

## **R3.1 – Curricula EFA Modular**

### **Hellenic Open University**



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.

Pacote de trabalho:	3
Tipo:	Documento
Nível de disseminação:	Público
Versão:	Final
Data de entrega:	Abril 2020
Palavras-chave:	competências, curricula, EFV (educação e formação vocacional), quatro perfis profissionais, especialização
Resumo:	<p>Neste documento denominado “Curricula EFV Modular” os quatro (4) curricula são descritos, cada um necessário a um perfil profissional. No projeto <i>Mu.SA – Museum Sector Alliance</i>, a investigação resultou em quatro perfis profissionais emergentes: <b>Gestor da Estratégia Digital, Curador de Coleções Digitais, Developer de Experiências Interativas Digitais e Gestor de Comunidades Online</b> que foram atualizados e revistos de acordo com as necessidades dos profissionais dos museus. Como resultado foram criados quatro curricula profissionais com conjuntos de competências de forma a responder às necessidades de um perfil específico no setor dos museus.</p>
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## Resumo

Neste documento denominado “Currícula EFV Modular” os quatro (4) currícula são descritos, cada um necessário a um perfil profissional. No projeto *Mu.SA – Museum Sector Alliance*, a investigação resultou em quatro perfis profissionais emergentes: **Gestor da Estratégia Digital, Curador de Coleções Digitais, Developer de Experiências Interativas Digitais** e **Gestor de Comunidades Online** que foram atualizados e revistos de acordo com as necessidades dos profissionais dos museus. Como resultado foram criados quatro currícula profissionais com conjuntos de competências de forma a responder às necessidades de um perfil específico no setor dos museus.

## 1 Introdução

Educação e formação profissionais estão entre os pilares do setor dos museus, sendo necessário ao setor desenvolver soluções inovadoras e criativas (ICTOP, 2011). Os atuais processos de integração tecnológica no mercado de trabalho substituem as ferramentas de TIC em tarefas, projetos e feitos do dia-a-dia e isso mudou a forma como os profissionais de museus encontram o seu trabalho – atividades da vida dos museus e de outras organizações culturais.

Há uma mudança no sentido das abordagens modulares na implementação de currícula. Essa abordagem ganhou uma atenção especial nos sistemas de educação da maioria dos países, em particular na educação e formação vocacional e no ensino superior (Malik, 2012). A abordagem modular é uma tendência emergente no pensamento sobre a educação que muda o método de instrução tradicional para um paradigma de aprendizagem baseado nos resultados. A modularização é baseada no princípio da divisão do currículo em unidades ou módulos discretos pequenos, que são independentes, não-sequenciais e tipicamente curtos em duração. Uma abordagem modular à aprendizagem permite ao aprendente ter controlo sobre a sua aprendizagem e aceitar maior responsabilidade pela aprendizagem (Dejene, 2019).

O ensino modular preocupa-se com cada aprendente enquanto indivíduo com sua própria aptidão e interesse especial, com o objetivo de ajudar cada aluno a pensar por si próprio, e permitir a individualidade de cada aprendente. O foco deve ser colocado em alunos com habilidades únicas, aspirações e experiências influentes e, novamente para fornecer educação de qualidade, o tutor deve personalizar e individualizar o programa de ensino. Criatividade, flexibilidade e aprendizagem ao longo da vida são requisitos necessários para ter sucesso no mundo real.

Além disso, Rushton (2005) enfatizou que a avaliação contínua melhora uma aprendizagem profunda se houver bastante feedback e em intervalos regulares, e se todas as avaliações tiverem critérios de avaliação claros e previamente conhecidos dos alunos. Quando se combina uma avaliação frequente com feedback regular, isso irá melhorar a aprendizagem dos alunos (Rushton, 2005). Procedimentos de avaliação bem desenvolvidos definem



expectativas claras, estabelecem uma carga de trabalho razoável e dão oportunidades aos alunos para se auto monitorizarem, ensaiarem, praticarem e receberem feedback. Os resultados de aprendizagem indicados nos módulos devem ser avaliados usando procedimentos de avaliação aplicáveis e apropriados para que os resultados forneçam evidências de domínio dos resultados de aprendizagem desejados.

Como em qualquer outro setor público ou privado, o setor dos museus necessita de investir na educação contínua do tecido laboral. Com as mudanças demográficas, evoluções rápidas na tecnologia e na comunicação e a necessidade de sustentabilidade, é fundamental para os museus atualizar continuamente o conjunto de habilidades das suas equipas e otimizar os recursos disponíveis para atingir esse objetivo. No entanto, essa necessidade mais crítica muitas vezes é comprometida pela escassez de recursos, deixando os museus para continuar o trabalho sem serem capazes de desenvolver todo o seu potencial (Gangopadhyay, 2017).

## 2 O caminho para os currícula EFV do Mu.SA

### 2.1 Introdução ao desenvolvimento de currícula EFV

O currículo é cada vez mais visto por agentes do setor como uma estrutura dinâmica que guia os processos de ensino e aprendizagem e como um mecanismo que orienta para a qualidade. É mencionado nos principais documentos de políticas europeias como um novo pilar contribuinte para a Europa 2020, a estratégia europeia para um crescimento inteligente, sustentável e inclusivo. Os resultados da pesquisa empírica reconhecem amplamente que a relevância do currículo é uma condição imprescindível para melhorar o potencial de capital humano de indivíduos formados em educação e formação, e também para reter os alunos nos sistemas de educação e formação. A irrelevância endémica do currículo pode ser um dos maiores obstáculos para combinar com sucesso a oferta de educação e formação às necessidades do aprendente e do mercado de trabalho.

A adoção de uma abordagem de resultados de aprendizagem ao desenvolver currículos, valorizando o que um aprendente sabe, entende e é capaz de fazer no final de um processo de aprendizagem – independentemente de como, quando e onde essa aprendizagem ocorre – é vista por muitos países europeus como uma forma eficaz de evitar potenciais incompatibilidades e promover a aprendizagem ativa e o ensino inclusivo (Cedefop, 2010).

Para capacitar os indivíduos a desenvolver seus próprios percursos de aprendizagem, possibilidades de validação e reconhecimento de vários tipos de aprendizagem em várias etapas, assim como orientação ao longo da vida, são oferecidas em mais sistemas nacionais. O desenvolvimento de quadros nacionais de qualificações com base nos resultados da aprendizagem, para criar contextos favoráveis à concretização dessas possibilidades, continua a provar que a educação e a formação continuam a ser uma prioridade importante, mesmo em períodos de recessão económica (Cedefop, 2010).

Vários fatores influenciam os diferentes caminhos de mudança dos subsistemas de educação. Os dois argumentos mais comumente mencionados para a introdução de resultados de



aprendizagem nos currículos, são a relação mais estreita entre os requisitos de emprego e a oferta de formação e a necessidade de implementar ferramentas da UE, como o Quadro Europeu de Qualificações (QEQ). Desenvolvimentos políticos europeus endossados com a Recomendação do Parlamento Europeu e do Conselho sobre competências-chave para a aprendizagem ao longo da vida (2006)<sup>1</sup> – definindo oito competências-chave que todos os jovens devem desenvolver no final da sua educação inicial a um nível que os prepare para aprender mais e trabalhar ao longo da vida – também se tornaram motores importantes para reformas curriculares na escolaridade obrigatória (Leney et al., 2009).

A diversidade de uso e compreensão do termo 'resultados de aprendizagem' por toda a Europa, discutida por exemplo por Winterton (em Cedefop; Winterton et al., 2006) e Cedefop (2009a), tornou necessário usar a definição do QEQ como ponto de partida para comparar características específicas dos resultados de aprendizagem nacionais no quadro de aprendizagem do país.

No QEQ, os resultados de aprendizagem são definidos como "declarações do que um aluno sabe, entende e é capaz de fazer após a conclusão de um processo de aprendizagem".

As ferramentas europeias comuns desenvolvidas no âmbito do processo de Copenhaga, incluindo o quadro europeu de qualificações (QEQ) e o sistema europeu de créditos para o EFV (ECVET), utilizam os resultados da aprendizagem como um mecanismo chave para atingir o objetivo de 'transparência, comparabilidade, transferibilidade e reconhecimento de competências e/ou qualificações, entre diferentes países e em diferentes níveis' (Declaração de Copenhague, 29-30 de novembro de 2002).

Uma diferença simples, mas significativa entre resultados de aprendizagem e competências pode ser encontrada na compreensão do QEQ. De acordo com Markowitsch e Luomi-Messerer (2008, p. 41) os resultados da aprendizagem são mais abrangentes do que as competências e, portanto, o termo 'resultado da aprendizagem' pode ser usado como um termo genérico para competência, enquanto o inverso não é o caso. Competência, neste contexto, refere-se ao desempenho em uma determinada situação, ou seja, à capacidade de usar conhecimentos e habilidades de forma adequada. De acordo com esse entendimento, competência pode ser definida como resultados de aprendizagem contextualizados (Cedefop, 2009e, p. 6).

O Cedefop distingue o termo programa de aprendizagem do termo currículo: 'O programa de aprendizagem é um documento escrito que planifica experiências de aprendizagem num ambiente de aprendizagem específico. É desenvolvido com base no currículo e tem em consideração as necessidades dos alunos' (Cedefop, 2010a, p. 27). O desenvolvimento do currículo refere-se aos processos pelos quais os documentos do currículo são criados e depois implementados.

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<sup>1</sup> As oito competências essenciais definidas no quadro europeu são: (1) Comunicação na língua materna; (2) Comunicação em línguas estrangeiras; (3) Competência matemática e competências básicas em ciência e tecnologia; (4) Competência digital; (5) Aprender a aprender; (6) Competências sociais e cívicas; (7) Sentido de iniciativa e empreendedorismo; (8) Sensibilização e expressão cultural (Comissão Europeia, 2006).

A mudança para os resultados de aprendizagem (Cedefop 2009a) define as diferentes formas de utilização dos resultados de aprendizagem. Em particular, eles são usados em vários níveis para:

- a) Caracterizar (a nível sistémico) os objetivos gerais de educação e formação;
- b) Expressar os requisitos ou padrões estabelecidos pelas qualificações;
- c) Clarificar as intenções dos currículos e programas de aprendizagem.

Para além disso, dependendo do nível em que são usados, os resultados de aprendizagem são usados para uma variedade de propósitos:

- a) para reconhecer a aprendizagem anterior;
- b) para conceder crédito;
- c) para garantir a qualidade;
- d) para melhorar a credibilidade;
- e) para aumentar a transparência (Cedefop 2009a, p. 10).

A característica distintiva das abordagens de resultados de aprendizagem é que o currículo é descrito em função do que o aluno será capaz de fazer no final de seu curso, e não em termos de objetivos, processos, conhecimento ou outros elementos curriculares tradicionais (Cedefop, 2010a; Werquin, 2012).

No QEQ, 'resultados de aprendizagem' são definidos como declarações do que um aluno sabe, entende e é capaz de fazer ao concluir um processo de aprendizagem, que são definidos como conhecimentos, habilidades e competências (Parlamento Europeu e Conselho da UE, 2008). Nesta definição, 'competência' é entendida como uma capacidade especial que não é totalmente formulada como conhecimento ou habilidade. 'Competência', neste sentido, refere-se a autonomia e responsabilidade, valores e atitudes.

No entanto, "competência" também é entendida como incluindo descrições de capacidades sociais ou laborais que são exercidas no local de trabalho ou na sociedade (Cedefop 2012).

O uso de resultados de aprendizagem torna possível desenvolver currículos que:

- a) dotam os alunos de conhecimentos, habilidades e competências relevantes para as oportunidades de emprego disponíveis e de valor para eles numa série de situações sociais e laborais diferentes;
- b) integrar diferentes tipos de habilidades, por exemplo, competências teóricas e práticas ou transversais e genéricas;
- c) são transparentes e compreensíveis para os aprendentes e outras partes interessadas;
- d) podem ser aprendidos, ensinados e avaliados em vários momentos e numa variedade de lugares e formas;
- e) são sensíveis a necessidades em mudança (Cedefop, 2010a).

O Design de Aprendizagem Modular é uma estrutura flexível para currículos de educação. O objetivo desta estrutura é garantir a aprendizagem ao longo da vida, integral e significativa, adequada ao século XXI.

Ao projetar um currículo, há uma metodologia para o Autor / Instrutor seguir: identificar as competências da vida real que o aluno deve alcançar, conectar as competências da vida real



e os objetivos de aprendizagem, identificar ferramentas e habilidades que serão desenvolvidas, criar objetos de avaliação para a aprendizagem processo.

Os objetos de aprendizagem são o componente mais pequeno do currículo. Eles formam a base de um currículo estruturado, são essenciais para a aprendizagem e são usados para construir caminhos para um nível superior de consciência e compreensão cognitivas. O conteúdo dos objetos de aprendizagem sempre foi parte integrante dos processos de ensino e aprendizagem. A mudança para ambientes de aprendizagem digitais permite criar aulas digitais discretas que podem ser criadas, armazenadas, usadas e reutilizadas, rotuladas (etiquetadas), mapeadas em sequência, juntamente com avaliações formativas específicas e integradas em estruturas curriculares coesas maiores (Dolence, 2014).

## 2.2 Aprendizagem modular no projeto Mu.SA

No projeto Mu.SA, foram concebidos e desenvolvidos 4 currículos de EFV, incluindo *blended learning* (online, presencial e aprendizagem no trabalho), que foram fornecidos aos profissionais de museus durante o ciclo de vida do projeto. As atividades de pesquisa da Mu.SA tiveram como objetivo identificar quais são as habilidades ou competências digitais e transferíveis necessárias para apoiar os profissionais de museus a prosperar no ambiente digital (ver relatório consolidar WP2<sup>2</sup>).

O projeto Mu.SA adotou o Quadro de e-Competências (e-CF 3.0) no domínio específico da e-Cultura. Trata-se de um quadro para melhorar a mobilidade e a transparência dos profissionais das TIC em toda a Europa desenvolvido pelo grupo de trabalho da Organização Europeia de Normalização sobre Competências TIC, de acordo com o QEQ – Quadro Europeu de Qualificações, para cumprir este objetivo, ou seja, incentivar uma maior mobilidade laboral para profissionais de museus.

Digital ou e-competência (e-CF) significa usar habilidades de TIC de acordo com a seguinte definição: "*Competência é a capacidade de usar conhecimentos, habilidades e habilidades pessoais, sociais e/ou metodológicas, em situações de trabalho ou de estudo e no desenvolvimento profissional e pessoal*".<sup>3</sup>

Este é um conceito holístico, diretamente relacionado com atividades no local de trabalho e que incorpora comportamentos humanos complexos que são expressos como atitudes profundamente enraizadas ou interiorizadas.

Em vez disso, as competências transferíveis são *hard* e *soft skills* que se relacionam com muitas ocupações, por exemplo, pensamento criativo e habilidades de comunicação com aplicações do MS Office Suite ou gestão de tempo usando aplicativos como Outlook, etc.<sup>4</sup>

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<sup>2</sup> Relatório consolidado disponível no website do projeto Mu.SA: <http://www.project-musa.eu/results/> (acedido pela última vez em 10/8/2020)

<sup>3</sup> Fonte: Terminology of European education and training policy SECOND EDITION. A selection of 130 key terms." CEDEFOP, Luxembourg: Publications office of the European Union, 2014.

<sup>4</sup> De acordo com o dicionário online Cambridge, habilidades transferíveis são usadas em um trabalho ou carreira que também podem ser usadas noutra: *Liderança é uma habilidade altamente transferível*.



Outro Quadro Europeu relacionado com as competências digitais que o projeto Mu.SA considerou é o DigComp (Quadro de Competências Digitais para os Cidadãos 2.1)<sup>5</sup>, um Quadro Europeu para o desenvolvimento e aplicação de competências digitais básicas, dirigido a todos os cidadãos europeus enquanto utilizadores de tecnologias digitais. O DigComp tem uma gama detalhada de níveis de proficiência e apoia o desenvolvimento de materiais de aprendizagem e formação, enquanto identifica os principais componentes da competência digital em 5 áreas, tais como: Literacia de informação e dados, Comunicação e colaboração, Criação de conteúdos digitais, Segurança e Resolução de problemas. Também ajuda na conceção de instrumentos de avaliação do desenvolvimento de competências dos cidadãos, orientação profissional e promoção no trabalho.

Para cada perfil, as competências digitais e transferíveis foram listadas numa escala de classificação das mais as menos importantes. Os resultados da pesquisa mostram que existem competências digitais e transferíveis que devem ser desenvolvidas em todos os perfis profissionais e que devem ser consideradas essenciais como ponto de partida para a melhoria das competências.

Conforme detalhado na metodologia do projeto MuSA (R3.2), um conjunto de competências foi identificado como “comum” para os quatro currículos de EFV diferentes; estas competências mostraram-se essenciais para os quatro perfis profissionais, pelo que foram disponibilizadas através de um MOOC (*Massive Open Online Course*). Este curso incluiu 22 competências, oriundas do e-CF, DigComp e das competências transferíveis ou competências do século XXI. O MOOC do projeto Mu.SA com duração de 8 semanas de aprendizagem durou eventualmente um total de 12 semanas (com um intervalo de duas semanas no meio e duas semanas no final permitindo que os alunos atrasados terminassem). Cada competência e-CF foi ensinada em cerca de 5 horas de estudo (para o nível e-4 equivalente ao QEQ 7, mais 2 horas para o nível e-5 equivalente ao QEQ 8). Cada competência DigComp foi ensinada em 1-2 horas de estudo, enquanto cada competência do Século XXI (transferível) foi ensinada em aproximadamente 3 horas de estudo. Todos esses agregados somam 80 horas de estudo (10 horas por semana em média).

Em seguida, foi implementado um curso de especialização para cada perfil de função de trabalho diferente, incluindo aprendizagem online, presencial e no local de trabalho. Obviamente, algumas das competências eram comuns a mais que um currículo de EFV. As competências dos quatro cursos de especialização totalizaram 336 horas de aprendizagem. Em detalhes, cada curso de especialização incluiu:

A. O curso de Blended training durou 24 semanas (6 meses) com uma extensão de 1 mês, com um esforço de aproximadamente 15h de estudo semanal (total de 360h de estudo)

- A1: Estudo online e autónomo (288h) (material)
- A2: Sessões presenciais (24h = 6 x 4h) (uma vez por mês) (incluindo sessões por Skype)
- A3: Avaliação (48h)

<sup>5</sup> <https://ec.europa.eu/jrc/en/digcomp/digital-competence-framework> (acedido em 7/7/2020).



B. Aprendizagem no contexto de trabalho durou 10 semanas, aproximadamente 20,5h de trabalho no local por semana (totalizando 205h)

- B1: Formação em contexto de trabalho (200h)
- B2: Avaliação (5h)

Com base nos resultados do pacote de trabalho WP2, cada competência e-CF deveria ser ensinada a um nível específico que corresponde ao QEQ.

- e-3 (e-CF) = Nível 6 QEQ
- e-4 (e-CF) = Nível 7 QEQ
- e-5 (e-CF) = Nível 8 QEQ

A tabela abaixo apresenta o volume total de material educativo que é disponibilizado.

Material Educativo	Competências digitais (e-CF)		
	Nível e-3	Nível e-4	Nível e-5
Material nuclear <sup>6</sup>	4h (min)	5h (min)	6h (min)
Exercício prático	2h	3,5h	5h
Total	6h	8,5h	11h
Material Educativo	Competências digitais (DigComp)		
Material nuclear	1,5h (min)		
Exercício prático	1,0h		
Total	2,5h		
Material Educativo	Competências do Século XXI (transferíveis)		
Material nuclear	3h (min)		
Exercício prático	2h		
Total	5h		

Tabela 1 – Características do material educativo (cursos de especialização)

Tanto o MOOC quanto cada curso de especialização formaram um currículo de EFV em conjunto.

No Apêndice deste documento estão listados os 64 módulos, selecionados para o curso completo (MOOC e os cursos de Especialização). Os módulos de formação são constituídos pelas competências digitais (do e-CF e quadro DigComp) e pelas competências transferíveis (do século XXI).

Além disso, no Anexo, o leitor poderá encontrar as horas e o nível de cada competência, ministrada nos cursos de Especialização, para cada um dos perfis profissionais.

<sup>6</sup> Inclui exercícios.

### 3 Curriculum Mu.SA 1: Gestor da Estratégia Digital

#### 3.1 Perfil de trabalho

Descrição do perfil de trabalho	
Título	<b>Gestor da Estratégia Digital</b>
Missão	O <b>Gestor da Estratégia Digital</b> tem uma função estratégica com o objetivo de ajudar os museus a prosperar num ambiente digital. É responsável pelo plano de transformação digital que deve estar alinhado com a estratégia geral do museu. É responsável pela estratégia digital do museu e pelo planeamento financeiro dos recursos tecnológicos a nível superior, em conjunto com a administração do museu. Desempenha um papel de mediação entre os departamentos internos do museu e parceiros externos, e é capaz de se comunicar de forma eficaz com várias partes interessadas, especialmente empresas tecnológicas. Deve trabalhar confortavelmente com tecnologias de back-end e front-end. Tem um bom conhecimento do funcionamento de um museu.
Tarefas / Responsabilidades chave	<ul style="list-style-type: none"> <li>• Planear a estratégia digital e financeira dos recursos tecnológicos (orçamento atribuído pela Direção) a um nível superior, em consonância com a administração do museu</li> <li>• Desempenhar um papel mediador entre o museu e o exterior e comunicar eficazmente com partes interessadas, especialmente empresas de alta tecnologia</li> <li>• Para facilitar uma transição suave da produção de conteúdos para a tecnologia nos vários departamentos diferentes</li> <li>• Supervisionar melhorias, instalações e operações de backup no dia-a-dia</li> <li>• Supervisionar a segurança de todas as infraestruturas digitais</li> <li>• Tomar decisões estratégicas com base em evidências e conhecimentos relevantes sobre novos produtos digitais</li> <li>• Produzir diretrizes / políticas internas em conformidade com os padrões e regulamentos de TIC</li> <li>• Realizar análises de benchmarking</li> <li>• Produzir relatórios periódicos sobre o progresso das atividades e resultados obtidos</li> <li>• Avaliar as necessidades de formação interna e organizar atividades de formação</li> <li>• Realizar relatórios de avaliação sobre necessidades de públicos e coordenar com outros departamentos</li> <li>• Planear projetos e intervenções de tecnologia centrados no utilizador</li> <li>• Prever o impacto das soluções digitais, respondendo às necessidades do museu e do seu público</li> <li>• Aconselhar acerca da formação e regulamentos sobre o digital</li> </ul>
Conhecimento	Necessário Conhecimento de: <ul style="list-style-type: none"> <li>• Programação avançada, Realidade Virtual, Realidade</li> </ul>



<p>(no QEQ, Conhecimento é descrito como teórico)</p>		<p>Aumentada, Desenvolvimento de Aplicações, Digitalização de coleções, 3D, Gestão de Metadados, Exposição Digital, Linguagem XML, ferramentas de software específicas, software de sistemas de informação geográfica, HTML</p> <ul style="list-style-type: none"> <li>• Terminologia e produtos digitais para apoiar uma comunicação eficaz com colaboradores e fornecedores digitais no caso de projetos conjuntos</li> <li>• Principais estruturas de TI. COBIT, ITIL, CMMI, ISO e as suas aplicações em museus</li> <li>• Diferentes modelos de serviço (Saas, Paas, Iaas) e operações translacionais (computação em nuvem)</li> <li>• Dispositivos e ferramentas digitais para armazenamento e recuperação de dados</li> <li>• Novas tecnologias emergentes</li> <li>• Estrutura arquitetónica de TIC</li> <li>• Funções e contexto do museu</li> <li>• Os princípios e regras dos direitos de propriedade intelectual</li> <li>• Metodologias de gestão de projeto estruturadas</li> <li>• Como implementar estratégias de desenvolvimento de público</li> <li>• Capacidade de conduzir e interpretar pesquisas de público</li> </ul>
	<p>Desejado</p>	<ul style="list-style-type: none"> <li>• Experiência de utilizador</li> <li>• Conhecimento de método de gestão Agile</li> <li>• Dados abertos e linked data</li> </ul>
<p>Ambiente</p>	<p>Este perfil profissional é estratégico para todos os museus que queiram prosperar num ambiente digital. Os Gestores de Estratégia Digital são responsáveis por um plano de transformação digital, alinhado com a estratégia geral do museu. Atualmente, são mais frequentemente vistos como colaboradores externos, mas no futuro poderão pertencer à organização interna.</p>	
<p>Relações / Fluxo de responsabilidade / Responde a</p>	<p>Responde a:</p> <ul style="list-style-type: none"> <li>• Diretor e chefias de outros departamentos</li> </ul> <p>Interage com:</p> <ul style="list-style-type: none"> <li>• Departamento de Conservação e Curadoria</li> <li>• Departamento de Comunicação</li> <li>• Departamento de TIC</li> <li>• Departamento de educação</li> <li>• Serviços de resposta ao cliente</li> </ul>	

### 3.2 Competências do Gestor da Estratégia Digital

#### Competências digitais

#	Título	Curso em que é	Tipo	Nível
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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.

		disponibilizada		(QE)
1	IS and Business Strategy Alignment	MOOC	e-CF	e-4
2	Browsing, searching and filtering data, information and digital content	MOOC	DigComp	e-6
3	Managing data, information and digital content	MOOC	DigComp	e-6
4	Business plan development	MOOC	e-CF	e-4
5	Evaluating data, information and digital content	MOOC	DigComp	e-5
6	Identifying needs and technological responses	MOOC	DigComp	e-5
7	Technology trend monitoring	MOOC	e-CF	e-3
8	Netiquette	MOOC	DigComp	e-6
9	Innovating	MOOC	e-CF	e-3
10	(Innovating and) creatively using technology	MOOC	DigComp	e-5
11	Needs identification	MOOC	e-CF	e-3
12	Developing digital content	MOOC	DigComp	e-7
13	Collaborating through digital technologies	MOOC	DigComp	e-5
14	Forecast development	MOOC	e-CF	e-4
15	Relationship management	MOOC	e-CF	e-3
16	Protecting personal data and privacy	C. Especialização	DigComp	e-5
17	ICT quality management	MOOC	e-CF	e-4
18	Product / Service Planning	C. Especialização	e-CF	e-3
19	Identifying digital competences gaps	C. Especialização	DigComp	e-5
20	Service Level Management	C. Especialização	e-CF	e-4
21	Protecting personal data and privacy (specialisation course)	C. Especialização	DigComp	e-8
22	Sustainable Development	C. Especialização	e-CF	e-4
23	Managing digital identity	C. Especialização	DigComp	e-6
24	Information Security Strategy Development	C. Especialização	e-CF	e-4
25	Copyright and licenses	C. Especialização	DigComp	e-6
26	Education and Training Provision	C. Especialização	e-CF	e-3
27	Programming	C. Especialização	DigComp	e-6
28	Information and Knowledge Management	C. Especialização	e-CF	e-4
29	Solving technical problems	C. Especialização	DigComp	e-7
30	Purchasing	C. Especialização	e-CF	e-4
31	Process Improvement	C. Especialização	e-CF	e-4
32	Risk Management	C. Especialização	e-CF	e-4
33	Business Change Management	C. Especialização	e-CF	e-4

### 3.3 Competências transversais

#	Título	Curso em que é disponibilizada	Tipo
1	Team working	MOOC	Transferível / Séc XXI
2	Creative thinking	MOOC	Transferível / Séc XXI
3	Leadership and change facilitator	MOOC	Transferível / Séc XXI
4	Communication skills	MOOC	Transferível / Séc XXI
5	Time management	MOOC	Transferível / Séc XXI



6	Mentoring / coaching skills	C. Especialização	Transferível / Séc XXI
7	Decision making	C. Especialização	Transferível / Séc XXI
8	Sense of initiative and entrepreneurship	C. Especialização	Transferível / Séc XXI
9	Analyse and synthesize information	C. Especialização	Transferível / Séc XXI
10	Networking skills	C. Especialização	Transferível / Séc XXI
11	Negotiation skills	C. Especialização	Transferível / Séc XXI
12	Resilience	C. Especialização	Transferível / Séc XXI

## 4 Curriculum Mu.SA 2: Curador de Coleções Digitais

### 4.1 Perfil de trabalho

Descrição do perfil de trabalho	
Título	<b>Curador de Coleções Digitais</b> Também conhecido como Gestor de objetos culturais digitais, Gestor de objetos digitais, Curador digital
Missão	O <b>Curador de Coleções Digitais</b> é responsável por implementar a estratégia digital dedicada à recolha, conservação, arquivamento, preservação e ao acesso a coleções digitais (sejam digitais ou digitalizadas). Em museus maiores este pode ser um perfil em si mesmo, enquanto em menores um curador pode ser re-formado na matéria.
Tarefas / Responsabilidades chave	<ul style="list-style-type: none"> <li>Melhorar continuamente o plano de preservação, gestão e exploração digital do museu para todos os conteúdos / objetos culturais digitais</li> <li>Fornecer informações sobre direitos autorais e proteção da propriedade cultural digital de acordo com os padrões internacionais</li> <li>Supervisionar a implementação de padrões de catalogação / arquivamento</li> <li>Produzir metadados de acordo com padrões internacionais reconhecidos</li> <li>Colaborar com a equipa do museu para facilitar seu trabalho com objetos culturais digitais</li> <li>Colaborar com outros departamentos e gerir projetos de valorização de materiais digitais</li> <li>Supervisionar a segurança e proteção de materiais digitais</li> <li>Elaborar projetos em colaboração com outros departamentos para valorizar o acervo digital</li> <li>Facilitar o uso das coleções de acordo com as políticas e atividades do museu.</li> </ul>
Conhecimento (no QEQ, Conhecimento é	<p>Necessário</p> <p>Conhecimento de:</p> <ul style="list-style-type: none"> <li>Terminologia e produtos para auxiliar a comunicação eficaz com colaboradores e fornecedores de TIC em caso de projetos conjuntos</li> <li>Web, nuvem e tecnologias móveis</li> </ul>



descrito como teórico)		<ul style="list-style-type: none"> <li>Dispositivos e ferramentas para o armazenamento e recuperação de dados digitais</li> <li>Boas práticas e padrões para gestão de objetos digitais</li> <li>Novas tecnologias emergentes</li> <li>Funções e o contexto do museu</li> <li>Princípios e regulamentos dos direitos de propriedade intelectual</li> <li>Metodologias de gestão de projeto estruturadas</li> <li>Estratégias de desenvolvimento de público</li> <li>As melhores práticas de engajamento de públicos</li> <li>Estratégias de comunicação</li> <li>Conhecimento de software</li> <li>Dados abertos</li> </ul>
	Desejado	<ul style="list-style-type: none"> <li>Experiência de utilizador</li> <li>Técnicas de contar histórias</li> <li>Processos de gestão Agile</li> <li>Pesquisa de públicos</li> <li>Implementar estratégias de desenvolvimento de públicos</li> <li>Editar entradas da Wikipedia</li> </ul>
Ambiente	O Curador de Coleções Digitais colabora com fornecedores externos de tecnologia e, dentro do museu, com: <ul style="list-style-type: none"> <li>Gestão</li> <li>Departamentos de educação</li> <li>Departamento de comunicação</li> <li>Departamentos de curadoria (se diferentes do próprio)</li> </ul>	
Relações / Fluxo de responsabilidade / Responde a	Responde a: <ul style="list-style-type: none"> <li>Diretor e chefias de outros departamentos</li> <li>Mediador cultural digital</li> </ul> Interage com: <ul style="list-style-type: none"> <li>Departamento de <i>Comunicação</i></li> <li>Departamento de <i>TIC</i></li> <li>Departamento de educação</li> <li>Serviços de resposta ao cliente</li> </ul>	

## 4.2 Competências do Curador de Coleções Digitais

### Competências digitais

#	Título	Curso em que é disponibilizada	Tipo	Nível (QEQ)
1	IS and Business Strategy Alignment	MOOC	e-CF	e-4
2	Browsing, searching and filtering data, information and digital content	MOOC	DigComp	e-6
3	Managing data, information and digital content	MOOC	DigComp	e-6
4	Business plan development	MOOC	e-CF	e-4
5	Evaluating data, information and digital	MOOC	DigComp	e-5



	content			
6	Identifying needs and technological responses	MOOC	DigComp	e-5
7	Technology trend monitoring	MOOC	e-CF	e-3
8	Netiquette	MOOC	DigComp	e-6
9	Innovating	MOOC	e-CF	e-3
10	(Innovating and) creatively using technology	MOOC	DigComp	e-5
11	Needs identification	MOOC	e-CF	e-3
12	Developing digital content	MOOC	DigComp	e-7
13	Collaborating through digital technologies	MOOC	DigComp	e-5
14	Forecast development	MOOC	e-CF	e-4
15	Relationship management	MOOC	e-CF	e-3
16	Protecting personal data and privacy	MOOC	DigComp	e-5
17	ICT quality management	MOOC	e-CF	e-4
18	Product / Service Planning	C. Especialização	e-CF	e-3
19	Identifying digital competences gaps	C. Especialização	DigComp	e-5
20	Protecting personal data and privacy (specialisation course)	C. Especialização	DigComp	e-8
21	Managing digital identity	C. Especialização	DigComp	e-6
22	Documentation Production	C. Especialização	e-CF	e-3
23	Copyright and licenses	C. Especialização	DigComp	e-6
24	Service Delivery	C. Especialização	e-CF	e-3
25	Programming	C. Especialização	DigComp	e-6
26	Information and Knowledge Management	C. Especialização	e-CF	e-5
27	Solving technical problems	C. Especialização	DigComp	e-7
28	Problem Management	C. Especialização	e-CF	e-4
29	Purchasing	C. Especialização	e-CF	e-4
30	Risk Management	C. Especialização	e-CF	e-4

### 4.3 Competências transversais

#	Título	Curso em que é disponibilizada	Tipo
1	Team working	MOOC	Transferível / Séc XXI
2	Creative thinking	MOOC	Transferível / Séc XXI
3	Leadership and change facilitator	MOOC	Transferível / Séc XXI
4	Communication skills	MOOC	Transferível / Séc XXI
5	Time management	MOOC	Transferível / Séc XXI
6	Management skills	C. Especialização	Transferível / Séc XXI
7	Influence/ persuasion skills	C. Especialização	Transferível / Séc XXI
8	Mentoring / coaching skills	C. Especialização	Transferível / Séc XXI
9	Decision making	C. Especialização	Transferível / Séc XXI
10	Sense of initiative and entrepreneurship	C. Especialização	Transferível / Séc XXI
11	Interpersonal skills	C. Especialização	Transferível / Séc XXI
12	Networking skills	C. Especialização	Transferível / Séc XXI
13	Active listening skills	C. Especialização	Transferível / Séc XXI
14	Mediation skills	C. Especialização	Transferível / Séc XXI



## 5 Curriculum Mu.SA 3: Developer de Experiências Interativas Digitais

### 5.1 Perfil de trabalho

Descrição do perfil de trabalho		
Título	<b>Developer de Experiências Interativas Digitais</b> também conhecido como <i>Developer de Experiências Interativas, Designer de Experiências Interativas Digitais, Design de exposições interativas</i>	
Missão	O Developer de Experiências Interativas Digitais projeta, desenvolve e implementa experiências inovadoras e interativas com base nas necessidades do público, proporcionando experiências significativas para todos os tipos de público.	
Tarefas / Responsabilidades chave	<ul style="list-style-type: none"> <li>• Projetar e prototipar instalações interativas e inovadoras, proporcionando experiências significativas para todos os tipos de público</li> <li>• Realizar pesquisas de público e análises por observação</li> <li>• Desenvolver ferramentas de acessibilidade para todos os tipos de visitantes</li> <li>• Facilitar os fluxos de comunicação entre equipas diferentes do museu e empresas de alta tecnologia externas</li> <li>• Facilitar as relações entre equipas e departamentos do museu: curadoria, TIC, educação, marketing, comunicação, etc.</li> </ul>	
Conhecimento (no QEQ, Conhecimento é descrito como teórico)	Necessário	<p>Conhecimento de:</p> <ul style="list-style-type: none"> <li>• Elaborar soluções criativas para o fornecimento de novos conceitos, ideias, produtos ou serviços que possam aumentar o valor do museu e melhorar a experiência de seu público.</li> <li>• Terminologia e produtos TIC para auxiliar a comunicação eficaz com colaboradores e fornecedores de TIC no caso de projetos conjuntos (Realidade Aumentada, Desenvolvimento de Aplicações, Digitalização de coleções, 3D, Gestão de Metadados, Exposições Digitais, linguagem XML, ferramentas de software específicas (Adobe Photoshop, software de desenho digital, AutoCAD - software de arquitetura; software de sistemas de informação geográfica, HTML).</li> <li>• As funções de como um museu funciona</li> <li>• Os princípios e regulamentos dos direitos de propriedade intelectual</li> <li>• Metodologias de gestão de projeto estruturadas</li> <li>• Estratégias de desenvolvimento de público</li> <li>• As técnicas e melhores práticas de engajamento de públicos</li> <li>• Técnicas de contar histórias</li> <li>• Comunicação</li> <li>• Pesquisa de público e interpretação / análise dos dados</li> <li>• Storytelling interativo</li> </ul>
	Desejado	<ul style="list-style-type: none"> <li>• Experiência de utilizador</li> <li>• Processo Agile</li> <li>• Como implementar estratégias de desenvolvimento de públicos</li> </ul>

Ambiente	O Developer de Experiências Interativas Digitais trabalha em estreita colaboração com curadores de exposições e serviços educativos, tentando identificar e capitalizar o potencial interativo das exposições. Trabalha com a equipa de TIC, com o intuito de combinar e integrar as vertentes de design de exposições, TIC, educação, marketing e comunicação.
Relações / Fluxo de responsabilidade / Responde a	Responde a: <ul style="list-style-type: none"> <li>• Diretor e chefias de outros departamentos</li> <li>• Gestor da Estratégia Digital</li> </ul> Interage com: <ul style="list-style-type: none"> <li>• Departamento de curadoria</li> <li>• Departamento de <i>Comunicação</i></li> <li>• Departamento de <i>TIC</i></li> <li>• Departamento de educação</li> <li>• Serviços de resposta ao cliente / visitante</li> </ul>

## 5.2 Competências do Developer de Experiências Interativas Digitais

### Competências digitais

#	Título	Curso em que é disponibilizada	Tipo	Nível (QEQ)
1	IS and Business Strategy Alignment	MOOC	e-CF	e-4
2	Browsing, searching and filtering data, information and digital content	MOOC	DigComp	e-6
3	Managing data, information and digital content	MOOC	DigComp	e-6
4	Business plan development	MOOC	e-CF	e-4
5	Evaluating data, information and digital content	MOOC	DigComp	e-5
6	Identifying needs and technological responses	MOOC	DigComp	e-5
7	Technology trend monitoring	MOOC	e-CF	e-3
8	Netiquette	MOOC	DigComp	e-6
9	Innovating	MOOC	e-CF	e-3
10	(Innovating and) creatively using technology	MOOC	DigComp	e-5
11	Needs identification	MOOC	e-CF	e-3
12	Developing digital content	MOOC	DigComp	e-7
13	Collaborating through digital technologies	MOOC	DigComp	e-5
14	Forecast development	MOOC	e-CF	e-4
15	Relationship management	MOOC	e-CF	e-3
16	Protecting personal data and privacy	MOOC	DigComp	e-5
17	ICT quality management	MOOC	e-CF	e-4
18	Product / Service Planning	C. Especialização	e-CF	e-3
19	Identifying digital competences gaps	C. Especialização	DigComp	e-5
20	Application Design	C. Especialização	e-CF	e-3



21	Protecting personal data and privacy (specialisation course)	C. Especialização	DigComp	e-8
22	Application Development	C. Especialização	e-CF	e-3
23	Managing digital identity	C. Especialização	DigComp	e-6
24	Testing	C. Especialização	e-CF	e-3
25	Documentation Production	C. Especialização	e-CF	e-3
26	Copyright and licenses	C. Especialização	DigComp	e-6
27	Change Support	C. Especialização	e-CF	e-3
28	Programming	C. Especialização	DigComp	e-6
29	User Support	C. Especialização	e-CF	e-3
30	Solution Deployment	C. Especialização	e-CF	e-3
31	Problem Management	C. Especialização	e-CF	e-4
32	Solving technical problems	C. Especialização	DigComp	e-7
33	Risk Management	C. Especialização	e-CF	e-4

### 5.3 Competências transversais

#	Título	Curso em que é disponibilizada	Tipo
1	Team working	MOOC	Transferível / Séc XXI
2	Creative thinking	MOOC	Transferível / Séc XXI
3	Leadership and change facilitator	MOOC	Transferível / Séc XXI
4	Communication skills	MOOC	Transferível / Séc XXI
5	Time management	MOOC	Transferível / Séc XXI
6	Decision making	C. Especialização	Transferível / Séc XXI
7	Fact - driven	C. Especialização	Transferível / Séc XXI
8	Sense of initiative and entrepreneurship	C. Especialização	Transferível / Séc XXI
9	Analyse and synthesize information	C. Especialização	Transferível / Séc XXI
10	Interpersonal skills	C. Especialização	Transferível / Séc XXI
11	Mediation skills	C. Especialização	Transferível / Séc XXI
12	Networking skills	C. Especialização	Transferível / Séc XXI
13	Negotiation skills	C. Especialização	Transferível / Séc XXI
14	Active listening skills	C. Especialização	Transferível / Séc XXI
15	Resilience	C. Especialização	Transferível / Séc XXI
16	Storytelling	C. Especialização	Transferível / Séc XXI

## 6 Curriculum Mu.SA 4: Gestor de Comunidades Online

### 6.1 Perfil de trabalho

Descrição do perfil de trabalho	
Título	<b>Gestor de Comunidades Online</b> Também conhecido como Gestor de Comunidades Culturais Online, Gestor de Comunicação Digital, Curador de Media Digitais, Curador de Media Visuais, Gestor de Novos Media, Especialista de Redes Sociais ou



	Developer de Comunidades Online	
Missão	O Gestor de Comunidades Online atende às necessidades das comunidades online e offline. Cria e gere comunidades online acessíveis e colaborativas para todas as partes interessadas (públicos, colegas em museus e no setor do património cultural, organizações educacionais, doadores, patrocinadores, decisores, etc.).	
Tarefas / Responsabilidades chave	<ul style="list-style-type: none"> <li>• Projetar e implementar um plano de desenvolvimento de públicos online alinhado com o plano geral de comunicação estratégica do museu (incluindo KPI e objetivos inteligentes)</li> <li>• Envolver, monitorizar e gerir públicos online</li> <li>• Fazer a ligação eficaz com os outros departamentos da organização para produzir conteúdo e experiências online significativas</li> <li>• Rastrear as necessidades de públicos por inquéritos online</li> <li>• Realizar e monitorizar atividades online</li> <li>• Avaliar a eficácia e eficiência das atividades online (por exemplo, escrever relatórios periódicos sobre intuições sobre o online, conduzir análises de dados da web para avaliar se os objetivos estão a ser alcançados).</li> </ul>	
Conhecimento (no QEQ, Conhecimento é descrito como teórico)	Necessário	<p>Conhecimento de:</p> <ul style="list-style-type: none"> <li>• Marketing (Marketing não Convencional e Digital)</li> <li>• Ferramentas digitais para eventos online (Chat, Webcast, Facebook, live streaming, entre outros)</li> <li>• Aspectos jurídicos em direitos de autor, Creative Commons, Royalties</li> <li>• Acessibilidade de conteúdos da web</li> <li>• Analíticos da web (Google analytics, Facebook insights, etc.)</li> <li>• Comunicação e mediação eficazes</li> <li>• Conhecimento de como funciona um museu</li> <li>• Metodologias de gestão de projeto</li> <li>• Estratégias de desenvolvimento de públicos</li> <li>• Técnicas de storytelling</li> <li>• Interpretação de dados de pesquisa de público</li> <li>• Conhecimento profundo de redes sociais</li> </ul>
	Desejado	<ul style="list-style-type: none"> <li>• Experiência do utilizador online</li> <li>• Domínio de ferramentas gráficas</li> <li>• Conhecimento de programas de design gráfico</li> <li>• Conhecimento de ferramentas de publicação na web (por exemplo, CMS, Blog e Editor)</li> <li>• Conhecimento de linguagem Mark-up e folhas de estilo (por exemplo, XHTML, HTML e CSS) (dependendo dos requisitos de cada organização)</li> <li>• Capacidade de usar ferramentas de visualização para criar representações gráficas</li> </ul>
Ambiente	Como membro da equipa de comunicação, marketing e desenvolvimento de públicos, o Gestor de Comunidades Online é responsável por desenvolver e implementar um plano de desenvolvimento de públicos	



	online alinhado com o plano estratégico e missão geral do museu.
Relações / Fluxo de responsabilidade / Responde a	Responde a: <ul style="list-style-type: none"> <li>• Diretor de Comunicação e Marketing</li> </ul> Interage com: <ul style="list-style-type: none"> <li>• Departamento de curadoria</li> <li>• Departamento de TIC</li> <li>• Departamento de educação</li> <li>• Serviços de resposta ao cliente</li> <li>• Departamento administrativo</li> </ul>

## 6.2 Competências do Gestor de Comunidades Online

### Competências digitais

#	Título	Curso em que é disponibilizada	Tipo	Nível (QE)
1	IS and Business Strategy Alignment	MOOC	e-CF	e-4
2	Browsing, searching and filtering data, information and digital content	MOOC	DigComp	e-6
3	Managing data, information and digital content	MOOC	DigComp	e-6
4	Business plan development	MOOC	e-CF	e-4
5	Evaluating data, information and digital content	MOOC	DigComp	e-5
6	Identifying needs and technological responses	MOOC	DigComp	e-5
7	Technology trend monitoring	MOOC	e-CF	e-3
8	Netiquette	MOOC	DigComp	e-6
9	Innovating	MOOC	e-CF	e-3
10	(Innovating and) creatively using technology	MOOC	DigComp	e-5
11	Needs identification	MOOC	e-CF	e-3
12	Developing digital content	MOOC	DigComp	e-7
13	Collaborating through digital technologies	MOOC	DigComp	e-5
14	Forecast development	MOOC	e-CF	e-4
15	Relationship management	MOOC	e-CF	e-3
16	Protecting personal data and privacy	MOOC	DigComp	e-5
17	ICT quality management	MOOC	e-CF	e-4
18	Product / Service Planning	C. Especialização	e-CF	e-3
19	Identifying digital competences gaps	C. Especialização	DigComp	e-5
20	Protecting personal data and privacy (specialisation course)	C. Especialização	DigComp	e-8
21	Managing digital identity	C. Especialização	DigComp	e-6
22	Documentation Production	C. Especialização	e-CF	e-3
23	Copyright and licenses	C. Especialização	DigComp	e-6
24	Programming	C. Especialização	DigComp	e-6
25	User Support	C. Especialização	e-CF	e-3



26	Problem Management	C. Especialização	e-CF	e-4
27	Solving technical problems	C. Especialização	DigComp	e-7
28	ICT Quality Strategy Development	C. Especialização	e-CF	e-5
29	Digital Marketing	C. Especialização	e-CF	e-4
30	Business Change Management	C. Especialização	e-CF	e-5

## 6.1 Competências transversais

#	Título	Curso em que é disponibilizada	Tipo
1	Team working	MOOC	Transferível / Séc XXI
2	Creative thinking	MOOC	Transferível / Séc XXI
3	Leadership and change facilitator	MOOC	Transferível / Séc XXI
4	Communication skills	MOOC	Transferível / Séc XXI
5	Time management	MOOC	Transferível / Séc XXI
6	Management skills	C. Especialização	Transferível / Séc XXI
7	Influence/ persuasion skills	C. Especialização	Transferível / Séc XXI
8	Mentoring / coaching skills	C. Especialização	Transferível / Séc XXI
9	Integrity/ethical	C. Especialização	Transferível / Séc XXI
10	Decision making	C. Especialização	Transferível / Séc XXI
11	Sense of initiative and entrepreneurship	C. Especialização	Transferível / Séc XXI
12	Analyse and synthesize information	C. Especialização	Transferível / Séc XXI
13	Interpersonal skills	C. Especialização	Transferível / Séc XXI
14	Networking skills	C. Especialização	Transferível / Séc XXI
15	Negotiation skills	C. Especialização	Transferível / Séc XXI
16	Active listening skills	C. Especialização	Transferível / Séc XXI
17	Resilience	C. Especialização	Transferível / Séc XXI
18	Mediation skills	C. Especialização	Transferível / Séc XXI



## 7 Appendix

### 7.1 List of Competences

Competence	Course through which the competence is delivered
<p><b>IS and Business Strategy Alignment (e-CF)</b></p> <p>Anticipates long term business requirements, influences improvement of organisational process efficiency and effectiveness. Determines the IS model and the enterprise architecture in line with the organisation's policy and ensures a secure environment. Makes strategic IS policy decisions for the enterprise, including sourcing strategies.</p>	MOOC
<p><b>Browsing, searching and filtering data, information and digital content (DigComp)</b></p> <p>To articulate information needs, to search for data, information and content in digital environments, to access and navigate between them. To create and update personal search strategies.</p>	MOOC
<p><b>Managing data, information and digital content (DigComp)</b></p> <p>To organise, store and retrieve data, information, and content in digital environments. To organise and process them in a structured environment</p>	MOOC
<p><b>Business plan development (e-CF)</b></p> <p>Addresses the design and structure of a business or product plan including the identification of alternative approaches as well as return on investment propositions. Considers the possible and applicable sourcing models. Presents cost benefit analysis and reasoned arguments in support of the selected strategy. Ensures compliance with business and technology strategies. Communicates and sells business plan to relevant stakeholders and addresses political, financial, and organizational interests.</p>	MOOC
<p><b>Evaluating data, information and digital content (DigComp)</b></p> <p>To analyse, compare and critically evaluate the credibility and reliability of sources of data, information and digital content. To analyse, interpret and critically evaluate the data, information and digital content.</p>	MOOC
<p><b>Identifying needs and technological responses (DigComp)</b></p>	MOOC



<p>To understand where one's own digital competence needs to be improved or updated. To be able to support others with their digital competence development. To seek opportunities for self-development and to keep up-to-date with the digital evolution.</p>	
<p><b>Technology trend monitoring (e-CF)</b></p> <p>Investigates latest ICT technological developments to establish understanding of evolving technologies. Devises innovative solutions for integration of new technology into existing products, applications or services or for the creation of new solutions.</p>	MOOC
<p><b>Netiquette (DigComp)</b></p> <p>To be aware of behavioural norms and know-how while using digital technologies and interacting in digital environments. To adapt communication strategies to the specific audience and to be aware of cultural and generational diversity in digital environments.</p>	MOOC
<p><b>Team working (Transferrable/ 21st Century)</b></p> <p>Carry out agreed tasks that contribute to team success, work well with people with a wide range of diversity, inspire colleagues and provide constructive feedback, tackle problems as part of a group, contribute to problem solving with the whole team, work on group projects.</p>	MOOC
<p><b>Innovating (e-CF)</b></p> <p>Devises creative solutions for the provision of new concepts, ideas, products or services. Deploys novel and open thinking to envision exploitation of technological advances to address business / society needs or research direction.</p>	MOOC
<p><b>Innovating and creatively using technology (DigComp)</b></p> <p>To use digital tools and technologies to create knowledge and to innovate processes and products. To engage individually and collectively in cognitive processing to understand and resolve conceptual problems and problem situations in digital environments.</p>	MOOC
<p><b>Creative thinking (Transferrable/ 21st Century)</b></p> <p>Look and solve problems from different perspectives, thinking outside the box, meet new challenges and seek unusual solutions. Use brainstorming, mind mapping, reframing, envisaging the future, role plays.</p>	MOOC
<p><b>Needs identification (e-CF)</b></p> <p>Actively listens to internal / external customers, articulates and clarifies their needs. Manages the relationship with all stakeholders to ensure that</p>	MOOC



the solution is in line with business requirements. Proposes different solutions (e.g. make-or-buy), by performing contextual analysis in support of user centered system design. Advises the customer on appropriate solution choices. Acts as an advocate engaging in the implementation or configuration process of the chosen solution.	
<b>Developing digital content (DigComp)</b> To create and edit digital content in different formats, to express oneself through digital means.	MOOC
<b>Collaborating through digital technologies (DigComp)</b> To use digital tools and technologies for collaborative processes, and for co-construction and co-creation of data, resources and knowledge.	MOOC
<b>Forecast development (e-CF)</b> Interprets market needs and evaluates market acceptance of products or services. Assesses the organisation's potential to meet future production and quality requirements. Applies relevant metrics to enable accurate decision making in support of production, marketing, sales and distribution functions.	MOOC
<b>Leadership and change facilitator (Transferrable/ 21st Century)</b> Planning and delivering, adaptability and flexibility with change, drive to learn and improve, build confidence and motivating oneself and others.	MOOC
<b>Relationship management (e-CF)</b> Establishes and maintains positive business relationships between stakeholders (internal or external) deploying and complying with organisational processes. Maintains regular communication with customer / partner / supplier, and addresses needs through empathy with their environment and managing supply chain communications. Ensures that stakeholder needs, concerns or complaints are understood and addressed in accordance with organisational policy.	MOOC
<b>Protecting personal data and privacy (DigComp)</b> Establishes and maintains positive business relationships between stakeholders (internal or external) deploying and complying with organisational processes. Maintains regular communication with customer / partner / supplier, and addresses needs through empathy with their environment and managing supply chain communications. Ensures that stakeholder needs, concerns or complaints are understood and addressed in accordance with organisational policy.	MOOC
<b>ICT quality management (e-CF)</b>	MOOC



<p>Implements ICT quality policy to maintain and enhance service and product provision. Plans and defines indicators to manage quality with respect to ICT strategy. Reviews quality measures and recommends enhancements to influence continuous quality improvement.</p>	
<p><b>Communication skills (Transferrable/ 21st Century)</b></p> <p>Convey information to another effectively and efficiently. These typically include listening, nonverbal communication, clarity and concision, friendliness, confidence, empathy, open-mindedness, respect, feedback, and selection of the right medium.</p>	MOOC
<p><b>Time management (Transferrable/ 21st Century)</b></p> <p>Managing short and long term tasks successfully, meet urgent and lengthier deadlines, being proactive rather than reactive, adjust workload, make compromises and contingency plans, work to particular specifications and allocation of resources.</p>	MOOC
<p><b>Product/ Service Planning (e-CF)</b></p> <p>Analyses and defines current and target status. Estimates cost effectiveness, points of risk, opportunities, strengths and weaknesses, with a critical approach. Creates structured plans; establishes time scales and milestones, ensuring optimisation of activities and resources. Manages change requests. Defines delivery quantity and provides an overview of additional documentation requirements. Specifies correct handling of products, including legal issues, in accordance with current regulations.</p>	Spec. course
<p><b>Identifying digital competences gaps (DigComp)</b></p> <p>To assess needs and to identify, evaluate, select and use digital tools and possible technological responses and to solve them. To adjust and customise digital environments to personal needs (e.g. accessibility).</p>	Spec. course
<p><b>Service Level Management (e-CF)</b></p> <p>Defines, validates and makes applicable service level agreements (SLAs) and underpinning contracts for services offered. Negotiates service performance levels taking into account the needs and capacity of stakeholders and business.</p>	Spec. course
<p><b>Management skills (Transferrable/ 21st Century)</b></p> <p>The knowledge and ability of the individuals in a managerial position to fulfil some specific management activities or tasks.</p>	Spec. course
<p><b>Application Design (e-CF)</b></p> <p>Analyses, specifies, updates and makes available a model to implement applications in accordance with IS policy and user / customer needs. Selects appropriate technical options for application design, optimising the balance between cost and quality. Designs data structures and builds</p>	Spec. course



<p>system structure models according to analysis results through modelling languages. Ensures that all aspects take account of interoperability, usability and security. Identifies a common reference framework to validate the models with representative users, based upon development models (e.g. iterative approach).</p>	
<p><b>Protecting personal data and privacy (DigComp)</b></p> <p>To protect personal data and privacy in digital environments. To understand how to use and share personally identifiable information while being able to protect oneself and others from damages. To understand that digital services use a “Privacy policy” to inform how personal data is used.</p>	Spec. course
<p><b>Sustainable Development (e-CF)</b></p> <p>Estimates the impact of ICT solutions in terms of eco responsibilities including energy consumption. Advises business and ICT stakeholders on sustainable alternatives that are consistent with the business strategy. Applies an ICT purchasing and sales policy which fulfils eco-responsibilities.</p>	Spec. course
<p><b>Managing digital identity (DigComp)</b></p> <p>To create, and manage one or multiple digital identities, to be able to protect one’s own reputation, to deal with the data that one produces through several digital tools, environments and services.</p>	Spec. course
<p><b>Application Development (e-CF)</b></p> <p>Interprets the application design to develop a suitable application in accordance with customer needs. Adapts existing solutions by e.g. porting an application to another operating system. Codes, debugs, tests and documents and communicates product development stages. Selects appropriate technical options for development such as reusing, improving or reconfiguration of existing components. Optimises efficiency, cost and quality. Validates results with user representatives, integrates and commissions the overall solution.</p>	Spec. course
<p><b>Influence/ persuasion skills (Transferrable/ 21st Century)</b></p> <p>Persuasion skills refer to the talent of changing the attitudes, beliefs, or behaviors of a person or group towards another person, group, event, object, or idea. It is usually done by conveying, in a message, some feelings, information, reasoning, or a combination. Influencing skills are reliant on good soft skills and the ability to communicate effectively, engage stakeholders which involves the art of storytelling. In the podcast we look at negotiation techniques which focus on the ability to influence.</p>	Spec. course
<p><b>Information Security Strategy Development (e-CF)</b></p> <p>Defines and makes applicable a formal organisational strategy, scope and culture to maintain safety and security of information from external and internal threats, i.e. digital forensic for corporate investigations or intrusion investigation. Provides the foundation for Information Security</p>	Spec. course



Management, including role identification and accountability. Uses defined standards to create objectives for information integrity, availability, and data privacy.	
<p><b>Documentation Production (e-CF)</b></p> <p>Produces documents describing products, services, components or applications to establish compliance with relevant documentation requirements. Selects appropriate style and media for presentation materials. Creates templates for document-management systems. Ensures that functions and features are documented in an appropriate way. Ensures that existing documents are valid and up to date.</p>	Spec. course
<p><b>Testing (e-CF)</b></p> <p>Constructs and executes systematic test procedures for ICT systems or customer usability requirements to establish compliance with design specifications. Ensures that new or revised components or systems perform to expectation. Ensures meeting of internal, external, national and international standards; including health and safety, usability, performance, reliability or compatibility. Produces documents and reports to evidence certification requirements.</p>	Spec. course
<p><b>Mentoring/ coaching skills (Transferrable/ 21st Century)</b></p> <p>Mentoring as an act of giving advice to less experienced people, 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.</p>	Spec. course
<p><b>Copyright and licenses (DigComp)</b></p> <p>To understand how copyright and licenses apply to data, digital information and content.</p>	Spec. course
<p><b>Education and Training Provision (e-CF)</b></p> <p>Defines and implements ICT training policy to address organisational skill needs and gaps. Structures, organises and schedules training programmes and evaluates training quality through a feedback process and implements continuous improvement. Adapts training plans to address changing demand.</p>	Spec. course
<p><b>Service Delivery (e-CF)</b></p> <p>Ensures service delivery in accordance with established service level agreements (SLA's). Takes proactive action to ensure stable and secure applications and ICT infrastructure to avoid potential service disruptions, attending to capacity planning and to information security. Updates operational document library and logs all service incidents. Maintains monitoring and management tools (i.e. scripts, procedures). Maintains IS</p>	Spec. course



services. Takes proactive measures.	
<p><b>Solution Deployment (e-CF)</b></p> <p>Following predefined general standards of practice carries out planned necessary interventions to implement solution, including installing, upgrading or decommissioning. Configures hardware, software or network to ensure interoperability of system components and debugs any resultant faults or incompatibilities. Engages additional specialist resources if required, such as third party network providers. Formally hands over fully operational solution to user and completes documentation recording all relevant information, including equipment addressees, configuration and performance data.</p>	Spec. course
<p><b>Integrity/ ethical (Transferrable/ 21st Century)</b></p> <p>Ethics is understood to be a system of principles that guide how people make decisions and lead their lives. In contrast to ethics, integrity is understood as a consistent application of ethical principles, particularly honesty.</p>	Spec. course
<p><b>Programming (DigComp)</b></p> <p>To plan and develop a sequence of understandable instructions for a computing system to solve a given problem or perform a specific task.</p>	Spec. course
<p><b>Information and Knowledge Management (e-CF)</b></p> <p>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.</p>	Spec. course
<p><b>User Support (e-CF)</b></p> <p>Responds to user requests and issues, recording relevant information. Assures resolution or escalates incidents and optimises system performance in accordance with predefined service level agreements (SLAs). Understands how to monitor solution outcome and resultant customer satisfaction.</p>	Spec. course
<p><b>Decision making (Transferrable/ 21st Century)</b></p> <p>Increasing a professional's decision-making competence enhances his/her ability to make better decisions leading to better life outcomes for individuals, an improved atmosphere in the museum community and downstream benefits to society as a whole.</p>	Spec. course
<p><b>Change Support (e-CF)</b></p> <p>Implements and guides the evolution of an ICT solution. Ensures efficient control and scheduling of software or hardware modifications to prevent</p>	Spec. course



multiple upgrades creating unpredictable outcomes. Minimises service disruption as a consequence of changes and adheres to defined service level agreement (SLA). Ensures consideration and compliance with information security procedures.	
<p><b>Solving technical problems (DigComp)</b></p> <p>To identify technical problems when operating devices and using digital environments, and to solve them (from trouble-shooting to solving more complex problems).</p>	Spec. course
<p><b>Purchasing (e-CF)</b></p> <p>Applies a consistent procurement procedure, including deployment of the following sub processes: specification requirements, supplier identification, proposal analysis, evaluation of the energy efficiency and environmental compliance of products, suppliers and their processes, contract negotiation, supplier selection and contract placement. Ensures that the entire purchasing process is fit for purpose, adds business value to the organisation compliant to legal and regulatory requirements.</p>	Spec. course
<p><b>Problem Management (e-CF)</b></p> <p>Identifies and resolves the root cause of incidents. Takes a proactive approach to avoidance or identification of root cause of ICT problems. Deploys a knowledge system based on recurrence of common errors. Resolves or escalates incidents. Optimises system or component performance.</p>	Spec. course
<p><b>Process Improvement (e-CF)</b></p> <p>Measures effectiveness of existing ICT processes. Researches and benchmarks ICT process design from a variety of sources. Follows a systematic methodology to evaluate, design and implement process or technology changes for measurable business benefit. Assesses potential adverse consequences of process change.</p>	Spec. course
<p><b>ICT Quality Strategy Development (e-CF)</b></p> <p>Defines, improves and refines a formal strategy to satisfy customer expectations and improve business performance (balance between cost and risks). Identifies critical processes influencing service delivery and product performance for definition in the ICT quality management system. Uses defined standards to formulate objectives for service management, product and process quality. Identifies ICT quality management accountability.</p>	Spec. course
<p><b>Fact-driven (Transferrable/ 21st Century)</b></p> <p>Using fact-driven design can save one's company. It forces everyone to focus on what's important to business/organization.</p>	Spec. course
<p><b>Sense of initiative and entrepreneurship (Transferrable/ 21st Century)</b></p>	Spec. course



<p>The individual's ability to identify and seize opportunities, turn ideas into action, and to plan and manage processes to achieve objectives.</p>	
<p><b>Analyze and synthesize information (Transferrable/ 21st Century)</b></p> <p>It is often related to critical thinking, creative thinking, innovation, managing information, and is driven from the need of solving problems and making informed decisions. Analysing and synthesizing information is part of the critical and creative thinking.</p>	<p>Spec. course</p>
<p><b>Risk management (e-CF)</b></p> <p>Implements the management of risk across information systems through the application of the enterprise defined risk management policy and procedure. Assesses risk to the organisation's business, including web, cloud and mobile resources. Documents potential risk and containment plans.</p>	<p>Spec. course</p>
<p><b>Digital Marketing (e-CF)</b></p> <p>Understands the fundamental principles of digital marketing. Distinguishes between the traditional and digital approaches. Appreciates the range of channels available. Assesses the effectiveness of the various approaches and applies rigorous measurement techniques. Plans a coherent strategy using the most effective means available. Understands the data protection and privacy issues involved in the implementation of the marketing strategy.</p>	<p>Spec. course</p>
<p><b>Business Change Management (e-CF)</b></p> <p>Assesses the implications of new digital solutions. Defines the requirements and quantifies the business benefits. Manages the deployment of change taking into account structural and cultural issues. Maintains business and process continuity throughout change, monitoring the impact, taking any required remedial action and refining approach.</p>	<p>Spec. course</p>
<p><b>Interpersonal skills (Transferrable/ 21st Century)</b></p> <p>Interpersonal skills are the behaviors and tactics a person uses to interact with others effectively. Interpersonal skills range from communication and listening to attitude and deportment.</p>	<p>Spec. course</p>
<p><b>Networking skills (Transferrable/ 21st Century)</b></p> <p>Networking is the exchange of information and ideas among people with a common profession or special interest, usually in an informal social setting. Networking is the process of building and maintaining a network of contacts.</p>	<p>Spec. course</p>



<p><b>Negotiation skills (Transferrable/ 21st Century)</b></p> <p>Negotiation is a type of discussion used to settle disputes and reach agreements between two or more parties. Generally, a negotiation results in a compromise where each party makes a concession for the benefit of everyone involved.</p>	Spec. course
<p><b>Active listening skills (Transferrable/ 21st Century)</b></p> <p>Active listening is a skill that can be acquired and developed with practice. Active Listening requires effort, self-awareness, and practice.</p>	Spec. course
<p><b>Resilience (Transferrable/ 21st Century)</b></p> <p>Resilience relies on different skills and draws on various sources of help, including rational thinking skills, physical and mental health, and the relationships with others. To face challenges and respond appropriately can require us to draw on all our resources, both internal and external, including our personal relationships.</p>	Spec. course
<p><b>Mediation skills (Transferrable/ 21st Century)</b></p> <p>Mediation is a means to resolve disputes without resorting to litigation or other adversarial modes of dealing with conflict.</p>	Spec. course
<p><b>Storytelling (Transferrable/ 21st Century)</b></p> <p>Storytelling is the conveying of events in words, and images, often by improvisation or embellishment. Stories or narratives have been shared in every culture as a means of entertainment, education, cultural preservation, and to instil moral values. Crucial elements of stories and storytelling include plot, characters, and narrative point of view.</p>	Spec. course

## 7.2 Competences per Job Role Profile

DIGITAL COMPETENCES	TYPE	Digital Strategy Manager (Level)	Digital Collections Curator (Level)	Digital Interactive Experience Developer (Level)	Online Cultural Community Manager (Level)	Core material (hours)	Practical assignment (hours)
Service Level Management	e-CF	e-4				5	3,5
Product / Service Planning	e-CF	e-3	e-3	e-3	e-3	4	2
Application Design	e-CF			e-3		4	2



Sustainable Development	e-CF	e-4				5	3,5
Application Development	e-CF			e-3		4	2
Testing	e-CF			e-3		4	2
Solution Deployment	e-CF			e-3		4	2
Documentation Production	e-CF		e-3	e-3	e-3	4	2
User Support	e-CF			e-3	e-3	4	2
Change Support	e-CF			e-3		4	2
Service Delivery	e-CF		e-3			4	2
Problem Management	e-CF		e-4	e-4	e-4	5	3,5
Information Security Strategy Development	e-CF	e-4				5	3,5
ICT Quality Strategy Development	e-CF				e-5	6	5
Education and Training Provision	e-CF	e-3				4	2
Purchasing	e-CF	e-4	e-4			5	3,5
Information and Knowledge Management	e-CF	e-4	e-5			6	3,5 (level e-4) 5 (level e-5)
Digital Marketing	e-CF				e-4	5	3,5
Risk Management	e-CF	e-4	e-4	e-4		5	3,5
Process Improvement	e-CF	e-4				5	3,5
Business Change Management	e-CF	e-4			e-5	6	3,5 (level e-4) 5 (level e-5)
Copyright and licenses	DigComp	√	√	√	√	1,5	1
Programming	DigComp	√	√	√	√	1,5	1
Solving technical problems	DigComp	√	√	√	√	1,5	1
Protecting personal data and privacy	DigComp	√	√	√	√	1,5	1



Identifying digital competences gaps	DigComp	√	√	√	√	1,5	1
Managing digital identity	DigComp	√	√	√	√	1,5	1
<b>21<sup>ST</sup> CENTURY SKILLS</b>	<b>TYPE</b>	<b>R1 (Level / hours)</b>	<b>R2 (Level/ hours)</b>	<b>R3 (Level/ hours)</b>	<b>R4 (Level/ hours)</b>	<b>Core material (hours)</b>	<b>Practical assignment (hours)</b>
Mentoring / coaching skills	21st Cent	√	√		√	3	2
Analyse and synthesize information	21st Cent	√		√	√	3	2
Negotiation skills	21st Cent	√		√	√	3	2
Networking skills	21st Cent	√	√	√	√	3	2
Sense of initiative and entrepreneurship	21st Cent	√	√	√	√	3	2
Resilience	21st Cent	√		√	√	3	2
Decision making	21st Cent	√	√	√	√	3	2
Management skills	21st Cent		√		√	3	2
Interpersonal skills	21st Cent		√	√	√	3	2
Mediation skills	21st Cent		√	√		3	2
Influence / persuasion skills	21st Cent		√		√	3	2
Active listening skills	21st Cent		√	√	√	3	2
Storytelling	21st Cent			√	√	3	2
Fast-driven	21st Cent			√		3	2
Integrity / ethical	21st Cent				√	3	2
		<b>N. competences</b>	<b>N. competences</b>	<b>N. competences</b>	<b>N. competences</b>		



<b>SUM</b>		<b>23</b>	<b>22</b>	<b>27</b>	<b>26</b>		
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## 7.3 Digital competences

### 7.3.1 Digital competence (e-CF)

N. Competence	1
Competence Title	IS and Business Strategy Alignment
Type	e-CF
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>• Define future developments in business process and technology application</li> <li>• Recognize requirements for processes related to ICT services</li> <li>• Identify long term visitor / customer needs</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>• Illustrate the development of ICT strategy and policy, including ICT security and quality</li> <li>• Describe the development of the business strategy</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>• Examine feasibility in terms of costs and benefits</li> <li>• Demonstrate effects of implementations</li> <li>• Assess the impact of new technologies on business</li> <li>• Study the business benefits of new technologies and how this can add value and provide competitive advantage</li> </ul> <p>Analysis level</p> <ul style="list-style-type: none"> <li>• Analyse the Museum business architecture</li> <li>• Examine the legal &amp; regulatory landscape in order to factor into business requirements</li> </ul> <p>Synthesis level</p> <p>Evaluation level</p>



N. Competence	2
Competence Title	Business plan development
Type	e-CF
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>• Describe the methodology of doing a SWOT analysis</li> <li>• Identify 2 risks in a management plan</li> <li>• Present an example of a competitive analysis</li> <li>• Recognize the mission, the vision and values of a museum</li> <li>• Label 4 museum needs</li> <li>• Present the Museum Innovation Model (MIM)</li> <li>• Identify the 4 elements of the marketing mix (the 4 Ps)</li> <li>• Describe the methodology of doing a PEST analysis</li> <li>• Name 5 competitive forces to maximize profitability (Porter's 5 Forces)</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>• Estimate a cost analysis</li> <li>• Differentiate a business plan from a business model.</li> <li>• Indicate the steps of a business plan</li> <li>• Describe a marketing strategy</li> <li>• Describe the business model canvas</li> <li>• Indicate 2 sustainability issues of a museum</li> <li>• Recognize the value of 2 marketing communication functions</li> <li>• Identify a management plan for a museum</li> <li>• Give examples of 2 business models</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>• Produce a financial planning and analysis</li> <li>• Select an example of a Museum Marketing Plan</li> </ul> <p>Analysis level</p> <p>Synthesis level</p> <p>Evaluation level</p>

N. Competence	3
Competence Title	Technology trend monitoring
Type	e-CF
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>Identify at least 2 of the main milestones in the history of ICT in museums.</li> <li>Identify at least 2 of the current technologies that will shape the future in museums.</li> <li>Explore a SW tool to prototype a digital storytelling example.</li> <li>Examine 3 examples of how games provide distinct experiences in museums and enhance the visitor experience, by exploring case studies.</li> <li>List 3 advantages of how gamification can increase the visitors' engagement.</li> <li>Describe the concept of interactive storytelling and how it expands linear storytelling, by exploring case studies.</li> <li>Examine examples of how the reality virtuality continuum can improve the museum communication.</li> <li>Identify 2 different types of examples of Augmented Reality applications in museums</li> <li>Identify 2 different types of examples Virtual Reality applications in museums</li> <li>Identify 2 different types examples of Mixed Reality applications in museums</li> <li>Identify one set of principles of usability and how it promotes user adoption of technology.</li> <li>Identify the main guidelines for accessibility in museums places and the web, with a focus on inclusive museums</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>From analysing 2 case studies, explain how games and gamification are used distinctively. For each, complete the following fields: target, synopsis, objectives, advantages, constrains.</li> <li>From analysing case studies, understand how AR/VR or mixed reality solutions are used distinctively inside-out in museums.</li> <li>Discuss how usability can affect the user experience, from analysing a case study.</li> <li>When confronted with a specific problem in a museum, specify a solution based on interactive storytelling. Make a case-study by prototyping a solution.</li> <li>From analysing examples of using VR/AR or mixed reality solutions in museums understand the artist`s world.</li> </ul>



	<ul style="list-style-type: none"><li>• When confronted with specific problems in museums and websites, identify the principles that can enhance the accessibility</li></ul> <p>Application level</p> <p>Analysis level</p> <p>Synthesis level</p> <p>Evaluation level</p>
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N.	4
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Competence	
Competence Title	Innovating
Type	e-CF
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>• Define innovation and the areas it occurs</li> <li>• Identify the four different types of innovation</li> <li>• Identify the five different types of innovators</li> <li>• Identify the steps of the innovation-decision process</li> <li>• Describe the Museum Innovation Model</li> <li>• Identify the steps of design thinking process for innovations in museums</li> <li>• Identify the characteristics of open thinking</li> <li>• Define Open Thinking for museum innovation</li> <li>• Identify how crowdsourcing can be used from museums</li> <li>• Identify Linked Open Data for museum resources</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>• Classify innovations implemented in museums according to their type</li> </ul> <p>Application level</p> <p>Analysis level</p> <p>Synthesis level</p> <p>Evaluation level</p>

N. Competence	5
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Competence Title	Needs identification
Type	e-CF
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>• Define at least 3 research techniques</li> <li>• Outline at least 3 scenario characteristics</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>• Indicate how to manage an interview</li> <li>• Identify the aim of qualitative research within a Museum</li> <li>• Explain why personas are important</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>• Choose the data gathering techniques depending on prefixed requirements</li> <li>• Interpret data techniques</li> </ul> <p>Analysis level</p> <p>Synthesis level</p> <p>Evaluation level</p>

N. Competence	6
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Competence Title	Forecast development
Type	e-CF
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>• Identify the difference between prediction and foresight</li> <li>• Identify at least one technique used to perform qualitative forecasting analysis with museum staff on digital opportunities</li> <li>• Identify at least one technique used to perform quantitative forecasting analysis with museum staff on digital opportunities</li> <li>• List the steps and scope in the scanning process</li> <li>• Identify one method used to monitor change</li> <li>• Identify at least one new trend</li> <li>• Identify at least one method used to assess staff capacity for welcoming new digital tools</li> <li>• Identify at least three relevant metrics (KPI's) used to enable accurate decision making</li> <li>• Identify at least one technique used to understand audience needs and behaviours</li> <li>• Identify the difference between Digital communication and digital transformation</li> </ul> <p>Comprehension level</p> <p>Application level</p> <ul style="list-style-type: none"> <li>• Develop at least two scenarios, intersecting new and existing trends and potentially disruptive events</li> <li>• Create a stakeholders' list</li> </ul> <p>Analysis level</p> <p>Synthesis level</p> <ul style="list-style-type: none"> <li>• Collect at least two techniques used to assess user/technologies interaction</li> <li>• Plan one forecasting session</li> <li>• Plan at least two warm up exercises</li> </ul> <p>Evaluation level</p> <ul style="list-style-type: none"> <li>• Choose one evaluation tool used to monitor change</li> </ul>

N. Competence	7
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Competence Title	Relationship management
Type	e-CF
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>• Describe relationship management and its two main components in the business domain</li> <li>• Identify six interpersonal skills</li> <li>• List ten relationship management skills to enhance a business</li> <li>• Identify six fundamental competencies for a successful business relationship management</li> <li>• Identify the four types of customer relationship management</li> <li>• Discuss four objectives of customer relationship management</li> <li>• Give three examples of customer relationship management applications</li> <li>• Name three goals of customer relationship management</li> <li>• List seven steps of a museum’s complaints handling process</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>• Explain the four core disciplines of business relationship management</li> <li>• Describe the five tests of good customer relationship management strategy</li> <li>• Indicate six benefits of CRM in museums</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>• Sketch the business relationship management framework using the “House of BRM” approach</li> </ul> <p>Analysis level</p> <p>Synthesis level</p> <p>Evaluation level</p>

N. Competence	8
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Competence Title	ICT quality management
Type	e-CF
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>• Identify the benefits of quality improvement</li> <li>• Define a quality management system</li> <li>• Identify why IT projects fail</li> <li>• Identify the quality management principles</li> <li>• Define actions for organisation to improve their performance applying the principles</li> <li>• Identify the key benefits of ISO 9001:2015 standard</li> <li>• Identify the key areas of a Quality Management System based on the ISO 9001:2015 standard</li> <li>• Define the Capability Maturity Model Integration</li> <li>• Identify the CMMI maturity levels</li> <li>• Identify the critical elements of the ICT Quality Management implementation</li> <li>• Identify indicators for ICT Quality</li> <li>• Identify the critical aspects of ensuring ICT Quality</li> <li>• Identify the cornerstones of ICT Quality Auditing</li> </ul> <p>Comprehension level</p> <p>Application level</p> <p>Analysis level</p> <p>Synthesis level</p> <p>Evaluation level</p>

N. Competence	9
Competence	Product/ Service Planning



Title	
Type	e-CF
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>• Define the fundamental elements of Service Design</li> <li>• Define the fundamental elements of Project Management</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>• Understand the lifecycle of a service/product</li> <li>• Understand the role of Stakeholders in Project Management</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>• Apply a Project Plan</li> <li>• Apply a Network Planning</li> <li>• Apply a Project Execution</li> </ul> <p>Analysis level</p> <p>Synthesis level</p> <ul style="list-style-type: none"> <li>• Create a Network Planning</li> </ul> <p>Evaluation level</p>

N. Competence	10
Competence Title	Service Level Management



Type	e-CF
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>• Understand the Service Level Management process.</li> <li>• Recognize the need to apply it.</li> <li>• Recognize the implementation of Service Level Management levels for museum spaces.</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>• Separate of the needs of each level of the SLM separately.</li> <li>• Describe the needs of Service Level Management levels.</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>• Prepare a list of services and needs.</li> <li>• Identify services and needs.</li> <li>• Create of a template according to services and needs.</li> </ul> <p>Analysis level</p> <ul style="list-style-type: none"> <li>• Analyse the Service Level Management level based on needs of the organization and the client.</li> </ul> <p>Synthesis level</p> <ul style="list-style-type: none"> <li>• Understand the needs by utilizing the organization's services.</li> </ul> <p>Evaluation level</p> <ul style="list-style-type: none"> <li>• Evaluate Service Level Management models.</li> </ul>

N. Competence	11
Competence Title	Application Design
Type	e-CF



Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>•</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>• Identify the elements that can be used to model an application.</li> <li>• Describe one data structure that could represent a model.</li> <li>• Discuss how to validate models and applications.</li> <li>• Explain the basis of the framework presented.</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>• Construct a model of an application.</li> <li>• Apply a data structure to support the application design.</li> </ul> <p>Analysis level</p> <ul style="list-style-type: none"> <li>• Analyze a domain with the goal of creating a model of an application.</li> </ul> <p>Synthesis level</p> <p>Evaluation level</p>
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N. Competence	12
Competence Title	Sustainable Development
Type	e-CF



Learning outcomes	Knowledge level	<ul style="list-style-type: none"> <li>List the four phases for sustainable development's historical evolution</li> <li>Name the three major alternative concepts of sustainable future</li> <li>Recognize the ISO37120 indexes that match the UN SDGs</li> <li>Name examples of ICT that match the sustainability dimensions and SDGs</li> <li>Classify the stakeholders for sustainability assessment</li> </ul>
	Comprehension level	<ul style="list-style-type: none"> <li>Describe what sustainability stands for</li> <li>List the three sustainability dimensions and the five general indicator groups</li> <li>List the 17 UN SDGs</li> <li>List 3 EU sustainable strategies</li> <li>Describe what sustainability assessment stands for</li> <li>Describe how ICT matches the sustainability dimensions</li> <li>List the 5 environmental sustainability dimensions</li> </ul>
	Application level	<ul style="list-style-type: none"> <li>Measure the environmental impact of alternative ICTs</li> <li>Define ICT alternatives from the sustainability point of view</li> <li>Define ICT alternatives that meet sustainability dimensions</li> <li>List ICT sustainability criteria that can be applied in museums</li> </ul>
	Analysis level	
	Synthesis level	
	Evaluation level	

N. Competence	13
Competence Title	Application Development
Type	e-CF
Learning	Knowledge level



outcomes	<ul style="list-style-type: none"> <li>•</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>• Identify the activities of the software development life cycle;</li> <li>• Identify software development processes and their characteristics;</li> <li>• Identify languages and platforms that can be used for application development.</li> <li>• Identify different elements that can be used to develop an application with HTML;</li> <li>• Identify different visual styling that can be done with CSS.</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>• Construct a Web page using HTML and CSS according to a certain specification;</li> </ul> <p>Analysis level</p> <p>Synthesis level</p> <p>Evaluation level</p>
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N. Competence	14
Competence Title	Information Security Strategy Development
Type	e-CF
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>• Understand the family of standards ISO 27001</li> </ul>



	<ul style="list-style-type: none"> <li>• Understand the principal components of a management systems</li> <li>• Understand the principles of information security</li> <li>• Describe the requirements of the clauses 4 to 8 of ISO 27001</li> <li>• Describe implementation phases of ISO 27001 framework</li> <li>• Understand the principles of information security controls</li> <li>• Describe the components of monitoring and reviewing process on ISO 27001</li> </ul> <p>Comprehension level</p> <p>Application level</p> <ul style="list-style-type: none"> <li>• Choose the best control to apply and document the process</li> </ul> <p>Analysis level</p> <ul style="list-style-type: none"> <li>• Choose the best controls applied to a museum use case</li> </ul> <p>Synthesis level</p> <ul style="list-style-type: none"> <li>• Implement an ISMS complying with international standards (e.g. ISO 27001:2013)</li> </ul> <p>Evaluation level</p>
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N. Competence	15
Competence Title	Documentation Production
Type	e-CF
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>• Outline the two major achievements of a good documentation</li> <li>• Recognize the two main documentation types</li> </ul>



	<ul style="list-style-type: none"> <li>• Define process documentation</li> <li>• Describe the purpose of a product requirements document</li> <li>• Identify two broad information categories to describe an object of a heritage collection</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>• Describe four skills of a documentation specialist</li> <li>• Identify three types of document quality standards</li> <li>• Explain what each of the document production phases performs</li> <li>• Describe the four process documentation types</li> <li>• Distinguish between user and system documentation</li> <li>• Describe the three main processes when documenting heritage collections</li> <li>• Explain the two things documentation in museums focuses on</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>• Choose appropriate documentation components to address specific needs</li> <li>• Apply two writing style guidelines for good documentation</li> <li>• Document a museum object using the Artifacts Canada Data Dictionary</li> </ul> <p>Analysis level</p> <ul style="list-style-type: none"> <li>•</li> </ul> <p>Synthesis level</p> <ul style="list-style-type: none"> <li>•</li> </ul> <p>Evaluation level</p> <ul style="list-style-type: none"> <li>•</li> </ul>
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N. Competence	16
Competence Title	Testing
Type	e-CF
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>• Define six (6) quality parameters of a software product</li> <li>• Recognize the different rules of testing within the SDLC</li> </ul>



	<p>models</p> <ul style="list-style-type: none"> <li>Describe the concept of software testing</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>Identify five (5) goals of the defect management process</li> <li>Identify the five (5) test process phases</li> <li>Indicate the five (5) quality components that define usability</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>Choose when to use a certain usability method</li> </ul> <p>Analysis level</p> <ul style="list-style-type: none"> <li>Distinguish between different testing techniques</li> <li>Distinguish the formative and summative evaluation approaches</li> <li>Analyze a digital interactive installation using the M-dimensions Framework and the Heuristic Evaluation technique</li> </ul> <p>Synthesis level</p> <p>Evaluation level</p> <ul style="list-style-type: none"> <li>Value a digital interactive installation using the M-dimensions Framework and the Heuristic Evaluation technique</li> </ul>
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N. Competence	17
Competence Title	Education and Training Provision
Type	e-CF
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>Identify what are the existing generations</li> <li>Describe what are the learning profiles of each generation</li> <li>Identify some models of active learning methodologies</li> </ul>



	<ul style="list-style-type: none"> <li>Describe how models work in practice</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>Associate audience profile with learning methodologies</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>Implement class planning according to association between audience profile and learning methodologies.</li> </ul> <p>Analysis level</p> <p>Synthesis level</p> <p>Evaluation level</p>
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N. Competence	18
Competence Title	Service Delivery
Type	e-CF
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>To enumerate the main concepts of service management;</li> <li>To describe the main concepts of knowledge management;</li> <li>To define the main concepts of change management;</li> <li>To present and use code lines and baselines;</li> <li>To recall what an event, even types and event management</li> </ul>



	<p>process;</p> <ul style="list-style-type: none"> <li>• To define incidents and incident management process;</li> <li>• To describe user access management and key concepts related;</li> <li>• To list common operating activities;</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>• To understand ITIL lifecycle;</li> <li>• To explain main processes of service transition;</li> <li>• To explain main processes of service operation;</li> <li>• To recognize main processes of SLAs;</li> <li>• To understand the main concepts of configuration management;</li> <li>• To describe the basic concepts of release management;</li> <li>• To explain what an event, even types and event management process;</li> <li>• To describe incidents and incident management process;</li> <li>• To define user access management and key concepts related;</li> <li>• To recognize common operating activities;</li> <li>• To understand Software operation as a service in Cloud environments;</li> <li>• To comprehend key concepts of DevOps methodology</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>• To use a change request form;</li> </ul> <p>Analysis level</p> <ul style="list-style-type: none"> <li>• To analyse a system's version tree;</li> </ul> <p>Synthesis level</p> <ul style="list-style-type: none"> <li>•</li> </ul> <p>Evaluation level</p> <ul style="list-style-type: none"> <li>•</li> </ul>
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N. Competence	19
Competence Title	Solution Deployment
Type	e-CF
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>• Identify the different cloud service and cloud deployment</li> </ul>



	<p>models;</p> <ul style="list-style-type: none"> <li>Identify software packaging and distribution methods;</li> <li>Identify technologies and standards used for deploying software;</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>Explain the trade-offs between virtual machines and containers;</li> <li>Explain the relationship between deployment and software architecture;</li> </ul> <p>Application level</p> <p>Analysis level</p> <p>Synthesis level</p> <ul style="list-style-type: none"> <li>Design the deployment environment of a given system.</li> </ul> <p>Evaluation level</p>
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N. Competence	20
Competence Title	Information and Knowledge Management
Type	e-CF
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li></li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li></li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>Implement queries for finding paintings of an artist</li> </ul>



	<ul style="list-style-type: none"> <li>• Implement queries for counting Objects in a museum</li> <li>• Implement queries for counting nationality or gender of artists</li> <li>• Graph plots for culture or technique in a collection</li> <li>• Display the most visited museums in the world or in a country</li> <li>• Implement queries for counting portrait painting works per artist or per country of origin</li> </ul> <p>Analysis level</p> <ul style="list-style-type: none"> <li>• Categorize the artworks of each artist</li> <li>• Categorize the material used in artists' works</li> <li>• Categorize the movements in a collection or in artworks generally</li> <li>• Categorize the type of museums</li> <li>• Categorize the genre in artworks</li> <li>• Organize the Eurostat museum data for plotting information about museums per country or per city</li> </ul> <p>Synthesis level</p> <ul style="list-style-type: none"> <li>• Generate the locations of archaeological sites of a county</li> <li>• Generate the distribution of public art by place</li> <li>• Check the genre or depicted entities or material used or locations of an artist works</li> <li>• Generate a map with the museums of the world or a map with the museums/ archaeological sites of a specific country</li> </ul> <p>Evaluation level</p> <ul style="list-style-type: none"> <li>• Produce timelines with paintings produced per year by an artist</li> <li>• Produce recommendations for the top museums for each user</li> <li>• Produce timelines with museums creation in a country</li> <li>• Produce a map with monuments and other heritage items located around our location.</li> </ul>
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N. Competence	21
Competence Title	User Support
Type	e-CF
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>• Understand User Support.</li> <li>• Recognize the need to apply it to improve services.</li> <li>• Recognize its application for museum spaces.</li> </ul>



	<p>Comprehension level</p> <ul style="list-style-type: none"> <li>• Separate needs for better utilization.</li> <li>• Describe user needs.</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>• Determine users' needs for creating a strategy.</li> </ul> <p>Analysis level</p> <ul style="list-style-type: none"> <li>• Analyse User Support level based on the needs of the organization and the client.</li> </ul> <p>Synthesis level</p> <ul style="list-style-type: none"> <li>• Create a User Support model for the museum spaces needs</li> </ul> <p>Evaluation level</p> <ul style="list-style-type: none"> <li>• Evaluate corresponding User Support models</li> </ul>
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N. Competence	22
Competence Title	Change Support
Type	e-CF
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>• Understand the Change Support Process.</li> <li>• Recognize the need to apply Change Support.</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>• Separate the needs for the initial design of Change Support.</li> <li>• Describe the Change Support process.</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>• Determine the original design to create a model.</li> </ul>



	<p>Analysis level</p> <ul style="list-style-type: none"> <li>Analyse the Change Support level based on the needs of the organization and the customer.</li> </ul> <p>Synthesis level</p> <ul style="list-style-type: none"> <li>Create a Change Support model for the needs of museum spaces.</li> </ul> <p>Evaluation level</p> <ul style="list-style-type: none"> <li>Evaluate the Assessment of Matching other Change Support Models.</li> </ul>
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N. Competence	23
Competence Title	Purchasing
Type	e-CF
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>List the 4 basic principles of procurement</li> <li>Name the 5 basic procurement stages according to ITIL</li> <li>Describe the procurement process/cycle</li> <li>Name the 6 procurement procedures available</li> <li>Define the requirements (technical and other) of a contract</li> <li>Name the 5 stages of bid evaluation</li> <li>Define the basic structure of a contract</li> <li>Identify Green and ICT procurement issues</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>Differentiate between purchasing and procurement</li> </ul>



	<p>Application level</p> <ul style="list-style-type: none"> <li>• Apply contract award methods</li> </ul> <p>Analysis level</p> <ul style="list-style-type: none"> <li>• Debate on “make, lease or buy” options</li> </ul> <p>Synthesis level</p> <ul style="list-style-type: none"> <li>• Establish tenderer evaluation criteria</li> <li>• Formulate contract performance clauses</li> </ul> <p>Evaluation level</p> <ul style="list-style-type: none"> <li>• Evaluate contract performance</li> <li>• Appraise good practices paradigms in ICT procurement</li> <li>• Identify and evaluate the risk factors involved in the procurement process.</li> </ul>
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N. Competence	24
Competence Title	Problem Management
Type	e-CF
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>• Recall the definitions of the key concepts of IT service management</li> <li>• Name the service lifecycle stages</li> <li>• Identify the types of problem management</li> <li>• Outline the main types of data a typical problem record includes</li> <li>• Identify the basic factors problem prioritization is based on</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>• Explain what problem management means</li> <li>• Distinguish problem management from incident management</li> <li>• Recognize the outcomes of problem management</li> </ul>



	<ul style="list-style-type: none"> <li>• Describe the problem management phases</li> <li>• Indicate where workarounds are documented</li> <li>• Explain the main target of root cause analysis</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>• Perform problem analysis using the Kepner - Tregoe method</li> </ul> <p>Analysis level</p> <ul style="list-style-type: none"> <li>• Choose the most appropriate problem analysis technique in particular circumstances</li> </ul> <p>Synthesis level</p> <p>Evaluation level</p>
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N. Competence	25
Competence Title	Process Improvement
Type	e-CF
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>• Understand business planning in the digital era</li> <li>• Identify at least two frameworks or approaches dedicated to business process management</li> <li>• Define museum processes and sub processes integrated with ICT-within-the-process characteristics</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>• Distinguish between standard operating procedures and non-documented operating procedures or between quality system / accreditation schemes and non-well performed job / work inconsistency</li> <li>• Describe the nature of Digital Strategy Operating Processes and associated activities in your own words</li> </ul>



	<p>Application level</p> <ul style="list-style-type: none"> <li>• Prepare a Standard Operating Procedure model for at least one museum process</li> <li>• Prepare of an Executive Summary examining the transformative potential of digital and social media for at least one museum process</li> <li>• Create an assessment checklist reflecting continuous review and improvement appraisal of a performance area framework (i.e. Collections Management, Exhibition, etc.)</li> </ul> <p>Analysis level</p> <ul style="list-style-type: none"> <li>• Differentiate between Museum Digital Strategy and Digital Asset Management framework.</li> <li>• Arrange benchmarks to be used as part of an organisation’s planning cycle to assess and plan an activity and measure progress against those plans.</li> </ul> <p>Synthesis level</p> <ul style="list-style-type: none"> <li>• Design management policy of personal data.</li> <li>• Create accreditation schemes with a purpose to support the organization performance and planning.</li> </ul> <p>Evaluation level</p> <ul style="list-style-type: none"> <li>• Criticize the organization business processes model.</li> </ul>
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N. Competence	26
Competence Title	ICT Quality Strategy Development
Type	e-CF
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>• Describe principles of ICT quality management.</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>• Interpreting the performance of online communication applications.</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>• Implementing indicators set for formulate objectives for service management, application and process quality in online communication.</li> </ul>



	<p>Analysis level</p> <ul style="list-style-type: none"> <li>Assessing the performance of online communication applications.</li> </ul> <p>Synthesis level</p> <ul style="list-style-type: none"> <li>Structuring the quality management of online communication.</li> </ul> <p>Evaluation level</p>
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N. Competence	27
Competence Title	Risk management
Type	e-CF
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>Recall the definitions of the key concepts of Risk Management</li> <li>Identify the types of risks</li> <li>Outline the main types of information a typical risk mitigation plan includes</li> <li>Identify the basic factors risk analysis is based upon</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>Explain what risk management means</li> <li>Distinguish quality from quantity risk categorization</li> <li>Recognize the outcomes of risk mitigation</li> <li>Describe the risk categorization phases</li> <li>Indicate how risks are documented</li> <li>Explain the main goals of cause and cause and effect analysis</li> </ul> <p>Application level</p>



	<ul style="list-style-type: none"> <li>• Perform risk categorization using the Pareto Analysis</li> <li>• Perform cause and effect analysis using the Ishikawa diagram</li> </ul> <p>Analysis level</p> <ul style="list-style-type: none"> <li>• Choose the most appropriate risk analysis techniques in particular circumstances</li> </ul> <p>Synthesis level</p> <p>Evaluation level</p>
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N. Competence	28
Competence Title	Digital Marketing
Type	e-CF
Learning outcomes	<p>Knowledge level</p> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>• To clarify the scope of digital marketing and the elements contained within a digital marketing plan</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>• To develop an online community</li> <li>• To select relevant content to post online</li> <li>• To choose at least 2 different social platforms to use for different goals</li> <li>• To select at least 2 appropriate tools according the adopted channels</li> </ul> <p>Analysis level</p> <ul style="list-style-type: none"> <li>• To compare at least 2 different marketing tools</li> </ul>



	<p>Synthesis level</p> <ul style="list-style-type: none"> <li>• To create a digital marketing strategy including setting Key Performance Indicators (KPIs)</li> <li>• To develop 3 different KPIs</li> </ul> <p>Evaluation level</p> <ul style="list-style-type: none"> <li>• To measure the success of digital activity including social media activity.</li> </ul>
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N. Competence	29
Competence Title	Business Change Management
Type	e-CF
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>• Identify at least three strategic options</li> <li>• Identify at least three customer's segmentation</li> <li>• Identify at least three museum positioning</li> <li>• Identify at least three trends of branding of Visitors destinations</li> <li>• Identify the use of relationship marketing on museum</li> <li>• Identify the experience marketing on museum</li> <li>• Identify the marketing mix on museum</li> <li>• Identify the branding and brand equity on museum</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>• Classify the needs of museum strategic marketing.</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>• Construct an audience development strategy.</li> <li>• Choose audience and visitors according to segmentation and</li> </ul>



	<p>positioning</p> <ul style="list-style-type: none"> <li>Choose best options to ensure good experiences and authenticity to visitors</li> </ul> <p>Analysis level</p> <p>Synthesis level</p> <ul style="list-style-type: none"> <li>Plan long-term strategic relations with all the museum stakeholders</li> <li>Design innovative museum marketing mix campaigns</li> <li>Design interactive and innovative solutions that provide meaningful experiences for all types of museum audiences.</li> </ul> <p>Evaluation level</p>
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### 7.3.2 Digital competence (DigComp)

N. Competence	1
Competence Title	Browsing, searching and filtering data, information and digital content
Type	DigComp
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>Describe the value of information and data analytics in the digital era</li> <li>Identify at least two (2) good practices on the use of digital content in Museums</li> <li>Define strategies and goals on data browsing research and information analysis</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>Convert knowledge into analytical thinking in order to select accurate data in the age of information</li> <li>Identify efficient use of internet tools for superior research collection methods</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>Develop a museum policy on data usage and extraction (set rules and goals compatible with targets and legislation)</li> <li>Prepare a case study report on museum rethinking using</li> </ul>



	<p>information retrieved online</p> <ul style="list-style-type: none"> <li>• Apply a copyright and GDPR compliant policy on information usage and data collection</li> <li>• Develop digital content using resources from the public domain and free stock material</li> </ul> <p>Analysis level</p> <ul style="list-style-type: none"> <li>• Identify capacity-building on open source applications and tools for digital content and information management and analysis</li> </ul> <p>Synthesis level</p> <p>Evaluation level</p>
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N. Competence	2
Competence Title	Managing data, information and digital content
Type	DigComp
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>• Define data, information, digital content, metadata</li> <li>• Examine the added value of Software</li> <li>• Examine the use of Software Applications regarding data, information and digital content management</li> <li>• Define the web threats and the necessity to face them</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>• Identify the web threats</li> <li>• Estimate the risk of data loss or corruption</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>• Employ effective methods of data archive</li> <li>• Explore effective methods of managing information</li> <li>• Use effective methods of retrieving information</li> <li>• Utilize effective methods of preservation of digital content</li> </ul> <p>Analysis level</p> <ul style="list-style-type: none"> <li>• Analyze web threats</li> <li>• Apply effective management of data, information and digital</li> </ul>



	<p>content of museum sector</p> <p>Synthesis level</p> <p>Evaluation level</p>
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N. Competence	3
Competence Title	Evaluating data, information and digital content
Type	DigComp
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>• Identify two technologies for organizing information.</li> <li>• List the best method for digital content assessment.</li> <li>• Present four steps for evaluating information.</li> <li>• Name four criteria when evaluating internet sources.</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>• Indicate the best strategy in searching data resources.</li> <li>• Select two principles on data resources Management.</li> <li>• Describe two digital tools for measuring a museum’s popularity.</li> <li>• Identify three trends in analytics.</li> <li>• Indicate the four key areas of SEO that a site owner need to take into consideration.</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>• Prepare at least five questions in evaluating the credibility of an information source.</li> <li>• Find one metrics’ report of a well – known museum.</li> </ul> <p>Analysis level</p>



	Synthesis level Evaluation level
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N. Competence	4
Competence Title	Identifying needs and technological responses
Type	DigComp
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>• Identify the key steps of a needs assessment procedure.</li> <li>• List at least two emerging technologies per main museum function.</li> <li>• Define the main technology characteristics required to cover common museum professionals' needs.</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>• Select a needs assessment model to identify the museum professional needs.</li> <li>• Recognize technologies embedding particular characteristics covering museum professionals' needs.</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>• Choose the appropriate technologies to solve museum professionals' needs.</li> </ul> <p>Analysis level</p> <p>Synthesis level</p> <p>Evaluation level</p>



N. Competence	5
Competence Title	Netiquette
Type	DigComp
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>Describe what netiquette is.</li> <li>Recall the importance of rules when interacting on the Internet.</li> <li>Identify at least five rules for communicating on the Internet.</li> <li>Describe how the cultural and generational diversity implicate the online communication.</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>Illustrate at least three examples of different environments and audiences.</li> <li>Illustrate at least three cases of poor online behaviour.</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>Choose an effective communication strategy considering the context and regarding the audience and the digital environment.</li> </ul> <p>Analysis level</p> <ul style="list-style-type: none"> <li>Distinguish between good and poor netiquette practices.</li> </ul> <p>Synthesis level</p>



	Evaluation level
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N. Competence	6
Competence Title	Innovating and creatively using technology
Type	DigComp
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>• Identify two Information technology and creative practices (ITCP).</li> <li>• Outline the meaning of Cultural Informatics.</li> <li>• Present two examples of creative digital media.</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>• Indicate three challenges in cross –disciplinary collaborations.</li> <li>• Select five ITCP Technologies used in museums.</li> <li>• Describe two different types of virtual museums.</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>• Choose two examples of digital communication technology in culture.</li> <li>• Find three mobile applications designed for museums.</li> </ul> <p>Analysis level</p> <p>Synthesis level</p> <p>Evaluation level</p>



N. Competence	7
Competence Title	Developing digital content
Type	DigComp
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>Recognize at least 3 sections of a webpage</li> <li>Describe at least 2 ways of communications through social media channels</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>Associate the information from a list in at least 3 web pages</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>Schedule the actions to take to create a video</li> </ul> <p>Analysis level</p> <p>Synthesis level</p> <p>Evaluation level</p> <ul style="list-style-type: none"> <li>Evaluate at least 3 different type of visuals</li> </ul>



N. Competence	8
Competence Title	Collaborating through digital technologies
Type	DigComp
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>Outline at least 3 digital tools for collaborating</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>Identify at least 2 typical human behaviour while collaborating within a team</li> <li>Indicate at least 1 technique to promote collaboration within a museum</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>Choose at least 2 appropriate features depending on the prefixed digital need.</li> </ul> <p>Analysis level</p> <p>Synthesis level</p> <p>Evaluation level</p>



N. Competence	9
Competence Title	Protecting personal data and privacy
Type	DigComp
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>• Recognize the four different types of stakeholders in data protection</li> <li>• Identify the seven data protection principles according to GDPR</li> <li>• Describe the four data security domains</li> <li>• Describe the four data protection functional components</li> <li>• Recognize the eight rights of data subjects according to GDPR</li> <li>• Outline five fundamental steps of a generic data protection strategy</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>• Explain the main distinctions of data privacy and data protection</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>• Apply basic measures to harmonize their organization with the GDPR requirements</li> <li>• Choose appropriate actions to comply with data protection regulations in specific occasions</li> </ul> <p>Analysis level</p> <p>Synthesis level</p> <p>Evaluation level</p>



N. Competence	10
Competence Title	Identifying digital competences gaps
Type	DigComp
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>List the five areas of digital competence according to the DigComp</li> <li>Name the two components of e-learning</li> <li>Describe three ways that e-learning is delivered</li> <li>Recognize three benefits of e-learning</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>Describe what digital competence stands for</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>Demonstrate digital competence gaps through online tools</li> <li>Choose appropriate e-learning solutions for self-development</li> </ul> <p>Analysis level</p> <ul style="list-style-type: none"> <li></li> </ul> <p>Synthesis level</p> <ul style="list-style-type: none"> <li></li> </ul> <p>Evaluation level</p> <ul style="list-style-type: none"> <li></li> </ul>



N. Competence	11
Competence Title	Protecting personal data and privacy (specialisation course)
Type	DigComp
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>• Understand privacy policies and data protection regulation</li> <li>• Identify principles, rights and obligations in reference with a cultural organization approach to privacy issues and processing personal data</li> <li>• Define the appropriate technical and organisational measures to meet the requirements of accountability and to demonstrate the organization compliance with GDPR</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>• Distinguish between exercising overall control of the purpose and means of the data processing and making technical decisions about data processing and administration</li> <li>• Describe the role and responsibilities of data controllers and processors in relation to the personal data the organization is holding</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>• 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</li> <li>• Prepare your organization detailed privacy notice in relation to information collected about visitors</li> </ul> <p>Analysis level</p> <ul style="list-style-type: none"> <li>• Undertake information audit on what data (and the types of personal data) the organization holds.</li> </ul> <p>Synthesis level</p> <ul style="list-style-type: none"> <li>• Classify GDPR obligations to be applied to the organization in relation to personal data</li> </ul>



	<p>Evaluation level</p> <ul style="list-style-type: none"> <li>Decide when a Data Protection Impact Assessment (DPIA) is required.</li> </ul>
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N. Competence	12
Competence Title	Managing digital identity
Type	DigComp
Learning outcomes	<p>Knowledge level</p> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>Indicate what is digital reputation</li> <li>Indicate at least two steps that can help build and maintain your museum digital reputation</li> </ul> <p>Application level</p> <p>Analysis level</p> <ul style="list-style-type: none"> <li>Identify the most important outcome of building and maintaining your museum digital reputation</li> <li>Analyse Trip Advisor reviews about a museum</li> </ul> <p>Synthesis level</p> <p>Evaluation level</p>

N. Competence	13
Competence Title	Copyright and licenses
Type	DigComp
Learning outcomes	<p>Knowledge level</p> <p>Comprehension level</p> <p>Application level</p> <p>Analysis level</p> <ul style="list-style-type: none"> <li>Identify in the hub site if there are, and where are the terms of use and the policies</li> </ul>



	<ul style="list-style-type: none"> <li>Examine the presence and type of information of the online captions of the images of the museum site</li> </ul> <p>Synthesis level</p> <p>Evaluation level</p>
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N. Competence	14
Competence Title	Programming
Type	DigComp
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>Identify the fundamentals of programming</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>Explain the main difference between client and server side</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>Use 3 elements of CSS to do specific things in more than one HTML page</li> </ul> <p>Analysis level</p> <ul style="list-style-type: none"> <li>Illustrate the 5 basic elements of an HTML page structure</li> </ul> <p>Synthesis level</p> <p>Evaluation level</p>



N. Competence	15
Competence Title	Solving technical problems
Type	DigComp
Learning outcomes	<p>Knowledge level</p> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>• Describe principles and concepts of problem solving;</li> <li>• Identify different methods and tools that could be used to problem solving;</li> <li>• Explain the different problem solving methods and techniques;</li> <li>• Identify the typical problems;</li> <li>• Identify different approaches to solve a problem;</li> <li>• Identify problem, causes, consequences and actions</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>• Employ the different problem solving methods and techniques;</li> <li>• Construct a problem tree;</li> </ul> <p>Analysis level</p> <ul style="list-style-type: none"> <li>• Create a problem tree scheme;</li> </ul> <p>Synthesis level</p> <ul style="list-style-type: none"> <li>• Evaluate the relevance of a problem and respective causes and consequences;</li> </ul> <p>Evaluation level</p>

## 7.4 Transversal competences (21<sup>st</sup> century skills)

N. Competence	1
Competence Title	Team working
Type	Transferable
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>• Identify the main characteristics of a working team.</li> <li>• Identify the key functional aspects of effective communication.</li> <li>• Identify at least three norms of a working team.</li> <li>• Identify the main characteristics of a working team.</li> <li>• Identify the different team roles.</li> </ul> <p>Comprehension level</p> <p>Application level</p> <ul style="list-style-type: none"> <li>• Choose adequate communication skills in order to promote teamwork and collaboration.</li> <li>• Articulate different team rules and roles and the significance of these differences for team working functioning.</li> </ul> <p>Analysis level</p> <p>Synthesis level</p> <p>Evaluation level</p>

N. Competence	2
Competence Title	Creative thinking
Type	Transferable
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>Identify at least three attributes of a creative thinker</li> <li>Identify at least three facts that contradict popular perceptions of how creativity works</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>Indicate at least three strategies that stimulate creative thinking</li> <li>Indicate two daily work situations creative thinking is a useful (or valuable) skill</li> </ul> <p>Application level</p> <p>Analysis level</p> <ul style="list-style-type: none"> <li>Identify the most important outcome of creative thinking skills in museum work</li> <li>Infer two of the most popular perception that limits creative thinking</li> </ul> <p>Synthesis level</p> <p>Evaluation level</p>



N. Competence	3
Competence Title	Leadership and change facilitator
Type	Transferable
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>• Identify the core components of the emotional intelligence model</li> <li>• Identify at least one case study in which effective, inclusive leadership initiated a digital transformation plan</li> <li>• Identify the main skills, values and competencies for leadership</li> <li>• Identify the main difference between management and leadership</li> <li>• Identify at least 3 characteristics of leadership</li> <li>• Recognise two different approaches to storytelling as relating to leadership</li> <li>• Identify at least 3 skills that storytelling can help you to build</li> <li>• Identify at least one storytelling technique for team building</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>• Recognise 3 characteristics of inclusive leadership</li> <li>• Recognise at least 3 elements of recent leadership models</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>• Choose at least one storytelling exercise to develop leadership skills</li> </ul> <p>Analysis level</p> <ul style="list-style-type: none"> <li>• Formulate appropriate questions</li> </ul> <p>Synthesis level</p> <p>Evaluation level</p>

N. Competence	4
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Competence Title	Communication skills
Type	Transferable
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>• Define five key elements of communication</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>• Indicate two techniques to manage a conversation</li> <li>• Identify at least 3 elements of nonverbal communication</li> <li>• Identify at least 3 positive attitudes in a conversation</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>• Interpret two body language signs</li> <li>• Interpret two feelings from a team conversation</li> </ul> <p>Analysis level</p> <p>Synthesis level</p> <p>Evaluation level</p>

N. Competence	5
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Competence Title	Time management
Type	Transferable
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>• Understand time management in the digital era</li> <li>• Identify at least two (2) different time management Software applications</li> <li>• Define time scheduling and understand its different dimensions</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>• Distinguish between cost and non-cost related time fractions in project implementation</li> <li>• Describe the nature of Milestones and time dependencies and typologies in your own words</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>• Prepare a list of Tasks by time and priority</li> <li>• Prepare of a WBS</li> <li>• Create an automated Timesheet</li> </ul> <p>Analysis level</p> <p>Synthesis level</p> <p>Evaluation level</p>

N. Competence	6
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Competence Title	Management skills
Type	Transferable
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>Define two current actions of a digital strategy according to the interview</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>Indicate two possibilities for people who use the Rijksstudio platform</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>Apply three principles of the digital strategy explored with Inspiring People project</li> </ul> <p>Analysis level</p> <ul style="list-style-type: none"> <li>Analyze one of the possibilities offered by digital experience at Tate Modern gallery</li> <li>Arrange a digital platform</li> </ul> <p>Synthesis level</p> <p>Evaluation level</p> <ul style="list-style-type: none"> <li>Decide the main steps for the creation of a digital collection</li> </ul>

N. Competence	7
Competence	Influence/ persuasion skills



Title	
Type	Transferable
Learning outcomes	<p>Knowledge level</p> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>• Identify three principles of influence/persuasion</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>• Indicate three strategies that stimulate influence</li> </ul> <p>Analysis level</p> <ul style="list-style-type: none"> <li>• Indicate two daily work situations where persuasion is a useful and a valuable skill</li> </ul> <p>Synthesis level</p> <ul style="list-style-type: none"> <li>• Identify the most important outcome of influence and persuasion skills in museum work</li> </ul> <p>Evaluation level</p>

N. Competence	8
Competence	Mentoring/ coaching skills



Title	
Type	Transferable
Learning outcomes	<p>Knowledge level</p> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>• Describe what mentoring is in 10 words</li> <li>• Describe the coaching relationship in 10 words</li> <li>• Recognize differences and similarities between mentoring and coaching</li> </ul> <p>Application level</p> <p>Analysis level</p> <ul style="list-style-type: none"> <li>• Identify 1 specific moment when you were 'mentorable'</li> <li>• Identify at least 5 traits of a great mentor</li> <li>• Identify at least 5 traits of a successful coach</li> <li>• Illustrate a mentoring programme for your existing or ideal work place.</li> <li>• Identify 3 soft skills that a mentee can develop through a mentoring relationship</li> </ul> <p>Synthesis level</p> <p>Evaluation level</p> <ul style="list-style-type: none"> <li>• Evaluate 3 benefits of being in a mentoring programme both for the mentor and the mentee.</li> </ul>

N. Competence	9
Competence Title	Integrity/ ethical



Type	Transferable
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>Identify when was published the first Code of Ethics for museum workers</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>Recognize what makes ICOM Code of Ethics distinctive from other codes of ethics in the museum sector</li> <li>Select at least three ethical issues in the museum sector</li> <li>Indicate at least two ethical challenges for museums in the digital environment</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li></li> </ul> <p>Analysis level</p> <ul style="list-style-type: none"> <li>Identify the most important outcome of using professional codes of ethics as reference tools</li> <li>Analyse ethical dilemmas in action with the help of the ICOM Code of Ethics</li> </ul> <p>Synthesis level</p> <p>Evaluation level</p>

N. Competence	10
Competence Title	Decision making



Type	Transferable
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>Define the dynamics of decision-making in groups;</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>Indicate two decision-making theories;</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>Apply an analytic approach;</li> </ul> <p>Analysis level</p> <ul style="list-style-type: none"> <li>Arrange the data analysis.</li> </ul> <p>Synthesis level</p> <ul style="list-style-type: none"> <li>Integrate to the already existing possibilities, two possibilities of use of the images</li> </ul> <p>Evaluation level</p> <ul style="list-style-type: none"> <li>Decide three actions to apply the data's outcomes</li> <li>Evaluate the application of the data analysis introducing two initiatives</li> <li>Predict two possible scenarios of interactions of users on the website</li> </ul>

N. Competence	11
Competence Title	Fact-driven



Type	Transferable
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>• Understand technology as enabler of business process innovation</li> <li>• Identify at least two drivers of museum innovation and digital transformation</li> <li>• Define reasons to automate and benefits an organization that embraces BPA could have</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>• Distinguish between process innovation and process improvement which both operate concurrently in a cycle of alteration for a single process</li> <li>• Describe a meaningful performance evaluation process</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>• Prepare a Data Envelopment Analysis exercise</li> <li>• Prepare a performance evaluation for a cultural organization</li> <li>• Create a performance review as a crucial part of the ongoing dialogue between managers and employees - An evaluation process for managers (employee evaluation)</li> </ul> <p>Analysis level</p> <ul style="list-style-type: none"> <li>• Differentiate between technology driven business models and human intelligence solutions.</li> </ul> <p>Synthesis level</p> <ul style="list-style-type: none"> <li>• Integrate performance and evaluation techniques in organization management.</li> </ul> <p>Evaluation level</p> <ul style="list-style-type: none"> <li>• Recommend Key Performance Indicators for the evaluation of organizational efficiency.</li> </ul>

N. Competence	12
Competence Title	Sense of initiative and entrepreneurship



Type	Transferable
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>• Know the meaning of sense of initiative and entrepreneurship within the lifelong learning framework.</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>• Describe the broad concept of entrepreneurship for the cultural sector in 10 words.</li> <li>• Identify three characteristics of museum entrepreneurship.</li> <li>• Recognize similarities and differences between entrepreneurship for profit and non-profit organizations.</li> <li>• Identify the main characteristics of digital entrepreneurship</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>• Apply evidence based approaches for improving their entrepreneurship competences.</li> </ul> <p>Analysis level</p> <ul style="list-style-type: none"> <li>• Analyze at least 3 competences from each of the areas of the EntreComp</li> </ul> <p>Synthesis level</p> <ul style="list-style-type: none"> <li>• Summarize the rationale and scope of the Entrepreneurship Competence Framework.</li> <li>• Manage their resilience at their work environment.</li> <li>• Combine digital and entrepreneurial competences for the cultural sector</li> </ul> <p>Evaluation level</p> <ul style="list-style-type: none"> <li>• Evaluate from the 15 competences of the EntreComp the most suitable according to their needs for professional and personal development</li> </ul>

N. Competence	13
Competence Title	Analyze and synthesize information
Type	Transferable



Learning outcomes	Knowledge level
	<ul style="list-style-type: none"> <li>Identify three situations in museum work that demand the ability to analyse and synthesize information</li> <li>List three tools that can be useful when analysing information</li> </ul>
	Comprehension level
	<ul style="list-style-type: none"> <li>Select at least three domains where the ability to analyse and synthesize information is often related</li> <li>Indicate at least two steps that can help making informed decisions and building your critical and creative museum practice</li> </ul>
	Application level
	Analysis level
	<ul style="list-style-type: none"> <li>Identify the most important outcome of analysing and synthesizing information</li> <li>Analyse an article</li> </ul>
	Synthesis level
	Evaluation level

N. Competence	14
Competence Title	Interpersonal skills
Type	Transferable
Learning	Knowledge level



outcomes	<ul style="list-style-type: none"> <li>• Identify two main types of interpersonal skills</li> </ul> <p>Comprehension level</p> <p>Application level</p> <ul style="list-style-type: none"> <li>• Indicate three strategies that develop interpersonal skills</li> </ul> <p>Analysis level</p> <ul style="list-style-type: none"> <li>• Indicate two online work attitudes you must have online, according to best practices of your interpersonal skills</li> </ul> <p>Synthesis level</p> <p>Evaluation level</p>
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N. Competence	15
Competence Title	Networking skills
Type	Transferable
Learning outcomes	Knowledge level



	<p>Comprehension level</p> <p>Application level</p> <p>Analysis level</p> <ul style="list-style-type: none"> <li>• To illustrate networking in the cultural sector, specifically in museums, as a means of audience engagement</li> <li>• To examine networking for museums as a means of digital development</li> </ul> <p>Synthesis level</p> <ul style="list-style-type: none"> <li>• To construct a professional network.</li> </ul> <p>Evaluation level</p>
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N. Competence	16
Competence Title	Negotiation skills
Type	Transferable
Learning outcomes	Knowledge level



	<p>Comprehension level</p> <ul style="list-style-type: none"> <li>• Describe at least three dimensions of a negotiation strategy</li> <li>• Describe the four elements of the mutual gain approach</li> <li>• Identify at least three elements of psychological influence in negotiation</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>• Apply at least one tool to use to prepare for a negotiation strategy</li> <li>• Demonstrate how to prepare for the three fundamental dimensions of any negotiation: People, Problem (substance) and Process</li> </ul> <p>Analysis level</p> <ul style="list-style-type: none"> <li>• Analyze at least two successful factors of the two museums analysed</li> <li>• Identify three soft skills that you need in a negotiation process</li> <li>• Analyze at least one typical factor of failure in negotiation and develop proper responses</li> </ul> <p>Synthesis level</p> <p>Evaluation level</p> <ul style="list-style-type: none"> <li>• Evaluate one key element of a successful negotiation strategy</li> <li>• Conclude at least three reasons why museums should become places of negotiation.</li> </ul>
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N. Competence	17
Competence Title	Active listening skills
Type	Transferable
Learning outcomes	Knowledge level Comprehension level



	<ul style="list-style-type: none"> <li>• Describe at least 1 element of active listening</li> <li>• Differentiate between active and passive listening</li> <li>• Describe one methodology to creatively listening to your audiences</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>• Discover the principle of Imitative decoding</li> <li>• Illustrate the principle of active empathic listening</li> <li>• Illustrate one reason how active listening can diffuse conflict in workplaces</li> </ul> <p>Analysis level</p> <ul style="list-style-type: none"> <li>• Identify 1 element of “non-functional” listening</li> <li>• Experiment active listening within the workplace</li> </ul> <p>Synthesis level</p> <p>Evaluation level</p> <ul style="list-style-type: none"> <li>• Argue the importance of active listening</li> </ul>
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N. Competence	18
Competence Title	Resilience
Type	Transferable
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>• Identify the resilience definition</li> </ul> <p>Comprehension level</p>



	<ul style="list-style-type: none"> <li>Identify two principles of resilience</li> </ul> <p>Application level</p> <ul style="list-style-type: none"> <li>Indicate two strategies that stimulate resilience</li> </ul> <p>Analysis level</p> <ul style="list-style-type: none"> <li>Indicate two daily work situations where resilience is a useful and a valuable skill</li> </ul> <p>Synthesis level</p> <ul style="list-style-type: none"> <li>Identify the most important outcome of resilience use in museum work</li> </ul> <p>Evaluation level</p>
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N. Competence	19
Competence Title	Mediation skills
Type	Transferable
Learning outcomes	<p>Knowledge level</p> <ul style="list-style-type: none"> <li>Identify the main characteristics of mediation.</li> </ul> <p>Comprehension level</p> <ul style="list-style-type: none"> <li>Identify the mediation mission in museums about digital</li> </ul>



	<p>collections.</p> <p>Application level</p> <ul style="list-style-type: none"> <li>Identify the role of mediation using social media and social networking in museums</li> </ul> <p>Analysis level</p> <ul style="list-style-type: none"> <li>Identify the main activities of the mediator using social networks.</li> </ul> <p>Synthesis level</p> <p>Evaluation level</p>
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N. Competence	20
Competence Title	Storytelling
Type	Transferable
Learning outcomes	<p>Knowledge level</p> <p>Comprehension level</p> <p>Application level</p> <p>Analysis level</p> <ul style="list-style-type: none"> <li>Compare museums using storytelling in It, Gr and Pt</li> </ul>



	<ul style="list-style-type: none"><li>• Identify 3 features for museums to be agent of change</li></ul> <p>Synthesis level</p> <ul style="list-style-type: none"><li>• Propose a strategy on storytelling</li></ul> <p>Evaluation level</p> <ul style="list-style-type: none"><li>• Compare strategies adopted by museums embracing storytelling for audience engagement</li><li>• Compare strategies adopted by museums embracing storytelling for audience engagement.</li></ul>
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