





Background note

The note begins by outlining the aims and expectations of the conference, followed by background information, and concludes with a description of the alternative policy scenarios for 2040 and their implications.

Please note that participants are encouraged to review the policy scenarios, so they can engage in meaningful discussions around them.

A supplementary document detailing the policy implications for policymakers is also available for the conference.

Aim of the conference and target group

With this conference, Cedefop aims to stimulate forward-looking discussions on the necessary conditions to create an integrated and cohesive learning landscape that enables mobility and lifelong learning for all. This means promoting flexible learning pathways and systems that support entry, re-entry, progression and accumulation of learning outcomes across institutions, education and training subsystems, and countries. Cedefop will present the key findings of its project <u>Ensuring transparency and transferability of learning outcomes</u>, including alternative policy scenarios for lifelong and life-wide learning towards 2040 (¹).

⁽¹) The first publication is available on the relevant project website: <u>Cedefop. (2024). Transparency and transferability of learning outcomes: a 20-year journey. Analysis of developments at European and national level</u>. Initial findings of the project were presented and discussed in <u>two Cedefop webinars and a seminar</u>.

The event targets stakeholders involved in shaping and influencing education and training policies. This includes policymakers at EU and national levels, academics, social partners, education and training institutions from various subsectors and levels of education, career and learning advisory services, businesses, and learners.

What to expect from the conference

The conference will start with considerations on recent European policy developments and reflections on the development of transparency tools and principles.

Cedefop will present the key findings of its project <u>Ensuring transparency and transferability</u> of learning outcomes.

The policy scenarios for lifelong learning towards 2040 will serve as a basis for discussions in breakout rooms, where participants can reflect on national and EU policy developments promoting lifelong learning, sharing their proposals and considerations.

Guiding questions for the breakout sessions:

- What is your view on the future policy scenarios presented? To what extent do you think they can stimulate reflections on policy developments and practices in your country?
- What factors can aid or hinder learners' ability to move easily within and across education and training sectors and countries, building on their skills and qualifications?
- What key priorities and actions should national and European actors pursue to make learning progression a reality?

Following the reporting from the breakout sessions, a panel of distinguished experts will engage in a reflective discussion on the elements required to build flexible and permeable learning systems.

The conference will conclude with final remarks from Cedefop, outlining the next steps.

Background

To foster an efficient and inclusive approach to lifelong learning, it is essential to promote flexible learning systems and pathways allowing individuals to build on past achievements. The emphasis on achieved skills, knowledge and competence remains a top EU priority, as highlighted in the <u>Political guidelines for the next European Commission (2024-29)</u>, which propose the creation of a 'Union of skills' focused on lifelong learning and the recognition of diverse learning experiences.

To support lifelong learning genuinely, facilitate upskilling or reskilling, and develop a Union of skills, addressing the challenge of transferability and portability of learning outcomes it is a precondition. This means ensuring that skills, knowledge, and competences are recognised and valued across different institutions and actors, education and training systems, economic and labour market sectors, and countries. Such recognition would allow individuals to build on past achievements.

Numerous EU and national initiatives strive to improve the flexibility of education and training systems. They promote using a learning outcomes approach, increasing transparency of systems and qualifications, and supporting the transferability of these outcomes.

Taking the turn of the century as a starting point, Cedefop's project <u>Ensuring transparency and transferability of learning outcomes (2022-25)</u> mapped the most important initiatives, analysing their coherence and joint contributions. The identified initiatives analysed cover different policy areas, such as quality assurance, comparability, credit systems, validation of non-formal and informal learning and recognition of qualifications.



An analysis of their coherence revealed a moderate level of coherence across initiatives. While some policy developments demonstrate strong synergies with potential benefits for learners, others highlight the need for further attention (2).

From a perspective of joint contribution, the initiatives analysed have increased:

- the focus on the learning outcomes promoting a shift towards learner-centred systems;
- the recognition of learning experiences outside formal settings;
- convergence across policy initiatives and national developments;
- commitment to transparent, comparable, and recognised qualifications;
- attention to the need for more flexible learning pathways and systems.

By switching the focus on individuals, the study compared the main barriers they faced in 2000 with those in 2020, and identified changes that resulted in smoother learning transitions, while promoting lifelong learning. Key advancement within and across formal education and training subsectors include the growing use of learning outcome and modular-based systems, more flexible admission requirements and greater comparability of qualifications, alongside more targeted measures for vulnerable groups. Additionally, improvements have been made in integrating formal, non-formal, and informal learning through the development of lifelong learning strategies and the increase in opportunities for learning validation of non-formal and informal learning outcomes. Opportunities for international learner mobility have also multiplied due to better recognition of qualifications and learning outcomes acquired abroad.

⁽²) Cedefop (2024). <u>Transparency and transferability of learning outcomes: a 20-year journey. Analysis of developments at European and national level</u>. <u>Publications Office of the European Union.</u>

Despite these evident improvements in the flexibility and permeability of education and training systems for individual learners, several challenges persisted by the end of the two decades considered, in 2020. Difficulties in the practical implementation of measures and in ensuring a coordinated approach among institutions, subsystems, and countries remained.

Building on the analysis of developments over the past 20 years, the study offers valuable insights into the strengths and weakness of pursuing lifelong and life-wide learning. These findings offer crucial input for shaping future European and national policies. The analysis also informed the development of future policy scenarios, which explore potential pathways forward (see dedicated section below).

Future policy scenarios for lifelong and life-wide learning towards 2040

Elements of the scenarios

The five scenarios (3) developed as part of the study focus on the learning ecosystem, rather than on potential future trajectories of specific subsectors of the education and training system. Following a comprehensive review of past and planned EU and national developments (4), key trends and drivers shaping the future of lifelong learning have been identified, ultimately revealing two primary variables for constructing the scenarios – flexibility and permeability – closely linked to transparency and transferability of learning outcomes.

Scenario axes: Flexibility versus permeability

Flexibility: the system allows leaners to customise their education and training to fit their needs, goals, and circumstances, with options in format, content, and assessment.

Permeability: the system allows leaners to access and easily move between different levels, sectors, or systems of education and training, with the possibility to build on their qualifications and learning outcomes.

The concepts of flexibility and permeability have been further defined using the indicators listed below.

reflecting and building on the past to varying degrees.

⁽³⁾ It is worth noting that the scenarios are not intended to predict the future but to alert policymakers and other stakeholders about the different potential policy trends and their implications. They are intended to be used as exploratory tools to support policy discussion. Assumptions underpinning the scenarios include assuming stability of the European political system. 'Black swan events' (such as COVID-19) have the power to alter trajectories significantly but are essentially unpredictable, and have therefore not been explicitly taken into account. (4) These scenarios acknowledge that education and training systems are path dependent, in other words

Indicators defining flexibility and permeability (5)

Flexibility

Personalisation: the extent to which learning is tailored to the learners' individual needs via a choice of modules or units when working towards qualifications

Learning content: the extent to which learning content is responsive to evolving labour market and individual needs

Assessment: the extent to which more non-traditional, flexible and continuous assessment methods, including online tools, AI, projects, etc., are used to encourage formative learning

Learning provision: the extent to which learning is provided by a variety of learning providers and learning formats

Permeability

Comparability: the extent to which NQFs and qualification registers provide comprehensive coverage of all types of qualifications (e.g. full, partial, and microcredentials), with clear and compatible descriptions of learning outcomes of qualifications and documented pathways or bridges between qualifications at different levels and across education and training sectors

Recognition: the extent to which qualifications are recognised across countries and subsystems (enabling cross-border mobility and learning progression)

Credit transfer: the extent to which compatible credit accumulation and transfer systems exist and are used

Digital tools to record learning outcomes: the extent to which an interoperable and robust digital tool exists to record and share learning outcomes across educational subsystems and countries

Systems and processes to validate non-formal and informal learning: the existence of systems and processes to validate learning from formal, non-formal and informal settings to achieve partial or full qualifications; the degree to which these are compatible within and across countries and education subsystems

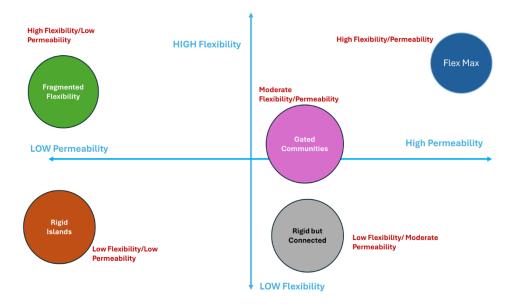
Access opportunities between subsystems: the degree of flexibility in access requirements and the availability of mechanisms supporting learner transitions between educational subsystems

Coordination of quality assurance standards, processes and tools within and across subsystems: the extent to which quality assurance standards, processes and tools are coordinated within and across education subsystems to standardise practices

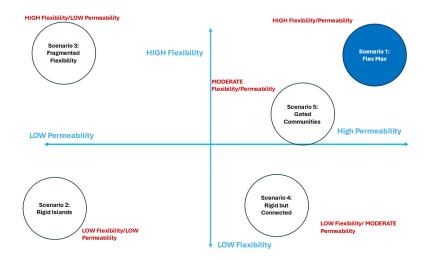
⁽⁵⁾ All the indicators take different forms in the different scenarios. For example, regarding personalisation of learning in scenarios positioned in the upper part of the grid, learners have access to a wide choice of stackable units, modules or microcredentials, which can lead to partial or full qualifications based on achieved learning outcomes. In the scenarios positioned in the lower part of the grid, learners have limited or no choice of units or modules when working towards qualifications.

Scenario descriptions

- Scenario 1: Flex Max
- Scenario 2: Rigid Islands
- Scenario 3: Fragmented Flexibility
- Scenario 4: Rigid but Connected
- Scenario 5: Gated Communities



Scenario 1: Flex Max



Box 2. Flex max scenario narrative

High Flexibility and High Permeability

By 2040, EU member states will have developed a seamless learning ecosystem which supports personalised learning paths within and across countries.

Rapid technological developments and the faster pace of change in jobs and tasks are met by on-demand learning opportunities provided by a mixture of formal and non-formal learning providers, including international providers, employers, and non-governmental organisations (NGOs). Learners, irrespective of age, educational attainment and employment status have access to flexible, responsive, and adaptive learning content, from a variety of practical and flexible learning formats, such as online, practice-based, case-based, project and work-based learning, personalised learning platforms and adaptive courses.

Learners have access to a wide choice of units, modules or microcredentials and can stack these to build partial or full qualifications based on achieved learning outcomes across sub-systems and countries. This is matched by a more extensive use of non-traditional, flexible and continuous methods to assess learning outcomes to encourage formative learning. This includes online tools, artificial Intelligence (AI), projects, or work-based learning. AI is also used to recognise skills and qualifications developed or achieved across diverse learning environments, by comparing learning outcomes (skills, knowledge, and competences), against agreed terminological standards and to store, verify, and manage digital credentials.

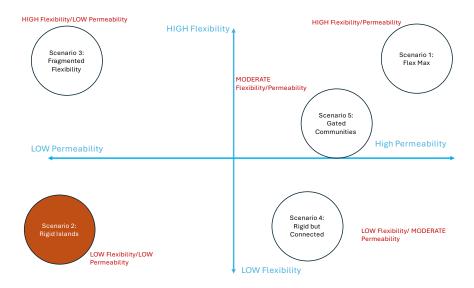
NQFs and qualification registers have broad coverage, documenting all types of full and partial qualifications (from formal and non-formal providers). Associated learning outcomes are described in accessible, clear and comparable formats, including across countries. NQFs clearly illustrate pathways and bridges between qualifications at different levels and between learning subsystems (e.g. VET, HE, Adult Education, General Education).

Compatible systems across countries and subsystems to validate learning from formal, non-formal and informal settings allow learners to move fluidly between formal education, workplace training, community learning, self-directed study, and informal learning opportunities within and across countries to achieve full or partial qualifications. This is further supported by non-restrictive access and admissions requirements between education and training subsystems, the existence of bridging courses/programmes, and second-chance education initiatives. Additionally, a widely used robust and interoperable EU digital tool enables learners to keep a record of achieved learning outcomes whenever and wherever these were achieved and to use them to access further learning opportunities or employment across sectors and countries.

International competition for talent has pushed EU countries to create widely recognised and easily transferable qualifications, allowing for smoother transitions across employment sectors, education and training subsystems and borders. This is further supported by compatible approaches across subsystems, institutions, and EU countries to credit accumulation and transfer. Comprehensive recognition procedures cover all qualifications, both formal and non-formal and are recognised across countries and education and training subsystems.

There is a high level of coordination of quality assurance standards, processes and tools within and across education subsystems and countries, resulting_in high levels of transparency and trust in qualifications achieved in different learning sectors and from all types of providers.

Scenario 2: Rigid Islands



Box 3 Rigid Islands scenario narrative

Low Flexibility and Low Permeability

Education and training in 2040 is characterised by straightforward, comprehensive and standardised learning pathways, with limited opportunities for personalised and flexible learning.

In the face of rapid technological developments and a faster pace of change in jobs and tasks, countries opt to maintain long-established systems recognising that these continue to meet current needs. Learners mostly achieve qualifications with highly trusted public formal providers such as schools, universities, or colleges, following a linear, structured, pathway. Most learning is also classroom-based with limited use of online or other alternative learning formats, with most assessments taking place at the end of a fixed duration of learning based on standardised course components with limited use of_less traditional, flexible, and continuous assessment methods.

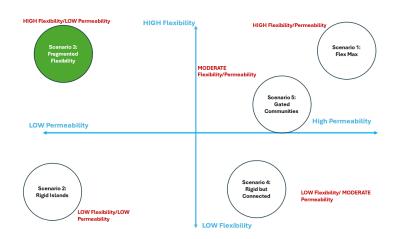
Learning content is standardised, focusing on established curricula, . Consistency and stability are prioritised over rapid responsiveness to evolving labour market demands and individual needs. More flexible approaches (e.g. microcredentials and customised learning approaches) are mainly offered within subsectors of the labour market to fill particular skills gaps in the face of international competition for talent. Some of these are delivered by nonformal learning providers, such as large employers or international providers, but they are not widely or easily recognised by other providers. Educational institutions, workplaces, and other learning environments frequently operate independently with minimal coordination

There is minimal coordination of quality assurance standards, processes and tools, which is largely focused on formal provision within an education subsystem (e.g. VET, HE, Adult Education, General Education) within a country. Moreover, there are differences in how these are applied among providers and institutions within the same subsystem, leading to variability in implementation. Additionally, they do not cover non-formal and informal learning. Access opportunities for learners to move between education and training subsystems are also limited, with minimal mechanisms to support transitions between them, e.g. via admission requirements or bridging programmes. Given the limited modularisation, developing compatible credit accumulation and transfer systems is not needed. Where they exist, they are at an early stage, with each subsystem having its own system that may be inconsistently applied across providers and institutions. There is no interoperable and robust digital tool used across sectors or countries to record, share or compare learning outcomes.

Systems and processes to validate non-formal and informal learning lack compatibility across subsystems and countries and recognition procedures across countries are very limited, only applying to specific sectors, qualifications, or learners, with little systemic alignment or cross-border compatibility. Additionally, NQFs and qualification registers include formal and full qualifications from formal providers with associated learning outcomes descriptions. However, there is no common approach, and each provider, subsystem and country, describes them differently. Progression opportunities are

restricted to predefined pathways within individual sectors, and NQFs do not display bridges between qualifications across sectors or levels. The use of AI to recognise skills and qualifications developed or achieved is restricted to providers or subsystems.

Scenario 3: Fragmented Flexibility



Box 4. Fragmented flexibility scenario narrative

High Flexibility and Low Permeability

In 2040, education and training subsystems provide personalised, adaptable learning experiences but operate largely separately.

The shrinking labour force, faster pace of change in jobs and task and rapid technological developments have prompted a variety of flexible learning options, including online courses, and microcredentials. Learning content is responsive to evolving labour market and individual needs – leading to greater hybridisation of curricula in education and training subsystems. Al learning applications, such as personalised learning platforms or adaptive courses and digital tools as well as credit accumulation and transfer systems exist; however, their actual use is quite limited typically to put the learning together and store information on past achievements. Given the limited co-operation (and permeability) between subsystems, it is not possible to combine them to customise the learner journey, as they are not recognised for building flexible learning across them. On the other hand, learners have access to a wide range of formal and non-formal providers (including international providers, employers, NGOs and others), into partial or full qualifications. However, this is mainly possible across some institutions and providers associated to the same education and training subsystem.

Learners can achieve qualifications in a flexible way because of the use of assessment of learning outcomes that encourages formative learning via the use of non-traditional,

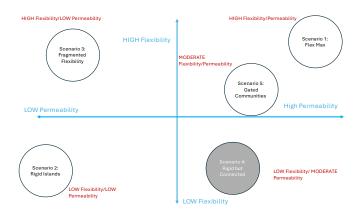
flexible and continuous assessment methods including online tools, AI, projects or work-based learning. This is supported by the existence of an overarching framework for quality assurance standards, processes, and tools within education and training subsystems. At the same time, institutions and providers apply these inconsistently.

Moving between different educational subsystems (e.g. from VET to HE) and countries is challenging also due to restrictive admission requirements and limited bridging programs and very limited coordination on quality assurance between subsystems and member states. Validation arrangements are fragmented within and across education subsystems, institutions and countries. While NQFs and qualification registers contain a mixture of formal and non-formal qualifications from both traditional and non-traditional providers, there are inconsistent approaches to describing the learning outcomes of qualifications and NQFs are not used to show pathways or bridges and progression options from and to between qualifications.

Al is increasingly used to recognise skills and qualifications developed or achieved across providers, by comparing learning outcomes, skill descriptions, and competencies to agreed standards and to store, verify, and manage digital credentials. However, this is mainly only possible across some institutions and providers associated to the same education and training subsystem. Furthermore, recognition procedures across countries often only apply to particular learning sectors, qualifications, or types of learners with little systemic alignment or cross-border compatibility. International cooperation on the development of core profiles across qualifications or subsystems is absent or limited to bilateral cooperations.

Cross-national and cross-sectoral credit accumulation and transfer systems that are compatible across countries and education and training subsystems are either not developed or at an early stage and not a political priority. Learners have limited or no access to an interoperable digital tool to keep a record of formal, non-formal and informal learning outcomes.

Scenario 4: Rigid but Connected



Box 5. Rigid but Connected scenario narrative

Low Flexibility and Moderate Permeability

In 2040, learning pathways are structured and standardised, offering learners little or no room to choose modules or units and hence customise learning to their needs. However, they offer transferability of learning within education and training sectors, including across borders for the same subsystem.

Learners primarily use formal providers such as schools, universities and colleges, with non-formal providers only filling in particular gaps in the education and training landscape to meet evolving labour market needs and a faster pace of change in jobs and tasks. This provision is often paid for by employers or individuals with the resources to do so.

Most learning is classroom based with limited use of online or other alternative learning approaches format. Learning content is standardised and focuses on established curricula delivered largely through traditional classroom-based methods, although supplemented in some cases by online learning and assessment tools. Advanced AI learning applications, such as personalised learning platforms or adaptive courses, are limited, and used only within particular subsystems or specific courses that may also use AI to recognise skills and qualifications.

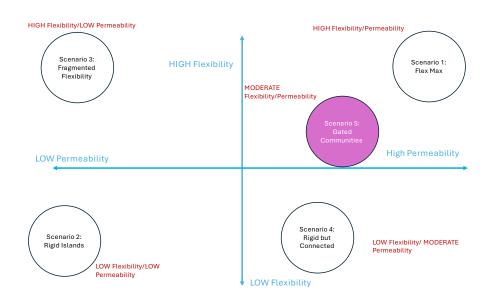
Learners therefore progress along structured, linear pathways, with qualifications awarded based on standardised assessments conducted at the end of a fixed period of study, , facilitating the recognition and transferability of formal qualifications across countries within the same subsystem. This is further supported by the coordination of quality assurance standards, processes, and tools of learning provision among traditional providers within education subsystems at national level. These efforts also extend across borders for the same subsystem, supporting the international recognition of formal qualifications. Coordination of quality assurance between subsystems and countries is patchy. There are limited established systems for qualifications awarded by non-traditional providers (such as employers).

Movement of learners between providers within particular education and training subsystems is therefore generally possible, nationally and internationally. However, the scope for mobility and progression between education and training subsystems (e.g. VET, HE, Adult Education, General Education) is limited. For example, compatible credit systems exist that enable learners to accumulate credits to achieve qualifications, but this is possible within individual subsystems allowing transfer of credits between providers (e.g. from one HEI to another). Within the same subsystem, this is also possible across countries. However, these systems are not fully developed across subsystems. There are also restrictive access and admission requirements. In addition, while recognition procedures that facilitate international mobility are well developed for specific subsystems and across formal qualifications, this is less so for non-formal or emerging credentials.

Relatedly, there are compatible systems to validate learning from formal, non-formal and informal settings, however they are more widely adopted in some countries and in particular education subsystems. Learners also have access to an interoperable digital tool to keep a record of formal, non-formal and informal learning outcomes whenever and wherever these were achieved

Learners can accumulate credits to achieve qualifications within subsystems allowing transfer of credits between providers (e.g. from one HEI to another), and to a more limited extent across subsystems and across some countries. This is compatible within education and training subsystems, with coordination also across countries for the same subsystem. However, interoperability with other education and training subsystems or for integrating learning outside formal systems is limited. NQFs and qualification registers provide details of most types of full and partial qualifications and associated learning outcomes in clear, accessible and comparable formats. They also show links and bridges between qualifications and how learners can progress to the next level within the same learning sector. However, qualifications from non-formal providers are often not included.

Scenario 5: Gated Communities



Box 6. Gated communities scenario narrative

Moderate Flexibility and Permeability

By 2040, rapid technological developments and a shrinking labour force have encouraged most EU countries to allow learners to achieve full or partial qualifications in flexible ways by completing units, modules, or microcredentials from across different education and training providers and programmes within a subsystem in a country, and, though to a

lesser extent, across subsystems (e.g. VET, HE, Adult Education, General Education) and countries.

Formal education providers, such as schools, universities, and colleges are responsible for most of the learning provision, although non-formal providers e.g. international providers, employers, NGOs, play an increasing role in supporting flexibility and personalisation of learning. While much of provision remains classroom based, some learners also have access to learning in flexible and practical ways, using online, practice-based, case-based, project and work-based learning which is responsive to individual learner needs and country's evolving labour market needs. Curriculum flexibility offers opportunities for providers to design and apply different forms of assessment, using AI and other online tools that support learning in a more flexible way. At the same time, the uptake of such opportunities is not uniform across countries and subsystems.

Systems and processes to validate non-formal and informal learning to achieve full or partial qualifications exist, although these operate primarily within education subsystems (and therefore are only partially compatible). At the same time, efforts to align these systems and processes nationally are emerging. Similarly, learners have access to a digital tool to keep a record of formal, non-formal and informal learning outcomes whenever and wherever these were achieved, but interoperability (within and across subsectors and administrative / governance levels) and robustness is limited. At is also increasingly used to recognise skills and qualifications developed or achieved across some learning environments, by comparing learning outcomes, skill descriptions, and competencies to agreed standards and to store, verify, and manage digital credentials.

Movement between providers within particular education and training subsystems is generally possible. This is also supported by the existence of compatible credit systems that are used to support the transfer of credits between institutions within the same subsystem (e.g. from one vocational provider to another). However, cross-border recognition is limited, reflecting a focus on strengthening pathways within and across subsystems at national level. In addition, the inclusion of non-formal achievements or emerging credentials is also limited.

While the scope for mobility and progression between learning subsystems is more challenging, some opportunities for credit transfer across subsystems exist, facilitated by some cooperation between formal providers across subsystems. However, the use of compatible credit systems to support subsystem transitions is not widespread. Similarly, mechanisms such as admissions and bridging solutions to support learner mobility and progression via are emerging, although their implementation and accessibility are uneven / not widespread across subsystems and institutions.

National qualifications frameworks and qualification registers provide details of most types of full and partial qualifications offered by both traditional and non-traditional national providers, and associated learning outcomes in clear, accessible and comparable formats. Although these illustrate bridges between qualifications at different levels, mainly within subsystems, they include some connections with qualifications from other subsystems.

There is coordination of quality assurance standards, processes and tools of learning provision by traditional providers within an education subsystem. There is also increasing cooperation to discuss and align quality assurance across subsystems. However, this is very limited for non-formal providers, learning formats and assessment methods as well as across countries.

Implications

Each scenario carries a range of potential implications for different groups of stakeholders. The groups considered are learners, education and training providers, and policymakers.

Learners

For example, the Flex Max (High Flexibility, High Permeability) scenario offers benefits by providing learners with increased flexibility and personalisation in their education journeys. This can improve their satisfaction and engagement in learning. However, learners can experience confusion about how to integrate various modules and microcredentials into broader qualifications; this will require robust quidance and opening issues related to digital access and literacy disparities that may hinder participation for vulnerable groups. In addition, while increased focus on small learning units does not inherently exclude or de-prioritise transversal skills, Scenario 1 – Flex Max (High Flexibility, High Permeability) may open up the risk of inadvertently overemphasising occupational skills, and neglecting broader competences and skills, such as intercultural skills, empathy, and civic awareness, which are increasingly critical. In Scenario 2 - Rigid Islands (Low Flexibility, Low Permeability) where there is limited or no choice of modules or units when working towards qualifications, learners benefit-from a clear, predictable learning path for achieving qualifications, which reassures learners, as it reduces the complexity to navigate choices, and lowers the demand for extensive guidance services compared to the more flexible scenarios. Learning is predominantly provided by formal, yet highly trusted, public institutions, which gives learners confidence and assurance about the quality and credibility of their qualifications. However, this means that non-formal and informal learning experiences are less likely to gain recognition, leaving many learners unable to capitalise fully on diverse learning experiences, particularly across borders.

Providers

In Scenario 1 – Flex Max (High Flexibility, High Permeability) education and training providers are faced with rising demand for personalised learning offers. They increasingly rely on technologies like AI, virtual reality (VR), and augmented reality (AR) to deliver personalised learning experiences. This enables them to reach a wider audience and adapt quickly to society and labour market demands. However, offering such diverse options also raises administrative and operational complications. The increased need for collaboration to ensure bridges between sectors, such as cooperation on quality assurance approaches, requires significant resource investment. In Scenario 2 – Rigid Islands (Low Flexibility, Low Permeability) education and training providers operate within a stable framework, and benefit from lower requirements to innovate and adapt, to more flexible models and a standardised approach reducing pressure, time, and cost. Nevertheless, limited cross-sector collaboration and exchanges can reduce innovation and leave the system unresponsive to new challenges,

restricting providers' capacity to evolve in line with technological advancements and emerging educational needs.

Policymakers

The overarching aim of a scenario approach is to illustrate potential choices available for future policies and practices, at European and national levels. In the context of the project and development of future scenarios, broader policy implications for policymakers at institutional and system levels are also explored. An excerpt from the draft final report is available for consultation, offering a preview of its key reflections. These might be further elaborated following the results of the conference.