CREDEX

Credentials for Creatives

Report of the State of the Art of Micro-Credentials Frameworks (D3.1)

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INTRODUCTION

1. Context of WP3 within the CREDEX project and objectives of the report

The CREDEX project ("Cultural and Creative Industries Experimental Policy for Developing Micro-credentials") aims to co-design and test innovative models for the establishment, assessment, and improvement of micro-credential frameworks tailored to the needs of Cultural and Creative Industries (CCIs). Within this framework, Work Package 3 (WP3) plays a crucial role by consolidating the state of the art in micro-credentials, identifying best practices, and analysing policy, regulatory, and quality assurance frameworks across different European contexts. WP3 contributes directly to the broader objectives of CREDEX by providing a comprehensive evidence base that supports the design of guidelines, tools, and policy experimentation in subsequent work packages.

The primary objectives of this report are to:

- Map and compare existing definitions, frameworks, and policies on micro-credentials at EU and national levels.
- Assess the applicability and potential of micro-credentials in the CCI ecosystem, including benefits, challenges, and sector-specific skills needs.
- Provide recommendations for improving the design, recognition, and adoption of micro-credentials to strengthen employability, lifelong learning, and resilience within CCIs.

2. Methodology for data collection and analysis

The research conducted in WP3 relies on a mixed-methods approach combining qualitative and quantitative evidence. Four main methodologies have been employed:

- Desk research: systematic review of existing literature, EU-level documents, and national policy frameworks relevant to micro-credentials, with a focus on Italy, Ireland, and other European countries.
- Expert interviews: To maximise policy insight and sectoral diversity, the partnership successfully conducted a total of 29 expert interviews across the six partner countries. These consultations with policymakers, education providers, and industry representatives provided valuable insights on current practices, challenges, and opportunities.
- Surveys: The targeted surveys, designed to systematically collect quantitative and qualitative data on the adoption, value, and recognition of micro-credentials by CCI stakeholders, yielded a total of 16 responses. Respondents included CCI professionals, training providers, and other relevant stakeholders, ensuring input from the target groups defined in the methodological templates.[1]
- Case studies: in-depth analysis of selected initiatives and best practices, highlighting their transferability, impact on learners and employers, and potential scalability across CCIs.

This methodological combination ensures a balanced perspective that integrates both academic and policy-oriented insights with the lived experience of professionals and stakeholders in the sector.

[1] While the targeted surveys were deployed to systematically collect data on the adoption, value, and recognition of micro-credentials, the CREDEX partnership experienced difficulties in engaging stakeholders to complete the survey, potentially due to the technical nature of the questions or a general lack of awareness. It was recognised that expert interviews and case studies, engaging directly with individual stakeholders, proved a more effective format for collecting detailed qualitative and quantitative data. What the survey responses did highlight, however, was the prevalent limited awareness and understanding of micro-credentials, especially among professionals and employers, with countries like Estonia specifically noting the need for clearer information and public communication. These targeted insights contributed nonetheless to the final cross-analysis.

3. Report structure

The report is organised into four main sections:

- **Section 1** explores definitions and understandings of micro-credentials, including a comparative analysis of EU and national frameworks.
- **Section 2** examines the standard elements, principles, and quality assurance mechanisms guiding the design and implementation of micro-credentials.
- **Section 3** analyses CCI engagement with micro-credentials, including perceived benefits, challenges, case studies, and skills gaps.
- **Section 4** presents recommendations and future perspectives, offering policy insights and strategies for wider adoption and scalability.

Section 1: Definitions and Understanding of Micro-credentials

1.1. Common Definitions and Variations

1.1.1. International and European frameworks

Over the past decade, micro-credentials have emerged globally as a key mechanism for enabling lifelong learning, skills recognition, and labour-market adaptability. The OECD, UNESCO, and the European Commission all recognise them as short, targeted, quality-assured learning experiences that certify specific competences and can be accumulated or transferred across contexts.

The **2022 Council Recommendation on a European Approach to Micro-credentials** provides a common European reference point. It defines a micro-credential as:

"***The record of the learning outcomes that a learner has acquired following a small volume of learning. These learning outcomes have been assessed against transparent and clearly defined standards. Courses leading to micro-credentials are designed to provide the learner with specific knowledge, skills and competences that respond to societal, personal, cultural or labour market needs. Micro-credentials are owned by the learner, can be shared and are portable. They may be standalone or combined into larger credentials. They are underpinned by quality assurance following agreed standards in the relevant sector or area of activity***".[2]

Across Europe, this definition has become the conceptual and regulatory reference point. Micro-credentials are not treated as new qualifications but as modular "building blocks" that can be integrated within national qualification

[2] European Commission. "Council Recommendation of 16 June 2022 on a European approach to micro-credentials for lifelong learning and employability." *European Union*, 2022, p. 6, https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022H0627(02).

frameworks and existing quality-assurance systems. They support lifelong learning pathways and improve the visibility of learning outcomes through transparent metadata and digital portability.

In addition to these formal policy texts, thematic initiatives have proposed contextualised interpretations. For instance, the **SACCORD** project developed a definition tailored to the **Cultural and Creative Industries (CCIs)**, describing a micro-credential as:

"A micro-credential for the CCIs is a record of the knowledge, skills and competencies that a learner has acquired and demonstrated following a focused learning experience; these learning outcomes are assessed against transparent standards; they are relevant to the specific needs of the creative and cultural sectors; they are owned by the learner, portable, combinable into larger qualifications, and underpinned by quality-assurance processes adhering to agreed standards within the CCIs".[3]

While SACCORD is not a policy framework, it illustrates how the general international conception of micro-credentials can be adapted to specific sectoral contexts, emphasising creative work patterns, cultural value and cross-disciplinary competences.

Together, these European and international sources provide a coherent conceptual basis: micro-credentials are concise, outcomes-based, quality-assured certifications designed to meet specific learning and labour-market objectives while remaining stackable, transparent, and learner-centred.

1.1.2. National Interpretations: Similarities and Differences

While international organisations have developed a broadly shared understanding of micro-credentials, each European country adapts these principles to its own education and training ecosystem. The CREDEX desk research and

[3] Materahub. "Evaluation report on the common definition of micro-credentials in CCI." 2024, p. 35, https://drive.google.com/file/d/1YFTHzBDy_67kSVKMLlaYtZInszgn-kRx/view?usp=sharing.

interviews show a strong convergence around the **2022 Council Recommendation**, yet variation in regulatory maturity, terminology and implementation. The synthesis below summarises how the concept is defined and interpreted across the countries analysed.

Estonia – A legally defined, quality-assured model

Estonia has established one of the clearest national systems in Europe, with micro-credentials formally recognised in the **Adult Education Act (2025)**. They are defined in law as *"a set of knowledge and skills acquired through continuing education, which is verified, recognised, and meets the needs of the labour market or society."*

The official term used is **"micro-qualification"** (*mikrokvalifikatsioon*). These qualifications can either stand alone or be integrated into formal higher-education or vocational education pathways as well as provided by private training businesses,

Criteria:

- **Workload: 5–30 ECTS** (each ECTS equals 26 hours of student work).
- **Level:** aligned with the **Estonian Qualifications Framework (EstQF)**.
- **Assessment:** required and competency-based.
- **Quality assurance:** regulated by **HAKA**, the national quality agency; providers must obtain an activity licence and submit their curricula for approval.
- **Register:** all recognised micro-qualifications are listed in the national **EHIS** database.

As one national expert explained, *"micro-qualifications are designed to be both practical and rigorous, ensuring that learning outcomes meet real labour-market and societal needs."* This framework also supports professional development in the **Cultural and Creative Industries**, with examples such as **design, music production,** and **heritage conservation** courses developed through higher-education and continuing-education partnerships.

Ireland – System-wide implementation and shared metadata standards

Ireland fully adopts the EU definition and integrates it across both higher and further education.

The **Quality and Qualifications Ireland (QQI)** description mirrors the Council text, defining a micro-credential as *"the record of the learning outcomes that a learner has acquired following a small volume of learning… assessed against transparent and clearly defined criteria."*

This wording is used consistently by the **Irish Universities Association (IUA)** and the country's technological universities.

The preferred **term** is *"micro-credential,"* though *"micro-qualification"* is sometimes used in the Further Education and Training (FET) sector.

The N-TUTORR report noted there was *"initial confusion with unclear practices and interchangeable terminology,"* but this is being resolved through system-wide alignment .

Criteria:

- **Size / workload:** normally **5–30 ECTS** (some internal pilots 1–30).
- **Level: NFQ 6–9 / EQF 5–7.**
- **Duration:** typically **4–15 weeks.**
- **Assessment:** always credit-bearing and quality-assured.
- **QA:** under QQI or institutional ESG-aligned procedures.

Micro-credentials are published in the **Irish Register of Qualifications (IRQ.ie)** and the **IUA MicroCreds Portal (https://microcreds.ie/)**, making Ireland one of the most mature and coherent systems in Europe and offering learning also for the Creative and Cultural Industries.

Spain – National Standards, Regional Implementation

Spain has established a strong regulatory framework for micro-credentials in higher education and professional training, anchored by **Real Decreto 822/2021** (Royal Decree 822/2021**)** and **Ley Orgánica 2/2023**. These laws enable universities to offer "microcredenciales universitarias" aligned with EU standards, focusing on short, targeted learning experiences and ensuring compatibility with the European Qualifications Framework (EQF).

However, implementation varies by region. While the central government sets the main guidelines and funding, regions like Cantabria and Valencia have developed their own programmes. In the Basque Country, agencies such as UNIBASQ oversee quality assurance, and initiatives like KSIgune tailor micro-credentials to local cultural and creative sector needs.

These are defined as *"records of learning outcomes acquired through short, targeted learning experiences… assessed against transparent standards".* They are typically treated as *títulos propios* (non-official qualifications) but must meet both internal and external quality-assurance criteria, supervised nationally by ANECA (Agencia Nacional de Evaluación de la Calidad y Acreditación).

Criteria:

- **Workload:** up to **15 ECTS (≈ 375 hours).**
- **Level:** mapped to **MECES/EQF 6–7.**
- **Quality Assurance:** ESG-aligned internal and national systems, with ANECA overseeing national QA. In some regions, such as the Basque Country, agencies like UNIBASQ play a key role in recognition and quality assurance, particularly within the ECTS framework.
- **Certification:** increasingly digital and verifiable (e.g., blockchain).

Micro-credentials are increasingly used in Spain for reskilling and professional education, particularly in fields such as **audiovisual production**, **design**, **digital creativity**, **cultural management**, and **entrepreneurship**. While engagement from the Cultural and Creative Industries (CCIs) is growing, it remains at an early stage. At the national level, universities offer MCs in these relevant areas, and at the regional level - especially in the Basque Country - programmes are tailored to local priorities, with a focus on Basque culture and the professionalisation of cultural agents.

Netherlands – Pilots translating European principles into national practice

In the Netherlands, micro-credentials are recognised as a *"proof of learning outcomes of short learning experiences, which are assessed against transparent standards and designed to be portable and stackable."*

A common national approach is being developed through the **Npuls** and **SURF** pilots, supported by the Ministry of Education (OCW).

Criteria:

- **Volume: 3–30 ECTS.**
- **Level:** aligned with **NLQF.**
- **Assessment:** mandatory and verifiable.
- **QA:** aligned with existing national higher education frameworks.

The national platform **edubadges.nl** provides verifiable digital certification.

An expert interview from Stichting sQuare highlighted that micro-credentials *"extend and strengthen the learning pathway for professionals"* and foster cooperation between education providers, industry, and learners — an approach especially relevant for creative and design-related programmes.

Belgium – Regional differentiation within a shared EU reference

Micro-credential policy in Belgium differs across linguistic communities.

Both **Flanders** and the **Wallonia-Brussels Federation** follow the 2022 Council Recommendation, though their practices are at different stages.

In **Flanders**, universities and colleges already issue *micro-credentials* through networks such as **Nova Academy** and **Continue.be**.

As one report explains, *"It is possible to enroll in just one module of a degree programme (≥ 3 ECTS) on the basis of a credit contract."*

All courses are registered in the **Flemish HE Database (DHO)** and recorded in learners' **Learning and Experiences Database (LED).**

In **Wallonia-Brussels**, the term *micro-certification* or *continuing-education certificate* is used, though *"there is no legislation on micro-certifications"* yet, and training below 10 ECTS cannot be formally certified under the **Landscape Decree**.

Criteria:

- **ECTS range:** Flanders 0.5–59; Wallonia ≥ 10.
- **QA:** institutional, with regional guidance under development.

According to an interview with a University of Antwerp representative, their micro-credential in Cultural Entrepreneurship and Innovation Management is accredited with ECTS and provides a European-recognised certification, which is obligatory for all micro-credentials: "If you are described as a micro-credential, you always get a

certification of the course that you followed, and it's a European certification… We must give a certification, because otherwise people don't want to follow the course."

Italy – Conceptually aligned, but implementation still fragmented

In Italy, *micro-credentials* (*microcredenziali*) are defined as *"short, targeted learning experiences that certify the achievement of specific skills or competencies."*

They are closely linked to lifelong learning and labour-market needs, with universities and AFAM institutions (arts, design, and music) experimenting with different formats.

While there is no single national definition, terminology is becoming more consistent with European usage.

Other expressions such as *corsi brevi*, *formazione modulare*, or *attestati di competenze* are still used, but the Ministry of University and Research (MUR) is working toward harmonisation under the **QNQ/EQF** framework.

Criteria:

- **Volume: 1–15 ECTS (pilots).**
- **Assessment:** required and transparent.
- **QA:** within institutional procedures monitored by **ANVUR.**

An interviewee from the creative sector noted that *"micro-credentials help connect universities with the professional and artistic world,"* particularly in digital creativity, sustainable design, and cultural management.

Across all partner countries, micro-credentials share a common European foundation - short, assessed, and quality-assured learning experiences aligned with the *Council Recommendation (2022)*.

However, national systems differ in how these principles are applied: **Estonia** and **Spain** have formal legislation, **Ireland** and the **Netherlands** operate coordinated frameworks or pilots, while **Belgium** and **Italy** follow more decentralised institutional approaches.

The table below summarises these national characteristics.

Table 1. Comparative Overview of National Approaches to Micro-credentials

Aspect	Ireland	Netherlands	Belgium	Italy	Estonia	Spain
Official / Common Term	Micro credential / Micro qualification	Micro-credential	Micro-credential (Flanders); Micro-certification (Wallonia)	Micro Credenziali / Corsi brevi	Micro-qualification (*mikrokvalifikatsioon*)	Micro Credencial universitaria
Definition Focus	Record of learning outcomes assessed against transparent criteria (QQI)	Proof of learning outcomes from short, assessed learning experiences (Npuls)	Modular courses within degree or continuing education	Short, targeted learning experiences certifying specific competences (INDIRE)	Set of knowledge and skills acquired through continuing education, verified and recognised (Adult Education Act 2025)	Records of learning outcomes acquired through short, targeted learning experiences (ANECA, UNIBASQ)

						adopted also by UNIBASQ)
Regulatory Status	Fully embedded in national policy and QA	National framework in pilot (SURF / Npuls)	Regional frameworks; no national law	Alignment in progress; no binding law	Legally defined (Adult Education Act 2025)	Legally defined (Royal Decree 822/2021)
Typical Volume (ECTS)	5 – 30	3 – 30	0.5 – 59 (Flanders); ≥ 10 (Wallonia)	1 – 15	5 – 30	≤ 15
Qualification Level	NFQ 6–9 / EQF 5–7	NLQF (HE)	EQF 6–7 (HE)	QNQ / EQF aligned	EstQF aligned	MECES / EQF 6–7
Quality Assurance	QQI (ESG / EQAVET)	Institutional QA	Institutional QA; regional guidance in development	Institutional QA under ANVUR	HAKA (licensing + curriculum QA)	ANECA/UNIBASQ + ESG-aligned QA

Digital / Registration System	IRQ.ie + IUA MicroCreds Portal	edubadges.nl	DHO & LED (Flanders)	Institutional platforms / pilots	EHIS national register	Institutional registers / blockchain badges

1.1.3. Proposal for a Consolidated Definition for CCIs within the CREDEX Context

The comparative analysis of national frameworks shows that micro-credentials across Europe share a common core: they are **short, outcomes-based, and quality-assured learning experiences** designed to recognise specific competences in a transparent and portable way.

Yet within the **Cultural and Creative Industries (CCIs)**, learning processes are often informal, project-based, and collaborative. Creative professionals acquire skills through practice, experimentation, and exchange across disciplines—modes of learning that are not always visible in formal qualification systems.

To ensure that micro-credentials are both **recognisable and relevant** in this environment, the definition must reflect the distinctive nature of creative practice while staying consistent with the European framework.

The SACCORD project made an important step in this direction by linking micro-credentials to sector-specific needs and standards. Building on that approach, **CREDEX proposes the following refined definition:**

> *"A micro-credential for the CCIs is a record of the knowledge, skills and competencies that a learner has acquired and demonstrated following a focused learning experience; these learning outcomes are assessed against transparent standards; they are relevant to the specific needs of the creative and cultural sectors; they are owned by the learner, portable, combinable into larger qualifications, and underpinned by quality-assurance processes adhering to agreed standards within the CCIs."*

This definition:

- **Aligns** with the 2022 *Council Recommendation* by maintaining transparency, assessment, portability, and quality-assurance requirements.
- **Extends** the European framework to reflect *sectoral relevance*, recognising the diverse, practice-based, and collaborative nature of learning in the CCIs.
- **Supports** flexible and stackable learning pathways that connect formal education, professional practice, and lifelong upskilling.
- **Emphasises ownership and recognition**, ensuring that creative professionals can evidence and transfer competences across cultural, academic, and labour-market contexts.

Adopting this definition within the **CREDEX framework** ensures that micro-credentials are not only *aligned* with European principles but also *authentically rooted* in the working and learning patterns of the creative and cultural sectors. It supports the project's overarching aim to build **trustworthy, stackable, and recognisable micro-credentials** that validate creative competences, promote cross-sector mobility, and strengthen professional development in Europe's CCIs.

1.2. Policy and Regulatory Context

1.2.1. Overview of the main policies and regulatory frameworks at the EU level

At the European level, the policy environment for micro-credentials has advanced significantly over the past few years, reflecting the EU's broader commitment to **lifelong learning, flexible pathways, and employability**. Micro-credentials are positioned as key instruments to support individuals in **upskilling, reskilling, and mobility across sectors and borders**.

The **Council Recommendation on a European Approach to Micro-credentials for Lifelong Learning and Employability (2022)** provides the main reference framework. It establishes a shared European approach based on four pillars: **transparency and comparability**, **quality assurance**, **recognition and portability**, and **learner-centred inclusiveness**.

Beyond the 2022 Recommendation, several other EU policy initiatives directly support the uptake and governance of micro-credentials:

- The **European Skills Agenda (2020)** identified micro-credentials as tools and initiatives to **support people** in their lifelong learning pathways.[4]
- In the **Europass Decision** adopted in April 2018, the European Commission was tasked with developing a digital framework to document, share and verify learning achievements (including skills and qualifications) from formal and non-formal settings, leading to the development of the **European Digital Credentials for Learning Infrastructure** (EDCI). EDCI plays a central role in the European Commission's wider agenda for education, skills, and digital data. The **European Skills Agenda** launched in July 2020 highlights EDCI as an important tool to create flexible lifelong-learning pathways for EU citizens. Finally, the **European Strategy for Data** adopted in February

[4] European Commission. "European Skills Agenda - Employment, Social Affairs and Inclusion." *Employment, Social Affairs and Inclusion*, 2020, https://employment-social-affairs.ec.europa.eu/policies-and-activities/skills-and-qualifications/european-skills-agenda_en. Accessed 18 November 2025.

2020 calls for the creation of a Common European skills data space and for Member States to prepare high-quality data on qualifications and learning outcomes as part of their plans to develop digital credentials.[5]

Together, these frameworks position micro-credentials as **integral to Europe's vision for lifelong and cross-sector learning**.

They provide both the regulatory foundation and the technical instruments that national systems—and projects like **CREDEX**—can build upon to design micro-credentials that are **transparent, comparable, and portable across borders**.

1.2.2. Comparative analysis of the political and regulatory context in the analysed EU countries

Across the CREDEX partner countries, the political and regulatory environment for micro-credentials shows a **shared European direction but different degrees of institutionalisation**.

All systems are influenced by the **Council Recommendation on a European Approach to Micro-credentials (2022)**, yet they interpret and operationalise it through their own governance traditions, levels of autonomy, and education–labour market coordination mechanisms.

Overall, three broad regulatory stages can be identified:

- **Legally established systems** — *Estonia* and *Spain* have adopted national legislation explicitly defining micro-credentials.
    - In **Estonia**, the **Adult Education Act (2025)** formalises micro-credentials as recognised learning units with clear specifications on workload, assessment requirements, and quality procedures. Higher education

[5] European Union. "Stakeholder information about European Digital Credentials." *europass*, 2025, https://europass.europa.eu/en/stakeholders/european-digital-credentials/stakeholder-information-about-european-digital-credentials#. Accessed 18 November 2025.

institutions and adult training providers must register accredited micro-learning modules in the national education information system, ensuring transparency and comparability across sectors. This legislative framework supports the strong digital-learning ecosystem Estonia is known for and facilitates the integration of micro-credentials into both professional upskilling pathways and innovation-oriented programmes within the creative industries.

  - In **Spain**, **Royal Decree 822/2021** and **Ley Orgánica 2/2023** provide the legal basis for university micro-credentials, allowing universities to offer short learning programmes of up to 15 ECTS, with mandatory internal and external quality assurance supervised by ANECA. While this has led to rapid uptake and the widespread use of digital credentials aligned with European standards, implementation varies across regions. Regions such as Cantabria, Valencia, and the Basque Country have developed their own specific programmes and regulations, leading to differences in recognition and standardization. Engagement is growing, especially in the Cultural and Creative Industries (CCIs), but challenges remain around regional fragmentation, unequal labour market recognition, and the need for greater collaboration and awareness among stakeholders.

- **Nationally coordinated policy frameworks** — *Ireland* and *the Netherlands* demonstrate advanced coordination without relying on specific legislation.
  - In **Ireland**, national alignment is driven by the **National Framework of Qualifications (NFQ)**, **Quality and Qualifications Ireland (QQI)**, and the **Irish Universities Association (IUA)**. Together, these bodies ensure consistency in learning outcomes, assessment practices, credit ranges, and quality assurance across higher education institutions. Ireland's cross-institutional micro-credentials initiative has enabled the creation of shared standards, a joint national catalogue, and sector-wide guidelines. These developments have been strongly supported by labour-market agencies and Skills Councils, making Ireland one of the most coordinated national systems in Europe—despite the absence of a single dedicated law.
  - In the **Netherlands**, coordination is led by large-scale national programmes such as **Npuls** and **SURF**, supported by the **Ministry of Education (OCW)**. Dutch higher education institutions have collaboratively

designed pilot micro-credential structures that include standardised workload expectations, quality indicators, and digital-verification protocols. This enables broad institutional experimentation within a coherent national vision that prioritises lifelong learning and stackability within vocational, higher education, and professional learning ecosystems.

- **Decentralised or evolving models** — *Belgium* and *Italy* rely on institutional or regional initiatives rather than central regulation.
    - **Belgium** reflects the complexity of its federal education system. In **Flanders**, micro-credentials are closely tied to the ongoing reform toward modularisation in higher education, with universities and university colleges piloting short learning units aligned with competency-based curricula. Flanders has also explored stackable micro-credentials linked to labour-market needs and has developed preliminary guidelines on workload and assessment. In **Wallonia**, the concept of micro-certifications is still emerging, with initiatives largely driven by individual institutions and regional authorities, often connected to continuing education or professional training. The absence of a unified national framework leads to variability, but also allows experimentation across linguistic and governance communities.
    - **Italy** remains in an evolutionary phase, where universities and AFAM institutions actively develop micro-credentials inspired by European recommendations but without a national law defining their structure. Institutions generally follow ANVUR quality procedures, and many have adopted the EU-recommended range of 1–15 ECTS, using clear learning outcomes and formal assessment. While experimentation is widespread—especially in digital, creative, and green-skills pathways—consistency varies by region and institution. Policy discussions within the Ministry of University and Research (MUR) and Italy's participation in European initiatives such as MICROBOL and EDC are accelerating convergence, but a unified framework has not yet been formalised.

Within this spectrum, **Ireland and Italy** represent two contrasting but complementary cases.

Ireland – A coordinated and mature national framework

Ireland illustrates a **highly coordinated policy model** that integrates micro-credentials across higher, further, and professional education.

Led by **Quality and Qualifications Ireland (QQI)** and supported by the **Irish Universities Association (IUA)**, national efforts have produced a unified framework that ensures **quality assurance, credit transfer, and visibility** through the *Irish Register of Qualifications* and the *MicroCreds.ie* portal.

The approach is grounded in Ireland's wider **National Skills Strategy**, positioning micro-credentials as instruments for workforce upskilling and lifelong learning.

Politically, Ireland's success lies in **cross-sector alignment** rather than legal obligation: consistent ministerial support, active cooperation between universities, further-education providers, and employers, and shared recognition principles based on the **National Framework of Qualifications (NFQ)**.

The system demonstrates how **policy coherence and institutional collaboration** can create a sustainable ecosystem without the need for new legislation. A notable example of this collaborative approach is the Creative Futures Academy (CFA), a partnership between University College Dublin, IADT, and NCAD. CFA leverages Ireland's national micro-credentials framework to design and deliver flexible, accredited learning opportunities specifically for the creative and cultural sectors. By aligning its micro-credentials with the National Framework of Qualifications (NFQ) and national quality assurance standards, CFA demonstrates how sector-focused initiatives can both address emerging skills needs and enhance the visibility and recognition of creative competences within Ireland's broader lifelong learning strategy.

Italy - A developing and decentralised framework

In contrast, Italy remains at an **early policy-development stage**, with implementation mainly driven by higher-education and AFAM (arts, music, and design) institutions under existing QA and accreditation mechanisms.

The **Ministry of University and Research (MUR)** has acknowledged micro-credentials as part of its *National Plan for Skills and Lifelong Learning*, but **no legal framework or national coordination body** yet exists.

Interview data highlight **growing awareness** among universities and policymakers, coupled with a need for clearer definitions, recognition pathways, and alignment with the **Italian Qualifications Framework (QNQ)** and **European Qualifications Framework (EQF)**.

Political discussions increasingly link micro-credentials to **digital transition, cultural innovation, and professionalisation** in creative sectors, signalling movement toward a coordinated strategy.

However, progress is currently fragmented, with universities piloting diverse models in response to local and sectoral needs.

This decentralised evolution reflects Italy's broader higher-education governance structure, where institutional autonomy drives innovation ahead of formal regulation.

Table 2. Key Policy and Regulatory Features: Ireland and Italy

Dimension	Ireland	Italy
Regulatory status	Nationally coordinated policy framework under QQI and IUA; no specific law required	No legal framework yet; policy discussions under MUR; institution-led pilots
Governance model	Centralised coordination across education sectors	Decentralised, institution-based experimentation
Policy drivers	Workforce development, digital and green skills, inclusion, lifelong learning	Digitalisation, creative industries, and cultural innovation
Quality assurance	Embedded in QQI national QA system	Managed by institutions under ANVUR supervision
System maturity	High – integrated across HE, FET, and industry	Emerging – piloted and diversely interpreted
Political coordination	Strong cross-sector policy coherence	Growing interest but limited coordination so far

1.2.3. Identification of Responsibilities (National vs. Regional) and Diversities in Regulatory Frameworks

While all countries share a common reference to the European Council Recommendation (2022), the responsibility for developing, managing, and assuring micro-credentials differs significantly between countries.

These variations reflect broader educational governance traditions — centralised in some contexts, devolved or institution-driven in others — and directly influence the level of coordination, recognition, and innovation within national systems.

The distribution of responsibility for micro-credential regulation can therefore be grouped into three broad models.

Table 3. The distribution of responsibility for micro-credential regulation

Governance Model	Examples	Characteristics
Centralised / Nationally coordinated	Ireland, Estonia	Defined legal or policy framework; QA and recognition regulated nationally; ensures uniformity and public trust.
Regional / Decentralised	Belgium, Italy	Regional or institutional autonomy; innovation encouraged; varying degrees of national coherence.
Collaborative / Pilot-based	Netherlands, Spain	National coordination combined with institutional design freedom; standardisation achieved through shared pilots.

National coordination and centralised responsibilities

In **Ireland** and **Estonia**, responsibilities for micro-credential policy, regulation and quality assurance are clearly defined at the national level.

- In **Ireland**, the Department of Further and Higher Education, Research, Innovation and Science (DFHERIS)sets policy direction, while Quality and Qualifications Ireland (QQI) oversees implementation, validation and quality assurance. All accredited institutions operate within this common framework, which guarantees transparency and mutual recognition across the country. Desk research and interviews show that this clarity of governance supports the rapid expansion of micro-credentials, including those offered by creative institutions such as IADT and ATU.

- In **Estonia**, the Ministry of Education and Research regulates the entire system through the Adult Education Act (2025). The law defines micro-qualifications, establishes the permissible workload range (5–30 ECTS), and assigns QA responsibilities to HAKA, the national quality agency. Institutions may issue micro-credentials only when they comply with these national criteria. This model represents a fully integrated, legally binding framework.

Both systems demonstrate how centralised responsibility ensures coherence, comparability and accountability, allowing for the systematic inclusion of micro-credentials within existing qualification structures.

Regional and community-based governance

In Belgium and, to a lesser extent, Italy, governance of micro-credentials is decentralised due to the countries' political and administrative structures.

- In Belgium, responsibility for education policy lies with the linguistic communities. Flanders has incorporated micro-credentials into its modular higher-education system, managed directly by universities and university colleges under regional QA processes. In the Wallonia-Brussels Federation, interviewee Lina Martorana (WBE) explained that the regional government is finalising a common framework for micro-certifications, to be overseen by AEQES. This framework will define short, stackable learning modules and clarify roles between HEIs, vocational providers and private training organisations.

- In Italy, the Ministry of University and Research (MUR) provides strategic direction but leaves operational responsibility to universities, AFAM institutions and regional authorities. Quality assurance remains institutional, monitored by ANVUR. Initiatives such as the RUIAP Toolkit (2024) and Digital Education Hubs coordinate pilot efforts, yet there is no central registry or unified recognition mechanism.

These decentralised systems enable innovation and responsiveness to regional and sectoral needs — especially relevant for CCIs — but they also create variability in recognition and transparency across the national landscape.

Collaborative and pilot-based coordination

In the Netherlands and Spain, responsibility for micro-credentials is shared between ministries, universities and national quality agencies, combining national oversight with institutional autonomy.

- In the Netherlands, the Ministry of Education, Culture and Science coordinates the national pilots managed by SURF and Nuls. Participating institutions design and implement their own courses within the shared pilot standards, aligned with existing national higher education frameworks. The edubadges.nl infrastructure supports verification and portability, illustrating a collaborative governance model that balances consistency and innovation.

- In Spain, the Ministry of Universities defines the regulatory basis through Royal Decree 822/2021, and ANECAis responsible for quality assurance and evaluation. However, universities retain the autonomy to design and deliver microcredenciales universitarias within this legal framework, ensuring both national alignment and local flexibility.

This model demonstrates that shared governance through national pilots and higher-education systems can achieve a balance between policy coherence and institutional innovation, a valuable approach for emerging sectors such as the CCIs.

Section 2: Standard Elements, Principles and Quality Assurance

2.1. Key Elements for Description and Certification

The desk research, interviews, and surveys conducted across the six CREDEX partner countries (Estonia, Ireland, Italy, Spain, the Netherlands, and Belgium) reveal a strong degree of convergence in how micro-credentials are structured and certified. The CREDEX partners agreed to incorporate additional data mapping activities from Spain, with support from CreativeFED. This inclusion was made in recognition of Spain's activities promoting the application of micro-credentials and the valuable contribution this data analysis would bring to the report.

Each system applies comparable elements that make the learning transparent, quality-assured, and portable.

Although implementation formats differ, the **core logic is consistent**: clearly defined learning outcomes, transparent assessment, explicit workload, recognised qualification level, and visible quality-assurance reference.

The following sections summarise these key elements and the existing national mechanisms for their registration and publication.

2.1.1. Main elements used to describe or certify micro-credentials

Across the analysed countries, they describe micro-credentials using the same essential parameters, with only minor variations in format and governance. This convergence illustrates a shared European understanding of how learning outcomes are defined, assessed, and recognised, even when delivered under different national regulations.

The table below compares how each country defines and documents these mandatory core elements based on the list recommended by the European Commission.

Table 4. Mandatory main elements of micro-credentials

Mandatory Element	Estonia	Ireland	Italy	Spain	Netherlands	Belgium
Identification of the learner	✔ Yes — required on microqualification certificates	✔ Yes — included in QQI/HE certification	✔ Yes — present in institutional certificates	✔ Yes — included in digital certificates (títulos propios, badges)	✔ Yes — included in edubadges	◐ Partial — implied in HE certification, not explicit
Title of the micro-credential	✔ Yes	✔ Yes	✔ Yes	✔ Yes	✔ Yes	✔ Yes
Country/Region of the issuer	✔ Yes — national	✔ Yes — national	✔ Yes — national	✔ Yes — national	✔ Yes — national	✔ Yes — regional (Flanders/Wallonia)

Awarding body(ies)	✔ Yes — licensed HE/VET providers	✔ Yes — QQI-validated providers	✔ Yes — universities & AFAM	✔ Yes — accredited universities	✔ Yes — universities in SURF/Nplus	✔ Yes — HEIs recognised by AEQES/VLUHR
Date of issuing	✔ Yes — included on certificates	✔ Yes	✘ No evidence	✔ Yes — part of digital metadata	◐ Partial — included in badge metadata	✔ Yes
Learning outcomes	✔ Yes — defined in national Act & EstQF	✔ Yes — aligned with NFQ; required in templates	✔ Yes — RUIAP/Bologna -aligned	✔ Yes — ANECA competence-based	✔ Yes — linked to NLOF	✔ Yes — embedded in modular HE system
Notional workload (ECTS)	✔ Yes — 5–30 ECTS defined	✔ Yes — 5–30 ECTS typical	✔ Yes — 1–15 ECTS depending on institution	✔ Yes — <15 ECTS limit	✔ Yes — 3–30 ECTS pilots	◐ Partial — varies: Flanders (≥3 ECTS), Wallonia (≥10 credits)

Level (EQF / national frameworks)	✔ Yes — EstQF	✔ Yes — NFQ	◐ Partial — sometimes EQF/QNQ indicated	✔ Yes — MECES/EQF used	✔ Yes — NLQF/EQF	◐ Partial — depends on Community frameworks
Type of assessment	✔ Yes — mandatory and QA-verified	✔ Yes — required by QQI	✔ Yes — institution-based; reviewed by ANVUR	✔ Yes — competence-assessed under HE QA	✔ Yes — documented in HE QA and edubadges	◐ Partial — varies across institutions
Form of participation	✔ Yes — specified in curriculum documentation	✔ Yes — online/blended/on-site	◐ Partial — not standardised nationally	✔ Yes — listed by universities	✔ Yes — included in SURF metadata	◐ Partial — implied in course catalogues
Type of quality assurance	✔ Yes — national QA by HAKA	✔ Yes — QQI + institutional QA	✔ Yes — ANVUR + internal QA	✔ Yes — ANECA/regional QA	✔ Yes — NVAO/NLQF & ESG-aligned	◐ Partial — AEQES/VLUHR differ; evolving for MCs

Legend

✔ Yes = clearly evidenced / standardised
◐ Partial = present but inconsistent / institution-dependent
✘ No evidence = not found in attachments

2.1.2. National registries and portals for micro-credentials

Digital registries and portals play a crucial role in transparency, public access, and verification.

Most analysed countries already maintain or are developing such platforms, ensuring that validated micro-credentials can be searched, verified, and recognised nationally or across borders. For example, Ireland and Estonia already operate **national databases**, the Netherlands and Belgium use **interoperable regional or pilot systems**, and Italy and Spain rely on **institutional or network-based portals**. These registries ensure that micro-credentials are traceable, verifiable, and publicly visible - core conditions for trust and recognition within Europe.

The table below summarises the existing mechanisms.

Table 5. National registries and portals for micro-credentials

Country	Registry / Portal	Managing Body	Main Function
Ireland	**IRQ.ie** and **MicroCreds.ie**	QQI / Irish Universities Association	National registries providing metadata (learning outcomes, credit, NFQ level, QA, issuer). Enable digital verification and public visibility.
Estonia	**EHIS** (Estonian Education Information System)	Ministry of Education and Research	National database recording accredited programmes and micro-qualifications; links with EstQF and HAKA QA monitoring.
Italy	Institutional or network platforms (e.g., **RUIAP Toolkit**, **Digital Education Hubs**)	Universities / MUR projects	Used for pilot registration and metadata harmonisation; national registry under discussion.
Spain	Institutional portals (e.g., UOC, UMA) + Europass integration (planned)	Individual universities	Publish validated *microcredenciales universitarias* with workload and competences; coordination toward national interoperability ongoing.

Netherlands	**edubadges.nl**	SURF / Npuls Programme	National digital platform for issuing and verifying micro-credentials; contains metadata and ensures learner ownership.
Belgium	**nova-academy.be** and **continue.be** (Flanders)	Regional HE networks	Public catalogues of short courses and micro-credentials with provider details, ECTS value and QA reference; Wallonia developing unified AEQES portal.

2.2. Reflection of European Principles and Quality Assurance Mechanisms

This section provides a structured analysis of how the 10 European Principles for micro-credentials (as set out in the 2022 Council Recommendations) are applied and reflected in the six CREDEX partner countries (Ireland, Estonia, Netherlands, Belgium, Spain, Italy). It also details specific national guidelines for design, issuance, and quality assurance, discusses existing QA and certification mechanisms, and summarizes evidence of incentives for learners and providers.

2.2.1. Analysis of How the 10 European Principles Are Applied

The 10 European Principles for micro-credentials are:

1. **Quality**
2. **Transparency**
3. **Relevance**
4. **Valid Assessment**
5. **Learning Pathways**
6. **Recognition**
7. **Portability**
8. **Learner-Centered Design**
9. **Authenticity**
10. **Information and Guidance**

Across the six CREDEX partner countries, the application of the 10 European Principles for micro-credentials shows shared ambition but differing levels of system development. All countries align with the principles of quality, transparency, relevance, valid assessment, learning pathways, recognition, portability, learner-centred design,

authenticity, and information and guidance, though the degree of integration into policy and practice varies. Estonia, Ireland, the Netherlands, and Spain demonstrate more coordinated and structured adoption, while Italy and Belgium show emerging or uneven implementation influenced by institutional autonomy, regional structures, or ongoing pilot work.

The following table summarises how each country reflects these ten principles in practice.

Table 6. The application of 10 European Principles for micro-credentials

Principle	Ireland	Estonia	Netherlands	Belgium	Spain	Italy
Quality	QQI, ESG, NFQ	HAKA, Adult Ed Act, ESG	NVAO/NLQF, pilots, ESG	AEQES/VLUHR, institutional	ANECA, ESG, UNIBASQ	ANVUR, institutional
Transparency	15 EU metadata fields, public registries	EHIS, public registry	edubadges.nl, metadata	nova-academy.be, continue.be	Institutional, open badges	Institutional, pilot-based
Relevance	Employer/sector input, HCI, Skillnet	Labour market focus, employer input	Employer input in pilots	Some sectoral pilots	Employer input, sectoral pilots	Employer input, pilot-based
Valid Assessment	Graded, credit-bearing, QA	Assessment required, QA	QA, programmatic assessment	QA, institutional	QA, documented	QA, institutional

Learning Pathways	Stackable, modular, RPL	Stackable, modular	Stackable, modular	Modular, credit contracts	Stackable, modular	Modular, pilot-based
Recognition	NFQ, IRQ.ie, Europass	EstQF, EHIS, ENIC/NARIC	NLQF, EQF, edubadges	EQF, ECTS, institutional	MECES, EQF, Europass	QNQ, EQF, bilateral
Portability	Digital badges, Europass	Digital certificates, EHIS	edubadges.nl, Europass	Paper/digital, Europass	Digital badges, Europass	Digital badges, Europass
Learner-Centered	Flexible, modular, RPL	Flexible, modular	Flexible, modular	Flexible, modular	Flexible, modular	Flexible, modular
Authenticity	Digital verification, QA	QA, digital certificates	Digital verification	QA, digital certificates	Digital verification	Digital verification
Info & Guidance	Public portals, guidance	EHIS, guidance	edubadges.nl, guidance	Institutional, guidance	Institutional, guidance	Institutional, guidance

2.2.2. National Guidelines for Design, Issuance, and Quality Assurance

Across the six CREDEX partner countries, national guidance for the design, issuance, and quality assurance of micro-credentials ranges from fully formalised legislation to institution-led or pilot-based practices. **Estonia** and **Spain** operate within clear regulatory frameworks that define key parameters for workload, assessment, and institutional responsibilities. **Ireland** and the **Netherlands** do not have micro-credential-specific legislation, but both demonstrate strong national coordination through QA agencies, sectoral frameworks, and shared design principles that ensure consistency across institutions. In **Belgium** and **Italy**, guidance remains largely decentralised or institution-driven, resulting in greater variation in design and certification practices.

Despite these differences, all countries rely on established higher-education QA systems to ensure credibility and ESG alignment. Digital certification and public registries are more developed in Estonia and the Netherlands, while other countries are at earlier stages of implementing standardised digital systems or national repositories. The overview below summarises the main elements shaping national-level guidance across the consortium.

The table below synthesises these national approaches, highlighting the degree of formalisation, clarity of design requirements, issuance rules, and the mechanisms used to guarantee quality and transparency across the consortium.

Table 7. National Guidelines for Design, Issuance, and Quality Assurance

Country	Design	Issuance Rules	Quality Assurance
Ireland	✔ Clear standards via QQI/NFQ	✔ Issued by HEIs + QQI-validated providers	✔ Strong institutional QA validated by QQI
Estonia	✔ Legally defined (Adult Education Act 2025)	✔ Licensed providers; mandatory EHIS registration	✔ National QA via HAKA; compulsory evaluations
Netherlands	✔ Pilot-based standards (Npuls/SURF)	✔ HEIs issue MCs; standardised edubadges	✔ Institutional QA aligned with NVAO/ESG
Belgium	◐ Regional variation (Flanders/Wallonia)	◐ Institution-defined formats and criteria	◐ Regional QA only; no MC-specific frameworks
Spain	✔ National regulation (Royal Decree 822/2021)	✔ Accredited universities issue MCs	✔ ANECA + regional QA aligned with ESG
Italy	◐ Institution-led EU-aligned design	◐ Issued by universities and AFAM	✔ Institutional QA under ANVUR

Legend:

✔ = Clearly established / consistent - ◐ = Partially established / emerging - ✘ = Not established / no national guidance

2.2.3. Existing Quality Assurance and Accreditation/Certification Mechanisms

Across all six CREDEX partner countries, micro-credentials are supported by established higher-education quality assurance systems, even where no micro-credential-specific framework exists. In countries with stronger national coordination—such as **Estonia**, **Ireland**, **Spain**, and the **Netherlands**—accreditation and certification mechanisms are clearly embedded within institutional or national QA cycles aligned with European Standards and Guidelines (ESG). These systems ensure consistent assessment procedures, transparent documentation, and reliable verification of issued micro-credentials.

In contrast, **Belgium** and **Italy** rely primarily on institutional QA structures and regional agencies, resulting in more varied implementation and fewer unified mechanisms for certification or external monitoring. Digital certification practices are most advanced in Estonia and the Netherlands, while other countries remain at different stages of adopting standardised digital or publicly accessible records.

The table below provides a visual comparison of how each country structures its internal and external QA mechanisms, accreditation approaches, and certification practices, highlighting the level of consolidation and consistency across the consortium.

Table 8. Existing Quality Assurance and Accreditation/Certification Mechanisms

Country	Internal QA	External QA / National QA Agency	Certification Mechanisms
Ireland	✔ Institutional QA aligned with QQI	✔ QQI validates QA processes (ESG-aligned)	✔ HEI-issued certificates; consistent formats
Estonia	✔ Mandatory institutional QA (Act 2025)	✔ HAKA oversees providers + curriculum evaluation	✔ Certificates and curricula registered in EHIS
Netherlands	✔ Institutional QA aligned with HE standards	✔ NVAO alignment through sector-wide pilots	✔ Standardised digital issuance via edubadges
Belgium	◐ Institutional QA varies by region	◐ External QA by AEQES/VLUHR but no MC-specific QA	◐ Certification varies by institution; no registry
Spain	✔ Strong internal QA aligned with ESG	✔ ANECA + regional QA agencies	✔ Digital certificates and badges widely used
Italy	✔ Institutional QA under ANVUR	✔ ANVUR oversees institutional QA but no MC-specific processes	◐ Certification varies by institution; no national system

Legend:

✔ = Clearly established / consistently implemented
◐ = Partially established / varies across institutions or regions
✘ = Not established / no national mechanism in place

Section 3: CCI Engagement and Impact Assessment

3.1. Overview of current CCI engagement

Engagement of the Cultural and Creative Industries (CCIs) with micro-credentials across the analysed EU countries remains **emerging, uneven and highly context-dependent**, with clear differences in maturity between higher education systems and sector-specific practices. While the overall uptake of micro-credentials is growing—primarily within universities and continuing education structures—the **direct involvement of CCIs is still limited**, with most initiatives at a pilot or exploratory stage. Evidence from interviews and surveys indicates a growing interest from CCI stakeholders, but uptake is hindered by structural, regulatory and cultural factors.

Italy

In Italy, CCI engagement with micro-credentials is described as **initial and fragmented**. Although several AFAM institutions and universities with strong CCI profiles (e.g., design, media, cultural heritage) have started to **experiment with micro-credentials**, these initiatives are not yet part of a coordinated national strategy. The national report notes that engagement is "still at an initial stage," despite promising developments linked to digital and green innovation policies under the PNRR .

Some universities involved in digital education hubs are producing short online courses; however, these mostly award **open badges rather than credits**, limiting their recognition within CCI labour markets.

Ireland

Ireland shows the **highest level of structured CCI engagement** among the countries analysed. Dedicated micro-credentials exist in areas such as Design Thinking, Radio & Podcast Production, User Experience Design, Television Writing, Digital Photography, and Applied Brand Strategy .

CCI engagement is supported by **targeted national incentives**, particularly through the Cultural & Creative Industries Skillnet, which co-funds bespoke training for artists, designers, performers and creative media professionals.

Nonetheless, CCI-specific micro-credentials still represent a small proportion of the national offering: only 4 of the 240 micro-credentials in the IUA MicroCreds catalogue—which captures programmes and courses across the seven Irish Universities Association (IUA) member universities, not every institution or HEI provider across the island—fall directly under “Creative arts, media culture,” with some sub-fields (e.g., film, VR) showing no dedicated micro-credentials.

However, initiatives in CCIs still exist. And one of the most significant ones driving progress in the CCIs is the Creative Futures Academy (CFA), a collaborative partnership between University College Dublin (UCD), the National College of Art and Design (NCAD), and the Institute of Art, Design + Technology (IADT). CFA is unique in Ireland for its exclusive focus on the cultural and creative industries (CCIs), and for delivering micro-credentials primarily through the MicroCreds framework. CFA works closely with CCI Skillnet to ensure industry relevance and has partnered with Creative Spark to develop micro-credentials such as ”Design for Digital Manufacturing.” By offering flexible, accredited learning opportunities tailored to creative professionals, CFA is helping to address sector-specific skills gaps and to expand the reach and impact of micro-credentials within the Irish CCI ecosystem.

Netherlands

In the Netherlands, CCI-specific engagement with micro-credentials remains **modest**. Desk research reports "no explicit mention" of CCIs in existing policy frameworks .
However, expert interviews show increasing interest from CCI-related actors, especially organisations such as **stichting sQuare**, which develops modular programmes aimed at professionals transitioning from vocational level 4 to level 5—an approach explicitly linked to creative and cultural sectors .
Yet, systemic CCI engagement remains **largely exploratory** and depends on partnerships rather than national policies.

Belgium

Belgium presents **divergent dynamics** between its linguistic communities.

- **Flanders:** Current documentation reports **no specific engagement** of CCIs with micro-credentials, and no qualitative data on CCI uptake is available.
- **French-speaking Community (FWB):** Interviews highlight that CCI engagement is **developing but not yet structured**. Universities (e.g., ULiège, UCLouvain, ULB) already issue micro-certifications aligned with EU recommendations, but these are not yet tailored specifically to CCIs. The sector is seen as a **target area for future pilots**, including within CREDEX itself, although institutional silos and lack of funding remain obstacles . Additionally, the University of Antwerp (Flanders) provides a notable example of practice: a **micro-credential in Cultural Entrepreneurship and Innovation Management**, co-created with fashion, heritage and performing arts schools, and explicitly engaging CCI professionals and alumni as case providers. This represents the most concrete Flemish example to date of CCI-specific micro-credential delivery .

Spain

Spain shows **growing institutional adoption of micro-credentials**, but **very limited direct engagement by CCIs**. National documentation indicates that while micro-credentials are increasingly recognised by universities and employers, CCI-specific offerings remain scarce, and "direct engagement of CCIs is limited" in the current landscape .
Most developments are driven by broader digital-skills or upskilling agendas rather than targeted cultural or creative sector strategies.

Estonia

CCI engagement with micro-credentials in Estonia is emerging and increasingly visible through university-led initiatives. While micro-credentials are well-integrated in higher education, recent developments show that several universities are actively offering micro-credentials aligned with their institutional focus areas, including the cultural and creative industries (CCIs). For example, the University of Tartu Viljandi Culture Academy provides micro-credentials and short courses specifically for the CCI sector. Similarly, the Estonian Academy of Arts offers several micro-credentials targeted at creative fields, and Pallas University of Applied Sciences also delivers micro-credentials relevant to CCIs. Although there is not yet a comprehensive national CCI-focused policy or pilot, these institutional efforts demonstrate a growing commitment to supporting creative professionals through flexible, accredited learning opportunities. Engagement is thus shifting from potential to actual, particularly in digital skills, design, and innovation areas, and is expected to expand further as awareness and demand increase.

The table below illustrates the summary of Current CCI Engagement with Micro-credentials in 6 analysed countries.

Table 9. Summary of Current CCI Engagement with Micro-credentials

Country	Level of CCI Engagement with Micro-credentials	Overall Maturity
Ireland	Moderate to high engagement, reflected in the availability of multiple CCI-focused micro-credentials and numerous sector-specific training initiatives	Most advanced
Belgium	Low to moderate engagement; isolated good practices and emerging pilots, but not yet structurally developed across the sector.	Low–Moderate
Netherlands	Emerging engagement, mainly through exploratory initiatives and interest from some creative and vocational actors.	Low
Italy	Initial and fragmented engagement; CCI-focused initiatives remain limited.	Low
Spain	Very limited engagement; CCI-specific micro-credentials are rare.	Low
Estonia	Minimal indirect engagement; no CCI-targeted micro-credentials identified.	Low-Moderate

3.2. Benefits and Challenges Associated with Micro-credentials

Micro-credentials present a wide range of perceived benefits for Cultural and Creative Industries (CCIs), particularly in relation to skills development, employability and lifelong learning. At the same time, the research highlights structural, financial and cultural challenges that currently limit their adoption and recognition within CCI labour markets.

3.2.1. Key benefits

1. Flexible, modular learning suited to freelance and project-based work

Across interviews and surveys, participants consistently emphasised flexibility as one of the strongest benefits of micro-credentials. Their **short duration, modular structure and hybrid/asynchronous delivery** make them particularly suitable for CCI professionals, who often combine multiple jobs or work on unstable project schedules.

- Italian interviewee Gloria Lisena emphasised that flexible delivery is **“essential to allow creative professionals to participate alongside unstable work schedules”** .
- Estonian respondents highlighted that micro-credentials need to fit “**irregular project cycles**” typical of CCIs.
- Surveys in Estonia confirm that micro-credentials offer **ideal upskilling pathways for employed adults** seeking manageable learning volumes.

2. Targeted, up-to-date skills for employability and career progression

Micro-credentials are valued for providing **specific, current competences**, particularly in fast-evolving creative domains—digital media, design, innovation, and cross-disciplinary collaboration.

- Estonian survey participants note that micro-credentials offer a “**compact package of specific knowledge**,” supporting clear learning pathways compared to isolated short courses .

- Dutch interviewees highlight their usefulness as **“entry points into a skillset”** that help CCI professionals take the next step in their careers and sustain creative practice .
- Spanish survey respondents also value micro-credentials that enhance professional profiles and visibility in competitive labour markets.

3. Increasing recognition among employers and public institutions

Although sector-wide recognition is still limited, there are encouraging signs of acceptance:

- In Estonia, micro-credentials benefit from a **“quality label”**, with many learners participating based on employer recommendations or funding .
- The Estonian Unemployment Insurance Fund and some companies finance participation, indicating **growing institutional trust** in these qualifications .

4. Practical, experiential and applied learning

CCI stakeholders repeatedly highlight the importance of micro-credentials that integrate **hands-on practice**, real creative tasks, and authentic workflows.

- An Estonian CCI respondent stressed MCs should include “**both theory and practical activities**,” enhancing relevance for creative professionals .
- Italian interviews underlined the value of formats allowing learners to “**experiment and work on real creative tasks**” .
- HKU (Netherlands) highlighted that micro-credentials are most effective when aligned with **“real creative processes”** rather than abstract learning outcomes .

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5. Potential for mobility, stackability and lifelong learning

Micro-credentials offer clear opportunities to support **portfolio-based careers**, which are common in CCIs.

- Survey findings indicate strong interest in the **stackability** of micro-credentials towards larger qualifications or career transitions.
- Respondents across Spain and Estonia recognise the potential for micro-credentials to be **"recognised within the sector"** and across regions, facilitating mobility within creative labour markets .
- Micro-credentials align with the EU's lifelong learning priorities, enabling flexible return-to-education pathways.

3.2.2. Main challenges

Despite these benefits, several key obstacles hinder widespread use and recognition of micro-credentials in CCIs.

1. Limited awareness and understanding of micro-credentials

The most frequently mentioned barrier across countries is a **lack of awareness**, both among creative professionals and employers:

- Survey respondents in Spain and Estonia noted the need for clearer information about "**what MCs are and how they can be used**" .
- Estonian interviewees emphasised that mainstream media and public communication **do not adequately explain** micro-credentials, leading to low visibility .
- Italian responses also clearly highlighted the lack of awareness of what micro credentials are, also amongst educational providers, and thus, their potential benefits.

2. Financial barriers for freelancers and micro-enterprises

CCIs are dominated by small organisations and self-employed workers, for whom training costs represent a major obstacle.

- Estonian respondents reported course fees often **€2000–3000**, which many individuals cannot afford without subsidies .
- Dutch interviewees noted that creative professionals engage in training only if they are **highly motivated** or financially supported by employers, highlighting sector-wide economic constraints .

3. Time and workload constraints

Creative workers often have inconsistent schedules, making it difficult to commit to structured training:

- Dutch interviewees identified **time limitations** as a leading challenge for CCI participation in micro-credentials .
- Estonia reported high dropout or non-completion rates due to participants **overestimating available time** .

4. Weak or inconsistent employer recognition

Despite growing interest, **formal recognition within CCI labour markets remains uneven**:

- In the Estonian film industry, interviewees stated that certification **"does not give real benefits,"** since practical experience and attitude continue to outweigh credentials in hiring processes .
- Spanish and Estonian survey respondents emphasised that micro-credentials must be **recognised within the sector** to hold real value .

5. Risk of superficial learning and lack of depth

Some stakeholders expressed caution about the **limited duration** of micro-credentials:

- Estonian survey respondents highlighted the risk of **"superficial learning"** due to the short format of MCs, potentially insufficient for mastering complex creative skills .

6. Bureaucratic and institutional constraints

Several challenges relate to legal frameworks and administrative processes:

- Estonia noted that curricula changes require updating the national register (EHIS), which creates **additional bureaucracy** for providers .
- Lack of national qualification frameworks or digital portals in some countries (e.g., Spain) complicates recognition pathways.

7. Misalignment with informal learning cultures in CCIs

Creative professionals often rely on informal, peer-to-peer learning. Some highlight doubts about the relevance of formal micro-credentials:

- Dutch experts note that CCIs have a strong **informal learning culture**, where learning happens organically and may not align with credential-heavy systems.
- Digital badges or formal certificates may hold **little perceived value**, except for those transitioning out of CCIs into other sectors.

3.3. Relevant Case Studies and Best Practices in the Application of Micro-credentials

During the CREDEX mapping process for this report the following case studies have been documented:

Methodological Approach for Case Study Documentation

The documentation of all micro-credential initiatives was based on a standardized methodological template, ensuring the collection of structured and comparable data across various case studies. This uniform approach facilitated subsequent cross-analysis and synthesis. Four macro categories were adopted for data collection:

1. Case Study Details (The Basics) including focus on the providers, learners, sectors, duration and workload (hours, ECTS).

2. Key Features and Innovation (The Design) including focus on programme's structure and quality, Specific skills/competences adopted, innovative Design Process (collaboration/feedback), quality management and evaluation (assessment/accreditation), recognition and perception of value.

3. Impact and Results (Evidence-Based) including outcomes and evidence, impact on participants/students (e.g., employability data), impact on industry/companies (e.g., filling skills gaps), partnerships/collaborations generated.

4. Challenges, Lessons Learned, and Scalability (The Future) including implementation and replication potential, challenges encountered, key lessons learned.

Case studies were collected from both the Cultural and Creative Industries (CCI) and from other sectors where particularly inspiring examples were identified, in order to inform and inspire new applications. The inclusion of non-CCI examples was deliberate, aimed at extracting transferable models, replicable success factors, and innovative design

processes relevant to the Cultural and Creative Industries. In total, **15** comprehensive case studies were documented and analysed for this final report. A synthesis of the case studies follows:

Belgium

1. Cultural entrepreneurship and innovation in CCIs

Title Programme/Initiative

Cultural entrepreneurship and innovation in CCIs

Organisation(s) Involved

Antwerp University

Location

Belgium, Antwerp

CCI sub-sector(s) concerned or other sectors

Fashion and creative industries, heritage, fine arts and galleries, music, festivals, literature, performing arts

Programme/Initiative Start Date

08/02/2024

Estimated Number of Participants/Students

65 students

Programme Duration/Workload (if applicable)

3 ECTS, 7 weeks (Monday from 13:00–16:00), stopping before Easter holidays

Key Features and InnovationSpecific Skills/Abilities Adopted

Familiarity with approaches to **cultural entrepreneurship and innovation** in the creative industry. Insight into related

concepts like **design thinking, social innovation, network theory**. Ability to **create a sustainable business model and plan** from an ethical framework. Skills in **analysis, written academic essay composition, and oral pitching** to diverse stakeholders.

Innovative Design Process

Designed collaboratively between the **Faculty of Business and Economics and three creative schools** (Fashion Department, St. Lucas School of Arts, Conservatorium). **Artists and alumni were closely involved**, providing real-life business questions as the basis for group projects. Students could also bring their "own creative cases". Assessment adapted to **shorten written papers** and emphasize **oral presentations** in response to AI tools and student feedback.

Elements of Innovation / Good Practice

Combines the latest theories on entrepreneurship, business models, and innovation with a **practice-oriented approach**. Focuses on applying theories directly to a **real-life case** from a starting cultural/creative entrepreneur. **Flexible arrangements** are available for working students, including excused absence from permanent evaluation and alternative assignments.

Quality Management and Evaluation

Quality assured through **structured student feedback** at the end of the course, used for future improvements. Assessment uses a combination of **group projects** (creating business models with real artists) and **individual assignments** (analyzing innovation processes). **Oral presentations and evaluations** are emphasized to ensure originality and understanding (in response to AI tools). Certification is a **formal European-recognised certification** carrying 3 ECTS, assured at the institutional level.

Recognition and Perception of Value

Value is recognized by students who have chosen to take **other micro-credentials** after completing this one. Participants value the mix of perspectives, the practical approach of translating ideas into structured business models, and the **international/interdisciplinary group work**. Employers recognize the concrete skills acquired, citing systemic design thinking skills applied at the **European Commission** and in **heritage projects** in South Africa.

Impact and Results

Developed the ability to work effectively in **diverse, international groups** and navigate different professional perspectives. Improved skills in **"downsizing" large creative ideas** into clear, structured, practical business models. Gained **confidence in presenting** ideas orally. Several students put their **own business ideas into practice** with direct feedback.

Impact on Industry/Companies

Benefited the sector by directly addressing the gap between **artistic practice and business knowledge**. Artists and alumni received **concrete and sustainable business models** from student group projects. Practical outputs were shared back, creating a **feedback loop that supported process innovation** in the sector.

Partnerships/Collaborations Generated

Created strong synergies between the Faculty of Business and Economics and **three artistic schools** (Fashion, St. Lucas, Conservatorium). International students bring business knowledge and diverse perspectives, strengthening **interdisciplinary and international cooperation**. The initiative builds on a **25-year network** established by the Master's in Cultural Management.

Key Testimonies

Student Anna applied **systemic design thinking skills** at the European Commission. Another student applied innovation and business modelling skills to **heritage projects in South Africa**. Students valued the confidence gained to translate creative ideas into concrete, sustainable business models and working in **mixed international groups**.

Challenges and Lessons Learned

Difficulties balancing **group diversity** (international students preferred staying together). **Financial accessibility** is an issue as MCs are not subsidized in Flanders (€400 plus €30 per ECTS). Rapid rise of **AI tools** (e.g., ChatGPT) required adapting assessment methods. Some students needed extra guidance on **institutional processes** (registration, certification).

Key Lessons Learned

Actively mixing student groups (international, Master's, MC participants) is crucial for richer group work and

innovative outcomes. **Financial accessibility** needs structural support/alternative funding. Adapting assessments by using **shorter written assignments combined with oral exams/presentations** is more effective for evaluating originality than relying heavily on papers (due to AI). Providing **clearer institutional guidance** at the start is necessary.

Replicability and Scalability

The **strong and well-established network** built over 25 years through the Master's in Cultural Management. **Collaboration across disciplines** (creative schools linked with business faculties). The combination of **theory and practice** (applying business models directly to real cases from artists/alumni).

Adoption/Adaptation Potential

High potential due to the urgent need for **business-minded people in CCIs**. Easily scalable in other regions/countries by **linking creative schools with business faculties**. Suitable for international adoption as a **3 ECTS module offered in English**, focusing on transferable tools like systemic design thinking and business modelling.

Italy

1. National Observatory on Microcredentials – Digital Education Hub Networks (PNRR)

Title Programme/Initiative

National Observatory on Microcredentials – Digital Education Hub Networks (PNRR)

Organisation(s) Involved

Education Hub Networks (Advance, EduNext, Alma); participating Italian universities; AFAM; Milan Polytechnic (Advance network leader)

Location

Italy (national coordination) POLYTECHNIC OF MILAN

CCI sub-sector(s) concerned or other sectors

Higher education; Continuing education; AFAM; Digital education; **Advanced digital skills**

Programme/Initiative Start Date

May 2023

Estimated Number of Participants/Students

Approximately 300,000 users trained (historic MOOC); project expanding (target 250 MOOCs by June 2026)

Programme Duration/Workload (if applicable)

Variable; MOOCs cover different workloads and generate digital badges that can be transformed into microcredentials

Key Features and InnovationSpecific Skills/Abilities Adopted

Advanced digital skills; transversal skills; artistic skills integrated with digital technologies; skills related to AI and digital design

Innovative Design Process

Comparative analysis of existing practices; definition of shared criteria; **Technological federation of university MOOC portals**; Badge issuing system interoperable with the **Europass standard**

Elements of Innovation / Good Practice

Advance Portal as a national federated showcase; Common digital module for issuing badges; Metadata compliant with European digital credentials; **Systemic approach: MOOC quality to badges to microcredentials.**

Quality Management and Evaluation

Assured via three working groups (MOOC quality, technical content of badges, career recognition). Periodic validation through a Steering. Guidelines are shared recommendations among all universities.

Recognition and Perception of Value

Badges used as a prerequisite for exams or blended activities. Possible career recognition (curricular or post-graduate). Strong reputational value of the institutions involved. Potential transformation into microcredentials recognized at European level.

Impact and Results

Expanded access to quality online courses. Development of advanced skills in a flexible manner. Greater integration of MOOCs into blended university courses.

Impact on Industry/Companies

Integration of companies' training needs. Involvement of external partners (companies and institutions) in needs analysis. Specific focus on skills in AI and digital technologies.

Partnerships/Collaborations Generated

Collaboration between almost all Italian universities + AFAM. Associated partners (e.g., companies, regions, public institutions). Technological cooperation with digital badge providers.

Key Testimonies

Satisfaction with the national coordination and the uniqueness of the infrastructure created. Strong interest from universities in a shared framework.

Challenges and Lessons Learned

Initial resistance to standardization. Regulatory complexity (mandatory in-person exam for curricular recognition). Technological complexity in the federation of portals and badge systems.

Key Lessons Learned

Need to start from mapping the existing. Importance of clearly distinguishing between MOOCs, badges and microcredentials. Success requires strong coordination and shared objectives.

Replicability and Scalability

Federated technological model. Shared and validated guidelines. Extensive collaboration between universities and AFAM.

Adoption/Adaptation Potential

Model replicable in complex national contexts. Highly transferable for initiatives requiring shared standards, digital badge management, and quality systems

2. Micro-credentials in Lifelong Learning – Rome Technopole Pilot

Title Programme/Initiative

Micro-credentials in Lifelong Learning – Rome Technopole Pilot

Organisation(s) Involved

Scuola laD, University of Rome Tor Vergata; Fondazione Rome Technopole; RUIAP (Italian University Network for Lifelong Learning)

Location

Rome, Lazio, Italy

CCI sub-sector(s) concerned or other sectors

Pharmaceutical Industry (pilot); Lifelong Learning; Digital Education

Programme/Initiative Start Date

2024

Estimated Number of Participants/Students

50-200 (pilot estimate)

Programme Duration/Workload (if applicable)

40 hours (pilot, blended learning)

Key Features and InnovationSpecific Skills/Abilities Adopted

Targeted, flexible skills acquisition; digital competence; pharmaceutical industry innovation; didactic skills for digital environments. Certificates are based on transparent learning outcomes.

Innovative Design Process

Scientific Board defines programmes, in **partnership with local industry and EU projects**. Direct feedback is gathered from participants and companies.

Elements of Innovation / Good Practice

Strong **alignment with European and national strategies**. Collaborative design process involving academic experts, industry representatives, and professional networks. Use of **digital badges and e-portfolios** for verifiable documentation. Linked to recognized competence frameworks (EQF, DigComp).

Quality Management and Evaluation

Quality assurance is integrated from design to delivery. Courses undergo **peer review**. Assessment combines formative and summative methods. **External referencing** (to sector or European frameworks) and **digital certification** enhance credibility. Continuous improvement through annual reviews and feedback.

Recognition and Perception of Value

Growing recognition in Italy. Valued for **upskilling/reskilling**. Seen as **added value** by both learners and companies.

Impact and Results

Potential for improved employability and skills. Increased self-confidence and enhanced opportunities for career mobility (including international mobility).

Impact on Industry/Companies

Opportunity to participate in the definition of skill standards. Improved recruitment and workforce development. Increased flexibility for integrating micro-credentialed professionals.

Partnerships/Collaborations Generated

Synergies with SMEs, RUIAP, Rome Technopole, other universities, and certification agencies.

Key Testimonies

Participants and companies highlight advantages of flexibility, motivation, new skills, and innovation.

Challenges and Lessons Learned

Reaching consensus on MC definition and value among diverse stakeholders. Establishing transparent and standardized criteria for assessment. Adapting administrative and quality assurance processes to short formats.

Raising awareness and **building trust** among employers. **Technical barriers** in integrating secure digital badge systems.

Key Lessons Learned

Flexibility allows focus on concrete upskilling/reskilling needs. **Stakeholder involvement is crucial** for relevance and recognition. Defining transparent quality criteria is key to credibility. Digital validation/tools (e-portfolios, badges) add value and portability.

Replicability and Scalability

Stakeholder involvement. Digital certification portability. EU standards compatibility. Ready for broader sectoral/national/EU use.

Adoption/Adaptation Potential

High potential for adoption in health, technology, and manufacturing. Modular structure, co-designed with employers and aligned to recognized frameworks, makes it scalable. Suitable for lifelong learning and professional upskilling in public and private sectors

3. University of Padova

Title Programme/Initiative

University of Padova

Organisation(s) Involved

University of Padova.

Location

Italia, Padova, Veneto

CCI sub-sector(s) concerned or other sectors

Generalist: covers all university sectors (medicine, agriculture, humanities, engineering, etc.). **No artistic, musical, or creative fields currently covered.**

Programme/Initiative Start Date

June 2022 (reference date of European guidelines followed)

Estimated Number of Participants/Students

Around 4,500 students have received MCs or Open Badges overall, but actual microcredentials are still few: around 70 have been issued so far.

Programme Duration/Workload (if applicable)

Variable duration: very short courses, even 1-2 credits, completed in a week if intensive. Available in-person, blended, or entirely online.

Key Features and InnovationSpecific Skills/Abilities Adopted

Extremely specific and sector-specific skills (e.g., specialized use of ultrasound in medicine). Does not involve transversal skills (managed with Open Badges).

Innovative Design Process

Designed within institutional committees with external stakeholders. Co-designed with departments. Direct student feedback is planned but not yet available.

Elements of Innovation / Good Practice

Flexible model for **postgraduate courses**. Issuance of **secure, verifiable, and unalterable digital certificates**. Integration into the **Europass European Digital Credential**.

Quality Management and Evaluation

Two committees ensure quality (one for curriculum design, one for content clarity). Results evaluated using online tools and specific assessment methods. Follows European guidelines.

Recognition and Perception of Value

Recognition **not yet consolidated**. Impact on the labor market is premature. Takes time to raise awareness among businesses. Research underway to gauge awareness and trust.

Impact and Results

Concrete results not yet quantified; too early to provide objective data on employability or career advancement.

Impact on Industry/Companies

Contact with companies is initial; university-business-MC ecosystem is still being built.

Partnerships/Collaborations Generated

Dialogue initiated with companies and external stakeholders, but no established structured partnerships yet.

Key Testimonies

No systematic testimonies have been collected.

Challenges and Lessons Learned

Lack of clear regulations. Technical difficulties integrating courses into management systems. Complexity in

monitoring impact and gathering feedback. Critical issues defining a common model among universities.

Key Lessons Learned

Importance of comparison between universities and a shared national model. Awaited official guidelines.

Replicability and Scalability

Prudent approach: integrate MCs into existing refresher courses. Secure digitisation of certificates. Structured in Europass, promoting EU interoperability.

Adoption/Adaptation Potential

Requires clear national regulations. Needs industrialized processes to manage large numbers. Requires greater collaboration with companies for targeted paths

4. Micro-credentials in Lifelong Learning – Rome Technopole Pilot

Title Programme/Initiative

Micro-credentials in Lifelong Learning – Rome Technopole Pilot

Organisation(s) Involved

Scuola laD, University of Rome Tor Vergata; Fondazione Rome Technopole; RUIAP (Italian University Network for Lifelong Learning)

Location

Rome, Lazio, Italy

CCI sub-sector(s) concerned or other sectors

Pharmaceutical Industry (pilot); Lifelong Learning; Digital Education

Programme/Initiative Start Date

2024

Estimated Number of Participants/Students

50-200 (pilot estimate)

Programme Duration/Workload (if applicable)

40 hours (pilot, blended learning)

Key Features and InnovationSpecific Skills/Abilities Adopted

Targeted, flexible skills acquisition; digital competence; pharmaceutical industry innovation; didactic skills for digital environments. Certificates are based on transparent learning outcomes.

Innovative Design Process

Scientific Board defines programmes, in **partnership with local industry and EU projects**. Direct feedback is gathered from participants and companies.

Elements of Innovation / Good Practice

Strong **alignment with European and national strategies**. Collaborative design process involving academic experts, industry representatives, and professional networks. Use of **digital badges and e-portfolios** for verifiable documentation. Linked to recognized competence frameworks (EQF, DigComp).

Quality Management and Evaluation

Quality assurance is integrated from design to delivery. Courses undergo **peer review**. Assessment combines formative and summative methods. **External referencing** (to sector or European frameworks) and **digital certification** enhance credibility. Continuous improvement through annual reviews and feedback.

Recognition and Perception of Value

Growing recognition in Italy. Valued for **upskilling/reskilling**. Seen as **added value** by both learners and companies.

Impact and Results

Potential for improved employability and skills. Increased self-confidence and enhanced opportunities for career mobility (including international mobility).

Impact on Industry/Companies

Opportunity to participate in the definition of skill standards. Improved recruitment and workforce development. Increased flexibility for integrating micro-credentialed professionals.

Partnerships/Collaborations Generated

Synergies with SMEs, RUIAP, Rome Technopole, other universities, and certification agencies.

Key Testimonies

Participants and companies highlight advantages of flexibility, motivation, new skills, and innovation.

Challenges and Lessons Learned

Reaching consensus on MC definition and value among diverse stakeholders. Establishing transparent and standardized criteria for assessment. Adapting administrative and quality assurance processes to short formats.

Raising awareness and **building trust** among employers. **Technical barriers** in integrating secure digital badge systems.

Key Lessons Learned

Flexibility allows focus on concrete upskilling/reskilling needs. **Stakeholder involvement is crucial** for relevance and recognition. Defining transparent quality criteria is key to credibility. Digital validation/tools (e-portfolios, badges) add value and portability.

Replicability and Scalability

Stakeholder involvement. Digital certification portability. EU standards compatibility. Ready for broader sectoral/national/EU use.

Adoption/Adaptation Potential

High potential for adoption in health, technology, and manufacturing. Modular structure, co-designed with employers and aligned to recognized frameworks, makes it scalable. Suitable for lifelong learning and professional upskilling in public and private sectors.

Netherlands

1. Conceptual thinking NLQF 5

Title Programme/Initiative

Conceptual thinking NLQF 5

Organisation(s) Involved

Stichting sQuare

Location

Amsterdam

CCI sub-sector(s) concerned or other sectors

Freelance visual craftsmen (photography, film, animation, illustration, game design, graphic design…)

Programme/Initiative Start Date

March, once a year

Estimated Number of Participants/Students

40

Programme Duration/Workload (if applicable)

400 study hours plus a 20-hour examination period, spread across one year (excluding July and August). Equivalent to **15 ECTS**.

Key Features and InnovationSpecific Skills/Abilities Adopted

Concept thinking and entrepreneurial skills for freelance creators. Focus on five core competencies: Problem solving, Critical thinking and acting, Creative thinking and acting, Collaboration, Self-regulation.

Innovative Design Process

Designed to offer MBO4 graduates a chance to professionalize at a **higher level of thinking and working (NLQF 5)**. Focuses on developing conceptual thinking from the participant's own craft/signature. Curriculum **co-created with creative agency Buutvrij for life**. Includes working in teams on a **current industry case**.

Elements of Innovation / Good Practice

Provides MBO4 graduates a pathway for professional growth at a higher level of thinking and practice, both at and on the job. Tackles five essential 21st-century skills flagged as underdeveloped among MBO4 graduates.

Quality Management and Evaluation

Programmatic assessment runs throughout the module, emphasizing application in practice. Uses **low stakes (feedback-driven) and medium stakes (reflection-based)** data points. Participants receive an **officially accredited, internationally recognized diploma at NLQF level 5**.

Recognition and Perception of Value

Microcredentials are not part of this setup; participants graduate with an **NLQF level 5 diploma**. NLQF level 5 is seen as an important stepping stone for **upskilling and new career opportunities**.

Impact and Results

100% report their ability to think conceptually has grown. **92%** report greater confidence as a self-employed creative professional. **85%** developed new hard skills and entrepreneurial skills. Every participant connected with clients and agencies they would not have reached on their own.

Impact on Industry/Companies

Graduates join the sQuare Community, connecting them with clients for paid assignments. The **need for on-the-job coaching has dropped noticeably** since the start of the program.

Partnerships/Collaborations Generated

Collaboration between **Stichting sQuare and Buutvrij**. Home Agency will join as a second CCI partner from 2026.

Key Testimonies

Testimonies from participants (Madde, Kylian, Class of 2024) are available via video links.

Challenges and Lessons Learned

Extensive research was needed to align the program with the **NLQF-framework** while appealing to both the target group and CCI partners.

Key Lessons Learned

The development, classification, and examination is **costly**. The current reduced-fee model (reliant on social/public partners) may be **unsustainable**. Requires a **stronger financial infrastructure for lifelong learning** for craftsmen, needing cross-institutional shared vision and joint advocacy.

Replicability and Scalability

Credibility achieved through its **community-based approach**, engagement of **industry partners**, and a track record of successful collaborations.

Adoption/Adaptation Potential

Model is scalable to different sectors and contexts. Conditions for replicability include: openness to shaping the curriculum in a **community-engaged way**; involvement of an industry partner; and embracing programmatic assessment.

2. Ludodidactics Summerschool

Title Programme/Initiative

Ludodidactics Summerschool

Organisation(s) Involved

HKU (Academy Creative Transformation)

Location

Utrecht

CCI sub-sector(s) concerned or other sectors

Creative Transformation

Programme/Initiative Start Date

7 days (between June and November 2022)

Estimated Number of Participants/Students

Maximum 24 participants, mixed group of teachers, trainers, educators, educational developers, and business professionals

Programme Duration/Workload (if applicable)

7 days

Key Features and InnovationSpecific Skills/Abilities Adopted

How to design learning experiences based on **play and game principles** using a methodology called Ludodidactiek.

Innovative Design Process

Grew out of a research program and public keynotes due to high demand for a shorter program. Designed as a **Summerschool** for convenience.

Elements of Innovation / Good Practice

”Sells itself” without advertising (always full). Unique in that it **bridges education and game design**. Focuses on **analogue artifact development** in a short, intensive format. An average of 21 out of 24 participants have a working prototype by the end of the week.

Quality Management and Evaluation

Participants must have a **working prototype** by the end of the week, which they test and then further test with their target group for two months. Certificate received after successful testing/final session. Taught by experienced teachers and educational game designers.

Recognition and Perception of Value

Students receive a **certificate**. Microcredentials are not part of the setup. Value is judged mostly for **personal inspiration and exploration**; not for formal job requirements or CV value as such.

Impact and Results

Develop a **shift in mindset** about their own teaching practice. Learn new forms of education based on play design principles and methods. Results in more interactive learning experiences, **greater student motivation**, and less exhaustion for teachers.

Impact on Industry/Companies

Leads to greater job satisfaction among teachers and increased enjoyment of learning among students. Results in improved knowledge transfer. In-company training has had a notable effect on the core remit (e.g., Utrechts Universiteitsmuseum).

Partnerships/Collaborations Generated

A **WhatsApp group** remains active for communication and exchange among participants after the program. Academic researchers from Radboud University and TU Twente are collaborating with the Ludodidactics team on a publication.

Key Testimonies

Participants describe the experience as an ”amazing and intense rollercoaster,” a ”party,” and a great way to ”silence

your inner Bert," highlighting the **playful, human, and valuable journey**.

Challenges and Lessons Learned

The initial design method was not academically established. Designing a one-week, "pressure cooker" format was challenging but successful. Continuing challenges in the didactics and design of micro-credentials, and **alignment with the Dutch Qualifications Framework (NLQF)**.

Key Lessons Learned

It is important to engage in an **ongoing dialogue about microlearning forms** and how to effectively design them. Inclusion of a **startup day and a rebound day** (before and after the week) substantially increased impact, reflection, and effectiveness.

Replicability and Scalability

Invest in people and share knowledge openly. **Diversity of the participants group** (teachers, trainers, healthcare professionals, etc.) makes the experience more enriching.

Adoption/Adaptation Potential

Scale up is primarily limited by **staff availability/capacity and the remit of HKU itself.**

3. Make IT Work

Title Programme/Initiative

Make IT Work

Organisation(s) Involved

Hogeschool van Amsterdam en IT Academy Noord-Nederland.

Location

Amsterdam

CCI sub-sector(s) concerned or other sectors

IT

Programme/Initiative Start Date

11 months, twice a year

Estimated Number of Participants/Students

I couldn't find this information

Programme Duration/Workload (if applicable)

2240 hours of study, distributed over the eleven months of the program.

Key Features and InnovationSpecific Skills/Abilities Adopted

Competencies in **business & data analysis** for highly educated talents without a specific IT background.

Innovative Design Process

Launched in 2015 to address major staff shortages in the IT sector. Developed in **collaboration with participating employers** to retrain highly educated non-IT talents for IT positions at a higher professional education level.

Elements of Innovation / Good Practice

Highly educated talents are **retrained as IT professionals in five months**. Followed by **at least six months of paid employment** in their new position with a participating employer.

Quality Management and Evaluation

Begins with an **analytical test and personality questionnaire**. Match with an employer via speed dating and job interview. **Go or no-go evaluation** after 3 weeks of lessons. Students receive a **certificate at higher vocational level** at the end.

Recognition and Perception of Value

Students receive a **certificate at a higher vocational level**. **Designated a model project for teaching digital skills by the European Commission** in 2018. Won the Pro-Motor Award (for quality and innovation).

Impact and Results (evidence-based)Impact on Participants/Students

Very high **pass rate of 92%. 97% of students still work in IT**. HBO certificate helps students find work in the promising IT sector.

Impact on Industry/Companies

Leads to **more personnel in the IT sector** and a better match between supply and demand.

Partnerships/Collaborations Generated

Collaboration between education and employers in the IT sector.

Key Testimonies

1,500+ successful students. Student quotes highlight enthusiasm and the challenge/reward of the program.

Challenges and Lessons Learned

I couldn't find this information.

Key Lessons Learned

I couldn't find this information.

Replicability and Scalability

Collaboration between education and employers. Coordinating labor market questions with the program. Structure: from assessment/matching to **six months of paid employment**.

Adoption/Adaptation Potential

First explore labor market questions with employers to see if such a program could work.

Estonia

In Estonia, the legal framework for micro-credentials entered into force in 2025, although universities had already been able to offer them earlier as modules within study programmes. For this reason, case studies were collected from universities to illustrate the activities underway nationally.

1. Creativity and self-development 15 ECTS

Title Programme/Initiative

Creativity and self-development 15 ECTS, Project management in creative entrepreneurship 15 ECTS, Team management and leadership 15 ECTS. **3 micro-degree modules** that are part of the Creative Project Management Master Degree (one year).

Organisation(s) Involved

University of Tartu, Viljandi Culture Academy (ESTONIA).

Location

Viljandi, Estonia

CCI sub-sector(s) concerned or other sectors

Entrepreneurship.

Programme/Initiative Start Date

Autumn 2024/Spring 2025

Estimated Number of Participants/Students

20

Programme Duration/Workload (if applicable)

15 ECTS per module.

Key Features and InnovationSpecific Skills/Abilities Adopted

Skills to independently lead the implementation of creative projects. To establish and operate a creative company. To manage multicultural and virtual teams. To analyze culture and comprehend the role of the creative sector.

Innovative Design Process

Designed to offer creative sector students professional/entrepreneurial skills and to mitigate the institution's financial risk (offsetting low formal degree student numbers). Program designers consulted professional associations in the creative industry.

Elements of Innovation / Good Practice

All micro-degree modules are **100% online**, making them attractive to audiences worldwide. Participants can study regardless of their geographical location.

Quality Management and Evaluation

Quality assured because modules are part of a Master Degree program approved by the University of Tartu Senate. Learning outcomes are monitored and assessed by the program manager. Upon successful completion, participants receive the **University of Tartu Certificate and relevant ECTS**.

Recognition and Perception of Value

Might be seen as **extra value**, but data on labour market perception is not available as it is a new program. Participants expressed overall satisfaction and achievement of learning goals.

Impact and Results

Hard to say, no alumni surveys yet. Testimonies highlight the **convenience, flexibility, education material, and technical knowledge** acquired.

Impact on Industry/Companies

No data available.

Partnerships/Collaborations Generated

Synergies created among students who collaborated during the programme.

Key Testimonies

Participants loved the **flexibility**, the new AI programs used, and the fact that the experience **"opened up my perspective pertaining to the creative Industry"**.

Challenges and Lessons Learned

The hardest thing was finding and attracting lecturers/trainers who are **good at running classes and are field experts** at the same time.

Key Lessons Learned

A critical lesson was **marketing issues** (how to find the target group). Need to make integration with degree students more meaningful for micro-degree students. Lecturers need to understand the different motivations of MC students.

Replicability and Scalability

Integration with formal degree programmes and online opportunity.

Adoption/Adaptation Potential

In principle, it is **scalable**, but institutions typically make decisions based on their specific areas of expertise and goals.

2. Design in Education and Education Design

Title Programme/Initiative

Design in Education and Education Design

Organisation(s) Involved

Estonian Academy of Arts

Location

Tallinn

CCI sub-sector(s) concerned or other sectors

Design

Programme/Initiative Start Date

Oct 20, 2025 (1st time was 2023/24)

Estimated Number of Participants/Students

Ca 15

Programme Duration/Workload (if applicable)

16 ECTS (Total of 416 hours: 128 hours contact learning and 288 hours independent work).

Key Features and InnovationSpecific Skills/Abilities Adopted

Knowledge of principles of teaching contemporary design and applied art. Ability to analyze and apply an **innovative academic approach based on design philosophy**. Ability to create a learning environment based on design philosophy.

Innovative Design Process

Developed by leading faculty members. Developed in part through a joint program with Tallinn University (Art Teacher). **Totally separate micro-degree programme**, but degree students can join as elective.

Elements of Innovation / Good Practice

Unique focus on **using design principles in education**. No one else in Estonia offered anything similar.

Quality Management and Evaluation

Quality approved by the Est Ministry of Research and Education and university regulations. Ongoing curricula use participant feedback surveys. Students get a **Micro-degree certificate**.

Recognition and Perception of Value

Recognized as a component of **teachers' continuing education** in Estonia, as teachers are required to undergo attestation and training.

Impact and Results (evidence-based)Impact on Participants/Students

Participants report using gained skills in everyday work as teachers. Learners bring forward the value of **co-design**. Feedback: gained understanding of co-design, ability to apply design tools, and a broader view of the Academy of Arts.

Impact on Industry/Companies

Enriched the field of education creation. One participant went on to start doctoral studies in bioplastic. No data of wider impact.

Partnerships/Collaborations Generated

Created synergies between the participants and their educational institutions (schools).

Key Testimonies

Learner feedback highlights understanding co-design, ability to apply design tools in primary school, and a broader perspective on the Academy of Arts.

Challenges and Lessons LearnedChallenges Encountered

No significant difficulties reported; high motivation and inspiration among those involved.

Key Lessons Learned

Keep people motivated.

Replicability and Scalability

Narrow focus combined with a wide variety of tasks and design tools. Always surprised learners with interesting tools and tasks.

Adoption/Adaptation Potential

Know your target group and its needs. Packaging the content well is important. Can be **scaled easily** depending on the specific profile of the university.

3. Towards a future heritage: conservation of historic Interior and wall paintings

Title Programme/Initiative

Towards a future heritage: conservation of historic Interior and wall paintings

Organisation(s) Involved

Pallas University of Applied Sciences (a state institution of professional higher education).

Location

Tartu, Estonia

CCI sub-sector(s) concerned or other sectors

Design, **Conservation/Restoration**, and the Arts.

Programme/Initiative Start Date

12.09.2025

Estimated Number of Participants/Students

5

Programme Duration/Workload (if applicable)

26 ECTS. Tuition fee: 1560 EUR.

Key Features and InnovationSpecific Skills/Abilities Adopted

Systematic knowledge and practical skills for preserving historical interiors, wall paintings, and monumental art. Practical conservation skills (cleaning, consolidation, filling) and application of historical decorative techniques.

Innovative Design Process

Offered for the 3rd time; **linked with the 4-year degree curriculum** Conservation and Restoration. **Changes specific target group each year** (e.g., paper/plastic to furniture to historic interiors) to match limited demand. Input came from the Estonian Conservation Association.

Elements of Innovation / Good Practice

Works with **small groups (3–6 students)**, directly related to strong focus on **quality and practical skills**. Changes the specific target group yearly because the demand for this type of specialist is limited. **Small groups, strong focus on hands-on learning, and flexibility**.

Quality Management and Evaluation

Quality assured by university continuous learning regulations and formal curricula regulations. Academic staff is accredited. The programme must be uploaded to the Estonian Education Information System for quality approval. Graduates receive a university certificate (”micro-degree certificate”).

Recognition and Perception of Value

Assumed to be recognized. Employers often **cover the cost of tuition fee**. Micro-credentials can be **transferred through prior learning and recognition (RPL)**.

Impact and Results

No data from follow-up surveys. Assume learners have polished their skills and acquired new knowledge due to high motivation. Formal curricula students learning together with micro-degree students supports experience sharing and networking.

Impact on Industry/Companies

No data. Assume students apply new knowledge at work and the sector benefits.

Partnerships/Collaborations Generated

Created synergies between learners’ networks where professionals share experience.

Key Testimonies

Students highly appreciated the **“practical implementation of the working techniques”** and “giving examples from everyday life, making connections”.

Challenges and Lessons Learned

Administrative complexity due to different study information systems for formal and continuous education students. **Logistical challenges** merging students and class schedules. Increased student number affects the individual approach and supervisor workload (practical skills). Waiting for approval from the Estonian Education Information System takes **1.5-2 months**, delaying promotion and planning.

Key Lessons Learned

Need for **clearer communication** to students about institutional duties. Need to **start the approval process earlier** to minimize stress and balance workload. Modification of content each year for a different target group is an **extra work burden** for academic staff.

Replicability and ScalabilityReplicable Success Factors

High quality content and practical skills. Programme **integration with formal curricula**. **Small groups** (max 10 students). Varied study formats: hands-on workshops, lectures, individual/group tasks.

Adoption/Adaptation Potential

Hard to scale due to sector-specific peculiarities. Could be adopted where conditions are similar (need for professionals, small group size.

Ireland

1. Practical Frameworks for Innovation

Title Programme/Initiative

Practical Frameworks for Innovation

Organisation(s) Involved

Trinity College Dublin

Location

Dublin

CCI sub-sector(s) concerned or other sectors

NA

Programme/Initiative Start Date

September 2024

Estimated Number of Participants/Students

12-16

Programme Duration/Workload (if applicable)

23 hours, **5 ECTS**, 7 weeks of training/course.

Key Features and InnovationSpecific Skills/Abilities Adopted

Practical application of innovation frameworks, problem-solving, and strategic thinking.

Innovative Design Process

Explores iterative design methods, user-centred approaches, and creative problem-solving techniques.

Elements of Innovation / Good Practice

Emphasis on real-world case studies, collaboration, and **evidence-based innovation strategies**.

Quality Management and Evaluation

Integration of evaluation tools to assess impact, effectiveness, and scalability.

Recognition and Perception of Value

Accredited by **Trinity College Dublin**. Includes **5 ECTS credits** and a certificate, enhancing professional credibility.

Impact and Results

Enhanced innovation capabilities. Practical skills in design thinking. Increased confidence in applying frameworks to real-world challenges.

Impact on Industry/Companies

Access to employees with up-to-date innovation strategies. Improved internal processes. Stronger capacity for creative problem-solving.

Partnerships/Collaborations Generated

Engagement with industry experts. Cross-sector collaboration opportunities. Potential for joint innovation projects.

Key Testimonies

Praised for its **hands-on approach, relevance to current industry needs**, and the credibility of earning ECTS credits from Trinity College Dublin.

Challenges and Lessons Learned

Recruitment difficulties. High competition from other offerings. Availability of free courses and funding opportunities.

Key Lessons Learned

Course duration adjusted from 6 to 7 weeks for better pacing. **Peer discussion enhanced engagement. Hybrid delivery models** increased accessibility and flexibility.

Replicability and Scalability

Integration of a **practical challenge tailored to each individual learner. Hands-on, applied learning approach.**

Adoption/Adaptation Potential

Could be scaled by partnering with regional education providers and industry bodies. Adaptable to other CCI sub-sectors by customizing content. Suitable for international implementation.

2. Nature-Based Entrepreneurship – Micro-Credential

Title Programme/Initiative

Nature-Based Entrepreneurship – Micro-Credential

Organisation(s) Involved

Trinity College Dublin

Location

Ireland, Dublin

CCI sub-sector(s) concerned or other sectors

Cultural and Creative Industries (cross-sector), **Sustainable Innovation**, Social Enterprise.

Programme/Initiative Start Date

September 2023

Estimated Number of Participants/Students

Approximately 20–30 participants to date.

Programme Duration/Workload (if applicable)

7 weeks, **5 ECTS credits**.

Key Features and InnovationSpecific Skills/Abilities Adopted

Sustainable entrepreneurship, nature-positive business design, stakeholder engagement, and systems thinking tailored to creative/cultural sectors.

Innovative Design Process

Designed through **collaboration between Trinity Business School and industry partners**. Incorporates feedback from learners and real-world case studies.

Elements of Innovation / Good Practice

Combines ecological awareness with entrepreneurial strategy. Includes practical challenges for individual learners and peer-to-peer learning formats.

Quality Management and Evaluation

Quality assured by Trinity College Dublin. Includes formal assessments, peer discussions, and award of **5 ECTS credits**.

Recognition and Perception of Value

Formally recognised by **QQI** and integrated into the **National Framework of Qualifications**. Increasingly valued by employers for upskilling and innovation roles.

Impact and Results

Gained practical skills in sustainable business design and systems thinking. Many reported increased confidence in launching or pivoting nature-based ventures. 5 ECTS credits enhanced academic/professional profiles.

Impact on Industry/Companies

Companies benefited from employees with fresh perspectives on sustainability and innovation. Helped fill knowledge gaps around nature-positive strategies and encouraged process innovation.

Partnerships/Collaborations Generated

Fostered collaboration between Trinity Business School, **Creative & Cultural Industries Skillnet**, and sustainability-focused enterprises.

Key Testimonies

Learners praised the **hybrid format and real-world applicability**. One participant noted: “It gave me the tools to rethink my business model with sustainability at its core”.

Challenges and Lessons Learned

Attracting participants unfamiliar with sustainability-focused entrepreneurship. **Limited visibility** of the micro-credential format. Balancing academic rigor with accessibility for non-traditional learners.

Key Lessons Learned

Real-world examples and case studies improved engagement. **Hybrid delivery** allowed broader participation. Future iterations need targeted outreach and clearer articulation of career outcomes.

Replicability and Scalability

Hybrid delivery model. Practical challenge tailored to each learner. **Accreditation with ECTS credits** enhanced credibility. Peer discussion fostered engagement.

Adoption/Adaptation Potential

Can be scaled through partnerships with universities, sustainability networks, and business incubators. Adaptable to various sectors (agriculture, tourism, design). Suitable for international rollout.

3. Strategic Development for Creative Professionals – Postgraduate Certificate

Title Programme/Initiative

Strategic Development for Creative Professionals – Postgraduate Certificate

Organisation(s) Involved

Institute of Art, Design + Technology (IADT), Cultural & Creative Industries Skillnet.

Location

Ireland, Dublin

CCI sub-sector(s) concerned or other sectors

Film, Design, Photography, Theatre, Events, Game Development, Animation, Fine Arts.

Programme/Initiative Start Date

October 2025

Estimated Number of Participants/Students

Approximately 15 participants per intake.

Programme Duration/Workload (if applicable)

1 year part-time, **20 ECTS credits** (4 modules at 5 ECTS each).

Key Features and InnovationSpecific Skills/Abilities Adopted

Strategic planning, creative entrepreneurship, leadership development, and business model innovation tailored to creative professionals.

Innovative Design Process

Developed in collaboration with **Cultural & Creative Industries Skillnet and industry stakeholders**. Shaped by feedback from past learners and sector needs.

Elements of Innovation / Good Practice

Modular structure allows learners to apply concepts directly to their own creative practice or business. Combines academic insight with practical application.

Quality Management and Evaluation

Accredited by IADT with **20 ECTS credits**. Includes formal assessments, reflective practice, and peer engagement.

Recognition and Perception of Value

Formally recognised within **Ireland's National Framework of Qualifications**. **Highly valued by creative sector employers** for upskilling and strategic development.

Impact and Results

Enhanced strategic thinking and improved confidence in managing creative projects. Applied new skills directly to their businesses, resulting in expanded client portfolios.

Impact on Industry/Companies

Helped address **leadership and strategic planning gaps** within creative organisations. Employers noted improved project delivery and innovation among staff.

Partnerships/Collaborations Generated

Strengthened ties between IADT, Cultural & Creative Industries Skillnet, and sector-specific employers. Fostered **peer-to-peer collaborations** among participants (some launched joint ventures).

Key Testimonies

Participant: "This course gave me the **structure and confidence to scale my creative business sustainably**". The faculty praised the blend of academic insight and real-world application. Employers praised the programme for producing **"strategically minded creatives ready to lead"**.

Challenges and Lessons Learned

Limited awareness of MCs among creative professionals. Difficulty balancing course workload with **freelance or**

project-based careers. Competition from free or informal learning options.

Key Lessons Learned

Clear communication of the value and ECTS accreditation helped boost engagement. **Flexible scheduling and hybrid delivery** were essential for accommodating varied work patterns.

Replicability and Scalability

Modular structure. **Hybrid delivery** supports flexibility. Industry collaboration ensures content relevance. Accredited with 20 ECTS.

Adoption/Adaptation Potential

Can be scaled nationally through partnerships. Adaptable to various CCI sub-sectors (music, crafts, digital arts) by tailoring case studies. Suitable for international rollout.

4. Creative Entrepreneurship Programme & CLIMB (Creative Leaders Innovating for Market and Business Growth)

Title Programme/Initiative

Creative Entrepreneurship Programme & CLIMB (Creative Leaders Innovating for Market and Business Growth)

Organisation(s) Involved

Crew, Atlantic Technological University (ATU), EIT HEI Partners (Başkent University, University of Art and Design Romania, University of Évora, Portugal).

Location

Ireland (with European collaboration)

CCI sub-sector(s) concerned or other sectors

Creative and Cultural Industries, Entrepreneurship, Film & TV, Immersive Technologies.

Programme/Initiative Start Date

Creative Entrepreneurship: 2021; CLIMB: 2025.

Estimated Number of Participants/Students

60 through Creative Entrepreneurship; 400 targeted in Try Creates; CLIMB expanding to broader reach.

Programme Duration/Workload (if applicable)

Creative Entrepreneurship: 30 credits over 2 semesters; CLIMB: 6 modular sessions, flexible and rolling.

Key Features and InnovationSpecific Skills/Abilities Adopted

Business ideation, market strategy, creative entrepreneurship, mentorship, acceleration, immersive tech awareness.

Innovative Design Process

Modular structure allowing independent participation. **Asynchronous and in-person delivery**. Designed for flexibility.

Elements of Innovation / Good Practice

Co-delivery between academic and industry. Rolling access. Integration with enterprise supports. Uses digital badges.

Quality Management and Evaluation

Feedback from alumni. Alignment with pedagogical standards. Informal evaluation through enterprise progression.

Recognition and Perception of Value

High value placed on accreditation. Micro-credentials are seen as **more motivating than full certs**. Credibility for enterprise support.

Impact and Results

High success rate in progressing to Enterprise Ireland's New Frontiers. Increased access to enterprise support. Enhanced credibility.

Impact on Industry/Companies

Supports sustainable and lifestyle businesses. Fills a gap for non-tech creative entrepreneurs. Potential for global competitiveness.

Partnerships/Collaborations Generated

Strategic collaboration with **ATU and European HEIs**. Potential future collaboration with CREDEX.

Key Testimonies

Participants **prefer modular micro-credentials over full certs**. Accreditation helps with investment and enterprise access.

Challenges and Lessons Learned

Institutional constraints on accreditation. Requirement for Level 8 entry. Lack of flexibility in the academic calendar.

Key Lessons Learned

Micro-credentials increase accessibility and motivation. **Modular design is essential**. Industry partnerships can ease

delivery burden.

Replicability and Scalability

Modular structure. **Co-delivery model**. Asynchronous access. Integration with enterprise support.

Adoption/Adaptation Potential

High potential across CCI sectors. Applicable to immersive tech, film, and entrepreneurship. **Scalable through digital delivery and micro-credentialing.**

An analysis of these case studies across Europe reveals common structural innovations, measurable impacts, and shared challenges in integrating this new educational format into the creative and professional sectors.

1. Key Features and Innovation: Bridging Disciplines and Real-World Needs

The most salient feature of successful micro-credentials is their innovative design, particularly the blend of academic rigour with immediate, real-world application, often bridging previously separate disciplines:

Interdisciplinary and Co-Design Models: Many initiatives are fundamentally cross-sectoral, designed collaboratively between academic institutions and industry partners. For instance, the University of Antwerp's program combines the Faculty of Business and Economics with three creative schools to apply business models directly to real artists' cases. In the Netherlands, the Conceptual Thinking NLQF 5 program was co-created with a creative agency to ensure relevance to freelance visual craftsmen.

Technological and Systemic Innovation: Italy is leading efforts in systemic integration. The National Observatory is implementing a federated model across almost all Italian universities, focused on converting MOOC quality to badges

and then to micro-credentials, all interoperable with the Europass Digital Credential standard. The University of Padova is also focused on issuing secure, verifiable digital certificates integrated into Europass.

Unique Delivery Structures: Programs are highly flexible and modular to accommodate working professionals. Crew/ATU in Ireland utilizes a modular, asynchronous delivery model. The Dutch Make IT Work initiative, an EU model project for digital skills, features an innovative structure: five months of intense training followed by a minimum of six months of paid employment with a partner employer, retraining non-IT graduates for the IT sector.

Accreditation and Formal Alignment: Initiatives in Ireland (Trinity College Dublin, IADT) and the Netherlands (sQuare) leverage formal accreditation. The Irish programs are formally recognized by the National Framework of Qualifications (NFQ) and award ECTS credits , while the Dutch Conceptual Thinking program results in an NLQF level 5 diploma.

2. Impact and Results: Measurable Outcomes

The evidence suggests MCs deliver tangible benefits for participants and industry, especially in improving specialised competencies and entrepreneurial ability:

Enhanced Employability and Confidence: Programs demonstrate a high return on investment for participants. The Make IT Work model boasts a 97% employment rate in IT for its graduates. In the creative sector, participants in the NLQF 5 program reported a 92% increase in confidence as self-employed professionals.

Filling Industry Skill Gaps: MCs directly address specific, immediate industry needs. The Irish IADT program fills leadership and strategic planning gaps within creative organizations. The Pallas UAS in Estonia focuses on highly specialized conservation skills, adapting the program annually to address the limited, specific demand for specialists.

Value Perception and Transfer: Micro-credentials are seen as highly motivating by participants, who often prefer them over full certificates. Furthermore, formal academic transfer is demonstrated, as Pallas UAS confirms their

micro-credentials can be transferred through Prior Learning and Recognition (RPL). Graduates of the Trinity College Dublin program have successfully used their newly acquired systemic design thinking skills in roles at organizations like the European Commission.

Partnerships and Ecosystem Development: The programs are catalysts for new collaborations, often strengthening existing university-industry networks (e.g., the 25-year network foundation leveraged by the University of Antwerp).

3. Challenges and Lessons Learned

While the format is successful, implementation reveals consistent challenges related to regulation, finance, and technology.

Challenge Encountered	Critical Lesson Learned
Regulatory Ambiguity and Trust	The **lack of clear national regulations** and initial employer skepticism necessitate **strong stakeholder involvement** and clear communication of the MC's value.
Financial Accessibility	High development costs and a lack of state subsidies (e.g., in Flanders) create **financial barriers** for individual participants, particularly freelancers.
Administrative and Technical Constraints	Integrating short, flexible MC modules into traditional, rigid university administrative and quality assurance systems causes complexity.

Maintaining Integrity in the Age of AI	The rise of AI tools (like ChatGPT) complicates traditional assessment methods, such as long written papers.
Recruitment and Visibility	Attracting participants and raising awareness, particularly among professionals unfamiliar with formal upskilling routes, remains difficult.

4. Replicability and Scalability

The potential for scaling micro-credentials is high, provided specific structural factors are replicated:

- **Modular and Digital Infrastructure:** The **modular structure** and the ability to access content asynchronously (e.g., **Crew/ATU**) are key success factors. The **federated technological model** developed by Politecnico di Milano is highly transferable for national-scale initiatives requiring shared standards and digital badge management.
- **Adaptable Cross-Disciplinary Models:** The model of **linking creative schools with business faculties** is highly replicable across regions to address the urgent need for business-minded professionals in the CCI. Content can be adapted by tailoring case studies to specific sub-sectors (e.g., music, digital arts).
- **Accreditation and Partnership:** Scalability hinges on establishing accreditation (e.g., ECTS or NFQ classification) and securing **strong industry partnerships** and enterprise supports to ensure credibility and relevance.

3.4. The potential of Micro-credentials in the CCI Sector

Based on these case studies, the potential of micro-credentials (MCs) to support the Creative and Cultural Industries (CCI) is significant, primarily by **bridging the gap between artistic practice and necessary business/digital skills** and by providing **flexible, recognised pathways** for professional upskilling.

Here are the key areas highlighting this potential:

3.4.1. The Potential of Micro-Credentials for the CCI

1. Targeted Skill Development and Innovation

Micro-credentials excel at delivering **highly specific and in-demand skills** that are often lacking in the CCI sector:

- **Filling the Business Gap:** MCs address the critical need for **business acumen** among creative professionals. Programs focus on skills like strategic planning, creative entrepreneurship, leadership development, and translating creative ideas into **sustainable business models**.
    - *Example:* The Antwerp University program directly addresses the gap between artistic practice and business knowledge by having students create concrete business models for real artists' challenges.
- **Specialized and Practical Skills:** They provide practical, hands-on training for highly specialized sub-sectors where demand is limited but critical.
    - *Example:* The Pallas University of Applied Sciences focuses on niche, hands-on skills in **conservation/restoration of historic interiors**. The Ludodidactics Summerschool teaches design principles based on **play and game principles**.

- **Future-Proofing through Digital and Sustainable Skills:** MCs are used to integrate emerging skills vital for the future of the CCI.
    - *Examples:* The **Nature-Based Entrepreneurship** MC combines ecological awareness with entrepreneurial strategy. The Italian National Observatory aims to deliver advanced skills in **AI and digital technologies**.

2. Flexibility and Accessibility for Working Professionals

The design of MCs is perfectly suited to the freelance and project-based nature of many CCI careers:

- **Accommodating Work-Life Balance:** The use of **flexible scheduling, hybrid delivery**, and **asynchronous access** is critical for creative professionals whose work patterns conflict with rigid academic calendars.
- **Modular and Stackable Learning:** Their short, modular nature allows professionals to acquire credentials **without committing to a full-time degree**. This structure facilitates **lifelong learning** and rapid reskilling in response to changing market requirements.
- **Alternative Pathways:** MCs offer a crucial stepping stone for individuals who might not pursue traditional degrees, such as **MBO4 graduates** looking to professionalize at a higher level of thinking and working (NLQF 5).

3. Recognition and Credibility

Formal accreditation and industry integration enhance the professional value of these short learning formats:

- **Formal Recognition:** When MCs are integrated into national qualification frameworks (like Ireland's NFQ) and award **ECTS credits**, their value and portability are significantly enhanced, giving employers confidence in the quality of the skills gained.
- **Industry Validation:** The mandatory involvement of industry partners in co-designing and delivering programs (e.g., Creative & Cultural Industries Skillnet in Ireland) ensures the content is **immediately relevant and practical**.

- **Transferability:** MCs provide verifiable proof of competency that can be used for **career recognition (curricular or post-graduate)** and transfer through **Prior Learning and Recognition (RPL)** into formal degree programs.

4. Innovation in the Learning Ecosystem

MCs drive positive changes in the way creative institutions operate and collaborate:

- **Cross-Sectoral Synergy:** They act as catalysts for new synergies between artistic schools, business faculties, and institutions, building bridges and strengthening cooperation.
- **Financial Mitigation:** For educational institutions like the University of Tartu's Viljandi Culture Academy, offering MCs can help **mitigate financial risk** by offsetting low student numbers in formal degree studies.
- **Catalyst for Quality:** The requirement for clear, transparent learning outcomes and assessment criteria for MCs encourages institutions to focus on quality assurance and continuous improvement based on feedback from both learners and industry.

3.4.2. Measuring impact and the CREDEX Theory of Change Grid

It is clear from the CREDEX mapping activities, as supported also by the findings of the SACCORD project that work is still needed across Europe to effectively communicate the potential and benefits of micro credentials - across all stakeholder groups. Effective tools are needed to measure impact and connect individual change to systemic impact (the stackable vision) whilst managing diverse stakeholder expectations and alignment.

To this end, the CREDEX partnership, led by ICHEC, has developed an impact assessment process (data collection and processing, analysis and actional insights) in the form of a Theory of Change Grid.

This tool will be adopted and tested by the CREDEX partnership throughout the project in order to assess its potential as an universal tool. The structure of the tool can be found below:

1. Systemic Objectives (Policy, Frameworks, and Market Alignment)

This level focuses on policymakers, public authorities, and national agencies to enhance market responsiveness and skills governance.

Timeframe	Key Objective / Outcome	Stakeholder(s)
Short Term (1-3 years)	**Policy Adoption:** Achieve official policy adoption of Micro-credential (MC) definitions and standards by public authorities and policymakers.	Public authorities and policy makers
Medium Term (4-6 years)	**Framework Integration:** MCs are officially mapped to National Qualification Frameworks (NQF) and the European Qualifications Framework (EQF).	National agencies
Long Term (+6 years)	**Skills Reduction:** Substantially reduce skills mismatch in CCIs due to the flexible supply of recognized micro-credentials.	Social partners and policy makers

2. Institutional Objectives (Implementing Organization / National Agency Leadership)

This level focuses on the operational capacity and strategic influence of the main implementing Agency/Organization (the CREDEX consortium).

Timeframe	Key Objective / Outcome	Stakeholder(s)
Short Term (1-3 years)	**Advocacy Expertise:** Staff possess the specific expertise required to advocate for micro-credentials as a solution to critical sector-wide skills gaps (e.g., green and digital skills).	National Agency Staff
Medium Term (4-6 years)	**Partnership Facilitation:** Staff successfully facilitate cross-border institutional partnerships for MC delivery (e.g., matching VET providers with cultural networks).	Cultural Networks and NGOs
Long Term (+6 years)	**EU Leadership & Quality Hub:** The organisation establishes itself as the European leader in responsive qualification standards for the CCI, and becomes the certified EU-level quality monitor/knowledge hub for best practices in CCI micro-credentialing.	Cultural Networks and NGOs

Long Term (+6 years)	**Process Efficiency:** Achieve documented/efficiency gains in the NQF updating process due to the integration of micro-credential data.	National Agency Staff

3. CCI/Provider Staff and Organisational Capacity Objectives

This level focuses on Higher Education (HE) providers, Vocational Education and Training (VET) providers, and CCI organizations that deliver the micro-credentials.

Timeframe	Key Objective / Outcome	Stakeholder(s)
Short Term (1-3 years)	**Supply & Quality:** Achieve increased supply and quality of CCI micro-credentials offered.	HE and VET Providers
Short Term (1-3 years)	**Staff Capacity (Design/Delivery):** HE/VET staff in CCIs improve their capacity to design and deliver MCs that meet European standards.	HE and VET Providers

Medium Term (4-6 years)	**Content Alignment:** Achieve improved alignment of MC content with current industry needs for Green, Digital, and Transversal skills.	HE and VET Providers
Medium Term (4-6 years)	**Staff Capacity (Digital Portability):** Staff improve their capacity to use European digital tools for MC portability and recognition.	HE and VET Providers
Long Term (+6 years)	**NQF Linkage:** The MC offer is successfully linked to relevant EQF/NQF levels, ensuring national and European recognition.	HE and VET Providers
Long Term (+6 years)	**Resource Availability:** High-quality teaching/training resources for MC delivery are widely available across the EU.	All CCI Organizations

4. Learner Objectives (The ultimate beneficiaries)

This level focuses on the professionals and individuals seeking to upskill or reskill through micro-credentials.

Timeframe	Key Objective / Outcome	Stakeholder(s)
Short Term (1-3 years)	**Increased Uptake:** Achieve increased learner uptake of MCs in CCIs.	CCI Professionals / Students
Medium Term (4-6 years)	**Professional Progression:** MC holders achieve a higher employment rate and better professional progression.	CCI Professionals / Students
Long Term (+6 years)	**Employer Recognition:** Achieve increased recognition of MCs by employers, making them highly valued in the labour market.	CCI Professionals / Students

Section 4: Recommendations and Future Perspectives

4.1. Recommendations for improving MCs in CCIs

4.1.1. Summary of concrete recommendations for improving the relevance and effectiveness of micro-credentials for CCIs

The interviews and surveys conducted across the partner countries highlight a set of recurring recommendations for improving the relevance and effectiveness of micro-credentials (MCs) for the Cultural and Creative Industries (CCIs). These recommendations reflect the specific needs and working conditions of CCI workers, as well as the perspectives of higher education institutions and cultural organisations.

1. Stronger alignment with real CCI competences

In the Netherlands, **Willem-Jan Renger (HKU University of the Arts Utrecht)** emphasised the need for micro-credentials that capture authentic creative-sector competencies. He noted that MCs must be grounded in the actual workflow and problem-solving practices of CCI professionals, ensuring that learning outcomes "*represent real creative processes rather than abstracted academic descriptions*." From Italy, **Gloria Lisena (INDIRE)** similarly stressed the relevance of MCs when they are connected to "*skills that support innovation and experimentation within creative work*," highlighting the need for alignment with emergent practices in design, arts, and cultural production.

2. Integration of practical and applied learning

Several respondents highlighted the importance of practical components. An Estonian survey respondent (CCI organisation) emphasised that MCs should include "*both the theory and practical activities*," underscoring the importance of applied, experience-based learning for creative professionals. Italian interviewee **Letizia Genovese**

(INDIRE) also stressed the value of formats that allow learners to "*experiment and work on real creative tasks,*" noting that practice-based learning is essential in CCIs.

3. Improved accessibility and reduction of financial barriers

Freelancers and micro-enterprises face significant cost constraints. An Estonian survey respondent (CCI company manager) stated that participation would increase if MCs "*could be funded by the state*," expressing a widely shared concern about affordability.

4. Clearer communication and visibility

Some stakeholders described confusion or limited awareness around micro-credentials. Survey responses from Estonia and Spain indicated that clearer information is needed about "*what MCs are and how they can be used*," pointing to the need for targeted communication strategies.

5. Enhanced collaboration between higher and further education and the creative sector

Interviewees stressed the need for collaborative curriculum development. According to **Willem-Jan Renger (HKU)**, MCs are most effective when designed "*together with external partners who understand the actual challenges of creative work*." This emphasis on co-design resonates with survey comments and interview responses from Spain calling for stronger links among universities, industry stakeholders, and cultural institutions to ensure MCs directly address sector needs.

6. Flexible formats adapted to freelance and project-based work

The fragmented nature of CCI employment requires adaptable formats.
Italian interviewee **Gloria Lisena** noted that flexibility—including modularity, hybrid delivery, and asynchronous

options—is "*essential to allow creative professionals to participate alongside unstable work schedules*." Estonian survey respondents likewise highlighted the need for training that fits "*irregular project cycles*."

7. Recognition and sector acceptance

Recognition remains uneven. Survey respondents in Spain and Estonia expressed that MCs must be "*recognised within the sector*" and linked clearly to professional advancement pathways.

4.1.2. Suggestions for policy measures or initiatives to support the CCI sector

Across the partner countries, several policy-level measures were proposed to strengthen the role of micro-credentials (MCs) in supporting the Cultural and Creative Industries (CCIs). These proposals reflect the structural challenges of freelance work, fragmented learning pathways, and limited institutional recognition within the sector.

1. Expand public funding and financial support for CCI learners

Financial barriers are repeatedly highlighted in the surveys. Estonian respondents noted that participation in MCs would increase if training were "*funded by the state*" (Estonian survey respondent, CCI organisation). This aligns with feedback from other countries indicating that freelancers and small creative organisations often cannot afford formal training without subsidies.

Policy implication: Introduce national or regional funding schemes, fee subsidies, or vouchers specifically targeted at CCI workers and micro-enterprises.

2. Improve national visibility and communication strategies

Survey responses—particularly from Spain and Estonia—identified a significant lack of information about micro-credentials, noting that the sector needs clearer guidance on "*what MCs are and how they can be used*" (Spanish survey respondent), especially among employers and professionals, supporting sector-wide recognition.

Policy implication: Develop coordinated national communication campaigns, registries, or portals presenting micro-credentials in a transparent and accessible manner tailored to CCIs.

3. Support co-design and collaboration between HEIs and CCI organisations

Interview and survey data emphasise the value of stronger collaboration. In the Netherlands, **Willem-Jan Renger (HKU)** stressed that MCs work best when designed "*together with external partners who understand the actual challenges of creative work*." This echoes survey feedback from Spain calling for policies that facilitate cooperation between educational institutions, cultural organisations, and industry stakeholders.

Policy implication: Introduce incentives or frameworks for structured partnerships between HEIs and cultural organisations for the joint development of MCs.

4. Promote flexibility and adaptable delivery models

Creative professionals often work irregular schedules, making traditional training formats difficult to access. Italian interviewee **Gloria Lisena (INDIRE)** highlighted the need for flexible formats that allow participation "*alongside unstable work schedules*." Estonian respondents also stressed that training must fit around "*irregular project cycles*."

Policy implication: Encourage HEIs to adopt modular, hybrid, and asynchronous learning formats supported through national guidelines or funding for digital delivery.

5. Strengthen recognition and integration of MCs within national/European qualification systems

Several survey respondents (Spain, Estonia) expressed that micro-credentials need to be "recognised within the sector" in order to have real value. For example, Spanish experts advocate for standardisation linked to the EQF and national frameworks to ensure consistency and sectoral recognition, noting that fragmented recognition reduces their usability for career development. At the same time, as highlighted by Adele Commins (DKIT), employers in some industries still lack awareness of the value of accredited micro-credentials and may even prefer shorter, non-certified certificates offered by private organisations in Dublin. She emphasised the significant difference in learner workload between a 5-credit micro-credential (100–125 hours) and shorter, more targeted certificates, illustrating how different industries have varying needs and expectations regarding training formats and certification.

Policy implication: Develop clearer national pathways for recognising micro-credentials within existing qualification frameworks while simultaneously strengthening employer awareness and understanding. This includes ensuring consistency and transparency for cultural institutions, while also acknowledging sector-specific preferences and supporting communication strategies that clarify the added value of accredited, quality-assured micro-credentials.

6. Encourage sector-specific MC development for emerging creative skills

Italian interviewee **Letizia Genovese (INDIRE)** noted the importance of MCs that address "*emergent practices and innovation*" in CCIs. Survey respondents similarly highlighted needs around digital competences, entrepreneurship, and new creative technologies.

Policy implication: Support HEIs and CCI organisations in developing MCs that respond to emerging skill areas such as digital production, cultural management, interdisciplinary collaboration, and creative entrepreneurship.

4.1.3. Policy recommendations - an iterative process for the CREDEX project

The consolidated insights and experience of the CREDEX consortium during the project will shape final policy recommendations targeting public authorities and educational providers to help drive the application of micro credentials in support of the Creative and Cultural Industry. To this end, initial work had already begun prior to these mapping activities and based on the knowledge of the partnership that motivated the successful selection of the CREDEX project, including submission of the technical paper 'Micro-credentials in Culture: Frameworks, Cases, and Policy Path' to the UNESCO MONIDIALCULT 2025 Digital Library[6], working together with the SACCORD project and with the endorsement of the Creative Pact for Skills.

The paper presents two forward-looking recommendations for fostering a sustainable micro- credential ecosystem in Europe's Cultural and Creative Industries (CCIs). These recommendations – (1) developing Public-Private-People Partnership (PPPP) models and (2) establishing long-term impact assessments – are offered in an exploratory tone. Rather than prescribing a single solution, they outline adaptable frameworks that recognise the complexity of current debates and the gaps in evidence. The goal is to co-design inclusive governance structures and to evaluate micro-credentials beyond short-term metrics, thereby aligning policy with the dynamic needs of CCIs.

Furthermore, the CREDEX partnership participated to the 'Strategic Dialogue on the European Creative Economy' (SDECE), organised by the European Federation for Creative Economy (CreativeFED), brought together representatives of government, industry, academia, EU-funded project representatives and civil society to discuss strategies that foster innovation, protect intellectual property, and reinforce Europe's creative leadership. A white paper, co-created

[6] Micro-credentials in Culture: Frameworks, Cases, and Policy Paths, UNESCO Mondiacult 2025 Digital Library https://mondiacult2025.com/wp-content/uploads/2025/10/M25-Technical-Paper-Cultural-stakeholder-alliance-Consorzio-Materahub-Industrie-Culturali-e-Creative.pdf Selected and Published Sept 2025

from high-level round tables, was published November 2025: 'White Paper Empowering Creative Sectors for Innovation, Sustainability, and Global Influence'[7].

The CREDEX expertise helped shape a core policy objective, which is to position creative skills as transversal enablers of innovation to strengthen Europe's competitiveness, economic sovereignty, and cultural autonomy, addressing their current undervaluation and inconsistent recognition across EU systems. To formalise this, the recommended action is to establish a European Skills Recognition Framework for CCIs and integrate creative skill sets into national curricula and labour classification systems, explicitly utilising tools such as Micro-credentials and supporting Life-Long Learning modules through a European and regional Skills Alliance. The expected impact is the embedding of these creative competencies - including hybrid skill sets combining arts, technology, and ethics - into formal systems, which will ensure cultural professionals are visible and valued, enhancing employment opportunities, sectoral resilience, and reinforcing cultural autonomy as an active economic strategy within the Single Market.

The findings of this report, combined with previous work and insights as outlined above, supported further by programmed policy forums with key stakeholders, will collectively shape the final policy recommendations through an iterative and co-creative process.

[7] White Paper Empowering Creative Sectors for Innovation, Sustainability, and Global Influence - Strategic Dialogue on the Future of Europe's Creative Economy, Creative FED, published November 2025
https://www.creativefed.eu/files/DOC_White%20Paper_SCECE2025_20250903.pdf

4.2. Vision on the future role of MCs

Across the partner countries, a clear belief was expressed that micro-credentials (MCs) will play an increasingly strategic role in future education and employment systems, particularly for the Cultural and Creative Industries (CCIs). Their insights highlight three main directions: MCs as agile learning instruments, as mechanisms for sectoral innovation, and as tools for recognising emerging skills that traditional qualifications often overlook.

1. MCs as flexible, lifelong learning pathways

Interviewees emphasised that CCIs require learning formats that adapt to highly dynamic and irregular work patterns. In Italy, **Gloria Lisena (INDIRE)** noted that MCs can offer "*flexible opportunities for professionals who need shorter, targeted training*," positioning them as a natural fit for freelance and project-based careers. Estonian survey respondents supported this view, highlighting the importance of short, modular training that can be accessed around "*irregular project cycles*," which characterise much of the CCI labour market. This emphasis on flexibility is further echoed by Spanish experts, such as Ruth Mayoral, who observed that the adaptable nature of MCs enables creative professionals to continually update their skills in response to rapidly changing sector demands. Such adaptability is increasingly recognized as essential for supporting lifelong learning and career resilience within the CCIs.

Future vision: MCs are expected to become a central mechanism enabling continuous upskilling and mid-career reskilling in sectors where traditional education is too slow or too inflexible.

2. MCs as catalysts for innovation and emerging skills

Respondents also viewed micro-credentials as tools for anticipating and addressing new forms of creative work. **Letizia Genovese (INDIRE)** described MCs as particularly well suited to "*support innovation and experimentation*," noting their value in fast-evolving areas of design, digital production, and creative technologies. In the Netherlands, **Willem-Jan**

Renger (HKU) emphasised that MCs can formalise and recognise "*real creative processes*" that are often invisible in conventional qualifications. This recognition strengthens innovation capacity by validating new types of expertise.

Future vision: MCs will play an increasing role in legitimising and structuring emerging CCI competences — including interdisciplinary practices, digital creation, and hybrid art-technology roles.

3. MCs as recognised, portable signals of competence

Survey respondents highlighted the value of MCs as portable proof of skills that can be understood across institutions and employers. Respondents in Spain and Estonia stressed that MCs must be "*recognised within the sector*" to support mobility and career progression. This focus on portability aligns with the broader European trajectory towards interoperable digital credentials, supporting more fluid labour markets where creative workers move between projects, sectors, and international networks. In Spain, experts further note that the international recognition associated with digital credentials could make MCs a cornerstone of future education systems, greatly facilitating cross-border mobility and employability for CCI professionals.

Future vision: MCs are expected to become recognised, interoperable credentials supporting mobility across regions, institutions, and creative subsectors.

4. MCs as bridges between education and the creative industries

Interviewees described MCs as an opportunity to tighten the relationship between creative practice and higher education. **Willem-Jan Renger (HKU)** stressed that future MCs should be co-designed with industry partners who "*understand the actual challenges of creative work*," enabling more responsive curriculum development. This view also appeared in surveys from Spain, where respondents called for stronger connections between education providers, cultural organisations, and the broader creative ecosystem. This perspective is also strongly supported by Spanish experts, such as Juan Bartolomé, who emphasized that MCs can provide a vital bridge between formal education and

the labor market—particularly in industries like the CCIs, where new skills are constantly required. This bridging function is seen as crucial for ensuring that training remains relevant and that creative professionals are equipped for the evolving needs of the sector.

Future vision: MCs will become a structured interface for collaboration, enabling HEIs and CCIs to jointly shape training that is relevant, timely, and sector-responsive.

5. MCs supporting employability and career resilience in CCIs

Given the precarity of CCI employment, respondents saw micro-credentials as offering new ways to strengthen workers' career resilience. Survey comments from Estonia indicated that MCs could help workers build "*additional competences*" that increase employability across different creative projects.

Future vision: MCs will support portfolio-based careers, enabling creative professionals to accumulate recognised competences that enhance employability across multiple roles and subsectors.

4.3. Key Factors for replicability and scalability

Several features of micro-credential (MC) development that can be effectively replicated or scaled across regions, institutions, and sectors. These factors relate primarily to design practices, cooperation processes, relevance to labour-market needs, and structural enablers that make MCs transferable across contexts.

4.3.1. Main Success Factors That Could Be Replicated in Other Contexts

1. Co-design between HEIs and industry partners

Interview data emphasise that MCs are most effective when developed with direct involvement from sector specialists. **Willem-Jan Renger (HKU)** stressed that effective MCs emerge when designed "*together with external partners who understand the actual challenges of creative work*." This collaborative approach ensures relevance, authenticity, and immediate applicability—features transferable to any sector.

2. Alignment with real competences and concrete workflows

Both Italian and Dutch interviews highlight the importance of grounding MCs in actual professional practice. **Gloria Lisena (INDIRE)** underlined the value of MCs that respond to "*skills supporting innovation and experimentation*," while **Renger (HKU)** emphasised the need to recognise "*real creative processes*."
This principle—competence-based rather than content-based design—has strong replicability across sectors with emerging skill needs.

3. Integration of practical and experiential learning components

Practical, hands-on learning was consistently highlighted. Estonian survey respondents stressed the need for MCs that include "*both the theory and practical activities*." This combination enhances relevance and learner engagement and can be transferred to numerous applied sectors (technology, design, digital media, etc.).

4. Flexible and modular delivery formats

Flexibility was repeatedly emphasised as a success factor for participation. Italian interviewee **Gloria Lisena** pointed to the value of formats that accommodate "*unstable work schedules*," while Estonian respondents noted the need for training that fits "*irregular project cycles*." Such modularity enables scalable use across sectors with freelance or project-based labour markets.

5. Clear information and communication strategies

Survey data from Spain and Estonia indicated that MCs must be explained clearly and consistently to learners and employers. Effective communication is a universally replicable success factor and a prerequisite for adoption in any sector.

4.3.2. Potential for Wider Adoption or Adaptation to Different Contexts

1. Strong applicability to other freelance- and project-based sectors

The CCIs' working conditions—project-based, fluid, interdisciplinary—are shared with other fields such as digital media, technology, tourism, and start-up ecosystems. The flexible, short-form, practice-based nature of MCs described by **Lisena**, **Genovese**, and **Renger** makes them suitable for transfer into these environments.

2. Adaptability for regions with emerging innovation agendas

Italian interview feedback emphasises that MCs can support "*innovation and experimentation*," suggesting high potential for adoption in regions prioritising digital transformation, cultural regeneration, or creative tourism. This aligns with survey responses in Estonia pointing to the need for additional competences supporting sectoral change.

3. Opportunity for integration into national lifelong learning strategies

Respondents across countries—especially Estonia—indicated that state-backed support or subsidies would significantly increase participation. This highlights the potential for MCs to be integrated into broader national policies on lifelong learning, upskilling, and regional workforce development, not limited to CCIs.

4. Scalable framework for international recognition and mobility

Survey respondents in Spain and Estonia stressed the importance of MCs being "*recognised within the sector*." Because MCs in the project already reference transparent learning outcomes, practical competencies, and flexible formats, they provide a replicable basis for mobility across national and regional labour markets.

5. Transferability of co-design processes across institutions

The collaborative approach demonstrated in the HKU and INDIRE interviews—working with practitioners, cultural organisations, and external experts—offers a model that can be adopted by HEIs in other regions to enhance relevance and innovation.

CONCLUSION

The WP3 research across six countries demonstrates that micro-credentials hold strong potential for strengthening skills development in the Cultural and Creative Industries (CCIs), but current systems remain fragmented, unevenly implemented, and insufficiently adapted to the realities of freelance and project-based creative work. Stakeholders consistently value MCs for their flexibility, relevance, and capacity to address emerging skills needs, yet barriers related to cost, recognition, communication, assessment formats, and alignment with industry practice limit their present impact.

The findings directly reinforce key priorities of the EU Council Recommendation on Micro-credentials and the European Skills Agenda—particularly the need for transparent standards, quality assurance, portability, and lifelong learning pathways. WP3 highlights that these principles are not yet fully realised in national contexts, confirming the relevance of CREDEX as a policy-experimentation initiative.

Across all countries, the research identifies clear gaps and opportunities:

- Insufficient coordination between higher education and CCIs;
- Limited visibility and understanding of MCs;
- Weak recognition and stackability mechanisms;
- Financial and time-related barriers for creative workers;
- Inconsistent national frameworks and quality practices.

These findings will directly inform the **next strategic actions** of the CREDEX project aimed at integrating micro-credentials into the Cultural and Creative Industries (CCI) ecosystem. They underscore:

- The necessity of creating a **practical, cross-national roadmap** for incorporating micro-credentials into national frameworks and policies, specifically tailored for the CCI, providing a concise set of **guidelines and case studies.**
- The critical need to **validate the developed roadmap** through extensive piloting, complemented by an open call to engage additional stakeholders. These activities will test the roadmap with a representative user group, explore effective models for mutual recognition across diverse national contexts, and use feedback - supported by dedicated online training - to refine capacity-building materials and ensure the roadmap's overall **adaptability and scalability**.

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