TRAINING HANDBOOK FOR "DIGITAL COLLECTIONS CURATOR"

Co-funded by the Erasmus+ Programme of the European Union

This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Training Handbook for "Digital Collections Curator" (R3.3)

The Mu.SA - Museum Sector Alliance Project, has been funded with support from the European Commission. This publication reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Funding Programme: Erasmus+ (European Commission)

Key Action: Cooperation for innovation and the exchange of good practices

Action Type: Sector Skills Alliances for design and delivery of VET

Project Number: 575907-EEP-1-2016-1-EL-EPPKA2-SSA

Starting Date: 1 November 2016

Ending Date: 30 April 2020

www.project-musa.eu

Co-funded by the
Erasmus+ Programme
of the European Union

Work package:	3
Type:	Document
Dissemination level:	Public
Version:	Final
Delivery date:	April 2020
Keywords:	Handbook, EQAVET, validation, VET curricula, Digital Collections Curator
Abstract:	This document consist the Handbooks for the VET curricula of Digital Collections Curator. It was developed from the Mu.SA project, aiming to support VET providers and tutors who would like to implement this VET curricula. It capitalizes on the full potential of various learning settings and applies EQAVET principles. Various ways of implementing the VET methodology are described, addressing the needs of different audiences, taking into account the context of training and the special attributes of the trainees. It also incorporates the specification of procedures to validate prior, informal and non formal learning of the professionals of the museum sector, and guidelines for applying EQAVET principles and procedures. The handbook presents the details of the competence modules that must be delivered to the trainees, first through an introductory course, and second through a specialization course.
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Introduction

The Mu.SA project was implemented between 2016 and 2020, addressing the training needs of Museum and cultural organizations professionals. It produced a range of innovative outcomes, including among others, (a) four profiles of emerging job roles in museums and cultural organizations that will serve as a common reference at the European level, (b) a staged VET methodology based on learning outcomes, (c) modular VET curricula that dynamically combine training modules for digital and transferable competences, (d) a MOOC for delivering the basic competences, (e) a European specialization course that combines e-learning, face to face instruction and work place learning, and (f) Communities of Practice (one per project country, i.e. Italy, Greece and Portugal, and one at the European level), in order to support Museum and Cultural Organization Professionals to engage into an open dialogue and sustainable peer learning. European instruments (EQF, ECVET and EQAVET) were applied improving transparency and recognition of qualifications.

This document consists the training handbook that will be used from the tutors and VET providers that intend to deliver the VET curricula for Digital Collections Curator after the end of the Mu.SA project lifecycle. The handbook is based on the separate handbooks that were developed during the different competences design, in a modular approach.

In this document, VET providers and tutors will find information on Digital Collections Curator, and specifically how to implemented the Mu.SA training methodology. Their main endeavour is to motivate learners, so as to engage them into the competence development procedure and decrease drop-out, and to solve them any questions, especially through the respective competence communication mechanism (forum).

1 Description of Digital Collections Curator

Table 1 – Digital Collections Curator description

Digital Collections Curator description	
Title	*DIGITAL COLLECTIONS CURATOR* Also know as Digital Cultural Asset Manager, Digital Asset Manager, Digital Curator
Mission	The Digital Collections Curator is responsible for implementing the digital strategy relevant to collecting, storing, archiving, preserving and making accessible the digital collections (either born – digital or digitized). In larger museums this could be a role-profile in itself, while in smaller museums a curator should be up skilled in the area.
Academic qualification Sector (Recommended)	University degree Museum degree (desired)
Tasks/ Key responsibilities	• To improve a museum's digital preservation, management and exploitation plan for all digital cultural content/objects, on an on-going basis • To provide information on copyright and protection of digital cultural property according to international standards • To supervise the implementation of cataloguing/archiving standards • To produce metadata according to recognised international standards • To collaborate with museum staff in order to facilitate their work with digital cultural assets • To collaborate with other departments and manage projects involving enhancement of digital materials • To supervise the security and safety of digital materials • To design projects in collaboration with other departments in order to enhance the digital collection • To facilitate the use of collections according to museum policies and activities.
Environment	The Digital Collections Curator collaborates with external technology suppliers and, within the museum, with the: • Management • Education departments • Communication department • Object curatorial departments (if different from own)
KPIs	• Number of digital projects begun, implemented, completed, failed • Quantity of new and returning audiences

	reached through the digital strategy • Audience satisfaction online/offline • Diversity and size of the collection of digital assets • Extent and frequency of consultation of digital assets by the Audience
Relationships	Reports to: Director and/or Head of other departments Digital Cultural mediator Interacts with: Communication Department ICT department Education department Customer relationship services

2 VET Methodology

Museum and cultural organization professionals face various challenges, including but not limited to the exploitation of contemporary ICT technologies so as to increase their effectiveness and efficiency, engage the public and exploit the potential of cultural resources. According to Eurostat (2019)[1], the 40% of all UNESCO cultural world heritage sites are located in the EU member states (over 350 in 2019). Around 9 million people in the EU-28 were working in the field of culture (around 3.8% of the total employment), with the 60% of cultural employees having a tertiary education degree (around 35% in total employment), proving the increased skillset of the human capital of the sector. Additionally, the one third of them reported being self-employed. Around the 5% of all enterprises in Europe, i.e. around 1.2 million, were operating in the sector in 2016, generating more than 1.2 billion € of value added. These numbers set the landscape around culture and prove that there is human capital development market that could exploit the potential created by the Mu.SA project.

In practice, the museum and cultural organization sector is dominated by many small organizations that – as in other economic sectors – have limited capability in re-skilling and up-skilling their workforce. This fact also proves the need for multitasking by several employees. In this regard, the Mu.SA project developed four Job Role Profiles, and provided to the community particular human resource development training interventions, exploiting the potential of the WWW (i.e. online learning), accompanying it with face-to-face and work based learning instruction. Mu.SA created also a plenty of learning resources, with the majority of them freely available through its website (http://www.project-musa.eu/results/oers/), categorized by the type of competence and linked with the identified Job Role profiles. The project synthesized the four different VET curricula, and implemented a particular training methodology.

The implementation of the VET Curricula follows a staged methodology. The learners first go through an introductory solely online learning course (in the form of a MOOC – Massive Open Online Course) that includes 22 training modules (competences) that support them to acquire digital and transferable skills[2]. The people that successfully complete this first stage, receive a certificate and are eligible to continue to a specialization course on one of the Mu.SA Job Role Profiles. The specialization course includes 25 competence (on average) per curricula, delivered through online learning. It also includes face-to-face instruction, and a serious component of work-based learning, where learners are called to implement in practice a subset of the learning outcomes they were taught. Indicative work-based learning activities were available to support this endeavour. In the end, the successful candidates received a certification for the VET curricula they followed, accompanied with ECVET points. The Mu.SA VET methodology for the application of the Digital Collections Curator curricula is presented in detail in a following section.

[1] https://ec.europa.eu/eurostat/documents/3217494/10177894/KS-01-19-712-EN-N.pdf/915f828b-daae-1cca-ba54-a87e90d6b68b

[2] The term "transferable" is used equally to "horizontal" and "21st century skills".

The training modules consist autonomous and standalone competences originating from two digital competences frameworks and transferable competences. In particular, the digital competences originate from the European Digital Competence Framework for Citizens (DigComp 2.1)[3], that includes basic digital skills, and the e-Competence Framework 3.0 [4], which focuses mostly to ICT professionals. The transferable competences focus mostly to soft skills, proven to be essential after extensive research for contemporary museum professionals.

VET providers that would like to exploit the results of the Mu.SA project, could follow different routes.

1. They could implement the already tested Mu.SA approach, implementing the introductory course through e-learning (e.g. a MOOC) and then guide the successful learners towards the Mu.SA predefined Job Roles through the separate specialization courses that included online, face-to-face and work-based learning.
2. They could build on the potential of the modular (content) approach, and form new curricula, probably with adding additional learning materials. These new curricula could serve the needs of the museums and cultural organizations sector, or even neighboring sectors (e.g. suppliers of museums), supporting a wider market. In this case, the VET providers should follow the contend design and development approach used by Mu.SA (detailed in R3.2 – Methodology for realizing VET curricula), so as to assure the quality of the results.
3. Last but not least, VET providers could form new curricula oriented to the needs of particular organizations, exploiting also the freely available material produced by Mu.SA.

At this point, we underline that the methodological approach designed, implemented and evaluated by Mu.SA is the most coherent one, and the Mu.SA consortium is willing to collaborate further with VET providers in Europe and above, to expand the approach in new areas and domains.

[3] https://publications.jrc.ec.europa.eu/repository/bitstream/JRC106281/web-digcomp2.1pdf_(online).pdf
[4] https://www.ecompetences.eu/

2.1 Assuring quality through EQAVET principles

The EQAVET Quality Assurance reference framework for vocational education and training is based on the **2009 Recommendation of the European Parliament** and Council[5]. EQAVET is an approach to quality assurance or a reference framework for VET which has been agreed by Member States. It offers VET providers a straight forward way to monitor and improve the quality of their provision. It is based on the four stage cycle of planning, implementation, evaluation and review which is at the heart of many other quality assurance approaches. The four stages of the quality assurance cycle are interrelated and need to be addressed together.

The VET methodology for the design and implementation of the Digital Collections Curator curricula follows the EQAVET Quality Reference framework. We remind the reader that, the Digital Collections Curator curricula is assigned to the EQF 5 level.

Table 2 – EQAVET Stage 1: Planning

Stage 1: Planning
Planning reflects a strategic vision shared by the relevant stakeholders and includes explicit goals/objectives, actions and indicators. The VET curricula for Digital Collections Curator has been planned as follows: • Explicit goals / objectives and targets were set and monitored, and the training programs supporting its implementation were designed to meet them. • Ongoing consultation with the Mu.SA social partners and all other relevant stakeholders took place in order to identify Digital Collections Curator specific local / individual needs. • The Mu.SA VET Providers have discussed cooperative initiatives with other VET providers and all other relevant stakeholders. • The Digital Collections Curator VET curricula is described using learning outcomes. • Mechanisms have been established for the quality assurance of the design, assessment, certification and review of qualifications[6]. • VET providers have an explicit and transparent quality assurance system in place

[5] https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:155:0001:0010:EN:PDF

[6] The Digital Collections Curator Job Role profile is in the process of being recognized as a qualification in the EQF 5 level in the in the Mu.SA project countries (Italy, Greece, Portugal).

Table 3 – EQAVET Stage 2: Implementation

Stage 2: Implementation
Implementation plans are devised in consultation with stakeholders and include explicit principles: • Relevant and inclusive partnerships, including those between teachers and trainers, were explicitly supported to implement the actions planned. • VET providers' programmes for the Digital Collections Curator Job Role profile enabled learners to meet the expected learning outcomes and become involved in the learning process • VET providers responded to the learning needs of individuals (museum professionals) by using approaches to pedagogy and assessment which enabled learners to achieve the expected learning outcomes • VET providers used valid, accurate and reliable methods to assess individuals' learning outcomes.

Table 4 – EQAVET Stage 3: Evaluation

Stage 3: Evaluation
Evaluation of outcomes and processes was regularly carried out and supported by measurement: • A methodology for evaluation has been devised, covering internal and external evaluation • Stakeholder involvement in the monitoring and evaluation process was agreed and clearly described • The national/regional standards and processes for improving and assuring quality were relevant and proportionate to the needs of the sector. Evaluation and review of the collection and use of data, and adequate and effective mechanisms to involve internal and external stakeholders were implemented. • Self-assessment/self-evaluation was periodically carried out under national and regional regulations/frameworks or at the initiative of VET providers • Evaluation and review covered processes and results/outcomes of the training including the assessment of learner satisfaction as well as staff performance and satisfaction

Table 5 – EQAVET Stage 4: Review

Stage 4: Review
• Learners' feedback was gathered on their individual learning experience and on the learning and teaching environment. Together with trainers' and all other relevant stakeholders' feedback this was used to inform further actions. • Procedures on feedback and review were part of a strategic learning process in the Mu.SA organisation, supported the development of high quality provision, and improved opportunities for learners. • Information on the outcomes of the review was widely and publicly available. • Results/outcomes of the evaluation process were discussed with relevant stakeholders and appropriate action plans were put in place.

2.2 Audiences

The courses produced by the Mu.SA project, and the separate "blocks of content" formalized into stand-alone competences with assessment materials, address the needs of museum and cultural organizations professionals; this broad definition includes people that consist employers, employees, self-employed people, unemployed or even students that currently operate or would like to work in the sector. The VET curricula produced focus to particular Job Role Profiles, and have as a prerequisite (preferred) the existence of a bachelor degree; specific knowledge on the sector is not a prerequisite, as their objective is to exploit the potential of contemporary ICT technologies and help people to acquire prominent horizontal (transversal / 21st century) skills, so as to become effective and efficient in their work. Knowledge on the sectors is optional but "good to have".

The **employers** will find in the Mu.SA offer (VET curricula and learning materials) a well structured set of human capital development interventions so as to help their employees to exploit the potential of ICT technologies in order to enhance the services of their organizations, serving both the "internal" and the "external" customers. **Employees** will find a scientifically developed and tested approach and content so as to improve their employability opportunities, improve their effectiveness and efficiency, and provide new engaging cultural experiences for the public. **Self-employed** people that will follow one of the Mu.SA VET curricula will manage to specialize and provide oriented services to their customers, especially the smaller organizations that would like to outsource one of the functions (e.g. management of online communities of visitors). **Unemployed** people can get a certificate so as to increase their employability potential, developing competences on emerging topics for the museums of the future. **Students** will get practical knowledge and will facilitated for their transition from education to work.

Other target groups include the VET providers, adult trainers and policy makers. **VET providers** will find a coherent set of tools (methodologies, handbooks, lessons learned) on how to organize a program addressing the emerging training needs of

museum professionals. They can exploit also the potential of scientifically developed and tested learning materials, freely available, so as to serve the community offering the predefined VET curricula, or even develop more for the sector or neighboring sectors, taking advantage of the modular approach. **Adult trainers** can find a coherent methodology to support their students, tight up with the particular needs of (working) adults, using the pre-developed (per competence) handbooks. And last, **policy makers** will find a wisely developed and tested approach on how to re-skill and up-skill professionals of the sector, using it as a template in design new human resource development interventions.

2.3 Introductory course

The VET provider implements the introductory course that addresses the training needs of all Mu.SA Job Role Profiles and not only the needs of the Digital Collections Curator. This course is delivered fully online. In the context of the Mu.SA project, this introductory course was implemented through a MOOC including learners from all over the world!

The VET provider publishes an invitation to participation to potential candidates, and recruits the appropriate tutors to support and motivate learners. Following the registration procedure, the course starts. It lasts 8 weeks, with each week including 2-3 modules (competences). The learners totally have to devote on average 80 hours in order to attend the course and fill in the assessment quizzes (on average 10 hours per week). Each e-CF competence is taught in about 5 hours of study. Each DigComp competence is taught in 1-2 hours of study, whereas each transferable competence is taught in approximately 3 hours of study. The aforementioned hours per competence include both learning and assessment. The learners are able to communicate with the tutor of each competence through a dedicated communication mechanism online (forum).

In case the dropouts increase, the VET provider may implement a break in the middle of the course, so as to enable learners to catch up.

This course is set up so as to be delivered fully online (learning, assessment, learner support). Alternatively, the VET provider may implement in parallel some face-to-face sessions (at least two during the course lifecycle) so as to solve learners' queries, enhance learners' collaboration, and facilitate the learning content to the work context.

Table 6 – Training modules of the introductory course

Week	Competence	Type
W1.1	IS and business strategy alignment	e-CF
W1.2	Browsing, searching and filtering data, information and digital content	DigComp
W1.3	Managing data, information and digital content	DigComp
W2.1	Business Plan Development	e-CF
W2.2	Evaluating data, information and digital content	DigComp
W2.3	Identifying needs and technological responses	DigComp
W3.1	Technology trend monitoring	e-CF
W3.2	Netiquette	DigComp
W3.3	Leadership and change facilitator	Transferrable / 21st century skills
W4.1	Innovating	e-CF
W4.2	Innovating and creatively using technology	DigComp
W4.3	Creative thinking skills	Transferrable / 21st century skills
W5.1	Needs identification	e-CF
W5.2	Developing digital content	DigComp
W5.3	Collaborating through digital technologies	DigComp
W6.1	Forecast development	e-CF
W6.2	Team working	Transferrable / 21st century skills
W7.1	Relationship management	e-CF
W7.2	Protecting personal data and privacy	DigComp
W8.1	ICT quality management	e-CF
W8.2	Communication skills	Transferrable / 21st century skills
W8.3	Time management	Transferrable / 21st century skills

2.4 Specialization course

The alumni of the introductory course are eligible to apply for the specialization course in one of the four different Job Role Profiles. This course includes a blended learning (online and face-to-face) and a work-based learning component.

Following the results of the MOOC, the successful candidates are invited to declare their interest in joining the specialization course for the particular VET curricula. The VET provider announces the initiation of the course in its website and social media, and sends a specific invitation through its network. It informs the candidates about the number of available seats, the characteristics of eligible candidates, the criteria for selection, the VET curricula it offers (with a short description of the Job Role Profiles), the key elements of the course (blended – work-based learning), the duties of the learners that will be selected to participate, and closing data for the applications.

The candidates are called to fill in an application (Expression of Interest) that includes at least the following:

- Job role profile selected
- Main contact information, i.e. name and surname, contact details, country of residence, region and city.
- Academic and professional background information, i.e. upper academic diploma, English language level, years of relevant professional experience in a pertinent field, current employment status, contact information of the employer (in the sector of interest, in case of people already working there), the role in the organization, previous experience, potential agreement of the current employer to host the learner for the work-based learning, etc.
- Other information justifying the application, i.e. justification of the interest to participate in the specialization course, the expected impact of the specialization course to his/her professional career, a detailed CV (preferably in Europass format).
- A Letter of Intent from an employer in the field that is willing to host the learner for the work-based learning (optional). The VET provider should also provide to the learner an Information Sheet about the program and the work-based learning, answering the questions of the employers. Depending on the country legislation, a typical question arises from the employers concerns the social security costs. This issue should be solved in advance by the VET provider.

The VET provider should be open and transparent in the selection procedure. The Mu.SA experience proved that the particular VET curricula were very popular and attracted a lot of applications!

The specialization course for the Digital Collections Curator includes blended and work-based learning. The course lasts totally 24 weeks. It includes 22 competences / modules, delivered online in 115 hours (learning equivalent) that are accompanied with 24 hours of face-to-face instruction (practice, problem solving, exercises, case

studies presentation, etc) and 205 hours of work-based learning (preferably in 10 weeks time)[7].

The online learning materials delivered to the learners through the Mu.SA platform included also learning quizzes for the assessment of the achievement of learning outcomes and the grading. The assessment of the work-based learning[8] is conducted through a presentation and a report detailing the work conducted during the work-based learning. In general, the following methods are used for the assessment:

Table 7 – Types of assessment

Type of assessment	Online	Face-to-face	Work-based learning
Formative	1. Observation (monitoring) of learners' progress by the tutor 2. Monitoring of the learners' progress for the submission of practical assignments 3. Informative feedback from tutors through a particular form	Collaborative learning (not rated)	1. Description of tasks and activities performed (learner – supervisor) 2. Weekly question by the social partner (optional)[9] 3. Bi-weekly questionnaire by the VET provider 4. On site visits
Summative	1. Learning quizzes 2. Practical assignments		1. Final presentation 2. WBL final report

[7] The aforementioned numbers include also assessment
[8] In some cases, the projects developed by the learners during the work-based learning are subject to copyright (from the employer side), therefore the delivery of the results to the VET provider may not be implemented.
[9] This applies only if the VET provider organizes the program in collaboration with a sector representative

Table 8 – Training modules of the specialization course

#	Competence	Type	Level
1	Product / service planning	e-CF	e-3
2	Identifying digital competences gaps	DigComp	
3	Management skills	Transferrable / 21st century skills	
4	Protecting personal data and privacy	DigComp	
5	Influence / persuasion skills	Transferrable / 21st century skills	
6	Managing digital identity	DigComp	
7	Documentation production	e-CF	e-3
8	Mentoring / coaching skills	Transferrable / 21st century skills	
9	Copyright and licenses	DigComp	
10	Service delivery	e-CF	e-3
11	Programming	DigComp	
12	Information and knowledge management	e-CF	e-5
13	Decision making	Transferrable / 21st century skills	
14	Solving technical problems	DigComp	
15	Problem solving	e-CF	e-4
16	Purchasing	e-CF	e-4
17	Sense of initiative and entrepreneurship	Transferrable / 21st century skills	
18	Risk management	e-CF	e-4
19	Interpersonal skills	Transferrable / 21st century skills	
20	Networking skills	Transferrable / 21st century skills	
21	Active listening skills	Transferrable / 21st century skills	
22	Mediation skills	Transferrable / 21st century skills	

Table 9 – Hours of learning materials for the specialization course

Educational material	Digital Competences (e-CF)		
	Level e-3	Level e-4	Level e-5
Core material[10]	4h (min)	5h (min)	6h (min)
Practical assignment	2h	3,5h	5h
Total	6h	8,5h	11h
Educational material	**Digital Competences (DigComp)**		
Core material	1,5h (min)		
Practical assignment	1,0h		
Total	2,5h		
Educational material	**21st Century competences (Transferrable)**		
Core material	3h (min)		
Practical assignment	2h		
Total	5h		

The schedule of the course may include 1-3 modules (competences) per week. Typically it starts with more modules, and decreases later so as to allow time to the learners to conduct the work-based learning. The (learning) hours for each module are presented in the Table 9. It worth to mention that – contrary to the introductory course – the modules in the specialization course include also a practical assignment. This is an exercise, a case study or an essay the tutor places and asks the learners to reply to that and send it to be graded.

The learners are able to communicate with the tutor of each competence through a dedicated communication mechanism online (forum).

In case the dropouts increase, the VET provider may implement a break in the middle of the course, so as to enable learners to catch up.

[10] Including assessment

3 Procedures to validate prior, informal and non formal learning

Beyond the formal classroom settings, people can acquire the most valuable of knowledge, skills and competences in their daily lives, being at work, at home or during leisure. Learning throughout life is a key route to personal development and acknowledging such learning can give greater value to citizen's achievements and their potential contributions to society.

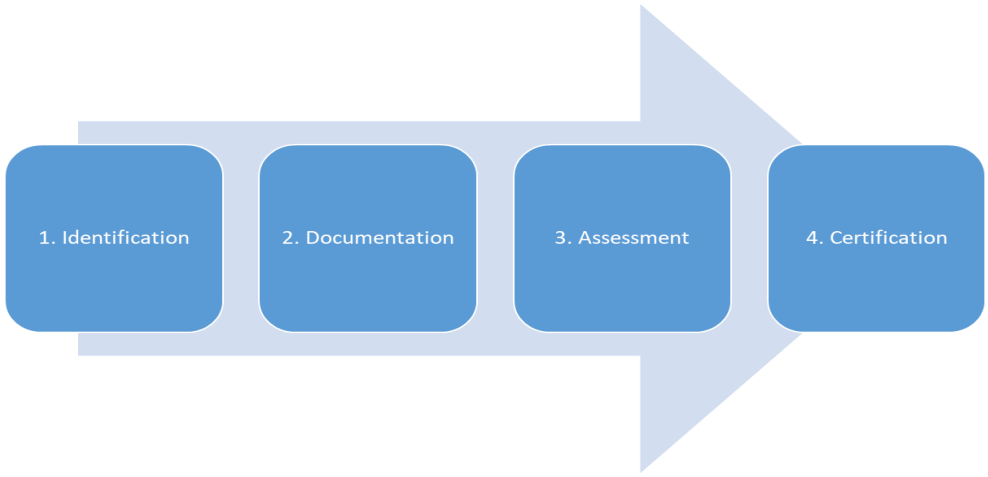
The key questions raised for the Mu.SA project were:

- How can we increase the visibility and value of learning taking place outside formal education and training systems, so that learners with different background can apply for the courses and by evidence receive exemption from one or more modules?
- What are the methods and tools for such a procedure?
- Who is involved?
- How can the social recognition and acceptance be guaranteed?

Such an idea was introduced by the European Council in 2012 with the launch of the COUNCIL RECOMMENDATION of 20 December 2012 on the validation of non-formal and informal learning (2012/C 398/01). The aforementioned Recommendation stressed the value of making prior learning visible for enhancing employability and mobility, as well as increasing motivation for lifelong learning, particularly in the case of the socio-economically disadvantaged or the low-qualified.

Accordingly, the Recommendation on the Validation of Non Formal and Informal Learning (hereof VNFIL), proposed to develop a procedure including the following components, whilst allowing each individual to take advantage of any of these, either separately or in combination, in accordance with his/her needs:

Figure 1 – The components of non-formal and informal learning process



1. **Identification** of knowledge, skills and competence acquired

This stage is crucial as learning outcomes differ from person to person and will have been acquired in various contexts: at home, during work or through voluntary activities. In some countries identification is supported by the use of standardised ICT tools allowing self-assessment. This stage will frequently require active involvement of advisors and counsellors able to enter into a dialogue with the candidate and direct him/her to appropriate options and tools.

2. Documentation

Documentation involves provision of evidence of the learning outcomes acquired. This can be carried out through the 'building' of a portfolio that tends to include a CV and a career history of the individual, with documents and/or work samples that attest to their learning achievements. Validation needs to be open to various evidence types, ranging from written documents to work samples and demonstrations of practice. Objectivity, reliability, credibility and validity define here the qualitative criteria to ensure the acceptance of the results.

3. Assessment

Individual's learning outcomes are compared against specific reference points and/or standards. Oral, written tests, exercises, projects, observation of executing tasks, etc. Assessment methods are based on learning outcomes and refer to the competent professional standard / profile.

4. Certification

Final valuing – of the learning identified, documented and assessed. This can take different forms but is commonly the award of a formal qualification (or part-qualification). Validation reaching the stage of certification requires a summative assessment officially confirming the achievement of learning outcomes against a specified standard.

The 2012 Council recommendation on validation encourages Member States to put in place national arrangements for validation by 2018. These arrangements aim to enable individuals to increase the visibility and value of their knowledge, skills and competences acquired outside formal education and training: at work, at home or in voluntary activities. To this regard CEDEFOP developed the European Guidelines to identify main challenges facing policy makers and practitioners and present possible responses to those challenges. The guidelines are practical, and provide advice for individuals and institutions responsible for initiating, developing, implementing and operating validation arrangements. Their impact relies exclusively on their relevance and ability to add value at national or local level.

The state of play on the adoption and implementation of the 2012 Council Recommendation on the validation of non-formal and informal learning (2012/C 398/01) is different in the three Mu.SA project countries (Italy, Greece, Portugal). Moreover, the Mu.SA VET curricula do not currently exist as "official" occupations in Italy, Greece and Portugal (at least all of them). In this regard, the VET provider should develop a procedure, "as compliant as possible" with the Council Recommendation. Thus, the VET provider should establish a procedure internally

aiming to the identification, documentation, assessment and certification (thereafter mentioned as "Mu.SA VET curricula validation office").

1. **Identification** of knowledge, skills and competence acquired

The Mu.SA project has developed training modules / competences synthesizing the Mu.SA training offer. These modules / competences were built based on learning outcomes. The Mu.SA VET curricula validation office should invite the candidates into dialogue with counselors / advisors, possibly using particular tools, so as to identify which of each Mu.SA VET curricula learning outcomes the candidate already disposes.

2. Documentation

Following the establishment of the previous list, the Mu.SA VET curricula validation office asks the candidate to provide evidence, so as to synthesize his/her portfolio. Almost every evidence should be taken into account, respecting always the national legislation.

3. Assessment

The Mu.SA VET curricula validation office compares the candidates existing learning outcomes with the ones included in the Mu.SA VET curricula using particular assessment methods. In this stage, the candidate becomes eligible to attend only the competences that he/she needs so as to reach the range of the learning outcomes of each Mu.SA VET curricula. No written or oral tests are foreseen so as to complete the assessment.

4. Certification

Learners attain and complete the course and its partial competences and take part in the final certification procedures, e.g. assessment tests, projects, etc.

After that, the learner who completes successfully the final exams gets recognition of the achievement of particular learning outcomes and is in principle able to follow the particular Mu.SA competences and eventually get the same Mu.SA Job Role Profile Certificate with the learners that followed successfully the complete the Mu.SA VET Curricula training offers. The same Certifications are awarded to every learner who has successfully completed the course, regardless of his/her type of enrolling, e.g. full course learner or partial course learner deriving from prior experience.

4 The competences in a glance

4.1 Introductory course

The following tables present in short the competences provided to the learner that would like to follow the Digital Collections Curator curricula, in the introductory course. The reader may find the detailed presentation of the competences in the appendix. The competences are presented in row, as they were delivered in the MOOC and following the sequence of the curricula.

Competence title	**IS and business strategy alignment**
Type	Digital (e-CF)
Description	This Course Module anticipates long term business requirements, influences improvement of organizational process efficiency and effectiveness. It aims to determine the IS model and the enterprise architecture in line with the organization's policy and ensures a secure environment. Makes strategic IS policy decisions for the enterprise, including sourcing strategies. Our goal is to provide leadership for the construction and implementation of long term innovative IS solutions and IS strategic leadership to reach consensus and commitment from the management team of the Museum.

Competence title	**Browsing, searching and filtering data, information and digital content**
Type	Digital (DigComp)
Description	This module aims at the development of the critical thinking required to conduct targeted data research and processing in order to acquire the necessary information or findings for museum related subjects. The management and filtering of digital information is crucial as due to the overflow of online data, it is harder than ever to identify, select and analyze accurate, useful and enriching details on every topic or thematic category, to be used in the field. Participants will test their capacity in finding and assessing the information needed. The modules will provide guidance on the matter in the principles of clarity, fact-checking and critical thinking and empowering attendants as internet users. Key areas are: the articulation of information needs, search for data, information and content in digital environments, access and navigation between them and the creation and update of personal search strategies.

Competence title	**Managing data, information and digital content**
Type	Digital (DigComp)
Description	This module facilitates attendants to organize, store and retrieve data, information and content in digital environments but also to manage and process them in a structured environment. The attendants should be able to collect, select and analyze information and use data in an optimal manner in the museum sector (i.e spreadsheet, database). Within this context, participants would improve museum's digital preservation, management and exploitation of digital content. Furthermore, they will archive and manage effectively and on time all the digital content. Data, information and digital content requires high-level ICT skills for attendants to be able to manage all the online and offline exhibitions and digital content.

Competence title	**Business Plan Development**
Type	Digital (e-CF)
Description	This module facilitates attendants to address the design and the structure of a business or product plan for museums including the identification of alternative approaches as well as return on investment propositions. The trainee will be able to: • consider the possible and applicable sourcing models; • present cost benefit analysis and reasoned arguments in support of the selected strategy; • ensure compliance with business and technology strategies; • communicate and sell business plan to relevant stakeholders and address political, financial and cultural organizational interests.

Competence title	**Evaluating data, information and digital content**
Type	Digital (DigComp)
Description	This module facilitates attendants to develop skills in order to analyze, compare and critically evaluate the credibility and reliability of sources of data, information and digital content.

Competence title	**Identifying needs and technological responses**
Type	Digital (DigComp)
Description	This module guides museum professionals on how to assess their own needs in terms of resources, tools and competence development, to match those needs with possible solutions, to adapt tools to their personal needs, and to critically evaluate possible solutions and digital tools.

Competence title	**Technology trend monitoring**
Type	Digital (e-CF)
Description	Technology can leverage the museum experience to new levels and increase the outreach of the collection and the visitors' experience. This module focus on how the museums can monitor and adapt to the technology trends, in a way to enhance (and not overlap) the major role of the collection and the museum as a whole.

Competence title	**Netiquette**
Type	Digital (DigComp)
Description	This module will explain important considerations regarding online communication and addresses the behavioural rules and know-how needed while using digital technologies and interacting in digital environments. By the end of this module the learner will be aware of the importance of how he/she communicates in digital environments and will be able to apply different communication strategies adapted to the specific audience as well as be aware of cultural and generational diversity in digital environments.

Competence title	**Leadership and change facilitator**
Type	Transferrable / 21st century skill
Description	Leadership skills can help us rethink the opportunities offered by digital technology to develop meaningful relationships with new and existing audiences. Why do we talk about leadership in a museum context today? How can museums lead change and innovation in ever-evolving digital society? What kind of leadership style best supports digital transformation in a museum?

Competence title	**Innovating**
Type	Digital (e-CF)
Description	This module facilitates attendants to develop skills related to the design and planning of creative solutions for the provision of new and innovative concepts, ideas, products or services for the museum sector. It also helps them to deploy novel and open thinking to envision the exploitation of innovative technological advances to address museums and their audiences' needs or research directions.

Competence title	**Innovating and creatively using technology**
Type	Digital (DigComp)
Description	This module facilitates attendants to learn on which are the digital tools and technologies that can use in order to create knowledge and to innovate processes and products. He/she will be able to engage individually and collectively in cognitive processing to understand and resolve conceptual problems and problem situations in digital environments.

Competence title	**Creative thinking skills**
Type	Transferrable / 21st century skill
Description	This module will explore what is creative thinking, and how it can stimulate problem-solving in museum practice in an innovative way. It envisages learners to look and solve problems from different perspectives, thinking outside the box, meet new challenges and seek unusual solutions; use brainstorming, mind mapping, reframing, and envisioning the future.

Competence title	**Needs identification**
Type	Digital (e-CF)
Description	This module facilitates attendants to develop skills useful to understand their users and customers for many types of products and services delivered into the Museum. It is focused on understanding the methodologies and techniques to use during the research phase, before designing a product or service for a Museum (physical or digital).

Competence title	**Developing digital content**
Type	Digital (DigComp)
Description	This module facilitates attendants to develop skills useful to create and edit digital content in different formats to express concepts, ideas and thoughts through digital means. It also helps attendants in understanding the appropriate formats depending on the content and the museum context.

Competence title	**Collaborating through digital technologies**
Type	Digital (DigComp)
Description	The module will introduce learners to technologies and digital tools for collaborative processes and for co-creation and development of resources and knowledge. The module will also describe the human approach towards the collaboration as an action and as a value in order to evaluate risks and common behaviors related to the topic.

Competence title	**Forecast development**
Type	Digital (e-CF)
Description	The coming decades will bring massive changes in our society: political, financial, cultural, technological and ecological. Museums can play a vital role in preparing for and responding to these challenges. As trusted conveners, museums can lead their communities in exploring where current trends may take us, identifying preferred futures and helping bring them into being. The module provides the resources to support an exploration of the future in your organization and with community partners. It is composed by the following section: 1. Overview of future studies and forecasting the why and what for and how 2. Identifying and monitoring changes, tracking the flow of trends, event and emerging issues 3. Imagining different futures and testing new assumptions through forecast and scenario building 4. Apply relevant metrics to enable the accurate decision making; 5. Create and plan a forecast session

Competence title	**Team working**
Type	Transferrable / 21st century skill
Description	This module will present the basics on team working development, focusing on communication skills and team membership and belonging patterns for the museum sector. At the end, learners will be able to recognize the basics of team working dynamics and be aware of the importance of establishing an adequate communication in order to improve collaboration.

Competence title	**Relationship management**
Type	Digital (e-CF)
Description	It facilitates attendants to learn on how to establish and maintain positive business relationships between stakeholders (internal or external) by deploying and complying with organizational processes. It also helps them to know how to maintain regular communication with customer / partner / supplier, and address of needs through empathy with their environment and management of supply chain communications. Ensuring that stakeholder needs, concerns or complaints are understood and addressed in accordance with the museum's policy.

Competence title	**Protecting personal data and privacy**
Type	Digital (DigComp)
Description	This module facilitates attendants to learn on how to protect personal data and privacy in digital environments. Also, to understand how to use and share personally identifiable information while being able to protect oneself and others from damages. Moreover, the learners will able to apprehend that digital services use a "Privacy policy" to inform the user on how personal data is used. As well as guiding others, he/she can: • apply different ways to protect my personal data and privacy in digital environments, and • apply different specific ways to share my data while protecting myself and others from dangers. • explain privacy policy statements of how personal data is used in digital services.

Competence title	**ICT quality management**
Type	Digital (e-CF)
Description	This module supports learners in the implementation of ICT quality policies so as to maintain and enhance service and product provision. It also helps them to plan and define indicators to manage quality with respect to the ICT strategy. Moreover, it facilitate learners to review quality measures and to recommend enhancements in order to influence continuous quality improvement.

Competence title	**Communication skills**
Type	Transferrable / 21st century skill
Description	This module will introduce learners to the complicated skill of communication as an effective and efficient way to convey information to the team, staff and audience. Typically this meaning of the term communication include other soft skills such as listening, nonverbal communication, clarity and concision, friendliness, confidence, empathy, open-mindedness, respect, feedback, and selection of the right medium.

Competence title	**Time management**
Type	Transferrable / 21st century skill
Description	This course module facilitates attendants to develop skills that are going to enable them to create structured time efficient plans, including the establishment of time scales and milestones, ensuring optimization of activities and resources within a given timeframe. Within this context the attendants will be able to define activities, responsibilities and identify critical milestones, reducing implementation costs through time utilization and minimization of time waste, without a reduction in quality. Through these, attendants will be able to deliver on time, on budget and in accordance with the original requirements, while enhancing monitoring skills.

4.2 Specialization course

The following tables present in short the competences provided to the learner that would like to follow the Digital Collections Curator curricula, in the specialization course. The reader may find the detailed presentation of the competences in the appendix. The competences are presented in row, as they were delivered in the specialization course and following the sequence of the curricula.

Competence title	**Product / Service planning**
Type	Digital (e-CF)
Description	This module will introduce learners to understand the functions and the goals of service design in museum contexts, giving them the basic tools to carry out the planning of a project.

Competence title	**Identifying digital competences gaps**
Type	Digital (DigComp)
Description	This module facilitates attendants to understand where one's own digital competence needs to be improved or updated. Also, it enables them to support others with their digital competence development. Moreover, it helps learners seek opportunities for self-development and to keep up-to-date with the digital evolution.

Competence title	**Management skills**
Type	Transferrable / 21st century skill
Description	This module will introduce learners to three interrelated management skills: planning, decision-making, and communication. These skills will be considered in the context of a museum digital strategy and analyzed from a global and a more specific point of view, addressing the role of the Digital Collections Curator and the Online Community Manager.

Competence title	**Protecting personal data and privacy**
Type	Digital (DigComp)
Description	The module emphasizes how the General Data Protection Regulation (GDPR) as well as other privacy policy frameworks will give citizens more control over their personal data and how museums and cultural organizations will ensure that personal data is managed in full compliance with legislative requirements and regulations. Data collection, storing and processing should enhance security, ensure consistency and make the practices easy for users to understand. Authoritative and advisory bodies have been set up to safeguard that data practices should meet the reasonable expectations of users and to uphold information rights in the public interest.

Competence title	**Influence / persuasion skills**
Type	Transferrable / 21st century skill
Description	Never the term "Influence", or the words derived from it, as "influencer", has been used as it is today, without, however, clearly understanding of what it refers to. Note that the use of influence and persuasion in museums must always respect the characteristics of this institution, calling for constant use in accordance with well-defined ethical principles.

Competence title	**Managing digital identity**
Type	Digital (DigComp)
Description	Digital identity can mean many things and can be approached from many perspectives. For instance, it can be related to security and protection issues from the individual or institutional standpoint. In this module we will rather focus on museums digital identity from the perspective of reputation, how to build and maintain it, and in that context how to deal with the data that museums produce in the digital environment.

Competence title	**Documentation production**
Type	Digital (e-CF)
Description	This module provides learners with information on how to produce documents describing products, services, components or applications to establish compliance with relevant documentation requirements. It facilitates learners to understand how to select appropriate style and media for presentation materials and create templates for document-management systems. It also describes appropriate ways to document functions and features, validate existing documents and keep them up to date.

Competence title	**Mentoring / coaching skills**
Type	Transferrable / 21st century skill
Description	This module will introduce participants to the concept, techniques and benefits of mentoring and coaching as tools for professional and personal development, with the focus on people working in the arts sector. While mentoring is a powerful tool for developing personal qualities and obtaining new skills, coaching is largely understood as a tool for improvement of professional performances in order to achieve addressed goals. Similarities and differences between mentoring and coaching are the subjects explored in this course. In this regard, the scope of this course is to help learners understand the benefits of the mentoring or coaching partnership, to identify the key soft skills that can be triggered as well as to be familiarized with the practical application of both concepts in many fields of work.

Competence title	**Copyright and licenses**
Type	Digital (DigComp)
Description	The publication of digital content requires a lot of attention and caution. We have to ask ourselves several questions: What kind of rules do I need to know to respect content copyright (e.g. images or other formats) and privacy issues when publishing it? Are there laws for publication for educational, informative purposes? If I want to allow users to use, disclose or modify contents from my website which licenses should I insert? And if as a museum professional I want to release images under a free license, how can I do it? If I collect information from online users, do I have to apply for an authorization? Does my museum have a privacy policy? Every professional must ask these questions when collecting data or sharing digital content on a website, a database, social media or other online platforms. Understanding copyright and licenses is a complex issue but a very important topic in museums. In this module you will learn basic notions that can be useful, including terminology, useful links to learn more and practical exercises.

Competence title	**Service delivery**
Type	Digital (e-CF)
Description	According to eCF terminology, "Service Delivery" enables personnel to deliver a service in accordance with established service level agreements (SLA's). The personnel takes proactive actions to ensure stable and secure applications and ICT infrastructure to avoid potential service disruptions, attending to capacity planning and to information security. They update operational document library and logs all service incidents. Maintains monitoring and management tools (i.e. scripts, procedures), maintain IS services and take proactive measures to ensure service continuity.

Competence title	**Programming**
Type	Digital (DigComp)
Description	This module will introduce learners to programming. They will learn the very basis of computer language and the most famous languages for website development.

Competence title	**Information and knowledge management**
Type	Digital (e-CF)
Description	Identifies and manages structured and unstructured information and considers information distribution policies. Creates information structure to enable exploitation and optimisation of information. Understands appropriate tools to be deployed to create, extract, maintain, renew and propagate business knowledge in order to capitalise from the information asset.

Competence title	**Decision making**
Type	Transferrable / 21st century skill
Description	This module will introduce learners to the knowledge of the decision-making field from a general point of view to a specific perspective. Starting with the meaning of the principle terms linked to the topic we will explore the main theories of decision-making. Concerning the application of this skill in museums, we will suggest some steps to follow to lead decisions for the better and we will show how data analysis can be useful.

Competence title	**Solving technical problems**
Type	Digital (DigComp)
Description	This module will present the basic concepts regarding solving technical problems with a focus on museum and respective audience needs, detailing methods and tools such as the root cause analysis or the problem tree analysis. It will also present potential technical problems with related causes, consequences and possible actions. At the end, learners will be able to address a problem in a systematic way using concepts and tools relevant to the subject.

Competence title	**Problem management**
Type	Digital (e-CF)
Description	This module provides learners with information on how to identify and resolve the root cause of incidents. It also describes how to take a proactive approach to avoidance or identification of root cause of ICT problems and deploy a knowledge system based on recurrence of common errors. It discusses incident resolving and escalation, as well as system optimization and component performance.

Competence title	**Purchasing**
Type	Digital (e-CF)
Description	The objective of this module is to deliver comprehensive knowledge that covers theoretical aspects, modern methods and good practices in the subject of Procurement, using established models (e.g. ITIL) and guidelines issued by the EU and international organizations. Trends like Green/Sustainable Procurement and topics like ICT procurement are also discussed, in view of successfully implementing the museums' "Digital Strategy" concept.

Competence title	**Sense of initiative and entrepreneurship**
Type	Transferrable / 21st century skill
Description	The overall objective of this module is to familiarize learners with the concept and tenets of entrepreneurship, focusing on what it is, why it is relevant for Museum professionals, when it is applied or not and how to do it in practice. Entrepreneurship is interpreted as a transversal competence, necessary for every professional working in a changing and open work environment. Based on the Entrepreneurial Competence Framework learners will know that entrepreneurship goes beyond the narrow understanding of setting up business; they will learn that entrepreneurship supports individuals, not only in their everyday lives at home and in society, but also in the workplace in being aware of the context of their work and being able to seize opportunities, to turn ideas into action and be able to start value-creating initiatives at work.

Competence title	**Risk management**
Type	Digital (e-CF)
Description	This module provides learners with information on how to identify and analyses risks, how to assess their impact. It also describes how categorize risks according to their severity and trace the causes that produce the risks.

Competence title	**Interpersonal skills**
Type	Transferrable / 21st century skill
Description	This unit will describe the complexity of interpersonal skills definition, and will help to find ways to develop one of the most required competences of the 21st century

Competence title	**Networking skills**
Type	Transferrable / 21st century skill
Description	In our modern society, it has become necessary and indeed urgent for museums to redefine their missions, their goals, their functions and their strategies to reflect the expectations of a changing world. This module intends to introduce participants to importance for museums to network to reach a wider audience and face easier the digital challenges. Personnel development through (international) networking is a necessary approach in sharing the pending problems that museums face in common.

Competence title	**Active listening skills**
Type	Transferrable / 21st century skill
Description	Active listening is an enhanced, active state of listening. Most of the people consider listening as a passive activity. Something that we can do while we are doing something else. It requires effort, self-awareness, and practice. It is a powerful tool, because it helps to understand more efficiently the issues that you are tackling and also helps you to communicate better inside of your team, with other departments and with external stakeholders.

Competence title	**Mediation skills**
Type	Transferrable / 21st century skill
Description	This module will present the basics on mediation skills, focusing on the work of museum mediation; At the end, learners will be able to recognize digital technologies in mediation context and identify general principles for use of social media.

4.3 Indicative work-based learning activities

In this section, the reader may find indicative work-based learning activities, than can be used to facilitate the learner to select – in collaboration with the local VET provider and the supervisor from the hosting organization, what to do during his / her work-base learning.

WBL activity	**Provide copyright information and protection of digital cultural property in accordance with international standards.**
Hours	100 – 150 hours
Description	Undertake the implementation and monitoring of the copyright service of the museum. Process the requests that various interested parties (researchers, schools, creative industries, artists etc.) address to the museum to use digital material. Assess and update the museum's policy on accessibility and use of collections. Make a report of the requests analysing users' profile and needs. Introduce this data in the objects' records in the Content Management System that the museum currently uses.

WBL activity	**Oversee the implementation of cataloging / archiving standards.**
Hours	50 – 100 hours
Description	Identify and assess the cataloging standards of a specific museum collection. Undertake the task of checking if these standards are met for the specific collection. Make a list of possible gaps and create a brief report with suggestions that will help museum to plan and implement improvements.

WBL activity	**Produce metadata according to recognized international standards.**
Hours	100 – 200 hours
Description	You may be assigned to work on a specific number of objects in a collection. Contribute to the digitization and documentation of these objects according to international standards. Your work on managing digital files, producing metadata and annotating objects should also take into account museum's priorities on collection management and exhibition planning.

WBL activity	**Collaborate with other departments and manage projects involving digital material enhancement.**
Hours	100 – 200 hours
Description	In collaboration with other staff, you contribute to the creation of online exhibitions based on the museum's digital collections and/or current events. You could present to the team a specific methodology for developing the online exhibition and undertake the management of the process. Create the storyboard of the online exhibition based on specific objects and their interpretation. Collect and manage the necessary digital material included in the storyboard, and then properly process it to the developers of the online exhibition.

WBL activity	**Oversee the safety of digital materials.**
Hours	40 – 80 hours
Description	Contribute to the creation and use of a monitoring system that will support day-to-day supervision of the safety of digital access (backups, storage and retrieval operations etc.).

WBL activity	**Develop projects in collaboration with other departments to improve the digital collection.**
Hours	100 – 200 hours
Description	Evaluate current accessibility and use of museum's collections by disabled people both online and onsite. Create a report of the situation (current services and possible gaps) and provide an action plan for improvements. Create sample material based on the collection documentation that could be used to enhance accessibility by these target groups (e.g. descriptive texts, audio/video interpretation, practical information on spatial orientation etc.).

5 Appendix

5.1 Introductory course

5.1.1 Digital competences (e-CF)

Competence title	**IS and business strategy alignment**
Type	Digital (e-CF)
Description	This Course Module anticipates long term business requirements, influences improvement of organizational process efficiency and effectiveness. It aims to determine the IS model and the enterprise architecture in line with the organization's policy and ensures a secure environment. Makes strategic IS policy decisions for the enterprise, including sourcing strategies. Our goal is to provide leadership for the construction and implementation of long term innovative IS solutions and IS strategic leadership to reach consensus and commitment from the management team of the Museum.
Knowledge domain	The main example domains are: • business strategy concepts; • trends and implications of ICT internal or external developments for museum organizations; • the potential and opportunities of relevant business models; • the business aims and organizational objectives; • the issues and implications of sourcing models; • the new emerging technologies (e.g. distributed systems, virtualization, mobility, data sets); • architectural frameworks; • Security.
Learning outcomes	• Define future developments in business process and technology application • Recognize requirements for processes related to ICT services • Identify long term visitor / customer needs • Illustrate the development of ICT strategy and policy, including ICT security and quality • Describe the development of the business strategy • Examine feasibility in terms of costs and benefits • Demonstrate effects of implementations • Assess the impact of new technologies on business • Study the business benefits of new technologies and how this can add value and provide competitive advantage • Analyze the Museum business architecture • Examine the legal & regulatory landscape in order to factor into business requirements

Units	1. Understand IS and Business Strategy 2. Designing of a Business Strategy: Key focus points 3. Achieving Growth and Technology: A Museum Perspective 4. Analyzing the Present and Future of Museum: Structuring an IS and Business Strategy

Competence title	**Business Plan Development**
Type	Digital (e-CF)
Description	This module facilitates attendants to address the design and the structure of a business or product plan for museums including the identification of alternative approaches as well as return on investment propositions. The trainee will be able to: • consider the possible and applicable sourcing models; • present cost benefit analysis and reasoned arguments in support of the selected strategy; • ensure compliance with business and technology strategies; • communicate and sell business plan to relevant stakeholders and address political, financial and cultural organizational interests.
Knowledge domain	The trainee learns about: • business plans and elements; • business models; • business Model Canvas; • SWOT analysis; • PEST analysis; • Porter's 5 Forces; • elements of the marketing mix (the 4 Ps); • competitive analysis; • operations and management plans; • financial planning and dynamics; • managing risk and opportunity assessment techniques; • marketing and corporate strategies.
Learning outcomes	• Describe the methodology of doing a SWOT analysis • Identify 2 risks in a management plan • Present an example of a competitive analysis • Recognize the mission, the vision and values of a museum • Label 4 museum needs • Present the Museum Innovation Model (MIM) • Identify the 4 elements of the marketing mix (the 4 Ps) • Describe the methodology of doing a PEST analysis • Name 5 competitive forces to maximize profitability (Porter's 5 Forces) • Estimate a cost analysis • Differentiate a business plan from a business model. • Indicate the steps of a business plan • Describe a marketing strategy

	• Describe the business model canvas • Indicate 2 sustainability issues of a museum • Recognize the value of 2 marketing communication functions • Identify a management plan for a museum • Give examples of 2 business models • Produce a financial planning and analysis • Select an example of a Museum Marketing Plan
Units	1. Understanding the Business Management Plan 2. A theoretical context of a business model 3. Marketing strategies 4. A business management plan for Museums

Competence title	**Technology trend monitoring**
Type	Digital (e-CF)
Description	Technology can leverage the museum experience to new levels and increase the outreach of the collection and the visitors' experience. This module focus on how the museums can monitor and adapt to the technology trends, in a way to enhance (and not overlap) the major role of the collection and the museum as a whole.
Knowledge domain	• Existing Digital Media Technologies and future trends; • Games and Gamification solutions in museums; • Virtual, Augmented and mixed solutions in museums; • Usability and accessibility guidelines
Learning outcomes	• Identify at least 2 of the main milestones in the history of ICT in museums. • Identify at least 2 of the current technologies that will shape the future in museums. • Explore a SW tool to prototype a digital storytelling example. • Examine 3 examples of how games provide distinct experiences in museums and enhance the visitor experience, by exploring case studies. • List 3 advantages of how gamification can increase the visitors' engagement. • Describe the concept of interactive storytelling and how it expands linear storytelling, by exploring case studies. • Examine examples of how the reality virtuality continuum can improve the museum communication. • Identify 2 different types of examples of Augmented Reality applications in museums • Identify 2 different types of examples Virtual Reality applications in museums • Identify 2 different types examples of Mixed Reality applications in museums • Identify one set of principles of usability and how it

	promotes user adoption of technology. • Identify the main guidelines for accessibility in museums places and the web, with a focus on inclusive museums • From analysing 2 case studies, explain how games and gamification are used distinctively. For each, complete the following fields: target, synopsis, objectives, advantages, constrains. • From analysing case studies, understand how AR/VR or mixed reality solutions are used distinctively inside-out in museums. • Discuss how usability can affect the user experience, from analyzing a case study. • When confronted with a specific problem in a museum, specify a solution based on interactive storytelling. Make a case-study by prototyping a solution. • From analysing examples of using VR/AR or mixed reality solutions in museums understand the artist`s world. • When confronted with specific problems in museums and websites, identify the principles that can enhance the accessibility
Units	1. History & Trends of ICT in museums 2. Interactive storytelling: From Games to Gamification 3. The reality–virtuality continuum 4. Usability & Accessibility

Competence title	**Innovating**
Type	Digital (e-CF)
Description	This module facilitates attendants to develop skills related to the design and planning of creative solutions for the provision of new and innovative concepts, ideas, products or services for the museum sector. It also helps them to deploy novel and open thinking to envision the exploitation of innovative technological advances to address museums and their audiences' needs or research directions.
Knowledge domain	• Innovation theory • Innovation models • Adopting innovations in museums • Designing innovations for museums • Open thinking • Open innovation • Crowdsourcing • Linked open data
Learning outcomes	• Define innovation and the areas it occurs • Identify the four different types of innovation • Identify the five different types of innovators • Identify the steps of the innovation-decision process • Describe the Museum Innovation Model

	• Identify the steps of design thinking process for innovations in museums • Identify the characteristics of open thinking • Define Open Thinking for museum innovation • Identify how crowdsourcing can be used from museums • Identify Linked Open Data for museum resources • Classify innovations implemented in museums according to their type
Units	1. Introduction to Innovation in Museums 2. Innovation Design and Open Thinking

Competence title	**Needs identification**
Type	Digital (e-CF)
Description	This module facilitates attendants to develop skills useful to understand their users and customers for many types of products and services delivered into the Museum. It is focused on understanding the methodologies and techniques to use during the research phase, before designing a product or service for a Museum (physical or digital).
Knowledge domain	• Qualitative research methodologies and techniques • Research techniques and fundamental outputs for the design phase • User-centered based type of process
Learning outcomes	• Define at least 3 research techniques • Outline at least 3 scenario characteristics • Indicate how to manage an interview • Identify the aim of qualitative research within a Museum • Explain why personas are important • Choose the data gathering techniques depending on prefixed requirements • Interpret data techniques
Units	1. Qualitative research 2. Personas and scenario within the Museum 3. From research to design

Competence title	**Forecast development**
Type	Digital (e-CF)
Description	The coming decades will bring massive changes in our society: political, financial, cultural, technological and ecological. Museums can play a vital role in preparing for and responding to these challenges. As trusted conveners, museums can lead their communities in exploring where current trends may take us, identifying preferred futures and helping bring them into being. The module provides the resources to support an exploration of the future in your organization and with community partners. It is composed by the following section: 1. Overview of future studies and forecasting the why and what for and how 2. Identifying and monitoring changes, tracking the flow of trends, event and emerging issues 3. Imagining different futures and testing new assumptions through forecast and scenario building 4. Apply relevant metrics to enable the accurate decision making; 5. Create and plan a forecast session
Knowledge domain	Knowledge domains of the module are: • Forecast Development
Learning outcomes	• Identify the difference between prediction and foresight • Identify at least one technique used to perform qualitative forecasting analysis with museum staff on digital opportunities • Identify at least one technique used to perform quantitative forecasting analysis with museum staff on digital opportunities • List the steps and scope in the scanning process • Identify one method used to monitor change • Identify at least one new trend • Identify at least one method used to assess staff capacity for welcoming new digital tools • Identify at least three relevant metrics (KPI's) used to enable accurate decision making • Identify at least one technique used to understand audience needs and behaviours • Identify the difference between Digital communication and digital transformation • Develop at least two scenarios, intersecting new and existing trends and potentially disruptive events • Create a stakeholders' list • Collect at least two techniques used to assess user/technologies interaction

	• Plan one forecasting session • Plan at least two warm up exercises • Choose one evaluation tool used to monitor change
Units	1. Future studies and forecasting 2. Scanning for change 3. Scenario building 4. Metrics for decision making 5. Forecast session

Competence title	**Relationship management**
Type	Digital (e-CF)
Description	It facilitates attendants to learn on how to establish and maintain positive business relationships between stakeholders (internal or external) by deploying and complying with organizational processes. It also helps them to know how to maintain regular communication with customer / partner / supplier, and address of needs through empathy with their environment and management of supply chain communications. Ensuring that stakeholder needs, concerns or complaints are understood and addressed in accordance with the museum's policy.
Knowledge domain	• Leadership and management; • Business relationship management (BRM); • Communication chains; • Customer Relationship Management (CRM)
Learning outcomes	• Describe relationship management and its two main components in the business domain • Identify six interpersonal skills • List ten relationship management skills to enhance a business • Identify six fundamental competencies for a successful business relationship management • Identify the four types of customer relationship management • Discuss four objectives of customer relationship management • Give three examples of customer relationship management applications • Name three goals of customer relationship management • List seven steps of a museum's complaints handling process • Explain the four core disciplines of business relationship management • Describe the five tests of good customer relationship management strategy • Indicate six benefits of CRM in museums • Sketch the business relationship management framework using the "House of BRM" approach

Units	1. Introduction in relationship management 2. Business relationship management 3. Customer relationship management 4. Developing customer relationship management strategy 5. CRM solutions in museums

Competence title	**ICT quality management**
Type	Digital (e-CF)
Description	This module supports learners in the implementation of ICT quality policies so as to maintain and enhance service and product provision. It also helps them to plan and define indicators to manage quality with respect to the ICT strategy. Moreover, it facilitate learners to review quality measures and to recommend enhancements in order to influence continuous quality improvement.
Knowledge domain	• Methods, tools and procedures that are applied within the organisation and where they should be applied. • The ICT Quality Management • Regulations and standards in ICT quality management
Learning outcomes	• Identify the benefits of quality improvement • Define a quality management system • Identify why IT projects fail • Identify the quality management principles • Define actions for organisation to improve their performance applying the principles • Identify the key benefits of ISO 9001:2015 standard • Identify the key areas of a Quality Management System based on the ISO 9001:2015 standard • Define the Capability Maturity Model Integration • Identify the CMMI maturity levels • Identify the critical elements of the ICT Quality Management implementation • Identify indicators for ICT Quality • Identify the critical aspects of ensuring ICT Quality • Identify the cornerstones of ICT Quality Auditing
Units	1. Quality Management Systems 2. Quality Standards 3. Implementing and measuring ICT Quality

5.1.2 Digital competences (DigComp)

Competence title	**Browsing, searching and filtering data, information and digital content**
Type	Digital (DigComp)
Description	This module aims at the development of the critical thinking required to conduct targeted data research and processing in order to acquire the necessary information or findings for museum related subjects. The management and filtering of digital information is crucial as due to the overflow of online data, it is harder than ever to identify, select and analyze accurate, useful and enriching details on every topic or thematic category, to be used in the field. Participants will test their capacity in finding and assessing the information needed. The modules will provide guidance on the matter in the principles of clarity, fact-checking and critical thinking and empowering attendants as internet users. Key areas are: the articulation of information needs, search for data, information and content in digital environments, access and navigation between them and the creation and update of personal search strategies.
Knowledge domain	• Data browsing, filtering, management mechanisms, methodologies and software usage; • Data use optimization, references and planning for superior museum sector services; • Use of digital content in research, reporting and training; • Information synthesis and good-practices on online data mining in museum-related studies • Browsing tips, traps and unexplored opportunities for potential growth; • Fake/unreliable information identification & fact-checking for events, galleries etc; • Efficient browsing and researching, using online tools accurately and efficiently;
Learning outcomes	• Describe the value of information and data analytics in the digital era • Identify at least two (2) good practices on the use of digital content in Museums • Define strategies and goals on data browsing research and information analysis • Convert knowledge into analytical thinking in order to select accurate data in the age of information • Identify efficient use of internet tools for superior research collection methods • Develop a museum policy on data usage and extraction (set rules and goals compatible with targets and legislation) • Prepare a case study report on museum rethinking

	using information retrieved online • Apply a copyright and GDPR compliant policy on information usage and data collection • Develop digital content using resources from the public domain and free stock material • Identify capacity-building on open source applications and tools for digital content and information management and analysis
Units	1. Understanding the power and importance of data and digital content 2. Modern Methodologies on data processing and online research

Competence title	**Managing data, information and digital content**
Type	Digital (DigComp)
Description	This module facilitates attendants to organize, store and retrieve data, information and content in digital environments but also to manage and process them in a structured environment. The attendants should be able to collect, select and analyze information and use data in an optimal manner in the museum sector (i.e spreadsheet, database). Within this context, participants would improve museum's digital preservation, management and exploitation of digital content. Furthermore, they will archive and manage effectively and on time all the digital content. Data, information and digital content requires high-level ICT skills for attendants to be able to manage all the online and offline exhibitions and digital content.
Knowledge domain	• Distinguish the definitions and understand key terminology; • Database management system; • Metadata management; • Data security ; • Relevant business software and applications; • Digital content management systems; • Digital solutions and changes on business management - Digitization of collection and content;
Learning outcomes	• Define data, information, digital content, metadata • Examine the added value of Software • Examine the use of Software Applications regarding data, information and digital content management • Define the web threats and the necessity to face them • Identify the web threats • Estimate the risk of data loss or corruption • Employ effective methods of data archive • Explore effective methods of managing information • Use effective methods of retrieving information

	• Utilize effective methods of preservation of digital content • Analyze web threats • Apply effective management of data, information and digital content of museum sector
Units	1. Define and articulate the concept: what is data, information, digital content, metadata 2. How to manage information flow and digital content

Competence title	**Evaluating data, information and digital content**
Type	Digital (DigComp)
Description	This module facilitates attendants to develop skills in order to analyze, compare and critically evaluate the credibility and reliability of sources of data, information and digital content.
Knowledge domain	• Data and information: definitions, types and meaning; • From data to wisdom: the DIKW hierarchy; • Data accuracy and data quality; • Analyzing and critically evaluating data, • Information resources and digital content; • Information behavior; • Information representation and information retrieval; • Traffic, queries and use of data in cultural institutions; • Search Engine Optimization (SEO) strategy.
Learning outcomes	• Identify two technologies for organizing information. • List the best method for digital content assessment. • Present four steps for evaluating information. • Name four criteria when evaluating internet sources. • Indicate the best strategy in searching data resources. • Select two principles on data resources Management. • Describe two digital tools for measuring a museum's popularity. • Identify three trends in analytics. • Indicate the four key areas of SEO that a site owner need to take into consideration. • Prepare at least five questions in evaluating the credibility of an information source. • Find one metrics' report of a well – known museum.
Units	1. Introduction to evaluating data, information and digital content 2. Museum & Metrics

Competence title	**Identifying needs and technological responses**
Type	Digital (DigComp)
Description	This module guides museum professionals on how to assess their own needs in terms of resources, tools and competence development, to match those needs with possible solutions, to adapt tools to their personal needs, and to critically evaluate possible solutions and digital tools.
Knowledge domain	The knowledge areas covered are the following: • Needs assessment • The emerging museum professional roles • The museums of the future and the needs they create to professionals • The emerging technologies for museum professionals
Learning outcomes	• Identify the key steps of a needs assessment procedure. • List at least two emerging technologies per main museum function. • Define the main technology characteristics required to cover common museum professionals' needs. • Select a needs assessment model to identify the museum professional needs. • Recognize technologies embedding particular characteristics covering museum professionals' needs. • Choose the appropriate technologies to solve museum professionals' needs.
Units	1. Needs assessment for museum professionals 2. Selecting technologies covering the needs of museum professionals

Competence title	**Netiquette**
Type	Digital (DigComp)
Description	This module will explain important considerations regarding online communication and addresses the behavioural rules and know-how needed while using digital technologies and interacting in digital environments. By the end of this module the learner will be aware of the importance of how he/she communicates in digital environments and will be able to apply different communication strategies adapted to the specific audience as well as be aware of cultural and generational diversity in digital environments.
Knowledge domain	Communication; Social and behavioural science.
Learning outcomes	• Describe what is netiquette. • Recall the importance of rules when interacting on the Internet. • Identify at least five rules for communicating on the Internet. • Describe how the cultural and generational diversity implicate the online communication. • Illustrate at least three examples of different environments and audiences. • Illustrate at least three cases of poor online behaviour. • Choose an effective communication strategy considering the context and regarding the audience and the digital environment. • Distinguish between good and poor netiquette practices.
Units	1. Introduction 2. The core rules of Netiquette 3. Examples and best practices

Competence title	**Innovating and creatively using technology**
Type	Digital (DigComp)
Description	This module facilitates attendants to learn on which are the digital tools and technologies that can use in order to create knowledge and to innovate processes and products. He/she will be able to engage individually and collectively in cognitive processing to understand and resolve conceptual problems and problem situations in digital environments.
Knowledge domain	• Existing and emerging technologies and tools for cultural organizations; • Creativity and creative practices; • Cultural challenges in cross – disciplinary collaborations.
Learning outcomes	• Identify two Information technology and creative practices (ITCP). • Outline the meaning of Cultural Informatics. • Present two examples of creative digital media. • Indicate three challenges in cross –disciplinary collaborations. • Select five ITCP Technologies used in museums. • Describe two different types of virtual museums. • Choose two examples of digital communication technology in culture. • Find three mobile applications designed for museums.
Units	1. Creatively using digital technologies: an Introduction 2. Creative tools and digital Museums

Competence title	**Developing digital content**
Type	Digital (DigComp)
Description	This module facilitates attendants to develop skills useful to create and edit digital content in different formats to express concepts, ideas and thoughts through digital means. It also helps attendants in understanding the appropriate formats depending on the content and the museum context.
Knowledge domain	Digital content development
Learning outcomes	• Recognize at least 3 sections of a webpage • Describe at least 2 ways of communications through social media channels • Associate the information from a list in at least 3 web pages • Schedule the actions to take to create a video • Evaluate at least 3 different type of visuals
Units	1. Formats and communication channels for museums 2. Design and develop multimedia content for social media communication

Competence title	**Collaborating through digital technologies**
Type	Digital (DigComp)
Description	The module will introduce learners to technologies and digital tools for collaborative processes and for co-creation and development of resources and knowledge. The module will also describe the human approach towards the collaboration as an action and as a value in order to evaluate risks and common behaviors related to the topic.
Knowledge domain	• Cognitive and emotional considerations about human collaboration; • Digital tools for sharing, co-creating and managing resources and projects.
Learning outcomes	• Outline at least 3 digital tools for collaborating • Identify at least 2 typical human behavior while collaborating within a team • Indicate at least 1 technique to promote collaboration within a museum • Choose at least 2 appropriate features depending on the prefixed digital need
Units	1. How to collaborate within a Museum 2. Digital tools to collaborate within a team

Competence title	**Protecting personal data and privacy**
Type	Digital (DigComp)
Description	This module facilitates attendants to learn on how to protect personal data and privacy in digital environments. Also, to understand how to use and share personally identifiable information while being able to protect oneself and others from damages. Moreover, the learners will able to apprehend that digital services use a "Privacy policy" to inform the user on how personal data is used. As well as guiding others, he/she can: • apply different ways to protect my personal data and privacy in digital environments, and • apply different specific ways to share my data while protecting myself and others from dangers. • explain privacy policy statements of how personal data is used in digital services.
Knowledge domain	Computer science
Learning outcomes	• Recognize the four different types of stakeholders in data protection • Identify the seven data protection principles according to GDPR • Describe the four data security domains • Describe the four data protection functional components • Recognize the eight rights of data subjects according to GDPR • Outline five fundamental steps of a generic data protection strategy • Explain the main distinctions of data privacy and data protection • Apply basic measures to harmonize their organization with the GDPR requirements • Choose appropriate actions to comply with data protection regulations in specific occasions
Units	1. Data privacy and protection fundamentals 2. Museums and data protection

5.1.3 Transferrable competences / 21st century skills

Competence title	**Leadership and change facilitator**
Type	Transferrable / 21st century skill
Description	Leadership skills can help us rethink the opportunities offered by digital technology to develop meaningful relationships with new and existing audiences. Why do we talk about leadership in a museum context today? How can museums lead change and innovation in ever-evolving digital society? What kind of leadership style best supports digital transformation in a museum? It is difficult to answer these questions but recent research suggests a more participative leadership approach best supports digital transformation in a museum. Yet, no one leadership style will fit every museum. The literature on leadership is rich and varied; the notions of leadership (and therefore the models in use) have changed over time especially in business literature. What leadership is taken to be is affected by what is happening in society, including social, technological, economic and political change. Without any claim to completeness, this module should be seen as an introduction to the concept. It surveys different resources concerning leadership, in particular, those linked to the museum sector and digital transformation. Given our premises, we restricted the field and selected what we found to be relevant to the outcomes of the Mu.SA research. There is no one-size-fits-all leadership model. Our aim with this module is to encourage you to think about the power of individual leadership and its relationship to organisational strength. We will also introduce Daniel Goleman's theories of **emotional intelligence**, which are relevant to some elements of leadership; those linked to a person's self awareness, how he/she relates to and understands others, how he/she manages themselves and manages relationships with others. This module contains 3 units. **Unit 1 Leadership theories for museums** explores recent leadership theories that best connect to the Mu.SA research findings. **Unit 2 Core skills for leadership and management** addresses the difference between leadership and management. **Unit 3 Storytelling for cultural leadership** introduces storytelling as an important skill for leaders. How do we define leadership in this module? ● Leadership is a skill that can be developed, it works anywhere in the building. But that doesn't mean everyone has the tools to be a leader. (Ackerson, Baldwin, 2014) ● Leadership is a behaviour that does not depend on the position a person holds within an organisation. ● Leadership is about creating the context for others to be

	brilliant (Wright, 2018). ● Leadership is a means to an end rather than the end itself. Two essential dimensions of cultural leadership are orientation to the future and its relationship to people. (Price, 2017). As the term 'change facilitation' also suggests, a topic linked to leadership is **organisational change**. By and large, by **organisational change** we mean the process by which any organisation changes its operational methods. As we will see, leadership skills are important in facilitating and leading organisational change when we talk about **digital transformation**, since, as Peacock argues, leadership skills can help to drive, seize and enable that change, by becoming not passive recipients **but active protagonists by stimulating the flow of conversation.** In that sense, leadership is about leading, embracing change, questioning our role and purpose in society as museum professionals, **why we exist, why we do what we do**. This is especially important for publicly funded museums. "There is no one organizational structure, business model, strategic blueprint, or leadership style that will fit every museum. The imperative is to define the museum – and the museum's value – as a set of evolving and meaningful relationships with its audiences, authorizers, and publics." (Semmel, 2012:267)
Knowledge domain	• Emerging leadership theories (in line with the Mu.SA research findings) • Leadership vs Management in cultural organisations and museums • Storytelling methodologies for leadership skills
Learning outcomes	• Identify the core components of the emotional intelligence model • Identify at least one case study in which effective, inclusive leadership initiated a digital transformation plan • Identify the main skills, values and competencies for leadership • Identify the main difference between management and leadership • Identify at least 3 characteristics of leadership • Recognise two different approaches to storytelling as relating to leadership • Identify at least 3 skills that storytelling can help you to build • Identify at least one storytelling technique for team building • Recognise 3 characteristics of inclusive leadership • Recognise at least 3 elements of recent leadership models • Choose at least one storytelling exercise to develop leadership skills

	• Formulate appropriate questions
Units	1. Leadership theories for museums 2. Core skills for leadership and management 3. Storytelling for cultural leadership

Competence title	**Creative thinking skills**
Type	Transferrable / 21st century skill
Description	This module will explore what is creative thinking, and how it can stimulate problem-solving in museum practice in an innovative way. It envisages learners to look and solve problems from different perspectives, thinking outside the box, meet new challenges and seek unusual solutions; use brainstorming, mind mapping, reframing, and envisioning the future.
Knowledge domain	Creative Thinking
Learning outcomes	• Identify at least three attributes of a creative thinker • Identify at least three facts that contradict popular perceptions of how creativity works • Indicate at least three strategies that stimulate creative thinking • Indicate two daily work situations creative thinking is a useful (or valuable) skill • Identify the most important outcome of creative thinking skills in museum work • Infer two of the most popular perception that limitate creative thinking
Units	1. What is creative thinking? 2. Creative thinking misunderstandings versus facts 3. Creative thinking matters for museum workforce

Competence title	**Team working**
Type	Transferrable / 21st century skill
Description	This module will present the basics on team working development, focusing on communication skills and team membership and belonging patterns for the museum sector. At the end, learners will be able to recognize the basics of team working dynamics and be aware of the importance of establishing an adequate communication in order to improve collaboration.
Knowledge domain	Personal development; Communication; Organizational behaviour.
Learning outcomes	• Identify the main characteristics of a working team.

	• Identify the key functional aspects of effective communication. • Identify at least three norms of a working team. • Identify the main characteristics of a working team. • Identify the different team roles. • Choose adequate communication skills in order to promote teamwork and collaboration. • Articulate different team rules and roles and the significance of these differences for team working functioning.
Units	1. Basics on team working 2. Team working functioning

Competence title	**Communication skills**
Type	Transferrable / 21st century skill
Description	This module will introduce learners to the complicated skill of communication as an effective and efficient way to convey information to the team, staff and audience. Typically this meaning of the term communication include other soft skills such as listening, nonverbal communication, clarity and concision, friendliness, confidence, empathy, open-mindedness, respect, feedback, and selection of the right medium.
Knowledge domain	• Information delivery; • Nonverbal communication; • Team Communication.
Learning outcomes	• Define five key elements of communication • Indicate two techniques to manage a conversation • Identify at least 3 elements of nonverbal communication • Identify at least 3 positive attitudes in a conversation • Interpret two body language signs • Interpret two feelings from a team conversation
Units	1. Communication between humans 2. Non-verbal communication 3. Team communication

Competence title	**Time management**
Type	Transferrable / 21st century skill
Description	This course module facilitates attendants to develop skills that are going to enable them to create structured time efficient plans, including the establishment of time scales and milestones, ensuring optimization of activities and resources within a given timeframe. Within this context the attendants will be able to define activities, responsibilities and identify critical milestones, reducing implementation costs through time

	utilization and minimization of time waste, without a reduction in quality. Through these, attendants will be able to deliver on time, on budget and in accordance with the original requirements, while enhancing monitoring skills.
Knowledge domain	The main example domains are the following: • Agile techniques for the development of software and other projects for museum and cultural organizations • Structured Project Management Methodologies for museum and cultural organizations • Time management optimization methods (e.g. lean management) for museum and cultural organizations • New emerging technologies in project management in specific time fragmentation techniques for museum and cultural organizations • Project fragmentation methodology, including approaches to define project steps and tools to set up action plans for museum and cultural organizations • Application of timeframes in SLAs in projects for museum and cultural organizations
Learning outcomes	• Understand time management in the digital era • Identify at least two (2) different time management Software applications • Define time scheduling and understand its different dimensions • Distinguish between cost and non-cost related time fractions in project implementation • Describe the nature of Milestones and time dependencies and typologies in your own words • Prepare a list of Tasks by time and priority • Prepare of a WBS • Create an automated Timesheet
Units	1. Understanding time 2. Modern Time Management Techniques 3. Task Scheduling Techniques 4. Time Management Applications

5.2 Specialization course

5.2.1 Digital competences (e-CF)

Competence title	**Product / Service planning**
Type	Digital (e-CF)
Description	This module will introduce learners to understand the functions and the goals of service design in museum contexts, giving them the basic tools to carry out the planning of a project.
Knowledge domain	• Project Management • Service Design
Learning outcomes	• Define the fundamental elements of Service Design • Define the fundamental elements of Project Management • Understand the lifecycle of a service/product • Understand the role of Stakeholders in Project Management • Apply a Project Plan • Apply a Network Planning • Apply a Project Execution • Create a Network Planning
Units	1. Service design and project management 2. Project management phases

Competence title	**Documentation production**
Type	Digital (e-CF)
Description	This module provides learners with information on how to produce documents describing products, services, components or applications to establish compliance with relevant documentation requirements. It facilitates learners to understand how to select appropriate style and media for presentation materials and create templates for document-management systems. It also describes appropriate ways to document functions and features, validate existing documents and keep them up to date.
Knowledge domain	• Information science • Document production and maintenance • Document management and control • Document management systems • Museum documentation
Learning outcomes	• Outline the two major achievements of a good documentation • Describe four skills of a documentation specialist • Choose appropriate documentation components to address specific needs

	• Apply two writing style guidelines for good documentation • Identify three types of document quality standards • Recognize the two main documentation types • Explain what each of the document production phases performs • Define process documentation • Describe the four process documentation types • Distinguish between user and system documentation • Describe the purpose of a product requirements document • Describe the three main processes when documenting heritage collections • Identify two broad information categories to describe an object of a heritage collection • Explain the two things documentation in museums focuses on • Document a museum object using the Artifacts Canada Data Dictionary
Units	1. Introduction to documentation 2. Document quality and production 3. Process and product documentation 4. Museum documentation

Competence title	**Service delivery**
Type	Digital (e-CF)
Description	According to eCF terminology, "Service Delivery" enables personnel to deliver a service in accordance with established service level agreements (SLA's). The personnel takes proactive actions to ensure stable and secure applications and ICT infrastructure to avoid potential service disruptions, attending to capacity planning and to information security. They update operational document library and logs all service incidents. Maintains monitoring and management tools (i.e. scripts, procedures), maintain IS services and take proactive measures to ensure service continuity.
Knowledge domain	Service Operation
Learning outcomes	• To enumerate the main concepts of service management; • To describe the main concepts of knowledge management; • To define the main concepts of change management; • To present and use codelines and baselines; • To recall what an event, even types and event management process; • To define incidents and incident management process; • To describe user access management and key concepts related;

	• To list common operating activities; • To understand ITIL lifecycle; • To explain main processes of service transition; • To explain main processes of service operation; • To recognize main processes of SLAs; • To understand the main concepts of configuration management; • To describe the basic concepts of release management; • To explain what an event, even types and event management process; • To describe incidents and incident management process; • To define user access management and key concepts related; • To recognize common operating activities; • To understand Software operation as a service in Cloud environments; • To comprehend key concepts of DevOps methodology • To use a change request form; • To analyse a system's version tree;
Units	1. Introduction to IT Service Management 2. Service transition 3. Service operation 4. Advanced service delivery approaches

Competence title	**Information and knowledge management**
Type	Digital (e-CF)
Description	Identifies and manages structured and unstructured information and considers information distribution policies. Creates information structure to enable exploitation and optimisation of information. Understands appropriate tools to be deployed to create, extract, maintain, renew and propagate business knowledge in order to capitalise from the information asset.
Knowledge domain	Information and Knowledge Management
Learning outcomes	• Implement queries for finding paintings of an artist • Implement queries for counting Objects in a museum • Implement queries for counting nationality or gender of artists • Graph plots for culture or technique in a collection • Display the most visited museums in the world or in a country • Implement queries for counting portrait painting works per artist or per country of origin • Categorize the artworks of each artist • Categorize the material used in artists works • Categorize the movements in a collection or in artworks generally • Categorize the type of museums

	• Categorize the genre in artworks • Organize the Eurostat museum data for plotting information about museums per country or per city • Generate the locations of archaeological sites of a county • Generate the distribution of public art by place • Check the genre or depicted entities or material used or locations of an artist works • Generate a map with the museums of the world or a map with the museums/ archaeological sites of a specific country • Produce timelines with paintings produced per year by an artist • Produce recommendations for the top museums for each user • Produce timelines with museums creation in a country • Produce a map with monuments and other heritage items located around our location
Units	1. Information management for artworks and artists from Museum Github 2. Extracting knowledge from Linked data of museums 3. Extracting knowledge from Linked data of artworks and artists 4. Extracting knowledge from Eurostat Museum data and constructing a Museum recommendation system

Competence title	**Problem management**
Type	Digital (e-CF)
Description	This module provides learners with information on how to identify and resolve the root cause of incidents. It also describes how to take a proactive approach to avoidance or identification of root cause of ICT problems and deploy a knowledge system based on recurrence of common errors. It discusses incident resolving and escalation, as well as system optimization and component performance.
Knowledge domain	• IT Service management • Service Operation
Learning outcomes	• Recall the definitions of the key concepts of IT service management • Name the service lifecycle stages • Identify the types of problem management • Outline the main types of data a typical problem record includes • Identify the basic factors problem prioritization is based on • Explain what problem management means • Distinguish problem management from incident management

	• Recognize the outcomes of problem management • Describe the problem management phases • Indicate where workarounds are documented • Explain the main target of root cause analysis • Perform problem analysis using the Kepner-Tregoe method • Choose the most appropriate problem analysis technique in particular circumstances
Units	1. IT service management 2. Incident and problem management 3. The problem management process flow 4. Problem analysis

Competence title	**Purchasing**
Type	Digital (e-CF)
Description	The objective of this module is to deliver comprehensive knowledge that covers theoretical aspects, modern methods and good practices in the subject of Procurement, using established models (e.g. ITIL) and guidelines issued by the EU and international organizations. Trends like Green/Sustainable Procurement and topics like ICT procurement are also discussed, in view of successfully implementing the museums' "Digital Strategy" concept.
Knowledge domain	Procurement
Learning outcomes	• List the 4 basic principles of procurement • Name the 5 basic procurement stages according to ITIL • Describe the procurement process/cycle • Name the 6 procurement procedures available • Define the requirements (technical and other) of a contract • Name the 5 stages of bid evaluation • Define the basic structure of a contract • Identify Green and ICT procurement issues • Differentiate between purchasing and procurement • Apply contract award methods • Debate on "make, lease or buy" options • Establish tenderer evaluation criteria • Formulate contract performance clauses • Evaluate contract performance • Appraise good practices paradigms in ICT procurement • Identify and evaluate the risk factors involved in the procurement process
Units	1. The Procurement Process 2. Contract Requirements Selection 3. Supplier Evaluation 4. Contract Awarding and Management 5. Issues on Green/Sustainable and ICT procurement

Competence title	**Risk management**
Type	Digital (e-CF)
Description	This module provides learners with information on how to identify and analyses risks, how to assess their impact. It also describes how categorize risks according to their severity and trace the causes that produce the risks.
Knowledge domain	Project and Operations management.
Learning outcomes	• Recall the definitions of the key concepts of Risk Management • Identify the types of risks • Outline the main types of information a typical risk mitigation plan includes • Identify the basic factors risk analysis is based upon • Explain what risk management means • Distinguish quality from quantity risk categorization • Recognize the outcomes of risk mitigation • Describe the risk categorization phases • Indicate how risks are documented • Explain the main goals of cause and cause and effect analysis • Perform risk categorization using the Pareto Analysis • Perform cause and effect analysis using the Ishikawa diagram • Choose the most appropriate risk analysis techniques in particular circumstances
Units	1. Introduction to Risk Management 2. Risk identification and monitoring 3. Risk prioritization 4. Risk cause analysis

5.2.2 Digital Competences (DigComp)

Competence title	**Identifying digital competences gaps**
Type	Digital (DigComp)
Description	This module facilitates attendants to understand where one's own digital competence needs to be improved or updated. Also, it enables them to support others with their digital competence development. Moreover, it helps learners seek opportunities for self-development and to keep up-to-date with the digital evolution.
Knowledge domain	Digital competence
Learning outcomes	• List the five areas of digital competence according to the DigComp • Name the two components of e-learning • Describe three ways that e-learning is delivered • Recognize three benefits of e-learning • Describe what digital competence stands for • Demonstrate digital competence gaps through online tools • Choose appropriate e-learning solutions for self-development
Units	1. Identifying digital competence gap 2. e-learning

Competence title	**Protecting personal data and privacy**
Type	Digital (DigComp)
Description	The module emphasizes how the General Data Protection Regulation (GDPR) as well as other privacy policy frameworks will give citizens more control over their personal data and how museums and cultural organizations will ensure that personal data is managed in full compliance with legislative requirements and regulations. Data collection, storing and processing should enhance security, ensure consistency and make the practices easy for users to understand. Authoritative and advisory bodies have been set up to safeguard that data practices should meet the reasonable expectations of users and to uphold information rights in the public interest.
Knowledge domain	• Data Protection • Data Security • Information auditing • Personal Data
Learning outcomes	• Understand privacy policies and data protection regulation • Identify principles, rights and obligations in reference

	with a cultural organization approach to privacy issues and processing personal data • Define the appropriate technical and organisational measures to meet the requirements of accountability and to demonstrate the organization compliance with GDPR • Distinguish between exercising overall control of the purpose and means of the data processing and making technical decisions about data processing and administration • Describe the role and responsibilities of data controllers and processors in relation to the personal data the organization is holding • Create a set of indicators as to whether you are a controller, a processor or a joint controller in relation to the personal data the organization is holding • Prepare your organization detailed privacy notice in relation to information collected about visitors • Undertake information audit on what data (and the types of personal data) the organization holds. • Classify GDPR obligations to be applied to the organization in relation to personal data • Decide when a Data Protection Impact Assessment (DPIA) is required.
Units	1. An introduction to the regulatory landscape of data privacy 2. Compliance Framework for Cultural Organisations 3. Performing an internal audit process

Competence title	**Managing digital identity**
Type	Digital (DigComp)
Description	Digital identity can mean many things and can be approached from many perspectives. For instance, it can be related to security and protection issues from the individual or institutional standpoint. In this module we will rather focus on museums digital identity from the perspective of reputation, how to build and maintain it, and in that context how to deal with the data that museums produce in the digital environment.
Knowledge domain	• Museums digital identity • Communication • Reputation • Digital strategy
Learning outcomes	• Indicate what is digital reputation • Indicate at least two steps that can hep build and maintain your museum digital reputation • Identify the most important outcome of building and maintaining your museum digital reputation

	• Analyse TripAdvisor reviews about a museum
Units	1. Building and maintaining your museum digital reputation

Competence title	**Copyright and licenses**
Type	Digital (DigComp)
Description	The publication of digital content requires a lot of attention and caution. We have to ask ourselves several questions: What kind of rules do I need to know to respect content copyright (e.g. images or other formats) and privacy issues when publishing it? Are there laws for publication for educational, informative purposes? If I want to allow users to use, disclose or modify contents from my website which licenses should I insert? And if as a museum professional I want to release images under a free license, how can I do it? If I collect information from online users, do I have to apply for an authorization? Does my museum have a privacy policy? Every professional must ask these questions when collecting data or sharing digital content on a website, a database, social media or other online platforms. Understanding copyright and licenses is a complex issue but a very important topic in museums. In this module you will learn basic notions that can be useful, including terminology, useful links to learn more and practical exercises.
Knowledge domain	• Copyright and licenses • Copyright and licenses - terminology
Learning outcomes	• Identify in the hub site if there are, and where are the terms of use and the policies • Examine the presence and type of information of the online captions of the images of the museum site
Units	1. Copyright and Licenses

Competence title	**Programming**
Type	Digital (DigComp)
Description	This module will introduce learners to programming. They will learn the very basis of computer language and the most famous languages for website development.
Knowledge domain	• Computer programming • Most used languages for web development
Learning outcomes	• Identify the fundamentals of programming • Explain the main difference between client and server side • Use 3 elements of CSS to do specific things in more

	than one HTML page • Illustrate the 5 basic elements of an HTML page structure
Units	1. How computers receive and elaborate information 2. Most used languages for web development

Competence title	**Solving technical problems**
Type	Digital (DigComp)
Description	This module will present the basic concepts regarding solving technical problems with a focus on museum and respective audience needs, detailing methods and tools such as the root cause analysis or the problem tree analysis. It will also present potential technical problems with related causes, consequences and possible actions. At the end, learners will be able to address a problem in a systematic way using concepts and tools relevant to the subject.
Knowledge domain	• Problem solving • Technical problems
Learning outcomes	• Describe principles and concepts of problem solving; • Identify different methods and tools that could be used to problem solving; • Explain the different problem solving methods and techniques; • Identify the typical problems; • Identify different approaches to solve a problem; • Identify problem, causes, consequences and actions • Employ the different problem solving methods and techniques; • Construct a problem tree; • Create a problem tree scheme; • Evaluate the relevance of a problem and respective causes and consequences;
Units	1. Problem solving 2. Technical Problems

5.2.3 Transferrable / 21st century skills

Competence title	**Management skills**
Type	Transferrable / 21st century skill
Description	This module will introduce learners to three interrelated management skills: planning, decision-making, and communication. These skills will be considered in the context of a museum digital strategy and analyzed from a global and a more specific point of view, addressing the role of the Digital Collections Curator and the Online Community Manager.
Knowledge domain	The main example domains are: • Management skills; • Planning, communication, cooperation within the museum; • Digital strategy in museums.
Learning outcomes	• Define two current actions of a digital strategy according to the interview • Indicate two possibilities for people who use the Rijksstudio platform • Apply three principles of the digital strategy explored with Inspiring People project • Analyze one of the possibilities offered by digital experience at Tate Modern gallery • Decide the main steps for the creation of a digital collection
Units	1. Approaching digital strategy in museums 2. Digital strategy: from the vision to the application

Competence title	**Influence / persuasion skills**
Type	Transferrable / 21st century skill
Description	Never the term "Influence", or the words derived from it, as "influencer", has been used as it is today, without, however, clearly understanding of what it refers to. Note that the use of influence and persuasion in museums must always respect the characteristics of this institution, calling for constant use in accordance with well-defined ethical principles.
Knowledge domain	• 21st century competencies • Communication
Learning outcomes	• Identify three principles of influence/persuasion • Indicate three strategies that stimulate influence • Indicate two daily work situations where persuasion is a useful and a valuable skill • Identify the most important outcome of influence and persuasion skills in museum work

Units	1. Influence, persuasion: meanings and limits 2. Influence, persuasion and museums

Competence title	**Mentoring / coaching skills**
Type	Transferrable / 21st century skill
Description	This module will introduce participants to the concept, techniques and benefits of mentoring and coaching as tools for professional and personal development, with the focus on people working in the arts sector. While mentoring is a powerful tool for developing personal qualities and obtaining new skills, coaching is largely understood as a tool for improvement of professional performances in order to achieve addressed goals. Similarities and differences between mentoring and coaching are the subjects explored in this course. In this regard, the scope of this course is to help learners understand the benefits of the mentoring or coaching partnership, to identify the key soft skills that can be triggered as well as to be familiarized with the practical application of both concepts in many fields of work.
Knowledge domain	• Soft skills for the arts (museum) sector • Mentoring and coaching for the creative sector • Tools for professional and personal development
Learning outcomes	• Describe what mentoring is in 10 words • Describe the coaching relationship in 10 words • Recognize differences and similarities between mentoring and coaching • Identify 1 specific moment when you were 'mentorable' • Identify at least 5 traits of a great mentor • Identify at least 5 traits of a successful coach • Illustrate a mentoring programme for your existing or ideal work place. • Identify 3 soft skills that a mentee can develop through a mentoring relationship • Evaluate 3 benefits of being in a mentoring programme both for the mentor and the mentee
Units	1. What are mentoring and coaching and why do they matter for museum professionals? 2. Mentoring stories: programmes and cases throughout the arts (museum) sector

Competence title	**Decision making**
Type	Transferrable / 21st century skill
Description	This module will introduce learners to the knowledge of the decision-making field from a general point of view to a specific perspective. Starting with the meaning of the principle terms linked to the topic we will explore the main theories of decision-making. Concerning the application of this skill in museums, we will suggest some steps to follow to lead decisions for the better and we will show how data analysis can be useful.
Knowledge domain	The main example domains are: • Terms and definitions; • Theories; • Approaches and dynamics; • Barriers and solutions in the museum context; • The data analysis applied in a real case study.
Learning outcomes	• Define the dynamics of decision-making in groups; • Indicate two decision-making theories; • Apply an analytic approach; • Arrange the data analysis. • Evaluate the application of the data analysis introducing two initiatives
Units	1. A guide to survive 2. Actions in the museum context

Competence title	**Sense of initiative and entrepreneurship**
Type	Transferrable / 21st century skill
Description	The overall objective of this module is to familiarize learners with the concept and tenets of entrepreneurship, focusing on what it is, why it is relevant for Museum professionals, when it is applied or not and how to do it in practice. Entrepreneurship is interpreted as a transversal competence, necessary for every professional working in a changing and open work environment. Based on the Entrepreneurial Competence Framework learners will know that entrepreneurship goes beyond the narrow understanding of setting up business; they will learn that entrepreneurship supports individuals, not only in their everyday lives at home and in society, but also in the workplace in being aware of the context of their work and being able to seize opportunities, to turn ideas into action and be able to start value-creating initiatives at work.
Knowledge domain	• Soft skills for the arts (museum) sector

	• Entrepreneurial competences for the creative sector • Creativity • Digital entrepreneurship for the creative sector
Learning outcomes	• Know the meaning of sense of initiative and entrepreneurship within the lifelong learning framework. • Describe the broad concept of entrepreneurship for the cultural sector in 10 words. • Identify three characteristics of museum entrepreneurship. • Recognize similarities and differences between entrepreneurship for profit and nonprofit organizations. • Summarize the rationale and scope of the Entrepreneurship Competence Framework. • Evaluate from the 15 competences of the Entrecomp the most suitable according to their needs for professional and personal development. • Analyze at least 3 competences from each of the areas of the EntreComp (in total 9 competences). • Manage their resilience at their work environment. • Apply evidence based approaches for improving their entrepreneurship competences. • Identify the main characteristics of digital entrepreneurship • Combine digital and entrepreneurial competences for the cultural sector
Units	1. The Sense of Initiative and Entrepreneurship as key competence for Museum professionals 2. Enhancing Entrepreneurial Competencies within EntreComp 3. Towards Digital Museum entrepreneurship

Competence title	**Interpersonal skills**
Type	Transferrable / 21st century skill
Description	This unit will describe the complexity of interpersonal skills definition, and will help to find ways to develop one of the most required competences of the 21st century
Knowledge domain	• 21st century Competencies • Communication
Learning outcomes	• Identify two main types of interpersonal skills • Indicate three strategies that develop interpersonal skills • Indicate two online work attitudes you must have online, according to best practices of your interpersonal skills
Units	1. Interpersonal skills definition and development

Competence title	**Networking skills**
Type	Transferrable / 21st century skill
Description	In our modern society, it has become necessary and indeed urgent for museums to redefine their missions, their goals, their functions and their strategies to reflect the expectations of a changing world. This module intends to introduce participants to importance for museums to network to reach a wider audience and face easier the digital challenges. Personnel development through (international) networking is a necessary approach in sharing the pending problems that museums face in common.
Knowledge domain	• Networking for museums –an oversight • Interview to one of the representative of NEMO. The Network of European Museum organization • Networking for museums –Practical tools, how to network
Learning outcomes	• To illustrate networking in the cultural sector, specifically in museums, as a means of audience engagement • To examine networking for museums as a means of digital development • To construct a professional network.
Units	1. Networking for museums –an oversight 2. Networking practical tools

Competence title	**Active listening skills**
Type	Transferrable / 21st century skill
Description	Active listening is an enhanced, active state of listening. Most of the people consider listening as a passive activity. Something that we can do while we are doing something else. It requires effort, self-awareness, and practice. It is a powerful tool, because it helps to understand more efficiently the issues that you are tackling and also helps you to communicate better inside of your team, with other departments and with external stakeholders.
Knowledge domain	• Active listening • Active listening as a Psychophysiological process • Communication • Empathic listening
Learning outcomes	• Describe at least 1 element of active listening • Differentiate between active and passive listening • Describe one methodology to creatively listening to your audiences

	• Discover the principle of Imitative decoding • Illustrate the principle of active empathic listening • Illustrate one reason why how active listening can diffuse conflict in workplaces • Identify 1 element of "non-functional" listening • Experiment active listening within the workplace
Units	1. Active Listening: what is it and how to practice it 2. How to listen creatively to your audiences

Competence title	**Mediation skills**
Type	Transferrable / 21st century skill
Description	This module will present the basics on mediation skills, focusing on the work of museum mediation; At the end, learners will be able to recognize digital technologies in mediation context and identify general principles for use of social media.
Knowledge domain	• Mediation; • Digital technologies; • Social Media; • Social Networking
Learning outcomes	• Identify the main characteristics of mediation. • Identify the mediation mission in museums about digital collections. • Identify the role of mediation using social media and social networking in museums • Identify the main activities of the mediator using social networks.
Units	1. Mediation Skills 2. Digital mediation in museum communication

5.3 Indicative work-based learning activities

WBL activity	**Provide copyright information and protection of digital cultural property in accordance with international standards.**
Hours	100 – 150 hours
Description	Undertake the implementation and monitoring of the copyright service of the museum. Process the requests that various interested parties (researchers, schools, creative industries, artists etc.) address to the museum to use digital material. Assess and update the museum's policy on accessibility and use of collections. Make a report of the requests analysing users' profile and needs. Introduce this data in the objects' records in the Content Management System that the museum currently uses.
Learning outcomes	• Explain the main distinctions of data privacy and data protection • Choose appropriate actions to comply with data protection regulations in specific occasions • Apply basic measures to harmonize their organization with the GDPR requirements • Decide when a Data Protection Impact Assessment (DPIA) is required • Identify in the hub site if there are, and where are the terms of use and the policies.

WBL activity	**Oversee the implementation of cataloging / archiving standards.**
Hours	50 – 100 hours
Description	Identify and assess the cataloging standards of a specific museum collection. Undertake the task of checking if these standards are met for the specific collection. Make a list of possible gaps and create a brief report with suggestions that will help museum to plan and implement improvements.
Learning outcomes	• Develop a museum policy on data usage and extraction (set rules and goals compatible with targets and legislation) • Identify capacity-building on open source applications and tools for digital content and information management and analysis • Apply effective management of data, information and digital content of museum sector • Indicate the best strategy in searching data resources • Document a museum object using the Artifacts Canada Data Dictionary • To understand Software operation as a service in Cloud

	environments • Implement queries for counting portrait painting works per artist or per country of origin • Categorize the artworks of each artist.

WBL activity	**Produce metadata according to recognized international standards.**
Hours	100 – 200 hours
Description	You may be assigned to work on a specific number of objects in a collection. Contribute to the digitization and documentation of these objects according to international standards. Your work on managing digital files, producing metadata and annotating objects should also take into account museum's priorities on collection management and exhibition planning.
Learning outcomes	• Define data, information, digital content, metadata • Use effective methods of retrieving information • Indicate the best strategy in searching data resources.

WBL activity	**Collaborate with other departments and manage projects involving digital material enhancement.**
Hours	100 – 200 hours
Description	In collaboration with other staff, you contribute to the creation of online exhibitions based on the museum's digital collections and/or current events. You could present to the team a specific methodology for developing the online exhibition and undertake the management of the process. Create the storyboard of the online exhibition based on specific objects and their interpretation. Collect and manage the necessary digital material included in the storyboard, and then properly process it to the developers of the online exhibition.
Learning outcomes	• Choose an effective communication strategy considering the context and regarding the audience and the digital environment • Choose two examples of digital communication technology in culture • Indicate three challenges in cross –disciplinary collaborations • Indicate at least 1 technique to promote collaboration within a museum • Sketch the business relationship management framework using the "House of BRM" approach • Identify the most important outcome of influence and persuasion skills in museum work • Evaluate the application of the data analysis introducing

	two initiatives • To construct a professional network.

WBL activity	**Oversee the safety of digital materials.**
Hours	40 – 80 hours
Description	Contribute to the creation and use of a monitoring system that will support day-to-day supervision of the safety of digital access (backups, storage and retrieval operations etc.).
Learning outcomes	• Illustrate the development of ICT strategy and policy, including ICT security and quality • Estimate the risk of data loss or corruption • Utilize effective methods of preservation of digital content • Outline five fundamental steps of a generic data protection strategy • Describe the components of monitoring and reviewing process on ISO 27001 • Choose the most appropriate risk analysis techniques in particular circumstances.

WBL activity	**Develop projects in collaboration with other departments to improve the digital collection.**
Hours	100 – 200 hours
Description	Evaluate current accessibility and use of museum's collections by disabled people both online and onsite. Create a report of the situation (current services and possible gaps) and provide an action plan for improvements. Create sample material based on the collection documentation that could be used to enhance accessibility by these target groups (e.g. descriptive texts, audio/video interpretation, practical information on spatial orientation etc.).
Learning outcomes	• Articulate different team rules and roles and the significance of these differences for team working functioning • Indicate at least three strategies that stimulate creative thinking • Apply a Network Planning • Indicate at least two steps that can hep build and maintain your museum digital reputation • To examine networking for museums as a means of digital development • Identify the mediation mission in museums about digital collections.

5.4 Competence handbooks