



EU Startup Nations Standards

Report 2025





EU Startup Nations Standards – Report 2025

Published by the Europe Startup Nations Alliance, Associação.

This report is also available online as an interactive version.
For further information please visit: www.esnalliance.eu/en/standards.

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We would like to thank the following persons for their support in providing information for the preparation of this report:

Austria (Sarah Klaffner and Lisa Stadlbauer, Federal Ministry for Labour and Economy, Werner Müller, FFG), Belgium (Pierre Bouygues and Laurence Geradon, FPS Economy), Bulgaria (Dobromir Ivanov and Alexander Nutsov, BESCO), Croatia (Filip Kočiš and Jurica Mateša, Ministry of Economy), Cyprus (Litsa Kountouridou and Theodoros Loukaidis, Research & Innovation Foundation), Czechia (Ivo Denemark, Renata Dosda and Markéta Přenosilová, CzechInvest), Estonia (Liisi Kirch and Henrik Kutberg, Ministry of Economic Affairs and Communications, Vaido Mikheim, Startup Estonia), France (Jérôme Gazzano, Romane Guigon and Thibault Mutinelli, Ministry of the Economy, Finance, and Industrial and Digital Sovereignty), Germany (Miriam Häfele, Federal Ministry for Economic Affairs and Energy, Rebecca Goffin and Philipp Kövener, Germany Trade & Invest), Ireland (Sharon Osigwe, Eugene Shiels and Patrick Sinnott, Department of Enterprise, Tourism and Employment), Italy (Giorgio Ciron and Laura Fornara, InnovUp), Latvia (Ineta Irbe and Olevs Nikers, Ministry of Economics), Lithuania (Akvile Dobromilskytė, Startup Lithuania), Luxembourg (Felix Even and Orkun Ozbatır, LuxInnovation), Malta (Brian Camilleri and Selina Holgersson, Malta Enterprise), Netherlands (Leslie Vijn-Schouwstra and Egehan Yıldırım, Ministry of Economic Affairs), Poland (Marta Pawlak and Tomasz Snażyk, Startup Poland), Portugal (João Silva, Startup Portugal), Romania (Alexandru Buciului and Olesea Chiochiu, Ministry of Economy, Entrepreneurship and Tourism), Slovakia (Martina Pirošková, Slovak Business Agency), Slovenia (Matej Rus, Startup Slovenia), Spain (Miguel Campillo, Ministry for the Digital Transformation and of the Civil Service), Sweden (Thérèse Wikberg, Ministry of Climate and Enterprise, Anne Lidgard, Vinnova) and Ukraine (Evelina Holovanova, Innovation Development Fund).

We express our gratitude to the Steering Committee, specifically assembled to discuss the development of this analysis, for their insights and cooperation:

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ESNA, February 2026

Disclaimer

Views and opinions expressed in this document do not necessarily reflect the position of the European Union (EU) regarding each topic covered in this report. The European Union cannot be held responsible for them. The elaboration of this document was supported by the Recovery and Resilience Fund.



Foreword

The EU Startup Nations Standards (SNS) Report 2025 marks another important milestone in the Europe Startup Nations Alliance (ESNA)'s ongoing mission to strengthen Europe's startup ecosystems through policy alignment, peer learning and measurable progress. Building on the foundations laid in previous years, this edition reflects a maturing framework, one that increasingly serves both as a benchmark for implementation and as a practical policy tool for Member States.

The eight Standards set out in the EU Startup Nations Standards of Excellence ministerial declaration remain the backbone of this initiative. They ensure comparability across countries while providing a shared reference point for assessing progress and identifying gaps. In 2025, we continue to observe a positive trajectory in implementation, underpinned by deeper engagement from national authorities, a growing alignment between strategic ambition and concrete policy action.

This year's report also reflects an ongoing collaborative and iterative process. The exchange with national Focal Points, the review of Country Factsheets and the consolidation of feedback have continued to strengthen both the quality and the credibility of the results. These contributions are essential to ensuring that the SNS remains a living framework that evolves alongside the needs of Europe's entrepreneurial ecosystems.

Beyond measurement, the SNS Report 2025 serves as a key strategic tool for governments and EU institutions, grounded in the growing recognition that startups are a vital asset for Europe. They play a critical role in driving innovation, competitiveness and economic resilience, while contributing to broader policy objectives such as digital transformation, sustainability and sovereignty. In a context of increasing global competition and geopolitical uncertainty, enabling startups to scale in Europe is key to safeguarding the Union's technological leadership and strategic autonomy.

For policymakers, this report offers more than an overview of performance. It provides insights into what works, where challenges persist, and how targeted reforms aligned with the eight Standards can accelerate impact. By highlighting both developments achieved and areas requiring renewed focus, the SNS continue to support evidence-based policymaking at national and European levels.

I would like to extend my sincere gratitude to our Members, Focal Points and the Steering Committee for their continued commitment and cooperation. Your expertise, responsiveness and dedication make this initiative possible and meaningful. As we look ahead, let us build on this collective momentum to further strengthen Europe as a place where startups can start, scale, and succeed, cementing the EU's position as a global leader in innovation and entrepreneurial excellence.



Arthur Jordão

Executive Director

Europe Startup Nations Alliance (ESNA)

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EXECUTIVE SUMMARY

The [EU Startup Standard Nations \(SNS\)](#) Report 2025 provides an overview of the European startup ecosystem through the lenses of the eight SNS. Targeted primarily at policymakers, the report monitors the implementation of startup-friendly policies across ESNA's Signatory Members. As the third iteration of this series, the 2025 edition enables year-on-year comparability and offers a clear picture of progress and remaining gaps.

The 2025 edition of the SNS report reflects the responses of 24 countries. Detailed methodological notes outline the approach, data collection and analysis processes, sources used and the role of the Steering Committee. Scores range from 0 to 100% and reflect the level of implementation of each Standard, substandard and indicator.

The full implementation of the eight Standards across all Signatory Countries remains the core objective of the SNS framework. In 2025, the average level of implementation reached 70%, representing an increase of nine percentage points compared to 2024 (61%). This overall progress reflects positive developments across most policy areas, despite some uneven dynamics between Standards. This increase is driven by improved implementation levels across all Standards, except one. Notably, Standard #1 – “Fast Startup Creation, Smooth Market Entry” and Standard #6 – “Access to Finance” are the best-performing Standards, each reaching 77%. Standard #8 - “Digital First”, after a slight decrease in 2024, returned to its 2023 implementation level of 75%. Continued progress was also observed in Standard #3 – “Stock Options” at 74%, Standard #7 – “Social Inclusion, Diversity and Protecting Democratic Values” at 73%, Standard #5 – “Innovation in Procurement” at 65%, and Standard #4 – “Innovation in Regulation” at 55%. Standard #2 – “Attracting and Retaining Talent” remained at 64%.

SNS #1 – “Fast Startup Creation, Smooth Market Entry” achieves one of the highest scores at 77%. Key findings reveal that digital documents emitted by a foreign entity are accepted in 20 of the surveyed countries. Regarding business setup, incorporation can be completed within one day and at cost of no more than €100 in five countries. Most of participating countries provide an online location where entrepreneurs can find all relevant information about national administrative requirements and funding opportunities, as well as a dedicated virtual helpdesk.

SNS #2 – “Attracting and Retaining Talent” stands at 64% implementation level, as the existence of more talent return programmes was almost offset by a setback in the processing times of visa applications. In 10 out of 21 of the countries, they are processed within one month for both founders and experienced workers. Beyond visa facilitation, 15 countries have a programme in place to encourage the return of EU tech talent.

SNS #3 – “Stock Options” recorded the second-highest increase in this year's scores, reaching 74%. Seven countries achieved full implementation, while ESNA's average rose 12 percentage points¹, compared to 2024 (62%). In line with the declaration's recommendations, 22 countries offer the possibility to issue stock options (SO) with non-voting rights – enabling smoother decision-making processes for company management. Only two countries reported not having a dedicated SO scheme in place, and 13 tax SO only at the moment of sale. This indicates that in 11 countries SO are taxed at grant, at exercise, or at multiple stages.

¹ The ranking of changes in performance across standards is based on the underlying decimal values rather than the rounded percentage-point changes. In cases where two standards appear to have the same rounded increase, their relative position reflects these non-rounded values.

SNS #4 – “Innovation in Regulation” reached an implementation level of 55% in 2025, showing a substantial increase compared with 2024 (43%), yet it remains the Standard with the lowest overall implementation. The Think Small First principle, which ensures that SMEs are considered in the early stages of legislation development, is reported to be applied in 21 of the surveyed countries, with 17 of them scoring 100%. However, only 12 countries provide exemptions or alternative measures for startups to achieve compliance, typically designed to address challenges related to company size and age and limited resources. Twenty-one (21) of the surveyed countries have regulatory sandboxes in place, providing a valuable mechanism for testing within specific regulatory frameworks.

SNS #5 – “Innovation in Procurement” has an implementation level of 65% in 2025, reflecting a 10-percentage point increase compared to 2024. This indicates progress towards smoother procedures, with 18 countries reporting no administrative impediments to startup participation and actively encouraging public buyers to procure from startups. This Standard also explores the retention of Intellectual Property Rights (IPR), which is permitted in 11 countries for startups or scaleups participating in public procurement tenders. The outlook is more positive for technology transfer policies, with 22 countries reporting having measures in place to facilitate research application and the creation of spinoffs.

SNS #6 – “Access to Finance” is one of the highest-performing Standards at 77%, with half of participating countries scoring above 80% and seven reaching full implementation. Country scores under this Standard highlight ongoing efforts to attract private funding and bridge financing gaps through the use of public financing instruments. Out of the 22 participating countries, 10 reported having introduced direct equity financing instruments funded by the RRF. All countries have introduced grants or loans, and 20 have used the EIB, promotional banks or other dedicated vehicles to channel funds to private VCs. In addition, 14 countries report having tax relief measures in place for Business Angels.

SNS #7 – “Social Inclusion, Diversity and Protecting Democratic Values” saw its implementation level increase from 51% in 2024 to 73% in 2025. Sixteen (16) countries report having national awards and/or policies in place to actively promote role models in startup communities, while 19 countries indicate that they directly engage with startups to address marginalisation and social inclusion. A majority of 17 countries has set up specific schemes to incentivise hiring practices that promote diversity, while 13 shared clear evidence of supporting both startup female founders and founders from underprivileged backgrounds.

SNS #8 – “Digital First” reflects the principle that all public services should be designed to be carried out digitally. This Standard increased by five percentage points, reaching 75% in 2025. A majority of 21 countries has 100% implementation in offering administrative services online (indicator 8.1.2), demonstrating ongoing efforts towards digitalisation. This is further supported by the fact that 23 countries have provided evidence that they have implemented digitalisation strategies. However, there is room for improvement in proactive knowledge sharing between governments and startups on digitalisation practices, which are currently implemented in only 16 of the surveyed countries.

Startup Nation Standards implementation progress

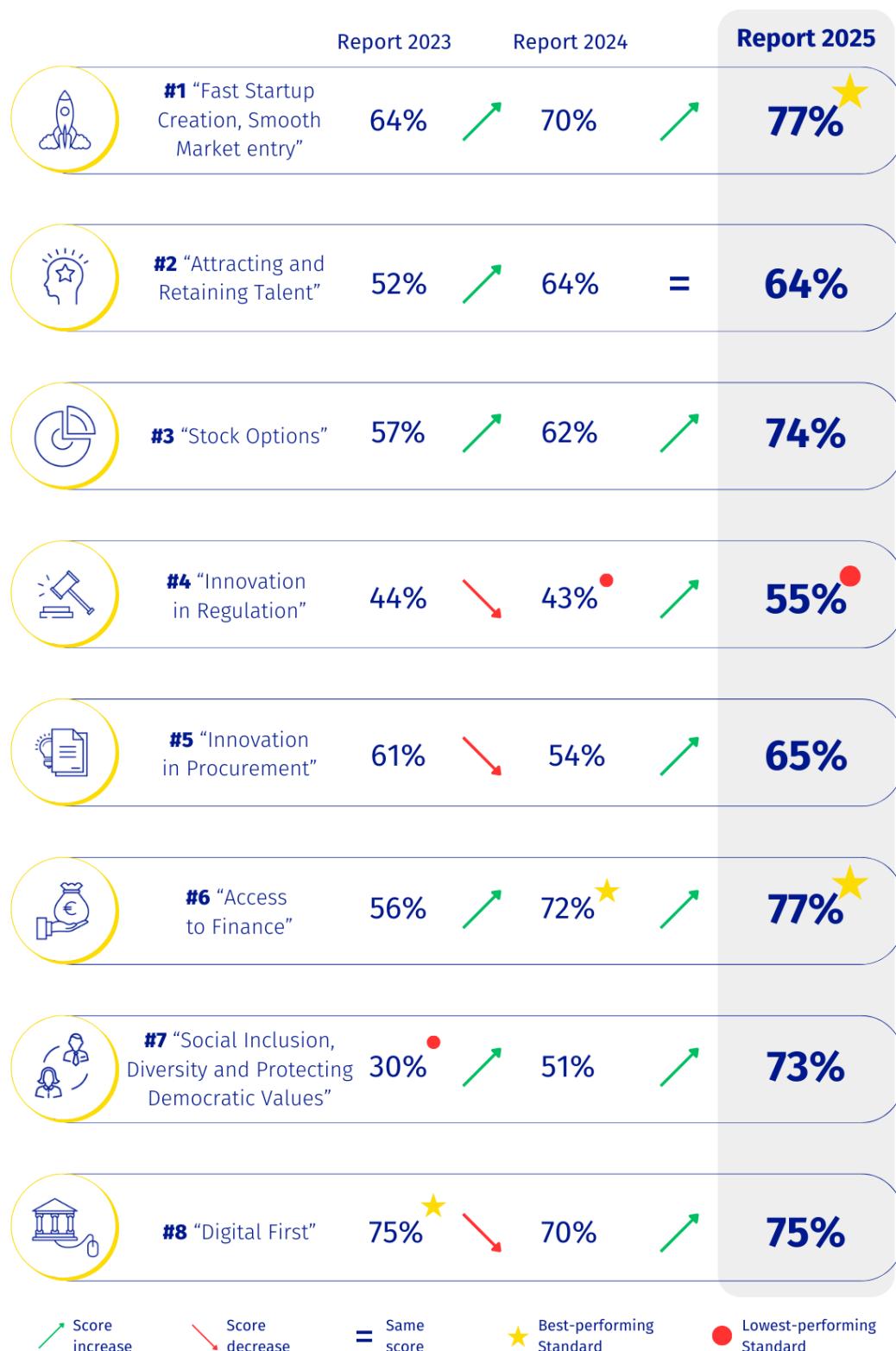


Figure 1. The eight SNS implementation level progress

Source: ESNA, based on official data from Member Countries (Survey 2023, 2024 and 2025) and external indicators



Introduction

01 .

1. Introduction

Startups and scaleups are strategic assets for Europe's economy and society. They develop breakthrough innovations in response to real-world needs and have the potential to accelerate the green and digital transitions while strengthening Europe's global competitiveness. These companies also foster synergies with Europe's strong traditional industries and generate high-quality employment opportunities.

A thriving startup and scaleup ecosystem plays a vital role in sustainable economic growth by driving productivity, attracting investment, creating quality jobs, and contributing to closing the innovation gap between Europe and its main global competitors.

In its Communication "2030 Digital Compass: the European Way for the Digital Decade" (COM (2021) 118 *final*), the European Commission (EC) set the ambition of doubling the number of unicorns in the EU by 2030. Achieving this target, however, requires addressing the persistent challenges that continue to hinder the growth and expansion of innovative companies across Europe. It is essential to create more favourable conditions for startups and scaleups to flourish.

To ensure that all European startups and scaleups can benefit from the best practices underpinning the world's most successful innovation ecosystems, twenty-eight European nations signed the *EU Startup Nations Standard of Excellence ministerial declaration* in March 2021. Through this declaration, the signatories committed to implementing a set of best practices, embodied in eight Standards (Figure 2), designed to strengthen the startup ecosystem and support its key actors across all stages of development.

EU STARTUP NATIONS STANDARDS OF EXCELLENCE DECLARATION

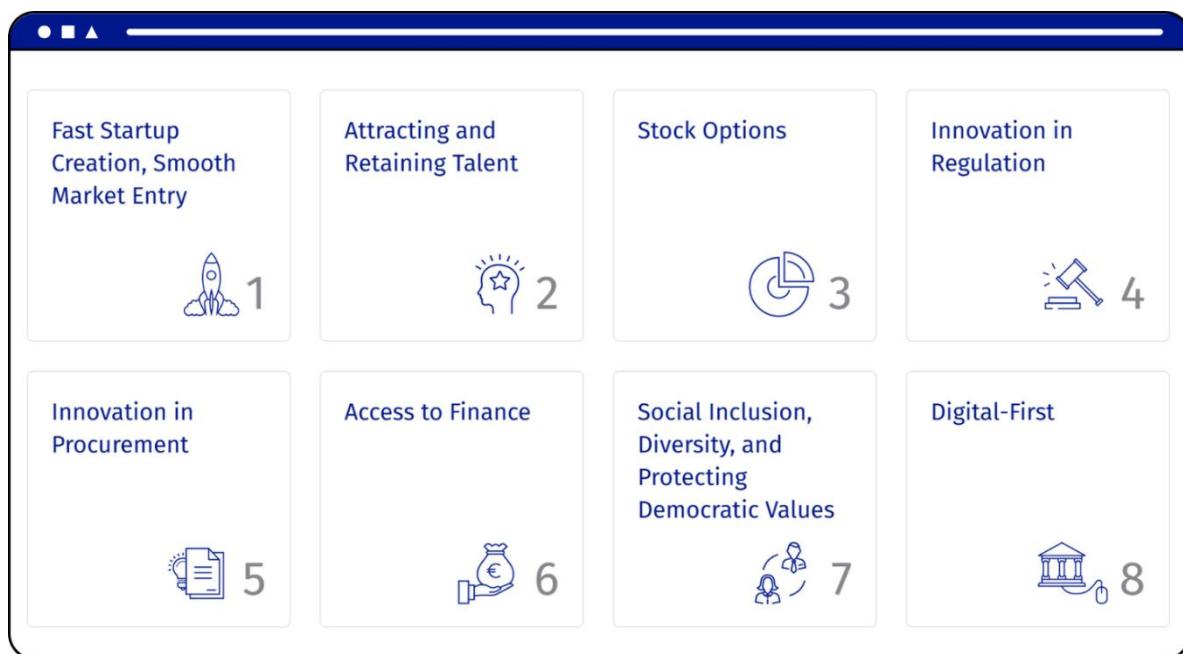


Figure 2. The eight Standards

Source: ESNA from EU Startup Nations Standard of Excellence Declaration

The eight Standards serve as a blueprint for national and regional policymakers, guiding the development and refinement of policies that strengthen startup and scaleup ecosystems. By

implementing these Standards, governments can create a more predictable and supportive environment for entrepreneurs, an essential condition for fostering innovation and competitiveness across Europe.

The declaration also recognised the need for a unified European body to advance the startup agenda. ESNA was established under this political mandate, specifically to *“facilitate measuring and monitoring of progress based on regular reporting from Member States in implementing best practices, and so help each country become an ‘EU Startup Nation’”*. In pursuit of this mission, ESNA publishes the annual Startup Nations Standard (SNS) Report.

The 2025 edition saw the participation of 24 countries, maintaining broad geographical coverage whilst introducing Latvia as a new participant. This year's exercise essentially follows the methodology employed in 2024, with only minor technical refinements detailed in Chapter 2, which describes the data collection and validation procedures underpinning the analysis. Following the methodological foundation, the report proceeds to provide a comprehensive overview of policy developments across the eight Standards and the broader startup ecosystem. Chapter 3 synthesises the main policy changes over the past 12 months and anticipated measures for the coming year, presenting an aggregated view of progress at the Standard level and at the country level. Chapter 4 delivers a detailed implementation analysis organised around the eight Standards. Each of the eight subchapters is dedicated to one Standard and unfolds the findings at multiple levels of granularity. The analysis begins with an overview of the Standard's current performance and the progress registered since 2024. This is followed by a systematic breakdown across substandards and their constituent indicators, with country-level results disaggregated to reveal patterns of implementation, disparities, and sectoral variation. This approach enables both a granular assessment of progress at the indicator level and a holistic understanding of how Standards are evolving across different national contexts. Chapter 5 concludes the report by synthesising key takeaways and drawing out the policy implications of the 2025 findings.

By tracking the evolving framework of the European startup and scaleup ecosystem, the SNS Report serves as a key reference for stakeholders across Europe. It provides a detailed assessment of the implementation status of the eight Standards, offering a comprehensive and transparent overview of participating countries' progress in building robust and competitive startup environments. The report situates these developments within the broader EU strategy for fostering dynamic, innovation-driven, and sustainable economies. Importantly, the SNS Report is not designed to serve as a ranking or performance index of national ecosystems. It is also important to note that the SNS Report focuses exclusively on monitoring public policy inputs – that is, the policy measures, frameworks, and institutional mechanisms that governments have put in place to support startup ecosystems. The report does not assess policy outputs (such as the number of startups created or capital raised) or measure ecosystem impacts (such as job creation, economic growth, or innovation outcomes). Rather, it functions as a policy-tracking instrument, providing a consistent, evidence-based framework to evaluate the alignment of national policies with shared European best practices. This distinction is crucial for interpreting the report's findings: high scores reflect strong policy frameworks and institutional commitments, but do not directly measure the success of these policies in generating entrepreneurial activity or economic returns.

Through its annual reports, ESNA offers a transparent, data-driven foundation for understanding progress and for improving policies that strengthen the role of startups and scaleups as key drivers of innovation, job creation, and sustainable economic growth in Europe.



Methodology

02.

2. Methodology

2.1 Introduction

The 2025 edition of the Startup Nations Standard (SNS) Report builds on the foundation established in previous editions while introducing refinements that enhance its analytical precision and policy relevance. It continues to assess the implementation of the eight Startup Nations Standards across participating countries, offering an evidence-based overview of progress in fostering strong, competitive, and inclusive startup ecosystems in Europe.

This chapter provides a detailed description of the methodology adopted in this year's edition of the SNS Report, the annual monitoring exercise that tracks progress in implementing best practices underpinning robust startup ecosystems.

A sound and transparent methodology is essential not only to ensure the credibility of the findings but also to support their effective use in policymaking. As in previous editions, the objective is to provide a structured, evidence-based overview of how far each country has progressed in aligning with the SNS framework.

The methodology is designed to evolve gradually, improving its precision, addressing feedback from participating countries and responding to the growing complexity of the policy landscape. The 2024 edition represented a step forward in terms of clarity, consistency and robustness of results, with the incorporation of several methodological improvements compared with 2023. Building on this foundation, the 2025 edition maintains a high degree of comparability with previous results. All methodological changes introduced this year have been clearly documented, particularly where they may affect comparability, while further refining the accuracy and policy relevance of the analysis.

This process benefited from the involvement of the Steering Committee, whose work in 2025 centred on the discussion and validation of the report's main findings, offering expert advice to ensure their accuracy, relevance and policy coherence.

2.2 Framework

The eight Startup Nations Standards serve as ESNA's benchmark for evaluating countries' performance in creating and developing startup-friendly policies. They were first established in the *EU Startup Nations Standard of Excellence ministerial declaration*, signed by 26 EU Member States plus Iceland in March 2021, and later (in 2024) endorsed by Ukraine. Each Standard defines a key dimension of an enabling startup ecosystem, such as swift company registration, access to finance, or digital-by-default public services.

To enable systematic monitoring, the broad principles expressed in the declaration were translated into a structured set of substandards, each reflecting a specific aspect of implementation. This process involved converting the narrative content of each Standard into concrete, observable components while preserving the policy intent of the original text. The substandards provided the foundation for selecting the indicators that form the analytical backbone of the SNS Report.

This selection process followed established principles for indicator design, prioritising policy relevance, analytical soundness, timeliness, and data accessibility, to ensure that each indicator accurately reflects the implementation of a specific element of the Standards.

Most indicators are based on data collected through the annual ESNA survey, specifically designed to capture the full range of dimensions covered by the eight Standards. Survey responses are provided by the network of national Focal Points, designated by members of

each ESNA signatory country, who are invited to complete the questionnaire over a period of approximately three months.

Throughout the reporting process, ESNA maintains close contact with the Focal Points. An introductory webinar is held before the opening of the survey period to prepare and support countries in data collection. In parallel, ESNA's Standards & Policy team remains available to provide continuous guidance and individual assistance as needed.

The first section of the survey is divided into eight subsections, one for each Standard. Each subsection begins with a short introduction and includes a set of assessment questions of various types (yes/no, multiple choice, open-ended, etc.), based on the good practices outlined in the *EU SNS declaration*. While the number of core questions is fixed, the total number shown to each country may vary depending on their answers: several questions include conditional sub-questions that typically request further clarification, which appear only when relevant. Many questions are designed to collect supporting evidence, which serves as the basis for scoring. At the end of each subsection, an open field allows Focal Points to provide any additional information they consider relevant.

The second section of the survey focuses on recent developments in each country's startup ecosystem. Focal Points are invited to report on significant policy changes over the past 12 months, as well as new measures under preparation or planned for implementation, together with their expectations for the year ahead.

Each indicator is scored on a categorical scale from 0% to 100%, reflecting the respective level of implementation: 100% denotes full implementation, 0% denotes non-implementation, and intermediate values represent partial implementation². As the survey data are primarily qualitative, they must be transformed into quantitative values. Scoring criteria were tailored to each question and applied consistently across countries based on the evidence provided. Cross-checks were conducted using the supporting material submitted by the focal points, to ensure both accuracy and consistency in the scoring process.

For a small number of indicators not based on categorical criteria, and for which fixed thresholds for implementation could not be defined (Indicators 4.3.2, 4.3.3, and 5.2.2), a min-max transformation was applied to enable comparability across countries. This method subtracts the minimum observed value from each data point and divides the result by the range of observed values (i.e. the difference between the maximum and minimum). The lowest value in the sample is thus set to 0%, the highest to 100%, and all others are proportionally distributed in between.

In addition to survey responses, five indicators (1.3.1, 2.2.2, 3.2.2, 5.2.2 and 8.1.1) are based on third-party data sources, such as the European Commission and the OECD. These sources were selected for their thematic relevance to the eight Standards and for the methodological robustness of their data.

Indicator 1.3.1 is based on the “cross-border services” dimension of the European Commission’s eGovernment Benchmark, which measures the extent to which citizens and entrepreneurs from other European countries can access online information and services in a usable and integrated way, including through electronic identification and eDocuments. For the SNS Report, the score for Indicator 1.3.1 corresponds to the overall average of the cross-border services dimension in the eGovernment Benchmark, calculated by aggregating results across multiple life events and associated services. No specific life events were selected;

² Partial implementation may also mean that no evidence was provided.

instead, the composite dimension score was used in its entirety. As the eGovernment Benchmark already reports values on a 0–100 scale, these could be directly incorporated into the Scoreboard without further transformation.

The OECD and the Bertelsmann Stiftung have developed a comprehensive benchmarking tool to assess how well countries attract and retain skilled migrants. The *Indicators of Talent Attractiveness* evaluate countries across several dimensions for four categories of migrants: highly educated workers (including those with Master's or Doctoral degrees, ISCED 7–8), entrepreneurs (including business founders and active investors), international students in higher education and startup founders.

For the purpose of this report, the SNS Scoreboard uses the composite index for *entrepreneurs* for indicator 2.2.2. While the index for startup founders would have been conceptually closer to the focus of this analysis, it covers a smaller number of countries. The entrepreneurial index, by contrast, offers broader coverage and allows for more consistent comparisons across Europe. The OECD index is calculated from multiple indicators that are normalised to a 0–1 range; in constructing the corresponding Scoreboard indicator, this scale was converted to a 0–100 scale to align with the overall scoring framework used throughout the report.

Indicator 3.2.2 is based on the “*minority shareholders and bureaucracy*” factor from the Not Optional ranking, which assesses the overall friendliness of national frameworks for employee stock options. This factor evaluates whether the exercise of stock options results in employees becoming minority shareholders with associated consultation rights, the implications this has for the treatment of leavers, and the administrative burden and costs involved in creating and maintaining stock option plans. For the purposes of the SNS Scoreboard, the indicator draws directly on the country scores compiled in the Not Optional study, which are reported on a five-point scale (5 = most positive and beneficial). These scores reflect the degree to which minority shareholder rules and bureaucratic requirements may discourage the use of stock options in each country. To ensure consistency with the Scoreboard framework, the original five-point scale was rescaled to a 0–100 scale, enabling comparability with other indicators.

Indicator 5.2.2 is derived from the “*Intellectual property receipts as a percentage of total trade*” variable, as reported in the Global Innovation Index published by the World Intellectual Property Organization (WIPO). This indicator measures the share of revenues from intellectual property in a country’s overall trade flows, providing an indication of the extent to which the national economy generates value from knowledge-intensive assets. For the Scoreboard, the original values published in the Global Innovation Index were used as input, and a min-max normalisation was applied to rescale results to a 0–100 scale, ensuring consistency within the report’s analytical framework.

Finally, Indicator 8.1.1 draws on the Index of Digital Public Services for Businesses from the Digital Economy and Society Index (DESI) published by the European Commission. This index assesses the extent to which companies can access public services online in a fully digital and integrated manner, covering services such as company registration, reporting obligations, and permits. For the Scoreboard, the country values from DESI were used directly, and since the index is already reported on a 0–100 scale, no further transformation was required.

Following common practice among international organisations such as the OECD, the European Commission, and the World Bank, the degree of implementation of the best practices outlined in the SNS declaration is measured through a composite index.

By aggregating information into a single score, a composite index provides a more straightforward basis for interpretation than analysing trends across multiple individual indicators. It helps communicate complex policy developments to a broader audience and enables comparative analysis between countries, facilitating benchmarking and the consistent tracking of progress over time on complex policy dimensions.

Despite their usefulness, composite indexes also have potential drawbacks. They are sensitive to methodological choices such as weighting and normalisation, and if poorly constructed or misinterpreted, they may convey misleading policy messages, invite simplistic conclusions, or obscure weaknesses in specific areas. For these reasons, the composite index presented here is intended to complement — not replace — the detailed insights available through the full set of disaggregated results, including both the Scoreboard and country-level profiles.

The composite index is calculated as the simple average of the eight standards. Each standard score results from the simple average of its respective substandards, which, in turn, are the simple average of the indicators they comprise.

That is:

$$I = \frac{1}{8} \sum_{s=1}^8 \left(\frac{1}{n_s} \sum_{i=1}^{n_s} \left(\frac{1}{k_i} \sum_{j=1}^{k_i} x_{ij} \right) \right)$$

where

I : score of the overall index

n_s : number of substandards composing standard s

k_i : number of indicators composing substandard i , of the respective standard s

x_{ij} : score of indicator j in substandard i .

For presentation purposes and to enhance readability, scores in the report are generally displayed rounded to the nearest whole number. However, all underlying calculations are performed using the full, unrounded values to preserve accuracy.

This calculation is carried out at both the country implementation level and the Standards implementation level. At the Standards level, the score of indicator j within substandard i is determined as the simple average of countries' scores for that indicator. Since the analysis is based on the EU Startup Nations declaration of Excellence, which does not differentiate between the relative importance of best practices, simple averages were used throughout. While alternative weighting schemes could have been considered, assigning different weights to indicators would not have been consistent with the principles and spirit of the declaration.

2.3 Data for 2025 edition

As in 2024, the 2025 Scoreboard comprises a total of 41 indicators. The table below provides a detailed breakdown of these indicators, organised by Standard and corresponding substandards.

Standard	Substandard	Indicator
SNS #1 “Fast Startup Creation, Smooth Market Entry”	1.1 Time & Cost	1.1.1 Number of days to establish a business online
		1.1.2 Number of days to establish a business in the commercial registers
		1.1.3 Administrative costs for establishing a startup
	1.2 Startup Fast Lane	1.2.1 Existence of an online service to set up a company
		1.2.2 Existence of fast lane & helpdesk available for entrepreneurs
		1.2.3 Existence of a virtual helpdesk for regulatory issues for startups and scaleups
	1.3 Cross-Border Services	1.3.1 Index of the cross-border services
		1.3.2 Utilisation of legal documents from other EU countries for startup establishment or expansion within the single market
SNS #2 “Attracting and Retaining Talent”	2.1 Visa Applications	2.1.1 Time to complete visa applications for founders
		2.1.2 Time to complete visa applications for experienced workers
	2.2 Programmes for Talent	2.2.1 Existence of return of tech diaspora programmes
		2.2.2 Index of talent attractiveness for entrepreneurs
SNS #3 “Stock Options”	3.1 Taxation	3.1.1 Taxed only upon cash liquidity
	3.2 Non-Voting Rights	3.2.1 Existence of stock options with non-voting rights for startups
		3.2.2 Minority Shareholders & Bureaucracy
SNS #4 “Innovation in Regulation”	3.3 Stock Options Scheme	3.3.1 Existence of a country-specific stock options scheme
	4.1 “Think Small First”	4.1.1 “Think Small First” principle implementation level
		4.2.1 Existence of compliance exemptions/alternatives for startups
	4.2 Compliance Exemptions	4.3.1 Existence of regulatory sandboxes
		4.3.2 Number of established regulatory sandboxes
		4.3.3 Number of startups involved in regulatory sandboxes consortia
SNS #5 “Innovation in Procurement”	5.1 Procurement Opportunities	5.1.1 Existence of administrative impediments to startup participation
		5.1.2 Existence of incentives for public buyers and procurement services to procure innovation from startups
	5.2 Intellectual Property Rights	5.2.1 Possibility of ownership of IPR for startups in innovation procurement
		5.2.2 Intellectual property receipts as percentage of total trade
		5.2.3 Existence of exceptions for public sector Intellectual Property Rights (IPR) ownership based on overriding public interests
	5.3 Open-Source Assets	5.3.1 Existence of incentives for open-source assets contribution
S N S #6 “	5.4 Tech Transfer Policies	5.4.1 Existence of policies for smooth tech transfer
	6.1 Direct Access to Finance	6.1.1 Existence of equity instruments funded by the RRF to startups

Standard	Substandard	Indicator	
SNS #7 “Social Inclusion, Diversity and Protecting Democratic	6.2 Indirect Access to Finance 6.3 Tax Relief Measures	6.1.2 Existence of public grants, loans and other non-equity instruments	
		6.1.3 Utilisation of EIB, promotional banks and dedicated vehicles distributing funds to established/professional VC	
		6.2.1 Initiatives to diversify private capital for high-growth startup co-investment	
SNS #7 “Social Inclusion, Diversity and Protecting Democratic	6.3 Tax Relief Measures	6.3.1 Existence of tax relief for business angels	
	7.1 Incentives for startups 7.2 Incentives for Founders	7.1.1 Existence of national awards and policies for startup role models	
SNS #8 “Digital First”		7.1.2 Existence of social inclusion mobilisation initiatives	
		7.1.3 Existence of incentives for diversity hiring	
7.2 Incentives for Founders	7.2.1 Support to founders from underprivileged backgrounds		
SNS #8 “Digital First”	8.1 Digital First 8.2 Knowledge Sharing	8.1.1 Index of digital public services for businesses	
		8.1.2 Digital public services availability by percentage of areas covered	
		8.1.3 Existence of national digitalisation strategy	
	8.2 Knowledge Sharing	8.2.1 Existence of proactive engagement for digital knowledge sharing and best practices	

Table 1. List of indicators by (sub)standard

Source: ESNA

In the 2025 edition, the structure of Standard #6 – “Access to Finance” has been revised to align more precisely with the wording and intent of the Ministerial declaration. In previous editions, this Standard was divided into “Public Grants”, “Indirect Access to Finance”, and “Tax Relief Measures”. However, this formulation implicitly contrasted direct and indirect types of funding, rather than types of access to finance, as originally intended in the declaration.

The declaration draws a clear distinction between direct access, referring to mechanisms through which public instruments (such as RRF funds, promotional banks, or the EIB) enhance startups’ access to venture capital and indirect access, which encompasses policy initiatives that mobilise and diversify private investment sources. The earlier structure blurred this conceptual boundary by focusing on funding modalities instead of access modes. The revised structure restores this conceptual clarity: Standard #6 now explicitly distinguishes between “Direct Access to Finance”, “Indirect Access to Finance” and “Tax Relief Measures”, thereby mirroring the original policy framing of the declaration.

While this revision enhances the conceptual coherence and alignment of Standard #6 with the Ministerial declaration, results should be interpreted with caution when comparing them to previous editions. The refinement of substandards and indicators was designed to ensure greater consistency with the declaration’s policy intent, which may affect strict comparability over time, though without altering the overall analytical direction of the standard.

The 2025 survey retained the same overall structure as in 2024. It comprised a total of 37 mandatory main questions, covering the eight Startup Nations Standards. Among these, 34 questions contributed directly to the Scoreboard scoring, while three provided contextual information relevant to the characterisation of national startup ecosystems but were not used

for scoring purposes. In addition to the main questions, the questionnaire included 31 conditional sub-questions, displayed only when relevant based on the answers provided. These follow-up items were designed to gather supporting details and evidence, and their responses were fully considered for scoring. Furthermore, each Standard concluded with an open and optional question, eight in total, allowing Focal Points to provide any additional information they deemed important, particularly to complement their previous answers. Although optional, these qualitative inputs were also reviewed and considered in the scoring and validation process. The detailed description of each indicator, including its correspondence to the survey questions and the specific scoring criteria applied, is provided in Annex 2. This annex serves as the reference point for understanding how the indicators were operationalised and scored.

For this edition, the questionnaire was open from 18 June to 5 September 2025, and was administered via the Typeform online platform, which served as the official channel for data submission. As in 2024, Focal points were also provided with a Word version of the questionnaire to facilitate internal coordination. This complementary format enabled them to share specific sections or questions with the relevant national authorities or agencies holding the required information, ensuring that all responses were based on the most accurate and up-to-date data available.

In total, 24 countries participated in the 2025 edition of the survey, maintaining the same level of coverage as in 2024. The participating countries were Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Estonia, France, Germany, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, and Ukraine. While the number of respondents remained unchanged, the composition of the sample evolved slightly, with Latvia joining the 2025 round and Denmark not participating this year. Overall, the sample provides broad geographical representation across Europe. Collectively, the participating countries account for approximately 94% of the EU's GDP, 93% of its population, 92% of enterprises and almost 93% of total employment, including skilled employment.

Not all participating countries answered every question in the 2025 survey. Consequently, at the Standard level, the ESNA score for each indicator was calculated using only the subset of countries that provided valid responses. The corresponding country sample for each indicator is detailed in Annex 2. This approach safeguards the integrity of each indicator's results but also implies that different indicators may be based on slightly different samples. When comparing the 2025 results with those from 2024 and 2023, these variations in coverage should therefore be taken into account, as they may influence cross-year comparability.

Compared with the 2024 edition, the 2025 exercise introduced several refinements to the data collection and validation process. In addition to maintaining regular exchanges with national focal points and providing on-demand support throughout the survey period, a second webinar was organised closer to the submission deadline to address questions arising during data collection. To enhance the reliability and consistency of the data, systematic quality-control procedures were implemented. These included automated consistency checks using R software to identify internal discrepancies, as well as desk research to cross-verify and contextualise responses where necessary. Together, these mechanisms strengthened the robustness of the dataset underpinning the 2025 edition. However, given these methodological adjustments, some degree of caution is warranted when comparing results across editions, as changes in procedures may have a marginal impact on data comparability.

Regarding external indicators, the eGovernment Benchmark methodology was updated in 2025. In the new framework, the cross-border services dimension, on which indicator 1.3.1 is based, was discontinued, with three of its underlying indicators redistributed across the revised three-pillar structure. Specifically, “Cross-border Online Availability” was retained under “Online Service Delivery”; “Cross-border eID” was relocated to “Interoperability Signifiers”; and “Cross-border User Support” was moved to “User-Friendly Portals”. The fourth component, “Cross-border eDocuments”, was discontinued as a standalone measure.

As a result, a bridging solution was developed for the 2025 edition. Indicator 1.3.1 was recalculated from the three remaining cross-border components. Concretely, the indicator was computed as a weighted aggregate that preserves the original sub-dimension design: “Cross-border Online Availability” (50%), “Cross-border User Support” (25%) and “Cross-border Key Enablers” (25%). As the Key Enablers sub-dimension now comprises only the “Cross-border eID” measure, its score is taken directly as the value for that sub-dimension. This procedure maintains the hierarchical aggregation logic of the original eGovernment Benchmark specification (aggregation by sub-dimension rather than by flat averaging of indicators), therefore preserving the relative importance assigned to each policy area in the earlier series. A full account of the alternative bridging approaches considered, including statistical tests and sensitivity analysis, is provided in Annex 3. It should be noted that this methodological adjustment introduces a break in series, meaning that the 2025 results are not directly comparable with those from 2023 and 2024.

As mentioned earlier, indicator 2.2.2 is derived from the OECD Talent Attractiveness Index (using the “entrepreneur” profile). This index is not produced on an annual basis: the first edition was published in 2019, followed by a second in March 2023, which provides the most recent available data. Accordingly, the 2025 SNS Report relies on the 2023 results — the same data used in the 2024 edition, meaning that no new measurement is available for this year. Consequently, the indicator should not be interpreted as evidence of stability or absence of change, and this limitation should be considered when assessing developments within the relevant substandard, standard, or composite index.

Taken together, these methodological refinements and adjustments enhance the internal coherence and reliability of the 2025 dataset. Nonetheless, certain limitations must be acknowledged. Comparability across years remains constrained by factors such as changes in indicator frameworks, evolving data sources, and variations in survey participation. In particular, when comparing ESNA scores between 2024 and 2025, it should be noted that the set of participating countries is not identical: while overall participation remained constant at 24, Latvia joined in 2025 and Denmark did not.

Cross-country comparability is likewise influenced by differences in data availability, institutional practices, and policy interpretations. Moreover, the absence of a shared, operationally consistent definition of what constitutes a “startup” across jurisdictions continues to complicate both longitudinal and cross-sectional analyses. These caveats should therefore be borne in mind when interpreting score variations or drawing comparative conclusions from the 2025 results.

2.4. Steering Committee

In the 2025 edition, a Steering Committee was once again established to provide external expertise and independent guidance to the ESNA team. Unlike in the previous edition, where the Committee’s primary focus was the methodological development of the framework, the 2025 Committee concentrated on the analysis and interpretation of results. With the overall



methodological structure now consolidated, the Committee's contributions were directed mainly towards the final stages of the process, providing critical feedback on the preliminary findings and draft report.

The Steering Committee played a key role in validating the robustness and policy relevance of the conclusions drawn from the 2025 data. Its members provided complementary perspectives rooted in their respective areas of expertise, helping to contextualise country results, refine the analytical narratives, and ensure a balanced representation of diverse policy experiences across Europe.

The 2025 Steering Committee brought together five experts representing diverse institutional and professional backgrounds, from the Joint Research Centre of the European Commission, the European Investment Bank (EIB), the EISMEA/European Innovation Council (EIC), academia and independent consultancy. Short biographies of the members are presented in Annex 4.

Overview of the Standards and the Startup Ecosystem

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3. Overview of the Standards and the Startup Ecosystem

In 2025, the implementation of the Europe Startup Nations Standards reflects steady and consistent progress in the policy environment for the startup ecosystem. Continuing the positive trajectory observed since 2023, the overall SNS implementation level reached 70%, representing a 9-percentage-point increase compared with 2024. This growth mirrors the previous year's pace, which also saw a 6-point improvement from 2023. Standard #1 – “Fast Startup Creation, Smooth Market Entry” and Standard #6 – “Access to Finance” are the best-performing standards, with a 77% implementation rate³, followed by Standard #8 – “Digital First” at 75%. At the lower end of the spectrum, Standard #4 – “Innovation in Regulation” continues to show the lowest level of implementation at 55%, followed by Standard #5 – “Innovation in Procurement” (65%), which was the third-lowest performing standard in 2024 (Figure 3).

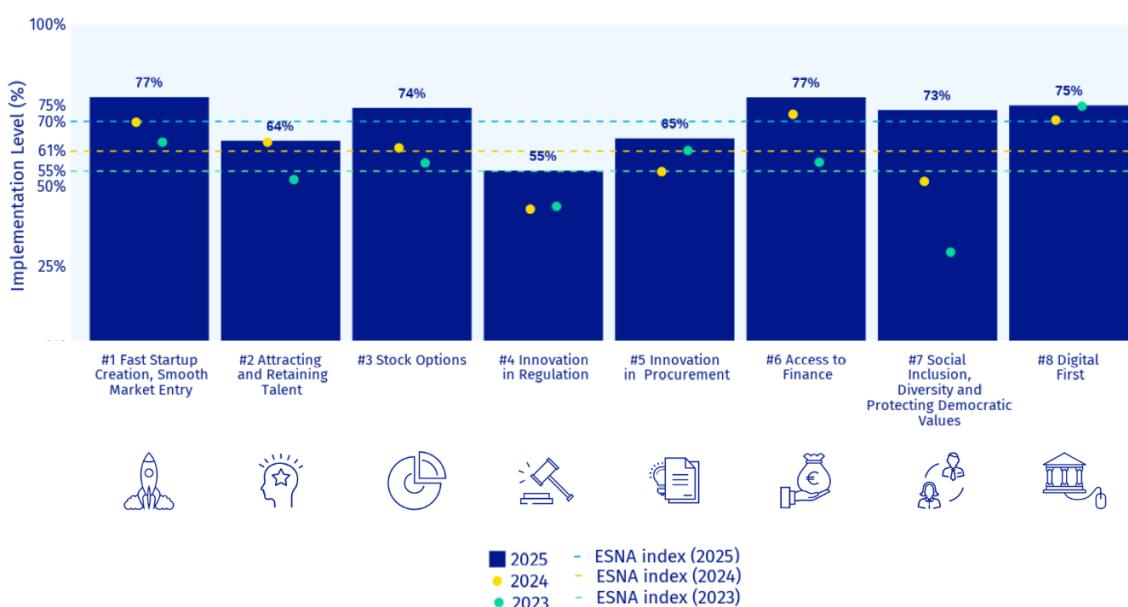


Figure 3. Implementation level of the eight standards for ESNA

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023) and external indicators

Over the past year, the European entrepreneurial policy ecosystem has seen the introduction of new policies and initiatives, contributing to the positive evolution observed. Standard #7 – “Social Inclusion, Diversity and Protecting Democratic Values” recorded the most substantial progress (22 p.p.), reaching a 73% implementation level. It now stands above the overall ESNA implementation level, together with Standards #1 – “Fast Startup Creation, Smooth Market Entry”, #3 – “Stock Options”, #6 – “Access to Finance”, and #8 – “Digital First”, which also scored above the average. Standards #3 – “Stock Options” and #4 – “Innovation in Regulation” are the other two having the largest increases, while Standard #2 – “Attracting and Retaining Talent” records only a marginal improvement of 0.3 percentage points, remaining practically unchanged compared to 2024.

³ In fact, Standard #1 achieved a slightly higher score at the decimal level, meaning it narrowly outperformed Standard #6 in the underlying data.

It is worth noting that the standards with the lowest scores in 2024 showed the strongest progress in 2025 (see Annex 5). This pattern suggests a broad-based effort among participating countries to close gaps in policy areas critical to startup development. Nevertheless, significant heterogeneity in achieved implementation levels remains, as illustrated in Figure 4.

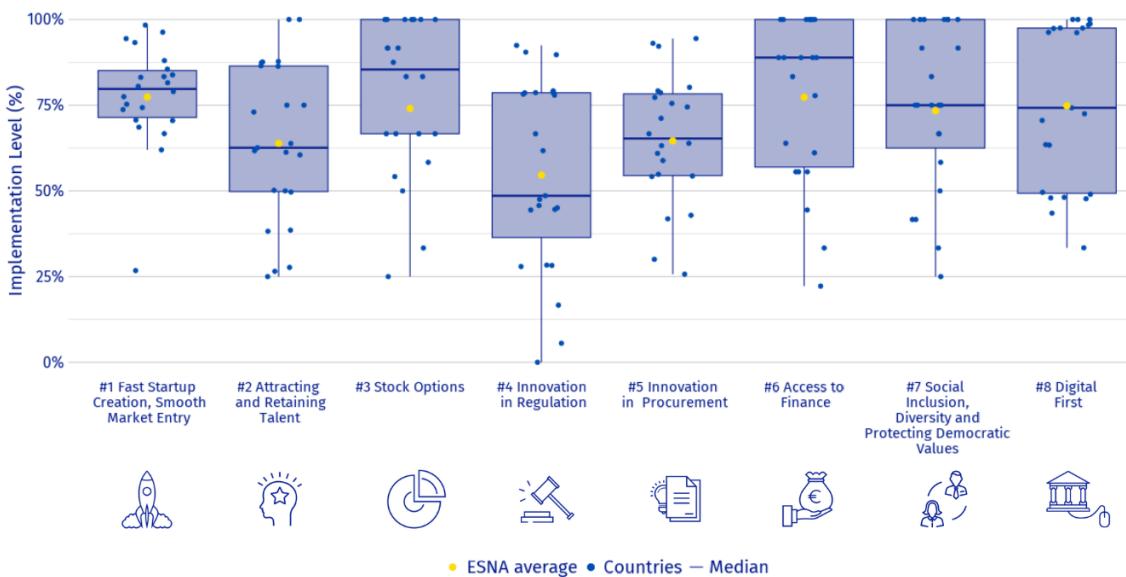


Figure 4: Distribution of implementation levels for the eight standards

Source: ESNA, based on official data from Member Countries (Survey 2025) and external indicators

Standard #1 – “Fast Startup Creation, Smooth Market Entry” recorded moderate progress, increasing by 8 percentage points to reach an implementation level of 77%⁴, above the overall ESNA average of 70%. In addition to being one of the two top performing standards, it also shows a high degree of convergence across countries, reflecting shared policy efforts to facilitate faster and less costly startup creation processes. While no country has yet achieved full implementation, Malta (98%), the Netherlands (96%) and Spain (94%) are close to completing this standard.

Over the past year, Bulgaria and Czechia registered the most significant progress in this area (42 and 28 p.p., respectively). In Bulgaria, the introduction of a new legal form – the Variable Capital Company (VCC) in December 2024 has already resulted in the registration of over 500 companies, simplifying and increasing flexibility in company formation for founders. In Czechia, progress stemmed from the full digitalisation of the trade licensing register, the elimination of redundant steps in company registration, and the recognition of selected foreign documents and signatures under the *EU Single Digital Gateway*. Looking ahead, Slovenia is expected to make further advances with the planned introduction of a simplified limited liability company, a new legal form specifically tailored to startups, which will reduce administrative barriers and costs for new founders.

Standard #2 – “Attracting and Retaining Talent” highlights common opportunities to strengthen talent attraction and retention across participating countries. This standard reached an implementation level of 64% in 2025, slightly below the overall ESNA implementation level

⁴ Although the rounded figures suggest a 7-percentage-point increase, the actual advancement was 8 percentage points, as calculations are based on unrounded values before presentation rounding.

of 70%. Despite notable achievements in return programmes for talent, a significant setback in visa processing times was observed, which helps explain why this standard shows only a marginal improvement in 2025 (0.3 p.p.) after the strong advance recorded in 2024. It is now the second lowest-performing standard. Yet, it is also one of only four standards where countries have achieved full implementation: Cyprus and Malta, which remain the only two countries to fully implement this Standard. Cyprus updated its Start-up Visa Scheme in 2025, and further developments are expected in Sweden, where the working group “*Work in Sweden*” has been tasked with helping non-EU talent join startups and supporting non-EU students to establish startups in the country.

Standard #3 – “Stock Options” reached a 74% implementation level, with an absolute increase of 12 percentage points, mainly due to the introduction of specific legislation governing stock-option schemes. This was the third-largest improvement among the eight standards, underscoring the growing relevance of equity-based incentives in European startup policy. Seven countries now achieve full implementation, four of which were already at this level in 2024; the remaining three include Slovakia, which rose 100 percentage points after a 2024 amendment on stock option taxation.

The low implementation of **Standard #4 – “Innovation in Regulation”** underscores the continued need to address the regulatory and administrative burdens faced by startups in participating countries. Regulatory barriers across the EU continue to constraint scaling up, especially for young firms, due to complex, costly and fragmented systems (Draghi, 2024). With an implementation level of 55%, Standard #4 – “Innovation in Regulation” remains the lowest-performing, even after a 12-percentage-point increase, one of the highest improvements among the eight standards. This has also been one of the most active areas of support to Member Countries under ESNA’s Service Line⁵, generating the second-highest number of requests. Full implementation has not yet been achieved in any participating country, and persistent disparities across national results reinforce the need for intensified efforts.

New policy initiatives adopting the “*Think Small First*” principle and introducing compliance exemptions for SMEs and startups have improved implementation in many participating countries, including Italy, Lithuania, Luxembourg, Germany, Ireland, and Ukraine. Moreover, the Irish Government has also committed to systematically applying SME testing into all new legislation. Though not specifically directed at startups, in Belgium, the Flemish Government’s “*Regelrecht*” aims to reduce regulatory pressure through public consultation with the citizens, businesses and other stakeholders. In Germany, the “*Fourth Bureaucracy Reliefs Act*”, adopted earlier this year, reduces administrative burdens for companies. Additionally, Germany’s draft “*Regulatory Sandboxes Act*”, adopted by the Federal Cabinet, aims to create unified standards for regulatory experimentation, marking further progress in this area.

Standard #5 – “Innovation in Procurement” currently ranks as the third lowest-performing standard, with an implementation level of 65%, having surpassed Standard #2 – “Attracting and Retaining Talent” but fallen behind Standard #7 – “Social Inclusion, Diversity and Protecting Democratic Values”. Driven largely by improvements in tech transfer policies and startup participation in public procurement, it registered an increase of 10 percentage points. However, no country has yet reached full implementation, although Bulgaria, Italy, Slovenia and Ukraine recorded notable progress (25, 22, 33 and 23 p.p., respectively).

⁵ ESNA’s Service Line offers tailored support to Member States, helping advance the implementation of the eight SNS through practical solutions, expert guidance, and best practices from across Europe.

Italy launched the 2025 “*Call for Technology Transfer Offices*” to fund new university projects, and Sweden adopted a new “*Research and Innovation Bill*” supporting commercialisation of research and expanding testbeds for emerging technologies. Luxembourg introduced a new spin-off scheme in May 2025 to fund research commercialisation. Ukraine introduced an innovative partnership procedure and is working on a new law on Public Procurement. Looking ahead, Portugal is preparing the “*Start from Knowledge*” programme to support startups originating from higher education institutions, promoting the transfer of scientific and technological knowledge to business. The Portuguese Institute of Industrial Property (INPI) Strategic Plan 2025–2030, approved in February 2025, also commits to raising awareness, training startups, and promoting intellectual property activities.

One of the two top-performing standards, **#6 – “Access to Finance”**, achieved an implementation level of 77%. This is the standard which has generated the highest number of support request through ESNA’s Service Line, underscoring its central importance in national startup policies. Seven countries (Belgium, Cyprus, France, Poland, Portugal, Spain and Sweden) have reached full implementation (100%). Half of all participating countries scored above 80%. However, while regulatory barriers and market fragmentation are being addressed, further efforts are needed to improve financing conditions. Europe’s share of global venture capital funding has declined, accounting for just 5%, compared with 52% in the US and 40% in China (Draghi, 2024). European startups also face relocation pressures, as firms seek better financing conditions (ESNA, 2024).

Across participating countries, several new financing initiatives have been introduced. The Cyprus “*Equity Fund*” became the first venture capital fund in the country to receive investment from the European Investment Fund (EIF), alongside contributions from the Government of Cyprus and the RRF. Slovakia is developing a voucher mechanism with the European Innovation Council (EIC), while Italy, through the “*Scale Up Act*”, introduced tax incentives for early-stage investors. Czechia plans to introduce Business Angel incentives as part of its forthcoming “*Startup Act*” and has engaged with ESNA’s Service Line on this topic in 2025. Looking forward, Austria plans to create the red-white fund to crowd-in investments from institutional investors, while Bulgaria announced the launch of a €100 million Entrepreneurship Fund, a fund of funds, strengthening early and growth-stage financing infrastructure.

Several countries also launched dedicated programmes for tech startups. Poland introduced, in May 2025, the “*PFR Deep Tech*”, a €140 million fund of funds aimed at closing the deep-tech financing gap. France, through BPI France, set a goal of creating 500 deep-tech companies annually, while Estonia launched its “*Deep Tech Development Programme*”.

After two years of rapid improvement, **Standard #7 – “Social Inclusion, Diversity and Protecting Democratic Values”** reached an implementation level of 73%, rising from the lowest-performing standard in 2023 to the fifth best-performing in 2025. Seven countries – Belgium, France, Ireland, Lithuania, Luxembourg, Poland, and Spain – have achieved full implementation level. However, as shown in Figure 4, disparities persist, indicating a need for continued focus on countries lagging behind. The past year saw a marked increase in policies promoting entrepreneurship among underrepresented groups. Sweden strengthened its commitment to social innovation and inclusion through the Swedish Innovation Agency (Vinnova), while in France, the “*Parity Pact*” under the French Tech Mission, which promotes gender equality and inclusive governance, reached 700 startup signatories.

Finally, **Standard #8 – “Digital First”** maintained its strong performance, reaching an implementation level of 75%, above the ESNA average, with a 4 percentage-point increase over 2024. Three countries, Luxembourg, Malta and Ukraine, achieved full implementation

level, and other seven also exceeded 95% implementation. Digital transformation remains central to the EU's policy agenda, supporting progress under this standard.

Recent initiatives include Czechia's "eDoklady" mobile app, which provides digital official documents, reinforcing the national Digital First principle, and Spain's "National Forum of Emerging Companies", which held its first meeting in May 2025 to promote startup policies, coordinate actions, and foster regional entrepreneurial growth.

Additional developments include Belgium's federal plan for SMEs and the Netherlands updated startup policy strategy, both of which are expected to bring significant changes to their national entrepreneurial ecosystems across multiple standards.

At the national level, these policy developments translated into broadly positive progress across most participating countries. Compared with 2024, the SNS implementation level increased in 19 countries. More than half of participating countries perform above the ESNA average (Figure 5)⁶.

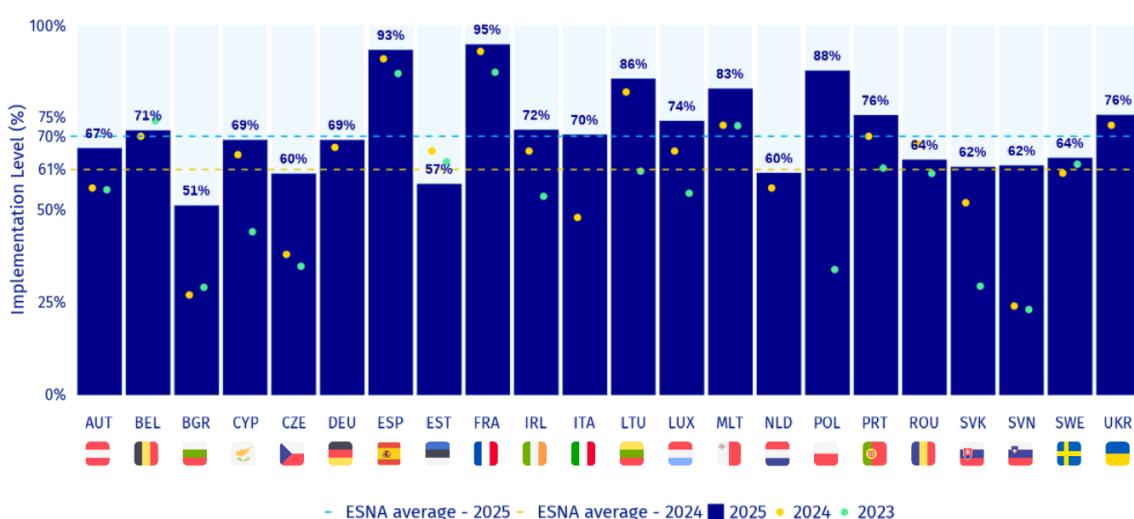


Figure 5: Overall score across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023) and external indicators

Compared with last year, the dispersion of results has decreased, suggesting greater convergence in implementation levels across countries. Moreover, countries with lower implementation levels in 2024 recorded the strongest improvements in 2025, reinforcing this trend towards convergence (see Annex 5). Bulgaria, Italy and Slovenia achieved the most substantial progress, with increases of 24, 23 and 38 percentage points, respectively. For the first time, no country recorded an implementation level below 40%, while the highest overall implementation level rose to 95%.

Table 2 presents the implementation levels of the SNS by country. France, Poland and Spain are the countries with the highest overall score this year. Spain and France had also achieved the most significant implementation levels in 2024, while no complete data were available for Poland last year. France, Poland and Spain perform strongly across multiple standards, with France exhibiting among the highest scores in seven standards, Spain in six, and Poland in

⁶ Croatia and Latvia did not provide enough data in order to compute an overall index.

four. Notably, all three countries achieve the highest scores for Standards #5 – "Innovation in Procurement", #6 – "Access to Finance", and #7 – "Social Inclusion, Diversity and Protecting Democratic Values". Interestingly, this correlation between Standards #5, #6 and #7 is not observed on average across all participating countries.

Overall, high implementation scores in one standard do not necessarily correspond high scores in others. Correlations between implementation levels at the country level remain low across most standards, with only a few moderate exceptions (see Annex 5).

Country	#1 Fast Startup Creation	#2 Attracting and retaining talent	#3 Stock Options	#4 Innovation in Regulation	#5 Innovation in Procurement	#6 Access to Finance	#7 Social Inclusion, Diversity and protecting democratic values	#8 Digital First
Austria	62%	88%	88%	49%	80%	44%	75%	48%
Belgium	74%	63%	50%	48%	64%	100%	100%	74%
Bulgaria	79%	75%	67%	0%	26%	56%	58%	49%
Cyprus	67%	100%	100%	28%	71%	100%	42%	44%
Czechia	77%	73%	83%	45%	55%	22%	75%	48%
Estonia	93%	50%	100%	44%	30%	56%	33%	50%
France	88%	87%	100%	92%	94%	100%	100%	96%
Germany	74%	27%	25%	90%	76%	89%	75%	96%
Ireland	71%	39%	58%	79%	63%	89%	100%	75%
Italy	27%	86%	92%	79%	43%	89%	83%	63%
Lithuania	86%	86%	67%	79%	79%	89%	100%	99%
Luxembourg	84%	64%	33%	62%	61%	89%	100%	100%
Malta	98%	100%	67%	79%	74%	78%	67%	100%
Netherlands	96%	38%	54%	46%	67%	64%	67%	48%
Poland	82%	60%	92%	78%	92%	100%	100%	98%
Portugal	83%	50%	100%	45%	54%	100%	75%	97%
Romania	75%	25%	100%	67%	42%	61%	75%	63%
Slovakia	71%	61%	100%	78%	54%	33%	25%	71%
Slovenia	81%	62%	100%	17%	59%	56%	50%	73%
Spain	94%	88%	83%	90%	93%	100%	100%	98%
Sweden	69%	28%	92%	6%	79%	100%	42%	98%
Ukraine	83%	75%	67%	28%	77%	83%	92%	100%

Top implementation level
 Above median implementation level (below top 6)

Bottom implementation level
 Below median implementation level (above bottom 6)

Table 2. ESNA Scoreboard 2025

Source: ESNA, based on official data from Member Countries (Survey 2025) and external indicators



Implementation Level by Standard

04.

4. Implementation Level by Standard

4.1 SNS #1 Fast Startup Creation, Smooth Market Entry

4.1.1 Overview

The first Standard of the EU Startup Nations Standard (SNS) declaration, “**Fast Startup Creation, Smooth Market Entry**”, rests on the fundamental premise that the ability to establish a business swiftly, at low cost, and with minimal administrative complexity is a prerequisite for a dynamic and competitive startup ecosystem. By setting explicit targets, the declaration translates broad policy orientations into **quantifiable benchmarks**.

From an economic standpoint, it is well established in the academic literature that lengthy and costly registration procedures correlate negatively with business density and early-stage innovation rates⁷. Indicators such as the *OECD Product Market Regulation Index* and the *World Bank B-Ready* (formerly *Ease of Doing Business Index*) measures also highlighted the simplification of business creation as a key determinant of entrepreneurial dynamism.

The provision for completing registration both online and offline responds to the dual objective of ensuring universal accessibility while advancing the transition towards fully digital administrative processes. This approach, together with the mutual recognition of legal documentation, aligns with the *Single Digital Gateway Regulation* (EU) 2018/1724⁸, which requires essential administrative procedures be available online and interoperable across Member States, enabling businesses to complete them digitally from start to finish.

While administrative simplification facilitates company formation, the “startup fast lane” component recognises that the ease of incorporation holds limited value unless accompanied by equally efficient mechanisms to navigate regulatory and informational barriers. The *Single Digital Gateway Regulation* also acknowledges that businesses, particularly those operating across borders, continue to face fragmented, unreliable and linguistically opaque information dispersed across multiple national websites and administrative layers. By requiring Member States to provide clear, comprehensive and operational information on applicable rules and procedures, and to make essential processes fully available online, the Regulation aims to eliminate the informational asymmetries and technical barriers that undermine the freedom of establishment within the Single Market.

The startup fast lane advances this vision in two complementary ways. First, through a centralised online portal, it consolidates guidance on administrative procedures and funding opportunities into a single, quality-assured interface, reducing the transaction costs and uncertainty traditionally associated with business registration and early market entry. Second, the establishment of a virtual helpdesk for cross-border entrepreneurs gives practical effect to the Regulation’s requirement that users encountering unclear procedures or obstacles to the exercise of their rights must have access to assistance services.

The third provision of the Standard, accepting legal documents from other EU jurisdictions as valid proof for incorporation or for establishing a subsidiary, extends this logic of administrative interoperability to the evidentiary layer of business creation. It is conceptually aligned with the *Once-Only Principle* and the *European Interoperability Framework*, both of which aim to ensure that data, certificates and official records issued in one Member State can be securely

⁷ See, for instance, Audretsch et al. (2024), Chambers & Munemo (2019), Djankov et al. (2002) and Klapper & Love (2016).

⁸ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32018R1724>

reused in another without unnecessary repetition or verification. In practice, this means that entrepreneurs should not be required to resubmit information or documentation already validated by a competent authority elsewhere in the EU. Such mutual recognition mechanisms are essential to realising the full potential of the Single Digital Gateway — moving beyond digitalisation as mere procedural conversion, towards an integrated, cross-border administrative ecosystem that actively facilitates innovation and mobility within the Single Market.

Taken together, these three dimensions of Standard #1 — low-cost and rapid company formation, the startup fast lane and the mutual recognition of legal documents — form a coherent architecture aimed at reducing both the administrative and informational burdens associated with starting and expanding a business within the EU. The following analysis turns from the conceptual framework to the empirical assessment of ESNA's performance.

ESNA achieved an implementation level of 77% for Standard #1 in 2025, representing an improvement of 8 percentage points compared with its 2024 score of 70%⁹. This indicates steady progress in the overall implementation of measures under this standard across participating countries (Figure 6).

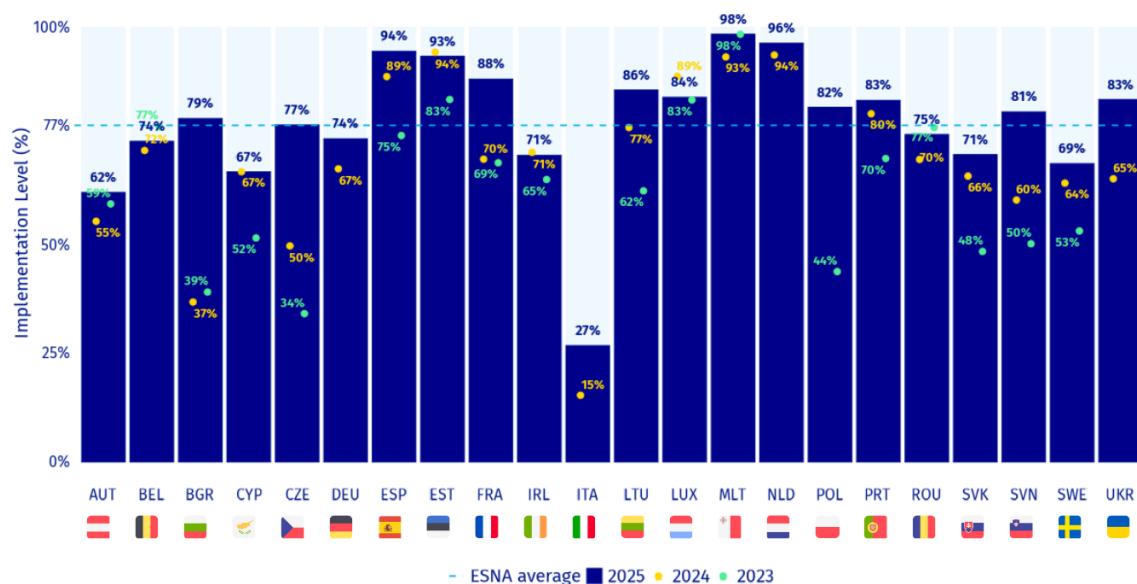


Figure 6. Implementation level of SNS #1 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023) and eGovernment Benchmark (European Commission)

The 2025 assessment confirms a generally positive trajectory in the implementation of Standard #1 with Malta (98%), the Netherlands (96%) and Spain (94%) having the highest score. Seventeen countries recorded improvements in their implementation levels, with three achieving particularly substantial gains: Bulgaria (42 p.p.), Czechia (28 p.p.) and Slovenia (20 p.p.). A small number of countries experienced minor declines, reflecting the overall pattern of steady advancement and increasing convergence towards higher levels of implementation for this Standard.

In operational terms, Standard #1 translates into:

⁹ Although the rounded figures suggest a 7-percentage-point increase, the actual advancement was 8 percentage points, as calculations are based on unrounded values before presentation rounding.

- i) the ability to establish a legal entity, either online or offline, within one day and for a cost not exceeding €100;
- ii) a startup fast lane, combining (a) a centralised online information portal on administrative requirements and funding opportunities, and (b) a virtual helpdesk to support startups or scaleups from other Member States encountering regulatory or administrative barriers; and
- iii) the acceptance of legal documents from other EU jurisdictions as valid proof for incorporation or for the creation of a subsidiary within the Single Market.

These three operational elements correspond respectively to Substandard 1.1 – “Time & Cost”, Substandard 1.2 – “Startup Fast Lane”, and Substandard 1.3 – “Cross-Border Services”, for which the implementation levels are shown in Figure 7.

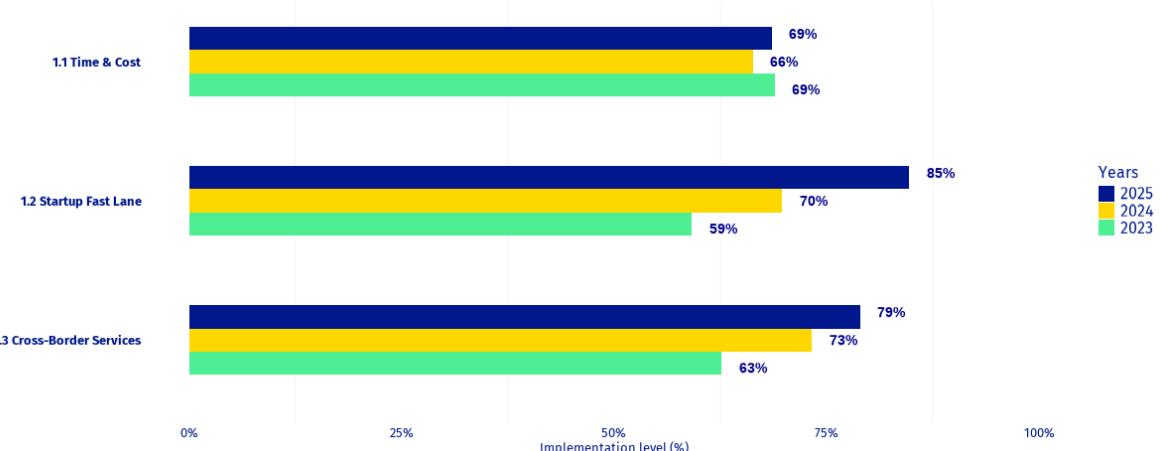


Figure 7. Implementation level of SNS #1 substandards for ESNA

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023) and eGovernment Benchmark (European Commission)

Substandards 1.2 – “Startup Fast Lane” and 1.3 – “Cross-Border Services” show implementation levels above the average for Standard #1, while the opposite holds for Substandard 1.1 – “Time & Cost”. The latter displayed the lowest implementation level also in 2024. The overall increase of 8 percentage points in Standard #1 was mainly driven by improvements observed in Substandard 1.2, as illustrated Figure 8.

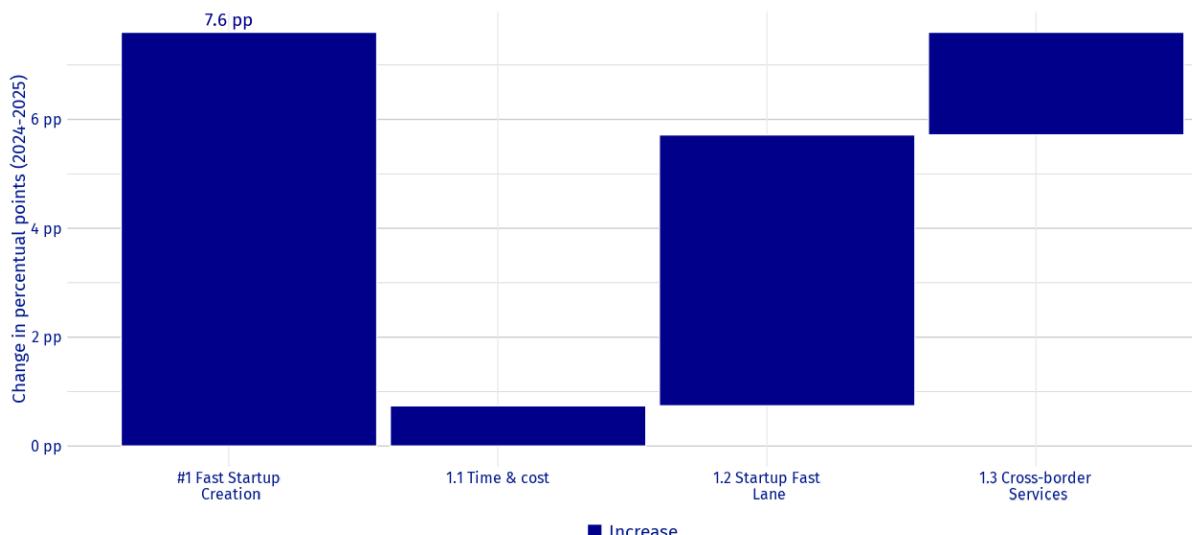


Figure 8. Decomposition of the change in SNS #1 implementation level by substandard (2024–2025)

Source: ESNA, based on official data from Member Countries (Survey 2025 and 2024) and eGovernment Benchmark (European Commission)

While overall implementation levels are relatively high, the degree of variability across countries differs between substandards (Figure 9).

Substandard 1.1 – "Time & Cost" displays the widest dispersion, with substantial variation in national performance, reflecting diverse approaches to reducing administrative burdens in company registration. In contrast, Substandard 1.2 – "Startup Fast Lane" shows strong concentration at the upper end. Substandard 1.3 – "Cross-Border Services" similarly displays a compact cluster of national scores in the upper range, suggesting a more uniform approach towards the mutual recognition of legal documents.

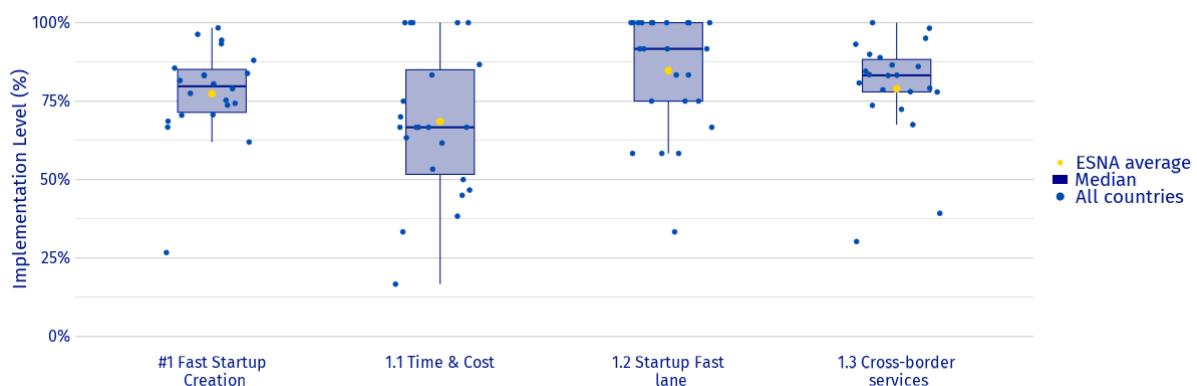


Figure 9. Distribution of implementation levels for the substandards of SNS #1

Source: ESNA, based on official data from Member Countries (Survey 2025) and eGovernment Benchmark (European Commission)

Overall, the 2025 results for Standard #1 are marked by progress in most countries. However, the aggregate trends conceal some heterogeneity. The following sections therefore explore each substandard in greater detail, highlighting national performance patterns and identifying the main drivers behind the observed changes.

MAIN TAKEAWAYS

1. Standard #1 is **among the highest-performing standards**, achieving an implementation level of **77%**, representing an 8-percentage-point improvement since 2024.
2. **The time to register a business online** (Indicator 1.1.1) improved in several countries, with 10 now at full implementation and **no country scoring zero**.
3. **Fast-lane and helpdesk for entrepreneurs** (Indicator 1.2.2) advanced significantly, with the ESNA average rising **from 71% to 86%**, and the number of countries achieving full implementation more than doubling.
4. 20 out of 22 respondents **accept legal documents from other EU jurisdictions** for startup registration, establishing near-universal mutual recognition on Indicator 1.3.2.

4.1.2 Substandards analysis

4.1.2.1 Substandard 1.1 – Time & Cost

The score for Substandard 1.1 – “Time & Cost” is calculated as the arithmetic average of three indicators measuring the time and cost involved in setting up a startup: Indicator 1.1.1 – “Number of days to establish a business online”; Indicator 1.1.2 – “Number of days to establish a business in the commercial registers”; and Indicator 1.1.3 – “Administrative costs to establish a startup”.

Indicator 1.1.1 – “Number of days to establish a business online” measures the time required to complete the online registration of a legal entity. Respondents were instructed to consider all relevant legal, administrative and support services involved in the process, ensuring that the reported duration reflects the full administrative burden of business creation. As shown in Figure 10, the average implementation level across ESNA countries reached 67% in 2025, a modest but steady improvement of 6 percentage points compared with the previous edition¹⁰. Progress was driven primarily by strong advances in Czechia (75 p.p.) and France (50 p.p.), both of which achieved full implementation, alongside Estonia, Latvia, Malta, the Netherlands, Poland, Romania, Spain and Ukraine. Several other countries also registered incremental gains, including Germany, Italy and Sweden, each improving by 25 percentage points. Importantly, no country now scores zero on this indicator, marking a clear step forward in the overall digitalisation of business creation processes. Although a few countries saw declines, the broader trend remains positive, with increasing alignment towards faster and more accessible online registration systems.

¹⁰ Although the rounded figures suggest a 7-percentage-point increase, the actual advancement was 6 percentage points, as calculations are based on unrounded values before presentation rounding.

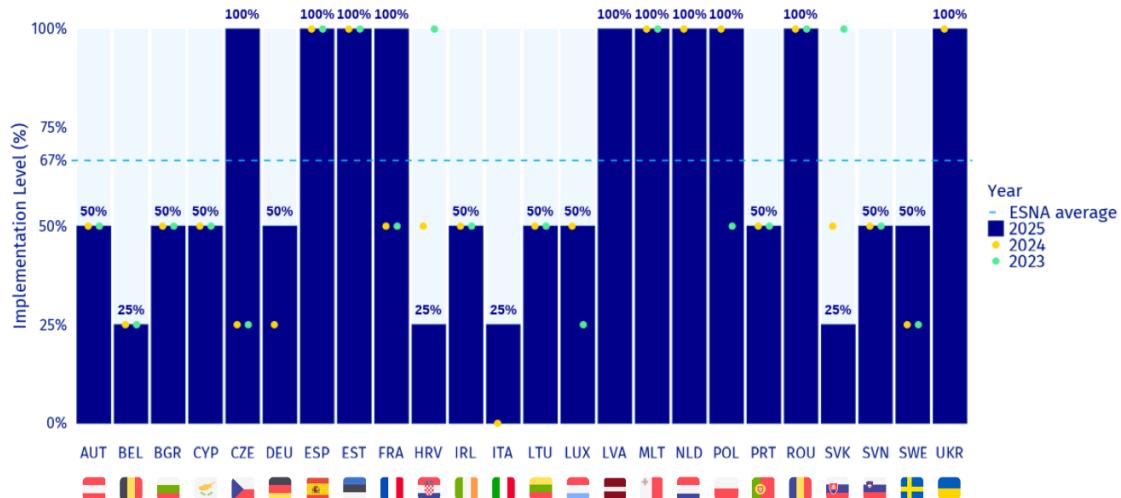


Figure 10. Implementation level of Indicator 1.1.1 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023)

Indicator 1.1.2 – “Number of days to establish a business in the commercial registers”, assesses the time needed to establish a company through the commercial registers, encompassing all required procedures to complete the process. While the average ESNA implementation dropped from 66% in 2024 to 63% in 2025, the country-level dynamics reveal diverging trends (Figure 11).

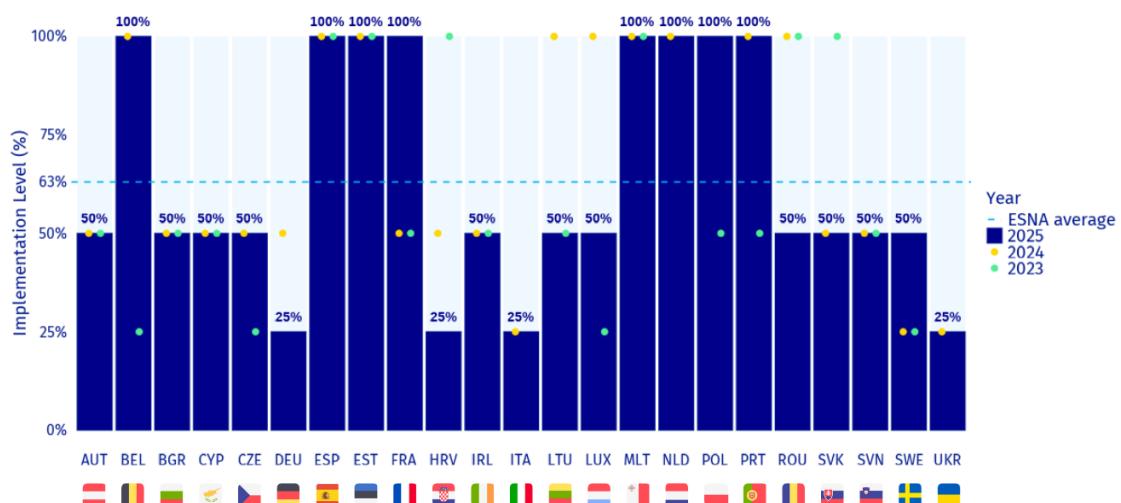


Figure 11. Implementation level of Indicator 1.1.2 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023)

In 2025, only Sweden and France recorded positive increments in implementation scores. Notably, France advanced to full implementation, joining Belgium, Estonia, Malta, the Netherlands, Poland¹¹, Portugal and Spain at the 100% benchmark. This consolidation at the top took place in a context where the ESNA average declined by 3 percentage points to 63%, largely reflecting regressions among several previously high-performing Member States.

¹¹ Poland did not have a recorded score for this indicator in the 2024 assessment.

Although no country scored zero, the results point to an increasing polarisation in implementation levels. While several countries have consolidated strong performance and sustained momentum, others experienced temporary slowdowns, bringing the overall average down. These findings underline the need for targeted policy support to help countries with lower scores regain progress and further harmonise implementation across the ESNA area.

The correlation coefficient between the scores for online establishment (Indicator 1.1.1 – “Number of days to establish a business online”) and establishment via commercial registers (Indicator 1.1.2 – “Number of days to establish a business in the commercial registers”) stands at 0.48, somewhat lower than might be expected given their shared objective of simplifying business creation workflows. This moderate association suggests that rapid online procedures and streamlined registry-based formalities do not always develop in parallel. In some national contexts, digital transformation has been prioritised as an alternative entry route, leading to high performance in online registration even where traditional registry processes remain more complex. Conversely, countries focusing on modernising registry administration may not yet have fully digitalised their systems. This divergence highlights differentiated reform strategies and indicates opportunities to better integrate online and registry-based processes for greater overall efficiency.

The 2025 results for **Indicator 1.1.3 – “Administrative costs to establish a startup”** (Figure 12) reveal a clear stratification among ESNA countries. Most have maintained direct registration fees within the lowest bands: fourteen countries achieved full implementation, reporting fees of no more than €100, while a smaller subset remained in the €101–250 range (60%). Progress was most pronounced in Sweden, which improved from 60% to 100%. Reflecting these dynamics, the ESNA average edged upward from 72% to 76%.

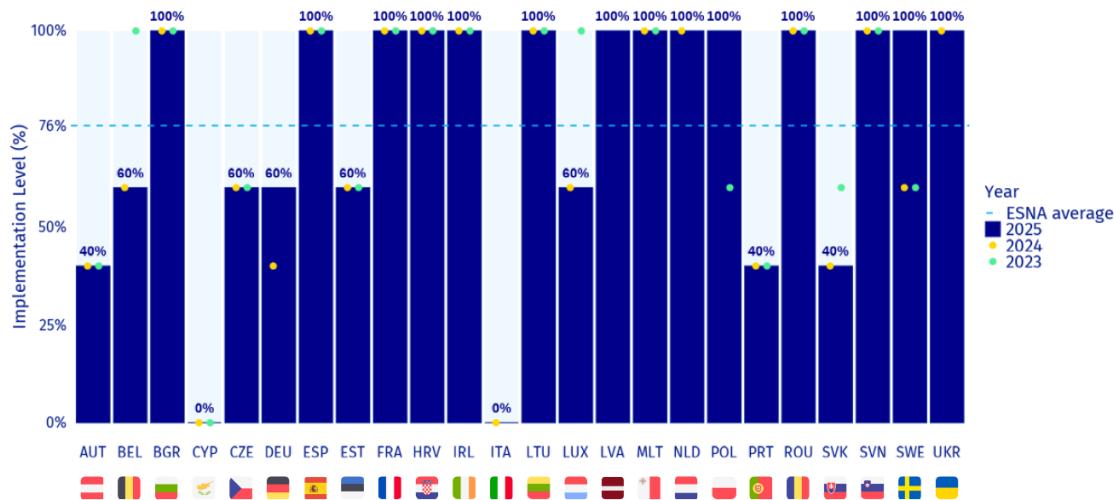


Figure 12. Implementation level of Indicator 1.1.3 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023)

The declaration establishes a €100 ceiling for company formation fees. Echoing this strict interpretation, the survey instrument considers only registration fees directly linked to the creation of a legal entity. Accordingly, Indicator 1.1.3 – “Administrative costs to establish a startup” focuses exclusively on direct registration costs, excluding legal, accounting, translation, notarial or other ancillary expenses. This approach enables standardised benchmarking across countries but may understate total cost of starting a business. Consequently, progress on administrative fee reduction may not fully capture the broader cost

of company creation. Moreover, as the €100 threshold represents a nominal figure, its real value varies across economies, and this should be considered when comparing results across ESNA. Improvements in administrative fee reduction may not directly translate to a proportionate decrease in overall startup costs, and the effectiveness of regulatory streamlining, as tracked here, should be understood within these boundaries.

Overall, Substandard 1.1 – “Time & Cost” demonstrates near-stagnation in 2025, resulting from advances in digital registration times (Indicator 1.1.1) and incremental progress in reducing administrative fees (Indicator 1.1.3); by contrast, the time required for registration through commercial registers (Indicator 1.1.2) experience a slight deterioration, offsetting these gains. The dispersion of results across indicators and countries indicates limited convergence, with some national systems consolidating strong performance while others continue to face challenges in sustaining progress.

Taken together, the findings suggest that reforms in startup creation processes are advancing but remain uneven. Strengthening the integration between digital and traditional registration channels, alongside sustained efforts to streamline procedures, will be essential to achieving more consistent and enduring progress across the ESNA network.

4.1.2.2 Substandard 1.2 – Startup Fast Lane

Substandard 1.2 comprises three complementary indicators: 1.2.1 – “Existence of an online service to set up a company”, 1.2.2 – “Existence of a fast lane & helpdesk available for entrepreneurs”, and 1.2.3 – “Existence of a virtual helpdesk for regulatory issues for startups and scaleups”. The score for this substandard corresponds to the arithmetic average of the three indicator scores.

Indicator 1.2.1 – “Existence of an online service to set up a company” evaluates whether entrepreneurs can fully register a company digitally, focusing on the existence and accessibility of an operational online service. It measures whether this functionality is available for the main legal entities typically used by startups. In several countries, online portals exist but still require one or more physical steps – such as notarisation or document submission – which prevents full implementation. The indicator also assesses whether these platforms are accessible in English, in line with the *EU Single Digital Gateway Regulation*, which promotes cross-border usability and requires key administrative procedures to be accessible to non-native users. Platforms without an English version are therefore considered only partially compliant with the intent of the SNS declaration.

As shown in Figure 13, the average implementation level of Indicator 1.2.1 – “Existence of an online service to set up a company”, across ESNA countries, rose from 80% in 2024 to 86% in 2025. This reflects both consolidation among countries which had the higher scores in 2024 and the emergence of new full implementers. Fifteen countries now report full implementation, up from 10 in 2024, and eight of these maintained their top score year-on-year¹². The most significant gains occurred in Lithuania and Spain, both rising by 50 percentage points to achieve full implementation. Two countries registered declines, and 14 remained stable year-on-year. Although progress at the top end points to broad convergence, dispersion increased slightly, suggesting that while many are reaching maturity, others continue to face structural or accessibility constraints.

¹² Of the 10 countries that reported full implementation in 2024, Denmark did not participate in the 2025 exercise. Excluding Denmark, eight of the nine remaining countries maintained their 100% score. Additionally, Latvia, which was monitored for the first time in 2025, also achieved full implementation, bringing the total to 15 countries with 100% implementation in the current edition.

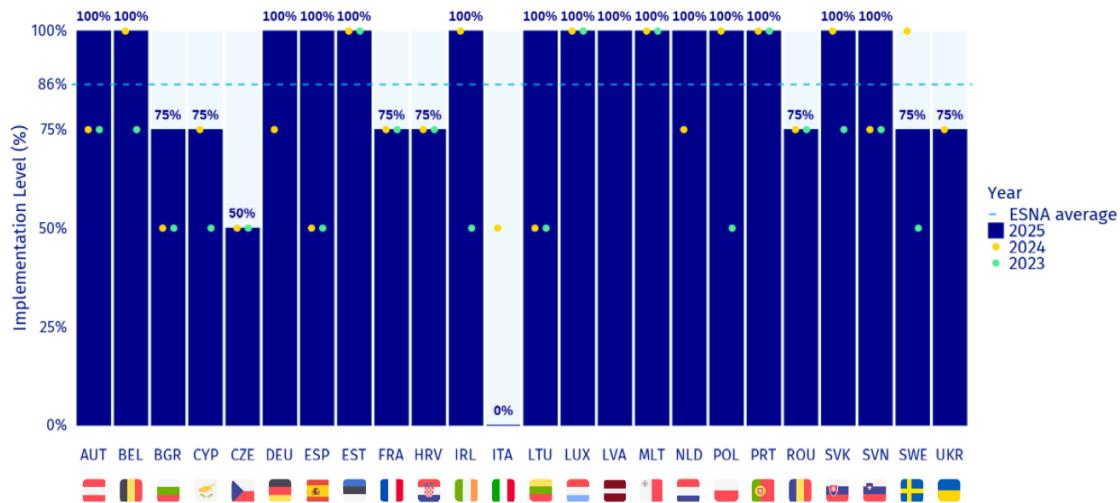


Figure 13. Implementation level of Indicator 1.2.1 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023)

Most partial scores stem from functional or accessibility limitations rather than a lack of online services. Five countries still require at least one in-person step (such as notarial validation or physical document submission), while two lack English-language interfaces ensuring cross-border accessibility. Encouragingly, several countries made clear progress in addressing these gaps. Austria, Bulgaria, Germany, the Netherlands, and Slovenia each improved by 25 percentage points, with all but Bulgaria now reaching full implementation. The underlying drivers vary: Austria, Bulgaria, and Slovenia enhanced accessibility through English-language versions of their portals, while Germany and the Netherlands completed the digitalisation of company registration by eliminating residual in-person requirements.

Indicator 1.2.2 – “Existence of a fast lane & helpdesk available for entrepreneurs” assesses whether entrepreneurs can access regulatory and funding information via a single online portal. As with indicator 1.2.1 – “Existence of an online service to set up a company”, the scoring framework applies graduated penalties for functional and accessibility shortcomings such as lack of English-language availability, information dispersed across multiple sites or incomplete coverage of funding or regulatory content. These criteria ensures that the indicator captures not only the presence of a platform, but also the degree of integration and usability, capturing how the service fulfils the principle of a “one-stop” online entry point.

The ESNA average rose from 71% in 2024 to 86% in 2025, confirming steady progress toward this goal (Figure 14). Bulgaria and Italy recorded the strongest improvements (from 0% to 100%), with Portugal also rising sharply (50 p.p.). Austria, Belgium, Czechia, France, Germany, Lithuania, and Slovakia each improved by 25 percentage points, consolidating their online information systems and closing earlier integration gaps. Sixteen countries now report full implementation, compared with seven in the previous edition.

Notably, only one country now reports zero implementation, down from two in 2024. In two countries, existing platforms remain fragmented, with information dispersed across several sources and limited availability in English, resulting in a 50% implementation level, a significant decrease from five in 2024. Five countries received a 25-percentage-points penalty for incomplete information, content dispersed across multiple sources, or the absence of an English version.

Strengthening integration and expanding multilingual accessibility could significantly enhance the overall user experience and bring these systems closer to full alignment with the SNS objectives.

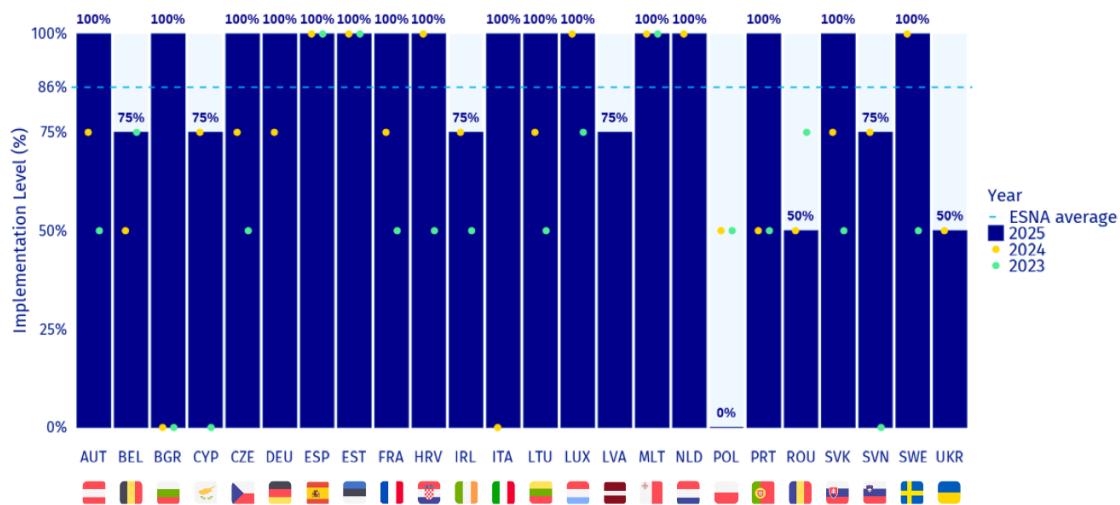


Figure 14. Implementation level of Indicator 1.2.2 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023)

Overall, the results indicate gradual convergence towards full implementation, although functional disparities persist. The key challenge no longer lies in establishing online services, but in improving their integration and usability, essential steps toward the SNS principle of a seamless digital environment for entrepreneurs.

Compared with 2024, the availability of virtual helpdesks¹³ for startups and scaleups has expanded notably. The average implementation level of **Indicator 1.2.3 – “Existence of a virtual helpdesk for regulatory issues for startups and scaleups”** rose 23 percentage points, from 58% to 81%, reflecting broader adoption of online mechanisms to support cross-border entrepreneurs (Figure 15). Twenty countries now report having a virtual helpdesk available to support startups and scaleups from other EU Member States facing regulatory barriers. This marks an increase from 17 countries in 2024¹⁴, reflecting a continued effort to facilitate cross-border business entry and problem-solving. The most significant progress occurred in Bulgaria, Romania and Slovenia, all advancing from zero to full implementation after establishing functional online contact points. However, four countries still report no virtual helpdesk available, a decrease from seven in 2024.

¹³ For this indicator, the term “virtual helpdesk” is interpreted broadly. It encompasses not only dedicated online helpdesks, but also digital channels such as online contact forms or email-based assistance.

¹⁴ The eleven countries reporting full implementation included Denmark, which does not participate in the 2025 exercise.

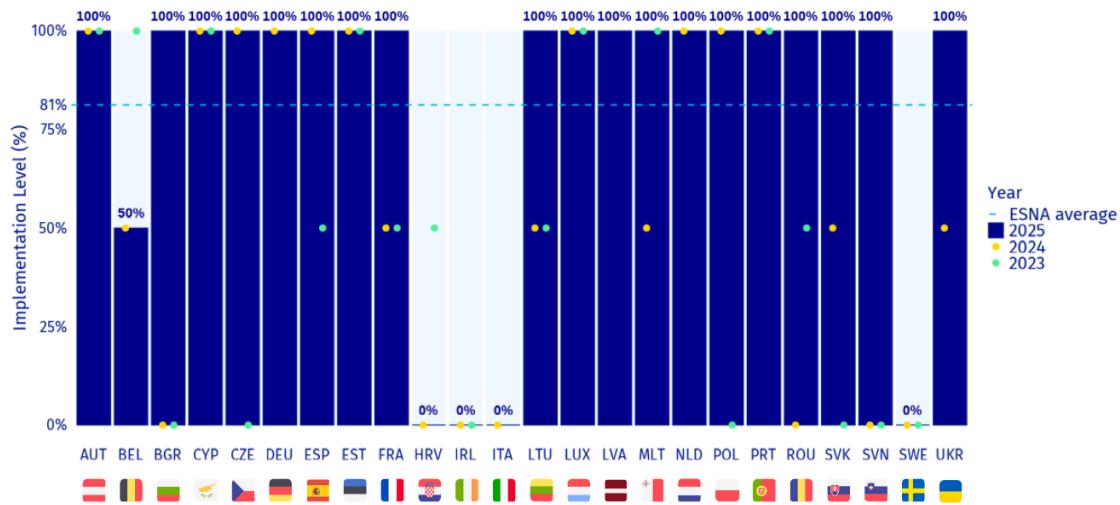


Figure 15. Implementation level of Indicator 1.2.3 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023)

Across its three indicators, Substandard 1.2 – “Startup Fast Lane” shows consistent and tangible progress in the digitalisation and accessibility of online services for entrepreneurs, consolidating its position as one of the most advanced areas of SNS implementation. Between 2024 and 2025, all indicators recorded higher average scores, with particularly notable gains in the development of centralised information portals (Indicator 1.2.2 – “Existence of a fast lane & helpdesk available for entrepreneurs”) and in the provision of virtual helpdesks (Indicator 1.2.3 – “Existence of a virtual helpdesk for regulatory issues for startups and scaleups”). The growing number of countries achieving full implementation reflects sustained investment in user-oriented, multilingual solutions.

Nonetheless, asymmetries persist in functionality and accessibility. A small group of countries still lacks full coverage or maintains partially manual steps, and several online services remain accessible only in national languages. These linguistic limitations do not concern the interoperability between systems, addressed under Substandard 1.3 – “Cross-Border Services”, but rather the user-facing accessibility that enables foreign entrepreneurs to navigate administrative processes effectively. In that sense, progress under Substandard 1.2 – “Startup Fast Lane” establishes a solid foundation for the next stage of digital integration: moving beyond nationally bounded portals towards genuinely interconnected, cross-border services within the Single Market.

4.1.2.3 Substandard 1.3 – Cross-Border Services

Substandard 1.3 – “Cross-Border Services” assesses the degree to which national digital infrastructures support cross-border operability within the Single Market. It comprises two indicators. Indicator 1.3.1 – “Index of cross-border services”, which measures the extent to which administrative procedures for business establishment are digitally accessible to non-resident entrepreneurs and, Indicator 1.3.2 – “Utilisation of legal documents from other EU countries for startup establishment or expansion within the Single Market”, which evaluates whether national systems recognise and accept documents or credentials issued abroad.

While Substandard 1.2 – “Startup Fast Lane” focused on the accessibility of national online services, Substandard 1.3 – “Cross-Border Services” examines their cross-border functionality, reflecting progress toward a truly integrated European digital space for entrepreneurs.

Indicator 1.3.1 – “Index of cross-border services” assesses the availability and usability of public eGovernment services across borders, considering the degree to which entrepreneurs from other EU Member States can complete key administrative procedures online. Following the 2025 methodological revision of the eGovernment Benchmark, the original cross-border dimension was discontinued and its underlying components redistributed across the new framework. To preserve continuity, a bridging solution was developed: the indicator was recalculated as a weighted composite of three remaining sub-dimensions — “Cross-border Online Availability” (50%), “Cross-border User Support” (25%), and “Cross-border Key Enablers” (25%), the latter now represented solely by “Cross-border eID”. Annex 3 explores this bridging solution in more detail. While this reconstruction maintains conceptual consistency with the previous design, it introduces a structural break in the time series. Consequently, 2025 results are not directly comparable to those from 2024.

Results for 2025 show uneven provision of cross-border digital public services (Figure 16)¹⁵. Estonia (86%), Luxembourg (96%), and Malta (90%) demonstrate strong capacity to make national services accessible to users from other European countries. At the other end, thirteen countries remain below the ESNA average of 67%.

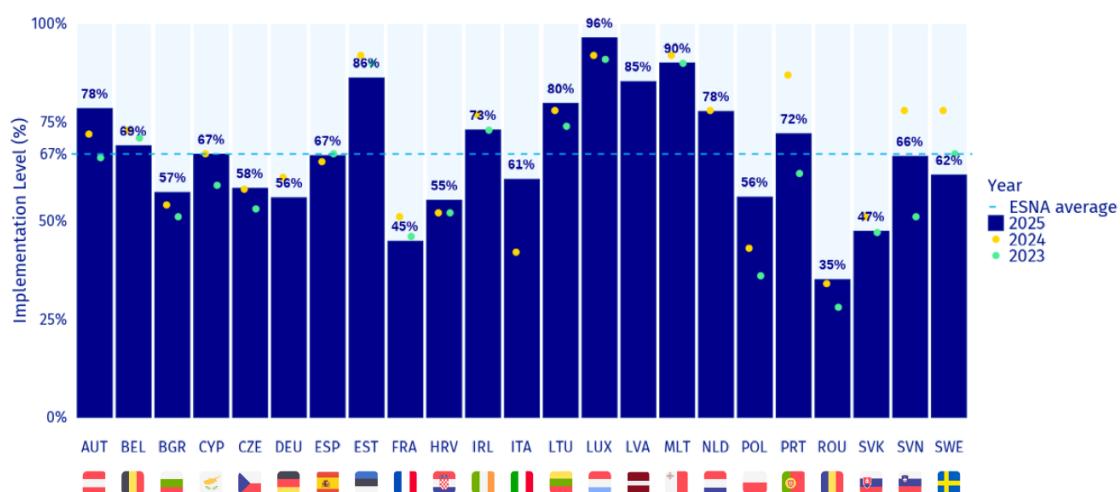


Figure 16. Implementation level of Indicator 1.3.1 across ESNA countries

Source: ESNA calculations based on eGovernment Benchmark

Among the three sub-dimensions, Cross-border User Support, which captures the availability of online help tools, feedback options, and complaint mechanisms for users from other Member States, achieved the strongest performance, with an ESNA average of 81% and seven countries reaching full implementation. Five of these countries also attained full scores in Indicator 1.2.3 – “Existence of a Virtual Helpdesk for Regulatory Issues for Startups and Scaleups”. At first sight, Indicator 1.2.3 and the Cross-Border User Support dimension might appear to capture the same aspects. While these two measures might appear similar, their correlation is relatively low ($r = 0.26$), reflecting that they capture distinct functional layers. While virtual helpdesks focus on providing targeted guidance to startup founders, cross-border user support reflects the broader availability of multilingual help, feedback, and complaint mechanisms for any foreign user. This distinction is analytically valuable, as it shows that the

¹⁵ As this is an external indicator from the European Commission’s eGovernment Benchmark, Ukraine is not covered in the 2025 dataset.

ESNA framework differentiates between startup-oriented tools and general cross-border support systems, thus avoiding redundancy in measurement.

Cross-Border Online Availability also shows solid performance, with an ESNA average of 72%. This dimension captures the extent to which informational and transactional public services are accessible online to users from other European countries, considering both the presence of information and the ability to complete procedures digitally. Malta, Luxembourg, and Estonia again stand out, combining full implementation of both startup registration systems and single information portals (indicators 1.2.1 – “Existence of an online service to set up a company” and 1.2.2 – “Existence of a fast lane & helpdesk available for entrepreneurs”) with online availability of cross-border services. However, most countries still show higher scores on those two indicators than in cross-border online availability. In fact, this dimension’s correlation with Indicator 1.2.2 is moderate ($r = 0.47$) and even weaker with the existence of an online service to set up a company (1.2.1, $r = 0.23$). These differences confirm that while information availability and online service delivery are conceptually related, they remain distinct in practice. Many administrations provide online content successfully but still face procedural or linguistic obstacles that limit usability for foreign entrepreneurs.

The limited usability of online administrative procedures across borders is not only a matter of language or information design but also of authentication. Even when services are technically available to foreign users, access often remains restricted by national login systems that do not recognise external credentials. The Cross-Border Key Enablers, represented by cross-border eID functionality, captures this crucial aspect, assessing whether electronic identification from other EU Member States can be used to access national e-government services. Results show that this dimension is the weakest and most fragmented component of Indicator 1.3.1 – “Index of the cross-border services”. The ESNA average for this indicator stands at 41%, substantially below the other dimensions with fourteen countries scoring below 50%. Conversely, Austria (87%), Lithuania (79%), and Luxembourg (88%) demonstrate the most advanced implementation. These overall results highlight that technical and legal interoperability for recognising non-domestic eIDs lags behind front-end digital service provision, reflecting a structural gap between user-facing accessibility and back-end authentication infrastructure. Many administrations have succeeded in creating online portals and user-support systems, yet the technical and legal interoperability required for recognising non-domestic eIDs remains limited. This fragmentation reflects a deeper structural gap: while the interface for information and communication has become more open, the underlying authentication infrastructure is still predominantly national. This gap between digital front ends and authentication back-ends has further implications for the use of legal documents across borders.

Indicator 1.3.2 – “Utilisation of Legal Documents from Other EU Countries for Startup Establishment or Expansion within the Single Market” examines whether entrepreneurs can submit official documents issued abroad when setting up a company or creating a subsidiary. In 2025, results are strongly polarised (Figure 17): all countries except two¹⁶ achieved full implementation. Bulgaria, Czechia, and Slovenia improved compared to 2024, while no country had a higher score in previous year.

Despite addressing a complementary dimension of cross-border usability, this indicator shows virtually no correlation with the cross-border eID dimension ($r = -0.06$). This absence of association is meaningful: it illustrates that the mutual acceptance of legal documents and the mutual recognition of electronic identities represent two distinct layers of interoperability. While

¹⁶ Croatia and Latvia did not provide data for this indicator.

cross-border eID depends on the technical and procedural capacity to authenticate foreign users online, the reuse of legal documents primarily reflects administrative and legal openness — that is, whether national systems accept evidence issued abroad, regardless of how authentication occurs. The decoupling between these two mechanisms suggests that even advanced eID infrastructures do not guarantee that documentation from other Member States will be recognised, and vice versa. Together, these findings reveal that cross-border digital governance remains fragmented, with legal and technical interoperability evolving on separate tracks.

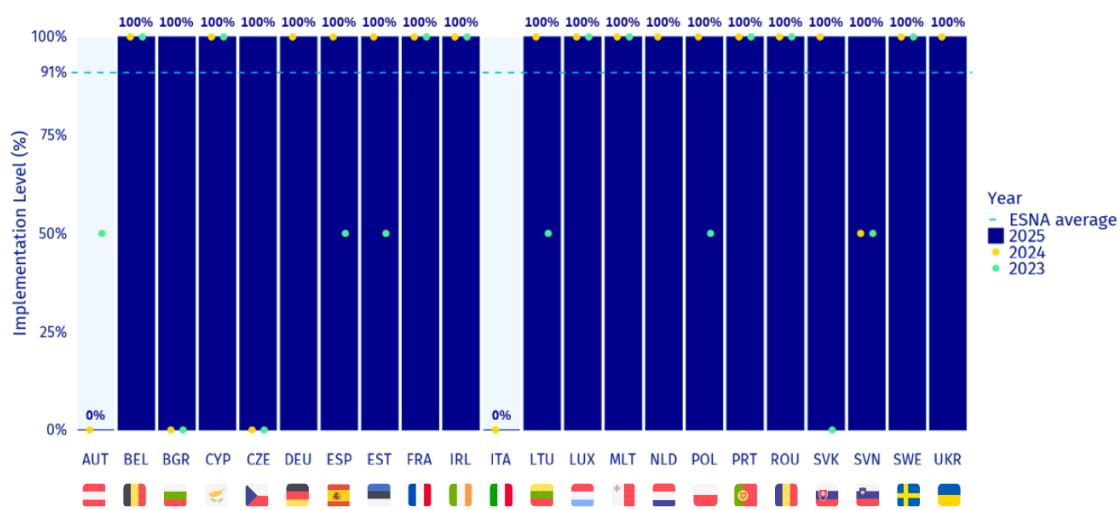


Figure 17. Implementation level of Indicator 1.3.2 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023)

Overall, the results of Substandard 1.3 – “Cross-Border Services” reveal that progress toward cross-border digital operability remains partial and uneven. While most ESNA countries have succeeded in building user-friendly front-ends – reflected in strong scores for online availability and user support – the underlying enablers of true interoperability lag behind. The contrast between the near-universal acceptance of foreign legal documents and the persistently low adoption of cross-border eID highlights this imbalance. In practice, many administrations are legally open to recognising evidence issued in other Member States but lack the technical capacity to authenticate foreign users digitally. This duality underscores a broader pattern: cross-border accessibility has advanced faster at the regulatory and procedural level than in the infrastructural foundations that would make these services fully integrated. Strengthening the linkage between legal recognition and digital authentication thus remains a key challenge for achieving a genuinely seamless Single Market for startups.

4.1.3 Conclusion

The 2025 results indicate that Standard #1 – “Fast Startup Creation, Smooth Market Entry” recorded a meaningful net improvement. The ESNA implementation level rose to 77%, up 8 percentage points from 70% in 2024. This aggregate advance, however, masks contrasting dynamics across the substandards and countries. Gains were concentrated in Substandard 1.2 – “Startup Fast Lane”, while Substandard 1.1 – “Time & Cost” remained the weakest pillar and stagnated, and Substandard 1.3 – “Cross-Border Services” presented a mixed, partly structural picture.

Two sets of quantitative facts explain this movement. Firstly, Substandard 1.2 – “Startup Fast Lane” improved decisively, with all three constituent indicators recording higher averages. Indicator 1.2.1 – “Existence of an Online Service to Set Up a Company” rose from 80% to 86%, Indicator 1.2.2 – “Existence of a Fast Lane & Helpdesk Available for Entrepreneurs” rose from 71% to 86%, and Indicator 1.2.3 – “Existence of a Virtual Helpdesk for Regulatory Issues for Startups and Scaleups” rose from 58% to 81%. This resulted in a larger number of countries achieving full implementation, notably driving the 8-percentage-point increase at the Standard level.

Substandard 1.1 – “Time & Cost” exhibited more mixed dynamics. Faster online registration times (Indicator 1.1.1) and slightly lower administrative fees (Indicator 1.1.3) contributed positively, but slower registry-based processes (Indicator 1.1.2) partially offset these gains, resulting in the substandard's increase from 66% to 69%.

At the country level, the largest national improvements were observed in Bulgaria (42 p.p.), Czechia (28 p.p.) and Slovenia (20 p.p.), primarily through targeted enhancements such as introducing English-language interfaces, consolidating portals, eliminating in-person steps, and implementing virtual helpdesk functions. Other 17 countries also experienced a raise in their scores. The highest-performing countries were Malta (98%), the Netherlands (96%) and Spain (94%).

Three structural lessons emerge from these results. First, front-end digitalisation and user support have advanced faster than back-end integration: many countries now publish information, offer centralised portals, and operate helpdesks, but fewer have aligned the authentication and procedural layers needed to complete cross-border transactions. Second, progress has been asymmetric rather than fully convergent: Substandard 1.2 – “Startup Fast Lane” achieved the strongest overall growth but also shows a widening spread of results, with some high-performing outliers pulling ahead while others lag behind. In contrast, Substandard 1.3 – “Cross-Border Services”, as well as the overall Standard, display broadly stable dispersion, suggesting that advances in administrative speed and cross-border functionality, while modest, are more evenly distributed. Third, improvements are often incremental and operational, adding English-language versions, closing single-step gaps, or formalising helpdesks, so policy successes are tangible and replicable, but they require sustained effort and targeted fixes rather than single sweeping reforms.

At face value, the fact that Standard #1 – “Fast Startup Creation, Smooth Market Entry” is one of the top two best performing Standards among all eight is a surprising outcome, especially when set against the tone of the major EU strategic documents, which repeatedly highlight regulatory and administrative burdens as a key drag on European competitiveness¹⁷. This contrast, good performance on Standard #1 versus the strategic concern about regulatory burden, invites deeper reflection.

Results suggest that many jurisdictions are making meaningful progress in the initial entry phase: easier online registration, streamlined portals, improved accessibility. However, underlying systemic challenges remain, the regulatory burden is inherently a life-cycle issue, not merely a starting-point issue. The Standard's focus on company creation and cross-border entry captures only a portion of that burden. In this sense, the Standard's narrow scope constitutes a conceptual limitation: while the strategy and competitiveness frameworks talk about burdens spanning the entire entrepreneurial lifecycle (creation, growth, scaling, exit), our monitoring exercise for this specific Standard remains anchored to the “*creation moment*”. Moreover, the cost dimension embedded in Standard #1 is limited. Although indicators around

¹⁷ See, for instance, (Draghi, 2024; European Commission, 2025c, 2025a, 2025b)

time, fees and online registration are included (particularly in Substandard 1.1 – “Time & Cost”), the broader spectrum of costs, such as ancillary costs (external legal advice, translations, professional services) and indirect compliance in early-stage operations, falls outside the scope.

It is also worth emphasising that part of the regulatory burden is in fact captured under Standard #4 – “Innovation in Regulation”, via indicators 4.1.1 – “Think Small First” principle implementation level and 4.2.1 – “Existence of compliance exemptions/alternatives for startups”. Nonetheless, limiting the burden discussion to that standard alone overlooks the cross-cutting nature of administrative and regulatory burdens, which affect entry, scaling, exit and cross-border mobility.

Regarding cross-border mobility, Standard #1 accounts for it under Substandard 1.3 – “Cross-Border Services”, whose results show a mixed, partly structural picture, thereby confirming that while entry mechanisms may improve, the deeper barrier of fragmentation remains resilient. This confirms the fragmentation of rules and markets, repeatedly flagged in EU reports as a manifestation of regulatory burden. Both the Startup and Scaleup Strategy and the Annual Single Market and Competitiveness Report highlight that cross-border provision of services continues to be hampered by regulatory and administrative barriers and sources of fragmentation.

In conclusion, the achievement of Standard #1 – “Fast Startup Creation, Smooth Market Entry” is encouraging as it signals genuine progress in the “fast lane” of business creation and initialised cross-border accessibility. Completing its ambition will require moving from information and assistance (where most countries are now reasonably strong) to procedural and authentication integration (where important technical, legal and organisational work remains). Practically, priorities should include removing remaining in-person requirements that fragment processes, scaling mutual recognition of core documents, and accelerating eID interoperability under eIDAS/European Digital Identity agenda. Doing so would convert the notable gains in the “fast lane” into durable, cross-border reductions in time and cost for founders across the Single Market – and would materially strengthen the practical effects of the SNS declaration. Additionally, to fully align with the ambitions of the EU strategic agenda, a two-fold shift is desired: broaden the monitoring horizon from creation to full lifecycle and enrich the cost metrics to cover adjustment and indirect compliance costs.

4.2 SNS #2 Attracting and Retaining Talent

4.2.1 Overview

The second standard of the EU Startup Nations Standard (SNS) declaration, Attracting and Retaining Talent, addresses one of the most decisive levers for building a robust and competitive startup ecosystem. Talent is not merely a resource; it is the critical input that transforms entrepreneurial ideas into scalable innovation and growth. Startups require a particular type of talent: relatively young, highly educated, digitally literate individuals, equipped not only with technical expertise but also with creativity, ambition, networks and sufficient market insight to identify growth opportunities (Patuzzi, 2019). Such individuals are rare, widely sought after and highly mobile. Consequently, countries face intense competition both to retain their own most promising nationals and to attract foreign talent.

For startup ecosystems, the presence of foreign entrepreneurs and experts generates positive externalities that extend far beyond individual firms. International talent brings cross-border

experience, global market insights, and access to investors, partners, and suppliers. These networks can accelerate the diffusion of ideas, unlock new markets, and attract venture capital and knowledge-intensive investment. In technology-driven industries, where innovation cycles are accelerating and success depends on both rapid learning and global connectedness, the ability to attract and retain such talent becomes a prerequisite for competitiveness.

However, Europe continues to face structural talent shortages, especially in ICT, engineering, and research-intensive sectors, which is one of the principal constraints on EU competitiveness and technological sovereignty. Recognising this, the European Commission has placed talent at the core of its competitiveness agenda. The *Communication on Skills and Talent Mobility* (European Commission, 2023c) and the accompanying *Skills and Talent Mobility Package* call for a more agile and coordinated European approach to legal migration. The *Draghi Report* (Draghi, 2024) further reinforces this priority, arguing that Europe's competitiveness depends on its ability to "*compete for talent globally*" and to remove the barriers that slow the circulation of knowledge and skills across borders. In parallel, the *Union of Skills* initiative (European Commission, 2025d) identifies "*attract, develop and retain talent*" as one of its four strands of action.

Standard #2 – “Attracting and Retaining Talent” therefore articulates two complementary objectives: attracting international talent and re-engaging European talent abroad. The first dimension ensures that visa applications are, as a general rule, processed within one month for (a) founders from third countries supported by a recognised trusted partner in the Member State, and (b) experienced staff from third countries, when submitted by startups, which may also be pre-approved as a “trusted party.” Fast-track procedures and third-party endorsement have been shown to reduce administrative friction and transactional costs and improve the attractiveness of jurisdictions for founders and startups (Mandelman et al., 2025; Papademetriou & Sumption, 2013; Patuzzi, 2019).

The second dimension concerns the introduction of programmes and incentives encouraging the return of EU nationals who have pursued professional opportunities in third countries. This “*circular mobility*” of knowledge and skills transforms what was once a brain drain into a reinvestment of experience, networks, and creativity within the European innovation system.

Together, these two dimensions operationalise the principle that talent mobility and retention are indispensable conditions for a thriving startup ecosystem. By combining accelerated visa pathways for foreign founders and specialised staff with targeted measures to re-engage European professionals abroad, the Standard translates strategic ambitions into tangible policy mechanisms that strengthen Europe’s innovation base. Building on this conceptual framework, the analysis below examines how these provisions have been implemented across Member States and how they perform in quantitative terms.

Across the ESNA area, implementation of Standard #2 – “Attracting and Retaining Talent” reached 64%, representing only a marginal increase of 0.3 percentage points compared to 2024. This result reflects a shift compared with the previous year’s growth of 12 percentage points. The Standard now ranks slightly below ESNA’s overall implementation level, underlining the continuing need to invest in talent attraction and retention in Europe.

Although aggregate implementation has almost stagnated, national trajectories diverge considerably. Out of the participating countries, seven improved their implementation levels, nine maintained their scores, and six recorded declines¹⁸. Bulgaria (56 p.p.) and Italy (50 p.p.)

¹⁸ Latvia did not provide enough data in order to compute the standard score and last year the same had happened with Poland.

achieved the highest progress, whilst Czechia and Slovenia also recorded significant gains (25 p.p.). Cyprus and Malta maintained full implementation as in 2024 (Figure 18).

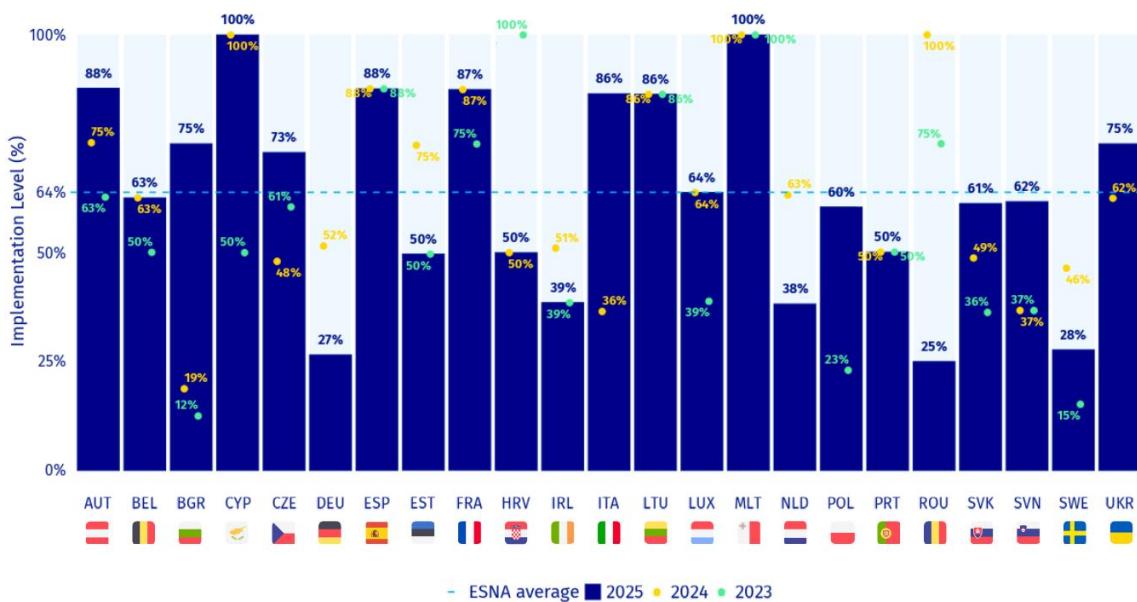


Figure 18: Implementation level of SNS #2 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023) and Talent Attractiveness Index (OECD)

Standard #2 – “Attracting and Retaining Talent” focuses on two substandards. The first, 2.1 – “Visa Applications”, covers talent attraction by assessing the ease and timeliness of visa procedures for founders and startup workers. Lengthy processing times to obtain visas increase add cost to already bureaucratic and difficult processes and might delay market entry by founders and harm startups with immediate needs of talent. The declaration has set one month as the visa processing threshold. The second, 2.2 – “Programmes for Talent”, deals with the country’s ability to attract and retain talent by measuring the implementation of programmes of talent return and using the OECD Talent Attractiveness Index.

Substandard 2.1 – “Visa Applications” achieved an implementation level of 73%, while Substandard 2.2 – “Programmes for Talent” lagged behind with an implementation level of 55%, 9 percentage points below the ESNA implementation level for this Standard (Figure 19).

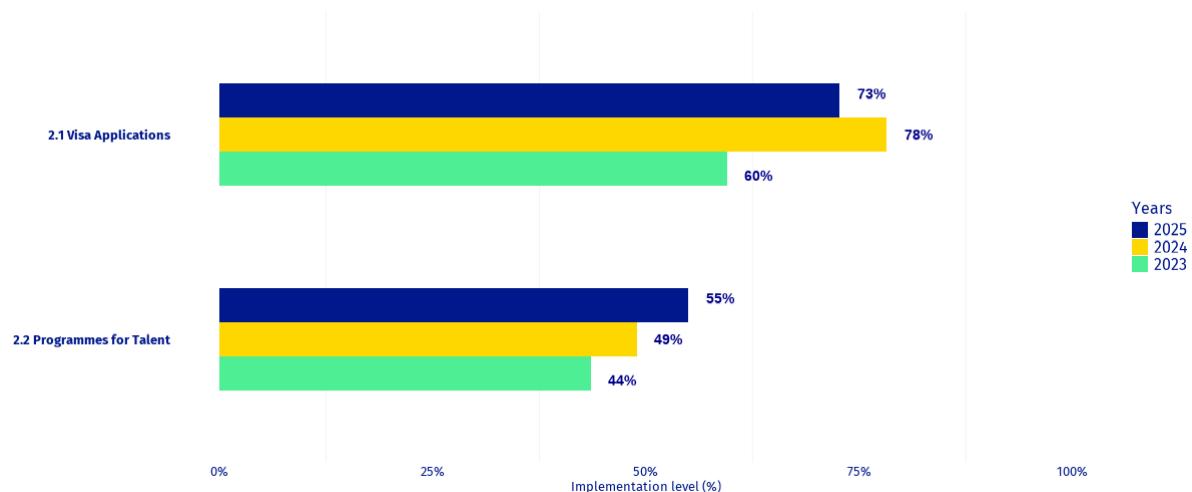


Figure 19: Implementation level of SNS #2 substandards for ESNA

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023) and Talent Attractiveness Index (OECD)

The two substandards have followed opposing trajectories over the past year, as depicted in Figure 20. While 2.1 – “Visa Applications” decreased by 6 percentage points to 73%¹⁹, 2.2 – “Programmes for Talent” improved by 6 percentage points to reach 55%. Therefore, the improvement in talent programmes is practically offset by the deterioration in visa processing times resulting in a stagnation.

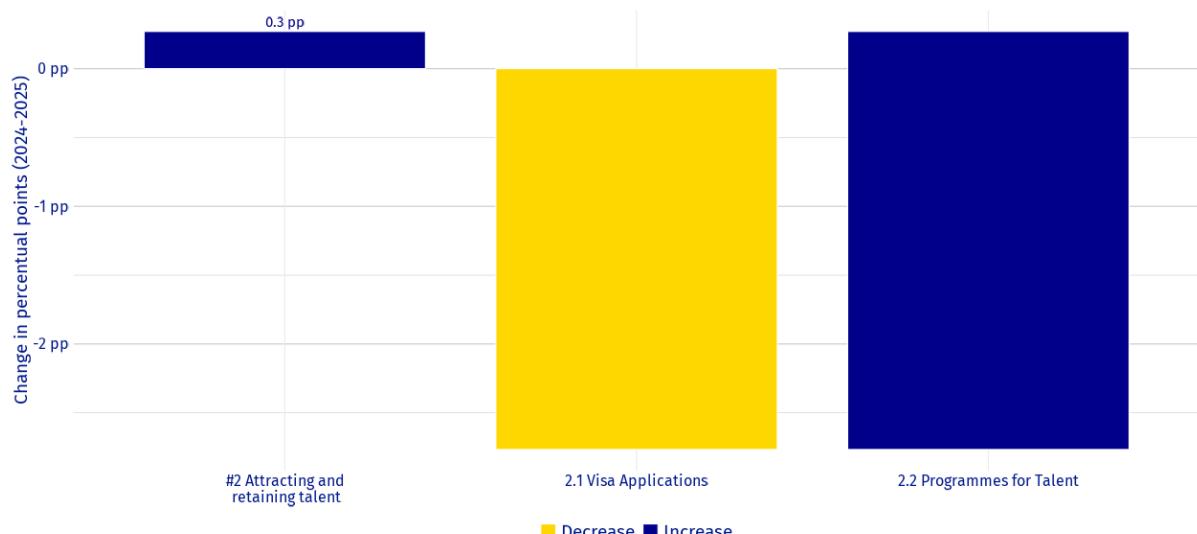


Figure 20: Decomposition of the change in SNS #2 implementation level by substandards (2024-2025)

Source: ESNA, based on official data from Member Countries (Survey 2025 and 2024) and Talent Attractiveness Index (OECD)

¹⁹ Although the rounded figures suggest a 5-percentage-point decrease, the actual decline was 6 percentage points, as calculations are based on unrounded values before presentation rounding.

While Standard #2 displays an implementation level close to the ESNA's average, differentials persist at country level, as shown in Figure 21. About half of the countries have an implementation level below the ESNA average, indicating the need for new measures to attract and retain talent in Europe. Implementation levels of Substandard 2.2 – “Programmes for Talent” are widely spread suggesting significant disparities. In Substandard 2.1 – “Visa Applications”, implementation levels are more moderately spread, despite the presence of some outliers. Both the median and average of the first substandard are higher than those of the second, but the difference between medians is much smaller than the difference between the averages. Also, in both cases, the median exceeds the average.

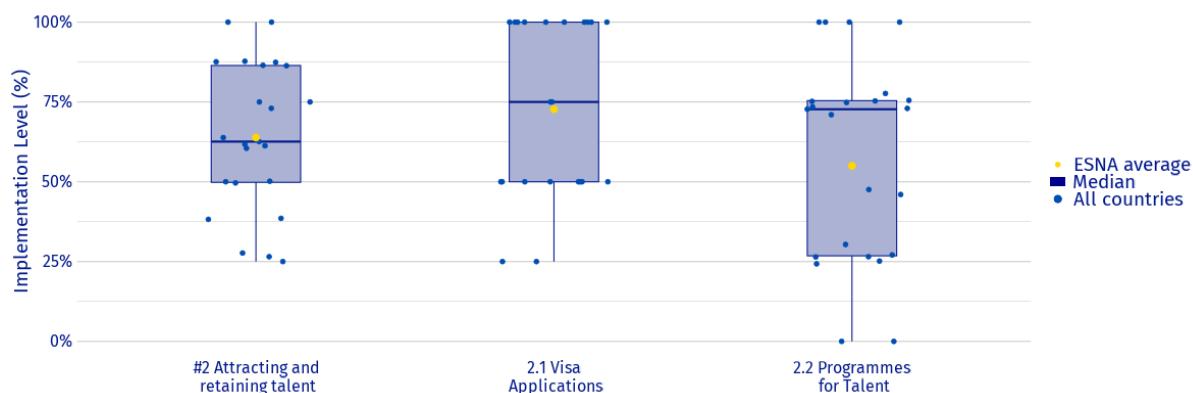


Figure 21: Distribution of implementation levels for the substandards of SNS #2

Source: ESNA, based on official data from Member Countries (Survey 2025) and Talent Attractiveness Index (OECD)

MAIN TAKEAWAYS

1. **Standard #2** reached an **implementation level of 64%**, remaining unchanged from 2024 after a 12-percentage-point growth in the previous year.
2. 12 out of 21 respondents **process founder visas within the one-month** Declaration threshold, whilst 10 have achieved full implementation for experienced worker visa applications.
3. **Talent return programmes** expanded significantly, with Indicator 2.2.1 rising by 13 percentage points, as five countries **introduced new schemes** to promote the return of national talent.

4.2.2 Substandards analysis

4.2.2.1 Substandard 2.1 – Visa Applications

Visa applications often constitute a barrier for startups seeking to hire talent or for founders establishing companies abroad. Lengthy and unpredictable procedures increase costs, delay market entry, and can discourage startups from international recruitment.

Substandard 2.1 – “Visa Applications” measures the ease of visa processes for founders and startup workers by assessing average processing times. The declaration sets a benchmark of one month for processing visa applications submitted by founders and workers supported by startups. This substandard is computed as the arithmetic average between indicators 2.1.1 – “Time to complete visa applications for founders” and 2.1.2 – “Time to complete visa applications for experienced workers”. Both indicators declined this year, explaining the regression in 2.1 – “Visa Application”.

Migrant entrepreneurs contribute to job creation, innovation, and cultural diversity. Bureaucratic visa processes hinder these benefits. The average implementation level for **Indicator 2.1.1 – “Time to complete visa applications for founders”** stands at 74% in 2025, down 4 percentage points from 2024. Considering only countries common to both years, the decline would be even sharper.

Figure 22 displays the implementation levels at country level. Since processing times are collected in time intervals, countries with equal scores do not necessarily take on average the same time to process visa application. Twelve countries now process founder visas within one month (two less than in 2024), with Italy joining this group for the first time. Conversely, processing times increased in four countries.

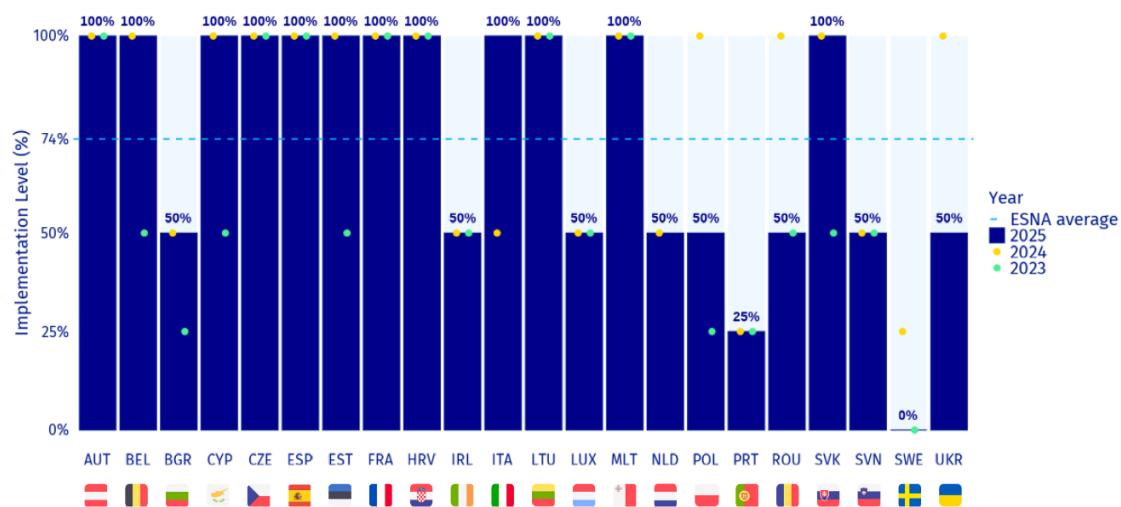


Figure 22: Implementation level of Indicator 2.1.1 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023)

Most participating countries have introduced startup and entrepreneur visa schemes enabling founders to profit from more tailored and in some cases streamlined application procedures. The programmes also allow countries to show their commitment to innovation and entrepreneurship. These visas have different characteristics in terms of validity, financial proofs, documents required, company ownership, capital requirements, family reunification conditions, requirement of business plan, being capped and renewability. The main policy challenge relies in defining the conditions that select founders with the right skill set to successfully start a business (Patuzzi, 2019).

Visa applications for experienced workers are important tools to fill one of the EU’s current strategies of addressing labour and skills shortages. The current supply of highly qualified workers does not match the growing demand creating a gap for startups seeking professionals

to drive entrepreneurship in Europe (ESNA, 2024). In countries where skills shortage are persistent, fast processing times for visa applications contribute to bridging the talent gaps faced by startups.

The implementation level of **Indicator 2.1.2 – “Time to complete visa applications for experienced workers”** decreased by 7 percentage points to 72%, slightly below that of founders. Note that only one country has a higher score in the previous indicator than in this one, suggesting the processing time of visa applications for experienced workers takes longer on average than for founders. Visa conditions in some countries are also stricter for highly qualified workers than for entrepreneurs.

Country-level implementation levels are represented in Figure 23. Ten countries exhibit an implementation level of 100% (processing time within one month). Czechia and Italy have achieved it for the first time this year, augmenting their score by 50 percentage points. Also, Bulgaria has increased its score, by decreasing the processing time for this visa applications from 3-6 months to 1-3 months. Inversely, the processing time has increased for five countries, reducing their scores and explaining the decrease in the implementation level of this substandard.

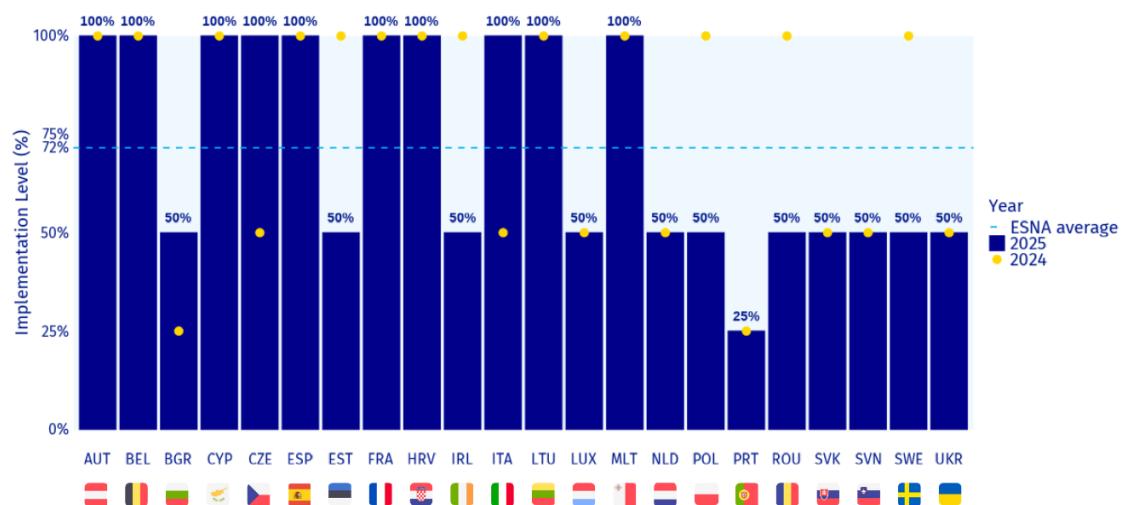


Figure 23: Implementation level of Indicator 2.1.2 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023)

Across Europe, migration policies have evolved in mixed directions. Some countries have tightened entry rules, while others have eased conditions for high-skilled workers. Many countries are reforming migration and asylum systems to ease integration challenges (OECD, 2025c). Migration helps address labour shortages, but stricter rules for labour migration are also being enacted. Some nations now have policies to attract high-skilled workers.

Overall, in regard to attracting highly qualified workers, Europe has been following a trend of facilitation of processes for this category of migrants (OECD, 2025c). The *EU Blue Card Directive* (2021/1883) introduced greater flexibility through lower salary thresholds, shorter contract requirements, and reduced education prerequisites. Nonetheless, these policy improvements have not translated into shorter processing times.

Alternatively, this trend might not have been accompanied by efforts to fasten and improve procedures over the last year. Findings from Indicators 2.1.1 and 2.1.2 stress that countries looking to attract high-skilled labour should also invest in streamlining these visa procedures.

Digitalisation is increasingly shaping immigration systems. While several countries have fully transitioned to online platforms, others still rely on paper-based procedures (OECD, 2024b). Expanding digital and AI-driven processes could significantly reduce processing times, illustrating the cross-cutting benefits of implementing Standard #8 – “Digital First”. Emerging technologies, such as Artificial Intelligence, blockchain technology and algorithmic models also carry potential to expand and improve migration services (OECD, 2024b).

4.2.2.2 Substandard 2.2 – Programmes for Talent

Substandard 2.2 – “Programmes for Talent” comprises two indicators: 2.2.1 – “Existence of Return of Tech diaspora programmes” and 2.2.2 – “Talent Attractiveness Index”. The first measures efforts to attract national talent back to their home countries, while the second assesses a country’s overall ability to attract and retain skilled migrant talent.

Indicator 2.2.1 – “Existence of Return of Tech diaspora programmes” measures the introduction of talent return programmes by participating countries. While the circulation of talent can yield benefits, brain drain undermines Europe’s competitiveness and innovation capabilities.

Anelli et al. (2023) found emigration of young and highly educated individuals deprives countries of origin of entrepreneurs, creating negative spillovers on firm creation. The ministerial declaration reinforces the need to implement policies promoting EU tech return to address structural labour shortages in these fields. Nonetheless, the extent of brain drain and related challenges remain highly heterogeneous across European countries. While in Western and Northern Europe migration flows of researchers are relatively balanced, the situation in Southern and several Eastern European countries is more asymmetrical (European Union, 2022). These geographical imbalances show differentials in brain drain dynamics in Europe. Return programmes can help narrow the gap between push and pull factors, increasing the incentives for highly skilled nationals to relocate back to their home countries.

In 2025, the indicator rose by 13 percentage points, reaching 61%, as illustrated in Figure 24. Adding to the seven countries – Cyprus, France, Lithuania, Luxembourg, Malta, Portugal and Spain – that had already fully implemented this indicator, six other countries – Austria, Bulgaria, Italy, Poland, Slovenia and Ukraine – exhibited evidence of having introduced programmes to promote the return of national talent. However, eight countries responded that they have not implemented such programmes yet.

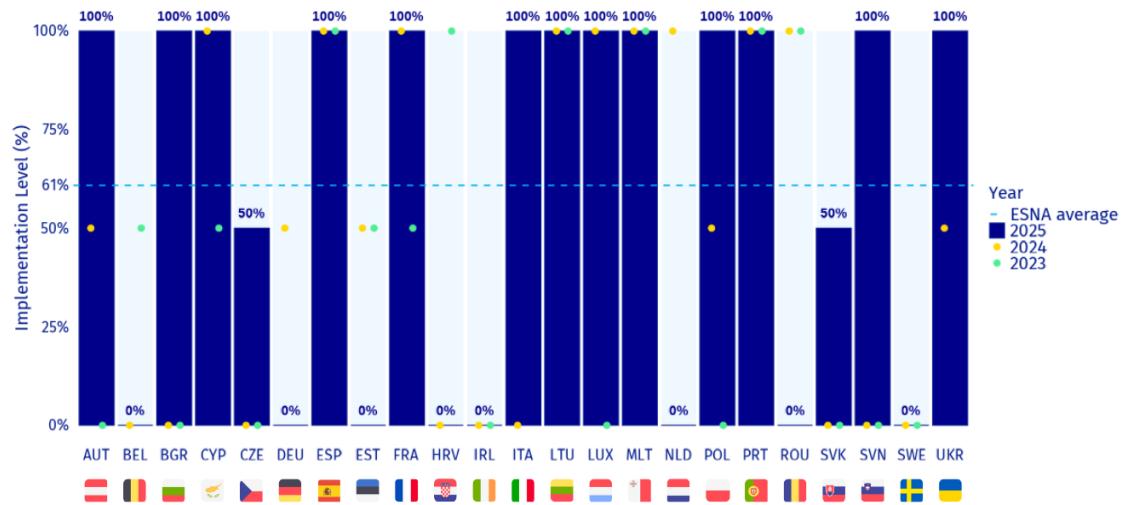


Figure 24: Implementation level of Indicator 2.2.1 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023)

Different economic and social factors underlining country-specific migration dynamics explain the variety of programmes used to attract nationals. Wage differentials, employment and educational opportunities are among some of the defining factors. The effectiveness of these programmes is related with how these factors are tackled and the targets of the programmes. For instance, academic literature has found tax incentives as a successful tool to attract researchers and highly talented nationals with productivity and innovation spillovers for other workers (Akcigit et al., 2016; Bassetto & Ippedico, 2024; Creanza, 2024). Other types of programmes decrease the moving cost, promote job matching between companies and workers or provide opportunities to develop research projects. The table below provides an overview of the incentives provided by the programmes mentioned by participating countries.

Programmes type	Countries					
Fiscal incentives						
Job matching						
Information & Consultation						
Research opportunities and public sector hiring						

Table 3: Return programmes by type

Source: ESNA, based on official data from Member Countries (Survey 2025)

Indicator 2.2.2 – “Index of Talent Attractiveness” uses the composite index for entrepreneurs of OECD Talent Attractiveness Index, capturing each country’s ability to attract and retain different types of migrant talent. While Substandard 2.1 addresses the procedural aspects of migration, this indicator reflects the broader “pull” factors that influence talent mobility decisions.

ESNA reached an implementation level of 49% (Figure 25). The best-performing country is Sweden (61%), followed by Luxembourg (55%) and Ireland (54%), reflecting above-average conditions to attract talent. Notably, none of these countries had implemented talent return programmes in 2023. These scores are the same as in 2024, as the OECD does not update the index annually²⁰. Consequently, progress under Substandard 2.2 stems from the introduction of new return programmes (Indicator 2.2.1).

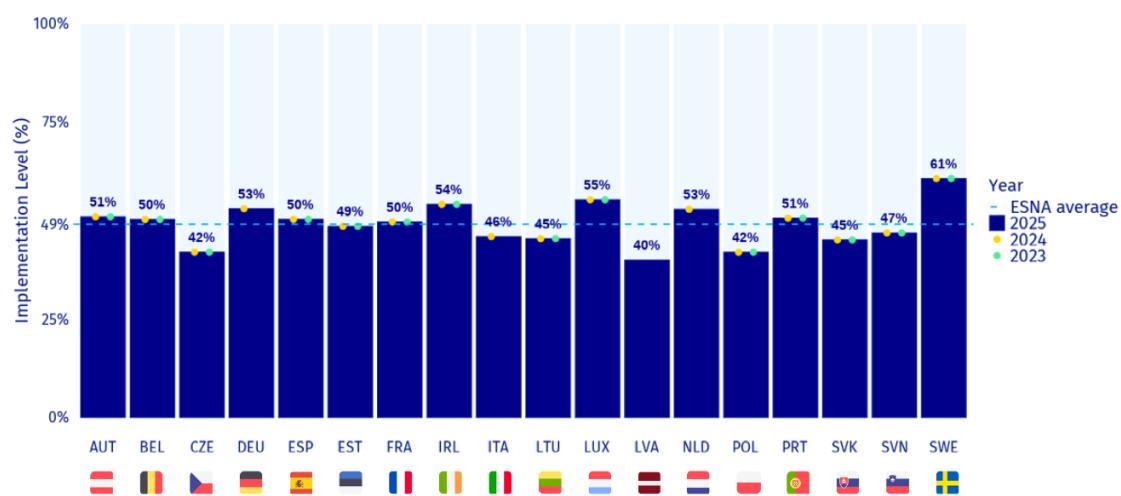


Figure 25: Implementation level of Indicator 2.2.2 across ESNA countries

Source: OECD, *Index of Talent Attractiveness*

In addition to the initiatives referenced in the declaration, participating countries may rely on complementary policies to attract, retain and develop highly qualified workers who contribute to the entrepreneurial ecosystem. Such initiatives include promoting STEM subjects and entrepreneurship among young people, improving retention conditions for international students, and fostering entrepreneurship within academia and knowledge centres. Re-skilling and up-skilling efforts will also be essential in emerging technology domains such as deep tech, AI, blockchain and climate technologies (ESNA, 2024).

4.2.3 Conclusion

Talent investment remains a core priority to drive innovation and entrepreneurship in Europe. The analysis highlights ongoing efforts by ESNA countries to attract high-skilled labour and address the skills shortages faced by startups.

²⁰ The ESNA composite score of 49% represents a 1-percentage-point decrease from 2024, despite the underlying OECD index values remaining unchanged. This decline reflects a compositional effect: Denmark, which scored 54% in 2024, did not participate in the 2025 exercise, while Latvia, newly included in 2025, scored 40%.

The evolution of Standard #2 – “Attracting and Retaining Talent” reflects several opposing dynamics. In 2025, ESNA reached an overall implementation level of 64%, showing no progress compared to 2024. Improvements in Programmes for Talent have been offset by longer visa processing times for founders and highly qualified workers.

Disparities between countries remain persistent, with thirteen still scoring below the ESNA average. These findings underscore the continued opportunities to strengthen policies that attract and retain talent, while recognising that not all countries face the same challenges regarding talent retention.

Policies covered under substandard 2.1 – “Visa Applications” have witnessed shifts across Europe, since 2023. While some countries have tightened entry requirements, others have eased conditions for high-skilled labour migration, partly due to the influence of the EU Blue Card Directive. However, these efforts have not been accompanied by sufficient efforts to decrease visa processing times for founders and high-skilled workers supported by startups. Indeed, processing times for visa applications have increased for both groups. A measurement issue worth highlighting is the need to further harmonise the data collection of processing times. While the main objective is to measure the actual processing time, some countries provide information on the processing time stipulated by regulations, which does not always correspond to the practiced. Only 12 and 10 participating countries report average processing times under one month, respectively, for visa applications from founders and high-skilled workers supported by startups. Streamlining and digitalising these procedures could yield significant improvements in future editions.

New efforts to attract qualified talent have been observed under Substandard 2.2 – “Programmes for Talent”. These initiatives are particularly important in countries most affected by brain drain and labour shortages. While eight countries are yet to introduce return programmes, 13 others have now fully implemented them.

Beyond these measures, initiatives promoting entrepreneurial and STEM education will be vital to foster a competitive entrepreneurial ecosystem in Europe. Continuous up-skilling and re-skilling of the workforce are necessary to support the growth of startups in emerging technology sectors, while promoting STEM and entrepreneurship among young people will help bridge the talent gap identified across Europe.

4.3 SNS #3 Stock Options

4.3.1 Overview

Stock options are a key instrument for startups to attract and retain skilled employees when cash resources are limited. They grant workers the right to acquire company shares at a predetermined price in the future, aligning individual effort with the firm's long-term performance and risk profile. In early-stage companies, where uncertainty is high and external financing scarce, such schemes act both as a motivational tool and a financing mechanism, enabling startups to offer competitive remuneration packages without immediate liquidity outflow.

Employee stock options also contribute to the broader dynamism of the entrepreneurial ecosystem. When startups succeed, employees who hold equity often reinvest their gains by founding new ventures or investing in emerging firms, creating a self-reinforcing cycle of talent, experience and capital. This “pay-it-forward” effect supports entrepreneurial density and

knowledge spillovers, both essential for sustained innovation and growth. Empirical evidence further shows that equity participation fosters stronger organisational commitment, higher productivity and lower turnover among employees, outcomes that enhance the resilience of young firms.

However, the potential of stock options depends critically on the surrounding legal and fiscal framework. Complex taxation rules or rigid shareholder-rights provisions can erode their value and limit their diffusion, particularly among unlisted firms where liquidity events are infrequent.

Accordingly, Standard #3 establishes that stock options should be recognised and taxed only at the moment of cash receipt, not when they are granted or vested. Taxing unrealised gains obliges employees to pay income tax before receiving any actual proceeds, creating a liquidity burden that often makes participation in such schemes unfeasible. The problem is particularly severe for startups and other unlisted companies, where shares cannot easily be sold to cover the tax due. Deferring taxation to the moment of cash receipt or sale of shares aligns the fiscal event with real income, reduces risk for employees, and preserves the attractiveness of these instruments as part of remuneration packages.

A second structural factor relates to shareholder rights. In many jurisdictions, every employee holding stock options becomes a formal shareholder once the options are exercised, which can trigger extensive consultation requirements and administrative costs. Allowing the issuance of non-voting options or equivalent equity instruments makes it possible to extend ownership more widely without compromising governance efficiency. The separation between economic and voting rights helps founders maintain strategic agility while ensuring that employees share in the company's financial success.

Finally, the existence of a stock-option scheme is essential for regulatory clarity and market confidence. Tailored frameworks that define eligibility criteria, valuation methods, and tax treatment provide both legal certainty and administrative simplicity. They also signal governmental recognition of startups as a distinct category within the economy, strengthening investor trust and facilitating cross-border comparability. Where such schemes are absent or overly restrictive, option plans remain underused, depriving startups of one of the most effective instruments to attract and retain talent.

In 2025, ESNA reached an implementation level of 74% for this Standard, slightly above the overall ESNA average of 70%. This 12-percentage-point improvement compared to 2024 reflects participating countries' continued commitment to fostering a favourable environment for startup development supported by highly qualified workers.

Figure 26 presents the implementation levels of Standard #3 – “Stock Options” across ESNA countries. Cyprus, Estonia, France, and Portugal maintain full implementation (100%), whilst Slovenia, Romania, and Slovakia have now joined this group after recording some of the most significant improvements since 2024. Slovenia registered the largest increase, rising by 100 percentage points, followed by Czechia with a gain of 79 percentage points. Romania and Slovakia each advanced by 33 percentage points. Overall, implementation levels increased in seven countries, although seven others registered declines over the same period. Notably, no country now scores zero, compared to two countries at this level in 2024.

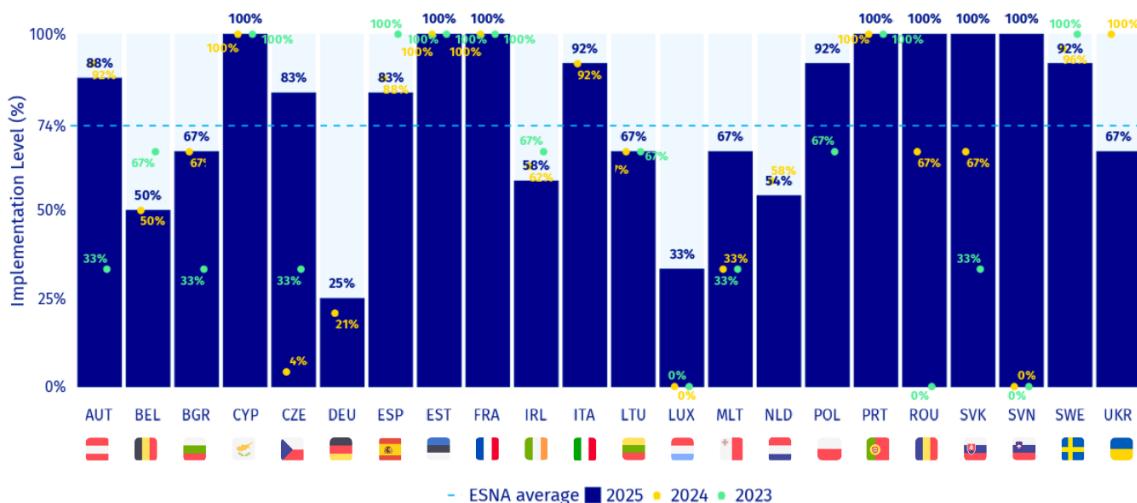


Figure 26: Implementation level of SNS #3 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023) and Not Optional ranking (Index Ventures)

Figure 27 illustrates the evolution of the three substandards: “Taxation”, “Non-Voting Rights”, and “Stock Options Schemes”. The first focuses on the tax framework’s attractiveness for employees; the second examines the schemes from the startups’ perspective, considering shareholder rights and management costs; and the third assesses whether national legislation provides for specific stock-option schemes.

Over the past year, no setbacks were recorded: all three substandards improved. Substandard 3.1 – “Taxation” rose by 8 percentage points to 54%, remaining below the standard’s average. Substandards 3.2 – “Non-Voting Rights” and 3.3 – “Stock Options Schemes” both advanced significantly, reaching 77% and 91%, respectively, after improving by 8 and 20 percentage points.

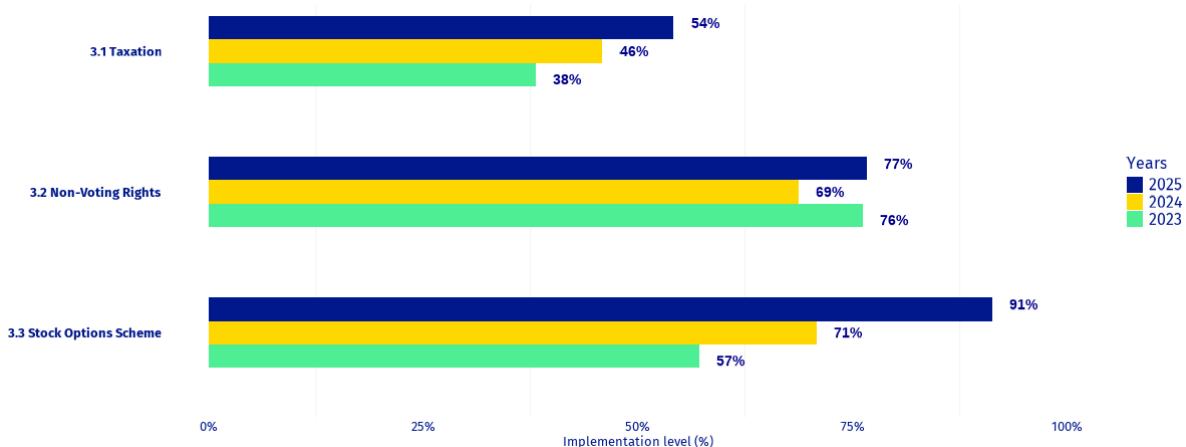


Figure 27: Implementation level #3 Substandards for ESNA

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023) and Not Optional ranking (Index Ventures)

Overall, implementation of Standard #3 – “Stock Options” increased by 12 percentage points, with Substandard 3.3 accounting for more than half of this growth (Figure 28).

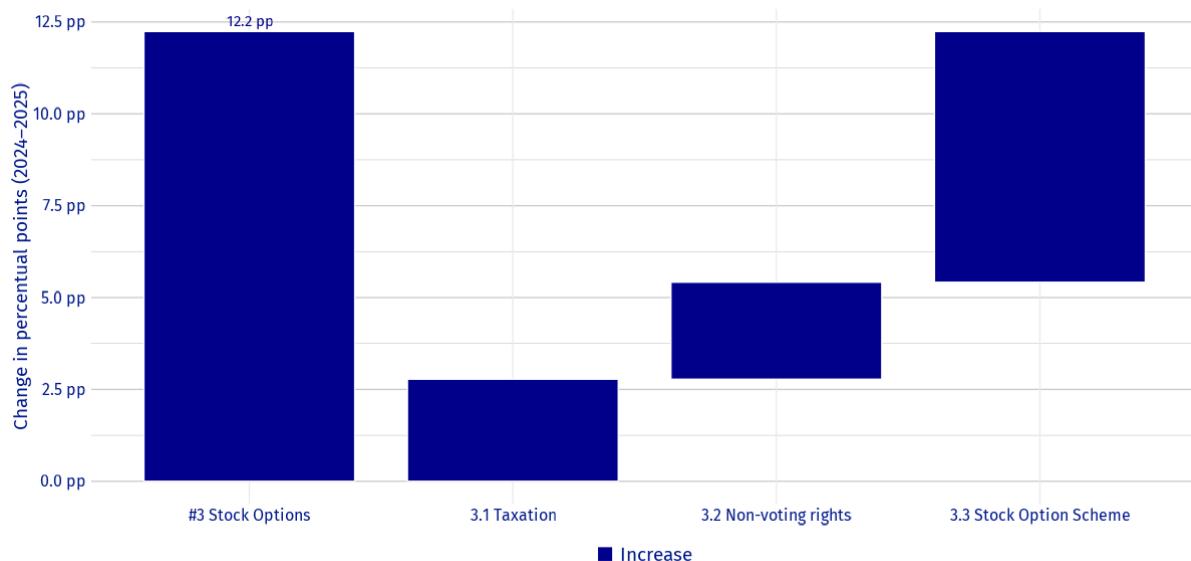


Figure 28: Decomposition of the change in SNS #3 implementation level by substandard (2024-2025)

Source: ESNA, based on official data from Member Countries (Survey 2025) and Not Optional ranking (Index Ventures)

As shown in Figure 29, Substandard 3.3 – “Stock Options Schemes” demonstrates near-universal implementation, with full compliance achieved by the vast majority of countries and zero implementation constituting an extreme outlier. Substandard 3.1 – “Taxation” presents a starkly contrasting picture: almost half of the countries show no implementation, whilst others have achieved full compliance, reflecting the binary nature of its single indicator, which only assumes scores of 0% or 100%. Conversely, Substandard 3.2 – “Non-Voting Rights” demonstrates the highest convergence: all countries have attained at least 50% implementation and the vast majority clusters at or near full compliance.

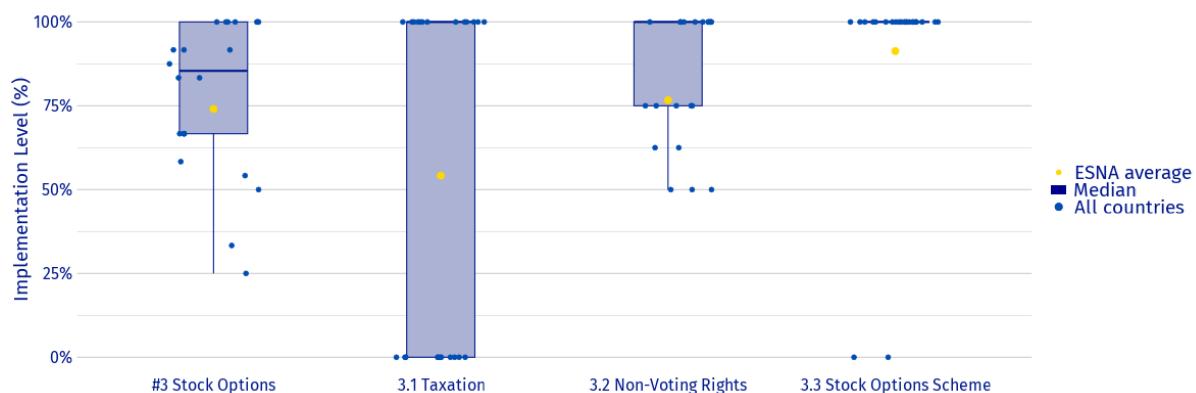


Figure 29: Distribution of implementation levels for the substandards of SNS #3

Source: ESNA, based on official data from Member Countries (Survey 2025) and Not Optional ranking (Index Ventures)

MAIN TAKEAWAYS

1. **Standard #3** achieved an **implementation level of 74%**, a 12-percentage-point increase from 2024.
2. 13 countries **tax stock options solely upon sale** (Indicator 3.1.1), making countries that follow this best practice a majority.
3. All 22 respondents **allow startups to issue stock options with no-voting rights**, resulting in an implementation level of 100% on Indicator 3.2.1.
3. 21 out of 23 participating countries have established **dedicated legal frameworks for stock options** (Indicator 3.3.1).

4.3.2 Substandards analysis

4.3.2.1 Substandard 3.1 – Taxation

Employee stock-options are widely used as remuneration instruments, helping startups attract and retain key talent. A favourable tax regime can substantially increase the relative returns of working in a startup, thereby shifting skilled professionals towards the sector. From a policy perspective, preferential tax treatment for stock options enables governments to promote entrepreneurship without reducing tax rates across the wider economy (Henrekson & Sanandaji, 2018).

The taxation of stock options may occur at three moments: grant, exercise and sale. The application of taxes before the moment of sale burdens employees with the taxation of gains which have not yet been received in liquidity, reducing the benefits of employee stock options. As mentioned, Substandard 3.1 – “Taxation” relies only on **Indicator 3.1.1 – “Taxed only upon cash liquidity”**. This indicator is binary and equal to 100% when stock options are taxed solely at the moment of stock sale and 0% otherwise.

The ESNA implementation level for this indicator stands at 54%, meaning that slightly more than half of participating countries have adopted full alignment with this recommendation. Thirteen countries — Austria, Cyprus, Czechia, Estonia, France, Italy, Poland, Portugal, Romania, Slovakia, Slovenia, Spain and Sweden — tax stock options only upon sale, with Czechia, Romania, Slovakia and Slovenia achieving this milestone for the first time this year (Figure 30).

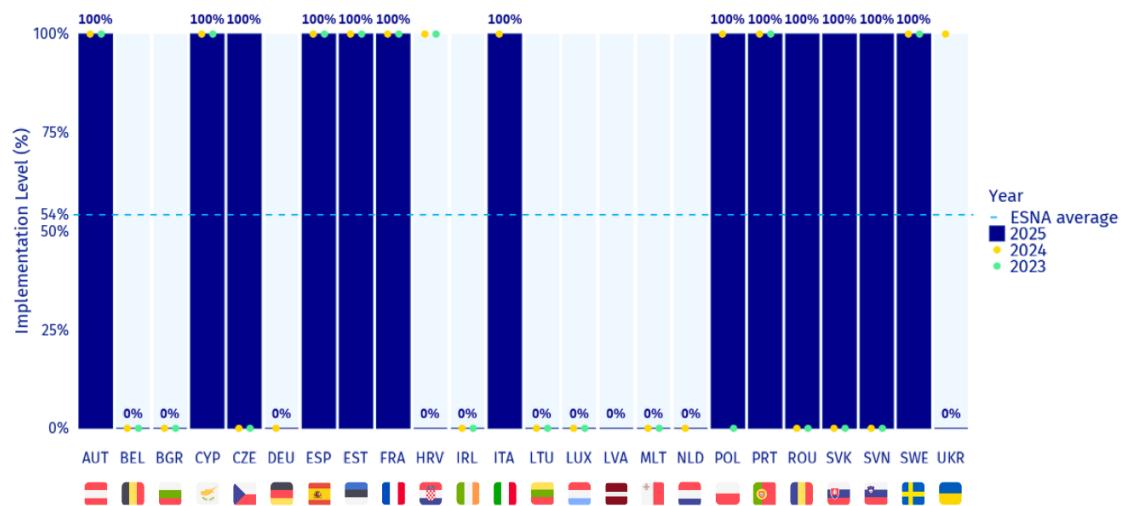


Figure 30: Implementation level of Indicator 3.1.1 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023)

Several countries have introduced specific stock-option regimes for startups or companies that meet defined criteria. For instance, in Italy, innovative startups whose stock-option plans meet the eligibility requirements can defer taxation until sale, with gains treated as capital rather than income. Similar schemes often apply only to employees who satisfy specific conditions relating to job position, tenure, or holding period. The taxable base also varies depending on the timing of taxation, contributing to a diversity of approaches across Europe.

Beyond timing, the type and rate of taxation are equally critical. The ministerial declaration recommends that employee stock options be taxed as capital gains, but in several participating countries they are subject to personal income tax instead.

Table 4. displays the tax regimes across participating countries, showing the heterogeneity in taxation types and administrative burdens. This diversity increases complexity for startups operating across multiple jurisdictions.

Country	Taxed as capital gains	Moment of taxation	Tax rate	Note
 AUT		Stock Sale	Flat; Income tax rate;	Austrian-FlexCo-Act
 BEL	PIT	Grant	Progressive	Taxed as personal income
 BGR	PIT; CGT;	Rights exercise; Stock Sale	PIT; Flat	
 CYP		Stock Sale		
 CZE	PIT	Stock Sale	Progressive	Companies can opt for this regime

 DEU	PIT; CGT;	Rights exercise	PIT; Flat	
 EST		Stock Sale	Flat	
 FRA		Stock sale	Flat	Under the Business creator share subscription warrants (BSPCE)
 ITA	Capital gains	Stock Sale	Flat	Regime only for innovative companies
 LTU	PIT	Stock Sale	Flat	If vetting time is longer than 3 years
 NLD	PIT	Rights exercise; Stock Sale;	Progressive	Implementation of a new tax regime is foreseen
 POL	Capital gains	Stock Sale	Flat	
 PRT	Capital gains	Stock Sale	Flat	Regime only applicable for startups
 ROU	Income tax	Stock Sale	Flat	
 SVN	Capital gains	Stock Sale	Flat	
 SWE	Capital gains	Stock Sale	Flat	

Table 4: Startups Employee Stock Options tax regime

Source: ESNA, based on official data from Member Countries (Survey 2025)

4.3.2.2 Substandard 3.2 – Non-Voting Rights

Substandard 3.2 – “Non-Voting Rights” is calculated as the arithmetic mean of two indicators: Indicator 3.2.1 – “Existence of stock options with non-voting rights for startups” and Indicator 3.2.2 – “Minority Shareholders & Bureaucracy”. Together, they capture the costs and administrative burdens startups face when implementing stock-option schemes, reflecting their overall attractiveness to companies.

Traditionally, stock options confer voting rights to their holders. However, for startups, this can result in a proliferation of minority shareholders whose consultation in key decisions slows governance processes and increases administrative costs. The declaration therefore recommends enabling startups to issue non-voting stock options, allowing broader employee participation without impairing decision-making efficiency. **Indicator 3.2.1 – “Existence of stock options with non-voting rights for startups”** assesses if that is possible.

As illustrated in Figure 31, ESNA achieved a 100% implementation level for Indicator 3.2.1, meaning that all the 22 countries²¹ allow startups to issue stock options with non-voting rights, having therefore a score of 100%. This is the highest performing indicator overall *ex aequo*. Notable progress was observed in Czechia, Luxembourg, Poland and Slovenia, which introduced relevant legislative changes in the past year, driving the overall increase of 21 percentage points in this indicator.

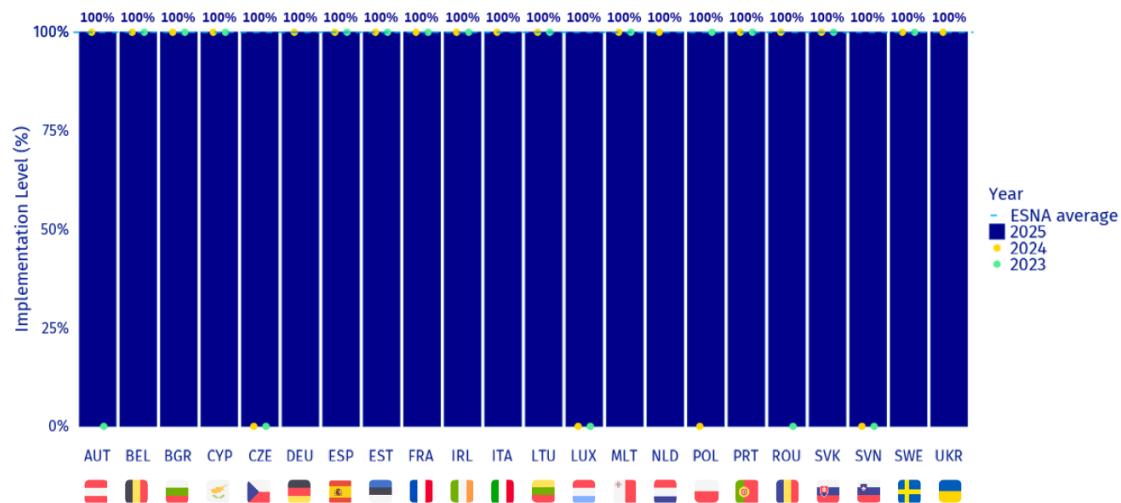


Figure 31: Implementation level of Indicator 3.2.1 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023)

Indicator 3.2.2 – “Minority Shareholders & Bureaucracy” draws on the minority shareholders and bureaucracy factor from the Not Optional ranking, which assesses the administrative costs and procedural burdens associated with these schemes from a company perspective. A lower score corresponds to higher costs, while higher scores reflect greater attractiveness. In 2025, ESNA reached 53% implementation, a 5-percentage-point decrease from 2024. When controlling for consistent country participation, this decline would be even steeper.

Estonia, France, Latvia, Lithuania and Portugal achieved full implementation (100%), indicating favourable conditions for companies adopting such schemes. This represents one additional country compared with 2024; yet the number of countries scoring 0% also increased from one to three.

²¹ Croatia and Latvia did not provide data for this indicator.

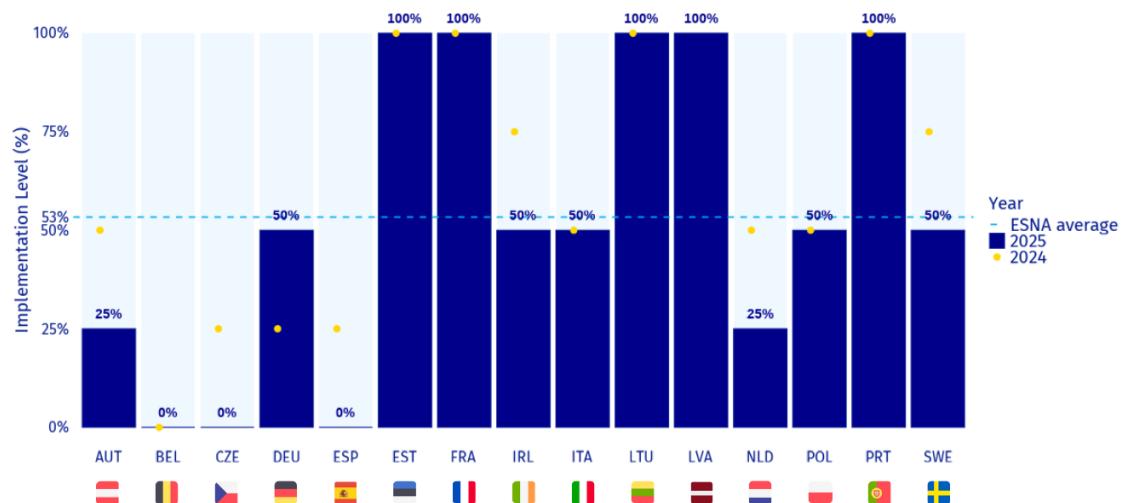


Figure 32: Implementation level of Indicator 3.2.2 across ESNA countries

Source: *Index Ventures, Not Optional ranking (2025 and 2024)*

The valuation of strike prices continues to differ significantly across countries and often requires external legal or technical expertise, highlighting the underlying complexity of these schemes.

4.3.2.3 Substandard 3.3 – Stock-Option Schemes

Substandard 3.3 – “Stock-Option Schemes” is assessed through Indicator 3.3.1 – “Existence of a country-specific stock-option scheme”, which evaluates whether a national legal framework explicitly regulates and enables the issuance of stock options. This indicator is also binary, allowing only two possible scores: 100% when such a framework exists, and 0% when it does not. Clear and transparent legislation enhances regulatory certainty and market confidence, signalling a government’s commitment to fostering a startup-friendly environment (Lowitzsch, 2024).

As Figure 33 illustrates, 21 out of 23²² participating countries have country-specific legislation governing stock-option schemes, achieving full implementation. Since 2024, progress has been recorded in Czechia, Malta, Poland and Slovenia.

²² Croatia did not provide data for this indicator.

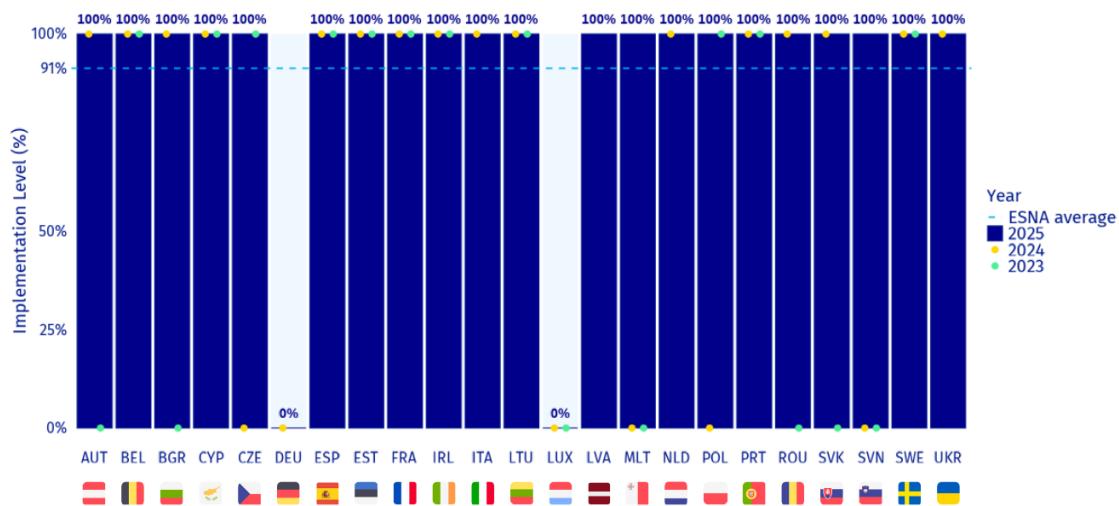


Figure 33: Implementation level of Indicator 3.3.1 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023)

Among the 21 countries with dedicated frameworks, 13 tax stock options solely upon sale. The two countries without dedicated frameworks apply taxation at moments other than the point of sale.

In some countries, startups have adopted virtual stock-options plans (VSOPs), which replicate the financial effects of stock options without conferring ownership rights (Index Ventures, 2018). These arrangements avoid the administrative and fiscal burdens of share issuance, but they may disadvantage employees through provisions allowing revocation without cause or the forfeiture of virtual options upon departure (Index Ventures, 2018).

4.3.3 Conclusion

Stock options are essential tools for attracting and retaining skilled employees, particularly when startups face limited cash resources. At a time when Europe is experiencing a shortage of talent, especially in STEM fields, enabling startups to offer competitive remuneration packages is essential to attract and retain highly qualified workers.

Standard #3 – “Stock Options” reached an implementation level of 74% in 2025, representing a 12-percentage-point improvement compared with the previous year. This progress reflects the commitment of participating countries to strengthening an entrepreneurial ecosystem capable of attracting talent. The overall improvement was driven by advancements mainly in Substandard 3.3 – “Stock Option Schemes”, whereas substandards 3.1 – “Taxation” and 3.2 – “Non-Voting Rights” also registered increases, but smaller.

Substandard 3.1 – “Taxation” has reached an implementation level of 54%. Deferring taxation on employee stock options until the moment of sale is crucial to prevent liquidity constraints and to ensure that these schemes remain attractive. Unfavourable tax treatment can significantly reduce the incentive effect of stock options, thereby limiting startups’ capacity to attract and retain highly skilled employees.

With an implementation level of 77%, Substandard 3.2 – “Non-Voting Rights” addresses the costs associated with stock option schemes from the firm’s perspective. All countries allow

startups to issue stock options with non-voting rights, enabling them to reward key employees without the additional administrative burden of engaging multiple minority shareholders. However, Indicator 3.2.2 – “Minority and Shareholders’ Rights” reached an implementation level of only 53%, indicating further room for improvement in simplifying procedures for companies operating such schemes.

Also, with an implementation level of 91%, Substandard 3.3 – “Stock Option Schemes” examines the existence of employee stock option frameworks. Transparent and well-defined legal structures foster market confidence and legal certainty.

Despite these advancements, the heterogeneity of stock option schemes across European countries continues to pose challenges for companies and employees engaged in cross-border activities. Simplifying and harmonising these frameworks would facilitate the mobility of startups and their workforce within the EU. Initiatives such as the Mutual Recognition Passport, directly linked to Substandard 1.3 – “Cross-Border Services”, can play a pivotal role in reducing legal and administrative barriers, promoting smoother cross-border operations, and enhancing Europe’s attractiveness for entrepreneurial talent.

4.4 SNS #4 Innovation in Regulation

4.4.1 Overview

A regulatory environment that enables innovation is a fundamental precondition for the development of dynamic startup ecosystems. When regulatory frameworks are rigid, outdated or disproportionate, they can create excessive compliance costs, discourage experimentation, and delay the market entry of new technologies. Startups – typically operating under high uncertainty and with limited financial and human resources – are especially exposed to these frictions. Conversely, when legislation is designed to be adaptive, proportionate, and innovation-friendly, it can transform regulation from a barrier into an enabler of entrepreneurship, accelerating the translation of ideas into viable products and strengthening Europe’s overall competitiveness.

The ministerial declaration explicitly frames this objective in terms of three policy instruments: (i) a rigorous application of the Think Small First principle to prevent unnecessary administrative burden/red tape for startups; (ii) exemptions or alternative compliance routes that render obligations proportionate to the size and risk profile of nascent ventures (for example with respect to environmental impact assessment); and (iii) the deployment of regulatory sandboxes — i.e. agreed policies or programmes, with clear rules, administrative support and concrete examples, that allow supervised testing of innovations in cooperation with sectoral authorities. This tripartite structure is the operational core of Standard #4 and defines the three substandards used in the monitoring framework.

Together, these three dimensions capture how governments move from static rulemaking towards adaptive regulatory governance – one that learns from experimentation, incorporates feedback, and evolves in line with technological and market developments. Think Small First introduces proportionality upstream in the legislative process; exemptions or alternative compliance lower burdens *ex post* for defined categories of firms; and sandboxes create controlled spaces for learning, iterative rule adjustment and evidence generation. Together, they capture both preventive (design-stage) and corrective (implementation-stage) instruments that reduce regulatory friction while preserving legitimate public-interest objectives such as safety, consumer protection and market integrity.

At the European level, this orientation resonates with broader policy frameworks such as the Better Regulation Agenda, the Small Business Act for Europe, and the New European Innovation Agenda, all of which stress the importance of regulation that is both predictable and conducive to innovation. The Draghi Report further reinforced this policy logic, calling for evidence-based and iterative governance mechanisms that foster competitiveness through smarter regulation rather than deregulation.

Within this analytical framework, Standard #4 examines the extent to which these principles have been embedded into national policymaking. Its implementation improved overall, with the ESNA average increasing by 12 percentage points from 43% to 55% (Figure 34). Despite this general progress, performance remained uneven across countries, reflecting simultaneous advances and regressions. Eleven countries saw their scores increase; the strongest gains were observed in Italy and Romania (both 33 p.p.), followed by Lithuania and Luxembourg (both 29 p.p.). By contrast, declines occurred in nine countries.

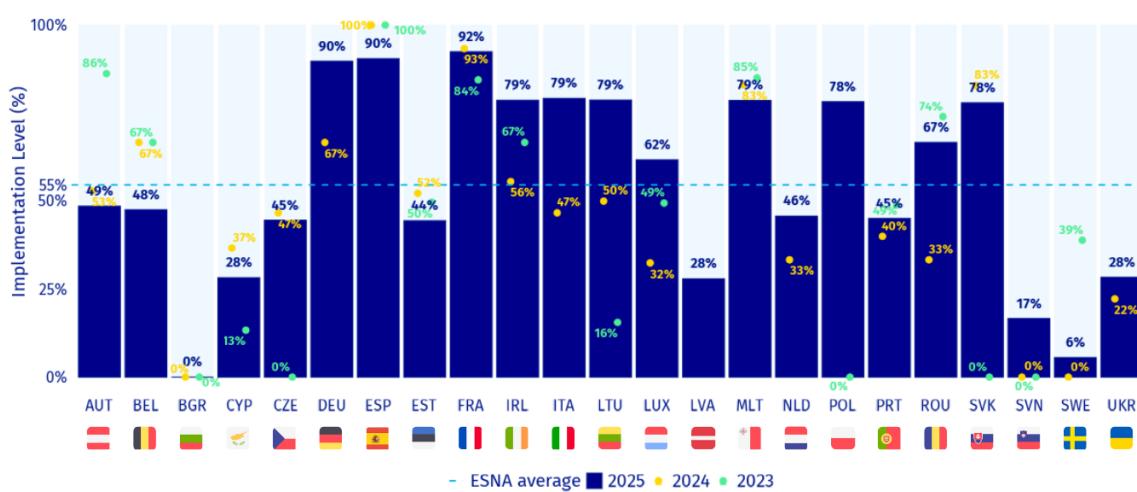


Figure 34. Implementation level of SNS #4 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023)

In 2025, the highest score recorded is 92%, attained by France, followed by Germany and Spain with 90%. At the other end of the spectrum, only one country remains at 0%, two less than in 2024. The average ESNA score growth was driven primarily by mid-range countries catching up rather than by further advancement at the upper end of the distribution. The most substantial improvements occurred among countries with moderate initial scores. The median rose by 2 percentage points, from 47% to 49%, and now sits below the average, indicating that improvements were concentrated among countries in the middle and lower ranges of the distribution, contributing to gradual convergence across countries.

Across the three substandards, implementation levels remain markedly differentiated (Figure 35). Substandard 4.1 – “Think Small First” continues to lead, reaching an implementation of 79% in 2025, well above the ESNA average for this Standard. It is followed by 4.2 – “Compliance Exemptions”, which stands at 50%, and by 4.3 – “Regulatory Sandboxes”, which lags behind at 35%. Compared with 2024, the hierarchy between the latter two has reversed, as sandboxes now record lower implementation than compliance exemptions.

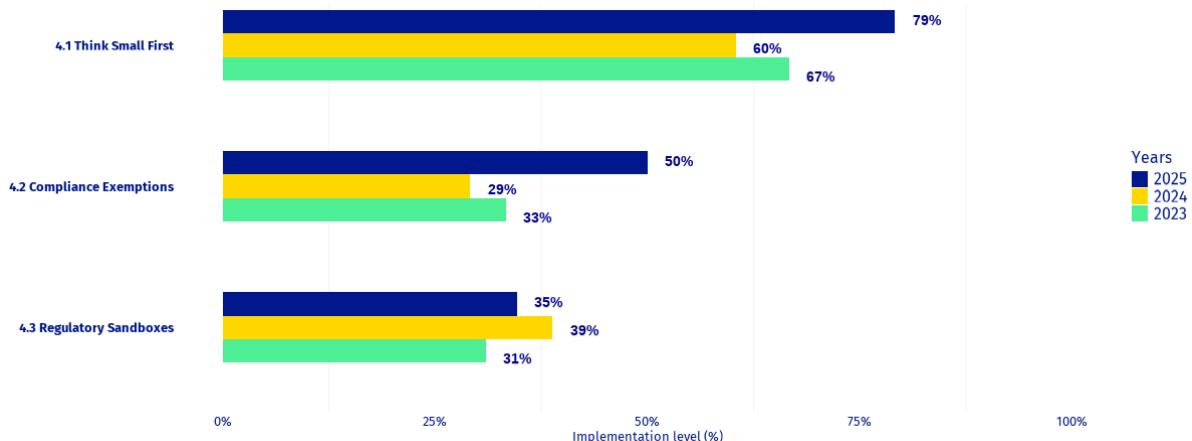


Figure 35. Implementation level of SNS #4 substandards for ESNA

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023)

The improvement of Standard #4 (12 p.p.) was driven by advances in the first two substandards (Figure 36). The strongest gain was recorded under Compliance Exemptions (21 p.p.), suggesting gradual diffusion of simplified compliance frameworks across national administrations. Think Small First also advanced significantly (19 p.p.), confirming the consolidation of mechanisms that integrate the SME perspective into legislative design. By contrast, Regulatory Sandboxes experienced a decline of 4 percentage points, which offset part of the general progress observed in the Standard #4.

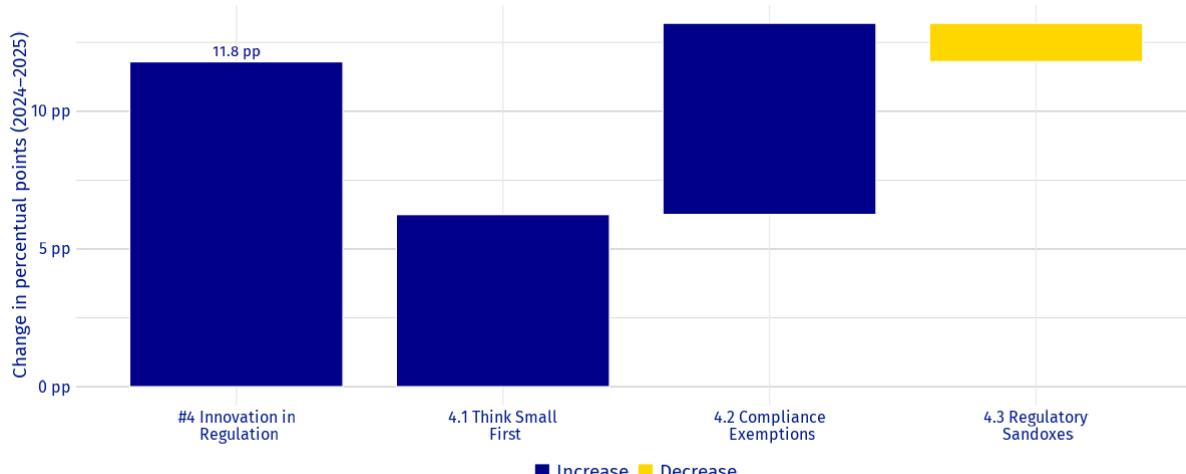


Figure 36. Decomposition of the change in SNS #4 implementation level by substandard (2024–2025)

Source: ESNA, based on official data from Member Countries (Survey 2025 and 2024)

The dispersion analysis further underscores the heterogeneity of implementation (Figure 37). Substandards 4.1 – “Think Small First” and 4.2 – “Compliance Exemptions” both display substantial cross-country variation. Note, however, that each of these substandards consist of a single indicator taking only three possible values, which results in concentrated clusters at the extremes and a wide overall range. By contrast, 4.3 – “Regulatory Sandboxes” shows a much narrower box but a large number of outliers. This combination signals a compressed core distribution – most countries scoring at low to moderate levels – alongside a few frontrunners achieving significantly higher implementation. The pattern thus suggests early but uneven diffusion of sandbox-based experimentation, with progress still concentrated in a

limited number of jurisdictions. Overall Standard #4 implementation displays a highly dispersed distribution with substantial outliers at both extremes, illustrating the coexistence of two dynamics within this standard: binary convergence around formalised SME-oriented principles, and fragmented advancement in more experimental regulatory approaches.

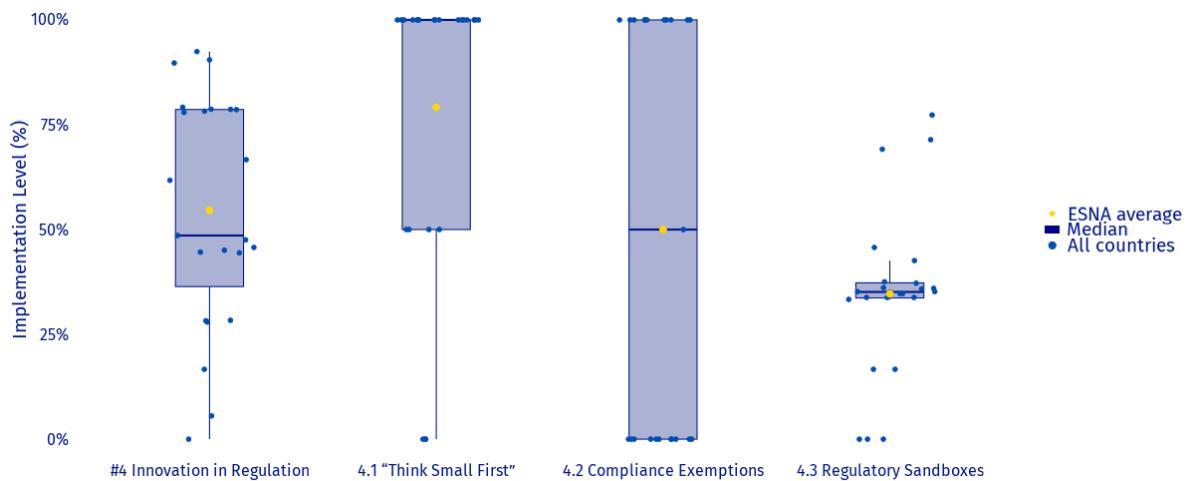


Figure 37. Distribution of implementation levels for the substandards of SNS #4

Source: ESNA, based on official data from Member Countries (Survey 2025)

In short, progress under Standard #4 has been uneven across its components, revealing contrasting levels of institutionalisation. The next section explores each substandard in detail, identifying the specific drivers and policy configurations behind these results.

MAIN TAKEAWAYS

1. The ESNA average for **Standard #4** increased by 12 percentage points, with **11 countries** recording improvements.
2. 21 of the 24 participating countries **have the Think Small First principle** formally embedded in their legislative processes, up from 18 in 2024.
3. The number of countries with full **implementation of compliance exemptions** or alternatives for startups **more than doubled**, from five in 2024 to 11 in 2025.
4. 19 of the 24 participating countries **report having regulatory sandboxes** in place, up from 14 in 2024.

4.4.2 Substandards analysis

4.4.2.1 Substandard 4.1 – “Think Small First”

As previously noted, this substandard consists of a single indicator, **4.1.1. — “Think Small First principle implementation level”**, so its evolution fully mirrors that of the indicator itself. Between 2024 and 2025, the ESNA average increased from 60% to 79%, confirming the consolidation of mechanisms that embed the SME and startup perspective into national

policymaking (Figure 38). The 19-percentage-point increase observed should, however, be interpreted with caution. Because this substandard is measured through a single binary indicator (with intermediate scoring only reflecting uncertainty in evidence), the quantitative rise does not necessarily imply a structural shift in policymaking practice. Rather, it reflects a gradual consolidation of implementation claims and a clearer demonstration of existing procedures.

In 2024, six countries reported that their legislation was not guided by the Think Small First principle. By 2025, this number had fallen to three signalling a wider policy uptake of SME- and startup-oriented legislative design. Poland, Romania, and Slovenia introduced measures that allowed them to report implementation for this year (although Slovenia had not provided evidence, reaching only 50%). Among the remaining countries, eleven already had full implementation in 2024 and maintained it in 2025. Another four moved from 50% to 100%, meaning that they were able to demonstrate the procedures they had previously reported rather than introducing new mechanisms.

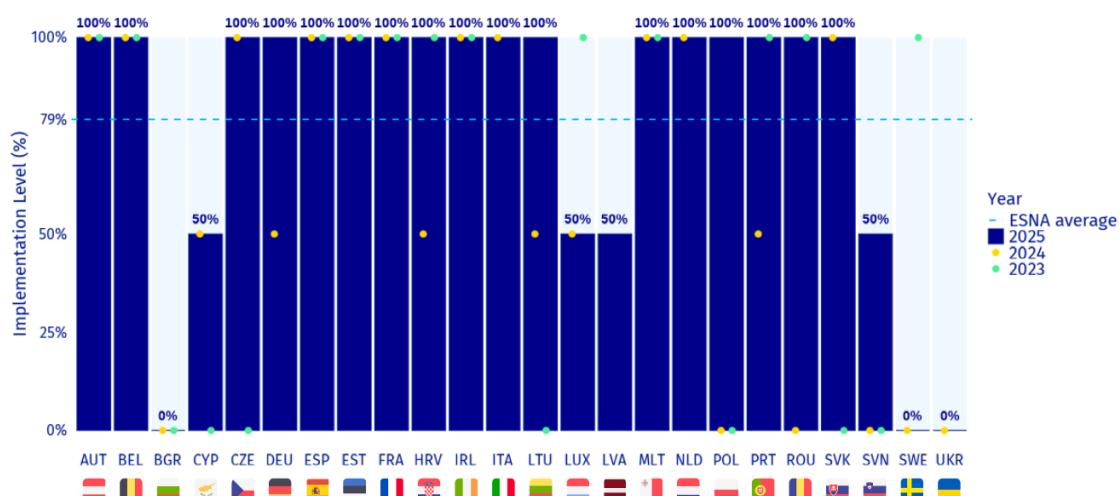


Figure 38. Implementation level of Indicator 4.1.1 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023)

These results point to consolidation among countries that already claimed to apply the principle and expansion among a smaller group that has now embedded it more explicitly in their regulatory processes. This typically corresponds to one or more of the following: an explicit SME Test embedded in Regulatory Impact Assessment (RIA) templates; mandatory consideration of SME impacts in the Cabinet or ministerial clearance process; formal better-regulation units that flag SME-related issues; or statutory requirements to assess administrative burdens on small firms. These mechanisms align with best practice recommended in EU and OECD guidance and tend to be associated with more systematic ex-ante scrutiny of regulatory proposals.

Conceptually, the Think Small First principle is rooted in the Small Business Act for Europe (2008) and the European Commission's Better Regulation Guidelines, both of which advocate that the specific needs and constraints of small and medium-sized enterprises should be considered upstream in the policymaking process. The principle translates into a systematic assessment of how proposed legislation may affect SMEs, typically through tools such as the SME Test, targeted stakeholder consultations, and proportionality checks within Regulatory Impact Assessments.

For startups — which, in their early stages, generally fall within the micro or small enterprise category — the relevance of this principle is indirect yet critical. EU firms spend 1.8% of turnover on staff employed only to deal with regulatory requirements. This share raises to 2.5% for SMEs (EIB, 2025). Although primarily designed for the wider SME population, this principle lays the regulatory groundwork for a more innovation-friendly business environment by preventing excessive or disproportionate compliance obligations from emerging in the first place. When consistently implemented, the Think Small First approach can therefore help preempt regulatory barriers that might otherwise constrain startup formation and growth, particularly in fast-evolving technology sectors. However, its effectiveness ultimately depends on timing, methodological rigour, and transparency — aspects that continue to vary significantly across countries.

4.4.2.2 Substandard 4.2 – Compliance Exemption

As with the previous substandard, Substandard 4.2 is calculated on the basis of a single indicator, **4.2.1 – “Existence of compliance exemptions/alternatives for startups”**, and its evolution therefore mirrors that of the indicator itself. Between 2024 and 2025, the ESNA average increased from 29% to 50% (Figure 39). Once again, the rise of 21 percentage points reflects both the introduction of new proportionality mechanisms and the formal recognition of practices that had previously remained undocumented. In 2025, eleven of the twenty-three²³ countries recorded full implementation (100%), compared to only five in 2024. The largest improvements were observed in Italy, Lithuania, Luxembourg, and Poland, all of which advanced from 0% to 100%; Germany and Ireland moved from 50% to 100%. The overall picture points to an expansion in the number of jurisdictions introducing or recognising compliance exemptions.

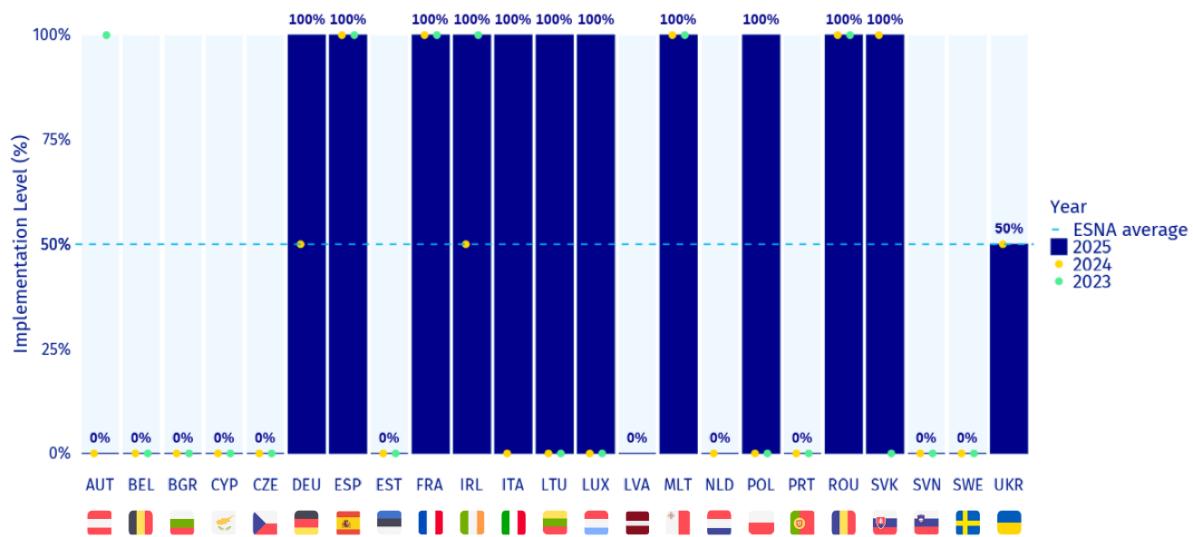


Figure 39. Implementation level of Indicator 4.2.1 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023)

Conceptually, compliance exemptions operationalise the principle of proportionality *ex post*, ensuring that regulatory obligations remain commensurate with the size, capacity and risk profile of enterprises. The idea is not to remove regulation, but to tailor compliance pathways to avoid unnecessary burdens for smaller or younger firms. In EU policy frameworks, this notion is embedded in the Better Regulation Toolbox and the Small Business Act for Europe,

²³ Croatia did not provide data for this indicator.

which both encourage regulators to design differentiated obligations or alternative routes for SMEs. Typical mechanisms include simplified or phased reporting requirements, reduced audit or registration obligations, transitional regimes for newly established firms, and risk-based application of impact assessments. The evidence reported by national respondents illustrates considerable diversity in how these principles are implemented (risk-based approaches within impact assessment and reporting frameworks, dedicated startup or SME regimes, reduced financial disclosure requirements, etc.).

Taken together, these developments indicate that the diffusion of proportionality-based regulation is advancing, although not yet systematically institutionalised, and that the principle of proportionality is gaining operational traction in national regulatory systems.

4.4.2.3 Substandard 4.3 – Regulatory Sandboxes

The term regulatory sandbox refers to a controlled policy instrument that allows innovative firms — often startups — to test new products, services, or business models under the supervision of competent authorities and within a predefined regulatory framework. Unlike general innovation support mechanisms, sandboxes operate within a legal context: they do not suspend existing rules but create temporary and conditional exemptions, or interpretative flexibility, that enable experimentation while maintaining safeguards for consumers, markets, and public interests.

It is important to distinguish sandboxes from related but less formal instruments such as innovation hubs, test beds, or living labs. Innovation hubs primarily serve as contact points between regulators and market participants, providing guidance and facilitating dialogue, but without any relaxation of legal requirements. Test beds and living labs, in turn, are usually physical or virtual environments for technological trials, often without direct regulatory oversight. By contrast, regulatory sandboxes combine three distinctive features: (i) an explicit legal or administrative mandate; (ii) a structured process for supervised testing; and (iii) a learning objective that informs future regulatory adjustments (European Commission, 2023b).

Within the startup policy context, regulatory sandboxes represent an advanced form of adaptive governance: they allow public authorities to observe real-world outcomes before making permanent legislative changes. This approach mitigates the risks of over- or under-regulation in fast-moving sectors such as fintech, AI, or clean technologies, while giving startups a clearer and safer pathway to market entry. As such, the existence and diffusion of sandboxes serve as a proxy for a country's capacity to integrate experimentation and evidence-based learning into its regulatory practice.

Substandard 4.3 assesses the extent to which countries have adopted and operationalised these frameworks. It is composed of three indicators that capture complementary dimensions of this type of regulatory experimentation: 4.3.1 – “Existence of regulatory sandboxes”, 4.3.2 – “Number of established regulatory sandboxes”, and 4.3.3 – “Number of startups involved in regulatory sandboxes consortia”. Together, they reflect the progression from basic institutional availability to effective participation by startups, thus mapping both the breadth and depth of national sandbox ecosystems.

Indicator 4.3.1 – “Existence of regulatory sandboxes” captures whether countries have regulatory sandboxes designed to facilitate controlled experimentation by startups and innovative firms. Between 2024 and 2025, the overall ESNA average rose from 69% to 83%, confirming a broad consolidation of this policy instrument across Europe (Figure 40). Nineteen countries now score 100 % – up from fourteen the previous year – reflecting the continued diffusion of regulatory sandboxes frameworks as part of national innovation strategies. Croatia

also reported ongoing preparations, scoring 50%, while only three countries continue to report no implementation in this field.

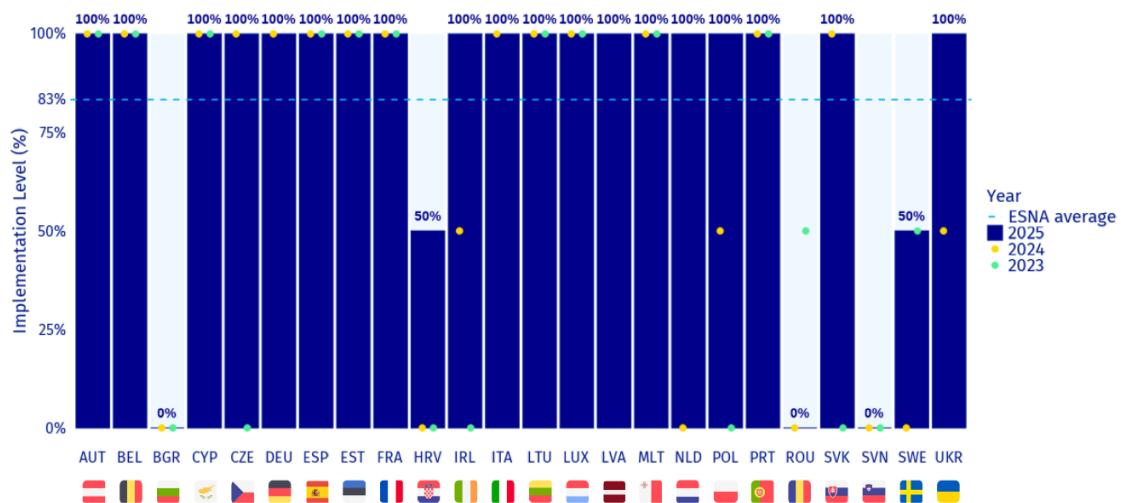


Figure 40. Implementation level of Indicator 4.3.1 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023)

This trend indicates that the sandbox model has matured from an emerging policy tool into a mainstream policy instrument for innovation governance. While fintech remains its most common application area, an increasing number of countries are extending the approach to domains such as energy, health, and digital technologies. As regulatory authorities accumulate experience and institutional capacity to manage controlled experimentation, sandboxes are evolving from ad hoc pilot schemes into more stable frameworks that help reduce compliance uncertainty for startups.

Having established where sandbox frameworks exist, **Indicator 4.3.2 – “Number of established regulatory sandboxes”** examines their scale of deployment, measuring how many have been formally established within each country. In 2025, the average ESNA score for Indicator 4.3.2 dropped sharply to 10%, compared with 35% in 2024 (Figure 41). It should be noted, however, that the 2024 results suffered from significant data gaps, as almost one third of the countries did not report any information – including Germany, which has now a score of 100% –, and that whereas in 2024 such gaps were treated as missing values, missing data for 2025 was coded as zero²⁴. With the available (yet still incomplete) data, the comparison between years reveals an overall decline across most countries. Only Ireland and Ukraine reported a marginal improvement of 1 percentage point, while the majority of respondents recorded lower scores.

²⁴ Gathering data on regulatory sandboxes can be challenging, especially in countries where such frameworks operate in a decentralised manner. The treatment of missing information as zero was necessary to ensure consistency in the substandard calculations, even if it may slightly underestimate actual engagement.

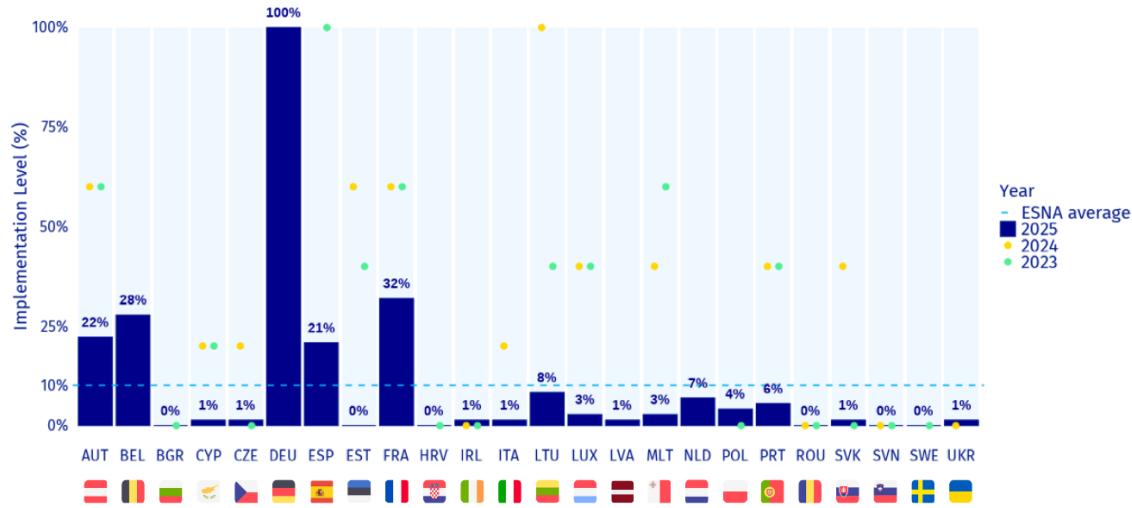


Figure 41. Implementation level of Indicator 4.3.2 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023)

Part of this apparent decline can be attributed to the broader country coverage achieved in 2025, which corrected for several missing observations from the previous edition. However, the main reason for these fluctuations lies in the construction method of the indicator. Unlike most other items in this framework, Indicator 4.3.2 is based on a min-max normalisation, which rescales each country's reported number of sandboxes between the lowest and highest values observed in that particular year according to the formula:

$$\text{Score} = \frac{X - X_{\min}}{X_{\max} - X_{\min}} \times 100$$

where X is the country's number of sandboxes, and X_{\min} and X_{\max} are the minimum and maximum values observed across all countries in that year. Therefore, scores are not anchored to a fixed scale that would permit meaningful temporal comparison. When one country reports a higher absolute number that surpasses the previous maximum – as happened in 2025 with Germany reporting 72 sandboxes – the maximum of the distribution increases; every other country's normalised score is then compressed downward even if its raw count stayed constant. Thus, a country can improve in absolute terms while its normalised score falls or remains negligible. Consequently, year-to-year changes primarily reflect shifts in the relative position of each country within the distribution of responses rather than genuine variations in implementation level.

To gain a clearer sense of the underlying trend, it is therefore more meaningful to look directly at the number of regulatory sandboxes in operation (Figure 42). In total, 175 sandboxes were reported across the 24 participating countries in 2025, compared with only 28 in 2024²⁵ – a nearly eightfold increase. Germany reports the highest number, with 72 sandboxes, followed by France (23), Belgium (20) and Austria (16). Spain also reported a significant number (15), while Lithuania (6) and the Netherlands (5) form a second tier of countries with moderate levels of activity. The remaining countries typically host between one and four sandboxes.

²⁵ Denmark, which participated in the 2024 exercise but not in 2025, reported three sandboxes last year.

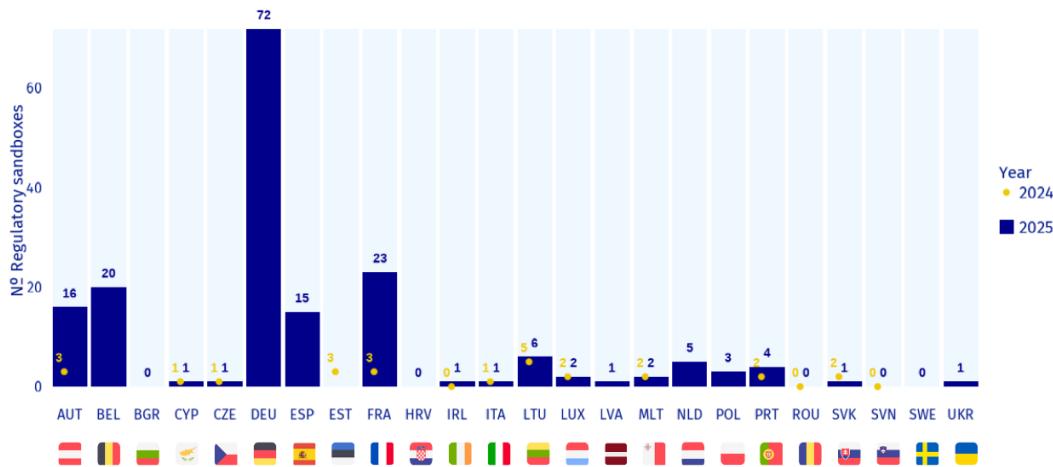


Figure 42. Number of regulatory sandboxes across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025 and 2024)

This expansion partly reflects improved data completeness but, more importantly, indicates that the regulatory sandbox model has entered a phase of institutional consolidation. In 2024, most countries referred to single pilot projects, often confined to specific sectors such as fintech. By 2025, several had transitioned from isolated schemes to multiple coexisting sandboxes, sometimes coordinated under national strategies or sectoral regulators. The growth in absolute numbers therefore signals not a generalised surge in experimentation, but rather the broadening and diversification of sandbox frameworks — with certain countries building on previous experiences to scale up and formalise their use as common regulatory instruments.

The third indicator under this substandard, **4.3.3 – “Number of startups involved in regulatory sandboxes consortia”**, examines the extent of startup participation in regulatory sandboxes. As with 4.3.2, the results are normalised through a min-max transformation, so the same considerations regarding scale effects and relative positioning apply.

Across the 24 countries reporting in 2025, a total of 270 startups were engaged in regulatory sandboxes, up from 141 in 2024. As shown in Figure 43, France now accounts for the largest number of participating startups (107), followed by Spain (100) and Austria (16). Germany also reports a significant number (8), reflecting its broad network of regulatory sandboxes. Italy expanded notably to 12 startups, while Ireland also increased to seven. The Netherlands, a new entrant, already reports five startups. Overall, the data indicate a widening of participation.

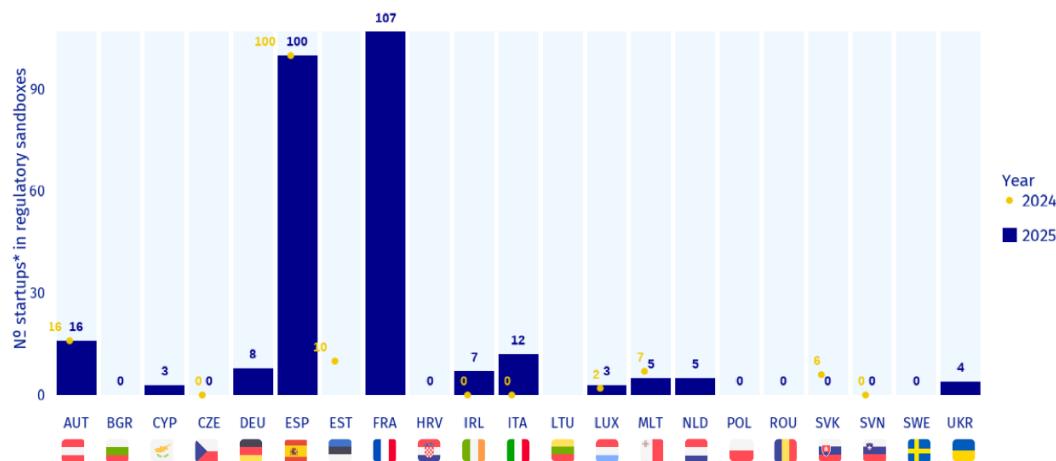


Figure 43. Number of startups engaged in consortia within regulatory sandboxes across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025 and 2024)

Normalised scores reveal an evolution distinct from absolute participation: gains in actual startup numbers do not necessarily translate into proportional gains within the scaled distribution. France, with 107 startups, surpasses the previous maximum and achieves the score of 100%. Consequently, Spain, despite maintaining its 100 startups from the previous year, drops to 93%. Austria experiences the same scaling effect, and beyond this mechanical compression, two countries recorded actual declines in absolute participation. In contrast, countries that increased their absolute participation saw corresponding gains: Italy rose to 11%, Ireland to 7%, and Luxembourg to 3%, demonstrating how real growth translates into proportional gains within the normalized scores. Therefore, the 2-percentage-point decrease in ESNA score (from 13% to 11%) masks the overall expansion in absolute terms (270 startups in 2025 versus 141 in 2024). The divergence underscores how normalisation prioritises relative performance over absolute growth. It also stems partly from the treatment of missing data as zero, as noted earlier. Figure 44 depicts this evolution in Indicator 4.3.3 scores.

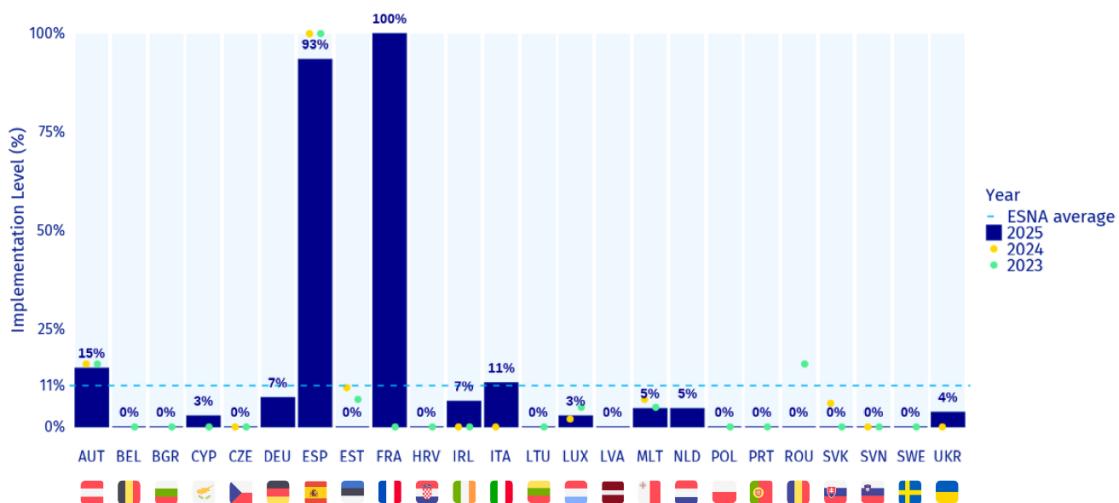


Figure 44. Implementation level of Indicator 4.3.3 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023)

Considering all, Substandard 4.3 experienced a decrease of 4 percentage points in 2025, reaching an implementation level of 35%. These results should, however, be interpreted

cautiously. The decline was driven by indicators 4.3.2 and 4.3.3 (indicator 4.3.1 improved over the same period). Their reliance on min-max normalisation anchors the maximum score (100%) to the highest reported value in a given year, without theoretical reference points, so that scores reflect relative positioning rather than absolute performance. This can produce counterintuitive trends, where countries increase their absolute number of sandboxes or startups yet see declining normalised scores, and where year-to-year comparisons are dominated by shifts in the distribution rather than real implementation changes. Likewise, the recoding of data gaps as zero – rather than treating them as missing values – also contributed to the apparent declines observed in implementation. Viewed from the perspective of absolute numbers, the picture is clearly more positive. Between 2024 and 2025, both the number of regulatory sandboxes and startup participation increased markedly, signalling that what was once an emerging policy tool is becoming a mainstream instrument for fostering innovation.

Also note that, beyond the measurement mechanics, a more fundamental tension exists between these indicators and the monitoring framework's core mandate. Indicators 4.3.2 and 4.3.3 measure outcomes – the operational scale and participatory depth of regulatory sandbox ecosystems – whereas the underlying intent of Substandard 4.3 is to assess implementation of good governance practices in adaptive regulation.

4.4.3 Conclusion

Standard #4 highlights the dual challenge facing European policymakers: ensuring that regulation is sufficiently light and proportionate to allow startups to emerge and grow, while simultaneously adapting legislative frameworks to accommodate innovation. The results for 2025 illustrate progress in the first of these dimensions, but a more uneven picture in the second.

The strong performance of Substandard 4.1 shows that the principle of proportionality has become structurally embedded in the policymaking process across most ESNA countries. This consolidation echoes a long-standing European policy concern that regulatory systems must “think small first” to sustain competitiveness. Simplification and *ex-ante* proportionality are increasingly seen not as deregulatory shortcuts, but as mechanisms of better governance that make rules clearer, more predictable, and more accessible to smaller firms. On the other hand, persistent concerns in EU strategic documents continue to identify administrative burden as one of the most significant obstacles to competitiveness and entrepreneurial growth. This tension suggests that the 19-percentage-point rise in the Think Small First implementation level reflects an institutionalisation of proportionality mechanisms that has not yet translated into a systematic reduction of regulatory complexity on the ground.

In practice, many of the procedures now formally embedded in legislative design – such as SME tests, proportionality checks or better-regulation units – operate more as procedural safeguards than as transformative instruments. They ensure that SME considerations are acknowledged in policymaking but do not always alter the substance, volume, or clarity of legislation. The apparent success of Substandard 4.1 thus reflects an administrative maturity more than a tangible simplification: governments are increasingly able to demonstrate conformity with the Think Small First principle, yet businesses continue to experience regulatory overload, fragmented obligations, and uneven enforcement. This may partly reflect the fact that the adoption of this principle inspires new regulation and law but does not always address regulatory overload caused by already existing laws and regulations. This gap between procedural compliance and material simplification highlights the need to re-examine how better-regulation frameworks measure success – shifting emphasis from the existence of

mechanisms to their measurable impact on compliance costs and market entry conditions. Moreover, the definition of a threshold based on the company's size for the calibration of the regulatory burden can create a cliff edge for innovative companies that are trying to grow and generate an unintended incentive to remain small in order to avoid more burdensome regulation.

The second dimension of Standard #4, innovation-enabling regulation, presents a different, though related, asymmetry. The overall decline of Substandard 4.3 in relative terms masks substantial absolute growth: the number of regulatory sandboxes increased more than sixfold and startup participation nearly doubled. Yet this expansion is concentrated in a few frontrunner countries. This concentration reflects a pattern of selective institutional adoption, where sandbox initiatives tend to emerge in jurisdictions with stronger regulatory capacity, clearer innovation mandates and pre-existing coordination mechanisms between supervisory authorities and ministries. In most other countries, experimentation remains fragmented, often limited to single-sector pilots without a stable legal basis or dedicated funding. Moreover, lessons learned from these pilots are rarely systematised or translated into broader regulatory reform, which constrains the diffusion of good practices and the development of shared evaluative frameworks across Europe (OECD, 2024c). Furthermore, while regulatory sandboxes have become emblematic of "innovation-friendly regulation", they represent just one instrument within a broader ecosystem of adaptive tools – including test beds, living labs, innovation hubs, and regulatory pilots – that aim to make learning and feedback integral to the regulatory cycle. In this sense, the challenge is the institutional asymmetry between ambition and implementation.

Taken together, these patterns reveal that Europe's transition toward smarter, innovation-ready regulation is advancing on two asynchronous tracks. The proportionality agenda (Substandards 4.1 and 4.2) is procedurally consolidated but still short of real simplification; the adaptive-innovation agenda (Substandard 4.3) is conceptually strong but institutionally fragile. Closing this gap will require connecting the two: using evidence generated in experimental environments to refine *ex-ante* legislative design and embedding proportionality principles within iterative learning cycles rather than static checklists. Ultimately, the maturation of Standard #4 will depend on whether Europe can turn its long-standing concern with regulatory burden into a pragmatic culture of experimentation and continuous simplification.

4.5 SNS #5 Innovation in Procurement

4.5.1 Overview

Standard #5 focuses on innovation procurement and related policies on technology transfer and open-source assets, highlighting the role of the public sector as a proactive enabler of innovation.

Across the EU, public authorities spend around 14% of GDP each year on goods and services (European Commission, 2023a). Consequently, public procurement may act as a demand-side policy instrument through which the public sector can stimulate innovation. Ensuring that no legal or administrative barriers place startups at a disadvantage and encouraging public buyers to seek innovative solutions from them, broadens the market base and reinforces the startup sector's role in driving public innovation. For startups, these opportunities open access to a large and stable market, providing early references, visibility, and scale, which are often decisive in overcoming entry barriers and attracting investors. But this approach also

recognises startups and scale-ups as key agents of experimentation and agility, capable of delivering high-impact solutions to complex public needs. As emphasised by the OECD and the European Commission, well-designed innovation procurement frameworks not only are a powerful driver of entrepreneurial activity but also improve the efficiency and quality of public services. The first substandard, 5.1 – “Public Procurement Opportunities”, therefore, examines the absence of legal or administrative impediments that would place startups at a disadvantage, and the extent to which public buyers are encouraged to procure innovative solutions from them, in line with the declaration.

Equally important is the question of who owns the knowledge created through these public–private interactions. Allowing startups to retain intellectual property rights (IPR) in most cases ensures that innovation can continue beyond the scope of the public contract. Without such rights, firms would face reduced capacity to commercialise the results of their R&D and thus weaker incentives to engage in public procurement processes. Both the OECD and the European Commission highlight the importance of balanced IPR frameworks that reward innovation while promoting diffusion and commercialisation. This principle is explicitly embedded in the SNS declaration – which states that startups and scale-ups participating in innovation procurement should normally retain ownership of IPR, except in exceptional cases justified by overriding public interest – and reflected in Substandard 5.2 – “Intellectual Property Rights”.

A third component of the standard is Substandard 5.3 – “Open-Source Assets”. The SNS declaration calls for policies that actively support startups in contributing to and benefiting from open-source assets. Such participation lowers development costs, accelerates technological diffusion, and enables “permissionless innovation” – the freedom to build, experiment, and deploy without requiring prior approval from gatekeepers. The European Commission’s *Open Source Software Strategy 2020–2023* explicitly promotes the reuse of software, knowledge, and expertise across institutions, framing open source as a pathway toward digital autonomy and technological sovereignty for Europe. For startups, open-source involvement serves as both a learning platform and a market-entry channel: it provides access to trusted, interoperable technologies at low cost whilst allowing firms to demonstrate technical capability and build reputation within developer communities. Substandard 5.3 captures the extent to which national policies actively support startups in engaging with this open-source ecosystem.

Closely linked to this is the role of technology transfer from research institutions. Effective technology transfer frameworks are essential to ensure that publicly funded research translates into market applications. When universities and research institutes can transfer knowledge and technologies efficiently to new ventures, the innovation potential of public R&D is maximised. Policies that promote the creation of spin-offs, simplify licensing procedures, and connect research outputs to procurement opportunities reinforce the link between the scientific base and entrepreneurial activity and the SNS declaration calls for them. Substandard 5.4 – “Tech Transfer Policies” captures this objective by assessing the presence of national frameworks that ensure knowledge developed at universities and research institutes can be transferred without obstacles and encourage the creation of academic spin-offs, thereby transforming public research investment into tangible entrepreneurial outcomes.

Figure 45 shows that the implementation level of Standard #5 across ESNA countries spans from 26% to the highest scores of France (94%), Spain (93%) and Poland (92%). The first two countries maintain their 2024 scores, when they also represented the highest values attained. Reflecting meaningful advances in innovation procurement frameworks during the reporting period, seven countries exhibited substantial gains, above 10 percentage points: Bulgaria (25 p.p.), Czechia, Estonia, Germany (all 13 p.p.), Italy (22 p.p.), Slovenia (33 p.p.), Sweden (19

p.p.) and Ukraine (23 p.p.). At the opposite end, four countries recorded decreases. These heterogeneous national trajectories contributed to the 10-percentage-point increase observed at the ESNA aggregate level, from 54% to 65%²⁶.

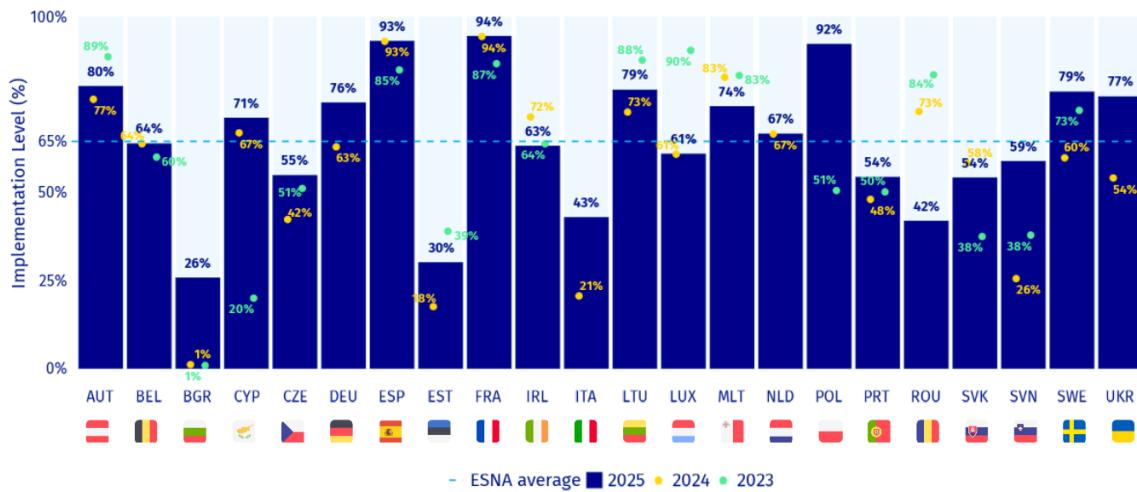


Figure 45. Implementation level of SNS #5 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2023, 2024 and 2025) and Global Innovation Index (WIPO)

Disaggregating Standard #5 into its four constituent substandards reveals a more nuanced picture of where progress has been strongest and where challenges remain (Figure 46). The four substandards exhibit markedly different performance levels and trajectories. Tech Transfer Policies (5.4) leads with a score of 96%, up from 77% in 2024, reflecting widespread adoption of formal mechanisms to facilitate knowledge transfer from research institutions and corporations to startups. At 80%, 5.1 – “Public Procurement Opportunities” ranks second, gaining 19 percentage points from 2024²⁷, as countries remove administrative barriers to startup participation in public procurement and encourage public buyers to procure innovation from startups. The remaining two substandards lag considerably: 5.2 – “Intellectual Property Rights” and 5.3 – “Open-Source Assets” both scored 41%, indicating that progress in these areas remains nascent.

²⁶ Although the rounded figures suggest a 11-percentage-point increase, the actual advancement was 10 percentage points, as calculations are based on unrounded values before presentation rounding.

²⁷ In 2024, the implementation level was 62%. Although the rounded figures suggest an 18-percentage-point increase, the actual advancement was 19 percentage points, as calculations are based on unrounded values before presentation rounding.

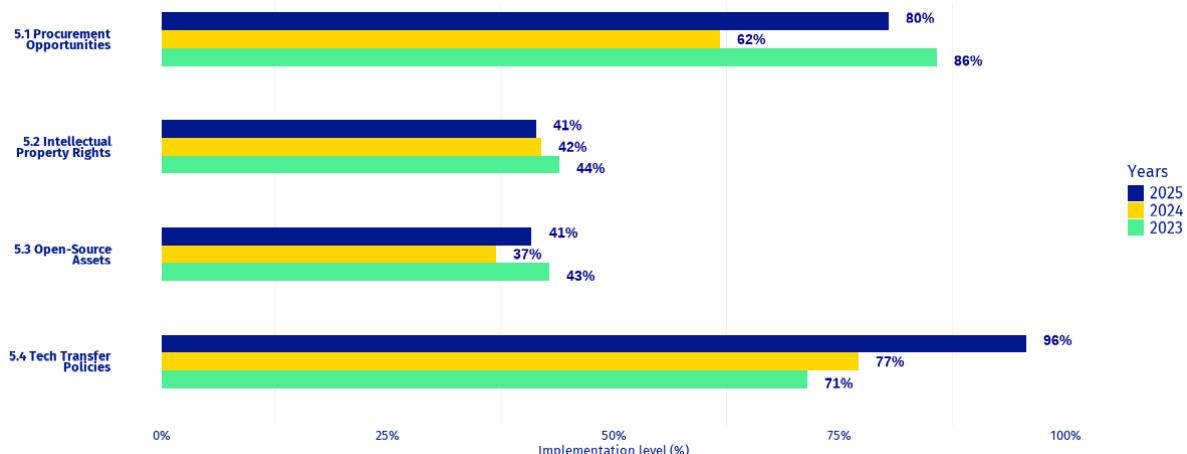


Figure 46. Implementation level of SNS #5 substandards for ESNA

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023) and Global Innovation Index (WIPO)

Translating these substandard trajectories into aggregate impact, Figure 47 decomposes the 10-percentage-point increase in Standard #5 into contributions from each dimension. Tech Transfer Policies and Public Procurement Opportunities emerge as the dominant drivers; these two substandards account for most of the aggregate increase, while substandards 5.2 and 5.3 have provided minimal or negative contributions to overall growth.

Since substandards 5.1 and 5.4 were already the highest-performing substandards, their greater rates of improvement have widened the performance gap relative to the other two, intensifying the internal disparities within the standard. This concentration of growth in already-leading dimensions underscores that the standard's improvement is concentrated in two policy areas – procurement accessibility and tech transfer capacity – whilst progress in intellectual property arrangements and open-source engagement remains underdeveloped.

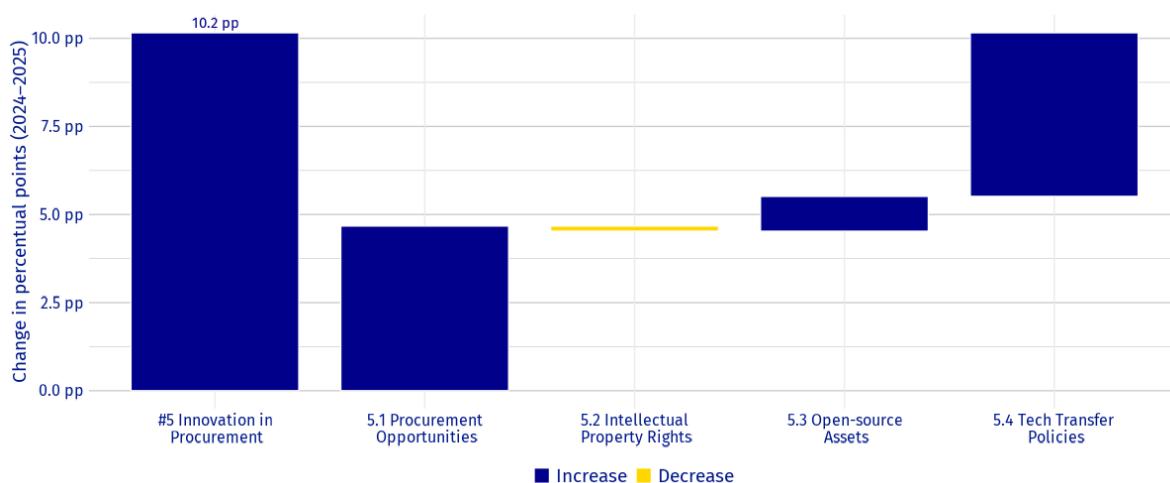


Figure 47. Decomposition of the change in SNS #5 implementation level by substandard (2024–2025)

Source: ESNA, based on official data from Member Countries (Survey 2025 and 2024) and Global Innovation Index (WIPO)

The disparities evident across substandards are complemented by further analysis at the country level (Figure 48). At the aggregate level, Standard #5 exhibits moderate spread across countries, with the median score matching the mean. However, the distributions across the

four substandards reveal marked structural asymmetries that underlie this aggregate pattern. Substandards 5.1 and 5.4 display heavily skewed distributions, with medians and upper quartiles clustered at or near 100%, indicating that large majorities of countries have achieved full or near-full implementation in Public Procurement Opportunities and Tech Transfer Policies. In sharp contrast, Intellectual Property Rights presents a more balanced profile, with median equal to mean and a wide dispersion of country scores, reflecting mixed rather than polarised national approaches. Open-Source Assets shows an almost opposite skewness: a median of 0% with a substantial upper group reporting full implementation.

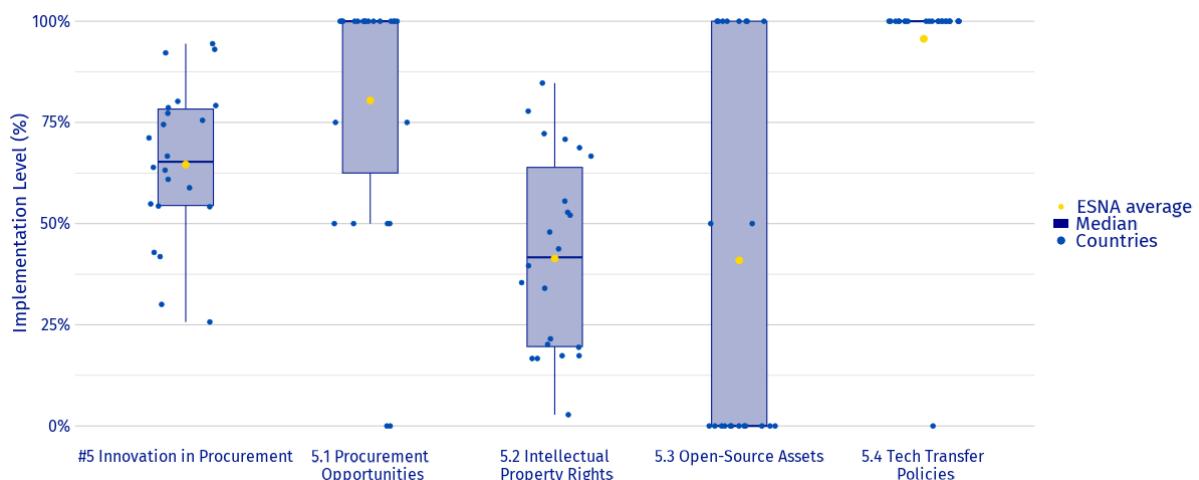


Figure 48. Distribution of implementation levels for the substandards of SNS #5

Source: ESNA, based on official data from Member Countries (Survey 2025) and Global Innovation Index (WIPO)

These distributional differences – from saturation at the high end to polarisation at the low end, and various configurations in between – point to fundamentally different patterns of adoption across the four policy domains. Examining each substandard in detail, which is done in the next section, reveals the sources and implications of these varied distributions.

MAIN TAKEAWAYS

1. Standard #5 reached an **implementation level of 65%**, a 10-percentage-point increase from 2024, with seven countries recording substantial gains of 10 or more percentage points.
2. Public procurement incentives for startups have strengthened significantly, with 18 countries now officially **incentivising public buyers to procure innovation from startups**, up from 11 in 2024.
3. 11 out of 24 participating countries enable **startups to normally retain full ownership of intellectual property rights** developed through public procurement.
4. Eight countries are forging **open-source engagement strategies**, actively supporting startup contributions.
5. 22 out of the 24 participating countries have **established policies supporting smooth technology transfer** from research institutions to startups, achieving full implementation (100%) on Indicator 5.4.1.

4.5.2 Substandard analysis

4.5.2.1 Substandard 5.1 – Public Procurement Opportunities

This substandard is calculated as the average of two indicators. The first, Indicator **5.1.1 – “Existence of administrative impediments to startup participation”**, examines whether legal or procedural barriers place startups at a disadvantage compared to other participants in innovation procurement opportunities overseen by national authorities. In practice, this does not refer to explicit restrictions – no country formally excludes startups from public tenders – but rather to implicit constraints such as minimum years of operation, high turnover thresholds, financial guarantees, or complex procedural arrangements, factors that can disproportionately disadvantage startups compared to more established competitors. While formally neutral, these conditions may create structural barriers limiting startups' ability to compete on equal terms for innovation procurement opportunities overseen by national authorities.

In 2025, 18 countries report a fully enabling environment with no identified impediments, compared with 16 in 2024; conversely, the number of countries scoring 0% decreased from eight to five²⁸ (Figure 49). This improvement raises the ESNA average to 78%, up from 67%, signalling continued progress towards more open and innovation-friendly procurement frameworks. Notably, Poland, Slovenia, Sweden and Ukraine all improved by 100 percentage points, removing the remaining obstacles previously reported.

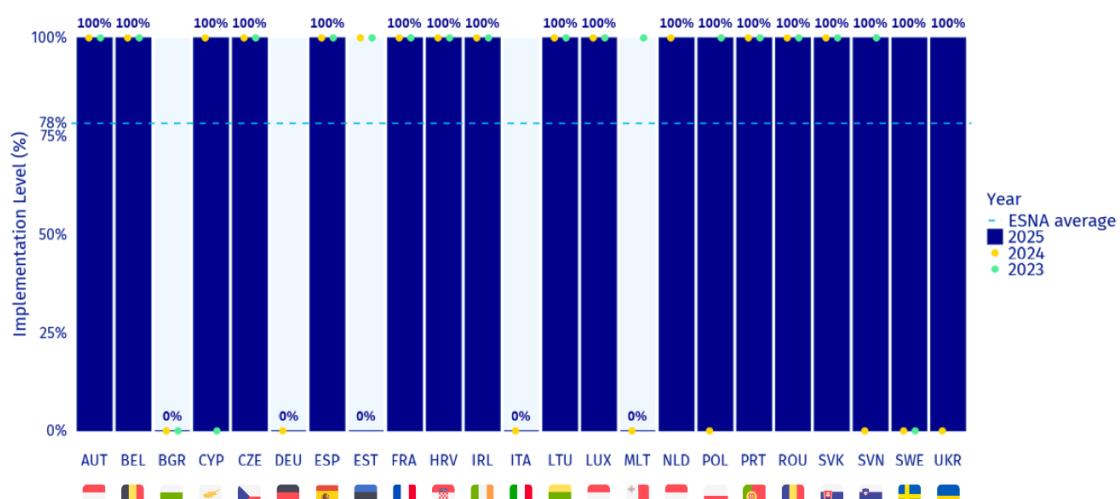


Figure 49. Implementation level of Indicator 5.1.1 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023)

Removing administrative impediments, whilst necessary, is not sufficient to foster startup participation in public innovation procurement. Equally important is the proactive encouragement of public buyers and procurement services themselves to actively seek out and commission innovative solutions from startups. This second dimension of Public Procurement Opportunities is captured by Indicator **5.1.2 – “Existence of incentives for public buyers and procurement services to procure innovation from startups”**.

²⁸ In 2024, 16 countries had reported 100%, including Denmark, which did not participate in the 2025 exercise. Additionally, Latvia did not provide data for this indicator, resulting in scores being available for 23 countries only in 2025.

Official encouragement of public procurement authorities to source innovations from startups can take multiple forms, reflecting different policy approaches and institutional capacities. The European Commission emphasises several interconnected mechanisms to facilitate startup participation (European Commission, 2021, 2023a). These include adopting innovation-friendly procedures such as innovation partnerships, competitive dialogue, and competitive procedures with negotiation, which allow for iterative co-development of solutions; or ensuring favourable financial conditions such as advance payments, pre-financing schemes, and payment schedules aligned with development phases to mitigate cash-flow constraints faced by resource-limited startups.

Beyond procedural adjustments, encouragement also involves institutional and ecosystem-level support. This includes establishing innovation procurement brokers and intermediaries that connect public buyers with startup ecosystems; creating living labs, incubators, and challenge-based platforms where startups can co-design solutions with public administrations in real-world settings; offering capacity-building and training for procurement officers to assess innovation potential and manage associated risks; clarifying intellectual property arrangements upfront to reassure startups that they can retain rights to innovations developed under public contracts; and embedding innovation procurement targets within national or sectoral innovation strategies to signal sustained political commitment. Communication strategies, including publicising calls on social media and innovation portals beyond traditional procurement channels, further enhance startup visibility and engagement.

The 2025 results show substantial progress in this indicator, with the ESNA average rising from 57% to 83%. As illustrated in Figure 50, 18 countries now report that public buyers are officially encouraged to procure from startups, compared with 11 in 2024. Between them, Czechia, Italy and Slovenia transitioned from 0% in 2024 to 100% in 2025, signalling the adoption of formal incentive structures, new legislation, or dedicated programmes during the reporting period. Sweden and Ukraine are also now with the group of countries acknowledging encouragement mechanisms but, having provided insufficient evidence, only score 50%. No country experienced a decline, and three (five less than in 2024) continue to report the absence of official encouragement mechanisms, scoring 0%.

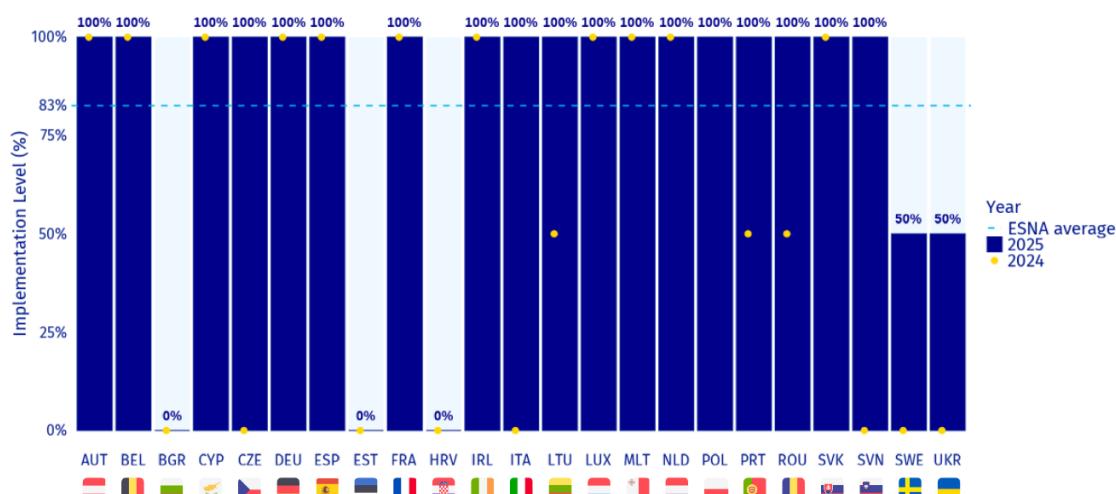
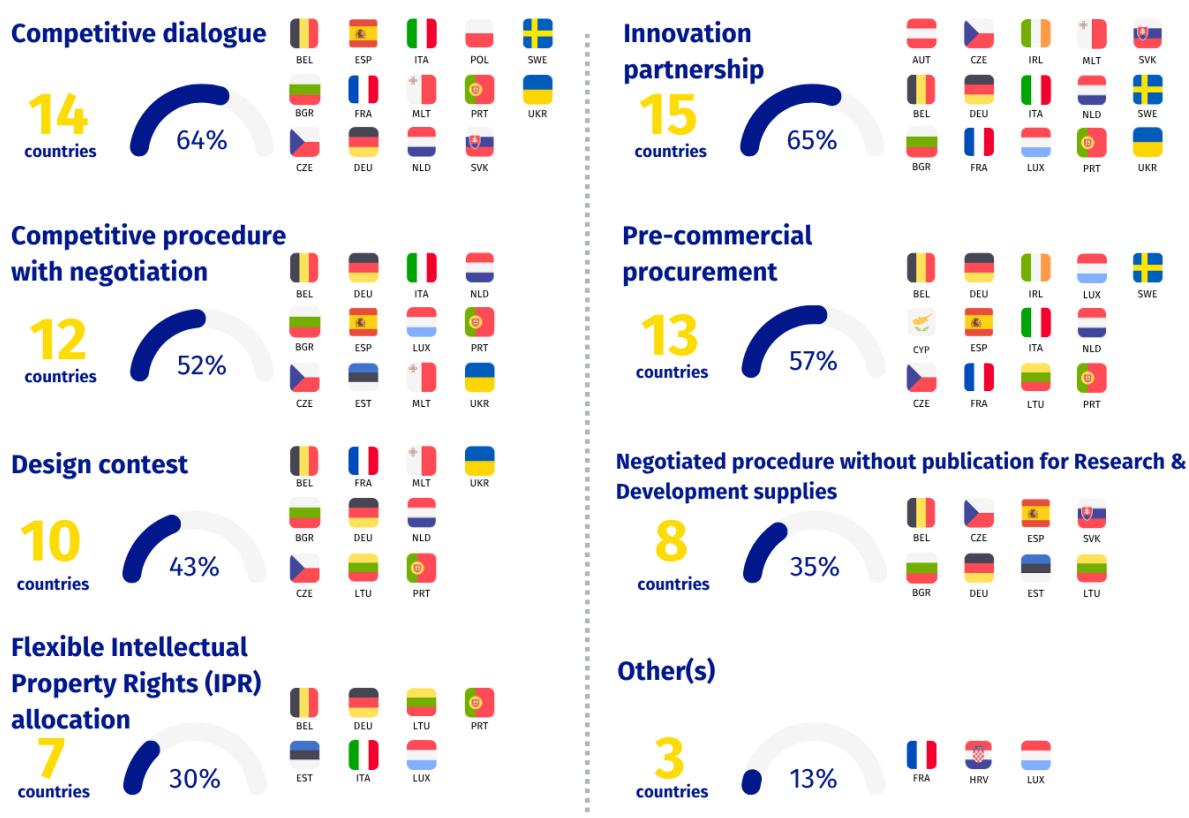


Figure 50. Implementation level of Indicator 5.1.2 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025 and 2024)

Among the countries scoring the maximum 100%, the most commonly reported mechanisms include legal or policy frameworks explicitly promoting innovation procurement and startup participation; the establishment of dedicated competence centres, innovation procurement platforms, or GovTech programmes offering hands-on support to both procuring authorities and startups; and capacity-building initiatives such as training, guidelines, and methodologies designed to help procurement officers navigate innovation-friendly procedures. Several countries also emphasise the use of innovation partnerships and other flexible procurement instruments, as well as financial incentives such as advance payments or subsidised pre-commercial phases. Less frequently mentioned, but present in a subset of responses, are challenge-based procurement schemes connecting startups directly with public sector needs, explicit targets or quotas for startup participation in certain sectors, and partnerships with national innovation agencies to co-fund or co-design innovation tenders (Figure 51).



Note 1: Percentages are calculated out of a universe of 23 countries, since Latvia was not included in the analysis due to lack of information.

Figure 51. Use of innovation procurement tools by type

Source: ESNA, based on official data from Member Countries (Survey 2025)

Substandard 5.1 captures both the removal of direct obstacles to startup participation (indicator 5.1.1) and the active encouragement of public procurement authorities to seek out innovative solutions from startups (indicator 5.1.2). Together, these two elements form a coherent framework: creating conditions for entry whilst simultaneously creating incentives for engagement. Taken together across both indicators, the ESNA average for this substandard in 2025 is 80%, rising from 62% in 2024, an improvement reflecting substantial gains in creating more startup-friendly innovation procurement environments. Yet removing impediments and offering encouragement, whilst necessary, are insufficient on their own.

Governments have confronted a range of hurdles in implementing robust innovation procurement practices. According to the OECD (2017, 2025b), the most common challenges remain related to risk aversion, management, personnel and skills deficits, limited capacity, and insufficient political support. The improvements observed in indicators 5.1.1 and 5.1.2 reflect genuine progress in formal policy architecture. However, this progress risks remaining incomplete without deeper institutional and cultural transformation.

Although innovation-friendly procedures such as innovation partnerships and pre-commercial procurement are tailored for development-stage solutions, even standard open procurement can foster innovation when approached with appropriate flexibility and a genuine focus on underlying public needs rather than narrow technical specifications. The distinction is crucial: governments that base tenders on identified challenges and unmet needs, rather than pre-specified solutions, create space for startups and innovators to propose novel approaches.

The path forward requires sustained effort across multiple dimensions: legal clarity, capacity building, political commitment, measurement. Yet transforming innovation-oriented procurement ultimately depends on a shift in mindset – one that must be embraced by all stakeholders: policymakers setting direction, top and senior management officials allocating resources and managing risk tolerance, procurement professionals executing tenders, oversight bodies approving procedures, and innovators themselves as participants (Monteiro et al., 2024; OECD, 2017, 2025b).

4.5.2.2 Substandard 5.2 – Intellectual Property Rights (IPR)

Intellectual property arrangements shape startup incentives to participate in public innovation procurement. How ownership of newly developed intellectual property is allocated between the public sector and the innovating startup fundamentally determines whether public procurement represents an opportunity or a risk for entrepreneurial firms. The first dimension of this substandard is captured by **Indicator 5.2.1 – “Possibility of Ownership of IPR for Startups in Innovation Procurement”**. It examines whether startups and scaleups participating in public innovation procurement can retain ownership of the intellectual property rights they develop or deploy. The ability to retain IPR is a critical incentive for innovative firms: it allows startups to capture value from their innovations beyond the immediate procurement contract, to build proprietary assets for future commercialisation, and to maintain competitive advantage in downstream markets. When public procurement contracts require full ownership transfer to the state, startups face a significant disincentive to participate, particularly for genuinely novel solutions where the intellectual capital represents the core value proposition.

The 2025 results reveal persistent fragmentation in how countries treat startup IP ownership (Figure 52). Eleven countries – Austria, Cyprus, France, Germany, Ireland, Luxembourg, Netherlands, Poland, Slovenia, Spain, and Ukraine – report that startups can usually retain full ownership of IPR, scoring 100%. Poland and Slovenia represent the most notable policy shifts, both moving from 0% in 2024 to 100% in 2025, signalling major reforms in IP arrangements for innovation procurement. Cyprus improved from 50% to 100%, whilst Austria, France, Germany, Ireland, Luxembourg, Netherlands, Spain, and Ukraine maintained their maximum scores from the previous year. By contrast, other eleven countries report partial or no possibility of IP retention: 10 countries score 50%, indicating context-dependent or conditional ownership arrangements, and only one has 0%²⁹. Therefore, the ESNA average improved 8 percentage points, from 65% in 2024 to 73% in 2025.

²⁹ Croatia and Latvia reported no data for this indicator.

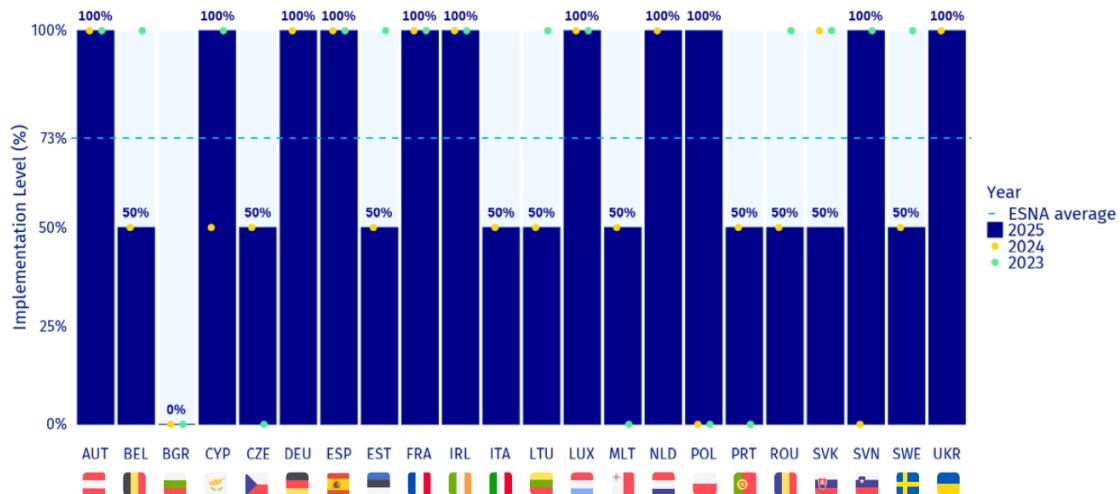


Figure 52. Implementation level of Indicator 5.2.1 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023)

Indicator 5.2.2 – “Intellectual Property Receipts as Percentage of Total Trade” is derived from the Global Innovation Index published by the World Intellectual Property Organization (WIPO) and captures intellectual property receipts as a percentage of total trade. The metric reflects the extent to which a national economy generates value from knowledge-intensive assets – including technology licensing, patents, software, and design royalties – that flow across borders.

For comparability with other ESNA indicators, the original WIPO data were subjected to min-max normalisation. Hence, scores reflect relative positioning within the observed distribution rather than absolute performance levels and year-to-year changes should be interpreted cautiously. To mitigate this interpretive limitation, it is therefore prudent to examine the underlying WIPO data in parallel with the normalised scores.

The 2025 results demonstrate disparities in how countries generate revenue from intellectual property (Figure 53). Only six countries – Cyprus, Germany, Ireland, Malta, Netherlands, and Sweden – exceed 50%, whilst the large majority cluster at the lower end, with sixteen countries scoring below 20%. Examination of the pre-transformation WIPO values reveals that all countries registered identical IP receipts ratios. Against this backdrop of country-level constancy, the ESNA average 1-percentage-point decline, from 26% in 2024 to 25% in 2025, is entirely a compositional effect.

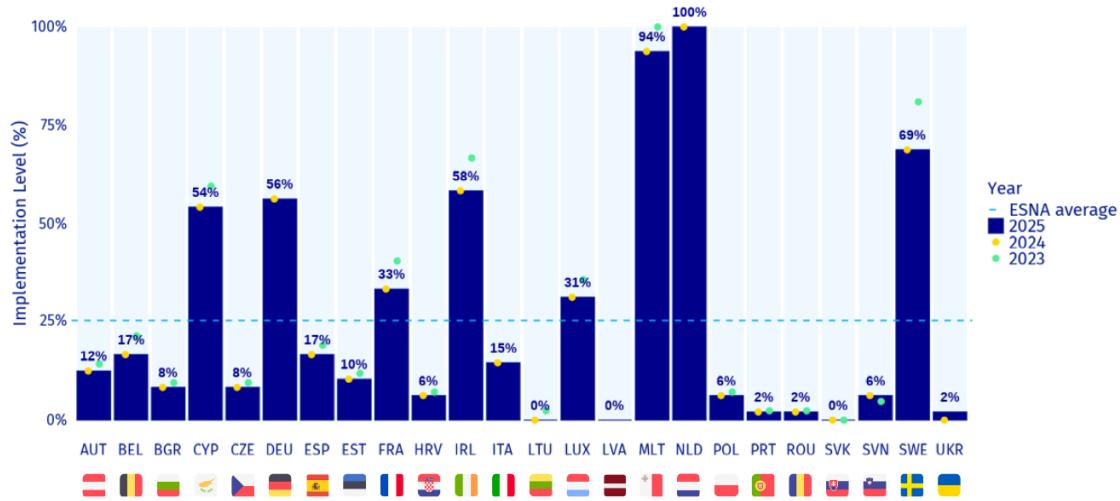


Figure 53. Implementation level of Indicator 5.2.2 across ESNA countries

Source: *ESNA calculations based on Global Innovation Index (WIPO)*

In a certain sense, Indicator 5.2.2 provides more a macroeconomic perspective on a country's overall IP ecosystem maturity and its capacity to leverage intellectual assets in the global market. A small group of countries has succeeded in embedding IP-intensive sectors within their economies, where knowledge and intellectual assets command significant value in international trade. These countries have developed mature institutional frameworks and commercial mechanisms capable of translating innovation into measurable trade revenues. The broad majority of ESNA countries, by contrast, remain outside this IP-intensive export economy. Whether due to structural economic specialisation in lower-value sectors, underdeveloped technology transfer infrastructure, or limited institutional capacity to commercialise research outputs, these countries generate minimal revenues from intellectual property in international markets. This relative stability in aggregate performance, combined with persistent polarisation between high-performing and low-performing countries, suggests that building IP-intensive export capacity requires sustained, long-term structural investment that cannot be achieved through short-term policy intervention alone.

Indicator 5.2.3 – “Existence of Exceptions for Public Sector Intellectual Property Rights (IPR) Ownership” complements the previous indicator 5.2.1 by examining the circumstances under which public sector retention of intellectual property rights is justified. Even in countries where startups can generally retain IPR from innovation procurement, certain legitimate exceptions exist – typically related to national security, defence, or public health imperatives – where public ownership may be warranted. This indicator distinguishes between such justified exceptions and broader patterns of public IP retention that could disincentivise startup participation. Countries reporting that IP ownership can revert to the public sector only in clearly defined, exceptional circumstances (defence, national security, or public health) score 100%. Countries where public IP retention extends beyond these narrowly defined cases score 0%.

The 2025 results reveal a mixed picture (Figure 54). Only six countries – Austria, Belgium, Cyprus, France, Poland, and Spain – achieve 100%, either by establishing clear frameworks limiting public IP retention to genuinely exceptional cases or by designating IP as startup property by default. ESNA average falls from 35% in 2024 to 26% in 2025 — a 9-percentage-point decline reflecting policy shifts across multiple countries. Three countries moved from 100% to 0%. Conversely, Poland improved from 0% to 100%, representing the sole upward

movement on this indicator. The majority of countries (17)³⁰ score 0% in 2025, indicating that public IP ownership is either the default rule or that exceptions are defined broadly enough to encompass routine procurement contexts. This group encompasses countries across diverse economic and institutional contexts, suggesting that limiting public IP claims to narrow exceptions remains a challenging policy frontier across ESNA surveyed countries.

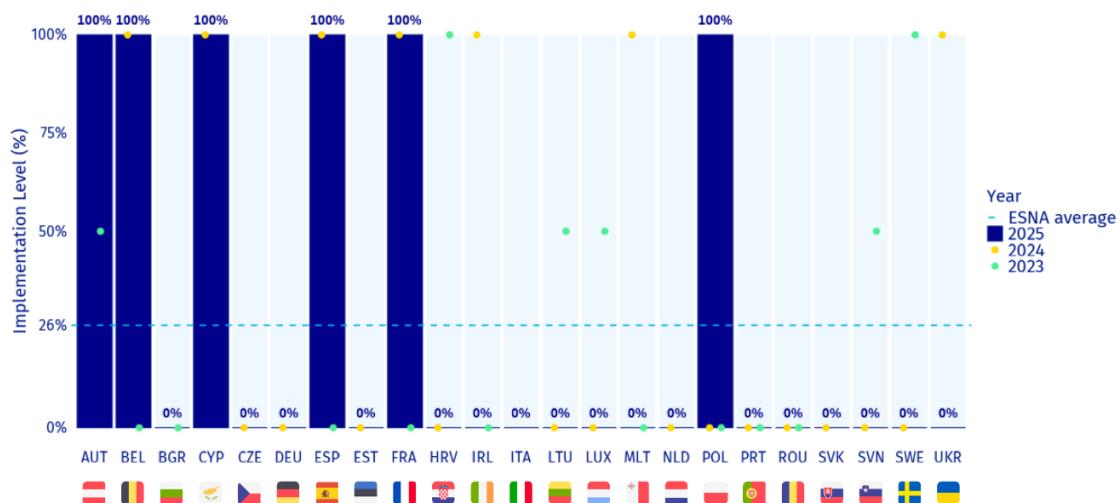


Figure 54. Implementation level of Indicator 5.2.3 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023)

Substandard 5.2 operationalizes the SNS declaration principle that startups should normally retain ownership of intellectual property created through innovation procurement, except in exceptional cases justified by overriding public interest. As noted earlier, it has demonstrated only nascent progress, with ESNA average reaching 41% – a level that reflects genuine but incomplete policy reform. The three indicators reveal complementary dimensions of this progress and its limits. Indicator 5.2.1, capturing whether startups can retain IPR within procurement contracts, records the strongest performance. Its improvement demonstrates that legal and contractual frameworks for startup IP ownership are advancing, and that policy reform in this domain is achievable. Yet the persistence of configurations where public ownership remains default or widespread indicates that commitment to the principle remains uneven and contested across the surveyed countries. Indicator 5.2.3 reveals that even where startup IP ownership is formally permitted, defining and enforcing appropriate exceptions to public IP retention remains a contested frontier. The ESNA average of 26% indicates that only a small minority of countries have clearly circumscribed public IP claims to defence, security, or public health contexts.

Indicator 5.2.2 presents a different kind of challenge entirely. The macroeconomic perspective on IP-intensive export capacity reveals deep structural divergence: a small cluster of countries has built IP-intensive sectors capable of generating substantial returns from intellectual assets in global trade, whilst the broad majority remain embedded in lower-value-added economic structures. This gap does not reflect procurement policy failure but rather fundamental differences in institutional capacity, research infrastructure, and market positioning that accumulate over decades. As highlighted before, building competitive advantage in IP-intensive sectors requires sustained, long-term structural investment entirely distinct from the policy interventions captured by Indicators 5.2.1 and 5.2.3.

³⁰ Latvia reported no data for this indicator.

The substandard's aggregate score of 41% thus reflects the overlap and interaction among these three dimensions. Progress on individual dimensions, particularly 5.2.1, is constrained by unresolved challenges on others: startup rights to IP mean less without the macroeconomic capacity to leverage those assets, and formal ownership frameworks matter little if exceptions to public retention remain undefined and expansive. As noted, Substandard 5.2 has been among the slowest-moving policy frontiers in the ecosystem, reflecting the complexity of balancing startup incentives, public sector interests, and structural economic constraints. Sustained progress will require coordinated attention across all three dimensions simultaneously.

4.5.2.3 Substandard 5.3 – Open-Source Assets

The operationalisation of commitment to open-source asset engagement is captured by a single indicator, **5.3.1 – “Existence of incentives for open-source assets contribution”**, which measures whether countries actively support startups to contribute to open-source development. This dimension translates the principle of open-source collaboration into concrete policy mechanisms – funding programmes, infrastructure access, or strategic partnerships with open-source platforms and communities. The indicator thus captures the extent to which countries have moved beyond passive tolerance of open-source participation to active encouragement and resource provisioning.

The 2025 results reveal limited but targeted policy engagement with open-source ecosystems. Eight countries achieve full scores: France, Germany, Lithuania, Malta, Poland, Spain, Sweden and Ukraine (Figure 55). These countries have established clear, documented mechanisms that support startup contribution to open-source assets. Active government support for open-source contribution takes multiple forms, including dedicated funding programmes for open-source development projects, direct provision of infrastructure and technical access to open-source platforms and communities, and strategic partnerships linking startups with established open-source foundations and collaborative ecosystems. Some countries have aligned their open-source support with broader strategic priorities – such as AI innovation or data sovereignty – in order to embed startup participation within larger innovation objectives. Others have integrated open-source encouragement into pre-commercial procurement frameworks, creating public-sector demand for open-source solutions developed by startups. These varied approaches demonstrate that the policy mechanisms linking startups to open-source contribution can be structured in diverse ways across different governance contexts.

Austria and Romania have reported encouragement for open-source participation but with evidence that did not fully substantiate dedicated startup-specific incentive mechanisms. Twelve countries³¹ score 0%, indicating that they do not actively encourage startups to contribute to open-source assets. This substantial zero-scoring majority underscores that open-source support remains an emergent policy frontier across the ESNA region, with most countries not yet having adopted policies explicitly linking startup support to open-source contribution.

³¹ Croatia and Latvia reported no data for this indicator.

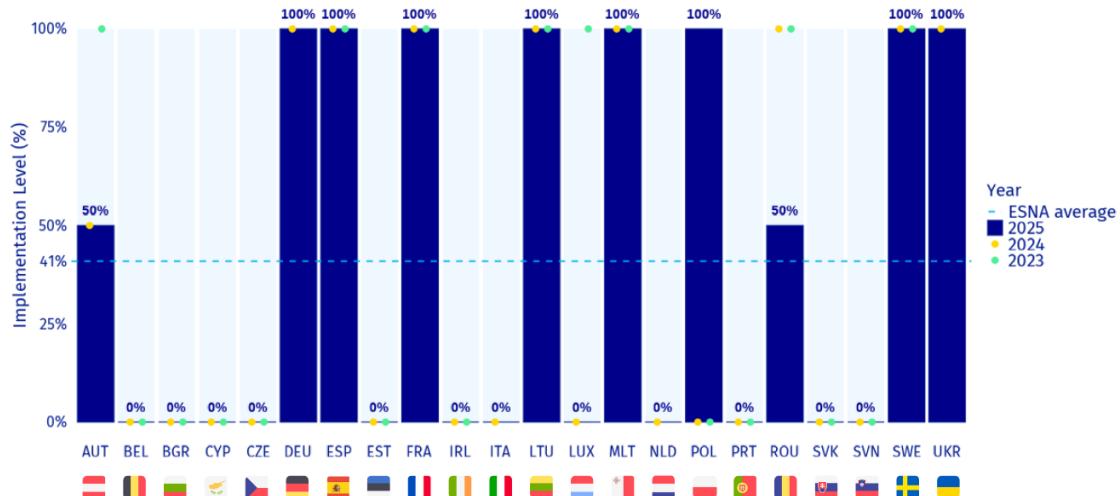


Figure 55. Implementation level of Indicator 5.3.1 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023)

The ESNA average reaches 39% in 2025, registering only a marginal 2-percentage-point increase from 41% in 2024. This near-stagnation reflects limited country-level movement: only Poland improved (from 0% to 100%). The stability of this indicator, combined with its low overall performance, highlights that open-source support policies have not yet become a priority across the respondents.

This stagnation sits alongside similar policy inertia observed in Substandard 5.2 – “Intellectual Property Rights”. At first glance, these substandards appear to operate in tension: Substandard 5.2 promotes startup ownership and control of proprietary intellectual assets, whilst Substandard 5.3 encourages contribution to commons-based open-source ecosystems where rights are shared, and code is publicly accessible. Yet this apparent contradiction is not inevitably problematic for startups. Intellectual property rights and open-source models represent complementary rather than competing strategies for value capture and diffusion. A startup may retain intellectual property in its core products or services – capturing premium value through exclusivity – whilst simultaneously contributing to open-source projects in adjacent domains, leveraging the strategic advantages of collaboration, interoperability, and market positioning that open-source participation provides. The policy challenge lies not in choosing between intellectual property protection and open-source contribution, but in creating institutional frameworks that enable startups to navigate both pathways strategically, depending on competitive context and business model requirements.

The limited progress on Substandard 5.3 reflects barriers extensively documented in recent European policy research and institutional assessments. Critical gaps across the European open-source ecosystem include chronic underfunding, skills shortages, limited visibility for European open-source solutions in global technology markets, and limited engagement in collaborative governance structures that would strengthen European influence over open-source development. The eight countries demonstrating active support mechanisms have begun to address these systemic barriers – through dedicated funding programmes, infrastructure provision, and strategic partnerships with open-source foundations – but the majority have not. The developing state of Substandard 5.3 thus reflects a deeper challenge: whilst Europe has articulated ambitious open-source objectives, the institutional mechanisms required to operationalise these commitments across member states have not yet materialised at scale.

4.5.2.4 Substandard 5.4 – Tech transfer policies

The operationalisation of tech transfer commitment is captured by **Indicator 5.4.1 – “Existence of Policies for Smooth Tech Transfer”**, which measures whether countries have established policies to facilitate smooth transfer of technology developed in universities and research institutes to startups. This dimension translates the principle of research commercialisation into institutional mechanisms – ranging from dedicated Technology Transfer Offices (TTOs) managing intellectual property portfolios and licensing agreements, to funding programmes supporting proof-of-concept development and spin-off incubation, to legislative frameworks clarifying intellectual property ownership rules and simplifying the administrative processes for research commercialisation.

The ESNA average registers robust progress, climbing from 77% in 2024 to 96% in 2025 – a 19-percentage-point increase reflecting strong momentum in technology transfer policy adoption across the surveyed countries (Figure 56). This improvement stems from policy reforms concentrated among two distinct cohorts of countries: Bulgaria, Estonia and Poland, previously at 0%, each advanced to full implementation, signalling genuine institutional shifts in tech transfer support. Germany, Italy, and Ukraine improved from 50% to 100%, consolidating and clarifying their existing policy commitments. Yet this progress coexists with policy reversal in one of the countries.

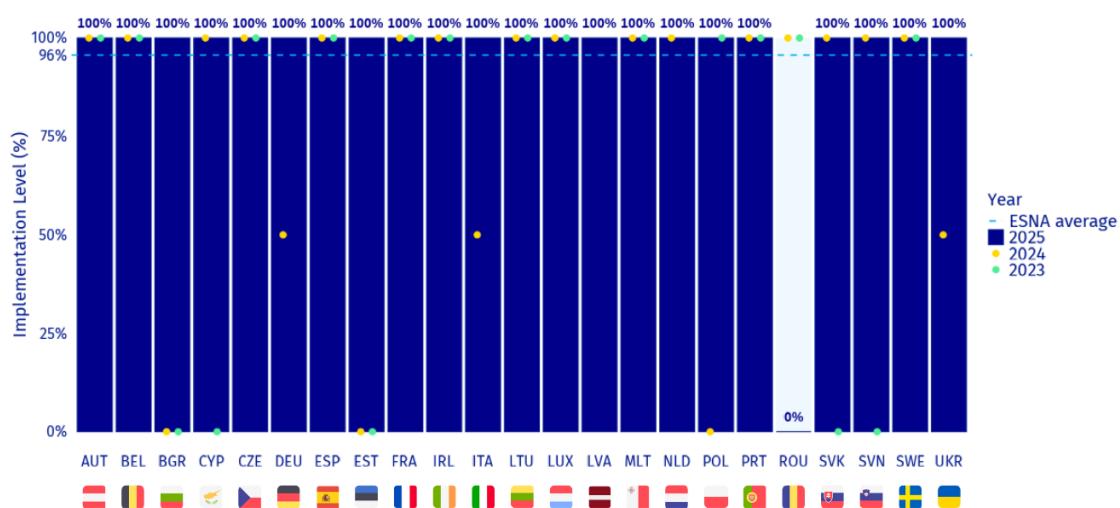


Figure 56. Implementation level of Indicator 5.4.1 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023)

The distribution of outcomes reveals that technology transfer has achieved markedly higher implementation penetration than other substandards within Standard #5. Twenty-two countries now report full scores, having established comprehensive frameworks supporting technology transfer – though the nature of these frameworks varies considerably across national contexts. Some countries operate extensive networks of university-based TTOs coordinating IP protection, licensing negotiations, and startup creation; others have enacted legislative reforms clarifying the rights and responsibilities of universities, researchers, and spin-off companies regarding intellectual property developed through public research; still others provide dedicated funding instruments – from early-stage grants supporting technology validation and prototype development to co-financing schemes enabling researchers to establish companies whilst maintaining academic affiliations. Importantly, leading countries have moved beyond simply establishing formal structures to developing standardised

procedures, model licensing agreements, and transparent valuation mechanisms that reduce transaction costs and accelerate deal-making between universities, researchers, and investors. Only one country³² scores 0%, reporting the absence of systematic policies facilitating this transfer.

The broader challenge lies not in formal policy existence but in policy effectiveness. The European Commission's knowledge valorisation policy framework emphasises that maximising the social and economic value of research requires not only formal technology transfer structures but also systemic improvements in connecting research ecosystems to market and societal actors. The framework identifies persistent needs for strengthening knowledge valorisation capacities through enhanced funding tools, reinforced networks of intermediaries, improved intellectual asset management, and deeper industry-academia collaboration mechanisms.

4.5.3 Conclusion

Standard #5 registers an increase in 2025, marking continued progress in creating institutional frameworks that position the public sector as a proactive enabler of startup innovation. Yet the improvement masks profound internal asymmetries: the gains are heavily concentrated in two dimensions, Public Procurement Opportunities and Tech Transfer Policies, whilst Intellectual Property Rights and Open-Source Assets remain effectively stagnant. This concentration of progress in already-leading substandards, combined with persistent underdevelopment in complementary policy areas, raises fundamental questions about whether the innovation procurement ecosystem is advancing coherently or fragmenting into isolated policy silos.

The uneven progress across substandards reflects, in part, differences in implementation complexity and institutional requirements. Removing administrative impediments to startup participation in procurement is conceptually straightforward. Similarly, establishing formal technology transfer offices and legislative frameworks for spin-off creation benefits from mature institutional practice across multiple countries. The stagnation in Substandards 5.2 and 5.3 exposes different obstacles. These dimensions address contested normative questions about knowledge governance – who owns intellectual property generated through public–private collaboration, and under what circumstances should innovations be released as open-source commons – where consensus remains elusive. Critically, the cross-cutting challenge of skills capacity constrains implementation across all substandards: countries lacking skilled procurement professionals, technology transfer specialists, IP lawyers, and technical staff familiar with open-source governance will struggle to translate formal policy commitments into effective action.

The divergent distributional profiles manifest differences in policy maturity: substandards 5.1 and 5.4 operate in domains where formal institutional solutions are well-documented and replicable, whilst 5.2 addresses contested questions about knowledge ownership where country positions remain divided, and 5.3 represents an emergent frontier where institutional support structures remain largely absent.

Formal structures alone, however, are insufficient to realise the transformative potential of innovation procurement. As (Monteiro et al., 2024) emphasises, successful strategic procurement for innovation requires governments to communicate positive outcomes, coordinate horizontally and vertically across tasks, demonstrate political leadership, build skilled staff capacity, cultivate open cultures toward new ways of working, and encourage

³² Croatia reported no data for this indicator.

cooperation across the procurement process. The gap between formal policy adoption and deeper institutional prerequisites suggests that many countries have established the institutional framework of innovation procurement ecosystems without yet embedding the organisational cultures, competencies, and risk-management frameworks required for these structures to function effectively.

4.6 SNS #6 Access to Finance

4.6.1 Overview

Access to finance remains one of the key dimensions of startup policy, as financial constraints fundamentally shape the capacity of new firms to survive, innovate and scale. Academic literature consistently identifies funding gaps as a defining feature of entrepreneurial ecosystems, especially in their early and growth stages. Startups typically face asymmetric information, uncertain returns and a lack of tangible collateral, which limit their access to conventional bank finance and make them highly dependent on risk-bearing instruments such as venture capital, business angel investment and, increasingly, hybrid public–private funding mechanisms.

Direct access to finance refers to public instruments that enhance startups' access to equity and quasi-equity funding. Governments use these tools not merely to disburse grants or subsidies, but to expand the overall supply of venture capital (VC) and improve the depth of early-stage markets. This can take the form of equity instruments financed through the Recovery and Resilience Facility (RRF), public grants and loans that complement private investment, or funding channels managed by the European Investment Bank Group, national promotional banks, and other dedicated vehicles. Such mechanisms aim to crowd in private investors by sharing risk, signalling confidence, and building the financial infrastructure necessary for a more resilient venture ecosystem.

Indirect access to finance, by contrast, encompasses the policy conditions that enable private capital markets to function more efficiently and at greater scale. This includes regulatory reforms that attract institutional investors – such as pension funds or insurance companies – into venture capital, adjustments to risk-weighting and investment rules, and efforts to increase cross-border investment flows within Europe. Literature on financial ecosystems highlights that these institutional and regulatory factors are often decisive in explaining why some countries sustain vibrant venture markets while others remain dependent on public sources of finance (Fratto et al., 2024; OECD, 2025a).

Complementing these two dimensions, targeted tax relief measures for business angels play a crucial role in stimulating early-stage investment. By mitigating the high risk associated with seed financing, fiscal incentives encourage private individuals to invest in nascent ventures and to contribute with their experience and networks. Empirical evidence suggests that such schemes can increase the volume of angel investment, though their effectiveness depends on stable, transparent frameworks and sufficient scale to attract professional investors.

Together, direct and indirect access mechanisms, coupled with tax relief incentives, form a multidimensional approach to addressing Europe's structural investment gap. Their combined aim is to create a continuum of finance that supports startups throughout their growth trajectory – from seed to scale – while reducing fragmentation and strengthening the capacity of national and European capital markets to sustain innovation-led growth.

In 2025, Standard #6 reached an implementation level of 77%, being one of the standards with the highest implementation level. Seven countries – Belgium, Cyprus, France, Poland, Portugal, Spain and Sweden – fully implemented this Standard (Figure 57).

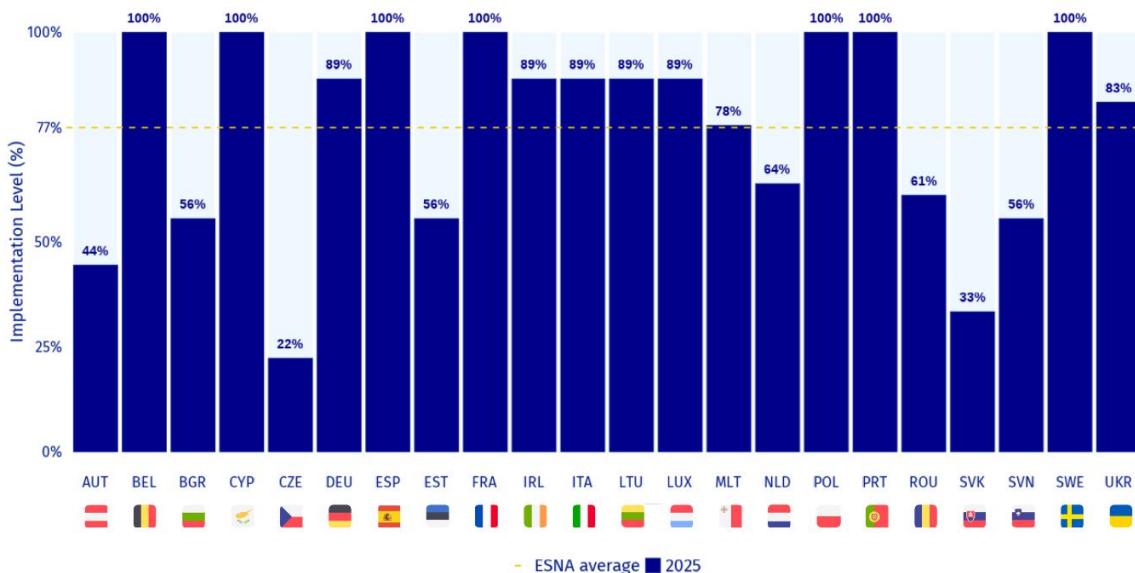


Figure 57: Implementation level of SNS #6 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025)

Standard #6 reflects the ongoing efforts to enable the adequate financing and scaling up of startups in Europe. Government agencies and public financing institutions can be catalysts by providing capital and broadening the investor base for VC firms (Arnold et al., 2024). Standard #6 is composed of three substandards: Substandard 6.1 – “Direct Access to Finance” deals with government funding policies, including venture capital, funds-of-funds, co-investment funds, grants and other instruments; Substandard 6.2 – “Indirect Access to Finance” focuses on policies other than tax relief to stimulate private investment and Substandard 6.3 looks exclusively into tax relief measures. The Standard’s structure suffered significant changes since last year, therefore comparisons over time are not conducted.

Out of the three substandards, 6.2 – “Indirect Access to Finance” achieved the highest implementation level at 92%, well-above the ESNA implementation average in this standard. It is followed by Substandard 6.1 – “Direct Access to Finance” at 76%, while 6.3 – “Tax Relief Measures” records the lowest implementation level at 65% (Figure 58).

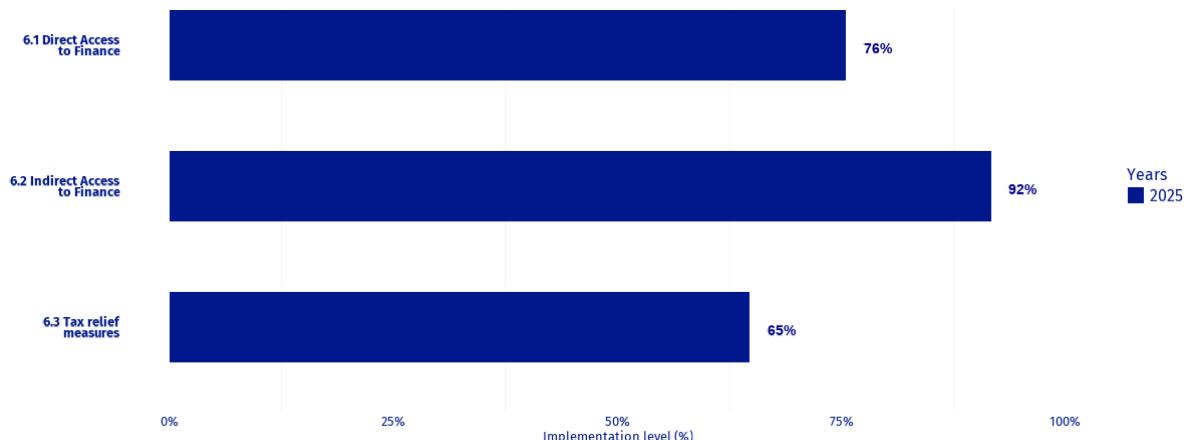


Figure 58: Implementation level of SNS #6 substandards for ESNA

Source: ESNA, based on official data from Member Countries (Survey 2025)

Despite reaching one of the highest implementation levels out of the eight standards, there are still significant disparities among the covered countries (Figure 59). The distribution of country implementation levels in each substandard exhibits different characteristics. Substandard 6.1 displays widely spread scores, with countries distributed across the range from 33% to 100%, and a concentration around 67%, while more than one third of countries have already reached full implementation at 100%. In Substandard 6.2, all countries have reached an 100% implementation level, except for two outliers who are still to implement these types of policies. Substandard 6.3 is composed of one indicator and reflects that while most countries have already reached a score of 100%, improvements are still needed in seven countries.

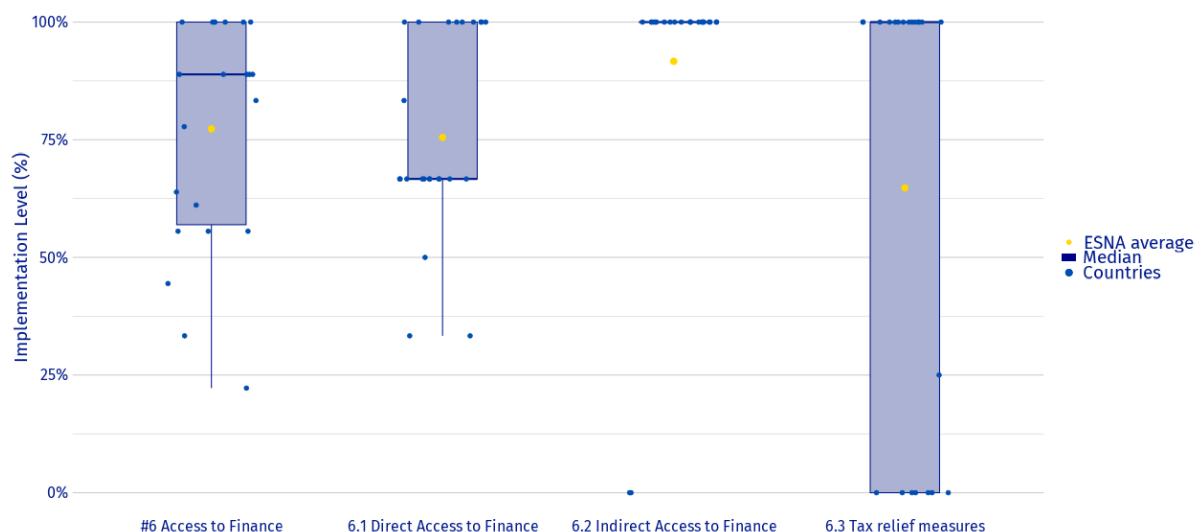


Figure 59: Distribution of implementation levels for the substandards of SNS #6

Source: ESNA, based on official data from Member Countries (Survey 2025)

Despite the high performance of this standard, Access to Finance is mentioned as one of the main obstacles faced by SMEs in Europe (Directorate-General for Communication, 2025). Venture capital investment in US companies is six to eight times higher than in the European Union (Fratto et al., 2024). Closing the gap in finance for startups and scale-up companies is key to enable innovation and technological development in Europe.

This standard's scores do not reflect the dynamism of the financing market in the participating countries but instead provide a clear picture of the ongoing initiatives to finance startups and promote private financing. Nonetheless, figures on the financing amounts of these policies and landscape can add to the previous analysis by identifying gaps and opportunities for improvement.

MAIN TAKEAWAYS

- 1.** Standard #6 reached an implementation level of 77%, being one of the **highest-performing standards**.
- 2.** All 24 participating countries have **introduced public grants, loans and other non-equity instruments to finance startups**, leading to an implementation level of 100% on Indicator 6.1.2.
- 3.** Indicator 6.2.1 achieved one of the highest implementation levels across all indicators at 92%, with 22 of the 24 participating countries having **measures to promote indirect access to capital**.
- 4.** 14 of the 24 participating countries have already implemented **tax relief measures for Business Angels**.

4.6.2 Substandard analysis

4.6.2.1 Substandard 6.1 – Direct Access to Finance

Substandard 6.1 – “Direct Access to Finance” encompasses different types of financing policies by the government and public institutions, both delivered directly to the beneficiary firm and indirectly via the financial sector. The scope of financing policies in Europe is not only wide but is also characterised by many variations of equivalent instruments subject to different regulations, objectives, targets and funding amounts. Nonetheless, the variety of instruments is essential to bridge gaps in the financing market throughout the life cycle of startups and to address specific needs and characteristics of startups and founders.

The European VC market remains fragmented, and many European countries struggle with the size of their domestic VC market, which does not follow their weight on the European Economy (Botsari et al., 2024). In the EU-28, the public sector represented 37% of total VC funds (Botsari et al., 2024). From 2013 to 2023, public entities represented around 31% of total VC raised (Arnold et al., 2024). This proportion varies from country to country, but smaller countries have fewer private investors and therefore public sector investments are likely to occupy a larger share of the VC fund market. A well-functioning VC market is key to enhance economic growth in Europe through the creation of new business, employment and development of new services and products.

Substandard 6.1 – “Direct Access to Finance” is composed of three indicators. Indicator 6.1.1 – “Existence of equity instruments funded by the RRF” assesses the introduction of direct venture capital financing policies with funds of the RRF, Indicator 6.1.2 – “Existence of public grants, loans and other non-equity instruments” measures if these instruments have been implemented and 6.1.3 – “Utilisation of EIB, promotional banks and dedicated vehicles distributing funds to established/professional VCs” monitors the existence of public funds

financing private VC firms. The instruments encompassed in indicator 6.1.2 usually target more early-stage startups due to the seed-stage financing gap derived from lack of collateral for loans or track record to access equity finance. In addition, grants can specifically cover costs such as the development of a product or tests on feasibility. Government VC policies play a more significant role by de-risking investments or correcting market imperfections during seed, early and later stages³³. Between 2008 and 2022, 64,2% of Government VC funds were for direct intervention, 32,6% for indirect investments and 4,4% for both (Testa, Johanyak, et al., 2024).

The ESNA average implementation level of Indicator **6.1.1 – “Existence of equity instruments funded by the RRF”** is low at 43%, with 10 countries – Belgium, Croatia, Cyprus, France, Italy, Poland, Portugal, Slovakia, Spain and Romania – having reported the existence of such instruments. In contrast, twelve have not introduced direct equity financing instruments funded by the RRF (Figure 60).

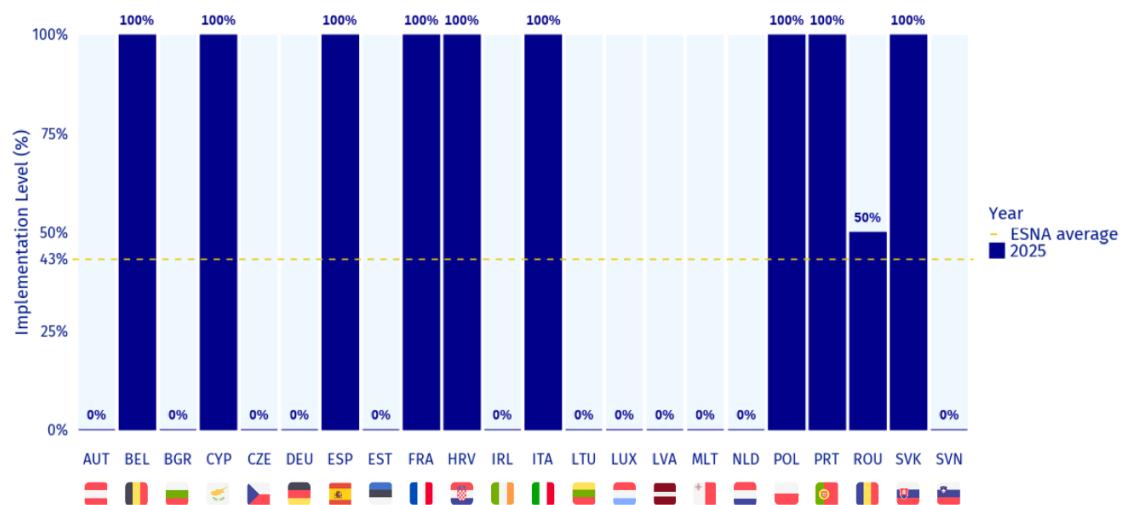


Figure 60: Implementation level of indicator 6.1.1 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025)

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While some countries traditionally prefer to invest in funds-of-funds, most participating countries have governmental VC agencies or programmes, including those not relying on funds from the RRF. Austria has the AWS Gruendungsfonds II, Ireland has the Seed and Venture Capital Scheme (SVC) by Enterprise Ireland, Luxembourg invests through the Luxembourg Future Fund, Malta Enterprise has the programme Business Start and Sweden has Almi Invest. Some participating countries have channelled RRF funding into other types of startup financing.

Government venture capital can contribute to filling the funding gap for companies and sectors that are high-risk or unattractive. While Nordic countries have the lowest government share of VC investments (13%), France and the Benelux, Southern Europe and Central and Eastern Europe have 26%, 37% and 40%, respectively (Compañó, 2025). These findings suggest that

³³ According to the literature, government VC programmes can be characterised as direct or indirect. Direct government venture capital policies refer to investments where government-owned funds supply directly capital to startups, whereas indirect venture capital policies are government equity investments in private-sector VC funds or funds-of-funds (OECD, 2025a; Testa, Quas, et al., 2024). Indicator 6.1.1 focuses on the first group and 6.1.3 on the second.

the low implementation of indicator 6.1.1 in some countries might be explained by already developed venture capital markets with other financing gaps. Nonetheless, in an underdeveloped early-stage market, direct government intervention can be helpful to fill the firm's equity capital gap (Colombo et al., 2014).

Government policies in VC tended to be sector neutral, but governments are increasingly targeting strategic sectors and technologies, such as green-tech and deep-tech (OECD, 2025d). On the one hand, direct investments can be used to follow strategic national objectives, such as the development of high-tech strategies, but on the other, a trade-off between profitability and other political mandates has been identified (Compañó, 2025). Moreover, government backed VCs might not have the expertise to run funds and have high operational costs generating inefficiencies. Together with the mission of public VCs, there are other factors that should be considered such as the duration of the fund, investment sums, financing caps, syndication strategy and collaboration with the private sector. The effectiveness of government venture capital programmes depends on their design and aims (Colombo et al., 2014).

With an ESNA implementation level of 100%, **Indicator 6.1.2 – “Existence of public grants, loans and other non-equity instruments”** is the only indicator that has been adopted by all participating countries (Figure 61). These results reiterate the ongoing efforts to cover the gaps in the financing markets in Europe and to make capital available for startups in early stages.

The instruments covered under this indicator are useful to correct imperfections in the funding market for startups in pre-seed stages. Startups with this maturity usually have negative turnover, do not have track record and constitute high risk investments, limiting the private capital willing to invest. These instruments offer different advantages. Public grants can target specific costs or activities including product development, testing and research, and do not burden companies with debt. At the same time, due to their nature, the incentives given to startups are lower as there is no offset. Public loans can dispose lower interest rates and bridge the financing gap by providing loans.

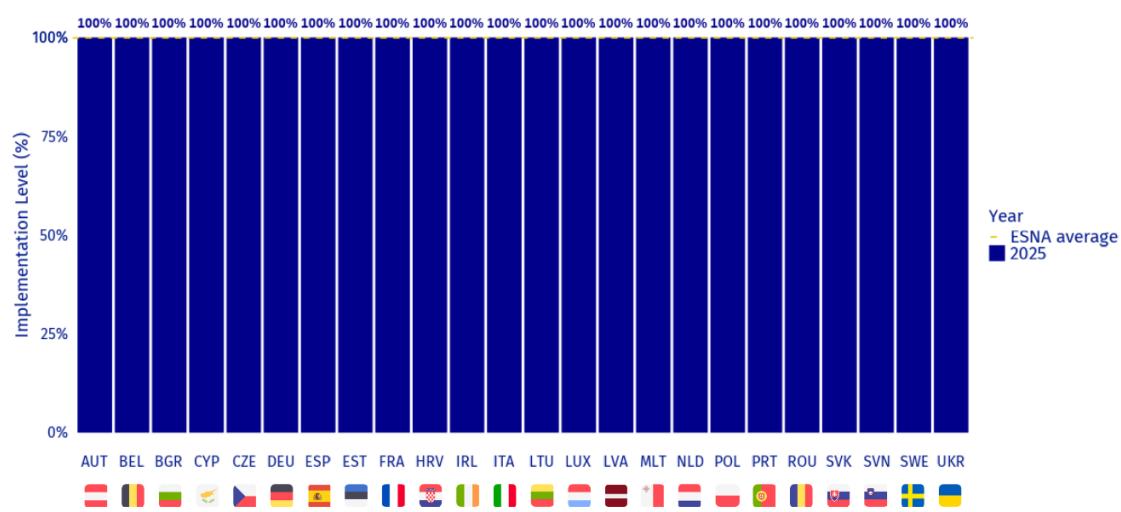


Figure 61: Implementation level of indicator 6.1.2 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025)

The European Investment Bank (EIB) and the European Investment Fund (EIF) are actively involved in government VC policies. The EIF supports 40-50% of venture capital-backed

startups in Europe (including the United Kingdom) in a typical year (Fratto et al., 2024). In more recent years, their programmes have targeted strategic sectors with social and climate impact. The EIB Group has entered partnerships with many participating countries contributing to the development of new financing instruments.

Indirect investments through government participation in VC funds appear to have taken a prominent role in government VC policies, nonetheless direct investments still play a relevant role in many countries (OECD, 2025a). The rise of indirect investments and growth-stage investments by public VC funds unveils the efforts in filling financing gaps in later stages.

In comparison with direct investments, indirect investments are not subject to the operational costs and leverage private knowledge and experience. Given that the literature (Köppl et al., 2025) finds private VCs to overperform public VCs, indirect investments are not subject to possible inefficiencies derived from only public VCs. However, interests of the public and private sectors might not be aligned.

ESNA has reached an implementation level of 83% on **Indicator 6.1.3. – “Utilisation of EIB, promotional banks and dedicated vehicles to distribute funds to established professional VCs”**. The vast majority of countries – twenty out of twenty-four – have fully implemented these distribution mechanisms, with only four still to introduce them (Figure 62).

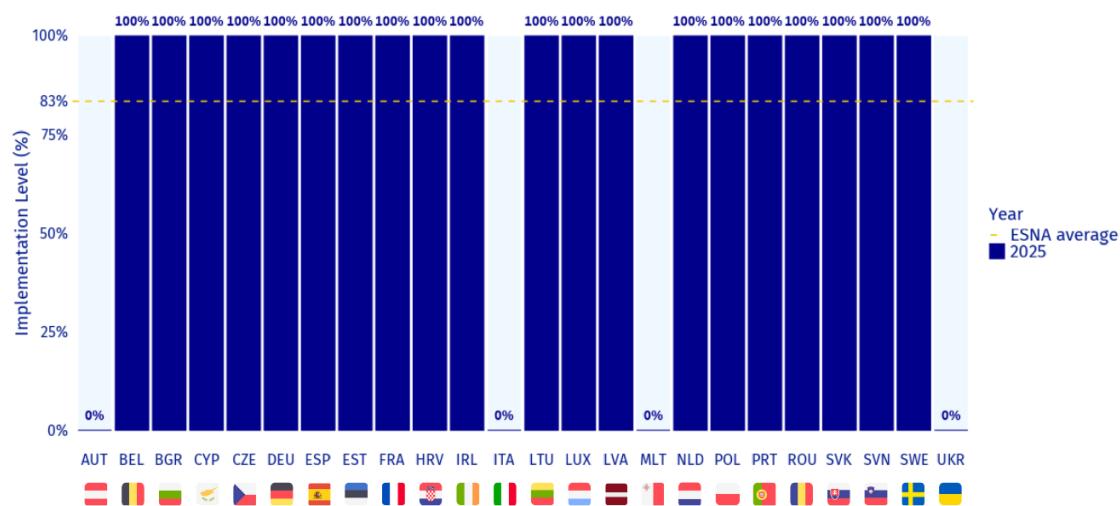


Figure 62: Implementation level Indicator 6.1.3 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025)

4.6.2.2 Substandard 6.2 – Indirect Access to Finance

Substandard 6.2 assesses the existence of non-financial initiatives aimed at promoting investments from private investors, except for tax relief measures for Business Angels which are exclusively covered by Substandard 6. 3. Attracting more investors into the VC market is key to their development in Europe. Institutional investors, namely pension funds, sovereign wealth funds and other long-term financial resources are key sources of private capital for VC funds with potential to develop the industry.

Literature has found that the institutional environment correlates with local venture capital activities (Lerner & Tag, 2013). The legal framework contributes to defining the relationship between startups and investors through the provisioned contracts, the returns of investors through taxation and capital available through restrictions of investments of pension funds.

Indicator 6.2.1 – “Initiatives to diversify private capital for high-growth startup co-investment” attained an implementation level at 92% at the ESNA level, one of the highest implementations across all indicators. Out of the 24 participating countries, 22 introduced initiatives to diversify private capital (Figure 63).

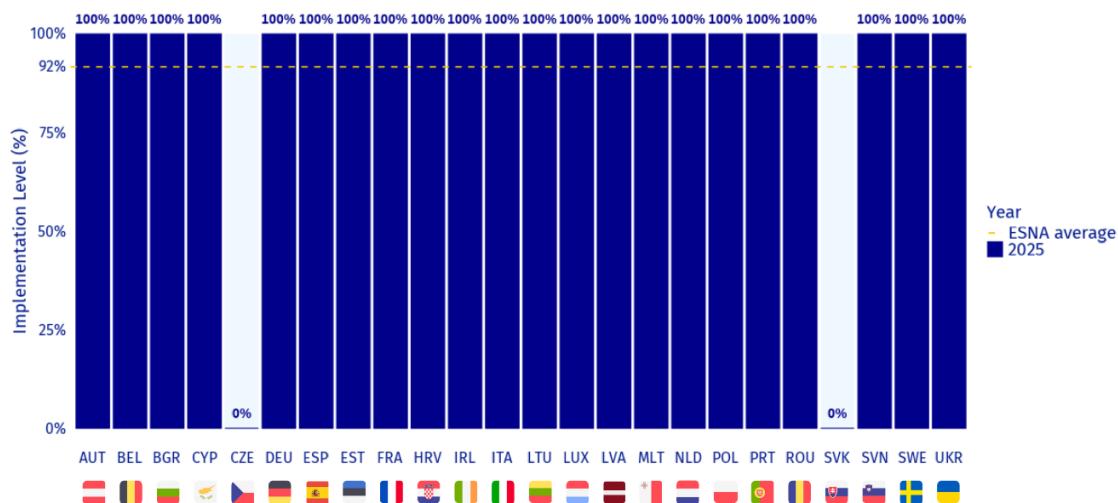


Figure 63: Implementation level of Indicator 6.2.1 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025)

Initiatives covered include networking events, websites and associations to connect investors to startups, among others. Academic literature has established that networking plays a significant role in both startups and VC performances (Zava & Caselli, 2023). VC networks are becoming central factors in understanding how firms access critical resources and navigate uncertainty. Better-networked VC firms experience significantly better fund performance, and the portfolio companies of better-networked VCs are more likely to survive to subsequent financing and eventual exit (Hochberg et al., 2007).

Institutional investors (e.g. pension funds, insurance companies) have contributed to the development of VC markets over the past decade. Government VC policies have contributed to the participation of pensions funds in VC markets (OECD, 2025a). Nonetheless, pension funds still represent a low share of the total VC sources and are highly heterogeneous between regions. In Europe, Pension Funds represented 7% of total VC sources in 2023 (*InvestEurope*). In the Nordics, they represented the highest portion with 21% and in Southern and Central and Eastern Europe the lowest with 2% (Compañó, 2025). Different regulations including quantitative limits are among the factors that may constrain investment in private equity and VC by pension funds (Arnold et al., 2024).

4.6.2.3 Substandard 6.3 – Tax Relief Measures

Tax relief measures are important tools to stimulate private financing. A more favourable treatment of capital gains or losses can reduce risks and raise expected returns and therefore promote investments in startups (Arnold et al., 2024). Reductions in the corporate capital gains tax increase the share of both high-tech and early-stage investments (Da Rin et al., 2006).

Business Angels are important during pre-seed stages, when startups are less likely to receive loans from banks and financing from venture capital. Business Angel networks are also found

to generate valuable information and reduce risk effects (Bonini et al., 2018). Creating favourable conditions for BA investments enables more financing into startups in early phases.

ESNA achieved an implementation of 65% on **Indicator 6.3.1 – “Existence of tax relief for BA”**. While 14 countries have already implemented tax relief for Business Angels, one is preparing new regulation and seven have yet to introduce them (Figure 64).

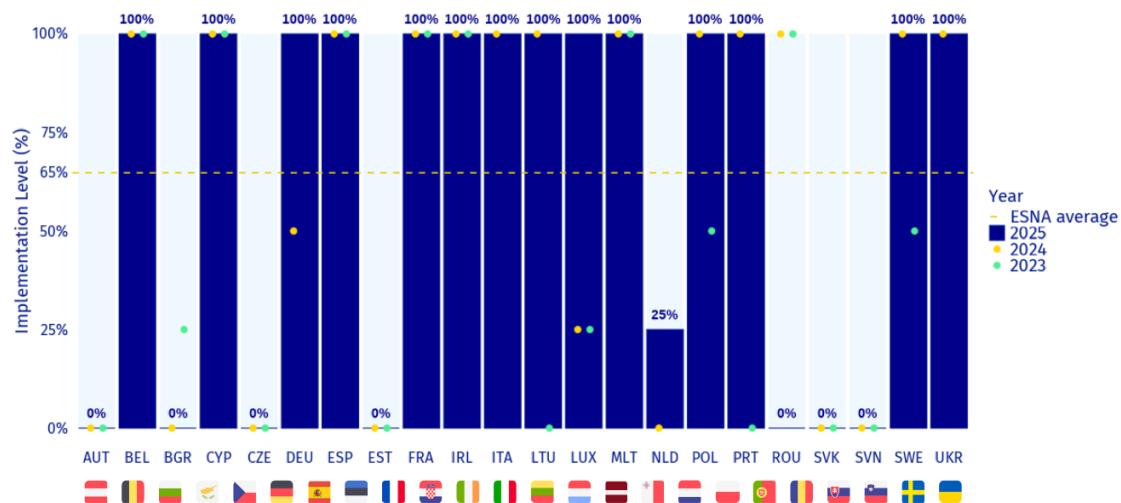


Figure 64: Implementation level of Indicator 6.3.1 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023)

Out of the tax relief programmes, the most common programmes are capital gains tax (CGT) reduction, followed by income tax reliefs. Table 5 shows the type of tax relief programmes introduced by country.

Type of tax relief measures	Countries				
Income Tax relief	 BEL FRA LTU LUX UKR				
CGT reduction	 CYP ESP IRL ITA POL PRT SWE				
Loss relief	 DEU				
Tax credit (not necessarily income)	 MLT				

Table 5: BA tax relief measures by country

Source: ESNA, based on official data from Member Countries (Survey 2025)

In addition to the previous tax relief measures for BA, tax incentives for VC can also be an important tool to stimulate VC investments where it lags (Arnold et al., 2024). Table 6 shows whether participating countries have introduced tax relief measures for VC. At the moment, 12 countries have already introduced these measures.



Table 6: VC tax relief measures by country³⁴

Source: ESNA, based on official data from Member Countries (Survey 2025)

4.6.3 Conclusion

The fragmented and underdeveloped VC market hinders Europe's ability to innovate and compete. Governments can play a decisive role by correcting imperfections in the financing market and promoting the diversification of investment by the private sector. Europe is lagging in innovation and the financing gap faced by startups is among the main deterrents.

Standard #6 – “Access to Finance”, with an implementation of 77%, is one of the best-performing standards, highlighting the increased effort of countries to make progress on providing better access to finance for startups. Despite this high score, access to finance remains one of the main challenges for startups and Europe can further develop a dynamic financing environment to promote startup growth. This score has not yet been reflected into a developed financing environment but rather depicts the ongoing efforts to correct the identified financing gaps. The monitorisation of funding amounts would add to this exercise by enabling a complete picture to where efforts are being channelled.

Substandard 6.1 – “Direct Access to Finance” reached an implementation level of 76%. Financing startups and VC-funds is essential to bridge the financing gap in early and late stages, while crowding in private investments. European startups are underfinanced in comparison with their US counterparts and European VC firms struggle consistently to secure equity financing (Böninghausen et al., 2025). The variety of financing instruments available in participating countries are complementary and answer to different needs and characteristics of startups and markets. Grants and loans play a significant role in pre-seed financing, allowing firms to overcome the initial funding gap. VC policies can contribute to bridge equity financing gaps. Out of the participating countries, 10 have used RRF funding for public VC, all have introduced grants or loans, and 20 countries have used EIB, promotional banks or other dedicated vehicles to distribute funds to private VCs. While indirect VC government policies have taken a prominent role, direct VC policies are still important to target specific objectives

³⁴ There is only data available for 22 countries. The figure refers to 55% of this universe.

and for fast financing. The success of these policies depends widely on their design, mission and context.

Literature has found legal frameworks and policy environment shape the private sectors' participation in capital markets and financing activities. Focusing on creating favourable and attractive conditions for private sector investments is essential to crowd in more private sector financing. Substandard 6.2 – “Indirect Access to Finance” achieved an implementation of 92%, stressing the ongoing efforts to promote private sector financing. Among institutional investors, pension funds and insurance companies have the potential to increase the capitalisation of the VC industry. Nonetheless, they still represent a small share of total VC and equity sources in Europe: 11% of GDP invested by EU institutional investors into direct equity compared to 36% in the US (EIB, 2025). A combination of regulatory restrictions, structural factors – such as the fragmentation of the VC market and of national initiatives to support institutional investors' participation –, and cultural aspects may influence these investors from playing a bigger role in the VC industry and capital markets.

Favourable tax regimes of investments can reduce risks and raise expected returns. Out of the participating countries, fourteen have introduced tax relief measures for BA, five in the form of income tax relief and seven through capital gains tax reductions, one tax relief and the other as tax credit. In addition, twelve countries have created tax relief policies for VC firms.

Adding to the mentioned initiatives targeting equity investments and the financing gap at early stages, improving startup exit options could incentivise startups not to list abroad. Stock markets in the EU are less liquid and smaller than in the US decreasing the attractiveness of IPOs in Europe (Arnold et al., 2024). In addition, EU firms receive fewer large-ticket investments than in the US. While the funding gap between the EU and the United States persists across all financing rounds stemmed by lower fund sizes and number of VC firms in the EU, it is exacerbated at later stages where the funding size is higher, leading to an increased reliance on non-EU investors (Böninghausen et al., 2025). Reducing the fragmentation of the EU capital markets can help improve conditions for startup exits and prevent the relocation of firms.

4.7 SNS #7 Social Inclusion, Diversity and Protecting Democratic Values

4.7.1 Overview

The promotion of social inclusion and diversity in entrepreneurship is key to correct market imperfections that devoid founders from the opportunity to launch their own businesses and hinder the participation of all groups in innovation. The declaration calls Signatory Countries to deploy actions to support diversity and inclusion in their startup policies and protect democratic values. Standard #7 evaluates the existence of initiatives promoting a diverse workforce in startups and ensuring opportunities for founders from underprivileged groups.

In 2023, 7.5 million “missing” entrepreneurs³⁵ were estimated in the EU representing 44% of all entrepreneurs (OECD/European Commission, 2023). This figure suggests the need to foster inclusive entrepreneurship to ensure opportunities to start and run startups for anyone with an innovative idea, regardless of their personal characteristics. The existence of additional barriers for entrepreneurship among women becomes clear, as they represent

³⁵ This number is computed based on the expected number of entrepreneurs if everyone was as active in business creation as 30-49 year old men, which is the cohort who is most often identified as the most active in business creation and most likely to create sustainable businesses. (OECD/European Commission, 2023)

around 70% of the missing entrepreneurs. Among these barriers, the finance barrier is one of the most relevant: women tend to receive smaller amounts from external sources, pay higher interest rates and are required to secure more collateral than men when accessing external financing (OECD/GWEP, 2025).

The declaration recommends the provision of support to founders from underprivileged backgrounds to create companies. The entrepreneurship gap stems from profound and difficult to tackle factors from both the demand and supply sides. Market imperfections affect certain gender, ethnic, religious, age, geographical and underprivileged groups more, as they face higher barriers to access financing, education, information and other resources. Social attitudes also have high influence by shaping entrepreneurial motivations and ambitions. Public policy can have a significant role by addressing market imperfections and levelling the playing field for founders and startup workers.

Promoting a diverse workforce is key to overcome the challenges faced by underprivileged groups. In addition, representativity helps ensure that technological and innovative solutions contribute to address challenges faced by society and are not biased towards certain groups. The declaration calls on the provision of targeted incentives for startups to hire a diverse workforce and their mobilisation to address marginalisation and social exclusion. Therefore, Standard #7 Social Inclusion, diversity and protecting democratic values measures the introduction of policies aiming to strengthen diversity, social inclusion and democratic values.

ESNA reached an implementation level of 73%, making Standard #7 the standard with the most significant progress out of all standards (22 p.p.). This standard's evolution shows the undergoing efforts in promoting an ecosystem aligned with social inclusion and diversity.

Figure 65 exhibits country-level scores for Standard #7. Despite existing differences between countries, this standard reveals a shared trajectory of progress between countries. In addition to France, Lithuania and Luxembourg who had already fully implemented it, Belgium, Ireland, Poland and Spain reached the 100% mark. Sixteen of the participating countries improved their scores, four sustained their implementation levels and two registered setbacks³⁶. Czechia registered the most significant progress translated in an improvement of 75 percentage points, while other six countries advanced more than 40 percentage points.

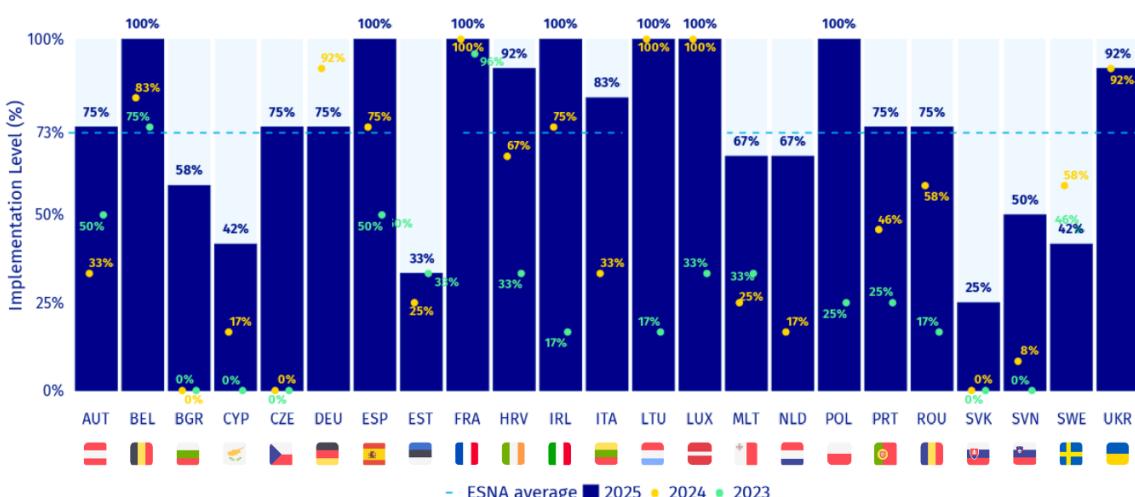


Figure 65: Implementation level Standard #7 across ESNA countries

³⁶ Latvia has not provided data for this indicator and Poland had no score in 2024.

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023)

Standard #7 – “Social Inclusion, Diversity and Protecting Democratic Values” delves into two substandards: 7.1 – “Incentives for startups” and 7.2 – “Incentives for founders”. While the first focuses on policy programmes to promote the hiring and representativity of workers from underprivileged backgrounds, the second assesses initiatives to correct market failures hindering founders from disadvantaged groups to launch their startups. Both substandards showcase relatively close implementation levels at 75% and 72%, respectively (Figure 66). While Substandard 7.1 remained the higher of the two and improved significantly (from 59% to 75%), Substandard 7.2 – Incentives for founders has registered substantially greater progress, advancing 28 percentage points from 43% to 72%³⁷.

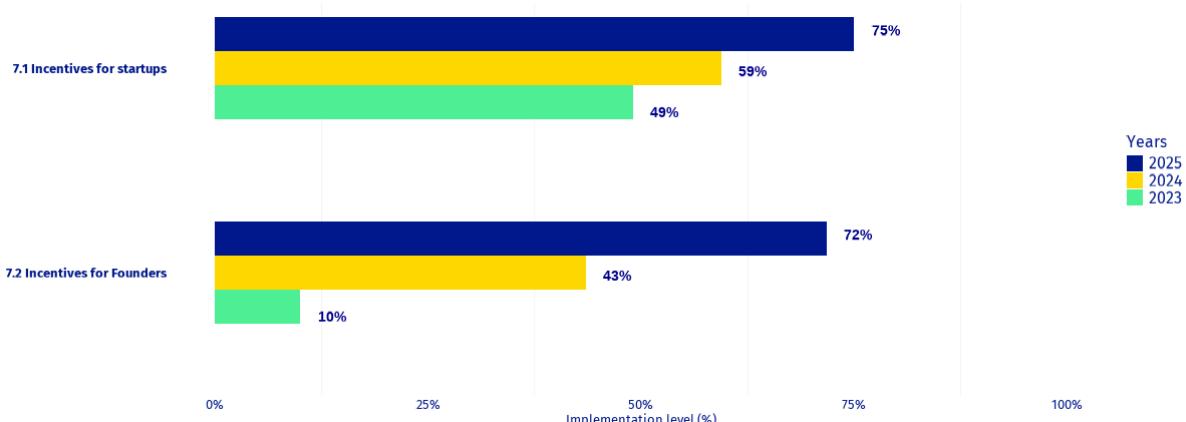


Figure 66: Implementation level of SNS #7 substandards for ESNA

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023)

So, though the two constituent substandards progressed since last year, the outstanding increase in Standard #7’s implementation level is owed to the significant improvement of initiatives targeting founders from underprivileged backgrounds (Figure 67). This progress reiterates efforts in correcting market inefficiencies in the financing and business creation opportunities for founders.

³⁷ Although the rounded figures suggest a 29-percentage-point increase, the actual advancement was 28 percentage points, as calculations are based on unrounded values before presentation rounding.

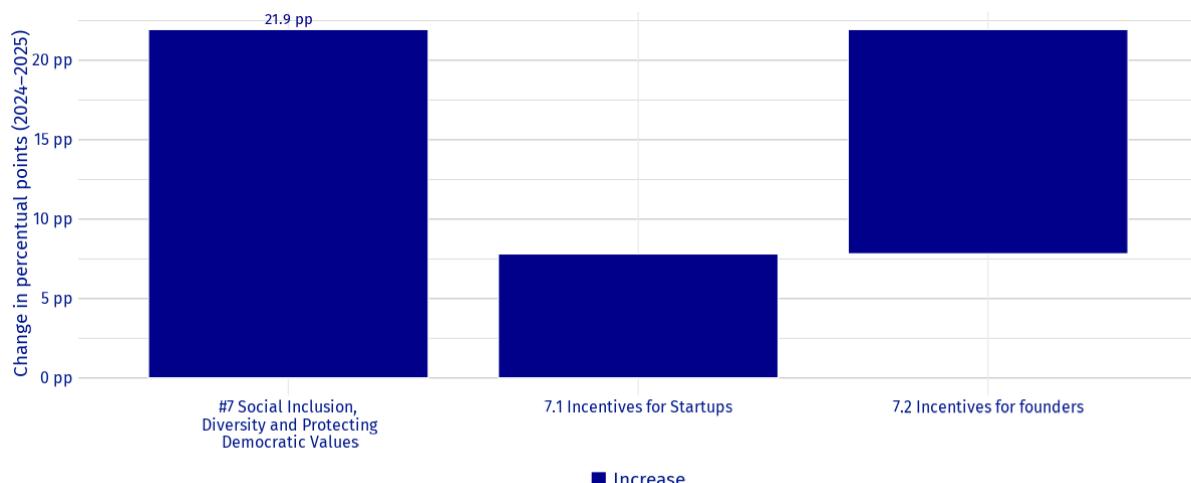


Figure 67: Decomposition of the change in SNS #7 implementation level by substandard (2024-2025)

Source: ESNA, based on official data from Member Countries (Survey 2025 and 2024)

At the country level, scores are widely spread under this standard and respective substandards, although with distinctive patterns (Figure 68). Standard #7 demonstrates relatively concentrated scores, with most countries clustered between 50% and 100%, indicating moderate to high implementation across ESNA. Substandard 7.1 – “Incentives for startups” also exhibits strong disparities between countries, spanning the full range from 0% to 100%, reflecting considerable variation in the availability and design of startup incentive frameworks. Substandard 7.2 only relies on one indicator with three scores: 50% of the countries score 100% and the remaining 50%, except for three outliers, present a notably polarised distribution, with countries concentrated at either 0%, 50%, or 100% — a pattern that stems from this substandard being assessed through a single indicator that admits only these three discrete values, rather than a continuous scale.

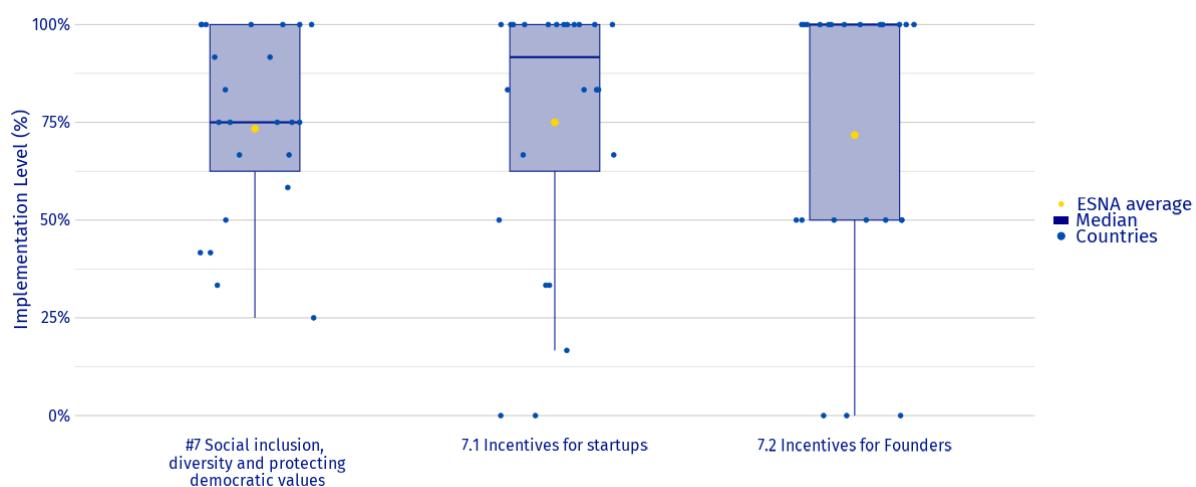


Figure 68: Distribution of implementation levels for the substandards of SNS #7

Source: ESNA, based on official data from Member Countries (Survey 2025)

MAIN TAKEAWAYS

1. Standard #7 reached an implementation level of **73%**, representing the **most significant increase out of all standards** with a 22-percentage-point improvement since 2024.
2. Out of the 24 participating countries, 19 have **social inclusion mobilisation initiatives** to promote startups' engagement in tackling marginalisation and social exclusion, while 15 provide **incentives for diversity hiring**, nearly doubling from eight in 2024.
3. 13 out of the 24 participating countries achieve full implementation (100%) on Indicator 7.2.1. by establishing comprehensive **polices that support both women entrepreneurs and founders from other underprivileged backgrounds**.

4.7.2 Substandards analysis

4.7.2.1 Substandard 7.1 – Incentives for Startups

Substandard 7.1 – “Incentives for Startups” is composed of three indicators: 7.1.1 – “Existence of national awards and policies for startup role models”, 7.1.2 – “Existence of social inclusion mobilisation initiatives” and 7.1.3 – “Existence of incentives for diversity hiring”.

Awards for startup role models allow to signal best practices and to provide examples to the rest of the startup community. These policies contribute to tackle stereotypes and provide successful stories to those who aspire to build a similar business.

Indicator 7.1.1 – “Existence of national awards and policies for startup role models” reached an implementation level of 79%, presenting a 10-percentage-point improvement since last year. Sixteen countries already fully implemented this indicator, four more than last year, while two others have not yet introduced national awards and policies for startup role models. Notably, Czechia and Bulgaria, both of which scored 0% in 2024, have now introduced such frameworks, with Czechia achieving full implementation (Figure 69).

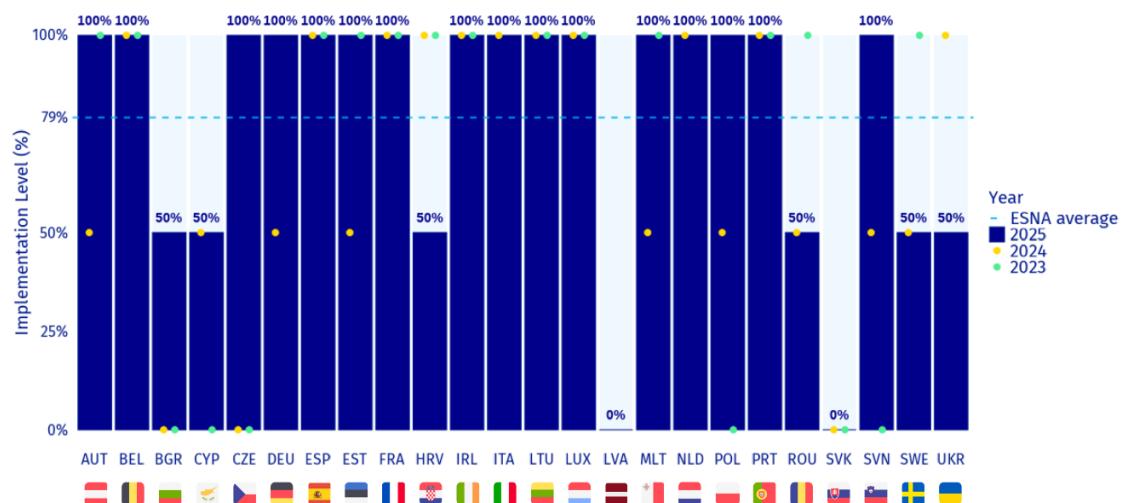


Figure 69: Implementation level of Indicator 7.1.1 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023)

The digital and green transitions have the potential of bringing many benefits to marginalised communities through new technologies, more affordable products, increased connectivity, sustainable solutions among others. Startups as major players in the twin transitions and technological development can contribute to addressing the challenges faced by marginalised communities directly or through spillovers.

Indicator 7.1.2 – “Existence of social inclusion mobilisation initiatives” addresses whether national or regional authorities promote startups’ engagement to tackle marginalisation and social exclusion among underprivileged communities. It achieved an implementation level of 79% in 2025 (17 p.p. more compared to last year³⁸). This indicator is binary, awarding 100% when such initiatives exist and 0% otherwise; consequently, the 79% average indicates that 19 countries have implemented these measures, compared with 15 in 2024. No country discontinued existing initiatives, while Belgium, Czechia, Slovenia and Sweden newly introduced such frameworks, scoring 100% (Figure 70).

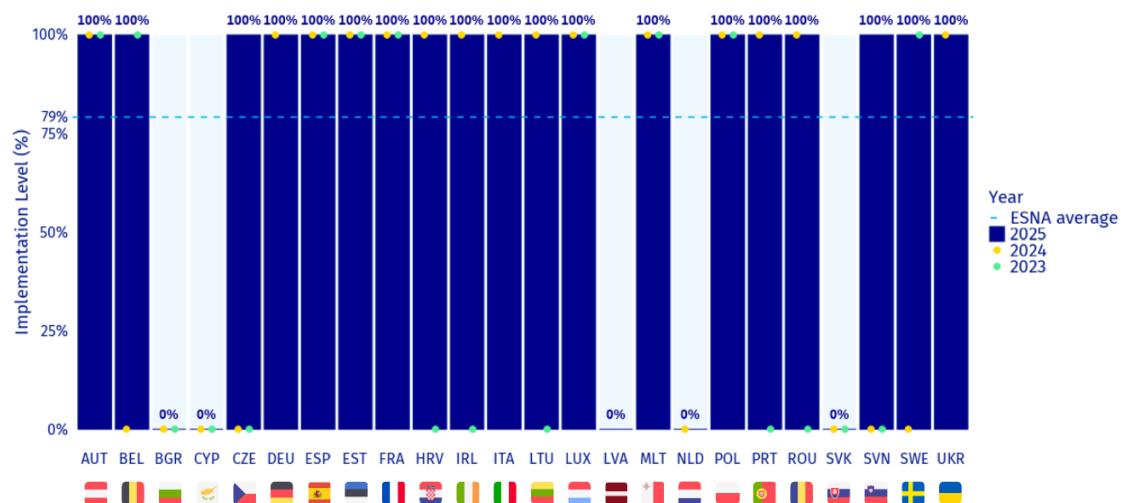


Figure 70: Implementation level Indicator 7.1.2 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023)

Hiring a diverse workforce can also contribute to improving how startups and new technologies are addressing challenges of marginalised groups. Labour market discrimination harms economic performance and well-being (Planes-Satorra & Paunov, 2017). Creation of incentives for diversity hiring can contribute to decreasing the impact of labour market discrimination on firms.

Indicator 7.1.3 – “Existence of incentives for diversity hiring” achieved 67% implementation, after a trajectory of significant improvement. In 2024, it had improved nine percentage points, and this year registered a 20-percentage-point change. In 2025, 15 countries reached full implementation (100%). This marks substantial progress compared with 2024, when only eight³⁹ countries held this position. This expansion reflects new policy

³⁸ In 2024, the implementation level was 63%. Although the rounded figures suggest a 16-percentage-point increase, the actual advancement was 17 percentage points, as calculations are based on unrounded values before presentation rounding.

³⁹ Including Denmark, which did not participate in 2025.

introductions and strengthened existing frameworks. Four countries – Croatia, Czechia, Slovenia and Sweden – introduced diversity hiring incentives, advancing from 0% to 100%, and Poland progressed from 50% to 100%, while Portugal moved from 75% to 100%, indicating that its incentive framework now extends beyond legislative or soft law mechanisms. Additionally, Malta advanced from 0% to 50%, demonstrating the introduction of diversity hiring incentives, albeit without providing sufficient evidence (Figure 71).

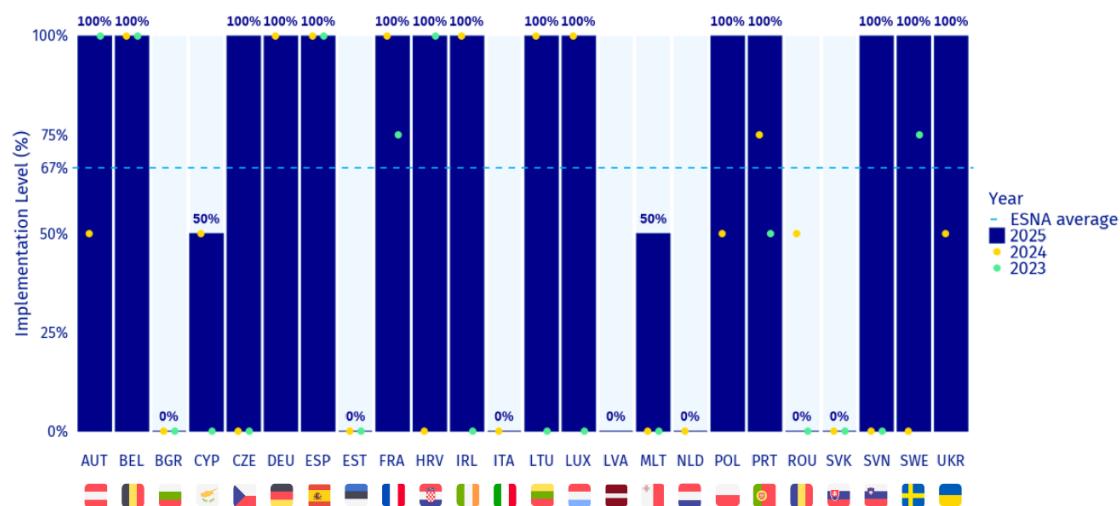


Figure 71: Implementation level Indicator 7.1.3 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023)

The 16-percentage-point improvement in Substandard 7.1 – “Incentives for Startups” stems from progress across all three constituent indicators, with Indicator 7.1.3 – “Existence of incentives for diversity hiring” contributing most substantially. The advancement reflects primarily the introduction of new policy frameworks, particularly in Czechia, Slovenia and Sweden, which implemented measures across multiple indicators. This combination of expanded award programmes for role models, broader mobilisation initiatives and enhanced diversity hiring incentives signals growing recognition among ESNA countries of the importance of inclusive entrepreneurial ecosystems.

4.7.2.2 Substandard 7.2 – Incentives for Founders

Substandard 7.2 – “Incentives for founders” only considers Indicator 7.2.1 – “Support to founders from underprivileged backgrounds”. While as mentioned in Standard #6 founders still face strong barriers when accessing finance, entrepreneurs from underrepresented groups find it even more difficult to access external financing. In addition, they tend to have more limited business networks and if they live in deprived areas, opportunities to participate in innovation might be scarce (Planes-Satorra & Paunov, 2017). Literature has also found entrepreneurial behaviour to be embedded in a social context.

Efficient public policy programmes should attempt at decreasing the barriers faced by underprivileged groups when creating and growing their business and correct market imperfections. Since access to finance is considered one of the main barriers faced by entrepreneurs, the creation of specific financing programmes for these groups is key. Moreover, the creation of trainings, mentoring programmes and networking promotion can help bridge knowledge and access gaps.

Indicator 7.2.1 – “Support to founders from underprivileged backgrounds” measures whether countries have introduced policies targeting either women entrepreneurs or founders from underprivileged backgrounds (or both), with scores of 50% awarded for evidence of programmes addressing either group and 100% for countries meeting both conditions. It reached an implementation level of 72%. Like indicator 7.1.3, this one followed a trajectory of strong and consistent progress. Thirteen countries achieved full implementation (100%), indicating comprehensive policies to support both women and underprivileged founders. Three of these countries (Bulgaria, Italy and the Netherlands) introduced such measures for the first time this year and other four (Ireland, Poland, Romania and Spain) expanded their existing frameworks and added support targeting the previously uncovered group. Three countries – Cyprus, Czechia and Portugal – have only programmes to support founders from underprivileged backgrounds, while four countries – Austria, Germany, Malta and Slovakia – have only programmes for women entrepreneurs (Figure 72).

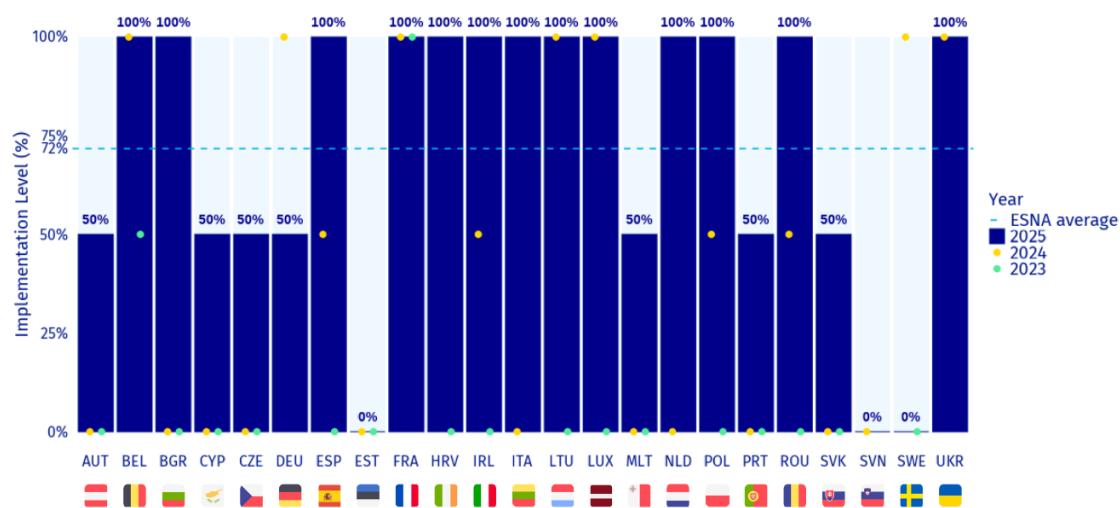


Figure 72: Implementation level of Indicator 7.2.1 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023)

In addition to these programmes, entrepreneurial education can play an important role in providing information to all founders, promoting youth entrepreneurship and tackling stereotypes that deter founders from starting their own businesses. Role models are also found to be one of the most effective ways to tackle stereotypes.

4.7.3 Conclusion

Promotion of diversity and social inclusion is key to increase entrepreneurship in Europe and overcome the inefficiencies derived from market barriers that affect unevenly certain groups in society. The declaration calls out the need to promote a culture of social inclusion and diversity and protect democratic values.

Standard #7 – “Social Inclusion, Diversity and Protecting Democratic Values” reached an implementation level of 70%, after a significant improvement of 18 percentage points. The observed evolution reflects the efforts in promoting an inclusive entrepreneurship culture among participating countries. This progress among sixteen countries, out of which Bulgaria, Czechia, Italy and the Netherlands distinguish themselves for higher score improvements.

Initiatives to promote diversity in the workforce and spillovers of the entrepreneurial activity into underprivileged communities are covered by Substandard 7.1 – “Incentives for startups”. Fifteen countries have created policies for startup role models such as awards, promotion of successful cases, among others. These policies are impactful in tackling stereotypes and promoting an inclusive entrepreneurial culture. In addition, three quarters of the countries have initiatives to promote impactful entrepreneurship for marginalised communities. Finally, there was a significant improvement in the introduction of incentives for diversity hiring. Together, these policies can decrease barriers to the participation of marginalised groups in startups and improve how technological developments and innovation contribute to the well-being of all communities. Eleven countries reached full implementation across role model policies, social inclusion initiatives and diversity hiring incentives, thus having a 100% score in the substandard, more than double the five countries in this position in 2024.

Supply and demand barriers still hinder the creation of startups by founders of underrepresented groups. These barriers are particularly high for women (OECD/GWEP, 2025). Substandard 7.2 – “Incentives for founders” measures the introduction of policies to provide incentives for founders. Sixteen countries have policies to support women entrepreneurs and fifteen to support founders from other underprivileged backgrounds.

However, entrepreneurial education may also play an important role in promoting entrepreneurship among youth people, tackling stereotypes and bridging knowledge gaps faced by particular groups and communities.

4.8 SNS #8 Digital First

4.8.1 Overview

Standard #8 addresses the digitalisation of government-startup interactions and the role of startups as active partners in the digital transformation of public administration.

The economic rationale for digital-first government extends beyond administrative convenience. Digital public services reduce compliance costs for businesses, and accelerate market entry (Martins & Veiga, 2022). For startups specifically, digital-first approaches create conditions for rapid scaling. Their ability to interact with authorities seamlessly through digital channels determines whether administrative processes represent enablers or barriers to entrepreneurial activity. When company creation, tax filing, participation in public procurement, or access to electronic identity systems require physical presence, paper documentation, or navigation of fragmented bureaucratic channels, the transaction costs disproportionately burden startups – firms that typically operate with constrained human and financial resources and whose competitive advantage lies in speed, agility, and scalability rather than administrative capacity. Conversely, when these interactions are designed to be fully digital by default, startups can allocate resources to innovation and growth rather than compliance and paperwork. Moreover, fully digital interactions generate structured data that governments can leverage to streamline subsequent services, implement risk-based compliance models, and identify regulatory frictions that hinder entrepreneurship.

At the European level, the digitalisation of public services constitutes one of four strategic dimensions of the Digital Decade Policy Programme 2030, which sets the quantitative target that 100% of key public services be available online by 2030. This commitment builds upon and complements several interconnected regulatory and policy frameworks, such as the Single Digital Gateway Regulation. The SNS declaration translates this European digital

transformation agenda into concrete requirements for startup-government interactions. Substandard 8.1 – “Digital First” operationalises this principle by examining whether all day-to-day interactions between startups and authorities – including company creation, filing of taxes, participation in public procurement opportunities, and use of electronic ID and digital signatures – are designed to be carried out in a digital-first manner, eliminating the need for physical presence or paper-based documentation and enabling startups to engage with public administration through seamlessly integrated digital channels.

Yet digitalisation of government-startup interactions is only one dimension of Standard #8. Equally important is the recognition that startups themselves possess critical knowledge, technical capacity, and innovative solutions that can accelerate public sector digital transformation. The emergence of GovTech, that is, “the collaboration between the public sector and start-ups, innovators, government ‘intrapreneurs’, and academia on innovative digital government solutions” (OECD, 2024a) reflects a fundamental shift in how governments approach digital modernisation. This approach supports startups in developing and scaling digital solutions tailored to public sector challenges whilst facilitating cross-border collaboration and knowledge exchange. It also not only diversifies the supplier base and reduces vendor lock-in but also enables governments to experiment with emerging technologies (artificial intelligence, blockchain, quantum computing, etc.) in ways that are responsive, scalable, and aligned with evolving user needs. In this vein, Substandard 8.2 – “Knowledge Sharing” assesses whether startups and scaleups are proactively approached and engaged by governments for the sharing of knowledge and best practices regarding digitalisation, capturing the extent to which countries have embedded startups as active contributors to – and beneficiaries of – public sector digital transformation.

Standard #8 shows modest aggregate progress in 2025, rising from 70% to 75% (Figure 73). Three countries achieved 100% – Luxembourg, Malta, and Ukraine – while seven others scored above 90% – France and Germany (both 96%), Lithuania (99%), Poland (98%), Portugal (97%), Spain and Sweden (both 98%). Country-level performance spans, nevertheless, a wide range. The dispersion reflects fundamentally different national trajectories, with Sweden recording the sharpest improvement (41 p.p., from 58% to 98%)⁴⁰, followed by Slovenia (29 p.p.), Slovakia (24 p.p.), and Bulgaria (21 p.p.), whilst seven countries experienced declines.

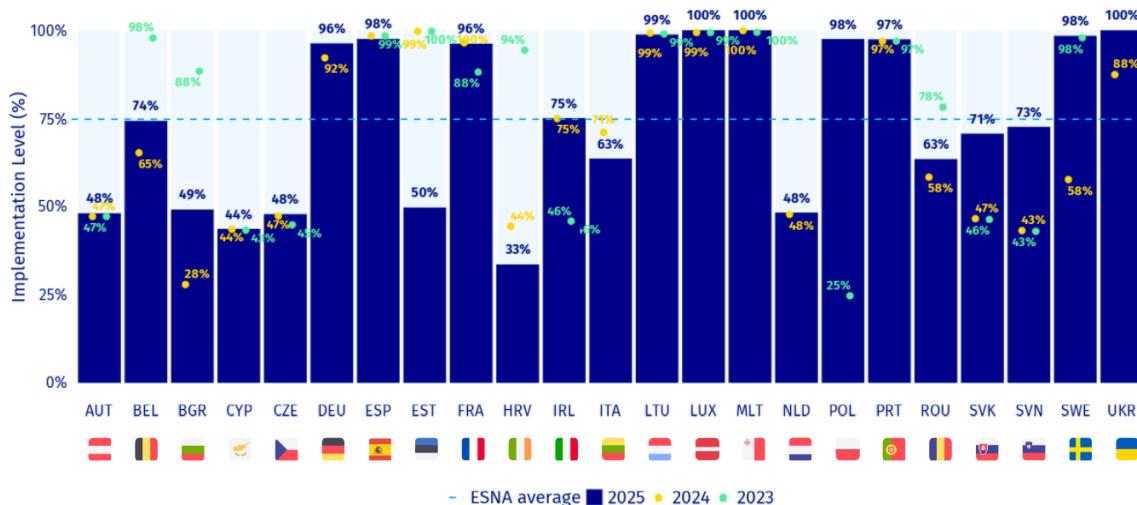


Figure 73. Implementation level of SNS #8 across ESNA countries

⁴⁰ Although the rounded figures suggest a 40-percentage-point increase, the actual advancement was 41 percentage points, as calculations are based on unrounded values before presentation rounding.

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023) and Digital Economy and Society Index (European Commission)

Disaggregating Standard #8 into its two constituent substandards reveals a significant asymmetry (Figure 74). Substandard 8.1 – “Digital First” reaches 93% in 2025, reflecting high digital public service provision for government-startup interactions across most countries and indicating that most of them have established or are approaching full digital accessibility for essential administrative procedures. Substandard 8.2 – “Knowledge Sharing” stands at only 57% in 2025, signalling that proactive government engagement with startups for knowledge exchange on digitalisation is substantially underdeveloped at the aggregate level. This 37-percentage-point⁴¹ gap between the two substandards reveals an incomplete pathway to digital-first government.

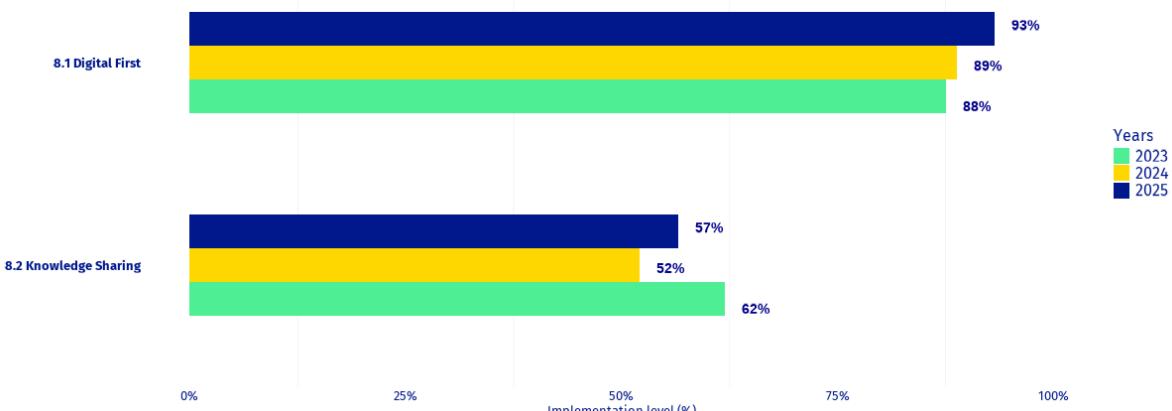


Figure 74. Implementation level of SNS #8 substandards for ESNA

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023) and Digital Economy and Society Index (European Commission)

Standard #8 exhibits near-stagnation at the aggregate level, rising only marginally from 70% to 75% (Figure 75). This subdued performance reflects that both constituent substandards have remained almost unchanged: both Substandard 8.1 and Substandard 8.2 showed a modest improvement of 4 p.p., contributing equally to the standard's overall change.

⁴¹ Although the rounded figures suggest a 36-percentage-point gap, the actual difference is 37 percentage points, as calculations are based on unrounded values before presentation rounding.

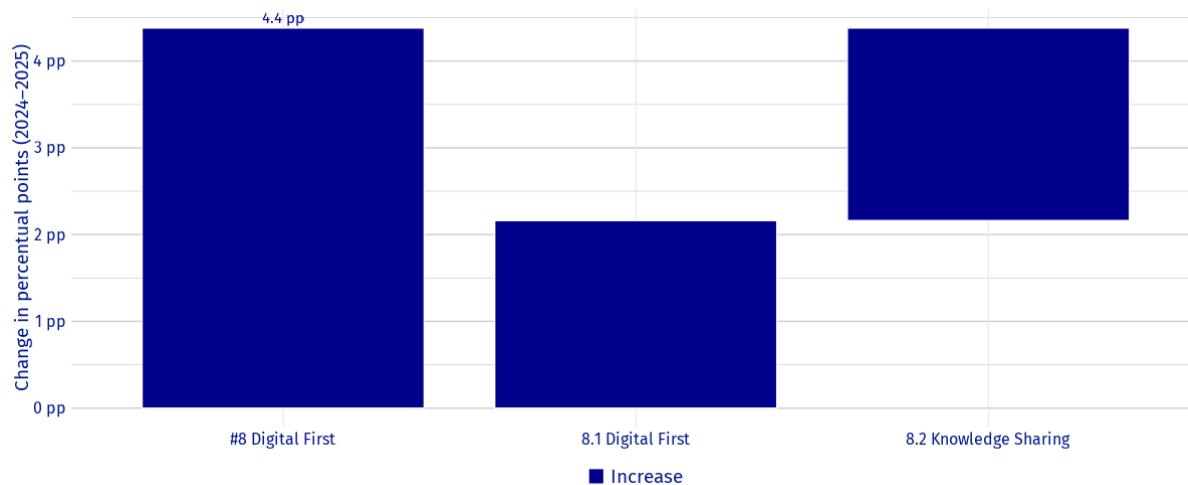


Figure 75. Decomposition of the change in SNS #8 implementation level by substandard (2024–2025)

Source: ESNA, based on official data from Member Countries (Survey 2025 and 2024) and Digital Economy and Society Index (European Commission)

As shown in Figure 76, Substandard 8.1 has a heavily right-skewed distribution, with the median nearly 100% and above the average, and the interquartile range compressed between 90% and 100%. This clustering indicates that digital-first government interactions have achieved near-consensus implementation across the participating countries, with most countries at or near full implementation and only four scoring below 90%. Substandard 8.2 – “Knowledge Sharing”, by contrast, displays a starkly polarised distribution: the median stands at 50%, yet scores cluster bimodally, with countries distributed across three distinct bands.

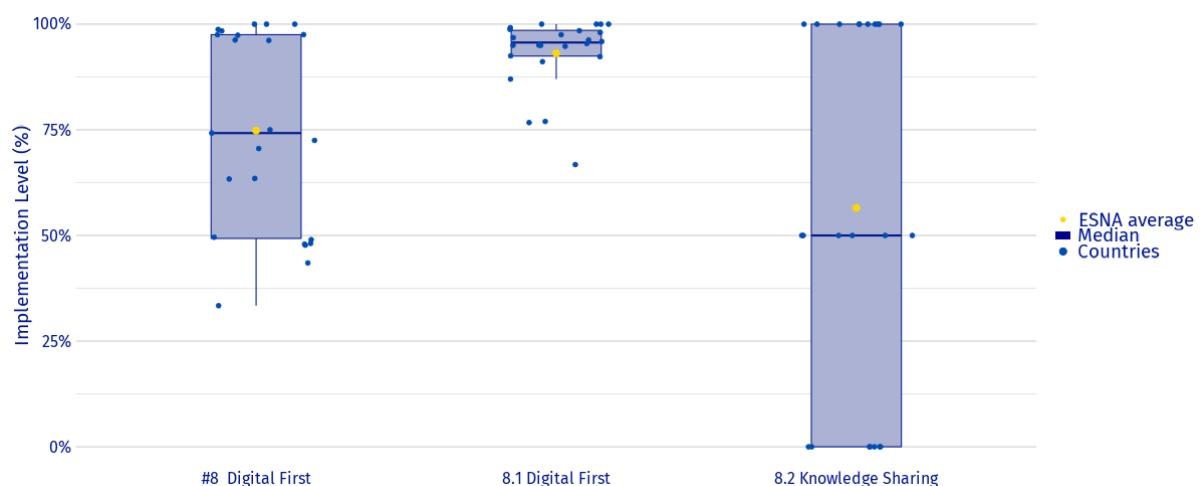


Figure 76. Distribution of implementation levels for the substandards of SNS #8

Source: ESNA, based on official data from Member Countries (Survey 2025) and Digital Economy and Society Index (European Commission)

To understand the drivers of these divergent distributional patterns, the next section examines each substandard in detail.

MAIN TAKEAWAYS

1. Standard #8 is **among the highest-performing** standards, reaching an implementation level of **75%**.
2. 23 out of 24 participating countries have adopted comprehensive **national digitalisation strategies**.
3. Proactive **government engagement with startups on digitalisation** is reported by 16 countries out of the 23 respondents.

4.8.2 Substandards analysis

4.8.2.1 Substandard 8.1 – “Digital First” Principle

Substandard 8.1 is composed of three indicators: 8.1.1 – “Index of digital public services for businesses”, 8.1.2 – “Digital public services availability by percentage of areas covered” and 8.1.3 – “Existence of national digitalisation strategy”. Together, these indicators capture the extent to which governments offer integrated, accessible, and strategically coordinated digital public services.

Indicator 8.1.1 – “Index of digital public services for businesses” uses the Index of Digital Public Services for Businesses, part of the Digital Economy and Society Index (DESI) by the European Commission. It evaluates the degree to which companies can access key administrative services fully online and in an integrated, user-centric format. The indicator captures not only the formal presence of digital services but also their completeness, usability, and the degree of integration across systems.

The statistical analysis for Indicator 8.1.1 (Figure 77) is based on results from 23 countries, as Ukraine does not receive a score in the DESI metric due to its non-EU status. In 2025, the highest scores were recorded by Ireland, Luxembourg, and Malta, each achieving 100%. While Ireland and Malta maintained their scores from the previous year, Luxembourg advanced by 3 percentage points.

Across the ESNA area, eight countries experienced declines in their scores, including three with decreases of six percentage points (the highest drop observed). On the other hand, the most significant improvement was registered by Poland, whose score increased by 12 percentage points. Notably, Poland was among the three lowest-scoring countries in 2024, with 73%. In addition to Poland and Luxembourg, nine other countries improved their results this year.

Importantly, for the second consecutive year, no country recorded a score below 50%, and only three countries remained below the 75% mark. This demonstrates that the vast majority of ESNA countries have achieved substantial progress in digitalising public services for businesses, with only a small subset still lagging significantly behind.

The composite effect of these developments is reflected in the ESNA average, which increased by 1 percentage point year-on-year, reaching 86% in 2025.

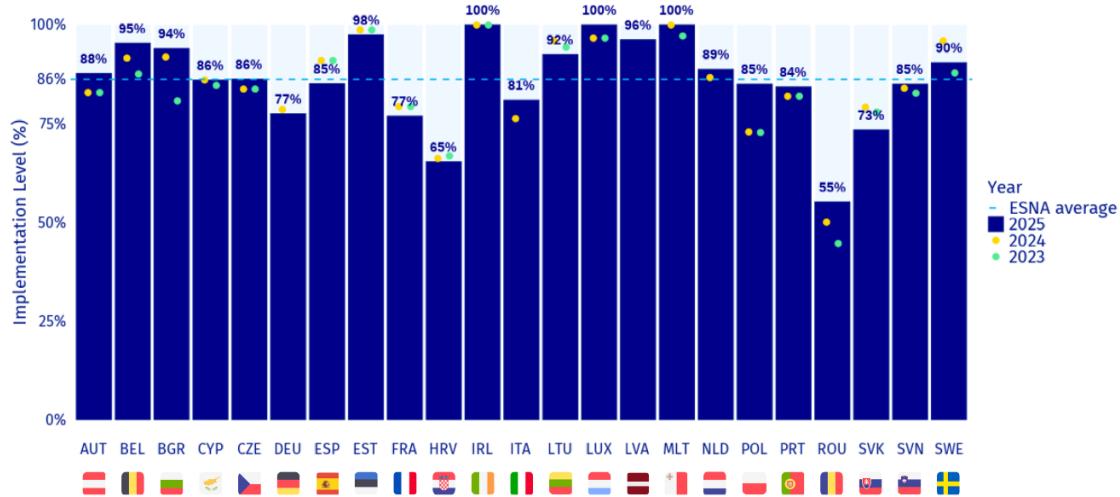


Figure 77. Implementation level of Indicator 8.1.1 across ESNA countries

Source: *Digital Economy and Society Index (European Commission)*

Indicator 8.1.2 – “Digital public services availability by percentage of areas covered” assesses the breadth of digital provision across key business-relevant administrative services. It measures the extent to which countries have designed their core services – encompassing company creation, tax filing, participation in public procurement, and access to official records – to be fully executable in digital form. The indicator thus captures not merely the presence of isolated digital services but the comprehensiveness of digital-first design across the primary business-government interaction points.

It demonstrates high consolidation across the countries surveyed. The aggregate ESNA average remained essentially unchanged at 95% in 2025, down only marginally from 96% in 2024. This stability at a high level suggests that most countries have already achieved comprehensive digital coverage of the essential business services in question (Figure 78). In 2025, twenty-one countries reported digital coverage across all four core service areas, reaching full implementation (100%). Croatia has digitalised only one of the four core services (participation in public procurement opportunities) but has complemented this with digital communication channels between courts and parties; Cyprus lacks full digital provision for company creation and consultation of official records; Romania offers three of the four core services digitally, except for company creation. Additional digitally accessible services for businesses include VAT and intellectual property registration, startup visas, health insurance services, e-prescription systems, vehicle registration, and obtaining residence permits and parking permits. These supplementary services reflect country-specific priorities and further enrich the digital administrative landscape.

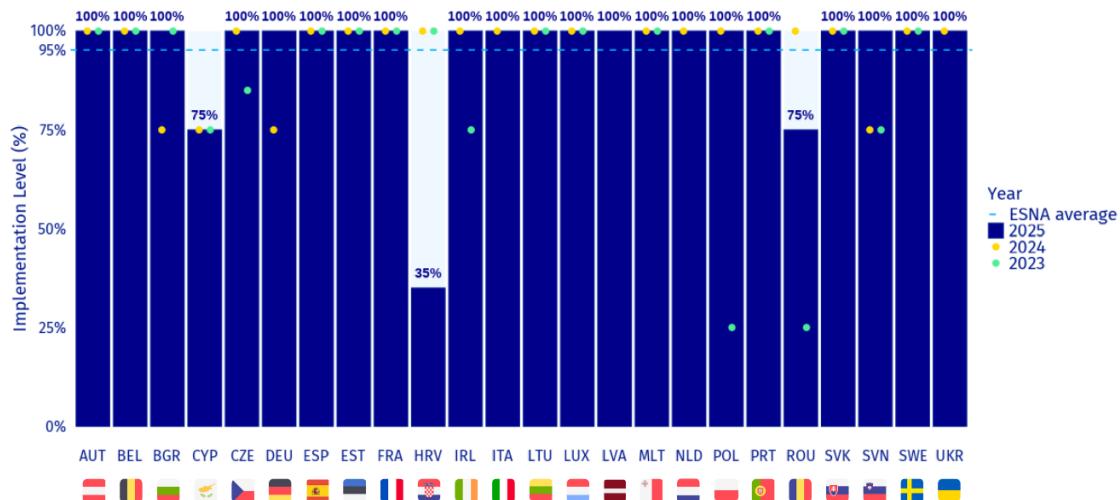


Figure 78. Implementation level of Indicator 8.1.2 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023)

Indicator 8.1.3 – “Existence of national digitalisation strategy” measures if countries are backing their digital government ambitions with explicit, cross-sectoral national digitalisation strategies that are actively being implemented.

In 2025, twenty-three countries reported having a comprehensive national digitalisation strategy actively in implementation and have provided robust evidence, reaching 100% (Figure 79). These strategies are aligned with the European digital policy framework established by the Digital Decade Policy Programme 2030, which mandates the definition and implementation of comprehensive national digitalisation strategies at country level.

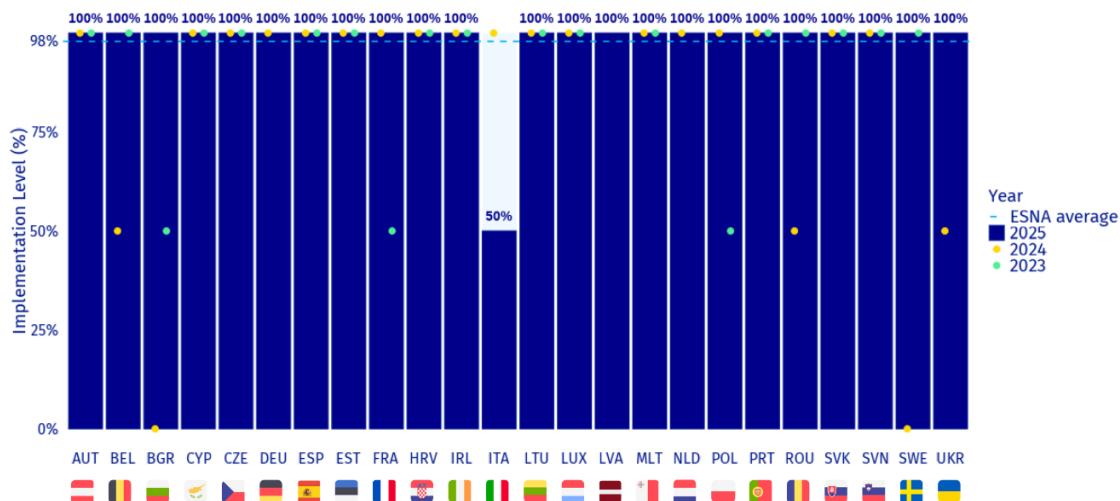


Figure 79. Implementation level of Indicator 8.1.3 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023)

Overall, the consolidation of explicit national digitalisation strategies across nearly all ESNA countries reflects both EU policy alignment and domestic recognition of the necessity for strategic coordination in public sector digitalisation. The near-universal adoption of formalised strategies underpins the sustained progress observed in the two preceding indicators. The detailed examination of Substandard 8.1 – “Digital First” reveals a picture of broad

maturation in digital government for business interactions across ESNA. Indicator 8.1.1 – “Index of digital public services for businesses” demonstrates that most countries have achieved high levels of digital service integration and accessibility, with an ESNA average of 86% and incremental improvement driven by mid-tier performers such as Poland converging towards the leaders. Indicator 8.1.2 – “Digital public services availability by percentage of areas covered” shows even stronger consolidation, with a score of 95%, reflecting near-universal acceptance of digital-first design in essential administrative procedures. Indicator 8.1.3 – “Existence of national digitalisation strategy” reveals the institutional foundations underpinning this progress: the establishment of comprehensive, strategically coordinated national digitalisation strategies across 23 out of 24 countries surveyed, aligned with the European digital policy framework.

As noted, Substandard 8.1 has experienced modest improvement, but it also has approached a plateau, with offsetting improvements and declines nearly cancelling one another out. The indicator-level analysis illuminates why: the substandard reflects a composite of three distinct dimensions, each at different stages of maturation. Whilst the breadth of digital service provision (Indicator 8.1.2) has achieved high saturation at 95%, with most countries offering comprehensive coverage of the core business services, the depth and quality of these services – captured by Indicator 8.1.1, which measures completeness, usability, and integration – remains lower at 86%, indicating scope for further improvement.

4.8.2.2 Substandard 8.2 – Knowledge Sharing

The analysis of Substandard 8.2 is based on a single indicator measuring proactive government engagement with startups for knowledge exchange on digitalisation. The aggregate average for **Indicator 8.2.1 – “Existence of Proactive Engagement for Digital Knowledge Sharing”** improved marginally from 52% in 2024 to 57% in 2025. Most countries maintained their positions year-on-year, though a small number experienced notable transitions (Figure 80). Two countries newly reported proactive engagement with startups on digitalisation: Slovakia and Slovenia. Conversely, one country that previously stated such engagement no longer reports it in 2025. On balance, these transitions largely offset each other, accounting for the small change at the aggregate level. Ten countries report proactive engagement with comprehensive evidence (100%): France, Germany, Lithuania, Luxembourg, Malta, Poland, Portugal, Spain, Sweden and Ukraine. Forms of engagement include establishment of GovTech labs and incubator programmes incubating state-led digital solutions; challenge-based procurement linking government bodies with innovative startups; acceleration programmes providing mentoring and access to infrastructure for scaling digital solutions; and dedicated platforms and workshops where startups and government actors exchange knowledge on digital transformation and innovation. By contrast, seven countries report no proactive government engagement with startups on digitalisation.

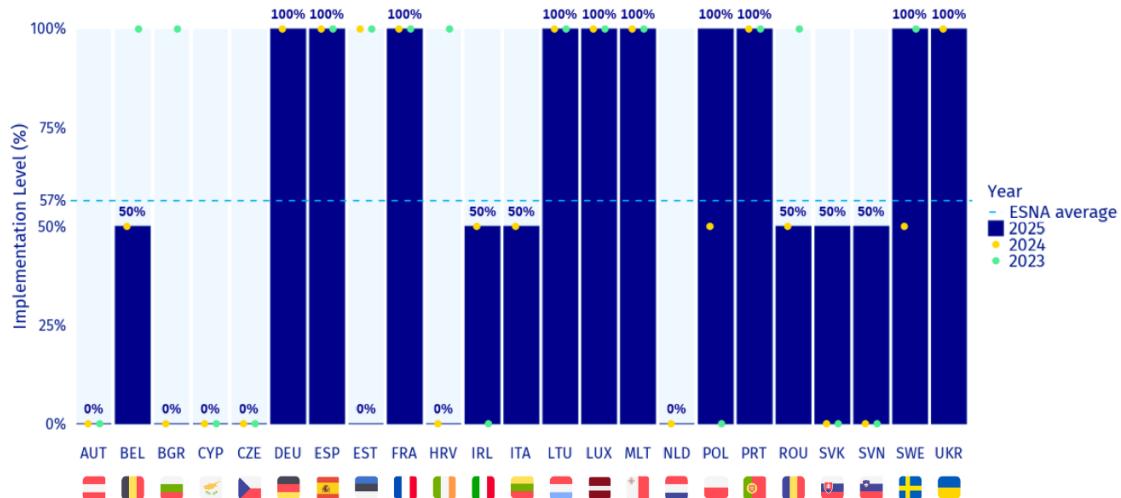


Figure 80. Implementation level of Indicator 8.2.1 across ESNA countries

Source: ESNA, based on official data from Member Countries (Survey 2025, 2024 and 2023)

The highly polarised distribution reflects a fundamental fragmentation across the ESNA region in how governments operationalise collaboration with startups on digitalisation. Whilst a small majority of 16 of countries have embedded proactive engagement as established practice, seven others⁴² report no such mechanisms.

4.8.3 Conclusion

Standard #8 reveals an asymmetric landscape in how ESNA countries have approached digital transformation. The 37-percentage-point gap between Substandard 8.1 – “Digital First” (93%) and Substandard 8.2 – “Knowledge Sharing” (57%) reflects a fundamental disconnect between the provision of digital public services and the strategic integration of startups as collaborators in public sector innovation.

On the first dimension – digital-first government interactions – the evidence demonstrates substantial consolidation across the region. The breadth of digital service provision (Indicator 8.1.2) has achieved near-universal coverage, with an aggregate score of 95%, reflecting that most countries offer complete digital access to core business-government services. The depth and quality of these services, measured through the integration and completeness of digital interactions (Indicator 8.1.1), stands at 86%, indicating that whilst most systems are mature, incremental improvements in usability and integration remain achievable. Underpinning this progress is the near-universal adoption of explicit, national digitalisation strategies (Indicator 8.1.3) aligned with the European Digital Decade Policy Programme 2030. This institutional embedding of digital transformation at the strategic level has created a policy environment supportive of consistent advancement across the region.

On the second dimension – proactive government engagement with startups for knowledge sharing – the picture is qualitatively different. Only 16 countries report some level of proactive engagement with startups on digitalisation. Examples provided on this engagement align closely with the OECD's definition of GovTech as “the collaboration between the public sector and start-ups, innovators, government 'intrapreneurs', and academia on innovative digital

⁴² Latvia did not provide data for this indicator/substandard.

government solutions". These mechanisms include GovTech labs and incubator programmes that enable public sector teams and entrepreneurs to co-create digital solutions iteratively; challenge-based procurement linking government bodies with innovative startups through outcomes-oriented contracting rather than traditional technical specifications; acceleration programmes providing mentoring, infrastructure access, and funding to support startups in scaling digital solutions for public sector use; and dedicated platforms and workshops facilitating knowledge exchange between startups and government actors on digital transformation and innovation. They represent a shift from traditional supplier-contractor relationships toward collaborative co-creation, reflecting what the literature identifies as a new model of public-private partnerships grounded in experimentation, agile methodologies, and user-centric development. However, a significant minority reports no such engagement, suggesting that GovTech mechanisms, despite representing an emerging international best practice, have been adopted unevenly across Europe.

The aggregate Standard #8 average (75%) thus masks two distinct policy dynamics. Digital-first provision benefits from cumulative policy convergence around European regulatory frameworks. Government-startup collaboration, by contrast, depends on deliberate strategic choice and is not yet driven by mandatory European policy frameworks; without such embedding, engagement mechanisms remain less institutionalised and subject to discontinuation when political priorities shift.

Closing the gap between the two substandards will then require more than incremental progress in digital service quality. It demands a parallel commitment to institutionalising structured mechanisms for government-startup knowledge exchange on digitalisation, embedding these mechanisms in policy frameworks.



Conclusions

05.

5. Conclusions

The 2025 edition of the SNS Report reaffirms the fundamental role of ESNA in systematically measuring and tracking the policies that shape the quality of Europe's startup ecosystem. It provides a transparent mapping of how each country is progressing in implementing the eight Startup Nations Standards, serving as a reference for policy formulation that strengthens the role of startups and scaleups as drivers of innovation, job creation, and sustainable economic growth. The report is not intended as a classificatory exercise that would establish country rankings but rather operates as an evidence-based policy monitoring instrument. Importantly, it is designed to track public policy inputs – that is, the legislative, regulatory, and institutional frameworks that governments have established to support startup development – rather than measure policy outcomes (such as the quantity of new ventures or investment volumes) or assess broader ecosystem effects (such as employment generation, economic impact, or technological advancement). This methodological approach is essential for understanding the report's scope: strong scores indicate robust policy architecture and governmental commitment, yet they do not constitute direct measures of policy effectiveness in stimulating entrepreneurial dynamism or delivering measurable economic returns. The report thus enables European policymakers to evaluate the extent to which their national laws and measures align with the best practices outlined in the 2021 ministerial declaration.

The 2025 edition maintains the methodological architecture consolidated in 2024, thereby safeguarding a high degree of comparability with previous editions. At the same time, it introduces a series of technical refinements which deepen the precision and robustness of the analysis rather than representing a radical break. Two aspects merit particular attention. First, participation remains at 24 countries, with Latvia joining and Denmark not taking part this year, thus preserving broad geographical coverage. Second, the data collection and validation process has been significantly strengthened through the use of systematic quality-control procedures, including automated consistency checks and desk research-based cross-verification, complemented by additional webinars held closer to the submission deadline. A dedicated Steering Committee provided independent expert feedback on the findings, helping to ensure their accuracy, relevance and policy coherence. At the same time, Standard #6 – "Access to Finance" has been conceptually restructured to restore a clearer distinction between "direct access" (through public instruments such as the RRF, the EIB and promotional banks) and "indirect access" (policy initiatives that mobilise and diversify private capital), thereby realigning the framework with the original intent of the ministerial declaration.

The 2025 edition documents a maturing startup policy ecosystem across ESNA, with the overall implementation level reaching 70% – a meaningful increase from the previous year. This aggregate progress masks significant variation across both standards and countries. The highest-scoring standards – Standard #1 ("Fast Startup Creation, Smooth Market Entry") at 77%, Standard #6 ("Access to Finance") at 77%, and Standard #8 ("Digital First") at 75% – reflect consolidated progress in foundational areas: company registration has been substantially digitalised, public finance instruments are widely available, and national digitalisation strategies are nearly universal. Conversely, the lowest-scoring standards reveal persistent challenges. Standard #4 – "Innovation in Regulation" – stands at 55% despite a 12-percentage-point increase, underscoring the difficulty of embedding adaptive regulatory frameworks, while Standard #5 – "Innovation in Procurement" – has reached 65%, reflecting uneven adoption of mechanisms to integrate startup innovation into public purchasing. All standards except Standard #2 – "Attracting and Retaining Talent", which remained at 64% –

registered score increases relative to 2024, with Standard #7 recording the largest gain, rising by 22 percentage points from 51% to 73% and moving from the second-lowest position in 2024 to fifth in 2025, now above the overall index. Notably, Standard #1 recorded the highest number of countries with improvements, closely followed by Standard #7. The standards with the lowest scores in 2024 generally recorded the strongest advances in 2025, suggesting a broad-based effort among participating countries to close gaps in policy areas critical to startup development, even as substantial heterogeneity in achieved implementation levels remains.

At the country level, the 2025 results reveal a landscape of convergence and broadening momentum. Nineteen of the 21 countries with comparable data improved their overall scores, with only two recording declines, signalling that policy learning and cross-national diffusion mechanisms are functioning at scale. Two other countries recorded no declines across any standard – demonstrating that sustained progress across the full breadth of policy domains is achievable –, with Slovenia advancing across all eight and exhibiting the largest improvement (38 p.p.), followed by Bulgaria (24 p.p.), and Italy (23 p.p.).

Most significantly, the dispersion across countries has narrowed substantially: the standard deviation of overall scores contracted from 0.17 to 0.11, indicating that countries with lower baseline scores are advancing faster than those with already high scores – a pattern consistent with policy diffusion dynamics. This convergence tendency extends across the standards themselves: dispersion decreased in all standards except for one.

No country now falls below 40% on the overall index (a threshold that three countries breached in 2024) whilst a new maximum of 95% has been reached by France—surpassing last year's highest score and indicating that comprehensive implementation across the eight standards is attainable. Spain and Poland achieved 93% and 88%, respectively, demonstrating that robust implementation at scale is feasible. Disparities in country-level trajectories persist, however, with variation reflecting divergent policy priorities and implementation capacities.

Notwithstanding these positive developments, a few methodological limitations constrain the interpretation of results and should be borne in mind. First, the referred methodological improvements have simultaneously introduced constraints on cross-year comparability. The restructuring of Standard #6, whilst enhancing conceptual coherence, means that direct comparison with previous editions requires caution. Beyond this deliberate redesign, several external factors further complicate longitudinal comparison. Indicator 1.3.1 (Cross-border services) had to be recalculated following changes in the European Commission's eGovernment Benchmark methodology, introducing a methodological break in the series. Additionally, indicator 2.2.2 (OECD Talent Attractiveness Index) still relies on 2023 data, as the index is not updated annually, leading to “frozen” time series that do not fully reflect recent policy developments. For certain indicators lacking fixed implementation thresholds – such as the number of regulatory sandboxes or the number of startups engaged in them –, the use of min-max normalisation implies that country scores are relative to the range of observed values rather than to an absolute target. This introduces a “moving ceiling” effect: changes in the minimum or maximum observed value automatically alter the relative positions of all other countries even if their absolute performance remains constant.

Second, the methodology relies primarily on self-reported survey responses, which introduces variability extending beyond simple questionnaire design. Different respondents may interpret policy concepts divergently – whether assessing the existence of a framework or measuring its actual implementation – or apply different standards when reporting metrics such as processing times, visa approval periods or compliance burdens. Some respondents may report on *de jure* conditions, reflecting what policies prescribe, whilst others report *de facto*

conditions, reflecting how policies operate in practice. Although the Steering Committee and ESNA's quality-control procedures provide layers of validation, there is no fully independent mechanism to verify all reported measures and consistency between them. The absence of a universally agreed operational definition of "startup" across jurisdictions compounds this challenge, creating conceptual ambiguity.

Third, the composition of the country sample is not perfectly stable over time. The inclusion of Latvia and the absence of Denmark in 2025 may introduce compositional effects at the aggregate level, particularly for indicators where these countries had distinctive scores. A further complication arises from missing values across certain indicators, particularly among external data sources. Gaps in data availability mean that some countries and indicators present incomplete information, constraining the comprehensiveness of the assessment and limiting the scope for comparative analysis in specific domains.

These variations in methodological approach, data sources and respondent interpretation, whilst necessary to maintain analytical flexibility across diverse national contexts, mean that caution should be exercised when drawing direct comparisons between 2025 results and those from earlier editions.

The analytical value of the 2025 edition becomes most apparent when the structural relationships between Standards are examined. The quality of startup ecosystems does not emerge from isolated policy domains, but from integrated systems in which deficiencies in one area can undermine progress in others.

The relatively high implementation level of Standard #1 owes much to the spread of digital channels for company registration, as most countries now allow at least partial online incorporation. Empirical evidence confirms that digital government services significantly reduce the time and administrative burden of starting a business, directly correlating with higher rates of formal firm creation (Martins & Veiga, 2022). However, this digitalisation remains incomplete, and, in several cases, digital procedures are constrained by legacy requirements, such as physical document submission or mandatory use of intermediaries – which reduce the benefits of online interfaces.

Standard #8 "Digital First" reinforces this picture. In most countries, a wide range of administrative services is now available online and national digitalisation strategies have become the norm, yet only a minority report structured mechanisms for proactive knowledge-sharing between governments and startups on digitalisation. This gap is critical because, as noted by the OECD (2020) and recent studies on digital entrepreneurial ecosystems (Bejjani et al., 2023), the effectiveness of digital public services depends on user-driven design that responds to the specific needs of high-growth firms. Yet digitalisation alone achieves limited impact if the underlying regulatory framework remains complex and burdensome. When regulatory frameworks become simpler, more predictable and explicitly tailored to startup realities, digital government services cease to be merely conveniences and become genuine enablers of entrepreneurial activity. Standard #4 – "Innovation in Regulation" is therefore essential for reducing the administrative weight that startups must bear. But it also fundamental for ensuring that the regulatory environment itself can adapt and evolve in response to digital innovation, rather than constraining it.

Standard #4 reveals that advances in digitalisation have not been matched by equivalent innovation in the regulatory sphere. In many countries the "Think Small First" principle is formally in place, but only a limited subset provides explicit compliance exemptions or tailored alternatives for startups, meaning young firms are often subject to the same regulatory and

administrative framework as large, established companies despite their lower administrative capacity. Regulatory sandboxes are present in a growing number of countries and represent a promising tool for controlled experimentation, yet their potential is limited if lessons learned are not systematically incorporated into mainstream regulatory frameworks. International evidence suggests that sandboxes are most effective where they are embedded in broader strategies for adaptive regulation and supported by clear guidance, resourcing and sectoral priorities.

The implications of this regulatory gap extend to the public procurement landscape (Standard #5). Digital procurement platforms are essential for lowering barriers to small companies' entry, increasing transparency and facilitating the uptake of innovative solutions by the public sector (OECD, 2025b). However, their effectiveness depends on a regulatory environment that actively encourages governments to procure from startups and removes administrative impediments to participation. The success of innovation procurement also hinges on other important dimension: the absorptive capacity of the public sector itself. Just as startups require specialised talent to execute their missions (Standard #2), public buyers require specific skills in risk assessment, intellectual property management, and market engagement to effectively identify and contract innovative solutions (Hanson & Collao, 2025). Without this institutional capability on the demand side, even well-designed procurement platforms cannot fulfil their potential.

Crucially, innovation procurement functions as a powerful instrument for bridging the "valley of death" between technological development and market uptake. When public entities act as first customers, they provide not only revenue but a vital signal of market validation that reduces uncertainty for private investors, thereby facilitating broader access to finance. Standard #5 and Standard #6 are thus fundamentally related: public purchasing validates technologies in the market, enabling private investors to commit capital with greater confidence. Yet the reality of public procurement often undermines this potential: lengthy payment terms, standard in government contracting, can be fatal for young firms operating with minimal cash runways. Then, mechanisms such as accelerated payment schemes, pre-financing or milestone-based advances are therefore not merely administrative conveniences but essential lifelines that directly complement Standard #6. In this integrated view, improved access to public procurement creates a pathway to creditworthiness that facilitates private capital access, whilst robust access to finance ensures startups have the liquidity to sustain operations during public contracting cycles.

Nevertheless, the ability of founders to leverage both public procurement opportunities and private investment channels depends critically on the quality and depth of entrepreneurial competence within the ecosystem. The transition from research to commercialisation requires specific skills (market sensing, business modelling, and investor communication) that go beyond technical expertise (Battaglia et al., 2021). Without these capabilities, even well-resourced founders struggle to navigate public procurement processes effectively or to present convincing investment narratives to private capital providers. In this context, Standard #2, framed primarily as a challenge of talent attraction and retention, gains a new dimension.

The mixed results observed in the 2025 data underscore this need for a broader approach. Progress in talent attraction has stagnated, while visa processing times have increased. Because relying solely on external recruitment has proven insufficient, closing the skills gap requires moving beyond the migration-focused policies of Standard #2 to encompass complementary initiatives: fostering entrepreneurship within academia and knowledge centres, promoting STEM and entrepreneurial education among young people,

improving retention conditions for international students, and supporting re-skilling and up-skilling efforts in emerging technology domains such as deep tech, AI, blockchain and climate technologies (ESNA, 2024). Policies supporting talent must therefore address not only the recruitment of experienced staff but also the cultivation of these "cultural enablers" within the ecosystem. This suggests that Standard #2 should extend beyond talent attraction to encompass the active creation and development of entrepreneurial competences.

Standard #3 provides a complementary lens on the attractiveness of startup employment in Europe. Employee stock options are widely recognised as a key instrument for aligning incentives in high-risk, high-growth companies, particularly where cash resources are limited. Yet the effectiveness of this instrument is severely constrained by fragmentation. While all countries offer the possibility to issue stock options with no voting rights – a best practice that enables smoother decision-making – only half of them tax stock options as capital gains. In a Single Market increasingly defined by remote work and cross-border mobility, divergent national tax rules regarding when and how options are exercised create significant administrative complexity and uncertainty. This regulatory patchwork functions as a hidden barrier to the movement of human capital, complicating the recruitment of international staff and effectively undermining the mobility that Standard #2 seeks to facilitate.

Ultimately, the effort to broaden the base of entrepreneurial talent faces a final critical test: the ability of these diverse founders to secure funding. Even if the ecosystem succeeds in cultivating a new generation of capable entrepreneurs, their potential remains unrealised if capital allocation remains driven by closed networks rather than merit. Research consistently demonstrates that founders from underrepresented groups, including women and ethnic minorities, face persistent, structural barriers in accessing capital, driven by network effects, information asymmetries and implicit biases in investment decision-making. This is where the intersection of Standard #6 – "Access to Finance" and Standard #7 – "Social Inclusion, diversity and protecting democratic values" becomes decisive. Without deliberate efforts to broaden founder networks, challenge investment biases, and create pathways for underrepresented entrepreneurs to access both capital and mentorship, the benefits of improved financing mechanisms will continue to accrue disproportionately to founders with existing social and professional capital. This represents not merely an equity concern but a significant efficiency loss for European ecosystems, as talent and innovation potential remain untapped among populations currently excluded from mainstream startup financing.

Taken together, these findings portray a European startup policy landscape that is more coherent, better resourced and increasingly aligned with the principles set out in the ministerial declaration yet still marked by critical structural gaps. This analysis highlights that regulatory reform, talent development, inclusive access to finance and innovation-oriented procurement operate as mutually reinforcing levers rather than isolated workstreams, and that further progress will depend on governments' ability to design and implement policies in an integrated, cross-cutting manner. In this sense, the SNS Report should be understood not as a static scoreboard but as a learning instrument that supports iterative policy improvement, peer exchange and collective experimentation across ESNA, helping participating countries translate formal commitments into tangible advances in startup-friendly institutional architectures.



Annexes

A.

A. Annexes

A1. EU Startup Nations Standards – Description

SNS #1 “Fast Startup Creation, Smooth Market Entry”

- An entrepreneur can establish a startup (legal entity) both online and offline in one day for a fee of no more than 100 EUR. In exceptional cases, to carry out appropriate checks, establishment should be possible within one week.
- Startup fast lane (including Market Access Helpdesk):
 - Aspiring startups and entrepreneurs can find all relevant information about national administrative requirements and funding opportunities in one place on the Internet – linking also to efforts under the Single Digital Gateway in this context.
 - A Member State will provide a (virtual) helpdesk for startups and scaleups from other EU Member States who, when trying to enter its market, have come across regulatory issues and/or impediments.
- Legal documents from other EU jurisdictions can be submitted as proof for the incorporation of a startup (or the creation of a subsidiary of an existing startup expanding in the single market).



SNS #2 “Attracting and Retaining Talent”

- Visa applications, as a general rule, are processed within a month for:
 - i) founders from third countries supported by a trusted partner in the Member State; and
 - ii) experienced staff from third countries, submitted by startups (which may also be pre-approved as a ‘trusted party’).
- Programmes and incentives are in place to encourage the return of EU tech talent who emigrated to third countries.



SNS #3 “Stock Options”

- SO are recognised and subject to capital gains tax at the moment of cash receipt and not before.
- Allow startups to issue stock options with non-voting rights, to avoid the excessive burden of having to consult large numbers of minority shareholders.



SNS #4 “Innovation in Regulation”

- Legal provisions and policies are in place explicitly targeting startups that promote a rigorous application of the '[Think Small First](#)' principle in view of avoiding unnecessary administrative burden/red tape;
- Exemptions – or alternative ways of achieving compliance - are confirmed and in place for startups in areas such as, but not limited to, impact assessment.



- Experimentation and innovation for startups are promoted and enabled through regulatory sandboxes.
- There is an agreed policy or programme (with rules and capacities, administrative support, and guidance) and concrete examples for the use of regulatory sandboxes by sectors in which innovations can be tested in cooperation with supervisory authorities.

SNS #5 “Innovation in Procurement”



- There are no legal or administrative impediments that would put startups/scaleups at a disadvantage compared to other participants in innovation procurement opportunities. Public buyers and procurement services are officially encouraged to procure innovations from startups.
- Ownership of IPR can normally be retained by the startup/scaleup participating in innovation procurement opportunities to enable further commercial exploitation (unless there are exceptional cases with overriding public interests that require the public sector to retain IPR ownership).
- Policies are in place to ensure technology developed at universities and research institutes can be transferred without obstacles leading to a new wave of venture-building activity (spinoffs/startups), opening up pathways to pursue – *inter alia* – innovation procurement opportunities.
- Startups are actively supported to contribute to and benefit from open-source assets stimulating permission-less innovation and access to trustworthy and affordable technologies.

SNS #6 “Access to Finance”



- Direct access to finance: Member States use part of their Recovery and Resilience Facility (RRF) funding to enhance access to venture capital for startups through the EIB, Promotional Banks or other dedicated vehicles, leveraging private investments, and distributing funds to established/professional VC firms to address the existing investment gap.
- Indirect access to finance: Member States introduce or improve policy initiatives that aim to increase the amount and diversity of private capital (for example from European Pension Funds) available for co-investing in high-growth startups.
- Tax relief measures aimed towards BA are in place to stimulate and support early-stage funding.

SNS #7 “Social Inclusion, Diversity and Protecting Democratic Values”



- Promotion of role models (e.g. by giving awards that promote and recognise diversity in the startup community);
- Provision of targeted incentives for Startups to hire on diversity of ethnicity, gender, religion, age and sexual orientation;
- Provision of support to founders from underprivileged backgrounds to create companies;

- Mobilisation of startups to address marginalisation and social exclusion linked to low income, limited education, location, culture, or disability.

SNS #8 “Digital First”



- All day-to-day interactions between startups and authorities (such as company creation, filing of taxes, participation in public procurement opportunities, electronic ID, and digital signatures) are designed to be carried out in a digital-first manner.
- Startups and scaleups are proactively approached and engaged for the sharing of knowledge and best practices regarding digitalisation.

A2. Metadata

Metadata is based on Eurostat's [European Statistical System handbook for quality and metadata reports](#).

Metadata Attribute	Description
Indicator Name	Number of days to establish a business online
Indicator nº (code)	1.1.1
Standard	SNS #1 "Fast Startup Creation, Smooth Market Entry"
Substandard	1.1 Time & Cost
Data description	The statistic measures the extent to which a country complies with the one-day benchmark for establishing a company online.
Unit of measure	Implementation level (%)
Country Coverage	24 countries
Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2025: Q7A. Is there an online option to set up a company? Q7B. How long does it take for an entrepreneur to establish a startup as a legal entity online?
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If answer to Q7A is no = 0% If answer to Q7A is yes (entirely or partially) and answer to Q7B is one day = 100 % If answer to Q7A is yes (entirely or partially) and answer to Q7B is one working week = 50 % If answer to Q7A is yes (entirely or partially) and answer to Q7B is 1-4 working weeks = 25% If answer to Q7A is yes (entirely or partially) and answer to Q7B is more than 4 weeks = 0% No answer treated as missing value.

Metadata Attribute	Description
Indicator Name	Number of days to establish a business in the commercial registers
Indicator nº (code)	1.1.2
Standard	SNS #1 "Fast Startup Creation, Smooth Market Entry"
Substandard	1.1 Time & Cost
Data description	The statistic measures the extent to which a country complies with the one-day benchmark for establishing a company in the commercial registers.
Unit of measure	Implementation level (%)
Country Coverage	23 countries (all except Latvia)
Frequency of Data collection	Yearly

Reference Year	2025
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2025: Q8. How long does it take for an entrepreneur to establish a startup as a legal entity in the commercial registers?
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If answer is one day = 100% If answer is one working week = 50% If answer is 1-4 working weeks = 25% If answer is more than 4 weeks = 0% No answer treated as missing value.

Metadata Attribute	Description
Indicator Name	Administrative costs for establishing a startup
Indicator nº (code)	1.1.3
Standard	SNS #1 “Fast Startup Creation, Smooth Market Entry”
Substandard	1.1 Time & Cost
Data description	The statistic measures the extent to which a country complies with the maximum fee of €100 benchmark for establishing a startup.
Unit of measure	Implementation level (%)
Country Coverage	24 countries
Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2025: Q6. What is the administrative fee for establishing a legal entity in your country?
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If answer is €0-€100 = 100% If answer is €101 - €250 = 60% If answer is €251-€500 = 40% If answer is over €501 = 0% No answer treated as missing value.

Metadata Attribute	Description
Indicator Name	Existence of an online service to set up a company
Indicator nº (code)	1.2.1
Standard	SNS #1 “Fast Startup Creation, Smooth Market Entry”
Substandard	1.2 Startup Fast Lane

Data description	The indicator measures the extent to which a business can be fully established online in the observed country.
Unit of measure	Implementation level (%)
Country Coverage	24 countries
Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2025: Q7A. Is there an online option to set up a company? Q7C. Besides the country's official language(s), how many languages is the website available in? Q7D. Please provide the URL for the aforementioned website. Q7E. Please explain why the company setup process may not be fully completed online.
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If answer to Q7A is "no" = 0% If answer to Q7A is yes (entirely or partially) = 100%, however the following penalisations apply: – 50 p.p. for not providing evidence – 25 p.p. if the platform is not available in English – 25 p.p. if it is only possible to set up a company online partially or under specific conditions. No answer treated as missing value.

Metadata Attribute	Description
Indicator Name	Existence of fast lane & helpdesk available for entrepreneurs
Indicator nº (code)	1.2.2
Standard	SNS #1 "Fast Startup Creation, Smooth Market Entry"
Substandard	1.2 Startup Fast Lane
Data description	The indicator measures whether there is an online location where entrepreneurs can find all relevant information about national administrative regulation and funding opportunities.
Unit of measure	Implementation level (%)
Country Coverage	24 countries
Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2025: Q9A. Is there a single online location where aspiring entrepreneurs can find all the necessary information about national regulations and funding opportunities?

	<p>Q9B. Besides the country's official language(s), how many languages is the website available in?</p> <p>Q9C. Please provide the URL for the aforementioned website.</p> <p>Q9D. Please explain why this is only partially applicable.</p>
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	<p>If answer to Q9A is no = 0%</p> <p>If answer to Q9A is yes or yes, partially = 100%</p> <p>For both "yes" and "yes, partially" answers the following penalisations apply:</p> <ul style="list-style-type: none"> – 50 p.p. for not providing evidence – 25 p.p. if the service is not available in English – 25 p.p. if the information is spread through multiple locations – 25 p.p. if there is missing information on funding opportunities or national regulation. <p>(Note: penalisations are cumulative, but not exceeding 50 p.p.)</p> <p>No answer treated as missing value.</p>

Metadata Attribute	Description
Indicator Name	Existence of a virtual helpdesk for regulatory issues for startups and scaleups
Indicator nº (code)	1.2.3
Standard	SNS #1 "Fast Startup Creation, Smooth Market Entry"
Substandard	1.2 Startup Fast Lane
Data description	The indicator measures whether a dedicated helpdesk exists to support startups and scaleups from other EU Member States facing regulatory issues or market entry impediments.
Unit of measure	Implementation level (%)
Country Coverage	24 countries
Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Survey
Data Source	<p>ESNA Scoreboard Survey 2025:</p> <p>Q10A. Is remote support available for startups and scaleups from other EU Member States who have encountered regulatory issues or impediment?</p> <p>Q10B. Please provide the URL for the aforementioned website.</p>
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	<p>If answer to Q10A is "no" = 0%</p> <p>If answer to Q10A is yes = 100%, however the following penalisations apply:</p> <ul style="list-style-type: none"> – 50 p.p. for not providing evidence – 25 p.p. if the helpdesk is not available in English

No answer treated as missing value.

Metadata Attribute	Description
Indicator Name	Index of the cross-border services
Indicator nº (code)	1.3.1
Standard	SNS #1 “Fast Startup Creation, Smooth Market Entry”
Substandard	1.3 Cross-border Services
Data description	The indicator evaluates the usability of online services for EU citizens in another country. It entails (I) cross-border online availability; (II) cross-border user support; (III) cross-border key enablers. The first dimension is composed of the weighted average of online availability of transactional and informational services. The second relies exclusively on the EC indicator Cross-border user support and the third on indicator Cross-border eID.
Unit of measure	Implementation level (%)
Country Coverage	23 countries (all except Ukraine)
Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Third-party source
Data Source	European Commission, eGovernment Benchmark
Transformation	None
Scoring Criteria (Classification System)	European Commission methodology (here) adapted (see chapter 2) Ukraine treated as missing value.

Metadata Attribute	Description
Indicator Name	Utilisation of legal documents from other EU countries for startup establishment or expansion within the single market
Indicator nº (code)	1.3.2
Standard	SNS #1 “Fast Startup Creation, Smooth Market Entry”
Substandard	1.3 Cross-border Services
Data description	The indicator measures whether legal documents from other EU jurisdictions can be submitted as evidence when establishing a startup or creating a subsidiary of an existing startup expanding in the single market.
Unit of measure	Implementation level (%)
Country Coverage	22 countries (all except Croatia and Latvia)
Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Survey

Data Source	ESNA Scoreboard Survey 2025: Q11A. Is it possible to use legal documents from other EU countries as evidence when establishing a startup, or for creating a subsidiary of an existing startup that is expanding within the single market?
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If answer is "Yes, both printed and digital documents may be submitted" = 100% If answer is "Yes, but only paper-based documents may be submitted" = 50% If answer is "no" = 0% No answer treated as missing value.

Metadata Attribute	Description
Indicator Name	Time to complete visa applications for founders
Indicator nº (code)	2.1.1
Standard	SNS #2 "Attracting and Retaining Talent"
Substandard	2.1 Visa Applications
Data description	The indicator measures the extent to which a country follows the 1-month recommendation for visas processing time for founders supported by a trusted partner in the Member States.
Unit of measure	Implementation level (%)
Country Coverage	22 countries (all except Germany and Latvia)
Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2025: Q13B. What is the processing time for visa applications for founders, when backed by a trusted partner in the Member State?
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If answer is "within 1 month" = 100% If answer is "1-3 months" = 50% If answer is "3-6 months" = 25% If answer is "more than 6 months" = 0% Germany treated as missing value.

Metadata Attribute	Description
Indicator Name	Time to complete visa applications for experienced workers
Indicator nº (code)	2.1.2
Standard	SNS #2 "Attracting and Retaining Talent"
Substandard	2.1 Visa Applications
Data description	The indicator measures the extent to which a country complies with the 1-month benchmark for visas

	processing time for experienced workers supported by startups.
Unit of measure	Implementation level (%)
Country Coverage	22 countries (all except Germany and Latvia)
Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2025: Q13A. What is the processing time for visa applications for experienced workers, when submitted by startups?
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If answer is “within 1 month” = 100% If answer is “1-3 months” = 50% If answer is “3-6 months” = 25% If answer is “more than 6 months” = 0% Germany treated as missing value.

Metadata Attribute	Description
Indicator Name	Existence of return of tech diaspora programmes
Indicator nº (code)	2.2.1
Standard	SNS #2 “Attracting and Retaining Talent”
Substandard	2.2 Programmes for talent
Data description	The indicator measures whether programmes or incentives exist to encourage the return of EU tech talent (experienced workers in technological fields) who emigrated to third countries, including but not limited to those from non-EU countries.
Unit of measure	Implementation level (%)
Country Coverage	24 countries
Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2025: Q14A. Are there any programmes and/or incentives in place to encourage the return of EU tech talent who emigrated to third countries? Q14B. Please provide evidence to support your answer to Q14A.
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If answers “yes” and provides clear evidence = 100% If answers “yes” and provides unclear/limited evidence = 50% If answers “no” or if evidence is out of scope = 0% No answer treated as missing value.

Metadata Attribute	Description
Indicator Name	Index of talent attractiveness for entrepreneurs
Indicator nº (code)	2.2.2
Standard	SNS #2 “Attracting and Retaining Talent”
Substandard	2.2 Programmes for talent
Data description	The indicator measures the strengths and weaknesses of OECD countries regarding their capacity to attract and retain different types of talented migrants. This indicator focuses on foreign entrepreneurs, and on a variety of factors.
Unit of measure	Implementation level (%)
Country Coverage	18 countries (all except Bulgaria, Croatia, Cyprus, Malta, Romania and Ukraine)
Frequency of Data collection	Indefinite
Reference Year	2023
Data Collection method	OECD methodology (here)
Data Source	OECD “Index of talent attractiveness for entrepreneurs”
Transformation	Rescaled from 0–1 to 0–100 by multiplying by 100
Scoring Criteria (Classification System)	Organisation for Economic Co-operation and Development (OECD), 2023. The OECD Indicators of Talent Attractiveness 2023 Bulgaria, Croatia, Cyprus, Malta, Romania and Ukraine treated as missing value

Metadata Attribute	Description
Indicator Name	Taxed only upon cash liquidity
Indicator nº (code)	3.1.1
Standard	SNS #3 “Stock Options”
Substandard	3.1 Taxation
Data description	The indicator measures whether employee stock options granted by startups are only subject to taxation at the moment of sale.
Unit of measure	Implementation level (%)
Country Coverage	24 countries
Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2025: Q16A. At what moment(s) are employees' stock options taxable? Select as many as applicable.
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If only “at the moment of sale” is selected = 100% If any option other than “at the moment of sale” is selected = 0% No answer treated as missing value.

Metadata Attribute	Description
Indicator Name	Existence of stock options with non-voting rights for startups
Indicator nº (code)	3.2.1
Standard	SNS #3 “Stock Options”
Substandard	3.2 Non-voting rights
Data description	The indicator measures whether the issuance of employee stock options with non-voting rights is permitted.
Unit of measure	Implementation level (%)
Country Coverage	22 countries (all except Croatia and Latvia)
Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2025: Q17. Are startups allowed to issue stock options with non-voting rights?
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If answer is “yes” = 100% If answer is “no” = 0% No answer treated as missing value.

Metadata Attribute	Description
Indicator Name	Minority Shareholders & Bureaucracy
Indicator nº (code)	3.2.2
Standard	SNS #3 “Stock Options”
Substandard	3.2 Non-voting rights
Data description	The indicator measures the attractiveness of having minority shareholders for companies in the observed country, considering the cost and bureaucracy associated.
Unit of measure	Implementation level (%)
Country Coverage	15 countries (all except Bulgaria, Croatia, Cyprus, Luxembourg, Malta, Romania, Slovakia, Slovenia and Ukraine)
Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Not Optional methodology (here)
Data Source	Not Optional “Latest Country Rankings”
Transformation	Rescaled from 0–5 to 0–100% by multiplying by 20
Scoring Criteria (Classification System)	Not Optional, 2024. Latest Country Rankings, Minority Shareholders & Bureaucracy Bulgaria, Croatia, Cyprus, Luxembourg, Malta, Romania, Slovakia, Slovenia and Ukraine treated as missing values.

Metadata Attribute	Description
Indicator Name	Existence of a country-specific stock options scheme
Indicator nº (code)	3.3.1
Standard	SNS #3 “Stock Options”
Substandard	3.3 Stock Option Scheme
Data description	The indicator measures whether a specific legislation or programme of employee stock options exists.
Unit of measure	Implementation level (%)
Country Coverage	23 countries (all except Croatia)
Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2025: Q18A. Are there any specific legislations or programmes for stock options in your country?
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If answer is “yes”= 100% If answer is “no”= 0% No answer treated as missing value.

Metadata Attribute	Description
Indicator Name	“Think Small First” principle implementation level
Indicator nº (code)	4.1.1
Standard	SNS #4 “Innovation in Regulation”
Substandard	4.1 Think Small First
Data description	The indicator measures whether the Think Small First principle is applied in legal provisions and policies, therefore targeting startups.
Unit of measure	Implementation level (%)
Country Coverage	23 countries (all except Croatia)
Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2025: Q20A. Are policymakers in your country guided by a “Think Small First” principle when formulating laws and regulations for startups, with the aim of minimising unnecessary bureaucracy and red tape? Q20B. Please provide some examples of initiatives/programmes developed under this principle.
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If answer is “yes” and provides evidence = 100% If answer is “yes” and does not provide clear evidence = 50% If answer is “no”= 0%

No answer treated as missing value.

Metadata Attribute	Description
Indicator Name	Existence of compliance exemptions/alternatives for startups
Indicator nº (code)	4.2.1
Standard	SNS #4 “Innovation in Regulation”
Substandard	4.2 Compliance Exemptions
Data description	The indicator measures whether confirmed exemptions or alternative compliance methods exist for startups.
Unit of measure	Implementation level (%)
Country Coverage	23 countries (all except Croatia)
Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2025: Q21A. Are there confirmed exemptions or alternative methods for startups to achieve compliance, in areas such as impact assessment?
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If answers “Yes” and provides clear evidence = 100% If answers “Yes” with no clear evidence = 50% If answers “No” or if evidence is out of scope = 0% No answer treated as missing value.

Metadata Attribute	Description
Indicator Name	Existence of regulatory sandboxes
Indicator nº (code)	4.3.1
Standard	SNS #4 “Innovation in Regulation”
Substandard	4.3 Regulatory Sandboxes
Data description	The indicator measures whether regulatory sandboxes are available to encourage and facilitate experimentation and innovation for startups.
Unit of measure	Implementation level (%)
Country Coverage	24 countries
Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2025: Q22A. Are there regulatory sandboxes available to encourage and facilitate experimentation and innovation for startups? Q22C. Please provide the URL to each of the regulatory sandboxes or alternatively their name and a brief description.

Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	<p>If answer is “yes” and clear evidence is provided = 100%</p> <p>If answer is “yes” but evidence is not provided = 50%</p> <p>If answer is “no” but evidence that regulatory sandboxes are being prepared is provided = 50%</p> <p>If answers “no”= 0%</p> <p>No answer treated as missing value.</p>

Metadata Attribute	Description
Indicator Name	Number of established regulatory sandboxes
Indicator nº (code)	4.3.2
Standard	SNS #4 “Innovation in Regulation”
Substandard	4.3 Regulatory Sandboxes
Data description	The indicator measures the relative positioning of the observed country in the number of established regulatory sandboxes.
Unit of measure	Implementation level (%)
Country Coverage	24 countries
Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2025: Q22A. Are there regulatory sandboxes available to encourage and facilitate experimentation and innovation for startups? Q22B. How many regulatory sandboxes are established in your country?
Transformation	Min-max transformation
Scoring Criteria (Classification System)	For countries answering “no” to Q22A, number of sandboxes is zero. Countries who did not provide the nr. of regulatory sandboxes were attributed zero.

Metadata Attribute	Description
Indicator Name	Number of startups involved in regulatory sandboxes consortia
Indicator nº (code)	4.3.3
Standard	SNS #4 “Innovation in Regulation”
Substandard	4.3 Regulatory Sandboxes
Data description	The indicator measures the relative positioning of the observed country in the number of startups participating in regulatory sandboxes.
Unit of measure	Implementation level (%)
Country Coverage	24 countries
Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Survey

Data Source	ESNA Scoreboard Survey 2025: Q22A. Are there regulatory sandboxes available to encourage and facilitate experimentation and innovation for startups? Q22D. How many startups are currently participating in regulatory sandboxes in your country?
Transformation	Min-max transformation
Scoring Criteria (Classification System)	For countries answering “no” to Q22A, number of startups participating in sandboxes is zero. Countries who did not provide the nr. of startups participating in regulatory sandboxes were attributed zero.

Metadata Attribute	Description
Indicator Name	Existence of administrative impediments to startup participation
Indicator nº (code)	5.1.1
Standard	SNS #5 “Innovation in Procurement”
Substandard	5.1 Procurement Opportunities
Data description	The indicator measures whether startups and scaleups face no additional legal or administrative impediments in innovation procurement opportunities compared with other participants.
Unit of measure	Implementation level (%)
Country Coverage	23 countries (all except Latvia)
Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2025: Q24. Are there any legal or administrative impediments that would put startups/scaleups at a disadvantage compared to other participants in innovation procurement opportunities overseen by national authorities?
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If answer is “no” = 100% If answer is “yes” = 0% No answer treated as missing value.

Metadata Attribute	Description
Indicator Name	Existence of incentives for public buyers and procurement services to procure innovation from startups
Indicator nº (code)	5.1.2
Standard	SNS #5 “Innovation in Procurement”
Substandard	5.1 Procurement Opportunities

Data description	The indicator measures whether incentives are in place to encourage public buyers and procurement services to procure innovation from startups.
Unit of measure	Implementation level (%)
Country Coverage	23 countries (all except Latvia)
Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2025: Q25A. Are public buyers and procurement services officially encouraged to procure innovations from startups? Q25B. Please provide some examples of these incentives.
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If answer is “yes” and clear evidence is provided = 100% If answer is “yes” and unclear/limited evidence is provided = 50% If answer is “no” or if provided evidence is out of scope = 0% No answer treated as missing value.

Metadata Attribute	Description
Indicator Name	Possibility of ownership of IPR for startups in innovation procurement
Indicator nº (code)	5.2.1
Standard	SNS #5 “Innovation in Procurement”
Substandard	5.2 Intellectual Property Rights
Data description	The indicator assesses whether intellectual property rights are generally retained by the startup or scaleup in innovation procurement opportunities.
Unit of measure	Implementation level (%)
Country Coverage	22 countries (all except Croatia and Latvia)
Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2025: Q27A. Can the ownership of intellectual property rights (IPR) usually be retained by the startup/scaleup participating in innovation procurement opportunities?
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If answer is “yes” = 100% If answer is “yes, partially” = 50% If answer is “no” = 0% No answer treated as missing value.

Metadata Attribute	Description
Indicator Name	Intellectual property receipts as percentage of total trade
Indicator nº (code)	5.2.2
Standard	SNS #5 “Innovation in Procurement”
Substandard	5.2 Intellectual Property Rights
Data description	The indicator measures the extent to which intellectual property rights receipts are represented in total trade. Receipts refer to payments between residents and non-residents for the use of proprietary rights (such as patents, trademarks, copyrights, industrial processes and designs, including trade secrets and franchises), and for licenses to reproduce or distribute (or both) intellectual property embodied in produced originals or prototypes (such as copyrights on books and manuscripts, computer software, cinematographic works and sound recordings) and related rights (such as for live performances and television, cable, or satellite broadcast).
Unit of measure	Implementation level (%)
Country Coverage	24 countries
Frequency of Data Collection	Yearly
Reference Year	2025
Data Collection method	Third-party source
Data Source	WIPO
Transformation	From 0-100% using min-max transformation
Scoring Criteria (Classification System)	WIPO methodology (here) No answer treated as missing value.

Metadata Attribute	Description
Indicator Name	Existence of exceptions for public sector Intellectual Property Rights (IPR) ownership based on overriding public interests
Indicator nº (code)	5.2.3
Standard	SNS #5 “Innovation in Procurement”
Substandard	5.2 Intellectual Property Rights
Data description	The indicator measures whether the public sector restricts its ownership of intellectual property rights to cases of overriding public interest.
Unit of measure	Implementation level (%)
Country Coverage	23 countries (all except Latvia)
Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2025:

	<p>Q27A. Can the ownership of intellectual property rights (IPR) usually be retained by the startup/scaleup participating in innovation procurement opportunities?</p> <p>Q27B. Please specify the situations where the public sector can retain ownership of Intellectual Property Rights (IPR).</p>
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	<p>If answers “yes” and provides evidence of the only exception being exceptional cases due to overriding public interest = 100%</p> <p>If answers “no” or “yes” and provides evidence of any exception besides cases of overriding public interest = 0%</p> <p>No answer treated as missing value.</p>

Metadata Attribute	Description
Indicator Name	Existence of incentives for open-source assets contribution
Indicator nº (code)	5.3.1
Standard	SNS #5 “Innovation in Procurement”
Substandard	5.3 Open-source assets
Data description	The indicator measures whether encouragement measures are in place for startups to contribute to open-source assets.
Unit of measure	Implementation level (%)
Country Coverage	22 countries (all except Croatia and Latvia)
Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2025: Q28A. “Are startups actively encouraged to contribute to open-source assets?” Q28B. “Which incentives does your country have in place in this regard?”
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	<p>If answers “yes” and provides clear evidence = 100%</p> <p>If answers “yes” but does not provide any evidence = 50%</p> <p>If answers “no” or if evidence is out of scope = 0%</p> <p>No answer treated as missing value.</p>

Metadata Attribute	Description
Indicator Name	Existence of policies for smooth tech transfer
Indicator nº (code)	5.4.1
Standard	SNS #5 “Innovation in Procurement”
Substandard	5.4 Tech transfer policies

Data description	The indicator measures whether policies are in place to facilitate technology transfers from universities and research centres to startups.
Unit of measure	Implementation level (%)
Country Coverage	23 countries (all except for Croatia)
Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2025: Q29A. Are there policies to facilitate a smooth transfer of the technology developed in universities and research institutes to startups? Q29B. Please provide examples of those policies.
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If answers “yes” and provides clear evidence =100% If answers “yes” but does not provide any evidence = 50% If answers “no” = 0% No answer treated as missing value.

Metadata Attribute	Description
Indicator Name	Existence of equity instruments funded by the RRF to startups
Indicator nº (code)	6.1.1
Standard	SNS #6 “Access to Finance”
Substandard	6.1 Direct Access to Finance
Data description	The indicator measures whether direct equity-based instruments are offered to startups within the Recovery and Resilience Facility (RRF) framework.
Unit of measure	Implementation level (%)
Country Coverage	22 countries (all except Sweden and Ukraine)
Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2025: Q31A. Does your country use part of its Recovery and Resilience Facility (RRF) funding to enhance access to venture capital for startups? Q31B. Please provide details on how the RRF, or other relevant public funds, are being used to enhance access to finance for startups.
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If answers “yes” and provides clear evidence = 100% If answers “yes” but does not provide any evidence = 50% If answers “no” = 0% Sweden and Ukraine treated as missing values.

Metadata Attribute	Description
Indicator Name	Existence of public grants, loans and other non-equity instruments
Indicator nº (code)	6.1.2
Standard	SNS #6 “Access to Finance”
Substandard	6.1 Direct Access to Finance
Data description	The indicator measures whether public grants, loans and other non-equity financing instruments are in place to finance startups.
Unit of measure	Implementation level (%)
Country Coverage	24 countries
Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2025: Q31A. Does your country use part of its Recovery and Resilience Facility (RRF) funding to enhance access to venture capital for startups? Q31B. Please provide details on how the RRF, or other relevant public funds, are being used to enhance access to finance for startups. Q33A. Have public authorities adopted initiatives to diversify private capital available for co-investing in high-growth startups? Q33B. Please specify the initiatives adopted.
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If provides clear evidence = 100% If does not provide evidence = 0% No answer treated as missing value.

Metadata Attribute	Description
Indicator Name	Utilisation of EIB, promotional banks and dedicated vehicles distributing funds to established/professional VCs
Indicator nº (code)	6.1.3
Standard	SNS #6 “Access to Finance”
Substandard	6.1 Direct Access to Finance
Data description	The indicator measures whether the country created funds or other vehicles that finance established private VCs.
Unit of measure	Implementation level (%)
Country Coverage	24 countries
Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2025:

	<p>Q32A. Does your country use European Investment Bank (EIB) programmes, Promotional Banks or other dedicated vehicles, leveraging private investments, and distributing funds to venture capital firms to address the existing investment gap?</p> <p>Q32B. Please provide details on how the vehicles are being used.</p>
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If answers “yes” and provides clear evidence = 100% If answers “no” or evidence is out of scope = 0% No answer treated as missing value.

Metadata Attribute	Description
Indicator Name	Initiatives to diversify private capital for high-growth startup co-investment
Indicator nº (code)	6.2.1
Standard	SNS #6 “Access to Finance”
Substandard	6.2 Indirect Access to Finance
Data description	The indicator measures if the country introduced non-financing policies other than tax relief measures to stimulate private sector startup financing.
Unit of measure	Implementation level (%)
Country Coverage	24 countries
Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2025: Q33A. Have public authorities adopted initiatives to diversify private capital available for co-investing in high-growth startups? Q33B. Please specify the initiatives adopted.
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If answers “yes” and provides clear evidence =100% If does not provide evidence= 0% No answer treated as missing value.

Metadata Attribute	Description
Indicator Name	Existence of tax relief for Business Angels
Indicator nº (code)	6.3.1
Standard	SNS #6 “Access to Finance”
Substandard	6.3 Tax Relief Measures
Data description	The indicator measures whether tax relief measures for Business Angels are in place to stimulate and support early-stage funding.
Unit of measure	Implementation level (%)
Country Coverage	22 countries (all except Croatia and Latvia)

Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2025: Q35A. Are there any tax relief measures in place aimed towards Business Angels to stimulate and support early-stage funding? Q35B. Please specify the incentives in place.
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If answers "yes" and provides clear evidence = 100% If answers "yes" but does not provide any evidence = 50% If answers "no" but it is being prepared = 25% If answers "no" = 0% No answer treated as missing value.

Metadata Attribute	Description
Indicator Name	Existence of national awards and policies for startup role models
Indicator nº (code)	7.1.1
Standard	SNS #7 "Social inclusion, diversity and protecting democratic values"
Substandard	7.1 Incentives for startups
Data description	The indicator measures whether national awards, public recognition or mentorship programmes exist to promote diverse role models in the startup community. Diversity includes considerations of gender, ethnicity, and social background.
Unit of measure	Implementation level (%)
Country Coverage	24 countries
Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2025: Q38.A Does your country actively promote diverse role models in the startup community through awards, public recognition or mentorship programmes? Role models should highlight and encourage diversity in areas like gender, ethnicity, and social background. Q38B. Please provide some examples.
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If answers "yes" and provides clear evidence = 100% If answers "yes" but does not provide any evidence = 50% If answers "no" = 0% No answer treated as missing value.

Metadata Attribute	Description
Indicator Name	Existence of social inclusion mobilisation initiatives
Indicator nº (code)	7.1.2
Standard	SNS #7 “Social inclusion, diversity and protecting democratic values”
Substandard	7.1 Incentives for startups
Data description	The indicator measures whether national and regional authorities engage startups to address marginalisation and social exclusion in underprivileged communities.
Unit of measure	Implementation level (%)
Country Coverage	24 countries
Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2025: Q39. Do national or regional authorities engage startups to specifically address issues of marginalisation and social exclusion among underprivileged communities impacted by low income, limited education, geographic location, cultural background, or disability?
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If answers “yes” =100% If answers “no” = 0% No answer treated as missing value.

Metadata Attribute	Description
Indicator Name	Existence of incentives for diversity hiring
Indicator nº (code)	7.1.3
Standard	SNS #7 “Social inclusion, diversity and protecting democratic values”
Substandard	7.1 Incentives for startups
Data description	The indicator measures whether there are specific incentives or legislation in place to promote diversity hiring in startups. Diversity includes considerations of ethnicity, gender, religion, age and sexual orientation.
Unit of measure	Implementation level (%)
Country Coverage	24 countries
Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2025: Q40A. Are there any specific incentives for startups to focus on hiring a diverse workforce, including

	considerations of ethnicity, gender, religion, age, and sexual orientation? Q40B. Please provide some examples.
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If answers “yes” and provides clear evidence =100% If answers “yes” but the incentive is only legislation and/or soft law = 75% If answers “yes” but does not provide any evidence = 50% If answers “no” =0% No answer treated as missing value.

Metadata Attribute	Description
Indicator Name	Support to founders from underprivileged backgrounds
Indicator nº (code)	7.2.1
Standard	SNS #7 “Social inclusion, diversity and protecting democratic values”
Substandard	7.2 Incentives for Founders
Data description	The indicator measures whether there are programmes to specifically support female founders and founders from underprivileged backgrounds in the early stages of startup creation. Underprivileged backgrounds are considered as listed in the Article 21 of the EU Charter of Fundamental Rights, including considerations of “ethnicity, gender, religion, age, and sexual orientation”.
Unit of measure	Implementation level (%)
Country Coverage	23 countries (all except Latvia)
Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2025: Q41. What support is provided to founders from underprivileged backgrounds to create companies?
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	No measures = 0% Cumulative awarding if evidence exists of having national/federal programmes or incentives promoting the creation of companies by: – women = 50% – underprivileged founders (other than women) = 50%. No answer treated as missing value.

Metadata Attribute	Description
Indicator Name	Index of digital public services for businesses
Indicator nº (code)	8.1.1

Standard	SNS #8 Digital First
Substandard	8.1 Digital First
Data description	The indicator measures the share of administrative steps on public services that can be completed fully online for major life events of entrepreneurs. It contemplates the processes of business creation and regular business operations.
Unit of measure	Implementation level (%)
Country Coverage	23 countries (all except Ukraine)
Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Third-party source
Data Source	Digital Economy and Society Index (DESI) for the State of the Digital Decade Report (2025)
Transformation	None
Scoring Criteria (Classification System)	DESI methodology (here) Ukraine treated as missing value.

Metadata Attribute	Description
Indicator Name	Digital public services availability by percentage of areas covered
Indicator nº (code)	8.1.2
Standard	SNS #8 Digital First
Substandard	8.1 Digital First
Data description	The indicator reflects the share of key public services designed to be carried out digitally. The public services contemplated are company creation, filling of taxes, participation in public procurement opportunities, and consultation of official records.
Unit of measure	Implementation level (%)
Country Coverage	24 countries
Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2025 Q43: "Which of the following public services in your country are designed to be carried out digitally? Select as many as applicable. (Options are: company creation, filling of taxes, participation in public procurement opportunities, consultation of official records, other)"
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	Cumulative awarding with a limit of 100% if selects: - company creation = 25% - filling of taxes = 25% - participation in public procurement opportunities = 25%

- consultation of official records = 25%
- other = 10%

No answer treated as missing value.

Metadata Attribute	Description
Indicator Name	Existence of national digitalisation strategy
Indicator nº (code)	8.1.3
Standard	SNS #8 Digital First
Substandard	8.1 Digital First
Data description	The indicator measures whether a global and cross-sector digitalisation strategy at the national level is being implemented.
Unit of measure	Implementation level (%)
Country Coverage	24 countries
Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2025 Q44A: Is your country currently implementing a global and cross-sector digitalisation strategy at national level? Q44B. Please provide evidence of the digital strategy being implemented.
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If answers “yes” and provides clear evidence =100% If answers “yes” and provides unclear/limited evidence = 50% If answers “no” or if evidence is out of scope = 0% No answer treated as missing value.

Metadata Attribute	Description
Indicator Name	Existence of proactive engagement for digital knowledge sharing and best practices
Indicator nº (code)	8.2.1
Standard	SNS #8 Digital First
Substandard	8.2 Knowledge Sharing
Data description	The indicator measures whether state authorities have measures in place to proactively engage startups and scaleups for knowledge-sharing on digitalisation and best practices.
Unit of measure	Implementation level (%)
Country Coverage	23 countries (all except Latvia)
Frequency of Data collection	Yearly
Reference Year	2025
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2025



Transformation

Scoring Criteria
(Classification System)

Q44A: Are startups and scaleups proactively approached and engaged by state authorities to share knowledge and best practices regarding digitalisation?

Q45B: Please provide some examples.

From 0-100% using scoring criteria

If answers “yes” and provides clear evidence =100%

If answers “yes” and provides unclear/limited evidence = 50%

If answers “no” or if evidence is out of scope = 0%

No answer treated as missing value.

A3. Bridging methodology for Indicator 1.3.1 (Cross-border services)

A.3.1. Context and problem definition

Until the 2024 edition, the Indicator 1.3.1 – “Cross-border services” was derived directly from the Cross-border Services dimension of the eGovernment Benchmark, which was calculated as:

$$CBS = 0.5 \times CBOA + 0.25 \times CBUS + 0.25 \times CBKE \quad (1)$$

with

$$CBKE = 0.5 \times CBeID + 0.5 \times CBeDoc \quad (2)$$

where

- CBOA = Cross-border Online Availability
- CBUS = Cross-border User Support
- CBKE = Cross-border Key Enablers
- CBeID = Cross-border eID
- CBeDoc = Cross-border eDocuments

Following the 2024 methodological revision of the eGovernment Benchmark, the Cross-border Services dimension was removed. Three out of the four underlying cross-border indicators continued to be produced, but were redistributed across the revised three-pillar structure. Specifically, “Cross-border Online Availability” was retained under “Online Service Delivery”; “Cross-border eID” was relocated to “Interoperability Signifiers”; and “Cross-border User Support” was moved to “User-Friendly Portals”. The “Cross-border eDocuments” indicator was discontinued as a standalone measure and is no longer available in the new framework.

This change created a break in the direct provision of the Cross-border Services composite score, and a discontinuity for Indicator 1.3.1. A bridging solution was therefore required to preserve, as far as possible, the conceptual integrity and time-series usability of Indicator 1.3.1 after the eGovernment Benchmark redesign.

A.3.2. Alternative bridging options considered

In light of the eGovernment Benchmark revision and the partial availability of the original indicators, three options were considered for recomputing Indicator 1.3.1 from 2025 onwards.

Option A – Replacement of Cross-border eDocuments

Under Option A, the missing Cross-border eDocuments indicator would be replaced by the new Once Only Technical System (OOTS) indicator, which assesses whether users can give the consent for the required documents to be retrieved in an automated way via OOTS from their home country issuing authority (applicable for just six services) and could be a potential proxy for cross-border document exchange.

The revised Key Enablers sub-dimension would then be calculated as:

$$CBKE_A = 0.5 \times CBeID + 0.5 \times OOTS \quad (3)$$

following which



$$CBS_A = 0.5 \times CBOA + 0.25 \times CBUS + 0.25 \times CBKE_A \quad (4)$$

Option B – Proportional rescaling of remaining indicators

Option B retains only the three remaining cross-border indicators (Online Availability, User Support, eID) and rescales their weights proportionally so that they sum to 100%. To derive the new weights, equation (2) is first substituted into equation (1) to express each of the four original indicators as a direct contribution to the overall composite:

$$CBS = 0.5 \times CBOA + 0.25 \times CBUS + 0.125 \times CBeID + 0.125 \times CBeDoc \quad (5)$$

Following the discontinuation of Cross-border eDocuments, Option B drops the last term and rescales the weights of the three remaining indicators so that they again sum to 100%. The rescaling is performed by dividing each original weight by the sum of the weights of the remaining indicators.

The sum of the remaining weights is:

$$0.5 + 0.25 + 0.125 = 0.875$$

The rescaled weights are therefore:

- Cross-border Online Availability: $\frac{0.5}{0.875} = 0.5714$ (or approximately 57.14%)
- Cross-border User Support: $\frac{0.25}{0.875} = 0.2857$ (or approximately 28.57%)
- Cross-border eID: $\frac{0.125}{0.875} = 0.1429$ (or approximately 14.29%)

The Indicator 1.3.1 under option B is then calculated as:

$$CBS_B = 0.5714 \times CBOA + 0.2857 \times CBUS + 0.1429 \times CBeID \quad (6)$$

Option C – Sub-dimension-based aggregation

This option aims to preserve the original sub-dimension hierarchy and weighting scheme whilst adapting the Key Enablers sub-dimension to the discontinuation of the eDocuments indicator.

The approach maintains the original sub-dimension weights at the top level:

- Online Availability – 50%
- User Support – 25%
- Key Enablers – 25%

with the Key Enablers sub-dimension being redefined so that it is now based solely on Cross-border eID, given that Cross-border eDocuments is no longer available. Formally:

$$CBKE_C = CBeID \quad (7)$$

yielding:

$$CBS_C = 0.5 \times CBOA + 0.25 \times CBUS + 0.25 \times CBeID \quad (8)$$

A.3.3. Comparative analysis and justification of the chosen solution

The three options outlined above present distinct trade-offs between structural fidelity to the original eGovernment Benchmark and pragmatic simplicity.

Option A would preserve the four-indicator structure of the original framework, retaining two components within the Key Enablers sub-dimension and maintaining the headline weighting scheme (50–25–25 at sub-dimension level; 50–50 within Key Enablers). This structural alignment is theoretically appealing.

However, significant empirical and conceptual limitations emerged from examination of this option. A preliminary obstacle concerns data coverage: the OOTS indicator does not achieve complete country coverage in the eGovernment Benchmark dataset, with missing observations for some member states. This data gap would create discontinuities in the time series and limit the usability of Indicator 1.3.1 for countries with incomplete OOTS data, introducing a practical impediment to this approach.

Beyond this practical constraint, deeper empirical and conceptual issues arise. Correlation analysis revealed that the OOTS indicator exhibits low statistical association with the historical Cross-border eDocuments measure, indicating weak equivalence between the two constructs. The two indicators measure fundamentally different policy dimensions: whilst Cross-border eDocuments captures the availability and use of electronic document exchange systems for cross-border transactions, OOTS represents a distinct technical infrastructure for automated data retrieval across borders, limited to six specific services.

Introducing OOTS as a direct replacement would embed a new policy concept into an indicator originally focused on e-document services. This conceptual shift would undermine the consistency and interpretability of the time series, since observed changes in the composite could predominantly reflect the introduction and expansion of OOTS services rather than genuine continuity in the cross-border document exchange services that the original indicator was designed to measure. For these reasons, Option A was deemed unsuitable as a bridging methodology.

Option B offers pragmatic simplicity and mathematical transparency. The rescaling procedure is straightforward: weights are renormalised arithmetically so that the three remaining indicators sum to 100%, and no external proxy is introduced. This approach preserves the presence of all available original measures.

However, proportional rescaling breaks the hierarchical aggregation logic that underpins the eGovernment Benchmark. The framework is designed to aggregate first at sub-dimension level, then at higher levels, reflecting the theoretical structure of digital government policy. By rescaling weights arithmetically, Option B converts the indicator into a flat-weighted average of individual components, abandoning this hierarchical foundation.

More substantively, proportional rescaling fundamentally alters the conceptual balance between policy areas. Whilst the Key Enablers sub-dimension was originally assigned 25% of the total weight (distributed equally as 12.5% each to eID and eDocuments), under the rescaled approach its sole remaining component (eID) accounts for only 14.29% of the composite. This reduction from 25% to 14.29% represents a significant downweighting of interoperability and enablers in the cross-border services assessment, diverging substantially from the policy priorities reflected in the original eGovernment Benchmark specification. The rescaled weights result from arithmetical necessity rather than policy-grounded justification.

Option C preserves the original sub-dimension hierarchy and weighting scheme whilst acknowledging the structural constraints imposed by the eGovernment Benchmark revision. The approach maintains the 50–25–25 weighting at the sub-dimension level and redefines the Key Enablers sub-dimension to comprise only Cross-border eID, given that Cross-border eDocuments is no longer available.

This solution preserves the conceptual integrity of the hierarchical aggregation framework. By maintaining original sub-dimension weights, it safeguards the relative importance of each policy area (Online Availability, User Support, Key Enablers) in the composite. The indicator continues to rely exclusively on measures that were part of the original Cross-border Services dimension, avoiding the introduction of non-equivalent proxies or external concepts.

The approach does entail recognisable limitations. The Key Enablers sub-dimension becomes unidimensional, represented solely by Cross-border eID, with an inevitable loss of internal diversity. Policy insights specifically relating to cross-border e-documents are unavoidably lost, since this component is no longer produced separately in the revised eGovernment Benchmark framework. However, these constraints are imposed by the eGovernment Benchmark redesign itself rather than representing shortcomings of the bridging methodology.

Table 7 below presents a summary of the empirical results obtained for each option, allowing for direct comparison of their respective performance characteristics.

Country	Option A	Option B	Option C
Austria	0.68	0.77	0.78
Belgium	0.64	0.73	0.69
Bulgaria	0.54	0.62	0.57
Cyprus	0.64	0.73	0.67
Czechia	0.54	0.61	0.58
Germany	0.54	0.62	0.56
Estonia	0.79	0.91	0.86
Spain		0.71	0.67
France	0.43	0.49	0.45
Croatia	0.52	0.59	0.55
Ireland	0.71	0.81	0.73
Italy	0.55	0.63	0.61
Lithuania	0.70	0.80	0.80
Luxembourg	0.85	0.98	0.96
Latvia	0.76	0.87	0.85
Malta	0.82	0.94	0.90
Netherlands	0.71	0.81	0.78
Poland	0.49	0.56	0.56
Portugal		0.76	0.72
Romania	0.34	0.39	0.35
Sweden	0.56	0.64	0.62
Slovenia	0.59	0.68	0.66
Slovakia	0.46	0.52	0.47
ESNA	0.61	0.70	0.66

Table 7. Recalculated Indicator 1.3.1 under each bridging option

Source: ESNA calculations based on eGovernment Benchmark dataset

Given the balance of empirical evidence and methodological considerations presented above, Option C was adopted as the bridging solution for the 2025 edition. This choice prioritises methodological coherence with the original eGovernment Benchmark framework, preserves the policy-grounded hierarchy and weightings of the original specification, and maintains substantially greater continuity with the historical series.



Despite the careful design of the bridging solution, it is essential to explicitly acknowledge the methodological break introduced in 2025. The discontinuation of Cross-border eDocuments entails an unavoidable loss of direct information on one specific aspect of cross-border digital public services. The new Indicator 1.3.1 continues to capture the core dimensions of cross-border service provision (online availability, user support, and key enablers via eID), but it no longer includes a dedicated measure of cross-border e-document exchange. As a result, Indicator 1.3.1 in 2025 is not directly comparable in absolute level with the values reported in 2023 and 2024. Apparent changes between 2024 and 2025 should be interpreted with caution, as they reflect both substantive policy developments and the change in methodology.

Within these boundaries, the adopted bridging methodology provides a coherent and transparent continuation of Indicator 1.3.1, ensuring its ongoing usefulness for monitoring developments in cross-border digital public services within the EU startup policy context.

A4. Steering Committee - Members

Stefano Bonini - Associate Professor of Finance



Stefano Bonini is an Associate Professor of Finance (tenured) at the Stevens Institute of Technology School of Business and a Professor at SDA Bocconi School of Management. His work focuses on corporate finance, corporate governance, venture capital, and entrepreneurial finance, with particular emphasis on innovation, firm growth, and capital markets. He has held visiting appointments at several international universities and serves as Co-Editor-in-Chief of *Venture Capital: An International Journal of Entrepreneurial Finance*. His research has been published in leading academic and practitioner journals, including *Strategic Management Journal*, *Entrepreneurship Theory and Practice*, and *Harvard Business Review*.

Ramon Compaño - Senior Expert at European Commission



Obtained a PhD in Physics at the University of Aachen, then went on to pursue two Masters in Technology Administration and Finance. Thanks to his strong multidisciplinary background, he has been working for the European Commission for the past thirty years. From policy and science-focused positions, he took on a variety of challenges before taking up the role of Senior Expert at the Joint Research Centre of the European Commission, focusing on techno-economic aspects.

Chiara Fratto - Economist at the European Investment Bank



Chiara Fratto is an economist in the Economics Department of the European Investment Bank (EIB), where she conducts economic research and contributes to the EIB's strategic discussions and flagship publications. Her work focuses on the financing and growth of innovative firms, as well as housing markets. Prior to joining the EIB in 2023, she worked as an economist at the International Monetary Fund and the World Bank, where she led a research projects on entrepreneurship in conflict-affected countries. Her research spans several fields, including spatial economics, monetary policy, the financing of innovative firms, and applied macroeconomics. She holds a B.A. and an M.S. from Bocconi University, as well as an M.A. and a Ph.D. from the University of Chicago.

Sofia Santos - CEO at Systemic



Sofia Santos is a consultant for the French Development Agency on sustainable finance in the context of Central Banks and National Strategies. She is also guest lecturer at ISEG Lisbon School of Economics and Management and co-coordinator of various courses at IDEFE Executive Education. Consultant for the United Nations Green Climate Fund for Africa. Member of the investment committee of the Portuguese Fund for Social Innovation. Technical specialist in Green Economy and Sustainable Finance in the office of the Minister for the Environment (2018-2019). General Secretary of BCSD Portugal (2016-2018)

Ekke van Vliet - Investment Coordinator at the European Investment Council (EIC)



Ekke van Vliet is a business economist and auditor by education and experience, with a career spanning more than two decades in various financial roles in the European Institutions. Since 2019 Ekke has been involved in the set-up and implementation of the EIC Fund. The EIC Fund is a multi-billion EU VC fund to support deep-tech start-ups in the EU and beyond.

A5. Statistical Annex

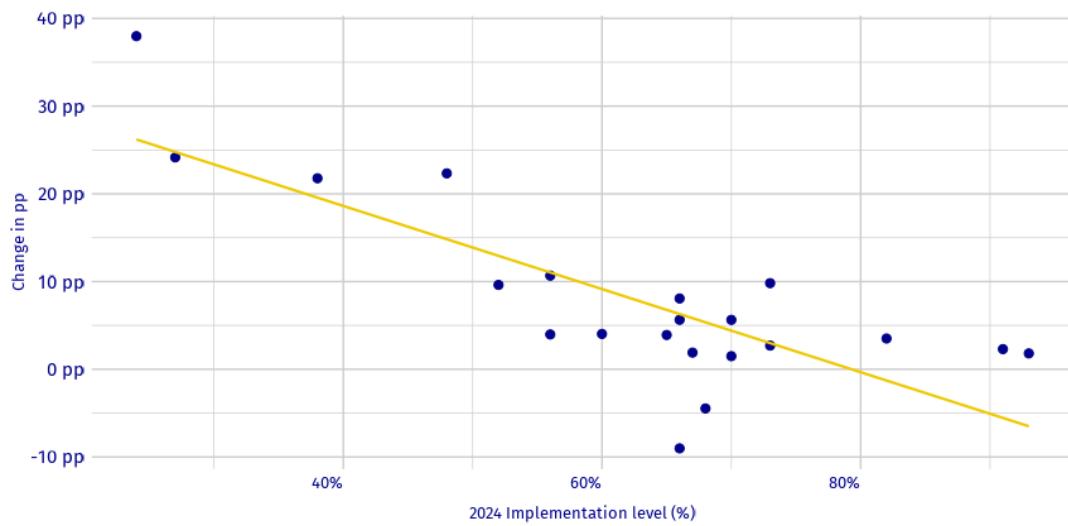


Table 8: Relationship between 2024 implementation level and change in p.p.

Source: ESNA

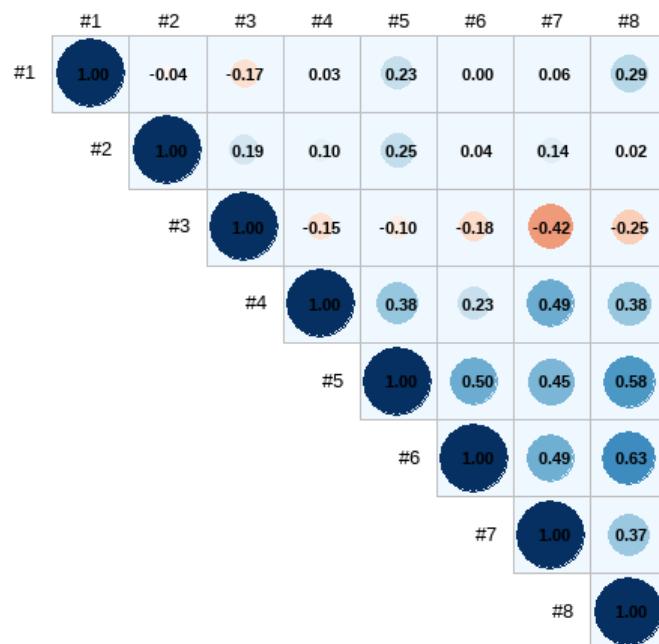


Figure 81. Correlation matrix for the eight standards

Source: ESNA

	#SNS1	#SNS2	#SNS3	#SNS4	#SNS5	#SNS6	#SNS7	#SNS8
Average	0.779	0.647	0.780	0.558	0.652	0.771	0.742	0.767
Median	0.797	0.632	0.854	0.552	0.653	0.889	0.750	0.746
Min	0.268	0.250	0.250	0.000	0.257	0.222	0.250	0.435
Max	0.983	1.000	1.000	0.924	0.944	1.000	1.000	1.000
Variance	0.023	0.055	0.053	0.077	0.036	0.058	0.058	0.048
Range	0.716	0.750	0.750	0.924	0.688	0.778	0.750	0.565
Std dev	0.151	0.235	0.230	0.278	0.190	0.241	0.241	0.220

Table 9: Descriptive statistics of the eight standards

Source: ESNA

	ind1.1.1	ind1.1.2	ind1.1.3	ind1.2.1	ind1.2.2	ind1.2.3	ind1.3.1	ind1.3.2
Average	0.667	0.630	0.758	0.865	0.865	0.813	0.669	0.909
Median	0.500	0.500	1.000	1.000	1.000	1.000	0.665	1.000
Min	0.250	0.250	0.000	0.000	0.000	0.000	0.350	0.000
Max	1.000	1.000	1.000	1.000	1.000	1.000	0.965	1.000
Variance	0.091	0.084	0.108	0.054	0.060	0.148	0.023	0.087
Range	0.750	0.750	1.000	1.000	1.000	1.000	0.614	1.000
Std dev	0.301	0.291	0.328	0.233	0.244	0.385	0.153	0.294

Table 10: Descriptive statistics of Indicators of SNS #1

Source: ESNA

	ind2.1.1	ind2.1.2	ind2.2.1	ind2.2.2
Average	0.739	0.716	0.609	0.491
Median	1.000	0.500	1.000	0.500
Min	0.000	0.250	0.000	0.400
Max	1.000	1.000	1.000	0.607
Variance	0.098	0.073	0.226	0.003
Range	1.000	0.750	1.000	0.207
Std dev	0.313	0.271	0.476	0.052

Table 11: Descriptive statistics of indicators of SNS #2

Source: ESNA

	ind3.1.1	ind3.2.1	ind3.2.2	ind3.3.1
Average	0.542	1.000	0.533	0.913
Median	1.000	1.000	0.500	1.000
Min	0.000	1.000	0.000	0.000
Max	1.000	1.000	1.000	1.000
Variance	0.259	0.000	0.151	0.083
Range	1.000	0.000	1.000	1.000
Std dev	0.509	0.000	0.388	0.288

Table 12: Descriptive statistics of Indicators of SNS #3

Source: ESNA

	ind4.1.1	ind4.2.1	ind4.3.1	ind4.3.2	ind4.3.3
Average	0.792	0.500	0.833	0.101	0.105
Median	1.000	0.500	1.000	0.014	0.000
Min	0.000	0.000	0.000	0.000	0.000
Max	1.000	1.000	1.000	1.000	1.000
Variance	0.129	0.250	0.123	0.045	0.072
Range	1.000	1.000	1.000	1.000	1.000
Std dev	0.359	0.500	0.351	0.213	0.269

Table 13: Descriptive statistics of Indicators of SNS #4

Source: ESNA

	ind5.1.1	ind5.1.2	ind5.2.1	ind5.2.2	ind5.2.3	ind5.3.1	ind5.4.1
Average	0.783	0.826	0.727	0.253	0.261	0.409	0.957
Median	1.000	1.000	0.750	0.115	0.000	0.000	1.000
Min	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Max	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Variance	0.178	0.127	0.089	0.091	0.202	0.229	0.043
Range	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Std dev	0.422	0.357	0.298	0.302	0.449	0.479	0.209

Table 14: Descriptive statistics of Indicators of SNS #5

Source: ESNA

	ind6.1.1	ind6.1.2	ind6.1.3	ind6.2.1	ind6.3.1
Average	0.432	1.000	0.833	0.917	0.648
Median	0.000	1.000	1.000	1.000	1.000
Min	0.000	1.000	0.000	0.000	0.000
Max	1.000	1.000	1.000	1.000	1.000
Variance	0.245	0.000	0.145	0.080	0.230
Range	1.000	0.000	1.000	1.000	1.000
Std dev	0.495	0.000	0.381	0.282	0.480

Table 15: Descriptive statistics of Indicators of SNS #6

Source: ESNA

	ind7.1.1	ind7.1.2	ind7.1.3	ind7.2.1
Average	0.792	0.792	0.667	0.717
Median	1.000	1.000	1.000	1.000
Min	0.000	0.000	0.000	0.000
Max	1.000	1.000	1.000	1.000
Variance	0.107	0.172	0.210	0.132
Range	1.000	1.000	1.000	1.000
Std dev	0.327	0.415	0.458	0.364

Table 16: Descriptive statistics of Indicators of SNS #7

Source: ESNA

ind8.1.1	ind8.1.2	ind8.1.3	ind8.2.1

	0.862	0.952	0.979	0.565
Average	0.862	0.952	0.979	0.565
Median	0.863	1.000	1.000	0.500
Min	0.551	0.350	0.500	0.000
Max	1.000	1.000	1.000	1.000
Variance	0.013	0.021	0.010	0.189
Range	0.449	0.650	0.500	1.000
Std dev	0.112	0.146	0.102	0.434

Table 17: Descriptive statistics of Indicators of SNS #8

Source: ESNA



Acronyms

A

Artificial Intelligence (AI)
Austria (AUT)

B

Belgium (BEL)
Bulgaria (BGR)

C

Croatia (HRV)
Cyprus (CYP)
Czechia (CZE)

D

Digital Economy and Society Index (DESI)

E

electronic Identification, Authentication and Trust Services (eIDeAS)
Employee Stock Ownership Plan (ESOP)
Estonia (EST)
Europe Startup Nations Alliance (ESNA)
European Economic Area (EEA)
European Investment Bank (EIB)
European Investment Fund (EIF)
European Union

F

Focal Point (FP)
France (FRA)

G

Germany (DEU)
Gross Domestic Product (GDP)

I

Information and Communication Technology (ICT)
Intellectual Property Rights (IPR)
International Labour Organisation (ILO)
Internet of Things (IoT)
Ireland (IRL)
Italy (ITA)

J

Joint Research Centre (JRC)

L

Latvia (LVA)
Lithuania (LTU)
Luxembourg (LUX)

M

Malta (MLT)

N

Netherlands (NLD)

O

Once Only Technical System (OOTS)
Organisation for Economic Co-operation and Development (OECD)

P

Percentage points (p.p.)
Poland (POL)
Portugal (PRT)

R

Recovery and Resilience Facility (RRF)
Romania (ROU)

S

Science, Technology, Engineering, and Mathematics (STEM)
Single Digital Gateway (SDG)
Slovakia (SVK)
Slovenia (SVN)
Small and Medium Enterprise (SME)
Spain (ESP)
Startup Nations Standards (SNS)
Stock Options (SO)
Sweden (SWE)

T

Tech Transfer Office (TTO)
Total Time of Journey (TTJ)

U

Ukraine (UKR)
United States (US)



V

Variable Capital Company (VCC)
Venture Capital (VC)

W

World Intellectual Property Organization (WIPO)

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