

MARTe – A technological approach to micro-credentials

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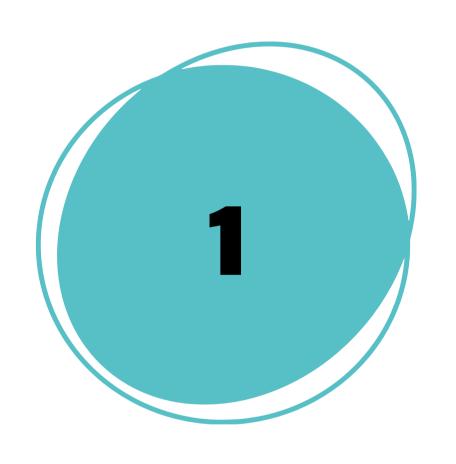
1 Background

Project Overview

Validation and Mobility: democracy in action?



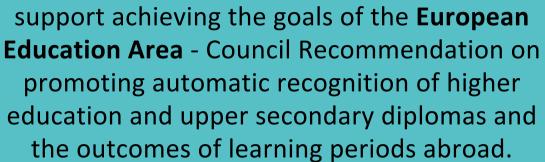




Background









Supporting HEIs - recognition-related topics and automatic recognition

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

Objectives

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





QA Standards learning outcomes

small volume of learning

standalone or combined into larger credentials

Recommendation on a European approach to micro-credentials for lifelong learning and employability transparent and clearly defined standards

portable

owned by the learner

societal,
personal,
cultural or
labour market
needs

specific knowledge, skills and competences







European Treaty Series - No. 165

Convention on the Recognition of Qualifications concerning Higher Education in the European Region

Lisbon, 11.IV, 1997

Preamble

The Parties to this Convention,

Conscious of the fact that the right to education is a human right, and that higher education, which is instrumental in the pursuit and advancement of knowledge, constitutes an exceptionally rich cultural and scientific asset for both individuals and society.

Considering that higher education should play a vital role in promoting peace, mutual understanding and tolerance, and in creating mutual confidence among peoples and nations;

Considering that the great diversity of education systems in the European region reflects its cultural, social, political, philosophical, religious and economic diversity, an exceptional asset which should be fully respected:

Desiring to enable all people of the region to benefit fully from this rich asset of diversity by facilitating access by the inhabitants of each State and by the students of each Party's educational institutions to the educational resources of the other Parties, more specifically by facilitating their efforts to continue their education or to complete a period of studies in higher education institutions in those other Parties:

Considering that the recognition of studies, certificates, diplomas and degrees obtained in another country of the European region represents an important measure for promoting academic mobility between the Parties;

Attaching great importance to the principle of institutional autonomy, and conscious of the need to uphold and protect this principle;

Convinced that a fair recognition of qualifications is a key element of the right to education and a responsibility of society;

Having regard to the Council of Europe and Unesco Conventions covering academic recognition in Europe:

- European Convention on the Equivalence of Diplomas leading to Admission to Universities (1953, ETS No. 15), and its Protocol (1964, ETS No. 49);
- (*) The Treaty of Lisbon amending the Treaty on European Union and the Treaty establishing the European Community entered into force on 1 December 2009. As a consequence, as from that date, any reference to the European Economic Community shall be read as the European Union.

Convention on the Recognition of Qualifications concerning Higher Education in the European Region - Lisbon Recognition Convention



GLOBAL CONVENTION ON THE RECOGNITION
OF QUALIFICATIONS CONCERNING HIGHER EDUCATION

CONVENTION MONDIALE SUR LA RECONNAISSANCE DES QUALIFICATIONS RELATIVES À L'ENSEIGNEMENT SUPÉRIEUR

CONVENCIÓN MUNDIAL SOBRE EL RECONOCIMIENTO DE LAS CUALIFICACIONES RELATIVAS A LA EDUCACIÓN SUPERIOR

ГЛОБАЛЬНАЯ КОНВЕНЦИЯ О ПРИЗНАНИИ КВАЛИФИКАЦИЙ, ОТНОСЯЩИХСЯ К ВЫСШЕМУ ОБРАЗОВАНИЮ

الاتفاقية العالمية للاعتراف بالمؤهلات المتعلقة بالتعليم العالي

承认高等教育相关资历全球公约

Global Convention on the Recognition of Qualifications concerning Higher Education

Art II.9

Promote, through the recognition of qualifications, inclusive and equitable access to quality higher education and support lifelong learning opportunities for all, including refugees and displaced persons

Art VIII.1

Each State Party shall establish transparent systems for the complete description of the qualifications and learning outcomes obtained in its territory.



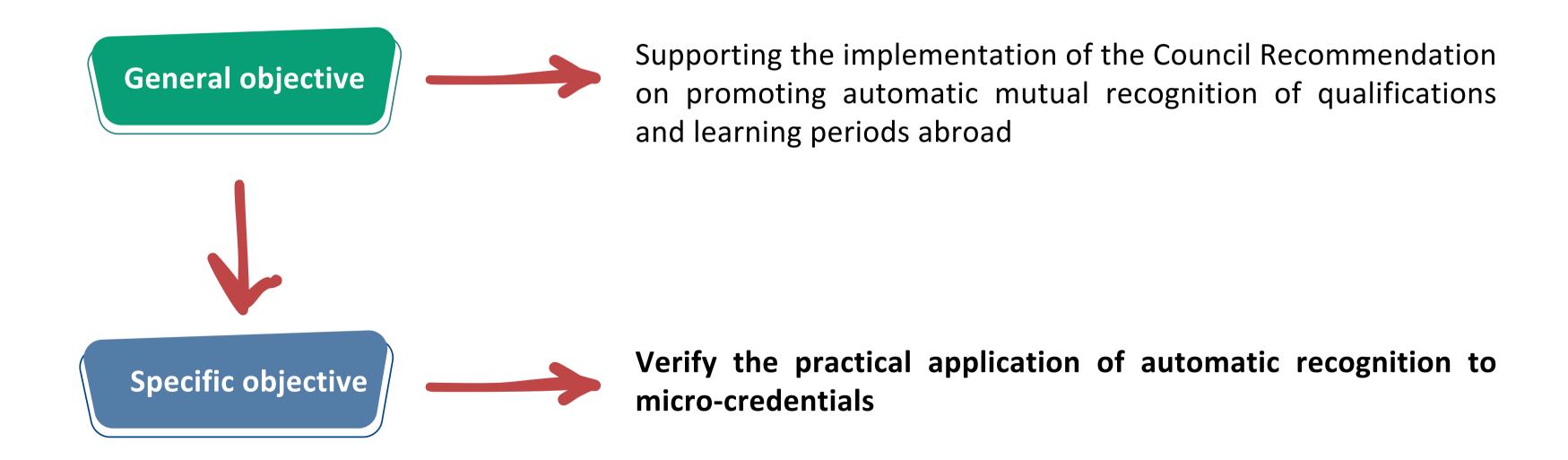






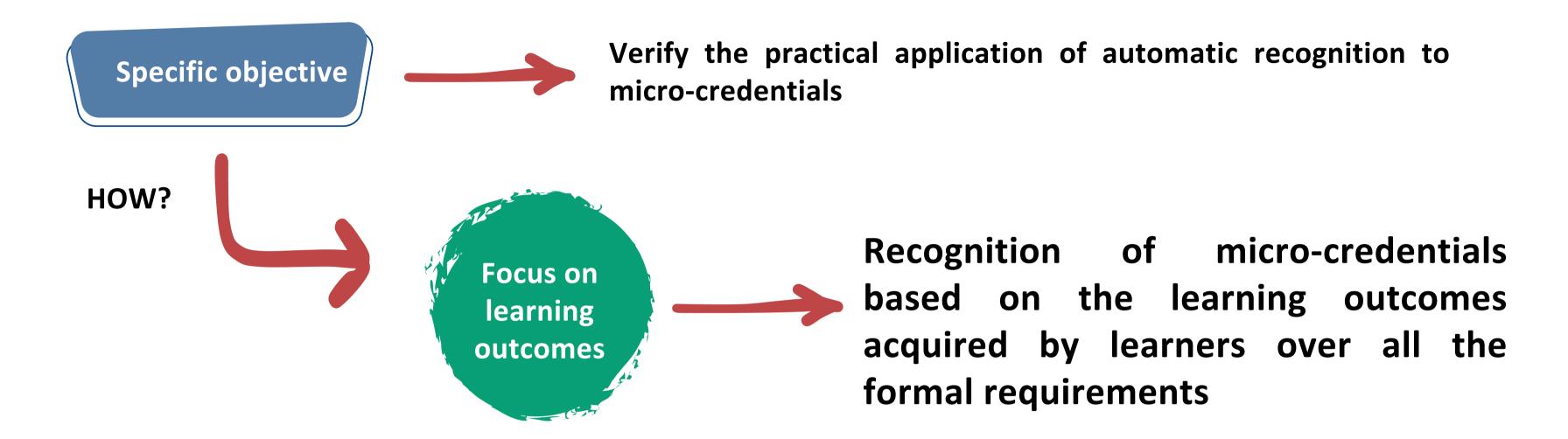


MARTe Objectives









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





Project partners



Associazione CIMEA ENIC-NARIC Italy Project Coordinator



Quality and Qualification Ireland ENIC-NARIC Ireland



Stichting Nuffic ENIC-NARIC Netherlands



University of Pisa

Third parties

I U ---A ---

Juan University of Venice



Leica







MARTe Results



Mapping the existing repositories of microcredentials in partner countries and analysing the practises related to the recognition of microcredentials that are already in place. 2

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 a non-academic actor in cooperation with a higher education institution





Mapping phase



Text-mining applied



31st December 2024



In-progress

End of the project







Work Packages



Project management, quality assurance monitoring and evaluation



Identification and further development of learning outcomes acquired through micro-credentials



Portability and recognition of a microcredential



Publication on methodology and keyfindings of the research and piloting activity



Dissemination and promotion activity





WP2: Identification and further development of learning outcomes acquired through micro-credentials - methodology

Step 1

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

Step 2

Data pre-processing - Data cleaning and Metadata analysis

Step 3

Text Mining analysis







Data collection - existing repositories of micro-credentials 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

What course did we considered as micro-credential?



- Courses provided by HEIs
- 1-59 ECTS credits*



Collection of repositories of microcredentials in partner countries

1048 micro-credentials collected

*MICROBOL project: see references







Step 2

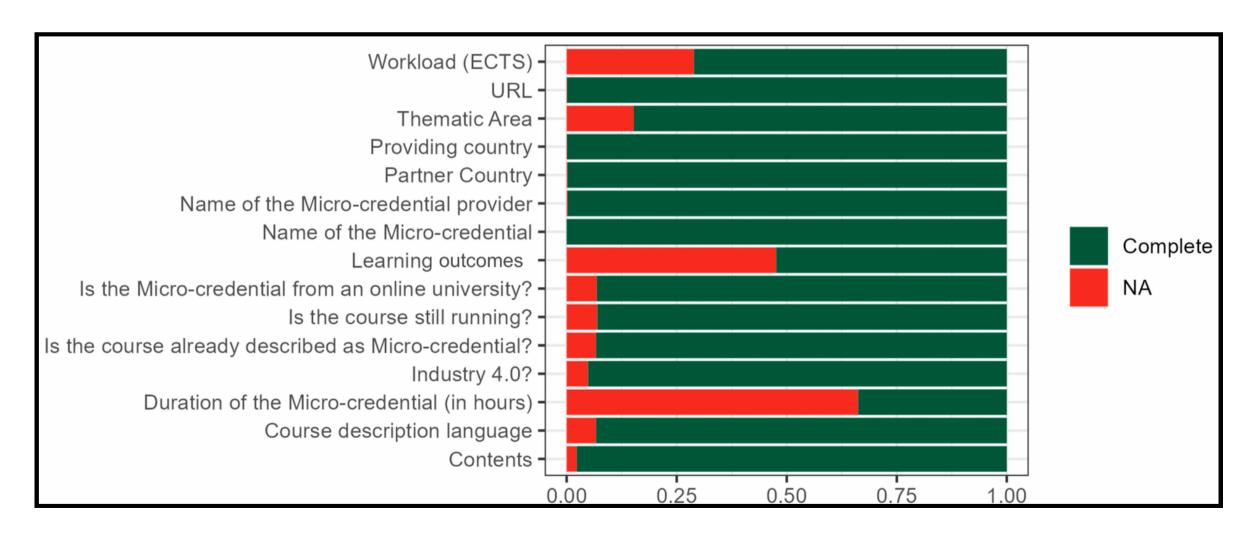
Data pre-processing - Data cleaning and Metadata analysis

WHY Preparing the data collected for text mining analysis

HOW Data cleaning and Metadata analysis

4

- Extraction of learning outcomes (LOs) from course descriptions
- Selection of usable cases from the sample (e.g. exclusion of cases without learning outcomes)







Step 3

Text Mining analysis



Text data analyzed focusing on the semantic and morphosyntactic structure of learning outcomes of the collected micro-credentials

2 main research questions:



Are there common patterns in learning outcomes writing?

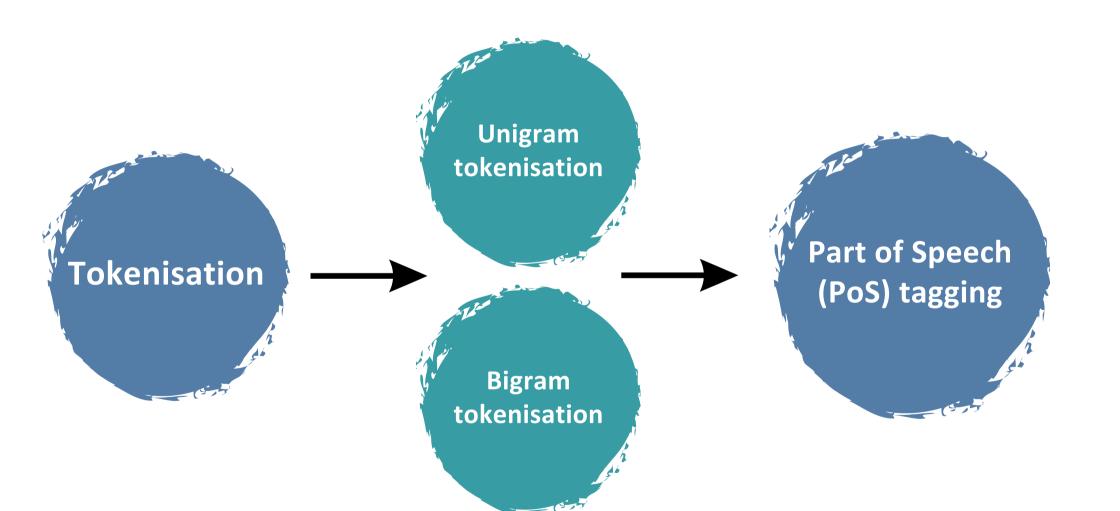


Is there a real connection among learning outcomes of micro-credentials and skills required in the labour market?





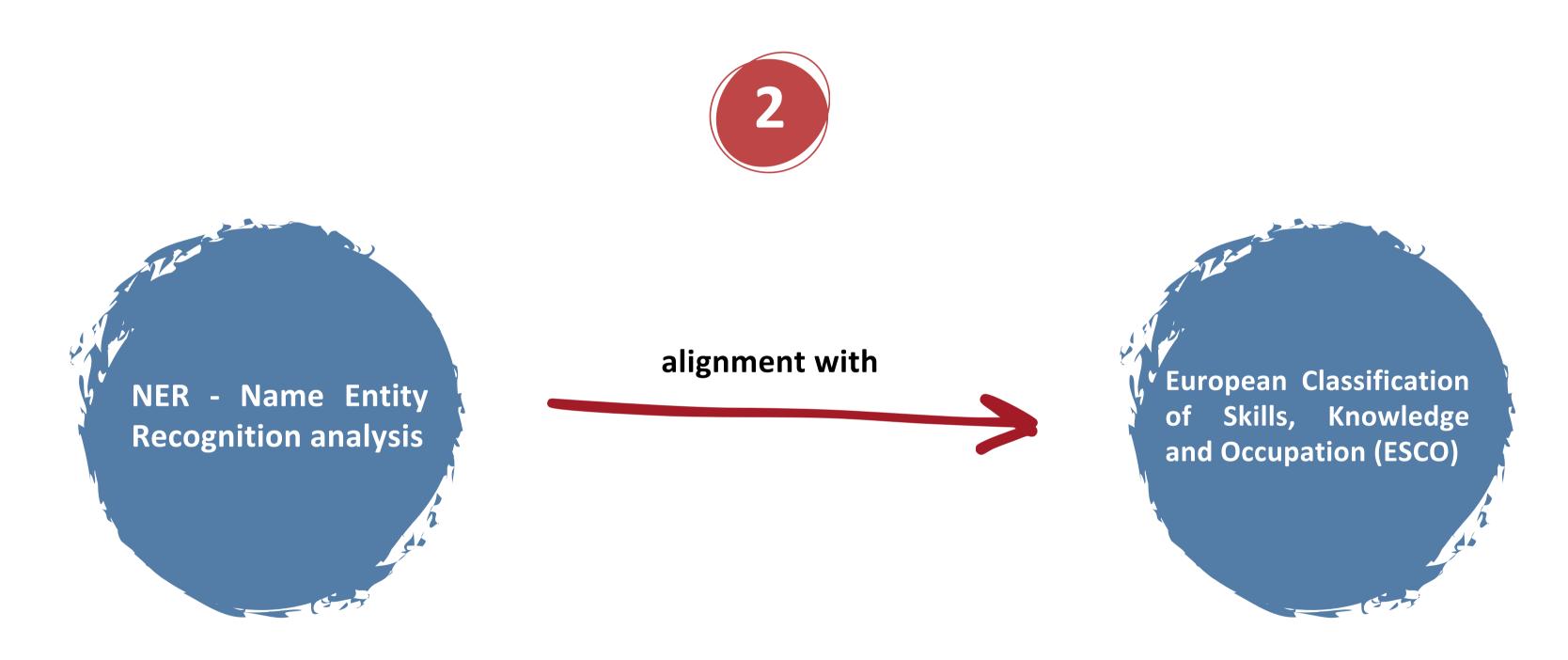




- 1. Distribution of different PoS categories in the collected LOs
- 2. Identification of the most frequent words for each PoS category
- 3. Identification of linguistic patterns in the structure of learning outcomes













The analysis confirmed that there are common patterns in learning outcomes writing among partner countries



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

*More detailed data will be available in the project final publication





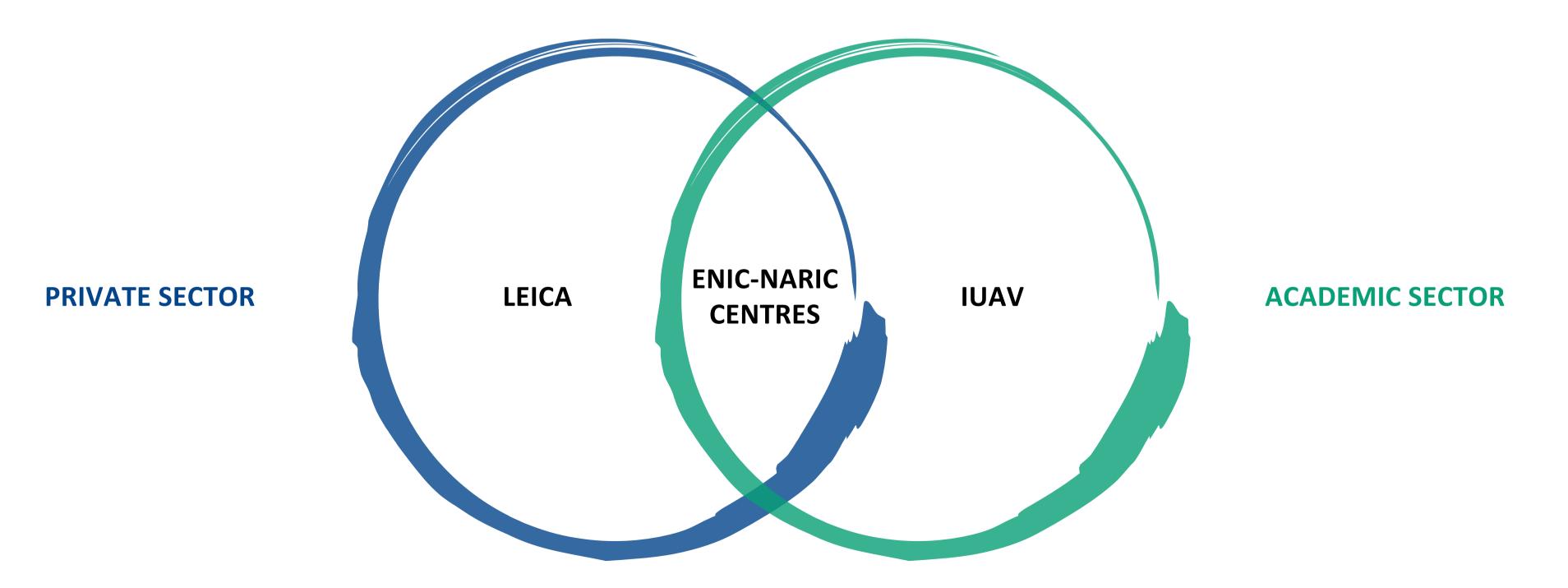
WP3: Portability and recognition of a micro-credential





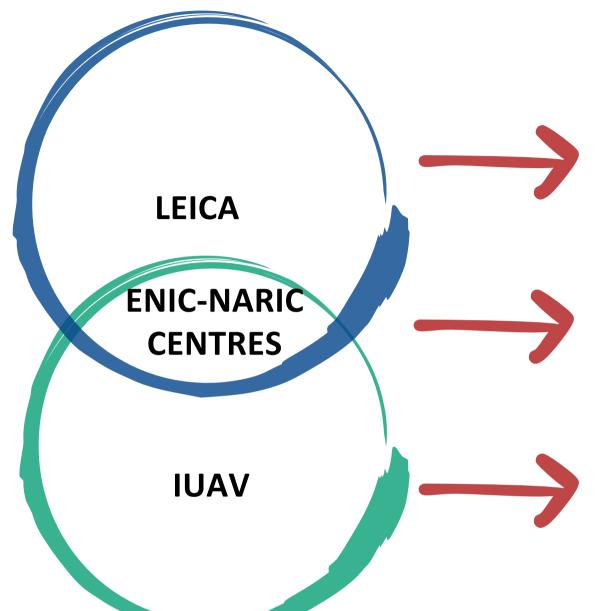


Stakeholders involved









PILOTING ACTIVITY

- 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







WP4 - Publication on methodology and key-findings of the research and piloting activity



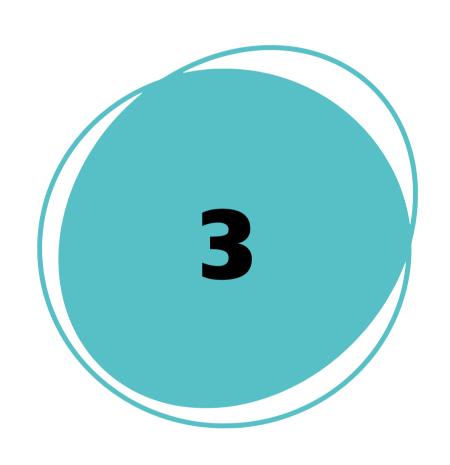












Validation and Mobility: democracy in action?







possible focus on learning outcomes rather than on contents of curricula in the recognition process







Al in Recognition



specific skills and competences acquired by the learner assessed through clear and defined standards







Co-design of the PILOT MICRO-CREDENTIAL



Use of technology







facilitate (automatic) recognition



Mobility



Democracy in action













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