Executive Summary

Corresponding to Deliverable 2.2 of the EU co-funded project "MICRO-credentials for lifelong learning and employability: Building Capacities for developing Agile educational opportunities in Southeast Asian Universities" or MICROCASA, this report discusses the findings on **infrastructure development** and **technical skills development** based on two surveys conducted with six Southeast Asian universities belonging to the MICROCASA Project Consortium, namely, the Universiti Sains Malaysia, Universiti Malaysia Sarawak, Universitas Brawijaya, Universitas Sam Ratulangi, University of the Philippines System (consisting of UP Diliman and UP Open University), and the Ateneo de Manila University.

The **first** MICROCASA Survey on Infrastructure and Technical Skills Needs was implemented from **December 2023 to January 2024**, whereas the **second** MICROCASA Survey–a follow-up to the earlier one–was conducted in **January 2025**.

Regarding **Infrastructure Development,** the two surveys revealed the following findings:

- All six Southeast Asian university partners decided to use the budget allocated for equipment to purchase hardware that would be used for hosting their preferred Learning Management Systems (LMS) and/or in creating instructional materials. This report details the equipment/hardware purchased by each Southeast Asian university, including each item's purpose, maintenance, and any training requirements. The Southeast Asian university partners are well aware that the completion of the purchase of all pieces of equipment is subject to the maximum eligible funding that each university can receive from the project.

- In general, the procurement or purchase of equipment by the Southeast Asian universities is governed by national policies, institutional guidelines, and external funding agency regulations.

Concerning **Technical Skills Development**, the two surveys yielded these results:

- When the Southeast Asian university partners were asked, in the first MICROCASA Survey (Dec 2023-Jan 2024), about their **knowledge and capability in developing and implementing micro-credential courses**, their **general weighted average was a 2.50**–a rating that corresponded to the **midpoint of "2-Somewhat capable and Somewhat knowledgeable"** and **"3-Capable and Knowledgeable."** There was noticeable variation in the responses of the universities, which ranged from "4-Very knowledgeable and Very capable" to "1-Not yet very knowledgeable and Not yet very capable at this point." The universities also explained their self-rating, as well as identified their needs and made suggestions, to enhance their knowledge in and capacity for developing micro-credential courses.

- A year after the conduct of the first survey, the second survey was conducted in January 2025. In this follow-up survey, the Southeast Asian university partners were asked if they faced or anticipated significant challenges in the micro-credential course content creation. **Three out of the six Southeast Asian universities (50%) reported that they currently had no challenges**.

The remaining three universities (50%) identified certain challenges in course content creation; at the same time, however, they are aware of the solutions that could be implemented to address these challenges.

● As per the Grant Agreement, the MICROCASA Project aimed to pursue a blockchain technology-based platform, with the project leveraging on the competency of CIMEA with DiploMe to fulfill this goal. When asked in the first MICROCASA Survey (Dec 2023-Jan 2024) about their **level of knowledge and competence in blockchain technology** the seven universities yielded self-assessment scores that resulted in a **general weighted average of 2.0**–a rating corresponding to **"2-Somewhat Knowledgeable and Somewhat Capable."** The Southeast Asian universities expressed interest in knowing more about the blockchain framework, as well as in receiving training on the technical aspects of its implementation.

Due to unforeseen and external factors beyond the control of the MICROCASA Project, CIMEA informed the project consortium that the renewed version of DiploMe would not likely be able to host the MICROCASA courses and micro-credentials. Despite this constraint, CIMEA continues to provide valuable technical inputs as a member of the project consortium.

An existing partnership between Dr. Achmad Basuki (Universitas Brawijaya) and the School on the Internet (SOI) Asia Project of Keio University in Japan led to the consideration of the micro-credentialing platform called **Inxignia** (a digital credentialing platform based on Open Badges 2.0) to support the project needs of MICROCASA. When members of the eleven institutions belonging to the MICROCASA Project Consortium convened in Manila from October 28 to 30, 2024, a highlight of the activities was the Technical Training conducted on Day 2 (29 October 2024). Among the Tuesday sessions was a hands-on workshop on the issuance of badges and certificates through Inxignia, led by Dr. Achmad Husni Thamrin and Dr. Andrey Ferriyan.

Thus, while challenges arose in adopting and implementing a blockchain-based technology for digital credential management, the consortium has already explored alternative solutions, such as the Inxignia digital credentialing platform.

In conclusion, the European Commission, through its support of MICROCASA, has provided the six Southeast Asian university partners financial support that enabled them to purchase essential hardware/equipment for course content development and/or hosting learning management systems and digital credential platforms. This support has enabled each project partner to have access to, or upgrade, university equipment that shall be used in the final year of project implementation.