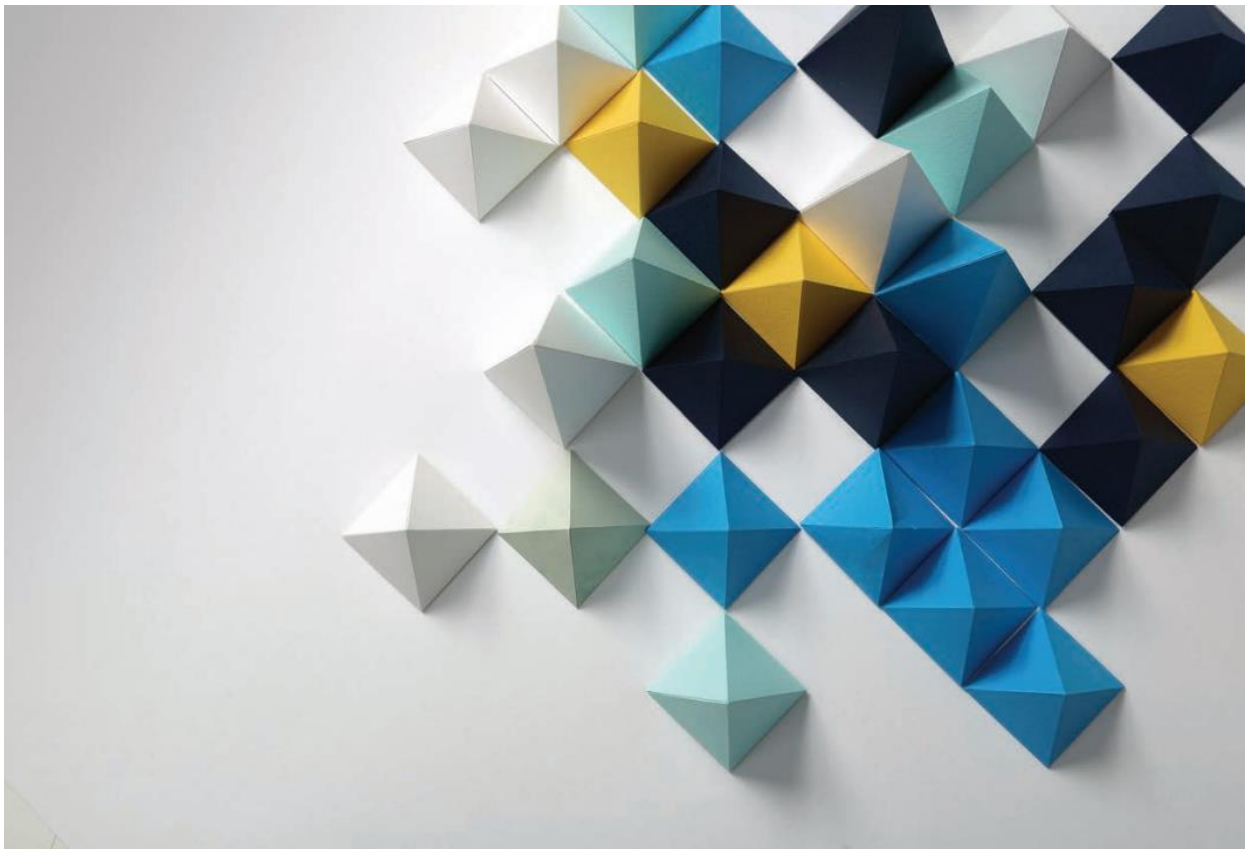
Micro-credential policy implementation in Finland, the Slovak Republic, Slovenia and Spain



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About this paper

This OECD Education Policy Perspective serves as Part B in a two-part series of summary papers published as part of the Micro-credentials Implementation Project, which ran from August 2022 to December 2023. The first publication, Paper A, examined the evolving landscape of micro-credentials, with a particular focus on the development of public policies that can foster effective utilisation of micro-credentials for lifelong learning, upskilling, and reskilling (OECD, 2023[1]). This publication, Paper B, presents case studies from the four European Union Member States that participated in the project – Finland, the Slovak Republic, Slovenia and Spain.

Each case study commences with a short overview of the respective national contexts in relation to the development of micro-credentials, followed by a discussion of assets and challenges in that national context, as identified through desk research, stakeholder interviews and workshops. The case studies conclude by outlining policy options that may serve to enhance the efficacy of micro-credential learning within these countries.

Overall, the two-part series of summary papers are aimed to serve as a guide for policy makers and stakeholders in the education and training sectors, offering a strategic framework for the integration and effective utilisation of micro-credentials.

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1 Micro-credentials Implementation Project

Running between August 2022 and December 2023, the Micro-credentials Implementation Project provided support to OECD countries in harnessing the potential of micro-credentials for lifelong learning and employability. Through robust research, practical guidance, and stakeholder engagement, the project aimed to equip policy makers with a diverse set of policy options to lay the foundation for effective micro-credential learning. The project was financially supported by the European Union (EU).

This section gives an overview of the project, describing its objectives, activities, methodological approaches and key outputs before introducing the four national case studies that form the core of this report.

Objectives

In recent years, public authorities in many OECD countries have been exploring ways of harnessing the potential of micro-credentials within their education, training and labour-market systems. Compared to traditional education and training programmes, micro-credentials are smaller, more targeted and more flexible. Micro-credentials may result in stand-alone qualifications or be embedded in broader learning pathways. Various stakeholders in education, training and labour markets argue that micro-credentials have the capacity to rapidly equip individuals with skills that are demanded in changing job markets. By doing this, micro-credentials can serve as catalysts in the shift towards digitally advanced and ecologically sustainable economies – a process commonly referred to as the "digital and green transitions". Moreover, policy makers anticipate that the rise of micro-credentials will strengthen a culture of lifelong learning across diverse groups, including, among others, working adults, those with familial obligations, and socially disadvantaged individuals.

The Micro-credentials Implementation Project aimed to support OECD countries with the development of a robust policy framework to underpin the provision and uptake of micro-credentials. In achieving this, it also aimed to provide technical assistance to EU Member States with the implementation of the *Council Recommendation on a European approach to micro-credentials for lifelong learning and employability*, which laid the groundwork for policy implementation in Europe (Council of the European Union, 2022[2]).

The project delivered this technical support by:

- strengthening the evidence base on the current and near-term potential of micro-credentials and related challenges; and
- outlining practical approaches and steps that countries can take to deliver on that potential and address challenges.

Activities and methodologies

Preparatory phase: Strengthening the evidence base on the current and near-term potential of micro-credentials and related challenges (from August to December 2022)

The main question underpinning the first activity in the project was what policy implementation measures countries might aim to develop given the current trajectory of micro-credentials. Taking into account the evidence already developed by different bodies with respect to micro-credential innovation, including the OECD's own previous work on micro-credentials (Kato, Galán-Muros and Weko, 2020[3]; OECD, 2021[4]; OECD, 2021[5]), the project team principally focused on the areas where evidence on the potential of micro-credentials was limited. Specifically, this meant examining how micro-credentials can contribute to:

a) enhancing employability, labour-market participation and outcomes among completers;

b) widening pathways from upper secondary education (including vocational education and training (VET) to higher education and improving completion of higher education; and

c) promoting social inclusion among disadvantaged learners and workers.

This activity involved desk-based research, interviews with leading international practitioners in the design and use of micro-credentials, and analysis of data supplied by micro-credential providers and data aggregators. A concise guidance paper summarised key findings from this activity was published under the title "Micro-credentials for Lifelong Learning and Employability: Uses and Possibilities" in March 2023 (OECD, 2023[6]).

Implementation phase: Outlining practical approaches and steps that countries can take to deliver on that potential and address challenges (from January to December 2023)

This activity conducted an in-depth analysis of the mechanisms through which countries could effectively execute their commitments to roll out micro-credential policies. With a specific focus on key policy instruments, such as public funding mechanisms, quality assurance processes, and information and guidance resources for learners, the OECD developed a set of guidelines tailored to the challenges and solutions in each relevant policy area. In so doing, the activity not only addressed how key policy instruments could be adapted and optimised to support an ecosystem that is beneficial for both micro-credential providers and users, but also explored avenues for enhancing collaboration opportunities among traditional educational and training institutions, industries, and new types of providers.

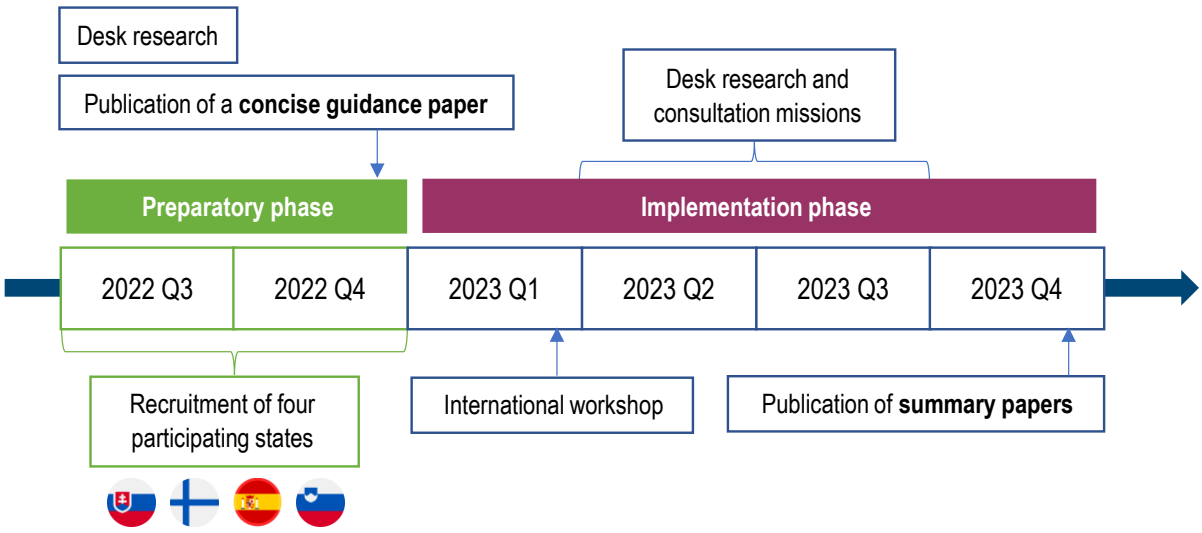
The activity involved desk research and interviews with education, training and labour-market stakeholders, as well as the analysis of the OECD Higher Education Policy Survey 2022 – a fixed-response policy survey administered to all OECD and EU Member States. The activity was carried out in close collaboration with four EU Member States that participated in the project – Finland, the Slovak Republic, Slovenia and Spain. In each of the four countries, the project team conducted a series of stakeholder interviews and a one-day national workshop to identify and discuss assets, challenges, and policy options that are most relevant to these countries' respective national contexts. As an output, a two-part series of summary papers titled "Public Policies for Effective Micro-credential Learning" (OECD, 2023[1]) and "Micro-credential Policy Implementation in Finland, the Slovak Republic, Slovenia and Spain" (this paper) was published in December 2023.

Outputs

The project generated five main outputs:

1) A **concise guidance paper** titled “Micro-credentials for Lifelong Learning and Employability: Uses and Possibilities” published in March 2023 (OECD, 2023[6]);
2) An online **international knowledge exchange workshop** “International Peer Learning Day on Micro-credential Policy Implementation” organised in March 2023;
3) **National stakeholder workshops** in Finland, the Slovak Republic, Slovenia and Spain that took place between April to June 2023;
4) A **two-part series of summary papers** titled “Public Policies for Effective Micro-credential Learning" (OECD, 2023[1]) and “Micro-credential Policy Implementation in Finland, the Slovak Republic, Slovenia and Spain” (this paper) published in December 2023; and
5) A **self-assessment tool** for implementing micro-credential policies published in December 2023 (as part of the summary paper "Public Policies for Effective Micro-credential Learning")

Figure 1.1. Project overview



2 Finland

Finland has one of the most successful education and training systems in the OECD, but rapid technological change, globalisation and an ageing population are leading to an escalating skills shortage in the country's labour-market (OECD, 2020[7]). There is a specific concern regarding the supply of high-level skills, since over 80% of employment in shortage occupations were high-skilled in 2019 (OECD, 2022[8]). To address these challenges, Finland must prioritise elevating the skill levels of its population, with a particular focus on strengthening the alignment of the country's continuous learning offer with emerging and evolving social and industry needs.

Participation in continuous learning in Finland stands out as having a notably higher engagement rate among adults compared to other EU Member States. The latest EU Adult Education Survey conducted in 2016-17 found that 54% of Finns aged 25-64 had taken part in some form of formal or non-formal education and training in the preceding 12 months, compared to the EU average of 44% (Eurostat, 2023[9]). Nonetheless, this engagement is unevenly distributed, with a substantial gap between those with higher levels of education and those with less, as well as between those employed and those unemployed (Eurostat, 2023[10]; Eurostat, 2023[11]).

To cater to the diverse needs of adult learners, Finland offers a range of formal and non-formal education and training opportunities, each serving a different purpose. These include offerings targeted at adults in basic and general education, vocational education, higher education, adult liberal education and staff training (OECD, 2020[7]). Of these, three types of provision – vocational education, higher education and staff training – are particularly relevant for the development of in-demand higher-level skills.

Continuous vocational education and training (CVET) provision covers formal initial, further and specialist vocational qualifications, as well as non-formal vocational labour-market training and some forms of integration training for immigrants. Responsibility for this area is shared between the Ministry of Education and Culture (OKM) and the Ministry of Economic Affairs and Employment. All of these programmes are focused on supporting labour-market insertion, and the majority of programmes are delivered in a modularised format. CVET providers include vocational institutions, adult education centres, continuous education centres of higher education institutions and private providers (OECD, 2020[7]).

Finland's **higher education** system comprises 13 universities and 22 universities of applied sciences (UAS) operating in the OKM's administrative branch. In addition to these, there are three other higher education institutions, namely the Åland University of Applied Sciences, the National Defence University and the Police University College. These institutions offer two primary forms of continuous learning: open studies and professional specialisation studies. Open studies refer to part-time non-degree studies which allow learners to take the university or UAS courses and modules that are offered through degree studies without having to pass university entrance requirements. They are offered in the daytime, evenings, weekends and online by most Finnish higher education institutions. Professional specialisation studies are typically between 30 and 60 European Credit Transfer and Accumulation System (ECTS) credit qualifications aimed at the reskilling and upskilling of higher education graduates (OECD, 2022[12]; Finnish National Agency for Education, n.d.[13]; n.d.[14]).

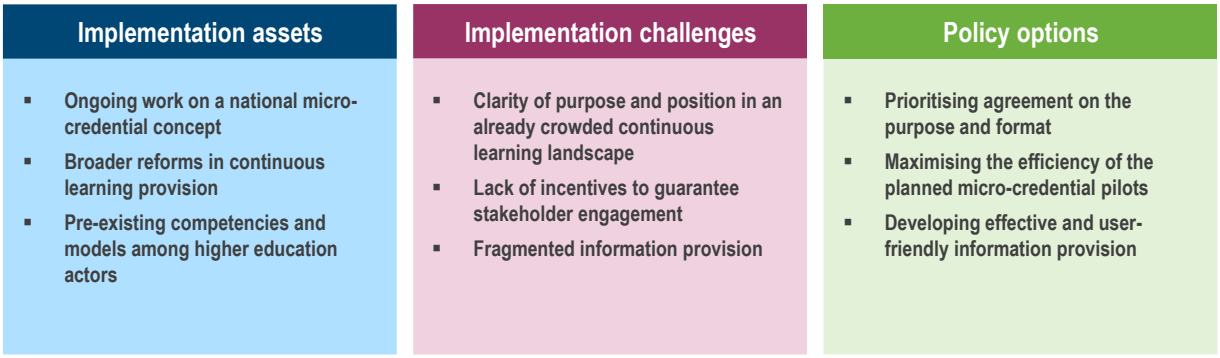
Staff training primarily refers to training organised by employers, or at the request of employers for employees or prospective employees. This category covers both privately and publicly delivered programmes. On the public side, staff training mostly consists of so-called "joint purchase training". This is

a form of labour-market training where the training is paid for and implemented jointly by an employer and one of the country's 15 local Employment and Economic Development Offices (*Työ- ja elinkeinotoimistot*, TE offices). In addition, employers organise staff training in-house or purchase it from private and quasi-private companies and the continuous education centres of higher education institutions. Staff training can overlap with different provision categories because it often makes use of publicly supported programmes, such as formal or non-formal vocational training (OECD, 2020[7]).

The subsequent sections will examine the assets and challenges Finland faces in its efforts to develop and implement micro-credential policies, along with policy options for future consideration. Key messages are summarised in Figure 2.1.

Figure 2.1. Overview: Micro-credential policy implementation in Finland

Key assets, challenges and policy options



Implementation assets

Finland is in the process of implementing a reform of its continuous learning provision and has already started stakeholder discussions to define the scope and focus of a national micro-credential ecosystem. Finnish higher and adult education stakeholders can also draw on a range of pre-existing capabilities, such as in skills forecasting or teaching and learning practices for a variety of part-time and adult learners.

Work on a national micro-credential concept has already started

The OKM has established a working group to discuss the implementation of micro-credentials in the Finnish higher education system, in response to the *EU's Council Recommendation on a European approach to micro-credentials for lifelong learning and employability*, as well as the Finnish National Strategy for Continuous Learning in Higher Education, published in December 2022. This working group brings together representatives from higher education institutions, the Finnish Education Evaluation Centre and the Ministry of Economic Affairs and Employment. Tasks for the working group are structured into two phases - the initial "definition phase", which started in early 2023, and the subsequent "development and experimentation phase".

The first, "definition phase" focused on four tasks which were:

1) identifying the purpose of micro-credentials by outlining the needs to which they respond in the Finnish continuous learning landscape;
2) defining a set of national criteria for the concept of micro-credentials;

3) exploring how micro-credentials could be communicated, marketed and provided on a digital service platform; and
4) looking into how Finnish higher education institutions would and could respond to the working group's proposals.

The second, "development and experimentation phase" is expected to focus on the following tasks:

5) exploring potential incentives that would encourage Finnish higher education institutions to engage in micro-credential provision;
6) investigating potential measures that would ensure that micro-credentials respond to the needs of the Finnish labour-market and broader society both on a national and local level; and
7) developing, guiding and evaluating the success of a project to pilot and experiment with micro-credentials.

Micro-credentials form part of continuous learning provision and can benefit from broader ongoing reforms in this area

The formation of the micro-credential working group represents a part of a broader range of national reforms aimed at revamping continuous learning in Finland. At the end of 2020, the Finnish Parliament articulated a strategic vision and goals for 2030, detailing 27 actionable measures to fulfil these ambitions (OKM, n.d.[15]).

Examples of implemented initiatives include the establishment of the Service Centre for Continuous Learning and Employment (SECLE or JOTPA in its Finnish abbreviation), which started operations in 2022. Working under the shared responsibility of the two ministries, the OKM and the Ministry of Economic Affairs and Employment, JOTPA's main mission is to address both immediate and emerging skill demands in the labour market and provide means for rapidly bridging gaps that are not catered for by existing educational programmes. JOTPA accomplishes this by a) identifying unmet skill needs through labour market analysis and forecasts and b) subsequently awarding state grants to education and training providers for the development of short programmes that respond to these skills gaps (JOTPA, 2023[16]).

JOTPA's work on skill forecasting builds upon the country's existing systems. At the national level, the National Forum for Skill Anticipation (*Osaamisen ennakointifoorumi*, OEF) organises nine sector-specific groups, each accountable for forecasting skills needs within their sector and formulating recommendations to improve the relevance of education and training. At the regional level, the TE offices regularly update the Occupational Barometer (*ammattibarometri*), which provides employment prospects for 200 key occupations over the subsequent six months in respective regions (OECD, 2020[7]). Under the EU-supported Recovery and Resilience Plan, Finland aims to strengthen its skills forecasting capacity, and efforts are underway to upgrade these existing tools, as well as to develop a new system "Skills Needs Compass (*Osaamistarvekompassi*)", which will consolidate short, medium and long-term skill forecasting data from different sources to help education and training providers understand future skill demand. JOTPA is tasked to launch the new system in 2024 (Finnish Government, 2023[17]).

Based on the data on skill demands, JOTPA steers education and training providers to develop and offer programmes that are shorter than degree programmes through the provision of targeted funding. Short programmes funded in 2022 include those in the social and health sectors and early childhood education, and those aimed at the development of green and digital skills (Finnish Government, 2023[17]).

Finland can draw on pre-existing competencies and models among higher education actors

Some of the skills and experiences needed for the introduction of a micro-credential ecosystem are already present, albeit in a disjointed and isolated form in different parts of Finland's higher and adult education system. For one, some Finnish higher education institutions, particularly UAS, already have robust ties with industry. Haaga-Helia University of Applied Sciences, for instance, has partnerships with over 100 companies for different purposes, including the provision of short, targeted training programmes. The university is also experimenting with a "work and study" model (*opinnollistaminen*) within its bachelor's degree curricula, allowing students to acquire academic credits for competencies developed through professional work experiences that are undertaken during their studies (Haaga-Helia University of Applied Sciences, n.d.[18]).

In addition, Finnish higher education institutions have previous experience with teaching non-traditional and non-degree students through the offerings of open studies and professional specialisation studies. Some higher education institutions also have experience with the provision of labour-market focused programmes financed without public subsidies. Such programmes typically take the form of fee-based non-degree credentials offered through legally separate subsidiary companies. For example, Aalto University offers a wide portfolio of professionally oriented non-degree programmes aimed both at companies and individuals through its commercial subsidiary, Aalto University Executive Education Ltd (Aalto University Executive Education, n.d.[19]).

Furthermore, a handful of (departments in some) higher education institutions are already offering programmes that have characteristics unique to micro-credentials. For example, the University of Helsinki's Department of Computer Science offers a modularised programme "Full Stack" free of charge. The curriculum is collaboratively developed with industry partners, and students who successfully earn the full credit (24 ECTS) are guaranteed an invitation to a job interview with partner companies (University of Helsinki, n.d.[20]).

Implementation challenges

Although micro-credentials have the potential to plug a relevant gap in Finnish continuous education provision, their successful introduction requires contending with a few challenges, of which three will be examined below. These are: 1) the clarity of purpose and positioning of micro-credentials vis-à-vis already existing forms of continuous learning provision; 2) a lack of incentives for higher education institutions, learners and labour-market stakeholders to dedicate their resources to higher education-based micro-credentials; and 3) the fragmented state of information provision for learners and labour-market stakeholders.

Clarity of purpose and position in an already crowded continuous learning landscape

Finland, with its mature education and training system, already provides a diverse selection of short, flexible, and targeted learning opportunities. These range from adult liberal education programmes offered by diverse providers to the array of more labour-market-oriented programmes, including professional specialisation studies at higher education institutions, labour-market training by CVET providers, and joint-purchase training created by employers and local TE offices. Additionally, opportunities exist to engage in modules of formal education through different means, such as open studies in higher education institutions.

For the effective integration of micro-credentials within Finland's continuous learning framework, it is essential to cultivate a shared understanding of the purpose and position of micro-credentials in relation to these existing learning provisions. A crucial consideration is whether 'micro-credentials' will encompass a

broad range of continuous learning programmes or will be introduced as a distinct concept designed to satisfy previously unmet education and training needs.

Efforts to define the concept of micro-credentials in Finland have already begun, with the OKM's working group making considerable progress in discussing their roles in higher education. There seems to be a general agreement among higher education stakeholders that micro-credentials, if introduced as a new concept, should be oriented to the labour-market needs and support upskilling and reskilling of the workforce, particularly in response to the shortage of high-level skills in the country.

Nonetheless, national stakeholders still appear to have diverging expectations on the concept of micro-credentials. For example, there is a notable difference in perspective regarding the duration of these programmes. Higher education providers generally envisage "short" or "micro" qualifications spanning weeks to several months. This view contrasts with that of many employers and industry representatives, who anticipate even shorter, typically less than 1 ECTS (equivalent to 25-30 hours of study).

The debate also extends to whether micro-credentials should award ECTS credits. Some stakeholders emphasise the importance of awarding academic credits to ensure these programmes serve as stepping stones towards more comprehensive qualifications, avoiding the risk of creating educational dead ends. In contrast, others note that many micro-credential participants are degree-holders who are not seeking additional credit accumulation, but rather specific skills and knowledge, and highlight the importance of thinking beyond the traditional academic credit scheme.

Current incentives are not sufficient to guarantee stakeholder engagement for micro-credentials

Currently, key stakeholders, including higher education institutions, prospective learners and labour-market actors, lack compelling reasons to invest their limited resources in developing, delivering, or engaging with micro-credentials. This is a central challenge for the introduction of micro-credentials in Finland and threatens to undermine the OKM's efforts to integrate micro-credentials within the Finnish higher education system.

From the perspective of higher education institutions, current financial incentives limit the effort and resources higher education institutions are willing to spend on the creation and delivery of non-degree programmes beyond open studies. Higher education institutions in Finland receive almost the entirety of their revenues from public sources, and since 2021, the allocation of core public funding considers the number of credits obtained through open studies (i.e. modules of degree programmes offered through open universities) - 5% for universities and 9% for universities of applied sciences. This change has spurred higher education institutions to expand their open studies offerings, as evidenced by the substantial increase in learner enrolment over the last five years (by 124% for universities and 381% for universities of applied sciences between 2017 and 2022) (OECD, 2023[21]; Vipunen, n.d.[22]; Vipunen, n.d.[23]). Nonetheless, other types of short learning programmes, chiefly professional specialisation programmes and non-credit bearing programmes offered through higher education institutions' subsidiary companies, are often run on a cost-recovery and fee basis, but even here, the cost of developing new content and upgrading digital infrastructure pose substantial deterrents to their expansion.

Moreover, the application of EU state aid rules presents a regulatory challenge for non-degree offerings by higher education institutions. While conventional higher education activities are deemed non-economic and thus exempt from these rules, the territory becomes obscure when fee-based continuous education programmes enter the marketplace. In such cases, the employment of public funds and resources may be interpreted as state aid, subject to EU regulations with few exceptions (OECD, 2022[24]). To navigate this complexity, numerous Finnish higher education institutions have established separate legal entities for continuous learning (OECD, 2023[21]), which makes it challenging for higher education institutions to take

an integrated approach to the provision of non-degree programmes, potentially deterring them from fully embracing their role in promoting lifelong learning.

From a learners' viewpoint, the Finnish tradition of free or low-cost education renders fee-based micro-credentials less appealing, especially if their labour-market recognition is not yet established. The Finnish job market seeks advanced and specialised skills, and the response of higher education institutions to this demand has predominantly been centred on degrees and qualifications. As such, learners may view pursuing an additional degree or open university studies as more cost-effective and rewarding, despite the longer duration and less direct orientation to professional practice. Currently, the primary incentives for learners to opt for fee-based non-degree programmes lie in the shorter completion times and potential employer recognition/support. Yet, the affordability of these programmes remains a barrier for individuals without any employer support, due to the high fees associated with these programmes.

Lastly, for employers, industry bodies and social partners, developing and delivering education and training programmes independently of higher education institutions can appear to be more rapid and, in some cases, less expensive. Private providers typically have more experience and a clearer focus on delivering targeted training specifically for the preferences of companies. This is especially true if co-operation with a higher education institution is not straightforward – for instance, when academic staff has limited experience delivering labour-market-oriented programmes and when there are no existing relationships established between entities. In addition, more generally, anecdotal evidence from stakeholder interviews suggests that employers tend to expect education and training offered by higher education institutions should be free of charge or inexpensive. Furthermore, certain employer-specific training needs are already met through publicly funded channels, such as the joint-purchase training available at regional TE offices.

Information provision related to continuous learning is fragmented

The information provision about the different forms of non-formal education and training opportunities available in Finland is disjointed and can be challenging to navigate. As a result, neither prospective learners, nor labour-market actors, chiefly employers and industry bodies, can easily comprehend the different types of programmes. Consequently, this complexity hinders the uptake of non-formal education compared to formal education, which benefits from more accessible and structured information. The absence of a comprehensive information point also impedes the enhancement of labour-market recognition for these non-formal learning programmes.

Acknowledging this barrier, Finnish national stakeholders are actively addressing the issue with two initiatives. One of these is the Continuous Learning Digitalisation project (*Jatkuvan Oppimisen Digitalisaatio-ohjelma*, JOD). It aims to create an online one-stop-shop for continuous learning that consolidates information on skill demands alongside education and training supplies. The work has already started using the architecture of the existing online study catalogue Studyinfo (*Opintopolku*), and the new portal aims to cover programmes offered by different types of providers, including higher education institutions, VET providers and eventually also private providers. The service is scheduled to be launched by the end of 2025 (OKM, n.d.[25]).

The other initiative developed in parallel is the Digivisio 2030 project – an initiative jointly launched by all Finnish higher education institutions – which aims to develop an online platform that will list continuous learning programmes offered by higher education institutions. The platform will also provide Artificial Intelligence (AI)-based guidance services, as well as serve as a joint application and registration service. Currently in the pilot phase, this service is expected to be fully operational by the end of 2024 (Digivisio, n.d.[26]).

Considerations for the successful definition and development of a national micro-credential ecosystem in Finland

Although the conditions for the introduction of labour-market oriented micro-credentials in Finnish higher education are encouraging, their successful implementation requires concentrated work and experimentation in several areas. While on the medium to long term, the OKM will need to ensure that micro-credential provision is underpinned by a sustainable funding system – which for Finland may mean experimentation with the inclusion of blended and private funding models – the following section will focus on three short term priorities. These are: 1) elaborating and clarifying the purpose and format of micro-credentials; 2) maximising the impact of the planned micro-credential pilots; and 3) ensuring that there is comprehensive and user-friendly information provision in place for prospective learners and labour-market actors.

Prioritising agreement on the purpose and format for micro-credentials

The OKM's working group has embarked on defining the role and form of micro-credentials. Reflecting on national stakeholder discussions and international case studies, the working group may consider the following points when carrying out their activities in the definition phase.

Firstly, in relation to the purpose of micro-credentials, if they were to be introduced as a distinct form of continuous education programmes in the higher education sector, micro-credentials could respond to two distinct needs. The first of these is the upskilling and reskilling of highly skilled adults, who often return to higher education for an additional degree at the same level. Micro-credentials could offer a more effective option for these individuals, bypassing the lengthy process of earning another conventional degree. The second need is the filling of gaps left unaddressed by current education and training provision. For instance, open studies generally aim to widen access to higher education rather than provide direct professional skill development. In-house company training, while comprehensive, may be overly specific and lacks the broad, research-driven approach that fosters versatile skills. Additionally, the private learning market does not always accommodate crucial learning areas, such as public sector careers, nor does it serve all learner demographics, such as refugees. Professional specialisation studies are intended to respond to these needs by developing professionally relevant skills among highly skilled individuals. Yet, such programmes are not suited for the swift rectification of minor skill gaps due to their substantial size of at least 30 ECTS and have thus far played a modest role in the continuous education market, evidenced by the participation of around 1 300 individuals in 2021 (Vipunen, n.d.[22]; Vipunen, n.d.[23]).

In addition, micro-credentials hold the potential to serve as one of the flexible educational pathways within higher education when appropriately developed. Open studies confer ECTS credits and permit learners to enrol in a degree programme if they complete a certain volume of learning (often around 60 ECTS) (OECD, 2023[6]). While the use of these programmes for this purpose is on the rise, the share of students who enrolled in degree programmes through this pathway is still modest – around 6% for universities and 8% for UAS in 2023 (Vipunen, n.d.[27]). And other non-degree programmes offered by higher education institutions typically do not yield ECTS credits. This presents an opportunity for micro-credentials to further facilitate a more adaptable and modular learning environment in higher education, bridging the divide between non-formal education and formal degree education.

Secondly, regarding the size of micro-credentials, Finland, as with other countries, may benefit from maintaining national criteria that are as flexible as possible, thus catering to diverse educational needs. Short programmes are advantageous for swiftly addressing minor skill gaps. However, international examples demonstrate that more extensive programmes can be instrumental for adults undergoing career transitions, such as the Google IT Support Professional Certificate, which is equated to 12 academic credits in the United States (equivalent to 24 ECTS). The Finnish working group should also contemplate how micro-credentials could interact with existing non-degree offerings, such as professional specialisation

studies that range from 30 to 60 ECTS. Detailed analyses of international approaches to the definition of micro-credentials are explored in the accompanying Part A paper (OECD, 2023[1]).

Lastly, arriving at a definitive definition of micro-credentials in an early stage of policy planning is not imperative. An initial definition can be applied and assessed through the planned pilot, with adjustments made in response to the outcomes observed. In the case of the micro-credential pilot in the Dutch higher education system, participating institutions agreed on the format and quality assurance measures, which subsequently laid the groundwork for the national approach ultimately adopted by the government (Acceleration plan, n.d.[28]).

Maximising the efficiency of the planned micro-credential pilots

Pilot programmes provide a crucial opportunity to test, and through that define micro-credential standards. Finnish authorities are already working to establish a micro-credential pilot scheme which is expected to be financed among others through the European Social Fund. For the pilot to be effective, the OKM might focus on two key objectives: 1) fostering collaboration between higher education institutions and labour-market actors; and 2) exploring blended and market-driven funding models for micro-credential programmes.

The pilot could encourage partnerships with industry stakeholders and the application of skills forecasting data. For instance, as was the case in Canada (Ontario), it could require the co-creation of micro-credentials with industry partners as a criterion for participation or, as was the case in Australia, seek industry endorsement as part of the assessment process (OECD, 2023[1]). Furthermore, it would be beneficial for institutions to incorporate skills forecasting data in their grant applications to further ensure relevance.

Additionally, the pilot offers a chance to evaluate a mixed funding model by introducing tuition fees. Government funding, as observed in the pilots run in Australia, Canada (Ontario), and Ireland, typically covers the foundational costs of developing micro-credentials, with an expectation of supplementary private investment through tuition fees. In Spain, under the pilot planned as part of the Recovery and Resilience Plan, participants are expected to contribute to 30% of the costs. Equity is also a priority, as demonstrated in Australia and Canada (Ontario), where existing grant and loan systems have been extended to micro-credential learners. Similarly, in Spain, fee reductions or waivers are available for those from disadvantaged backgrounds, ensuring that economic hurdles do not impede access to these educational opportunities (OECD, 2023[1]).

Developing effective and user-friendly information provision for prospective learners

Ensuring that all prospective learners can easily find out about all the micro-credentials offered by Finnish higher education providers requires putting in place a comprehensive and easy-to-use starting point, that is to say an information portal. Given that there are already multiple initiatives to plug this gap, the OKM may focus on maximising the impact of ongoing efforts.

Beyond synthetising available micro-credential offers, the most effective information portals also contain additional information to compare different programme offers. For one, it is greatly helpful to offer structured information on the different forms of available continuous education programmes. Such information is already available for large parts of Finland's existing higher and adult education provision on Studyinfo. Similar features are already being tested and rolled out for micro-credential information portals in several countries. For example, Germany's hoch & weit, for instance, offers structured information on different types of university continuous education programmes (certificates, diplomas etc.) and financial support and advice tailored to adult learners (hoch & weit, n.d.[29]). Similarly, Singapore's MySkillsFuture portal incorporates user feedback, displaying course ratings based on the five-point Likert scale to inform

prospective learners about the quality and outcomes of completed courses (Government of Singapore, 2023[30]).

Further enhancing the utility of these online resources, some governments are integrating offline support and conducting promotional campaigns to drive engagement. Singapore, for example, integrates the MySkillsFuture portal into its school career guidance programmes, ensuring early acquaintance with the platform. Additionally, Singapore extends personalised support through its Skills and Training Advisory Services, which offers consultations on career planning and skill acquisition. In Ireland, the MicroCreds initiative provides advisory services to help learners identify programmes aligned with their needs, complemented by extensive marketing efforts, including traditional media, to bolster awareness and national recognition of their micro-credential offerings (OECD, 2023[1]).

3 Slovak Republic

The Slovak Republic faces important demographic and technological challenges. Its school-age and working-age populations are declining, and its manufacturing economy is highly exposed to disruptive technological change from automation and digitalisation (Nedelkoska and Quintini, 2018[31]). To address these challenges, it must prioritise the skills of its population, with a view to boosting the adaptability and capabilities of its adult population.

While the country has seen a steady increase in tertiary education attainment in its population aged 25-34 from 21% in 2009 to 39% in 2019, Slovak higher education institutions are confronted with declining enrolment numbers (OECD, 2021[32]). Countering this will require Slovak higher education institutions to attract new types of learners, including adults with work and family responsibilities. In addition, more than one-third of workers aged 15-34 reported a field-of-study mismatch in 2018, which is above the OECD average of 32%, and implies that education provision is not sufficiently aligned with emerging labour-market needs (OECD, 2020[33]). As a result, there is an increasing demand for a closer alignment of education provision with the skill demands of the labour-market. Exploring ways to increase lifelong learning provision in general, and micro-credential provision in particular, could be a key step to respond to these challenges.

The Slovak Republic has a foundation for lifelong learning; however, the country's adult learning participation record is mixed. According to the EU Adult Education Survey, 46% of adults aged 25-64 participated in formal and non-formal education and training in 2016, which is above the EU average of 44% (Eurostat, 2023[9]). At the same time, data from the 2016 OECD Survey of Adult Skills suggests that the intensity of participation (measured by the number of hours dedicated to lifelong learning) is well below the OECD average (Desjardins, 2020[34]; OECD, 2020[33]). The Slovak Republic has been working to promote participation in adult learning to meet the target of 50% by 2025, which is set within the European Skills Agenda (Government of the Slovak Republic, 2021[35]). As is the case for other EU Member States, a large share of adult learning in Slovakia takes place through non-formal education and training programmes, which are often shorter than formal programmes.

Several providers play a role in lifelong learning, including higher education institutions, secondary vocational schools and other further education providers, such as training companies. Each of them appears to operate independently, meaning that regular communication and collaboration between these providers is yet to fully develop in the Slovak Republic.

Firstly, there are 33 **higher education institutions**, above all 20 public (*verejných vysokých škôl*) and three (specially maintained) state universities and colleges (*štátne vysoké školy*) who together educated nearly 90% of higher education students in the Slovak Republic in the academic year 2021-22 (MŠVVaŠ, 2023[36]). These institutions mostly offer degree programmes accredited by the Slovak Accreditation Agency for Higher Education (SAAVŠ), but a few departments also offer shorter professional upskilling programmes aimed at practitioners of a specific, usually regulated profession.

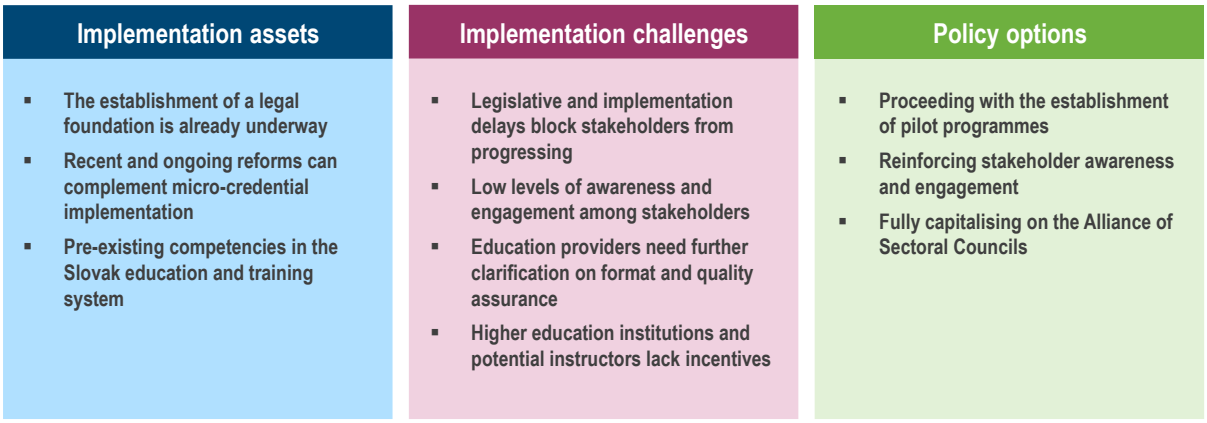
Secondly, there are the traditional **providers of VET**, chiefly secondary vocational schools (*stredná odborná škola*). These institutions can be either public or private (including church-affiliated). Of the different types of VET programmes, only one, the Refresher programmes (*pomaturitné inovačné štúdium, pomaturitné zdokonaľovacie štúdium*) offered at the post-secondary non-tertiary education level (ISCED 4) last less than a year (Cedefop and ŠIOV, 2022[37]).

Lastly, there are **other further education providers**, including private firms and non-governmental organisations, which offer professional or occupational programmes. The Ministry of Education, Science, Research and Sport (MŠVVaŠ) gives accreditation to these programmes, which are usually less than a year, based on the approval of the Accreditation Commission for Further Education (Cedefop and ŠIOV, 2022[37]). The recognised programmes are then registered to the national further education information system (*Informačný systém ďalšieho vzdelávania*) (MŠVVaŠ, 2023[38]). However, this registration is not mandatory, and therefore, there are other further education programmes offered outside of this system.

Strengthening lifelong learning in general, and establishing a micro-credential ecosystem in particular, is a long-term priority for the Slovak Republic, and public authorities, chiefly but not exclusively the MŠVVaŠ have undertaken a number of initiatives to this end. The following sections will examine some of the Slovak Republic's main assets and challenges, as well as potential further steps, with key messages summarised in Figure 3.1.

Figure 3.1. Overview: Micro-credential policy implementation in the Slovak Republic

Key assets, challenges and policy options



Implementation assets

The Slovak Republic can draw on multiple ongoing policies and pre-existing capabilities as it develops a national micro-credential ecosystem. Of these, the most important are firstly, the already underway establishment of legal foundations for micro-credentials, secondly, the presence of several parallel policy initiatives and thirdly, the pre-existing competencies of higher education stakeholders.

The establishment of a legal foundation for a micro-credential ecosystem is already underway

The formal development of a micro-credential ecosystem in the Slovak Republic began in 2021 with the adoption of the Strategy for Lifelong Learning and Guidance 2021-2030 (*stratégia celoživotného vzdelávania a poradenstva na roky 2021-2030*) and the Action Plan for the Strategy for Lifelong Learning and Guidance 2022-2024 (*akčný plán k Stratégii celoživotného vzdelávania a poradenstva na roky 2022-2024)* (Government of the Slovak Republic, 2021[35]; 2022[39]). Based on these, the MŠVVaŠ prepared a Draft Act on Lifelong Learning (*návrh zákona o celoživotnom vzdelávaní,* the Draft Act) (Government of the Slovak Republic, 2022[40]).

This sets out to formally introduce and define micro-credentials. The MŠVVaŠ is keen to ensure that the regulatory framework for micro-credentials will remain sufficiently flexible to accommodate micro-credentials from other EU Member States in the future, while also creating a sense of certainty for higher education stakeholders within the Slovak Republic (Gállová et al., 2023[41]). Accordingly, the Draft Act proposes to establish two types of micro-credentials, differentiating between lightly regulated "*mikrosvedčenie*" (micro-certificate), which could cover all qualifications that meet the definition outlined in the EU Council Recommendation, and more strongly regulated "*mikrokvalifikácia*" (micro-qualification), which builds upon the existing professional or occupational programmes registered with the MŠVVaŠ. "*Mikrokvalifikácia*" differ from existing programmes in size (it should be at least 10 hours) and quality assessments (if it is offered by alternative providers, such as companies, professional organisations, or non-governmental non-profit organisations, their quality is to be assessed by Slovak higher education institutions or secondary schools who have been authorised to provide education in the given subject (Government of the Slovak Republic, 2022[40]; Gállová et al., 2023[41]; Vantuch, 2023[42]).

Once adopted, the Draft Act will create a legal basis for micro-credentials. This is a precondition for any further development of a micro-credential ecosystem in the Slovak Republic because Slovak education institutions, especially higher education institutions, are reluctant to commit resources to initiatives that have not been clearly defined and demanded of them by legislation. Furthermore, some stakeholders, particularly in higher education institutions, are not yet convinced about the value and relevance of micro-credentials. Indeed, while some university departments already offer a small number of short, professional programmes in co-operation with professional bodies, the format and quality assurance of such programmes is fragmented, and they are not considered to be central to the mission of higher education institutions. Therefore, adopting the Draft Act is a first step towards creating the certainty and predictability needed to secure the understanding and co-operation of currently largely disengaged education providers.

Recent and ongoing reforms can complement micro-credential implementation

Many features of a micro-credential ecosystem are already present or could be developed from the structures set up by recent and ongoing initiatives in the Slovak Republic's higher and vocational education systems. One such initiative is the shift towards strengthened internal quality assurance, as a result of Act 269/2018 on quality assurance in higher education (*Zákon č. 269/2018 Z.z. o zabezpečovaní kvality vysokoškolského vzdelávania*) (Slov-Lex, 2018[43]). Delegating responsibility for programme-level quality assurance to higher education institutions appears to be more suitable for micro-credentials than the external accreditation of each programme as it is less likely to strain the resources of both higher education institutions and quality assurance agencies while also decreasing the time needed to establish new courses. Therefore, the experience of pre-existing internal quality assurance systems should be a valuable experience for higher education institutions, which they can build upon in the development of internal quality assurance for micro-credentials (European Commission, 2023[44]).

Similarly, recent efforts to improve the alignment of education and training provision to labour-market needs have already laid down the channels for reinforced communication between education providers and labour-market actors, chiefly employers. For instance, the 2002 amendment to the Higher Education Act 131/2002, made it easier for public and state higher education institutions to hire instructors with industry experience and allowed greater staff mobility between academia and industry (European Commission, 2023[45]). In addition, as an inter-ministerial and public-private initiative, the Alliance of Sectoral Councils (*Aliancia sektorových rád*, ASR) was established in 2023 to coordinate skills forecasting through sector-specific councils (Government of the Slovak Republic, 2021[35]; MŠVVaŠ, 2023[46]). Based on the success of similar initiatives in other OECD countries, such as Ireland's Skillnet (Skillnet Ireland, 2023[47]), the ASR could be used as a central channel through which industry actors and social partners can support educational institutions in identifying and acting on emerging skills needs, above by using facilitating the use of ASR data and analysis outputs in the development of micro-credentials.

Pre-existing competencies in the Slovak education and training system

Prior experience, industry connections, and international engagements that can support micro-credential development already exist in parts of the Slovak education and training system. Programmes like micro-credentials are not an entirely new concept in the Slovak education system. At the higher education level, some departments already offer, at least periodically, short professional programmes that meet the criteria laid out in the EU Council Recommendation (Council of the European Union, 2022[2]). These programmes are often the product of close collaboration with industry actors and professional bodies and function as upskilling opportunities for professionals in regulated professions, such as healthcare and law enforcement. For example, the Academy of the Police Force in Bratislava offers professional upskilling programmes, and in the last two years, has started offering shorter, specialised programmes, such as a course on hybrid threats. These programmes were historically aimed at specific groups of civil servants but there are discussions about opening them up to a broader group of relevant learners, such as journalists (AkademiaPZ, 2021[48]). Such programmes are not well-known outside of their fields and vary in their accreditation processes. For example, the quality assurance of the previously mentioned programmes by the Academy of the Police Force falls under the Ministry of Interior. However, such programmes still provide direct examples for developing and delivering shorter, professionally oriented programmes in close collaboration with industry and social partners.

Many Slovak higher education institutions (or departments) also have well-established international connections that can provide a foundation for micro-credential offerings. They work closely with higher education institutions in other EU Member States and participate in European Universities alliances. For example, the Comenius University in Bratislava is highly active in ENLIGHT (*European university Network to promote equitable quality of Life, sustaInability and Global engagement through Higher education Transformation*), the Slovak University of Agriculture in Nitra leads INVEST (*INnoVations of REgional Sustainability: European UniversiTy Alliance*) and the Technical University in Košice is part of the Ulysseus European University (INVEST, 2021[49]; ENLIGHT, n.d.[50]; Ulysseus European University, n.d.[51]). In fact, the OECD team found that, in the context of European Universities alliances, some departments have already engaged in discussion about establishing micro-credentials with their partner institutions.

Implementation challenges

There are several challenges the Slovak Republic must address to develop a fully functional micro-credentials ecosystem, of which four merit particular attention. These are: 1) the legislative and implementation delays affecting the Draft Act and other policy initiatives; 2) the low levels of awareness and engagement among stakeholders; 3) the need for further clarity and assurances for higher education institutions; and 4) the lack of incentives for education institutions, particularly higher education institutions to dedicate resources to micro-credentials.

Legislative and implementation delays block stakeholders from progressing with the realisation of micro-credentials

The Act on Lifelong Learning is still a draft, and its adoption and implementation have been significantly delayed by political uncertainty. At the time this publication was finalised, a new government was only just sworn in, meaning that the adoption and implementation of the Draft Act, and any consequent work on further legislative or regulatory proposals would likely resume in early 2024 at the earliest. Given the reluctance of Slovak stakeholders to dedicate resources to initiatives without a clear legal basis, the delay in the provision of a legal basis acts as a block on further work, including both the development of micro-credential offers and other complementary initiatives such as the ASR.

Low levels of awareness and engagement among stakeholders

Awareness of the government's work on micro-credentials is limited among relevant stakeholders. Most representatives of higher education institutions were unaware of recent developments, and in some cases, even the existence of work on micro-credentials in the country. The level of awareness among VET stakeholders and employers' associations appeared to be slightly higher, but even there, many representatives were not up to date about the latest developments, such as the contents of the Draft Act.

This echoes the findings of previous work undertaken by the OECD, which noted persistent challenges in collaboration among government and higher education stakeholders (OECD, 2021[32]). One of the key components of this was the limited and uneven communication between the government and the higher education and social and economic stakeholders regarding reform plans, such as the development of the Draft Act. This also extends to the presence of channels through which recent discussions and developments can be communicated, which vary between different types of stakeholders, as well as from one individual organisation to the other.

Because of the lack of engagement, institutional leaders view micro-credentials at best as a potentially useful but optional addition to their activities, and at worst, a potential threat that can distract them from their core responsibilities or even cannibalise (funding for) their longer programmes. This in turn created a situation where even higher education institutions which have already discussed micro-credential development with their European partners are deterred from committing resources without further assurances and incentives.

Education providers need further clarification on the format and quality assurance system of micro-credentials, especially as the implementation of recent policies around quality assurance and industry engagement are still ongoing

The Draft Act provides a legal basis for micro-credentials, and this is a much-needed step in the Slovak context. However, in its current state, stakeholders may think they do not have sufficient information to translate it into action. This may be particularly the case among higher education stakeholders, who are still finishing the implementation of other recent policy reforms.

Higher education stakeholders are currently navigating under the uncertainty of implementing multiple recent policy reforms. The provisions of Act 269/2018 on quality assurance in higher education, for instance, are still being implemented, with the first round of institutional assessments running until 2024 (Slov-Lex, 2018[43]). Similarly, a broad amendment to the Higher Education Act 131/2002 passed in 2022 brought changes to institutional governance and some academic positions, as well as introduced performance agreements, resulting in slow but ongoing changes in the institutional practices in Slovak higher education institutions (Slov-Lex, 2023[52]). Given that all higher education institutions have limited capacities and attention, which is currently taken up by the implementation of reforms that impact their core operations, there is limited capacity to engage with what can appear as a lower-priority initiative such as micro-credentials.

Some higher education and VET stakeholders also argued they would require more detailed guidance on the format and quality assurance. For size, the lower limit is currently expected to be set at 10 study hours to be able to accommodate programmes offered both by secondary schools and higher education institutions. However, for higher education institutions, it remains unclear whether micro-credentials are expected to convey ECTS credits, and whether micro-credential provision will be considered in external institutional assessments. This lack of clarity in turn exacerbates the already low levels of engagement among higher education institutions (OECD, 2021[32]). Indeed, Slovak higher education institutions appear unwilling to dedicate their finite resources to the development of micro-credentials before they can be certain that the programmes they develop will correspond to the final criteria and can therefore be used to secure additional funding.

The MŠVVaŠ is aware of some of these concerns and intends to remedy them through amendments to Act 131/2002 on Higher Education and Decree 614/2002 on Credit System Study. Work on these amendments is currently delayed by the political situation and expected to resume after the adoption of the Draft Act. These amendments would be helpful in further clarifying the legal basis for micro-credentials. However, a legal basis in and of itself is unlikely to be sufficient, and higher education institutions will seek further guidance and assurances before they agree to dedicate resources to micro-credentials. Also, in light of longstanding concerns about public funding levels and a reluctance to take on new and potentially non-funded responsibilities, it is likely that legal clarification will need to be accompanied by strong financial incentives for the development and offering of micro-credentials.

Higher education institutions and potential instructors lack incentives to develop micro-credentials

As of now, higher education institutions and academics do not have strong incentives to focus their finite resources on micro-credentials. On an institutional and department level: as already mentioned, higher education institutions are focussing on implementing what they see as higher priority reforms, which limits their capacity to work on micro-credentials. Also, under the current public funding mechanisms, higher education institutions primarily receive funding based on the number of students enrolled in degree programmes (OECD, 2021[32]). This acts as an incentive for higher education institutions to focus on longer education programmes, and as a disincentive for offering shorter (publicly funded) programmes. This effect is exacerbated by the broader context of falling student numbers and enrolment in several Slovak higher education institutions.

On the level of potential instructors: one can distinguish between academics and practitioners from industry who would be brought in as temporary instructors. For academics, it can appear that teaching micro-credentials neither translates into career progression, nor does it bring additional remuneration. This, combined with high existing workloads can make academics in Slovak higher education institutions reluctant to dedicate time to what they could see as 'non-essential' activities such as micro-credentials (OECD, forthcoming[53]). For industry practitioners, particularly from growing industries such as the technology sector, the comparatively low levels of remuneration in the public sector would be less of an issue for the simple reason that teaching micro-credentials would be secondary employment. However, they are likely to face difficulties in aligning their teaching with their industry-based, normally full-time employment, for example due to restrictions on the allocation of teaching hours.

Considerations for the successful definition and establishment of a national micro-credential ecosystem in the Slovak Republic

Although the Slovak Republic is advanced in the planning of micro-credential policies, the implementation of policies is lagging. Many of the reasons for this are admittedly outside of the control of the MŠVVaŠ, such as the delay in the parliamentary adoption of the Draft Act. At the same time, the MŠVVaŠ could consider undertaking further work, even while waiting for, or implementing the Draft Act. These are: 1) the establishment of pilot programmes as soon as possible; 2) the reinforcement of stakeholder engagement; and 3) the alignment and full utilisation of the ASR.

Getting on with the establishment of pilots

Experience with the adoption of other reforms in higher education suggests that it is neither feasible nor necessary for all higher education institutions to engage in micro-credential provision for the launch of a national micro-credential ecosystem in the Slovak Republic. A small group of institutions would be sufficient to start. In fact, starting work with a smaller group of institutions that are motivated to develop micro-

credentials could be more efficient, as this would allow for more experimentation with formats and teaching practices. Several OECD countries developed pilot programmes to test micro-credential concepts and finalised their regulations with hindsight from experimental programmes. Furthermore, developing experimental programmes with a smaller number of higher education institutions could provide direct and practical examples for other institutions both on the benefits and practical development of micro-credentials, which in turn could decrease the sense of uncertainty among higher education stakeholders.

Therefore, the Slovak Republic could consider developing a two-phase pilot scheme, taking the Australian pilot as an example (Australian Government, 2023[54]). The first phase could be limited to a handful of higher education institutions or even individual departments within higher education institutions. The second phase could then enlarge the number of participating higher education institutions or departments and allow participants to build on the experiences of the first phase in the development of their micro-credential experiments.

Ideally, the first phase could be organised and launched even before the adoption of the Draft Act, although it is probably more realistic to start once the Draft Act has been adopted but not yet implemented. To ensure labour-market relevance, the pilot scheme could focus on areas where labour shortages are high and could mandate the involvement of employers or other industry actors in the development of micro-credential experiments. For this, the MŠVVaŠ could draw on international examples, such as the micro-credential pilots funded by the Government of Ontario in Canada, which specified that only programmes developed through the partnership of post-secondary institutions and local industry and employers and those designed to fill labour-market gaps in priority sectors, such as health care and advanced manufacturing, were eligible for participation (Government of Ontario, 2023[55]). The selection of participants could take place through open calls, or the direct engagement of institutions or departments that have existing experience with providing lifelong learning or are already familiar with the European concept of micro-credentials, through their work in European Universities alliances.

Reinforcing stakeholder awareness and engagement

One of the main reasons for the reluctance of higher education institutions is a lack of knowledge on how exactly micro-credentials are relevant and beneficial for them. Addressing this requires first to raise awareness and secondly to create a sense of security through which enough stakeholders, chiefly higher education institutions, could be persuaded to partake in the development of micro-credentials. These are especially important as stakeholders expressed a strong desire for further information and more detailed guidance, especially as they are uncomfortable with work in an evolving legal framework.

Practically, the MŠVVaŠ could consider strengthening (or re-establishing) communication channels through which stakeholders, particularly mid-level higher education management and staff, could familiarise themselves with the work to date and receive updates on ongoing developments. For instance, the MŠVVaŠ could consider the dissemination of overview documents of recent and planned developments on micro-credentials, the organisation of information sessions, and clear signalling of a point of contact for enquiries. These would contribute to the creation of a 'safe space for experimentation' for higher education institutions by allowing them to rapidly familiarise themselves with the topic, receive information on upcoming projects and funding opportunities, and ask for clarification and reassurance during the implementation of any proposed policies, as well as potential micro-credential pilot schemes.

The MŠVVaŠ could also consider organising study tours for the representatives of Slovak higher education institutions in OECD countries who are even further ahead in the implementation of micro-credential polices, such as Ireland. Such a tour or tours could be financed from EU funds and could provide an opportunity to learn from the experiences of Irish employers, higher education institutions and regional governments.

Fully capitalising on the Alliance of Sectoral Councils

Effective skills forecasting is crucial to bringing about a better alignment of micro-credential offers, and emerging labour-market needs in the Slovak Republic. The establishment of the ASR is a significant step in the right direction as it provides a formal instrument for bringing together relevant social, labour-market and government stakeholders. The ASR has only been legally established in January 2023, and is therefore still in the early stages of its development. However, both the expected outputs, and the mechanism through which the ASR will translate its findings into curricula changes at education providers remain unclear. Therefore, to gain maximum benefit from the ASR, the MŠVVaŠ and the Ministry of Labour, Social Affairs and Family must ensure that the initiative is firstly capable of identifying emerging skills needs, and secondly, has the means through which its findings can be incorporated into the curricula or micro-credentials offered at secondary schools and higher education institutions.

To achieve this, the Education and Labour ministries could look at the example of Finland's skills forecasting initiatives, chiefly the National Forum for Skill Anticipation (*Osaamisen ennakointifoorumi*). This National Forum for Skill Anticipation has been performing an almost identical role to the one the Slovak Republic envisages for the ASR since 2017, and has developed a set work process and outputs (OECD, 2020[7]). As part of this, it could be beneficial to further clarify the regular input, including the type and expertise of representatives expected from participating organisations. For example, some stakeholders noted that certain employers might send human resources (HR) managers who would have a good understanding of current skills needs but were not necessarily the best placed to offer insight on the skills expected in the medium and long term.

Above all, the Education and Labour ministries should look to strengthen the mechanisms through which the ASR's findings can impact the design of micro-credentials in secondary schools and higher education institutions. This is especially important in the case of higher education institutions, whose involvement to date with the ASR appears to be somewhat limited.

Lastly, making the skills forecasting analyses of the sectoral councils accessible to a wider public would be greatly beneficial for prospective learners and employers in finding out about potential employment prospects or areas of investment. A first step towards this would be making the reports, and ideally the underlying database of the ASR accessible through the organisation's website.

4 Slovenia

Lifelong learning is particularly crucial to ensure Slovenia's long-term socio-economic development as the country's population is ageing more rapidly than that of most other OECD countries (OECD, 2020[56]). Slovenia's economy is also particularly exposed to disruptive technological change as more than half of jobs are estimated to have either a high chance of being automated or a risk of significant change in the medium to long term (Nedelkoska and Quintini, 2018[31]).

Slovenia can draw on a pre-existing system of adult education. The latest EU Adult Education Survey shows that 46.1% of 25-64 year-olds participated in some form of training in the previous 12 months in 2016, slightly above the EU average of 43.7% (Eurostat, 2023[9]). According to 2020 data from the Continuing Vocational Training Survey, the proportion of enterprises providing continuing vocational training is also higher than the EU average (Eurostat, 2023[57]). Nonetheless, Slovenia has considerable potential to improve both adult learning participation and provision. In terms of participation in adult education and training, the country has a larger gap between low and highly skilled adults compared to other EU countries (Eurostat, 2023[10]). Additionally, the level of continuing vocational training provided to employees is markedly lower in certain industries, such as construction, as well as in small and medium sized enterprises (SMEs) (Eurostat, 2023[57]; 2023[58]).

Adult education in Slovenia covers a wide range of programmes aimed at a variety of target groups. Many programmes are wholly or partially publicly funded, but many private or otherwise non-governmental providers also exist (OECD, 2018[59]). The full landscape of providers is quite complex but from the perspective of micro-credentials, three merit particular attention:

The first are **higher education institutions**, which have an established tradition of offering certain advanced, professionally oriented upskilling programmes. Only a minority of these are accredited by the Slovenian Quality Assurance Agency for Higher Education (NAKVIS) as "supplementary study programmes for advanced training (*študijski programi za izpopolnjevanje*)" (Logaj et al., 2014[60]; European Commission, 2023[61]). Higher education institutions account for only a small share of lifelong learning provision. According to research undertaken by the University of Ljubljana, public universities accounted for only 7% of the lifelong learning programmes registered in the database of the Slovenian Institute for Adult Education (*Andragoški center Republike Slovenije*, ACS). However, the same study also suggested that many lifelong learning programmes offered by universities are not registered in this database, and therefore, the actual share in the market might be higher (Arbeiter, Dolenc and Bučar, 2023[62]).

The second are the network of **folk high schools** (*ljudske univerze*) and **adult education units in public (state) schools** (OECD, 2018[59]). These offer a range of publicly subsidised programmes, but for the most part these are aimed at people with low levels of education who would like to complete formal levels of education, such as obtaining qualifications for specific vocations or completing the *matura* examination (European Commission, 2023[61]).

The third are private providers, specifically **training units of enterprises** and **specialised adult education institutions** (*specializirane organizacije za izobr. odraslih*). These appear to account for the largest share of learners in lifelong learning. **Education centres at professional bodies**, such as the Chamber of Commerce and Industry's (GZS) Business Training Centre (CPU), also regularly offer short, labour-market oriented programmes and workshops based on explicit industry demand (CPU, 2021[63];

GZS, 2023[64]). Most of these programmes are officially not recognised, but some may enjoy good recognition among employers (European Commission, 2023[61]).

Despite the heterogeneity of providers and the traditionally limited role of higher education in adult learning in the country, the Slovenian government's recent efforts at establishing micro-credentials – above all the Reforming Higher Education for a Green and Resilient Transition to Society 5.0 project – centre on micro-credentials in higher education. In light of this, the rest of this section will also focus primarily on micro-credentials in the context of higher education in Slovenia. It will explore the assets and challenges Slovenia encounters in developing and implementing micro-credential policies, along with policy options for future consideration. The main findings are summarised in Figure 4.1.

Figure 4.1. Overview: Micro-credential policy implementation in Slovenia

Key assets, challenges and policy options

Implementation assets	Implementation challenges	Policy options
▪ Micro-credential pilots are already underway ▪ Recent and ongoing policies can complement micro-credential development ▪ Pre-existing competencies in Slovenian higher education	▪ Education providers need further clarification on the format and quality assurance system ▪ Uneven engagement and preparedness among stakeholders ▪ Fragmented information provision ▪ Potential instructors and employers lack incentives to engage with micro-credentials	▪ Clarifying the framework and concept of micro-credentials ▪ Reinforcing communication and co-operation among stakeholders ▪ Strengthening information provision for prospective learners

Implementation assets

The establishment of a national micro-credential ecosystem in Slovenia is already underway – albeit in its early stages – as part of the Ministry of Higher Education, Science and Innovation's (MVZI) Reforming Higher Education for a Green and Resilient Transition to Society 5.0 project (MVZI, 2022[65]). Some elements of a micro-credential ecosystem are already in place. The most important of these are: 1) pilot programmes already underway; 2) several micro-credential-related policy initiatives; and 3) the pre-existing capacities found in Slovenian higher education.

Micro-credential pilots are already underway

Experimental micro-credential programmes are already being developed by Slovenian higher education institutions as part of the *Reforming Higher Education for a Green and Resilient Transition to Society 5.0* project. Financed through the EU's Recovery and Resilience Facility (RRF), this project funds four public higher education institutions to undertake pilot projects between 2022 and 2025 in support of increasing their capacity to respond to social and labour-market needs arising from the green and digital transitions. The funded institutions have all made their own respective plans with all of them engaging in the development of experimental short-term programmes which target a range of learner groups, including enrolled students, alumni, adults with work and family responsibilities and individuals who left higher education without a degree (MVZI, 2022[65]).

The *University of Ljubljana for a Sustainable Society* (ULTRA) project includes a pilot specifically dedicated to the development of micro-credential training. This includes among others the preparation, implementation and evaluation of 27 interdisciplinary micro-credential programmes which offer wholly new content co-created by different departments. Similarly, the University of Maribor's *Pilot Projects for a Green and Resilient Transition to Society 5.0* has a dedicated "agile development of education and micro-credentials" pilot. The micro-credential offer developed through this pilot comprises new as well as, unbundled material from the university's degree programmes. The university is also expecting to incorporate its existing lifelong learning offer into the micro-credential framework that will emerge through the project (MVZI, 2023[66]).

The *Green, Digital and Inclusive University of Primorska* project also concentrates on micro-credentials under a dedicated pilot project. The university has completed a stakeholder mapping exercise and has been in the process of exploring co-creation and co-provision opportunities with industry bodies. Lastly, the Faculty of Information Studies in Novo mesto has already established two six-month study programmes (and delivered to the first cohort of learners in the academic year 2022-23) within the *More Advanced Computer Skills* project. Each of these is comprised of six one-month courses worth at least 6 ECTS and uses unbundled material from the Faculty's bachelor's degree programmes (MVZI, 2023[66]).

Recent and ongoing policies complement micro-credential development

Strengthening the role of higher education institutions in lifelong learning and fostering the development of micro-credentials is well-embedded across the MVZI's ongoing public policy initiatives. Recent strategic documents, such as the Resolution on the National Programme of Higher Education to 2030 (*ReNPVŠ30*), reference the "development of an accreditation system" and "recognition" for micro-credentials in Slovenia (MVZI, 2022, p. 51[67]).

The MVZI has already started consultations with higher education stakeholders to revise the Higher Education Act (*Zakon o visokem šolstvu*, ZVis) (Government of the Republic of Slovenia, 2021[68]). The results of the stakeholder discussions and RRF pilot projects are expected to feed into the work on the new Higher Education Act. This initiative is in early stages and no draft has been presented yet. However, it is expected that the new Draft Act will introduce lifelong learning as one of the core missions of Slovenian higher education institutions.

There are also significant efforts aimed at strengthening the capacity of higher education institutions to respond to social and labour-market needs through their education offerings. Firstly, the MVZI is in the process of updating the country's higher education data system – eVŠ[1] – to make it more helpful for higher education institutions in understanding labour-market demands. Secondly, Slovenia has made notable progress in the development of a national skills forecasting platform. This work has been overseen by the Ministry of Labour, Family, Social Affairs and Equal Opportunities and the Employment Service of Slovenia (*Zavod Republike Slovenije za zaposlovanje*, ZRSZ) and builds upon the initial work that involved industry representatives, such as the GZS and regional chambers. This project is still under development, but the objective is to create an integrated system and an online interface where forecasts for future labour-market skills demands will be accessible to higher education institutions, as well as learners (OECD, 2022[69]).

Pre-existing competencies in Slovenian higher education

Several of the skills, experiences and competencies needed for the creation of a micro-credential ecosystem are already present in Slovenian higher education. For one, short, professionally oriented non-degree study programmes already exist, either as formal supplementary study programmes for advanced

[1] eVŠ stands for the records and analytical information system for higher education in the Republic of Slovenia (*Evidenčni in analitski informacijski sistem visokega šolstva v Republiki Sloveniji* - eVŠ).

training or as non-formal programmes. In the case of non-formal programmes, many departments also have direct experience with creating programmes in close collaboration with, or in some cases, even at the express request of companies or public authorities. Indeed, many academics have well-established personal relationships with industry representatives or employers, and regularly attend conferences and industry events.

Furthermore, Slovenian higher education institutions have already started to strengthen their existing career and student guidance structures which could be a cornerstone of a more user-friendly learner information system (OECD, 2022[69]). These efforts centre on the development of lifelong learning centres at the higher education institutions participating in the pilot programmes (MVZI, 2023[66]). While the exact function of lifelong learning centres is expected to vary from one public higher education institution to another, all of the centres are expected to serve as a centralised department supporting non-degree programme offers such as micro-credentials. In some institutions the centres are also expected to perform labour-market and industry outreach functions.

Implementation challenges

Slovenia has made significant steps towards the creation of a micro-credential ecosystem, but there are several challenges that the country must address as it moves forward. Of these, four merit particular attention: 1) the lack of common understanding of micro-credentials on a national level; 2) an uneven distribution of necessary capacities and engagement across system actors; 3) fragmented information provision; and 4) a lack of incentives for higher education institutions and employers.

Education providers need further clarification on the format and quality assurance system of micro-credentials

As of now, there is no common understanding of micro-credentials among Slovenian stakeholders. This means that in practice, each of the micro-credential pilots at public higher education institutions is developed according to the four institutions' own perception. This lack of clarity is the most pronounced regarding the size and recognition of micro-credentials, particularly on the number of ECTS credits they would worth. When developing the structure of the Reforming Higher Education for a Green and Resilient Transition to Society 5.0 project, the MVZI also explicitly aimed to provide limited guidance to allow for experimentation with the formats and methodology of micro-credentials. This is not in and of itself an issue, indeed, leeway to experiment can provide additional value. However, given the current levels of available guidance, Slovenian higher education institutions might have doubts about whether they have sufficient levels of information to develop the type of micro-credentials the MVZI expects.

Slovenian higher education institutions can be reluctant to act under what they perceive as regulatory uncertainty, such as a lack of clear legal foundation or agreed quality assurance provisions. This in turn discourages them from engaging in the development of wholly new material, instead incentivising reliance on pre-existing and thereby already approved content and methodologies. Therefore, while providing a sufficiently broad definition is valuable to encourage experimentation in formats and methodologies, it could be beneficial to agree on a slightly clearer and more consolidated vision of micro-credentials among different system actors in Slovenia.

Uneven engagement and preparedness among stakeholders

As already mentioned, there are numerous directly relevant pre-existing capacities and good practices to be found at Slovenian higher education institutions. However, these practices are not systematic but unevenly distributed among different university departments, academics, and companies. Consequently, there can be great differences in labour-market relevance from one programme to another.

For example, there are already existing examples of close collaboration and programme creation between certain departments and companies. However, these are not systematic practices in higher education institutions. Rather, they are the product of personal relationships between individual academics and companies or practitioners from industry. This in turn can make it challenging to maintain some university-industry relationships once the initiating academic leaves. Also, university departments where academics do not already have pre-existing industry connections may find it challenging to develop practices to establish such links.

It is worth noting that while most higher education stakeholders agree that programme co-creation with industry actors is necessary to ensure the labour-market relevance of micro-credentials, the engagement of industry practitioners in the delivery of programmes remains contested. Certain higher education stakeholders suggested that current habilitation requirements complicate hiring faculty members with a primarily industry background. Others voiced reservations about moving away from the traditional habilitation requirements, fearing a decline in instructor expertise and quality.

On the side of industry partners, there is considerable variation in the engagement from one company or professional body to another. Professional bodies are quite active, with the GZS and regional chambers in particular having a track record of engagement with adult and higher education initiatives, such as previous efforts on the development of the national skills forecasting platform as part of the Strategic Research and Innovation Partnership (SRIP) project (ŠGZ, n.d.[70]). At the same time, many companies, especially SMEs, have been so far reluctant to partner with higher education institutions or other public education providers, citing among others, the challenges of establishing such connections, the lack of necessary resources, or the difficulty to navigate the administrative systems of higher education institutions compared to those of private training providers.

Fragmented information provision

Information provision about different learning opportunities for adults is fragmented and disjointed. This applies to the provision of information on study opportunities as well as skills forecasting.

In the case of information provision on study opportunities, there are two principal issues. Firstly, there is no evident starting point where all prospective learners can find out about all the different forms of learning provision. Instead, each provider and programme type have their own information channels. For example, the ACS, the Institute of the Republic of Slovenia for Vocational Education and Training (*Center Republike Slovenije za poklicno izobraževanje*, CPI) and the ZRSZ all maintain separate websites (OECD, 2018[59]). Secondly, despite the plethora of existing platforms, there is no national-level synthesis of the short programmes offered by higher education institutions. Prospective learners may or may not be able to find information on institutions' web pages. It is also possible to reach out to the individual institutions. However, this means that finding basic programme information such as schedule and costs can already require prospective learners to have a clear idea of what to look for.

Similarly, in the case of skills forecasting, there are two main issues. Firstly, the different ongoing skills forecasting efforts can be difficult to navigate. It is understood that the work on the national skills forecasting platform is still ongoing under the leadership of the Ministry of Labour, Family, Social Affairs and Equal Opportunities. However, finding information regarding the progress of this work can be challenging for many stakeholders. Secondly, the data and analysis resulting from previous or already ongoing skills forecasting efforts are difficult to access for the public. For example, the data gathered as part of the SRIP project in 2015 is not necessarily easy to find or presented in an easy-to-understand format.

Potential instructors and employers lack incentives to engage with micro-credentials

Incentive structures in Slovenian higher education are not yet adapted to encourage higher education institutions and academics to concentrate their finite resources on micro-credential provision on the long

term. This is a challenge that affects many OECD countries working on the establishment of micro-credential ecosystems, and in the Slovenian context, will be examined in the areas of funding and human resources (staff) policies.

The funding provided through the Reforming Higher Education for a Green and Resilient Transition to Society 5.0 project is only scheduled to last until the end of 2025. Beyond this point, there is no clear indication on how higher education institutions are expected to fund micro-credential programmes. Outside of professions where targeted specialisation programmes already exist, there is a widespread perception in Slovenia that education provided by public higher education institutions is free of charge. Because of this, some employers might be reluctant to offer financial support, while fees borne entirely by students could limit opportunities to learners from economically advantageous backgrounds. Given the uncertainty of continued funding, especially as lifelong learning provision has not even been incorporated into the legally defined core responsibilities of higher education institutions yet, micro-credentials can be seen as an uncertain investment of time and resources for institutions.

Current human resource and career progression policies can also limit engagement with micro-credentials. A combination of factors, among others, highly quantitative performance evaluation systems for academics, appear to have made research output the main determinant of career advancement for academics (Flander, Rončević and Kočar, 2020[71]). Concurrently, Slovenian academics are also subject to stringent "load targets" for teaching and student support for degree programmes (Flander, Klemenčič and Kočar, 2020[72]; OECD, forthcoming[53]). Additionally, faculty members below the rank of full professors in Slovenia are almost always on fixed-term contracts. The resulting uncertainty means that much like in many other OECD countries, most academic staff are under pressure to de-prioritise tasks that do not directly contribute to their career progression towards more stable full professorial positions, such as micro-credential provision.

Considerations for the successful piloting and implementation of a national micro-credential ecosystem in Slovenia

While Slovenia is already in the process of piloting micro-credentials, the MVZI must ensure that the emerging micro-credential ecosystem fits into the context of the Slovenian higher and adult education system while also addressing the current gaps in provision to respond to the needs of the broader socio-economic environment. On the medium to long-term, this will require amending funding and academic staffing policies to create sufficient incentives that ensure that higher education institutions and academics are not pressured to de-prioritise micro-credentials. On the short to medium term, the MVZI could consider three policy options: 1) the establishment of a clear legal and regulatory framework for micro-credentials provided by higher education institutions; 2) the strengthening of cross-sectoral communication channels; and 3) the creation of a centralised and user-friendly information platform to direct prospective learners. This following section will examine the short to medium term policy options.

Clarifying the framework and concept of micro-credentials

While the decision to keep the definition of micro-credentials and pilot project expectations wide is based on a rationale to leave flexibility and space for innovation in micro-credential development, it could be beneficial to provide slightly more guidance and clarity for higher education stakeholders.

On the short to medium term, this could take the shape of a set of informal guidelines for the public higher education institutions participating in the Reforming Higher Education for a Green and Resilient Transition to Society 5.0 project pilots. This could bring together and reflect the experiences of public higher education institutions and other stakeholders, and through that allow the MVZI to experiment with a bottom-up definition of micro-credentials before any legal definition can be finalised. The informal guidelines could

include agreements on the size range, format, inter-institutional recognition, and internal quality assurance practices for micro-credentials. The guidelines should be defined by and agreed upon by the higher education institutions participating in the pilot. This process could take inspiration from the example of the Dutch Acceleration Plan's Microcredentials Pilot, during which 32 Dutch higher education institutions – 10 universities and 22 universities of applied sciences – agreed on a set of preliminary regulations regarding the size, format, provision, registration, and quality assurance of micro-credentials (Acceleration plan, n.d.[28]). Given that that Slovenian higher education stakeholders seem to prefer having a clear legal basis for all their activities, some form of legislative change, perhaps as part of a reform of the Higher Education Act, could be necessary to establish a fully functional regulatory system for micro-credentials.

Having clearer directions at the national level would be especially helpful in aligning the expectations of higher education institutions and labour-market actors. Indeed, there are signs that the length and intensity of programmes envisaged by higher education institutions is not in line with the time employers and members of target populations, chiefly adults with work and family responsibilities would consider feasible. While this is not unique to Slovenia and can be seen in several other OECD countries, in the case of Slovenia the MVZI could consider formalising the type of industry involvement expected in micro-credential co-creation, for example by including specific forms of collaboration in the quality criteria of micro-credential programmes. An example to look at could be the "Micro-credential Approval and Accreditation Rules" established by the New Zealand Qualifications Authority, which among others specifies evidence of the "need and acceptability" as a criterion for accrediting micro-credentials (NZQA, 2023[73]).

Reinforcing communication and co-operation among stakeholders, including among higher education institutions

While different system actors have organised events to bring together groups of stakeholders to discuss the development of micro-credentials, these events are reported to be too few and far in between to effectively establish a habit of continuing communication and best-practice sharing. Therefore, the MVZI could consider putting in place, or encouraging the organisation of regular discussion events or thematic workshops for relevant stakeholders from higher education, industry, and the broader socio-economic environment, such as trade unions and student representatives.

These regular discussion events or workshops could be financially supported by the MVZI and could be used for a variety of purposes. Firstly, on the level of higher education stakeholders, regular discussion opportunities, such as workshops could be used to bring together respective project team leads or smaller groups of academics working on specific issues such as collaborating with industry representatives, using skills forecasting data, or catering to the needs of adults with work and family responsibilities. Secondly, on the level of the Reforming Higher Education for a Green and Resilient Transition to Society 5.0 project stakeholders, regular and targeted thematic workshops could be a straightforward means to negotiate the above-mentioned set of informal guidelines. Lastly, regular discussions or workshops could be used to further strengthen the alignment of micro-credential provision with the demands of the broader socio-economic environment by facilitating the closer involvement of professional bodies, such as the GZS, who have already indicated a willingness to become more involved with the pilots. In practical terms, the MVZI could consider incentivising public higher education institutions to invite the GZS and other industry, social and student representatives to the workshops, where these organisations could observe, advise, and inform public higher education institutions.

Strengthening information provision for prospective learners

To ensure that all prospective learners can easily find out about available reskilling and upskilling opportunities, Slovenia should address the lack of national synthesis of different micro-credential offers. The first step towards this could be the establishment of a website where all the micro-credential offers of higher educational institutions, including information on length, associated costs, target populations and

entry requirements, could be listed. Such websites have already been established in other OECD countries, such as MicroCred Seeker in Australia and hoch & weit in Germany (Australian Government, n.d.[74]; hoch & weit, n.d.[29]). The website could be established either with the support of the MVZI or as a collaborative effort by Slovenian higher education institutions themselves.

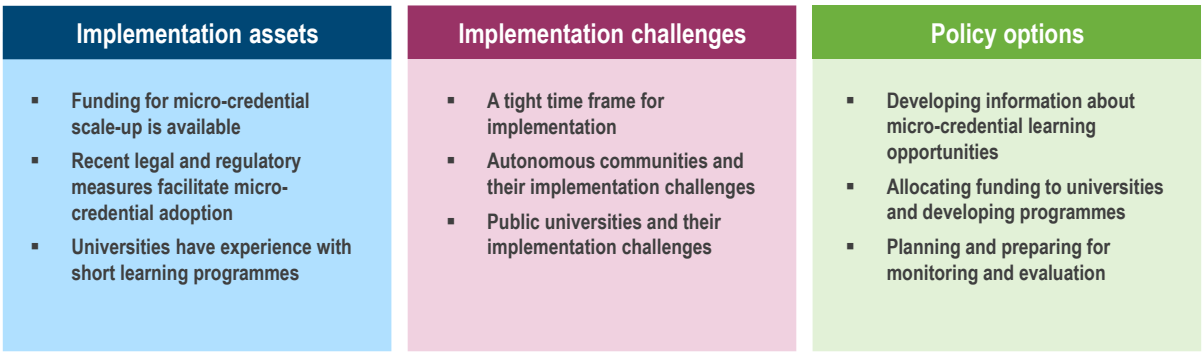
As a second step, it would be also useful for prospective learners to bring together all complimentary information, such as available financial support on micro-credential participation in one place. This could be the same website that aggregates the micro-credential offers of higher education institutions, as is in the case of the German hoch & weit website which offers structured information on the different forms of further education programmes offered by public and government-recognised higher education institutions (hoch & weit, n.d.[75]). Alternatively, given that platforms for different types of adult learning, chiefly the programmes offered through the ACS, the CPI and the ZRSZ have been already been established, the MVZI could consider establishing a separate web page aimed at explaining the different forms of adult learning, which would then link prospective learners to the respective national synthesis website for each programme type (OECD, 2018[59]).

5 Spain

Spain's public and private universities currently offer micro-credentials, albeit on a limited scale. With the support of the EU's Recovery and Resilience Facility (RRF) funding, Spanish public officials and higher education leaders aim to implement micro-credentials on a wide scale within their higher education system. As the Spanish higher education system moves forward to provide a wide and diverse offering of high-quality micro-credentials, accessible to all learners – including adults who are unemployed or have not completed higher education – it draws upon an important set of assets to support their implementation, but also face a range of challenges. This note identifies assets and challenges that will shape the scaling up of micro-credentials, and it shares some measures that may aid with the implementation of micro-credentials at scale (Figure 5.1).

Figure 5.1. Overview: Micro-credential policy implementation in Spain

Key assets, challenges and policy options



Implementation assets

Funding for micro-credential scale-up is available

The first asset that Spain brings to the implementation of a large-scale micro-credential offering is financial capacity to support the initiative. The Government of Spain has agreed to the EU's RRF grant package of EUR 80 billion, in which EUR 50 million has been set aside to support the development of micro-credentials by its public universities (European Commission, n.d.[76]).

The Ministry of Science, Innovation and Universities (MICINN)[2], through consultation with the General Conference for University Policy, agreed on a plan for the allocation of RRF funding in March 2023, which calls for funding to be allocated to Spain's autonomous communities proportional to their adult (25-64) population, and subsequently from autonomous communities to public universities. The agreement specifies that autonomous communities and universities are to allocate funding across six lines of activity,

[2] Ministry of Universities at the time of implementation.

including: 1) the development of training leading to micro-credentials (79%); 2) activities instrumental to the development of micro-credential learning (e.g. training of teaching staff) (3.9%); 3) external liaison and engagement with enterprises and state and voluntary sectors (3.9%); 4) institutional management costs (2.4%); 5) scholarships/financial aid (8.5%); and 6) evaluation and knowledge-sharing (2.3%). By the end of June 2026, Spain's public universities are to develop 970 training courses and deliver a total of 60 000 micro-credentials, the number of micro-credentials in each community weighted by population (Government of Spain, 2023[77]).

Public universities are to charge tuition fees that comprise no less than 30% of production costs, and no more than 100% of production costs. Production costs are notionally estimated to be EUR 56 400 per course (assuming 60 students per course, 10 ECTS per course, and a cost of EUR 94 per student-ECTS). Further, public universities are to provide free access to adult learners who are "unemployed participants and/or those at risk of social exclusion", and 8.5% of RRF funds are to be set aside for this purpose (Government of Spain, 2023[77]).

Recent legal and regulatory measures facilitate micro-credential adoption

In recent years public officials have adopted a range of statutory and regulatory measures that provide universities with an enabling environment for the introduction of micro-credentials.

The Organic Law 2/2023 of the University System, adopted March 22, 2023, stipulates for the first time that lifelong learning is to be a basic function of universities; that universities must promote scholarships and aid programmes for lifelong learning; and that university financing should include strategic objectives related to lifelong learning (BOE, 2023[78]; Ministry of Universities, 2023[79]).

Legal changes contained in the Royal Decree 822/2021 previously opened the way to the offer of micro-credentials by Spain's universities. Article 37, Section 8 of the decree authorised universities to provide their own continuing education courses in the form of micro-credentials or micro-modules of less than 15 ECTS, and provided that micro-credentials may be subject to credit recognition permitting learners to obtain an official degree (BOE, 2021[80]).

The decree (Article 37, Section 11) also brought all continuing education, including micro-credentials, within the quality assurance system of Spain and its autonomous communities (BOE, 2021[80]). Universities now bear primary responsibility for the quality of continuing and micro-credential learning and are charged with developing an Internal Quality Assurance System that is adapted to continuing education and micro-credential qualifications. In turn, external quality assurance bodies operating at the national level (the National Agency for Quality Assessment and Accreditation of Spain, ANECA) and the level of the autonomous communities (e.g. the Catalan University Quality Assurance Agency, AQU Catalunya) are responsible for auditing and validating institutional quality assurance systems.

While Spain's public universities continue to have a narrower scope of organisational, financial, and staffing autonomy than their counterparts in many other European higher education systems, they may nonetheless establish foundations that provide important freedom of action with respect to staffing and compensation, such as the Fundació Politècnica de Catalunya, established in 1994 to "encourage and promote permanent training activities for professionals in companies, and in the economic and social sectors of Catalonia" (Bennetot Pruvot, Estermann and Popkhadze, 2023[81]; Fundació Politècnica de Catalunya, n.d.[82]). If resourcefully used, foundations can play an important role in facilitating the development of micro-credential programmes within public universities. Moreover, under the new organic law for universities, autonomous communities now have an opportunity to set multiannual funding plans that prioritise continuing education, including micro-credentials.

Universities have experience with short learning programmes

Spain's universities have decades of experience in offering fee-based continuing education – *educación permanente* – for mature learners, and this provides a foundation of practice and capability upon which they can draw in developing their micro-credential offerings. The continuing education credentials that have been awarded by universities are not official (i.e. awarded and warranted by the MICINN, and automatically recognised), but rather unofficial (i.e. awarded by universities, *títulos proprios* ("own titles")), the recognition of which depends upon the receiving institution. Following adoption of the Royal Decree 822/2021, the structure of unofficial credentials awarded by Spain's universities now includes the five titles presented in Table 5.1.

Table 5.1. Types of unofficial (*títulos proprios*) credentials awarded by Spanish universities

Title	ECTS	Entry requirement
Master	60-120	Prior degree required
Specialist diploma	30-59	Prior degree required
Expert diploma	Less than 30	Prior degree required
Certificate [course name]	Up to 30	No prior degree required
Micro-credential	Less than 15	No prior degree required

Source: BOE (2021[80])

The University of Valencia, for example, offered a total of 254 unofficial credentials at the level of postgraduate degrees and continuing training in the 2023-24 academic year. Of these, 208 were awards at the master, specialist diploma, and expert diploma levels, 9 were certificates, and another 37 were micro-credentials, with offerings ranging from public employment law (8 ECTS) to vascular biology (6 ECTS) (University of Valencia, 2023[83]).

The scale, orientation, and management of continuing and professional education vary widely among Spain's public universities. A scan of public university websites indicates that some offer continuing education programmes that are strongly academic in focus and weakly oriented towards labour-market skill demands, such as specialisations in "conflict, peace and gender" or "international relations, geopolitics and global governance". In other public universities, one finds close engagement with the enterprises, industries, and professions in the design and delivery of adult learning programmes. The Polytechnic University of Catalonia, for example, hosts a dedicated School of Professional and Executive Development that offers over 200 lifelong learning programmes targeted to working professionals, some of which are priced at over 250 EUR per ECTS, and collaboratively developed with industry and other external partners, and closely linked to emerging skill demands, such as urban mobility or blockchain for business (Fundació Politècnica de Catalunya, n.d.[84]).

Implementation challenges

Although Spain has assets that should aid in the implementation of large-scale micro-credential learning, there are also challenges that pose important risks to the development of a successful micro-credential learning ecosystem.

A tight time frame for implementation

All measures supported by EU's RRF funds must be implemented within an unusually tight time frame. The regulation establishing the RRF requires that each milestone and target identified in the national Recovery and Resilience Plan is completed by August 2026. If, as planned, RRF funds become available

to the MICINN in the last quarter of 2023 and those funds are allocated to autonomous communities in January 2024, then autonomous communities and public universities will have approximately 32 months for 1) allocating RRF funds among universities; 2) distributing funds within universities in support of micro-credential proposals; 3) creating micro-credential programmes and enrolling learners in those programmes; and 4) reporting on and evaluating the outcomes of these programmes. The MICINN swiftly addressed its challenge of allocating RRF funds through a process of consultation with the General Conference for University Policy, agreeing in March 2023 to a simple population-based formula for the allocation of RRF funding to the nation's autonomous communities (Government of Spain, 2023[77]).

Autonomous communities and their implementation challenges

Autonomous communities are facing the challenge of developing allocation rules for the distribution of RRF funding among the public universities within their jurisdiction. Spain's 50 public universities are distributed across each of its 17 autonomous communities, though unevenly across its territory, largely reflecting the distribution of population. Nine autonomous communities are home to only one public university, while the remaining eight host more than one – with five autonomous communities hosting the majority (32/50) of public universities (Andalucia, Castilla y León, Cataluña, Madrid, and Valencia) (Ministry of Universities, n.d.[85]).

For autonomous communities with multiple public universities, decisions about the allocation of funding must be taken rapidly. The education departments of autonomous communities could allocate funds through competitive grant processes, in which universities would be invited to present programme proposals demonstrating how their programmes would address competitive priorities, such as responding to skills needs, involving employers as co-developers, and engaging and supporting disadvantaged or unemployed learners. However, it normally takes public officials months to consult, develop, and announce competitive priorities, and to evaluate the proposals universities have submitted. And universities need time, too, for the development of proposals responsive to announced competition priorities. Considering the time constraints under which autonomous communities are working, competitive grant-making appears to be unfeasible, and much simpler and swifter methods of allocation will likely be required, most likely a formula-based allocation approach.

Autonomous communities face a second implementation responsibility: under the plan made in March 2023, they are responsible for "follow-up and reporting on the achievement of objectives through the appropriate monitoring of indicators, maintain[ing] an adequate audit trail, including documentation of compliance with the objectives, tracking and accounting reporting of expenditures, and obtaining and reporting data on each of the final recipients of funds". This will, presumably, necessitate that they work in concert with one another and the MICINN, and in consultation with public universities, to identify what indicators are appropriate to report "on the achievement of objectives" and how institutional reporting through the Integrated University Information System might be adapted to meet these demands. Further, the autonomous communities are tasked with "evaluat[ing] the implementation and impact of funded micro-credentials and report[ing] the results of the evaluations" and have, collectively, around EUR 1 million set aside for this task (Government of Spain, 2023[77]).

As autonomous communities move forward with these responsibilities, there are grounds for concern about two implementation capacities, the first of which bears on their allocation responsibilities, and the second on their monitoring and evaluation responsibilities. Firstly, to what extent do autonomous communities have reliable information about emergent skill needs and skill gaps to which micro-credential programmes might usefully respond, and which funding allocations might reflect? Secondly, to what extent do the education departments of autonomous communities possess capacities sufficient to meet the exigent demands for monitoring and evaluation that accompany RRF funding? Given the great heterogeneity in the scale among autonomous communities, there are wide variations in the human and financial resources

that can be mobilised to meet these responsibilities, as well as the opportunities for mutually beneficial collaboration.

Public universities and their implementation challenges

As recipients of micro-credential funding, public universities must take responsibility for the swift and strategic allocation of funding, as well as identifying which among their faculties and departments has the capacity to deliver high-quality micro-credential learning that is attractive to learners prioritised by the March 2023 plan and to the skill needs of employers.

There are important differences in scale and profile among Spain's 50 public universities, however, there are also common characteristics that may constrain their implementation capacity for micro-credential implementation. For one, although public universities have experience with unofficial credentials, many of these programmes are not oriented to emerging skill needs. Those that are oriented to labour-market demands are principally offered at the postgraduate level, and target fee-paying working professionals, rather than vulnerable populations identified in the March 2023 plan. For example, at the University of Valencia, over 80% of unofficial credentials are targeted at individuals with a university degree, while all 99 unofficial credentials offered through the Lifelong Training Centre of the University of Salamanca in the academic year 2023-24 are at the postgraduate level (University of Salamanca, 2023[86]; University of Valencia, 2023[83]).

Public universities also have limited resources available with which to systematically identify emerging skill needs and deliver learning adapted to these needs, as well as a weak record of performance in adapting study programmes to skill demands (OECD, 2015[87]; Gorjón, de la Rica and Osés, 2022[88]). Multiple stakeholders argued that public universities are, as of now, weakly oriented to labour-market skill demands, with the skills of graduates often being mismatched to employer skill needs.

In addition, the incentive structure of academic staff is not linked to the development of micro-credential learning. National policies governing the recruitment and advancement of professors in public universities reward publication rather than pedagogical innovation (BOE, 2005[89]). Furthermore, higher education stakeholders observed that the instructional workload of academic staff in public universities is calculated based upon instruction in so-called "official programmes" rather than "own programmes", including continuing education. Academics who participate in the development and offer of micro-credentials may be offered supplemental compensation; however, this may not fully offset the opportunity cost of additional time invested in developing and offering micro-credentials.

Lastly, the governance and management structures currently in place at Spanish public universities do not support swift and strategic decisions among competing institutional priorities (Vidal and José Vieira, 2014[90]). This presents a risk that universities will find it difficult to make decisions if there are competing micro-credential programme proposals.

Considerations for a successful scale-up of micro-credentials in Spain

The successful scaling-up of micro-credentials will demand continued close co-operation in the development of information about micro-credential learning opportunities, allocation of funding, the development of programmes, and in the monitoring and evaluation of performance among the MICINN, education authorities in autonomies communities, and public universities.

Developing information about micro-credential learning opportunities

In its RRF funding agreement with the European Commission, the Spanish government has committed autonomous communities to "register and advertise training courses leading to micro-credentials financed

(by RRF funding) on the platforms indicated by the Ministry of Universities", while taking responsibility to provide its autonomous communities with a "platform for the registration and publicity of micro-credentials" (Government of Spain, 2023[77]).

Urgent information measures may be taken in the months ahead to satisfy near-term funding requirements. However, in the years ahead Spanish authorities should aim to support learner choice by providing micro-credential learning information that is highly comparable and easily accessible.

Information that is highly comparable will require that central government authorities require universities to employ common descriptors when giving an account of their micro-credential learning opportunities. These common descriptors can be based, in part, upon the "European standard elements to describe a micro-credential" that was recommended by the EU in its Council Recommendation (Council of the European Union, 2022[2]) and draw upon the example of German and Australian micro-credential portals, the hoch & weit and the MicroCred Seeker portals, respectively (Australian Government, n.d.[74]; hoch & weit, n.d.[29]).

If learners are to have easy access to micro-credential learning opportunities, public authorities will want to ensure that information is shared through a range of trusted and familiar channels — by the MICINN itself in a central portal, as well as by public employment authorities and field offices, autonomous communities, and employer bodies. An application programming interface (API) created by the MICINN can advance this dissemination by promoting the extraction and sharing data within and across organisations.

Allocating funding to universities and developing programmes

If autonomous communities had 12-18 months in which to allocate funds to Spain's public universities, they might wish to design a competitive and discretionary process, in which review panels scored proposals according to announced funding priorities – e.g. that proposals demonstrate evidence of employer engagement in programme development and adequate provision for the support of disadvantaged learners. However, developing competitive priorities, providing time for the universities to respond to these priorities, and scoring proposals require more time than is available. Autonomous communities must adopt simple allocation rules that permit the rapid disbursement of funds, examples of which include allocating funding according to the share of adult learners currently enrolled in the university, or the share of total enrolments in short-term programmes (i.e. diploma and certificate programmes requiring 30 or fewer ECTS).

Spain's public universities will bear principal responsibility for the successful implementation of micro-credential learning since it is they who are responsible for the allocation of funds within their institutions, and for the creation of micro-credential learning programmes. Public officials can most usefully help them meet these responsibilities by providing advice and support to higher education institutions as they allocate the funds they have been awarded. They can advise them to invest in micro-credentials that respond to identified or emerging skill needs, to consult with gain or collaborate with employers and professions, and to draw upon labour-market forecasts in developing their offerings. The advice will be most useful and actionable if it is developed through consultation and discussion among autonomous communities, and with universities. Their support is likely to be most beneficial if they organise peer-to-peer learning among universities that have already established successful micro-credential programmes, both within Spain and in "early mover" European higher education systems, such as Ireland.

Planning and preparing for monitoring and evaluation

It is best to begin planning and preparing for the monitoring and evaluation of micro-credential offerings immediately, commencing with collective consultation among autonomous communities and universities. Together they will want to agree on a framework for monitoring and evaluation, in which some common key dimensions and indicators of performance are agreed, to permit efficiencies of scale and learning.

These will necessarily include information about learners themselves, the structure of programmes (e.g. level of study, mode of delivery, recognition of prior learning, ECTS), and, insofar as possible, outcomes. They will likewise want to consult with one another to collaborate in developing capabilities that are necessary to implement evaluation. While some autonomous communities may have standing capabilities sufficient to carry out policy evaluations, and all communities are to receive funds set aside to support monitoring and evaluation, for many jurisdictions those funds are modest, and developing shared evaluation resources, e.g. through a collaborative procurement of evaluation services, may be prudent.

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Higher Education Policy Team

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For more information

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See: https://www.oecd.org/education/higher-education-policy/

Recent work on micro-credentials:

- OECD (2023), "Micro-credentials for Lifelong Learning and Employability: Uses and Possibilities", OECD Education Policy Perspectives, No. 66, OECD Publishing, Paris, https://doi.org/10.1787/9c4b7b68-en.
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