned at the beginning of the chapter, the architectural profession is here taken as an example to assess what are, if any, possible gaps and needs identifiable between E&T programmes and the job market in the CH field.

The interest in investigating the architectural profession in terms of gaps and needs relies, therefore, on the fact that it is a profession which is regulated across almost all European countries. This means, specifically, that it can be easily benchmarked. Furthermore, the architectural profession reveals its interest for this Report (and for the CHARTER analysis more in general) specifically when looking at the architects specializing in restoration and maintenance of monuments and cultural sites.

The Architects' Council of Europe is the representative body of the profession of architecture at the European level, whose members are the national representative and access bodies of the profession in all EU Member States, the Accession States, Norway and Switzerland.

Every two years since 2008, ACE has been proposing a sector study. This is based on a survey of architects across Europe to create national and European statistics on the profession. In 2022, all

[36] Mirza & Nacey Research Ltd, *The Architectural Profession in Europe* - 2022 Sector study (2023). The full report is available at https://www.ace-cae.eu/fileadmin/user_upload/2022_Sector_Study_EN.pdf.

31 Council member countries were invited to participate in the study and 26 of them accepted, even if with some important differences in the number of architects in each country. The **Sector Study seeks information directly from professionals to fill gaps and inconsistencies in the data held by professional organisations at a national level**. The research is based on an online survey available in 20 different languages. **The study received a large number of responses (30,678)** from architects who completed all sections of the questionnaire, ensuring that the results are statistically significant and allow for the construction of a credible time series of data on the architectural profession in Europe. The statistical validity of these results is accurate to within +/- 0.5 % at the 95 % confidence level, taking into account the recalled differences in the numbers of answers received from the various countries participating in the survey.

The covered CHARTER functions are R&D and Education, Preservation and Safeguarding.

4.3.1. Main findings

The report indicates that a significant percentage of architects in some European countries such as Romania, Italy, Spain, Portugal and Sweden are under 40 years old. In contrast, in countries such as Denmark, Norway and the United Kingdom, around a quarter of professionals are 60 or older. **The average age of architects in Europe is currently 45-49**, slightly higher than ten years ago when it was 40-44. These differences may have some consequences in terms of the education training followed by the two groups also for what concerns the CH sector, being the more recent curricula generally more attentive to it.

The study shows that **the majority of respondents work in small enterprises**. More than half of the market comes from private construction. Half of the market is new construction, a higher percentage than in previous surveys. Heritage work accounts for 14% of the market, about the same as in 2020, while refurbishment work accounts for 36%. Nevertheless, some significant differences exist among the involved countries. In Italy, for example, the percentage of interventions on existing buildings of cultural interest, even if not listed, is significantly higher, like in other southern countries.

Many architects in Europe have studied or worked in another European country. More than 20% have studied in another country, and the most popular destinations for training are Italy and Spain. This is particularly significant because in these countries the teaching subjects related to the CH sector are much more present in the curricula than in others. Erasmus students generally come to Italy, for example, also because in each Bachelor or Master programme in Architecture, at least 12 ECTS devoted to conservation/restoration of built heritage are mandatory for each student. In addition, over the last 12 months, 7% of architects have worked in another country, with the most popular destinations for work being the UK, France, Switzerland and Italy. Many others seriously considered working in another country, but 19% decided against it due to practical, personal or relocation problems. Most of these cited practical issues as the main concern, followed by a **lack of legal or regulatory knowledge and insufficient language skills**.

Almost half of the European **architects frequently use sustainability concepts to design low-energy buildings**, with similar percentages in most European countries, although in Italy, Portugal and Sweden the proportion is lower, approaching one-third. However, a smaller number frequently

apply other sustainable development concepts, such as nZEB, Circular Design and Plus Energy building design. Very often, professionals use these concepts because they are required by the client or regulations. Moreover, **respondents mainly use self-learning to learn sustainable concepts, with greater use of formal training for low-energy buildings**.

About **50% of architects frequently use 3D modelling tools**, which are the most popular digital tools. Rendering tools are frequently used by 33% of architects, and BIM tools by 25%. The majority of respondents use these tools by personal choice rather than by client obligation or to comply with regulations. These figures show that architecture is an increasingly digital profession. **Most architects learned to use these digital tools on their own, rather than through formal or informal training**.

The report emphasises that European architects devote **an average of around 20 hours per year to continuing professional development**, with the same figure remaining unchanged from previous surveys. However, public sector professionals devote on average more hours per year to CPD than the average for all architects. Czech and Italian architects are the most committed to professional development, dedicating on average 40 hours per year, twice the European average. In contrast, the lowest number of CPD hours is reported by colleagues in Belgium, Denmark and Portugal.

Architects are developing their knowledge to improve skills and embrace change.

The analysis shows insufficient training on sustainability and digitisation issues but also specific needs regarding more **exchange among countries**, more hours of **continuous professional development**, and more **focus on environmental sustainability and conservation/restoration of architectural heritage in the training years**.

4.3.2. The architectural profession in cultural heritage

Considering the field of conservation of architectural heritage, even greater gaps are revealed between the skills required today and the traditionally recognised professional profiles[37]. However, it should be emphasised that these professions are classified differently in different countries. In Italy, for example, all the architects (and only the architects) can intervene on listed monuments or assets. In Ireland, only those who attend a special Master-post-master programme in Conservation of monuments and sites can work on listed properties, like in France with the Ecole the Challot. Further, in Italy the Specialization Schools in Architectural Heritage and Landscape (master-post-master programmes with 120 ECTS) deliver a diploma required to enter the roles of the Ministry of Culture in charge of the protection/safeguarding of the built CH.

The conservation and restoration sectors have undergone major changes in recent years, some of which are common throughout Europe. First and foremost, the approach to heritage conservation has evolved, going beyond the mere physical aspect of things, and encouraging the promotion of public knowledge and enjoyment. Public intervention activities, therefore, in addition to heritage

[37] Della Torre, S. Moioli, R. (2019). *Profession(s) and professional(s) in the conservation process,* in Van Balen, K. Vandesande, A. *Professionalism in the Built Heritage Sector,* pp. 13-18.

protection, must also encourage initiatives that involve communities and strengthen relations with the territorial context. Consequently, broad and integrated projects involving different sectors, capable of creating networks and fostering the exchange of good practices, are becoming increasingly common. Professionals in charge must have traditional skills, but also learn to deal with many other languages and disciplines outside their educational background.

A second change is a desire to extend the protection and valorisation process to more types of assets, including landscape. This has led to the creation of new fields of specialisation for professionals, who have acquired new skills through lifelong learning and fieldwork. New interdisciplinary skills are also required due to the rapid scientific and technological development in recent years. Today, conservation, in addition to the support of traditional craft techniques, relies on the help of chemistry, physics, structural modelling and assessment, risk assessment methodologies facing different disastrous events (earthquakes, floods, fire…) advanced digital techniques, new materials and innovative technologies.

Analysing the profound process of change that the sector has gone through in recent decades, we need to understand **whether the current professional standards are still acceptable, whether updating them is sufficient, or whether the creation of new professions is necessary**. This is also because **current legislation in some European countries allows all architects to work on listed historic buildings without requiring the necessary specific skills**. However, it is well known that **in university** architecture courses the focus is mainly on new buildings and that **conservation and restoration are only marginally treated**, at least in many countries. Although lifelong learning can help professionals to keep their skills up-to-date, in some cases a shift in qualification or the creation of specific training courses may be necessary to acquire new skills. This shift to higher qualification levels could be sustainable but would also lead to increased costs. Therefore, it will be crucial to spread the awareness that certain specific skills are needed to work in the sensitive field of cultural heritage and that traditional training courses are not sufficient. Too often, in everyday life, professional standards are underestimated to reduce project costs.

4.4. Skills needs in the museum sector in Europe

The following analysis matches the main outcomes of four studies and reports carried out between 2020 and 2022 within the museum sector by European umbrella organisations like NEMO (surveys using questionnaires)[38], the European Museum Academy (collection of data from museums in 33 European countries)[39], the British Council via a research conducted in 6 European countries to shape a museum capacity building programme called 'Museums Revisited' (focus groups and interviews)[40], and by the Université Sorbonne Nouvelle, partner of the CHARTER project (interviews

[38] NEMO is the Network of European Museum Organisations. We refer to the reports on the impact of COVID-19 in museums across Europe available at https://www.ne-mo.org/advocacy/our-advocacy-work/museums-during-covid-19.html

[39] *How are museums doing in Europe?* National Museums Report 2022. Available at https://europeanmuseumacademy.eu/national-museum-reports-2022/.

[40] British Council, Tom Fleming Creative Consultancy, Museums Revisited/ A Museum Capacity Building Programme for the EU, Summary Report, https://www.britishcouncil.org/arts/europe/museums-revisited. Museum Revisited is a programme of capacity building led by the British Council that explores the role of museums in society today and aims to respond to the lack of skills and opportunities for museum

to museum professionals presented during the ICOM General Conference in Prague in 2022)[41]. Although further literature tackled the topic, we considered these reports because they were in most cases produced by CHARTER partners and have relevance towards the WP3 objectives.

4.4.1. Main findings

The new definition approved by ICOM - International Council of Museums - during its 26th General Assembly in August 2022, describes a museum as "a not-for-profit, permanent institution in the service of society that researches, collects, conserves, interprets, and exhibits tangible and intangible heritage. Open to the public, accessible and inclusive, museums foster diversity and sustainability. They operate and communicate ethically, professionally, and with the participation of communities, offering varied experiences for education, enjoyment, reflection, and knowledge sharing".[42]

As it is the case with any definition, also ICOM's understanding of what a museum is or should be, leaves room for a broad spectrum of institutions, as many and as diverse in size, typology, governance, business models, missions, activities, etc. as portrayed by the few existing museum statistics - neither complete, nor uniform - at European level.[43]

As opposed to the previous definition dated 2007, the new ICOM text introduces **concepts like "diversity, "accessibility", "inclusivity", "sustainability", "community participation"**, terms that reflect recent debates around the civic and social role of museums.

These, as several other recurring key words which characterise contemporary museological discussions, **can guide us to identify current challenges in museum work in Europe, which easily translate into development and skills needs of museum professionals**.

According to the British Council research, **reaching new audiences** and **increasing income / fundraising** are the top two priority training needs for the museums and cultural institutions in the six study countries[44]. This is closely followed by **marketing** and **communications** and **digital skills**. There is some variation between countries but, overall, the four top training needs are a priority for all countries.

professionals in the EU. The research took place in Greece, Italy, Poland, Romania, Portugal, Ireland-Northern Ireland through focus group sessions with 70 museum managers and senior professionals and surveys in each country for a total of 206 responses.

[41] Gobbato, V. Report (2022) *Museums and Professional Needs. A claim to Sustainability*. Unpublished. Report based on 20 interviews to museum professionals from different countries during the ICOM General Conference in Prague.

[42] https://icom.museum/en/resources/standards-guidelines/museum-definition/.

[43] Cf. the data provided by EGMUS - The European Group on Museum Statistics; https://www.egmus.eu/.

[44] British Council, Tom Fleming Creative Consultancy, Museums Revisited/ A Museum Capacity Building Programme for the EU, Summary Report, p. 21.

Comparing these findings with those of the other documents analysed and to literature, one could group the emerging gaps and needs of the museum profession in Europe under three main categories[45]:

a) Community and audience engagement, reaching new audiences

Museums are increasingly aware of their social role, many want to be more impactful in building a more inclusive and open society, some see themselves as social champions and activists, offering critical spaces for debate. The pandemic has highlighted **the contribution museums can make to people's well-being**, in particular to the most vulnerable individuals in society, and offered them the possibility to engage with audiences in different ways: digitally, outdoors, through outreach activities and by establishing new partnerships.

Skills needed:

- Skills to increase accessibility and inclusion
- Employing new and collaborative interpretative techniques
- Using tools for co-creating museum experiences with different communities
- Presentation techniques
- Building programmes for people with special needs
- Communication and mediation skills
- Participatory practices
- Storytelling and curation
- Intercultural communication

b) Digital transformation

This is undoubtedly one of the biggest challenges museums are facing nowadays. In this area of work, the pandemic acted both as a disruptor and as an accelerator for museums. NEMO's first "Survey on the impact of the COVID-19 situation on museums in Europe" (May 2020)[46] and the "Follow up Survey on the impact of the COVID-19 pandemic on museums in Europe - Final Report" (January 2021)[47], both relying on responses from nearly 1.000 museums in 48 countries, highlighted the need to **invest in digital services and to train/upskill museum staff** to make the best use of digital resources and tools. Almost 50% of the respondents claimed they were lacking

[45] Cf. Ruge, A. (2008) *Museum Professions – A European Frame of Reference*, available at. http://ictop.org/wp-content/uploads/2019/06/ICTOP-Museum-Profession_frame_of_reference_2008.pdf.
[46] https://www.ne-mo.org/fileadmin/Dateien/public/NEMO_documents/NEMO_COVID19_Report_12.05.2020.pdf.
[47] https://www.ne-mo.org/fileadmin/Dateien/public/NEMO_documents/NEMO_COVID19_FollowUpReport_11.1.2021.pdf.

skills in digital literacy. NEMO's report "Digitisation and IPR in European Museums" (July 2020)[48] highlighted **the need of museum staff to access capacity building opportunities to digitise collections, develop digital strategies and develop expertise about legal digital frameworks and intellectual property rights**.

Skills needed:

- Develop a digital strategy
- Digitise collections
- Curate digital content
- Digital preservation
- Engage audiences digitally
- Develop educational activities using digitised resources
- Copyright, IPR and Licensing
- Technical skills (e.g. video editing, creating new content for broadcast, immersive technologies, etc.)

c) The museum as an organisation in pursuit of relevance

According to the British Council research, museums are trusted institutions, which, however, need to strengthen their presence and demonstrate their value, not only as cultural organisations, but also with regard to the social and economic spheres. In other words, they have to strive for relevance, to raise awareness and influence policies through advocacy and by establishing new partnerships and connections. As pointed out by NEMO's reports, facing a time of rapid transformations and unpredictable events, museums expressed the need to adapt work methods and organisational structures to situations that require more flexibility and rapid, ad hoc decision-making procedures, as well as the need to look for alternative funding sources and seek out new and innovative funding schemes and opportunities. They underlined the relevance of transnational collaboration, of **learning from peers**, of benchmark, and of creating a stronger voice for common concerns. More than 25% of the respondents also said that they **lacked marketing and fundraising skills**.

Skills needed:

- Strategic planning
- Rethinking the museum as a safe space, a space for dialogue, also in a post-colonial context

[48] https://www.ne-mo.org/fileadmin/Dateien/public/Publications/NEMO_Final_Report_Digitisation_and_IPR_in_European_Museums_WG_07.2020.pdf

- Leadership and management skills
- Future forecasting
- Sustainable programming, environmental sustainability
- Advocacy
- Entrepreneurship
- Business development
- Developing partnerships, establishing cross sectoral collaborations
- Managing change
- Diversity management
- Guaranteeing the wellbeing of the museum workforce
- Team building
- Advocating for investment in museums
- Benchmarking
- Diversifying income streams, fundraising skills
- Marketing
- Networking (locally, nationally and internationally)

Transversal skills for all areas:

- Problem solving
- Empathy
- Adaptability
- Responsiveness
- Critical thinking
- Curiosity
- Resilience
- Collaborate with others, Teamwork

4.5. CHARTER's Meet the Young Cultural Heritage Professionals

Meet The Young Cultural Heritage Professionals is a series of interviews that the CHARTER project made to motivate young practitioners to discuss and learn more about the perspectives of the new generation of heritage professionals as they enter the sector and take their first professional steps[49].

The stakeholders involved reunite two groups:

- **HeritaGeeks**. This group of heritage professionals was formed in 2021 as a self-motivated initiative to discuss the challenges of the sector for youth[50].
- **ICOMOS Emerging Professionals Group**. This working group was established in 2017 in response to the 2016 ICOMOS Annual Report, calling for an expansion of the emerging professionals membership database. International and regional teleconferences are held by this group to track progress of ongoing initiatives, share updates and further engage with practitioners[51].

10 cultural heritage professionals from **25 to 35 years old**, coming from Portugal, Spain, Belgium, Germany, Romania, United Kingdom, Ireland; 5 males and 5 females.

The profiles of interviewees represent the following CHARTER functions: Education & Research/Development; Safeguarding and Preservation; Governance & Policy Making; Engagement and Use.

Between December 2022 and March 2023 CHARTER proposed a written interview to stakeholders in the frame of a special content series, "CHARTER Young Cultural Heritage Professionals", disseminated on the communication channels of the project. The stakeholders were contacted to answer 7 questions in relation to their experience with the cultural heritage sector (how they enter, the competences they didn't learn in formal educational paths, etc.)[52].

This sample has no statistical relevance, at the same time, the questions raised and the answers given contribute to gathering CHARTER's views from different perspectives before drafting the training guidelines. In addition, at the level of the sectoral research, this survey may provide inspiration to ask better questions and complete statistical relevant research on the field.

[49] https://charter-alliance.eu/tag/young-professionals/.
[50] https://www.heritageeks.com/.
[51] https://www.icomos.org/en/about-icomos/committees/emerging-professionals/75956-emerging-professionals.
[52] Questions: 1) What was your motivation to enter the cultural heritage field? Was it your first option? 2) How was/is your transition from education to working? 3)How are you looking/looked for a job in heritage? And how do you experience/experienced the phase of search and application? 4) What skills and competences do you notice are demanded the most in job offers? 5) Based on the profiles of job positions, do you notice skills or competences that your education didn't provide you with? 6) How do you think young people can be attracted to work in heritage? Do you have proposals? 7) How do you see the future of the cultural heritage field?

4.5.1. Main findings

a. **Moving from theory to practice: when experience becomes a skill**

From the interviews performed so far for the CHARTER Young Cultural Heritage professionals, interviewees coincide on the **lack of "practical skills" education provided them with**. In the line of practical skills, **management** emerges as a repeated term, alluding to different categories: project management; heritage management; team management; project coordination; teamwork dynamics (physically and digitally); how to communicate with different types of stakeholders.

Through the sample of interviews, a pattern can be identified in the sense that **most interviewees perceive their education was complete from the theoretical side**, **but not the practical**. One of them claims: "I think there was a disconnect between the very enjoyable, quite theoretical things I studied and the practical realities of the job market." Others declare there's not a connection with the "real world". Another one synthesises this point by expressing "**the world of work and the world of education do not always operate with the same variables**". Some of the interviewees also clarify that some of **the practical skills needed cannot be or are difficult to obtain through university but are more related to the type of skills and competences gained through working experience**.

Intertwined with the last point, when interviewees are asked which are the skills they notice as the most demanded in job positions, half of them mention "experience": "Several years of experiences", "Job offers tend to want quite substantial experience first"; "Experience is the most demanded skill"; "Having experience (2 years or more) in a similar position"; "Sadly: experience". It's important to understand that experience, in the context of the job positions requirements, is not a skill in itself, but the "(the process of getting) knowledge or skill from doing, seeing, or feeling things" (English Cambridge Dictionary). It is interesting to note how young professionals have translated this anachronic process gained with time and practice to the much harder and defined nature of a skill.

The current need for practical skills in the job market has created a problematic crossroad for young professionals, as practical skills are mostly obtained through experience which is demanded by the market. Many interviewees have also expressed the difficulties of engaging in low-paid or unpaid internships, juggling multiple jobs and continuing training. Therefore, a potential solution to this issue is to **rethink the design** and offer of practical training or internships during higher education, in order to provide new qualified professionals with the set of skills and experience needed to be eligible to enter the job market. To achieve this, **further collaboration between educational institutions, industry, networks, regions, local governments, and other stakeholders** could be explored.

b. **Digital skills and the young generation: is there a pressing need?**

In relation to the world of digital skills, frequently highlighted in discussions over the future profiles, only 2 from 10 interviewees referred to it, concretely as lack of "digital capacity" and "digital skills". When thinking this is the current young generation of cultural heritage professionals, it is important to reflect what this result could mean.

Further interviewees could explore in depth the perception or objective reality of digital gaps in young heritage students/professionals, but certainly some hypothesis could be developed:

i. The new generation and the generations to come are exhibiting **an increasing level of digital literacy**, allowing them to both adopt and adapt to new developments with relative ease. This is partially due to the fact that the young generations are able to receive basic training as well as engage in self-continuous learning, leading to a greater level of preparedness for the digital transition.

ii. **The current cultural heritage sector is not yet heavily reliant on digital competences, although there is a niche for specific profiles**. When the interviewees were asked about which skills and competences are the most sought-after for job positions, only one referred to the need for "digital skills, graphic design skills, and mastering online working tools". It may be that, as the sector does not require specific, complex digital skills beyond a general set of digital knowledge and competences, **young people may not see digital as a skills gap or need to enter into the job market**.

It is important to clarify the latter does not apply to profiles working mainly with specialised digital tools related to 3D, augmented reality, artificial intelligence, programming, etc.

4.6. HERITAGE-PRO camp

For the purpose of finding gaps and needs on a practical level, CHARTER-partner ACW (Association Culture and Work) developed a survey that targeted a focus group of young heritage managers who had participated in April 2021 in a training camp in the context of the HERITAGE-PRO project. There they had developed in an online seminar an interdisciplinary approach for the preservation of an industrial heritage site[53].

45 persons were contacted and asked to participate in the survey or to join a phone interview. The survey got 30 answered questions of participants **aged 24 – 32** from five European countries (Germany, Austria, Belgium, The Netherlands and Poland). Five more short interviews based on the same questions were implemented with young experts from France, Spain and Italy in order to broaden the national scope.

The following three questions were asked and discussed:

1) In your daily work, are you confronted with requirements or expectations that were not covered by your (academic or non-academic) training?

2) Are there training and development needs that you feel are particularly urgent and which were not covered by your education?

3) Who do you think should cover these educational needs?

[53] HERITAGE-PRO stands for Interdisciplinary Training for Professionals of Different Disciplines Towards Sustainable Management and Preservation of Cultural Heritage. It's an EU funded project within Erasmus+ (2018-2020) that aimed at upgrading the interdisciplinary competences of the workforce of cultural heritage managers. For the camp see https://heritage-pro.eu/training-camp/about-the-camp/.

4.5.1. Main findings

All respondents expressed their opinion that they had gaps in their education and that they needed additional training. They expressed the following gaps:

- **Organisation of funding** / access to additional funding for projects beyond the state funding for their institutions
- Calculation skills – how to create a **budget**
- **Business** aspects of all kinds
- **Organisation of participatory processes** to include citizens and volunteers in preservation activities (social interaction)
- Overview of **employment opportunities beyond the academic sector**
- Knowledge of **intellectual property rights**
- Knowledge on the **impact of climate change** on the preservation of sites

These gaps are closely linked to **training needs** in:

- business aspects like team leading / team spirit creation / soft skills to negotiate with craftspeople, accounting, calculations
- how raising additional money and finding sponsors
- interdisciplinary issues, especially how to include citizens and volunteers
- how and where to get relevant and high-quality information
- information on where people with a heritage-related education can be employed in other sectors
- judging the quality of training, especially in sensitive areas like intellectual property rights.

According to the respondents, there was a broad variety of ways to close the knowledge gaps:

- The majority advocated **continuous vocational training organised by the heritage institution**.
- The **training** should be on the spot in **their institutions** in order to link it directly to challenges.
- Some preferred to have training outside their institutions in order to be able to better concentrate on it.
- Also **courses in parallel to university studies** were suggested.

- Some suggestions by the respondents: an annual training budget for upcoming training needs, regular meetings with superiors in order to have the opportunity to discuss training needs, better access to good practices, an active role of employers to bring their staff into relevant networks.

The respondents **identified their gaps very clearly**. **They did not necessarily see them as gaps in their academic education, but rather linked to specific requirements** in their professions. They **preferred vocational on-site training in their institutions** to fill gaps in direct confrontation with needs on the spot. They would like employers and supervisors to play a more active role in supporting their training needs. They themselves made suggestions on how this could be achieved. They formulated **training needs** in areas that are already well known (business aspects, funding issues), but also in areas that are not directly related to their education, but rather **attributed to personal development and informal education (interdisciplinary skills, social interaction)**.

4.7. Future analysis

The CHARTER consortium partners have at their disposal other data sources that may be suitable to integrate in the next months the information collected in this report.

Moreover, ART-ER54, associated partner of the CHARTER project representing the Emilia-Romagna region (Italy), has undertaken a Skills Intelligence exercise of various productive sectors55 to monitor the job vacancies and the professional profiles and competences requested by the regional Smart Specialization Strategy: food and agriculture, constructions, energy and sustainability, culture and creativity, health and well-being, service innovation, mechatronics, big data. In particular, the Observatory Culture and Creativity56 provides interesting in-depth analysis of the thematic dynamics of the sector, like the digitalisation (fig. 6).

[54] ART-ER Attractiveness Research Territory is the Emilia-Romagna Joint Stock Consortium born with the purpose of fostering the region's sustainable growth by developing innovation and knowledge, attractiveness and internationalisation of the territory (https://en.art-er.it/).
[55] Skills Intelligence Emilia-Romagna can be browsed at https://emiliaromagnainnodata.art-er.it/skills-intelligence-emilia-romagna/.
[56] https://www.emiliaromagnaosservatorioculturaecreativita.it/.

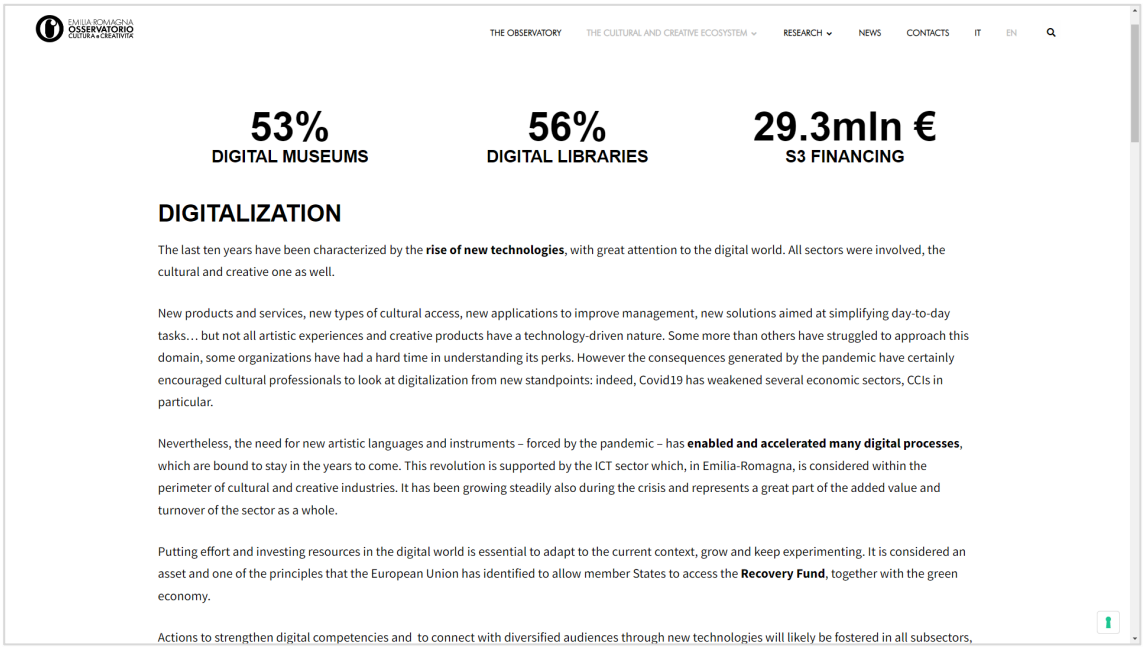

Fig. 6. Observatory Culture and Creativity of the Emilia-Romagna region. Theme: digitalisation.

However, the cultural heritage sector, like it often happens in other statistical frameworks and data collections, doesn't stand out and it is mixed with the creative industries' one. An extraction of more specific and meaningful data will be done in the forthcoming months and may retrieve significant data on profiles resulting from VET courses.

Finally, the CHARTER deliverable D4.1 'Mapping dynamics of internal and external CH stakeholders'[57] presents an overview of roles and dynamics of internal and external stakeholders in CH and implications to the education and training systems. Beyond others, it holds the very preliminary findings of an online survey on European cultural heritage dynamics launched in May 2022. The aim was to collect quantitative data from stakeholders in European countries on their views and perspectives in relation to challenges, constraints, and gaps with a particular emphasis on the implications to education and training systems.

A total of 1085 valid responses from 30 countries were collected with countries like Italy (216) and Sweden (139) being the ones with the highest responses. Overall, there was a normal distribution in the age groups, with the group 45-54 most represented. Around 60% of the respondents were female.

The questionnaire contained a set of specific questions about the gaps in education and learning and the needs of the labour market[58]. Generally speaking, the results raise lack of resources, entry

[57] Almevik, G. Hannes, A. Golfomitsou, S. Karatas, K. Lindblad, L. Martignoni, S. Mignosa, A. Vio, T. (2022). Report: *Who is not a stakeholder in cultural heritage?* CHARTER Consortium. Available at https://charter-alliance.eu/wp-content/uploads/2022/10/D4.1-Report-Who-is-not-a-stakeholder-in-cultural-heritage-_V2.pdf.
[58] Namely: 1: What do you view as the most significant gaps and needs in the current cultural heritage labour market? 2: For which professions should there be more education and training opportunities? 3: What formats for cultural heritage education and training are the most important to develop?

job opportunities and opportunities for professionals in general, training and low salaried jobs. However, the open-ended questions have not yet been thoroughly analysed and will be used to substantiate the report *Who is not a stakeholder in cultural heritage?* (D4.2) and the summary deliverable on cultural heritage dynamics and future scenarios *Overall sector integrated dynamics and future scenarios* (D.4.4) regarding the stakeholders' readiness for the digital shift, climate change, sectoral integration, mobility and continuous professional development.

5. CEDEFOP Skills Intelligence: What is its Use for the Cultural Heritage Sector?

For over a decade, the European Centre for the Development of Vocational Training (CEDEFOP)[59] has been analysing skills demand and supply in the European labour market. They have developed various tools and methods to analyse skill needs and trends, and to disseminate key information to stakeholders in EU Member states in order to help develop effective vocational education and training (VET) policies. The scope of the analysis provided below is to understand if and how the CEDEFOP data can support the identification of skill gaps for the CHARTER scope.

One of the tools used by CEDEFOP is the Skill Intelligence[60], which provides synthetic evidence on current and future skills and labour market trends through their visualisation through interactive and narrative-driven graphs. One of the latest data sets used by CEDEFOP is the **Online Job Advertisements (OJA)**[61], which collects over 100 million job vacancies from 28 European countries referred to the period between July 2018 and December 2021. This database provides information on the most requested occupations and skills across Europe, as well as information on the conditions offered such as contract types, and salary indications. The data is analysed using European classification systems such as ISCO for occupations, NUTS-2 for regions, NACE for sectors, and ESCO to classify skills.

The question is whether the CEDEFOP Skill Intelligence, particularly the one based on OJA, provides insights that can be useful for the heritage sector and, in particular, for analysing gaps and needs.

In general, it is challenging to draw specific insights from the Skill Intelligence for the cultural heritage sector. Despite the use of standardised classification systems such as ISCO and NACE, the information lacks granularity. For instance, occupational specification information is only available at the level of ISCO main groups, which includes only eight generic occupations, such as professionals, managers, clerks, etc. As a result, **the information provided on skill needs can only be analysed at the occupational level of these main groups**, which offers only general information about skill needs. For example, the most requested skills among the occupational group "professionals" in 2021 are business & administration, followed by generic programmes & qualifications and working with others in the EU (see fig. 7). Additionally, the ESCO level 2 is used for skill classification, but it provides only broad skill classifications. Due to these general categorizations, it is unclear whether these skill needs apply to heritage professionals.

[59] https://www.cedefop.europa.eu/en. CEDEFOP is one of the EU's decentralised agencies that supports the promotion, development and implementation of the Union policy in the field of vocational education and training (VET) as well as skills and qualifications policies by working together with the Commission, Member States and social partners.
[60] https://www.cedefop.europa.eu/en/tools/skills-intelligence.
[61] https://www.cedefop.europa.eu/en/tools/skills-intelligence/skills-online-job-advertisements?country=EU27_2020&year=2021.

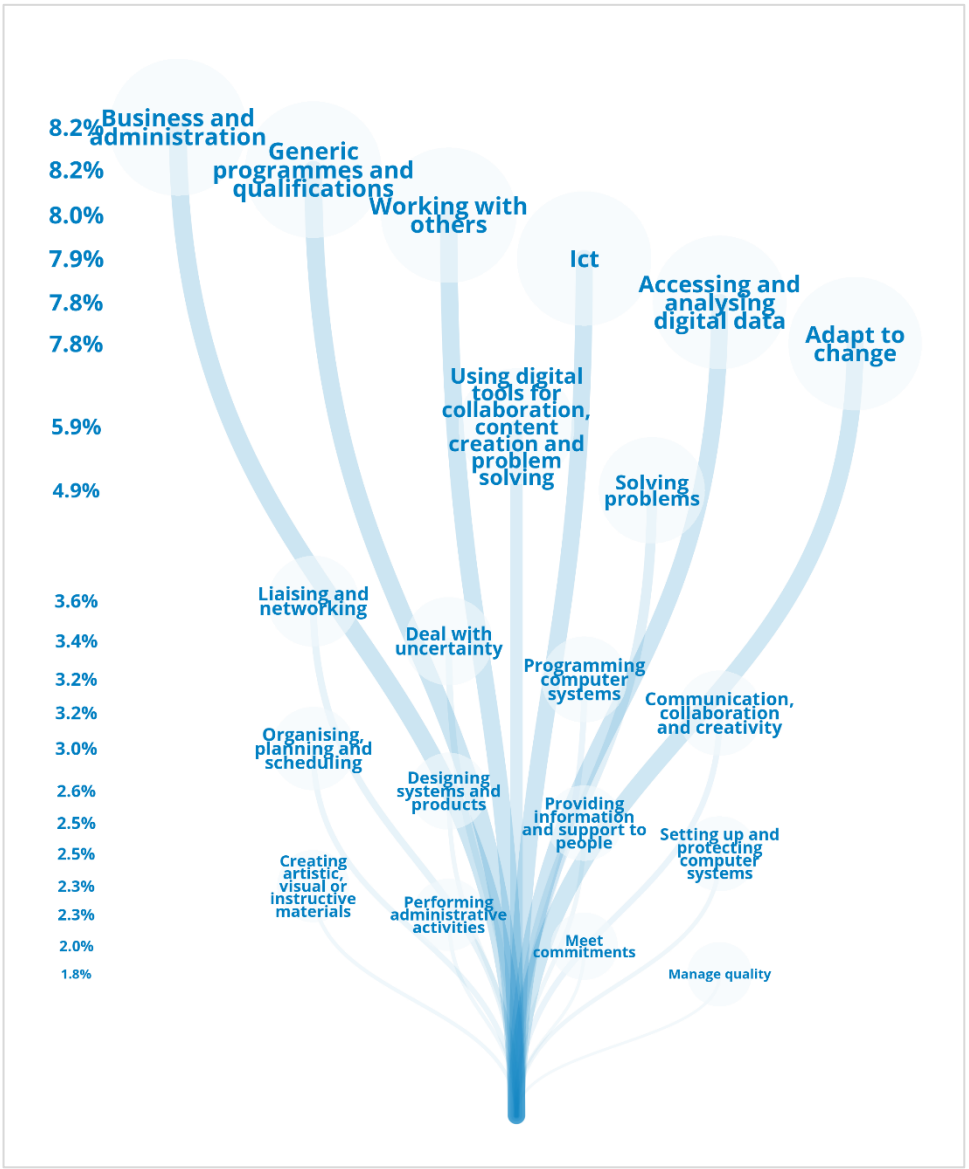

Fig. 7. Most requested skills in EU27 in Professionals in 2021 (ESCO level 2). Source: CEDEFOP 2023.

Some information is also provided on a sectoral level, for which the European classification system for economic activity NACE is used. The heritage sector is included in the R division, consisting of arts, entertainment & recreation, and other services[62]. Core heritage activities are represented in this division, such as the classes 90 and 91. However, other economic activities such as gambling and sports are also included in the same division, **making it challenging to draw conclusions solely for the heritage sector**. Additionally, other heritage-relevant sectors, such as crafts or architecture, are omitted from the R division (e.g., 32.1 or 71.11). For example, the sectors arts & recreation and other services represent only 0.7% of all job ads in the EU27 in 2021. However, if we focus on the occupational group "professionals," 28.6% of job ads are in the arts & recreation and other services sector (keep in mind that ads can be related to several sectors simultaneously) (see

[62] https://www.cedefop.europa.eu/en/tools/skills-intelligence/sectors?sector=05.17#1.

fig 8). From this information, we can conclude that the demand for labour is higher in this sector among professionals than across all occupations. However, it is unclear whether this information specifically applies to heritage occupations and heritage-specific sectors.

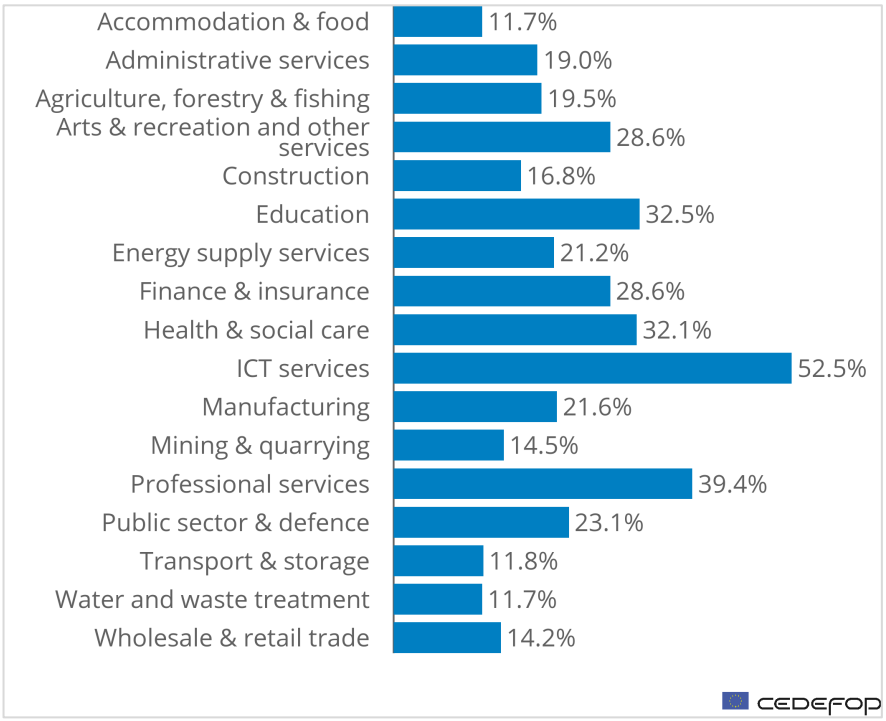

Fig. 8. Online job ads in EU27 sectors in Professionals in 2021. Source: CEDEFOP 2023.

Next to the OJA, CEDEFOP Skills Intelligence also applies other datasets to provide labour market insights, such as the **CEDEFOP Skills Forecast**[63], or the annual **European labour force surveys**[64] provided by Eurostat. While there is no data available specifically for heritage occupations or sectors, the **NACE sector R (consisting of arts & recreation and other services)** can be used as a proxy keeping in mind the limitation discussed above. This sector has a total employment of over 10 million in the EU, with a 3.4% share of high-tech occupations. The sector is also expected to **grow** by 6.2% between 2020 and 2030, although there are regional differences with some countries experiencing a decline in future employment (see fig 8). In terms of occupations, service & sales workers and personal service workers are the most common, followed by professionals. The majority of workers in this sector have a medium level of education and are in the age group of 25-49.

[63] https://www.cedefop.europa.eu/en/tools/skills-forecast.
[64] https://ec.europa.eu/eurostat/web/microdata/european-union-labour-force-survey.

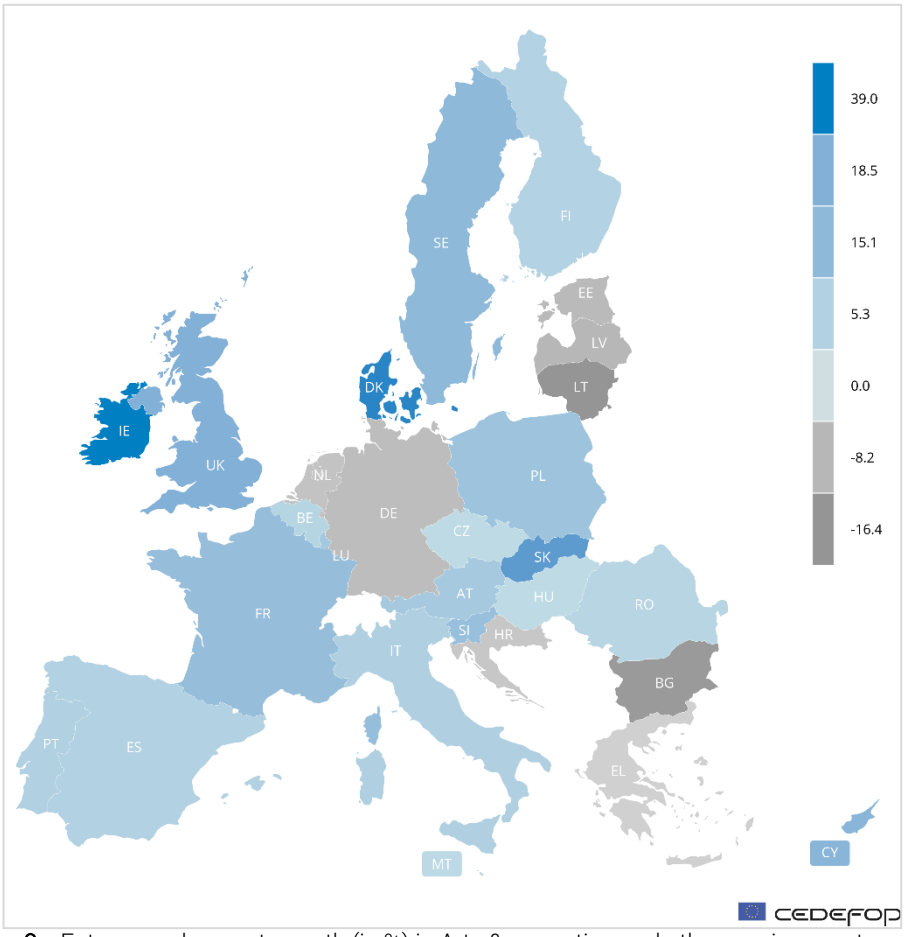

Fig. 9. Future employment growth (in %) in Arts & recreation and other services sector across countries in 2020-2030. Source: CEDEFOP 2023.

Overall, the CEDEFOP data intelligence, including the latest OJA dataset, provides valuable insights into labour demand and required skills across the EU Member states. However, the **information is limited in its specificity and granularity, making it difficult to draw precise conclusions regarding the heritage sector or related occupations**. A more detailed analysis could be achieved through the use of ISCO on a 4-digit level or the ESCO occupation classification, as well as NACE class level including 4-digits. As the OJA is still in its early stages, there is potential for future improvements in the specificity of information provided, which could benefit the cultural heritage sector.

6. Conclusions

The CHARTER analysis and outcomes produced until now provide the framework for interpreting the case studies and data sources presented in this Report.

Once again, it is worth stressing how the assessment that has been conducted here, and consequently also the conclusions that can be drawn from it, are not to be considered as exhaustive, both in the cases taken as examples and in the very vast literature and data to be analysed. This disclaimer is necessary essentially for two reasons: first, the field of CH presents itself as a vast and complex set of professional figures and diverse fields. This variety implies, necessarily, a selection and choice of cases to be analysed and which can be taken as examples. Second, the cases presented are those that, for one reason or another, were already part of CHARTER's broader project design and, as such, best represent the professions involved in the consortium and the joint activities that have been conducted over the past few years of collaborative work.

What we have learnt so far shows that the heritage professional practices are evolving at a high speed (even though with local or sectoral characteristics) and that common trends emerge at the European level. At the same time, national and also regional priorities could be different depending on each heritage context, field of practice or geographical boundary[65].

Moreover, the evolution of the sector is affected by internal and external challenges that professionals have to face to assure the relevance of their role for the society. The need of updated models of CH governance, the lack of reliable statistics and forecasting on the sector the E&T programs that do not adapt quickly enough to respond to the new demands of the market, the heterogeneous quality in VET, the little interest of the young generations for the cultural heritage and humanities studies are all issues that afflicts the sector and the capability of the professionals to address the global dynamics activated by the drivers of change of the sector.

Notably, the parallel discussion undertaken within the CHARTER project to investigate the areas where an innovative E&T offer is needed[66], had as a result the proposal of 8-10 fields (currently under discussion within the consortium) that match these drivers.

[65] "Europe is a continent with a broad variety and diversity of cultural heritage and social practices, characterised by a significant variety of landscapes and ecosystems. The relative magnitude of implications for countries will largely depend on the variability and specificity of local environmental, economic and social conditions. Some trends might have a strong regional or local connotation, and implications may necessitate a regional- or country-specific response". *Drivers of change of relevance for Europe's environment and sustainability.* EEA Report No 25/2019, p. 107.

[66] CHARTER Alliance Workshop on guidelines for innovative/emerging VET and HE curricula – 20-22 March 2023 (https://charter-alliance.eu/charter-events/charter-alliance-workshop-helsinki/).

DRIVERS OF CHANGE	INNOVATION FIELDS
Globalisation and geopolitical dynamics	Participatory leadership and management
Political, regulatory and governance framework	(Policy design and CH regulation)
Knowledge and skills transfer	Traditional craft and techniques
Climate change and environmental sustainability	Sustainability in built heritage and landscape (conservation and renovation) Management and preservation of contemporary heritage (cultural goods/expressions)
Technological shift	Cultural heritage in the digital environment
Demographic, social and cultural changes	Social and economic enhancement of cultural heritage (studies) Community development and intangible heritage Community engagement (Cultural heritage as a driver of societal wellbeing)

The main findings described below represent the commonalities emerged from the studies and will address the future discussion of the CHARTER consortium in terms of future scenarios and proposal of emerging curricula.

5.1. Transversal skills

- The demand for transversal skills is high in all sectors[67]. Even the local boundaries and the specificity of the CH professions influence the kind of transversality needed, the professional practice can't be exercised without (multidisciplinarity is a highly mentioned word).
- Managerial skills may have different shades and be declined as the capability of creating value, raising and managing funds, and how to allocate resources.
- Communication, marketing and entrepreneurial skills are tightly connected to the changing role of cultural heritage professionals and institutions, museums in particular, in the global

[67] CEDEFOP. Importance of transversal skills. https://www.cedefop.europa.eu/en/tools/skills-intelligence/importance-transversal-skills?skill=Communications&country=EU&year=2014.

society. They are perceived as essential to accomplish the mission of being inclusive, open to participation, and sustainable.

5.2. Digital dimension

- Is commonly acknowledged that the technological evolution and the increasing use of digital tools have dramatically changed the way people think, live and work and that digital media influence the approach of the society to these sectors. Whilst the latest approaches foster a perception of cultural heritage as significant for individuals and communities in terms of their identity and development processes[68] and the right of access to and enjoyment of cultural heritage is recognised as a human right[69], digital technologies are seen as the way to boost this right of access and fruition but also identification, interpretation and development of cultural heritage.

- Even if we may say that the private use of digital media and means is a solid background for the development of digital skills and competences, the analysis of the case studies shows that there's still a significant necessity of training in such an area. This became particularly true during the pandemic crisis between in 2020 when having or not specific digital skills and competences became the balance of power for the cultural heritage professionals.

- We must recognise the rise of digital technologies as one of the most important drivers of change in the contemporary CH sector. For instance, different post-COVID research carried out in the museum sector showed the need to invest in digital services and to train/upskill museum staff to make the best use of digital resources and tools; capacity building opportunities are mostly needed not only under the technological point of view, for digitising collections and foster the access to, but also to upskill the curatorial competences to develop cultural strategies and managing copyright, intellectual property rights and licencing in a digital environment.

- The approach to the digital sphere of the youngest generations is the most interesting finding that this report delivered. The lack of digital skills is not perceived as an issue, probably because they are engaged in a continuous daily use of digital tools that means a self-continuous learning that makes them ready for the digital transition. However, this consideration must be matched with two other considerations: at first, core education on cultural heritage, in particular the academic one, often is not yet heavily reliant on digital competences, although there is a niche for specific profiles; secondly, that this doesn't apply to those professionals working with specialised tools like rendering, 3D, BIM, AI etc.

- This latter is also the demonstration that the digital dimension is alternatively declined as a scope (learning how to use and apply a specific digital technology) or as a means to get

[68] FARO convention https://www.coe.int/en/web/culture-and-heritage/faro-convention
[69] Report of the independent expert in the field of cultural rights, Farida Shaheed, (A/HRC/17/38) https://www.ohchr.org/en/documents/thematic-reports/ahrc1738-report-access-cultural-heritage-human-right.

upskilled/reskilled in other functions; communication, managerial and entrepreneurial skills are all enhanced in a digital environment because, from back-office to front-of-house, they encompass all areas of the cultural heritage professionals' practice.

- Noteworthy is the following sub-sectoral specificity: since architecture is an increasingly digital profession, most architects learned to use the digital tools they need on their own, rather than through formal or informal training. Although this evidence appears only in the ACE report, it's likely to happen for other CH professions.

- Often cultural heritage institutions outsource the creation of their digital tools and services; this has as a consequence that the internal staff doesn't capitalise knowledge and skills to plan and run digital projects.

Opportunities

1. Supporting CH professionals in the digital transition (developing their ability to think strategically in a digital environment and to rethink their daily practice using digital tools).

2. Providing opportunities on the job to learn how to use specific digital tools and to keep the acquired skills and competences in the institution's expertise.

5.3. Sustainability

- 'Sustainable' and 'sustainability' are two words extremely recurrent in the different analyses, although associated with different concepts or perspectives: sustainable use of resources, sustainable education, environmental sustainability, energy and sustainability, sustainability associated with 'diversity' and 'inclusivity', sustainable (=low-energy) design. This definitely turns away the interpretation of "sustainability" as relevant for the environmental and climate change issues in favour of a more holistic concept of sustainable cultural heritage[70].

- Therefore, sustainability in our context may be interpreted as the need of making the professional practice sustainable to face the external global challenges in an innovative, long-lasting and low-impacting way[71]; not only greener, but fairer. As a consequence, E&T

[70] *Op. cit.* nt. 17, p. 9.
[71] Council of Europe (2014). Council conclusions of 21 May 2014 on cultural heritage as a strategic resource for a sustainable Europe. 2014/C 183/08. Available at https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52014XG0614%2808%29. Labadi, S., Giliberto, F., Rosetti, I., Shetabi, L., Yildirim, E. (2021). Heritage and the Sustainable Development Goals: Policy Guidance for Heritage and Development Actors. Paris: ICOMOS. Available at https://www.icomos.org/en/focus/un-sustainable-development-goals/91455-%20icomos-releases-sustainable-development-goals-policy-guidance-for-heritage-and-developmentactors.
Culture is both a means and an end to sustainable development as recalled by UNESCO in Culture for the 2030 Agenda (2018) (available at https://unesdoc.unesco.org/ark:/48223/pf0000264687). UNESCO also developed thematic indicators whose purpose is to measure and monitor the progress of culture's enabling contribution to the national and local implementation of the Goals and Targets of the 2030 Agenda (https://whc.unesco.org/en/culture2030indicators/). . Cf. Hosagrahar, J. Culture: at the heart of SFGs (2017) in The UNESCO Courier, pp. 12-14.

are at the same time pillars of sustainable society's growth, productivity and innovation, and enabling factors to spread the culture of sustainability in all sectors of our life[72].

- There's an increased sense of the cultural heritage institutions of their leading role in sustainable development (including social cohesion, human rights and well-being) but it's still rather unclear how this may be put into practice.

Opportunities

- Making the practice in cultural heritage sustainable, providing the right skills, can allow the practitioners to work more effectively and prevent labour market mismatches.
- **Traditional knowledge and skills are both needed and are at the basis of a sustainable practice**. In particular, in the preservation and safeguarding functions that lead to a sustainable management of cultural heritage and assure its transmission to future generations. Knowledge transfer in this framework can happen mainly with practical training and VET.
- Designing courses with the industry is a way to revamp the interest and the sustainability of traditional practices and skills.
- Being rather a concept than a specific gap, sustainability in E&T serves to shape the policies on CH and assure a mid- and long-term strategy toward the digital and green transitions.

5.4. Learning paths

- "The world of work and the world of education do not always operate with the same variables". This statement taken from one of the CHARTER interviews to young cultural heritage professionals is the perfect synthesis of the reason why education and job perspectives often do not match, in particular in the cultural heritage sector. This issue is reflected in the fact that the learning outcomes of an educational paths, that should be strictly connected to the professional profiles, actually it is not; from the analysis of the CHARTER E&T database they resulted as to be poorly described in an unstructured manner; this may lead to a misinterpretation of the scope of the course and not to meet the learner's expectations.
- The initial theoretical education, in particular the one received in universities, is commonly acknowledged as satisfactory to provide theoretical and sectorial background while soft and transversal skills are acquired mainly through a training on the job; therefore, it's not

[72] Cf. European Commission, *European skills agenda for sustainable competitiveness, social fairness and resilience*, July 2020, esp. p. 3.

surprising that the survey we conducted about emerging/innovative curricula shows that the functions in which innovation is less felt is the core one of 'Recognition'.

- Cultural heritage professionals from all analysed sectors commonly converge to the fact that the most pressing skills shortage concern all those transversal subjects that are needed to face the challenges that affect the sector and the social role that cultural heritage institutions play in it and that are not learnt in a background education path: skills related to social development, managerial skills, entrepreneurial skills, communication skills, digital skills, skills related to the sustainable use of resources, competences on regulatory frameworks, etc. Consequently, a traditional educational path combined with continuing education, in particular on the job, is considered to be the most suitable approach to cover specific training needs. The sample contacted by CHARTER reported that, when analysing the concept of innovation in E&T, the most frequently associated words are "multidisciplinarity" and "teaching format".

- The analysis of the data sources shows that people are in favour of a mix of all the training formats (formal, non-formal informal), with particular attention (for experienced professionals) to part-time training when that allows one to keep on working. The part-time training is more useful for upskilling, reskilling or professional updating.

Opportunities

1. Connecting E&T learning outcomes with the ESCO framework's skills is useful to make the educational offer more consistent to the necessities of the job market.

2. Fostering long-life learning and continuing professional development is the key to fill the E&T gaps and meet the professionals' needs. In particular, training on the job is commonly recognised as to be one of the most effective approaches.

3. Mixing formal classroom learning, research or project and work-based learning, in percentage adapted to circumstances, is a growing necessity.

4. Learning informally from peers is also considered fundamental.

5. One envisaged solution to be more aligned with the market needs, E&T in cultural heritage, is envisaged in the importance of engaging the largest possible group of stakeholders, representing different sectors and points of interests, in the design and/or provision of the training. This may be realised through the cooperation among different universities, E&T providers and CH institutions, as well as industry, networks, regions, and local governments; this latter is also envisaged as an opportunity to enhance traditional crafts through the co-design, provision and monitoring of VET courses.

5.5. Visibility and job market dynamics

- The visibility of cultural heritage professions and jobs is scarce in the statistical and professional classification systems both at the national and transnational levels; moreover,

emerging skills are slowly recognised and integrated too because they blur the boundaries of traditional codification of the sector. This affects the employment dynamics, in particular of the public sector, creating a misalignment with the skills description in the vacancies.

- It was acknowledged that ESCO, ISCO, NACE and other classificatory frameworks group the cultural heritage professions and the related skills under the umbrella of wider categories and, doing so, limits their specificity and granularity and therefore make them hardly traceable. Unfortunately, this also revealed to be true both for the CEDEFOP data and the European platform for vacancies, EURES.

- Centralised platforms for jobs advertising are rare since the labour market has a local (national or even regional) dimension. CH professionals with very specialised skills have more possibilities of being recruited on an international scale.

Opportunities

1) According to Action 2 of the Skills agenda[73], the European Commission will support the development of new and deepened skills intelligence, including at regional and sectoral levels. CHARTER has then the opportunity, through policy actions, to foster the process of retrieving punctual statistics on the cultural heritage sector.

[73] Op. cit. nt. 1 p. 8.

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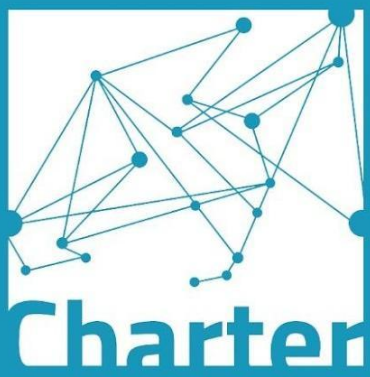
Annex I

CHARTER survey on training needs and emerging/innovative occupations. Summary of the results, 2023.

https://charter-alliance.eu/wp-content/uploads/2023/06/CHARTER-Report-on-the-SURVEY-of-emerging-curricula_FINAL.pdf



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