Micro-credential for higher education institutions: documents, projects and initiatives

Elisa Petrucci

Head of International Projects Unit, CIMEA

Micro-credentials for Higher Education systems of Georgia and Armenia: South Caucasus lighthouse project

Rome, June 4, 2024

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Projects involving micro-credentials

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2020-2022 MicroBOL

2022-2025 TPG-LRC CoRE

2023-2024 MARTe

2023-2025 MAReN

2023-2026 MICROCASA

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Developing the Framework for Micro-Credentials in EHEA

Exploring practices and policies
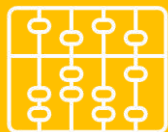
Desk research

Survey

microbol

Workshops

Publication

MicroBOL - Micro-credentials linked to the Bologna Key Commitments

↗ **Goal:** explore whether and how the existing Bologna tools can be used and/or need to be adapted to be applicable to micro-credentials in QA, recognition, ECTS and QF

↗ **Outcomes:**

○ **Desk research report on micro-credentials** (August 2020)

○ **Report on the state of play of micro-credentials** in the European Higher Education Area (February 2021)

○ **Recommendations** from the MICROBOL project for the European Commission's proposal for a Council recommendation on micro-credentials for lifelong learning and employability (July 2021)

○ Common **Framework for Micro-credentials** in the EHEA (March 2022)

Diversity as a strength – need for common understanding and approach

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Common Framework for Micro-credentials in the EHEA

Purpose

Micro-credentials are designed to provide the learner with specific knowledge, skills, and competences that respond to societal, personal, cultural or labour market needs

➢ A way to increase and diversify **lifelong learning provision** to support individual learning pathways and widen access to higher education

➢ They provide a timely and relevant response to **learners' and labour market needs**

➢ **Collaboration** is an important aspect for the provision of micro-credentials

European project
MICROBOL
Micro-credentials linked to the
Bologna Key Commitments

Common Framework for Micro-credentials in the EHEA

March 2022

Common Framework for Micro-credentials in the EHEA

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European project
MICROBOL
Micro-credentials linked to the
Bologna Key Commitments

Common Framework for Micro-credentials in the EHEA

Common Framework for Micro-credentials in the EHEA

Use

Credentials are owned by the learner, are portable and may be combined into larger credentials or qualifications

➢ Micro-credentials can be earned before, during and after higher education degree programmes and as a new way to certify competences acquired earlier in life

➢ **Learners** are **at the heart** of micro-credentials

➢ **Catalogues** of existing micro-credentials can be an important source of information for learners

➢ **Certificates** for micro-credentials can **be awarded** in many formats

➢ **Link between education and research:** micro-credentials can facilitate a smooth knowledge transfer → learning opportunities for the benefit of society

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[Common Framework for Micro-credentials in the EHEA](#)

MicroBOL framework

Link to Bologna key commitments

Quality Assurance

- Providers are responsible to assure the quality of the micro-credentials they offer through their internal QA processes
- External QA should focus on the institutional approach to micro-credentials
- A register of trustworthy providers could support the acceptance and recognition of micro-credentials

Recognition

- Micro-credentials can be assessed in line with the Lisbon Recognition Convention principles, provided that all constitutive elements are properly displayed
- A micro-credential can be recognized on basis of a proof of the learning outcomes achieved by a learner, according to transparent requirements and after assessment

Qualifications Framework & ECTS

- Micro-credentials should be included in the NQF, whenever possible
- The learning outcomes approach can be useful when developing micro-credentials
- ECTS, as a recognisable system, can support the development and description of micro-credentials

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Evidence based research and publication

TPG-LRC CoRE

Rome Communiqué

«Explore how and to what extent these smaller, flexible units, including those leading to micro-credentials, can be defined, developed, implemented and recognised by our institutions using EHEA tools»

Targeted to HEIs

Tool to support higher education institutions in the process of designing, implementing, awarding and recognising quality-assured micro-credentials

Joint document

Bring togheter the results of the work of the three EHEA Thematic Peer Groups

Provision and recognition of micro-credentials are two sides of the same coin

Builded on guiding questions

MICRO-CREDENTIALS FOR HIGHER EDUCATION INSTITUTIONS

Approaches developed in the EHEA using peer support

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What is a micro-credential?

As per the Council Recommendation on a European approach to microcredentials for lifelong learning and employability, "micro-credential means the record of the learning outcomes that a learner has acquired following a small volume of learning.

These learning outcomes will have been assessed against transparent and clearly defined criteria. Learning experiences 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 stand-alone or combined into larger credentials. They are underpinned by quality assurance following agreed standards in the relevant sector or area of activity"

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Why offer a micro-credential?

- Attract different groups of learners.

- Support students' access to study programmes.

- Respond to the demand of employers for more flexible learning pathways.

- Explore different study fields before applying to a programme.

- Foster connections between HEIs and relevant stakeholders

- Enhance attractiveness of HEIs (QUATRA, 2023, IMINQA, 2023)

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What type of micro-credentials?

Unbundling existing programmes

- Useful to support completion of academic degree programmes

- Teaching approach, delivery methods, learning outcomes may need to be

  adapted

Developing stand-alone courses

- Agile and dynamic design process, cooperation with other providers

- Can be a combination of LLL courses and courses based on existing

  programmes (IMINQA, 2023)

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Mentimeter

What to take in consideration to assign a QF level and define the workload

All responses to your question will be shown here

Each response can be up to 200 characters long

Turn on voting in Interactivity to let participants vote for their favorites

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Mentimeter

How to build a micro-credential around the learner?

All responses to your question will be shown here

Each response can be up to 200 characters long

Turn on voting in Interactivity to let participants vote for their favorites

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What to take into consideration when defining learning outcomes?

- From the initial design to the final assessment

- Crucial to plan teaching and learning based on knowledge, skills and competences (Cedefop, 2022)

- Basis for creating learning paths and qualifications comparable in their intrinsic diversity (MICROBOL, 2022)

- Need for further cooperation with non-academic actors (TPG-LRC CoRE, 2024)

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What to take into consideration to assign a QF level and define the workload?

- Suggested to include MC in NQF

- It may be difficult to ascertain to which QF level

- Provide clear indication to the learner

- No specific credit range has been set for microcredential (MICROBOL, 2022)

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How to build a microcredential around the learner?

Learner-centric education approach:

- Definition of the target group

- Learners' profile: students or lifelong learners

- Provide the learner with accurate information

- Collect learners' feedback to have insights for verifying the quality of learning and teaching

(Cedefop, 2022, MICROBOL, 2022, TPG-LRC CoRE, 2024)

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Me

How to quality assure micro-credentials?

All responses to your question will be shown here

Each response can be up to 200 characters long

Turn on voting in Interactiv let participants vote for th favorites

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How to support the recognition of micro-credentials?

leader bold focus creative fast transpiration inspiration

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Mentimeter

How can digital solutions support the posrtability of micro-credentials?

All responses to your question will be shown here

Each response can be up to 200 characters long

Turn on voting in Interactivity to let participants vote for their favorites

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How to Quality Assure micro-credentials?

External QA:

- Focus on reviewing the fitness-for-purpose of the institutional approach to micro-credentials to avoid overburdening HEIs (IMINQA, 2023)

Internal QA

- Alligned with ESG focus on well-defined learning outcomes, transparent assessment methods and information transparency

- Need to consider the unique characteristics of micro-credentials

How to support the recognition of microcredentials?

- Information provision as the key element (input/output phase)

- At all levels; in different format; in a historical perspective

- EC Council recommendation lists the standard

Two-track approach

- All the standard elements are properly displayed: LRC

- Elements are not transparently recorded: RPL

E-valuate methodology as a support to verify robustness of information

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How can digital solutions support the portability of micro-credentials?

Key words: portability and interoperability

At the European level, initiatives aimed to support:

- Agreed criteria for digitalisation of data

- Secure, transparent and trusted data provision

- Platforms of credential sharing

Examples:

- DEQAR as an example of interoperable solution

- European Learning Model

- European Blockchain Service Information - EBSI

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Analytical research applying new technologies on learning outcomes and empirical research on the writing methodology
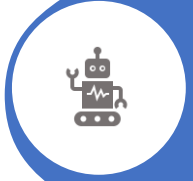
MARTe

A technological approach to micro-credentials

Background

support achieving the goals of the **European Education Area** - Council Recommendation on promoting automatic recognition of higher education and upper secondary diplomas and the outcomes of learning periods abroad.

Objectives

Supporting HEIs - recognition-related topics and automatic recognition

NARIC Call 2022

Mapping the possibility of automatic recognition of micro-credentials

support the goals of the **European Strategy for Universities** - map the possible use of automatic recognition for the recognition of micro-credentials and promote the recognition of short learning courses leading to micro-credentials.

Themes and priorities

developing the evidence-base in the field of automatic recognition, transparency and availability of information on recognition decisions

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Background

- QA Standards
- learning outcomes
- small volume of learning
- standalone or combined into larger credentials
- portable
- transparent and clearly defined standards
- owned by the learner
- societal, personal, cultural or labour market needs
- specific knowledge, skills and competences

Recommendation on a European approach to micro-credentials for lifelong learning end employability

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Project overview

Project partners

Third parties
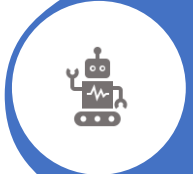
MARTe Objectives

General objective → Supporting the implementation of the Council Recommendation on promoting automatic mutual recognition of qualifications and learning periods abroad

Specific objective → Verify the practical application of automatic recognition to micro-credentials

HOW? → **Focus on learning outcomes** → Recognition of micro-credentials based on the learning outcomes acquired by learners over all the formal requirements

Are there common criteria in learning outcomes writing in the NARIC countries?

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Project overview

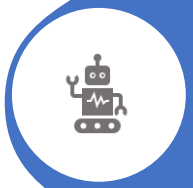## a technological approach to micro-credentials using AI and text mining

Mapping the existing repositories of micro-credentials in partner countries and analysing the practises related to the recognition of micro-credentials that are already in place.

Verifying the consistency of learning outcomes shared by delivering institutions by applying the text-mining technology to the repositories of micro-credentials.

Designing a Pilot micro-credential issued by anon-academic actor in cooperation with a higher education institution

1st January 2023

31st December 2024

Beginning of the project

End of the project

Mapping phase

Text-mining applied

In progress

Micro-GEAR
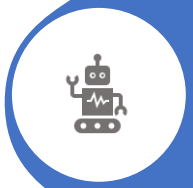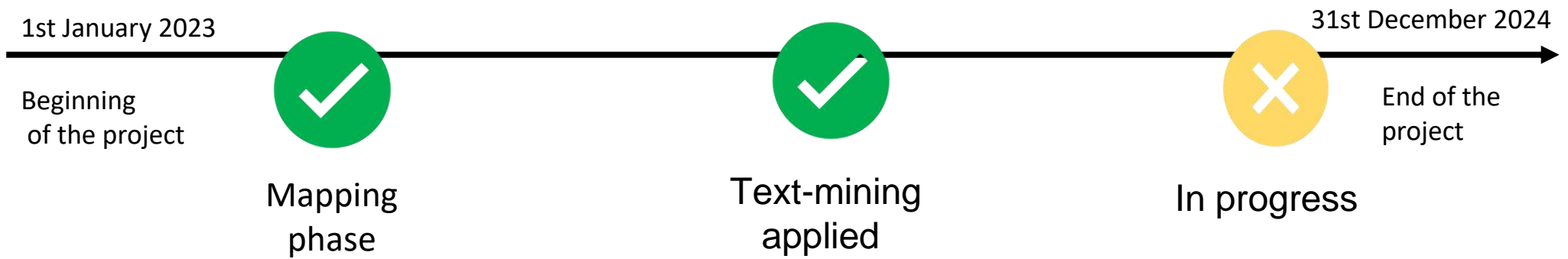
Text-mining

1 Data collection - existing repositories of micro-credentials in partner countries

2 Data pre-processing - Data cleaning and Metadata analysis

3 Text Mining analysis

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Step 1: Data collection – existing depositories in partner countries

Mapping of single micro-credentials:
1. Partner country
2. Providing country
3. Course description language
4. Industry 4.0? (YES/NO question)
5. Thematic Area
6. Workload (ECTS)
7. Duration of the Micro-credential (in hours)
8. Is the Micro-credential from an online university?
9. Name of the Micro-credential provider
10. Name of the micro-credential
11. Is the course still running?
12. Is the course already described as Micro-credential?
13. URL

Collection of repositories of micro-credentials in partner countries

1048 micro-credentials collected

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Step 2: Data pre-processing

Data cleaning

- Carried out manually by a group of researchers to extract learning outcomes from course descriptions

Metadata analysis

For each variable included in the dataset, we calculated the percentage of not available data on the total number of course descriptions
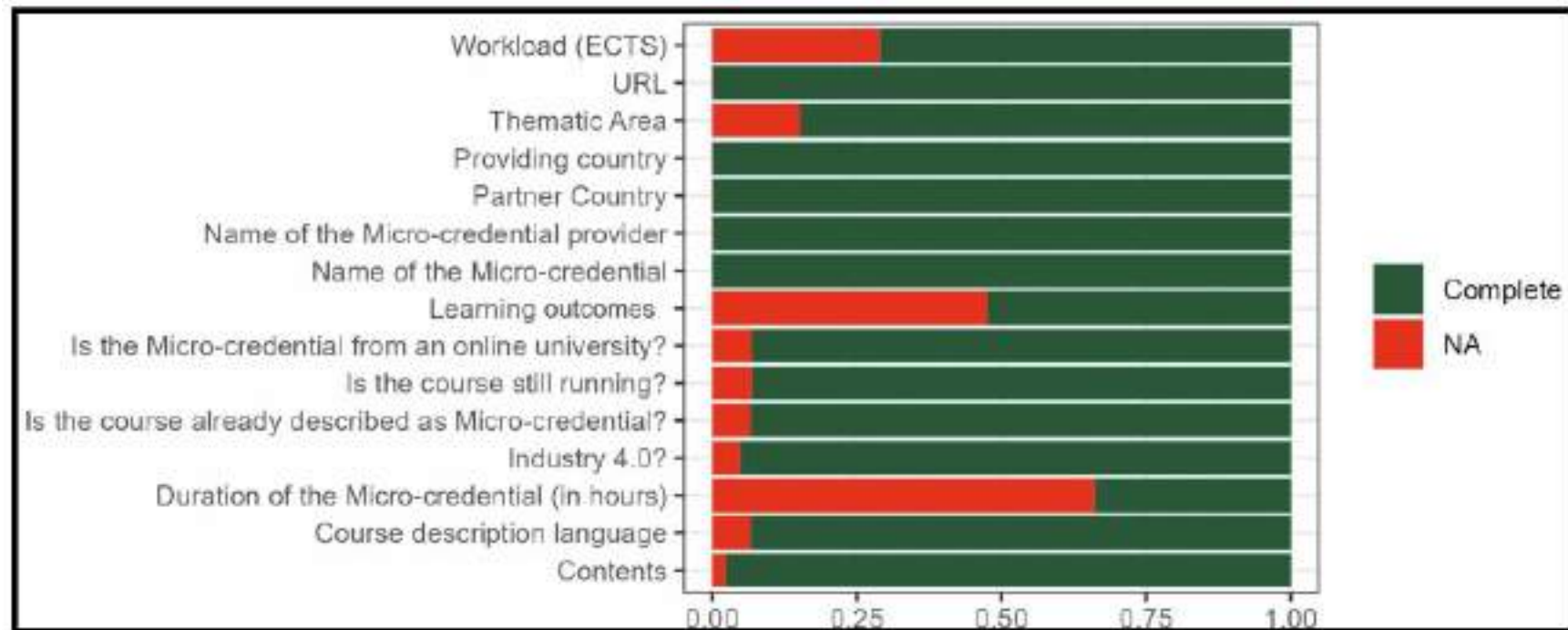
Step 3: Text-mining analysis

Text data analysed focusing on the semanticand morphosyntactic structure of learning outcomes of the collected micro-credentials.
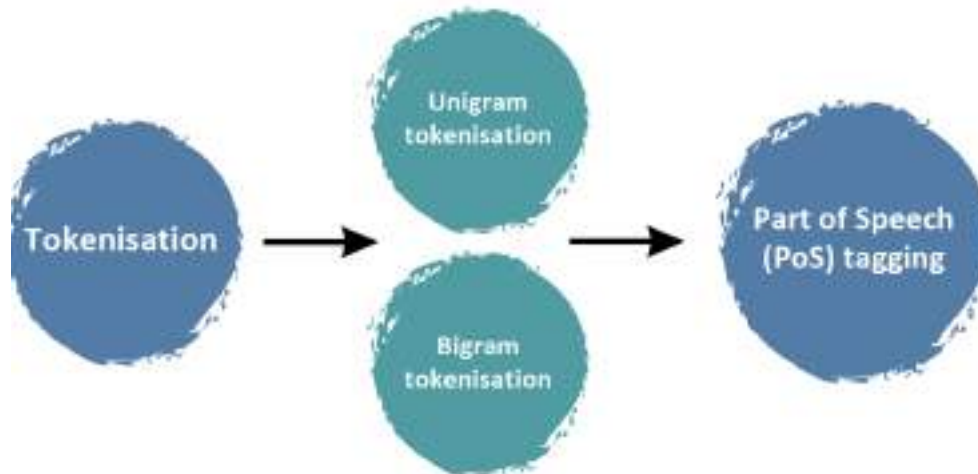
Two main questions:

? Are there common patterns in learning outcomes writing?

? Is there a real connection among learning outcomes of micro-credentials and skills required in the labour market?

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Are there common patterns in learning outcomes writing?

Tokenisation → Unigram tokenisation / Bigram tokenisation → Part of Speech (PoS) tagging

1. Distribution of different PoS categories in the collected LOs
2. Identification of the most frequent words for each PoS category
3. Identification of linguistic patterns in the structure of learning outcomes

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MARTe
Text mining

? Are there common patterns in learning outcomes writing?

⌄

Tokenisation/PoS

⌄

The analysis confirmed that the rule-based structure for LOs: VERB + NOUN (direct object, place, et.) is the most widespread
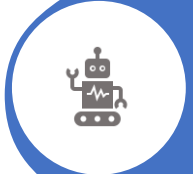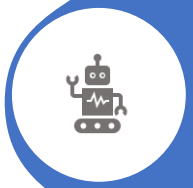
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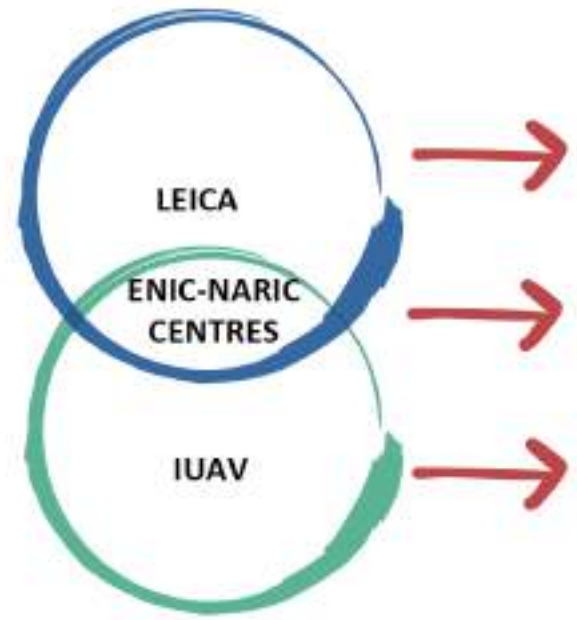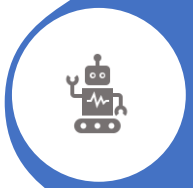
NER - Name Entity Recognition analysis

European Classificationof Skills, Knowledgeand Occupation (ESCO)

Low allignement with ESCO (42% ESCO skills in LOs in English)

PILOTING ACTIVITY

LEICA

ENIC-NARIC CENTRES

IUAV

- Definition of contents (field of photography)
- Connection with the labour market needs

- Learning outcomes writing on the base of the results of the research carried out in WP2

- Definition of quality requirements
- Possibility of recognition of the MARTe micro-credential

Pilot micro-credential certified on the CIMEA DiploME Blockchain platform
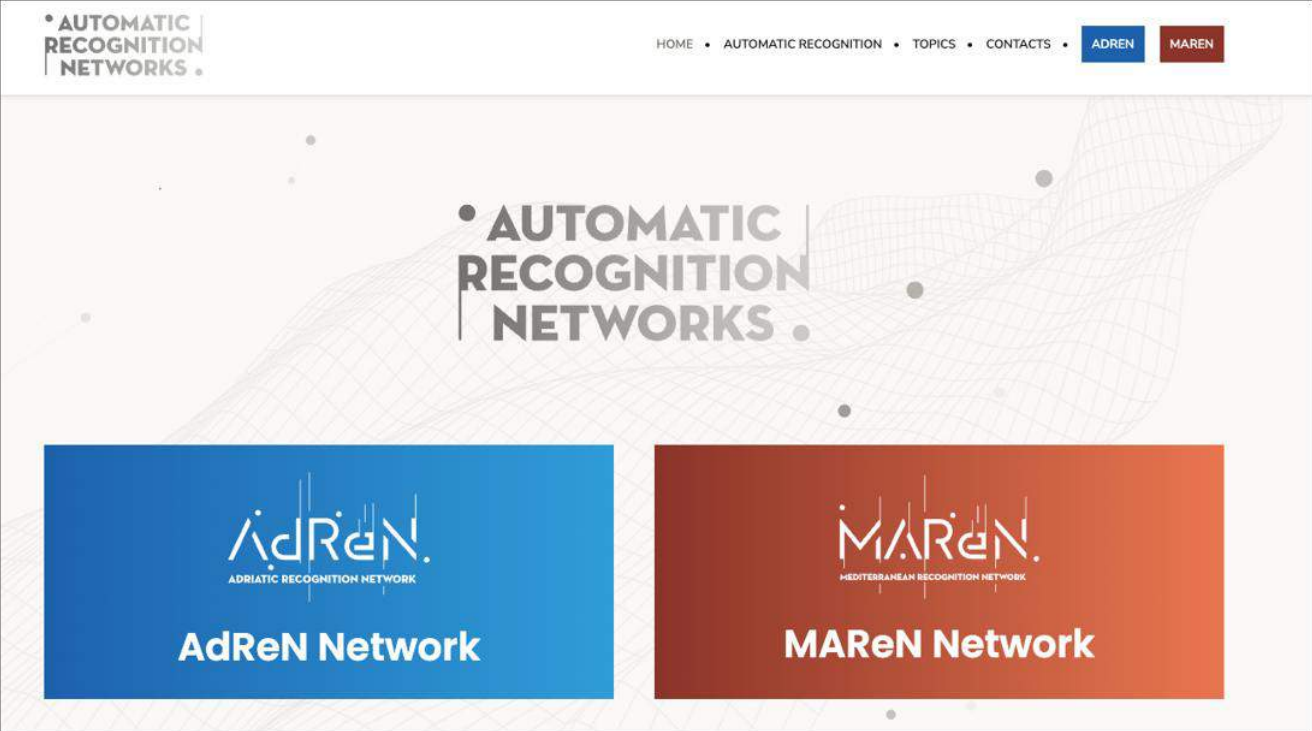
Delivering of a micro-credential

MAReN objectives

To support the implementation of the **Council Recommendation on promoting automatic recognition** working on automatic recognition in the Mediterranean region.

1 Create a **network of ENIC-NARIC centres** working on automatic recognition in the Mediterranean region

2 Develop **tools to support the daily work of credential evaluators**

3 Establish **synergies with other initiatives related to automatic recogntion** in other regions - AdReN project

Develop **tools to support the daily work of credential evaluators**

MAReN training (125 hours – 5 ECTS)

•**May 2024**: the training course is implemented (3 online lessons and 2-day workshop, for the last 2 modules)

•**July 2024**: micro-credentials are awarded to participants and the deliverable is completed and uploaded on the Funding & Tenders portal

1

2

3

MAReN.
MEDITERRANEAN RECOGNITION NETWORK

- **5 ECTS – final certification**
- **focus group**

- **21 participants**
- **from 21 higher education institutions**
- **from 5 countries**
- **10 trainers from ENIC NARIC centres**

Widening and enhancing the research assessing the state of play

Desk Research
Malaysia, Indonesia,
the Philippines
on policies and
framework

survey on
general awareness on
micro-credential

MICROCASA –

MICRO-credentials for life-long learning and employability:
Building Capacities for developing Agile educational interventions
in Southeast Asian Universities

Partners:
Germany, Italy, Spain, Indonesia, Malaysia, Philippines

Goal:
conduct a comparative analysis on general awareness and adoption of microcredentials in higher education institutions across Southeast Asia.

Methodology:
•Desk research
•Survey

Organisation of **roundtables** – Malang (Indonesia), Online, Manila (The Philippines)

Comparative study on micro-credential in SEA partner countries (survey on general awareness on micro-credentials, quality assurance, recognition, necessities at national level)

Study visits in Spain and Italy: how micro-credentials are integrated into the current academic processes

White paper on Necessary regulatory frameworks in the field on micro-credentials;
suggested measures enabling comparability and recognition of micro-credentials granted by different Universities in different countries of the region.