Europe Startup Nations Alliance

EU Startup Nations Standards

Report 2024

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EU Startup Nations Standards – Report 2024

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ESNA, December 2024

Disclaimer

Foreword

The EU Startup Nations Standards (SNS) Report 2024 marks a significant step forward in the European Startup Nations Alliance - ESNA's mission. Featuring a more efficient survey and an improved methodology, it reflects the collective ambition of the EU SNS of Excellence Declaration, highlighting both Europe's achievements and the challenges to be addressed.

The eight Standards set forth on the "EU Startup Nations Standards of Excellence" ministerial declaration, act as benchmarks for the countries' progress, thereby abiding by one of ESNA's key priorities: ensuring reports comparability. They also serve as a set of best practices that support national governments in their policy-design processes, benefiting Europe's startup ecosystem. This year we observed a significant increase in overall implementation—from 54% to 61%—this year's report reflects not only improvements across numerous Standards but also the shared commitment of Member States to fostering innovation, competitiveness, and entrepreneurial excellence.

The contribution of our members and respective focal points are invaluable as we strive to contribute to the ultimate objective, which is to bring Europe to the forefront of the global startup ecosystem.

This report is not merely a measure of progress; it is a critical tool for policymakers navigating the challenges of a competitive and sovereign Europe.

Startups are a driving force behind innovation and economic growth, and their role is vital for Europe to maintain its strategic autonomy in key sectors while addressing global challenges such as digital transformation, climate change, and social inclusivity. By aligning national policies with the eight Startup Nations Standards, this initiative ensures that the EU remains a fertile ground for entrepreneurs and a beacon of global innovation.

The SNS Report 2024 also highlights the role of startups in enhancing Europe's competitiveness on the global stage. By embracing innovation-friendly policies, member countries not only attract top talent but also foster ecosystems where groundbreaking technologies and inclusive economic growth can thrive. Startups serve as catalysts for advancing Europe's technological sovereignty, helping the region address critical gaps.

For policymakers, this report offers a blueprint for actionable change. By spotlighting both achievements and areas needing attention. It empowers decision-makers with the insights needed to craft policies that promote resilience and sustainability.

As a final note, we wish to extend our deepest gratitude to our Focal Points and Members for their valuable collaboration and who made this report possible. Your efforts in shaping a vibrant startup ecosystem are essential for Europe's future. As we look ahead, let us continue to build on this momentum, leveraging the insights within these pages to create a Europe that is not only a hub for startups but a global leader in innovation and entrepreneurial excellence.

Arthur Jordão
Executive Director

Europe Startup Nations Alliance (ESNA)

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The EU Startup Standard Nations (SNS) Report 2024 aims to provide an overview of the European startup ecosystem through the lenses of the eight SNS. This document is particularly targeted at policymakers, as it monitors the implementation of startup-friendly policies among ESNA's Signatory Members. The present report is the second iteration of this series, which enables comparability.

This report first describes the methodology used to carry out the analysis, the foundation for this report. This section consists of an overview of the implementation of the SNS, followed by a breakdown per Standard. Each section dedicated to one of the eight SNS dives into the results per country, substandard, and indicator.

Two aspects were significant in terms of methodology for this year's edition: accuracy and comparability. In order to address them both, the ESNA team strived to strike a balance between the initial methodology and some technical improvements. While it still combines desk research and a survey, external support was notably sought through a Steering Committee specifically set up for this year's report. Among the significant changes that occurred, the survey went from 73 initial questions to 46 questions and 43 sub-questions to make it easier to navigate. Initially covering 21 countries, the 2024 iteration of the report now covers 24. The methodological notes include details related to the approach, the data collection, the data analysis, the sources used, and the Steering Committee. The scores, ranging from 0 to 100, measure the implementation of the corresponding SNS or substandard.

The implementation of the eight Standards by all Signatory Countries is the key objective, hence it is worth noting that the level of implementation of the Standards is 61%, representing an increase of seven percentage points (p.p.) compared to last year (54%). With the exception of Standards #4, #5 and #8, where there has been a slight decrease, this increase is due to the improved level of implementation of the majority of the Standards (Standards #1, #2, #3, #6 and #7).

SNS #1 Fast Startup Creation, Smooth Market Entry achieves one of the highest scores at 70%. Key findings reveal that digital documents emitted by a foreign entity are accepted in 19 of the surveyed countries. As per business setup, it can be carried out within one day and for no more than €100 in four countries. Additionally, 11 of the participating countries offer remote support to startups in more than one language, emphasising efforts towards digitalisation and centralising information.

SNS #2 Attracting and Retaining Talent stands among the best-performing half with its 64% implementation level – an additional 14 p.p compared to last year. This year, Cyprus, Malta and Romania all achieve full implementation (100%). While visa applications are typically processed within one month in 11 of the surveyed countries, it may differ depending on the type of visa, as one may be easier to expedite than another in a given country. Going further on mobility, nine countries have a programme in place to encourage the return of EU tech nationals who emigrated outside of the continent

SNS #3 Stock Options is made up of three substandards. Quite a few countries (Cyprus, Estonia, France, Portugal and Ukraine) reach a full implementation level, while ESNA's average increased slightly (from 57% to 62%). In keeping with the SNS' recommendations, most countries (19) offer the possibility to issue stock options (SO) with no voting rights, thereby

enabling smoother decision-making processes for company management. While a good number of states (17 countries) currently have a dedicated SO scheme in place, only 11 countries tax SO as capital gains. This implies that 13 of the countries either tax SO multiple times, or at the moment of grant or exercise only.

SNS #4 Innovation in Regulation covers a variety of topics relevant to this field. With an implementation level of 43%, it is the Standard with the lowest implementation level. The Think Small First principle substandard – which implies that SMEs/startups are involved in the early stages of legislation development – appears to be applied in 11 of the surveyed countries. However, only five of them demonstrated having exemptions or alternatives specifically for startups. These exemptions are typically set up to mitigate issues they face due to their limited resources, track-record or size. While regulatory sandboxes are a relevant tool that enables testing within a specific regulatory framework, they remain overall underutilised, with over half of the surveyed countries (15 countries) having some in place.

SNS #5 Innovation in Procurement and its average implementation level of 55% is broken down into four substandards. 19 of the surveyed countries currently have tools in place to foster innovation in public procurement. While this denotes efforts towards smoother procedures, only ten of the countries set up incentives for public buyers to procure from startups. Still on the theme of procurement, about two thirds (16 countries) of these states claim not to have any legal or administrative impediments that could potentially disadvantage businesses such as startups or scaleups. This Standard also explores the issue of Intellectual Property Rights (IPR) retention, which is possible in ten countries for startups or scaleups when participating in a tender. The horizon appears brighter for technology transfer policies, however, as 16 of the countries reported having measures in place to facilitate research application and the creation of spinoffs.

With the highest implementation level, at 72%, **SNS #6 Access to Finance** relates to what is typically considered crucial at various stages of business development. Belgium, France, Lithuania, Portugal, Spain, Sweden and Ukraine reach a 100% score for this Standard. The surveyed countries make use of the tools fostering better access to finance for startups and scaleups, however at different levels. As such, 14 of them are currently implementing tax incentives for Business Angels (BA), thereby encouraging direct private investment. Similarly, there are also 14 countries uses part of their Recovery and Resilience Fund to enhance startups' access to VC. Additionally, 16 countries reported having adopted initiatives to diversify private capital for high-growth startup co-investment, which results in greater funds available to startups and scaleups. The most popular instrument appears to be the European Investment Bank (EIB) and promotional banks as a way to bridge the Venture Capital (VC) investment gap, with 21 of the analysed states making use of them.

SNS #7 Social inclusion, Diversity and protecting democratic Values remains one the Standards with the lowest implementation level, despite France, Lithuania and Luxembourg scoring 100%. Considering incentives for startups, many countries (21 countries) created national awards and/or policies to actively promote role models in the startup communities. However, fewer of them (15 countries) state that they directly engage with startups to tackle marginalisation and social inclusion. A minority of eight has set up specific schemes to incentivise hiring processes that would bolster diversity. Similarly, eight countries shared clear evidence of supporting startup founders from underprivileged backgrounds.

SNS #8 Digital First implies that services should be designed to be carried out digitally. This Standard scores as high as SNS #1, with Estonia and Malta (100%) leading the way. A large majority of the surveyed countries (20 countries) offer a variety of administrative services online, demonstrating that efforts are put towards digitalisation. This is further emphasised by the number of states implementing digitalisation strategies (19 countries) while, there is room for improvement when it comes to knowledge sharing between governments and startups, as it is implemented by nine surveyed countries.

Startup Nation Standards implementation progress

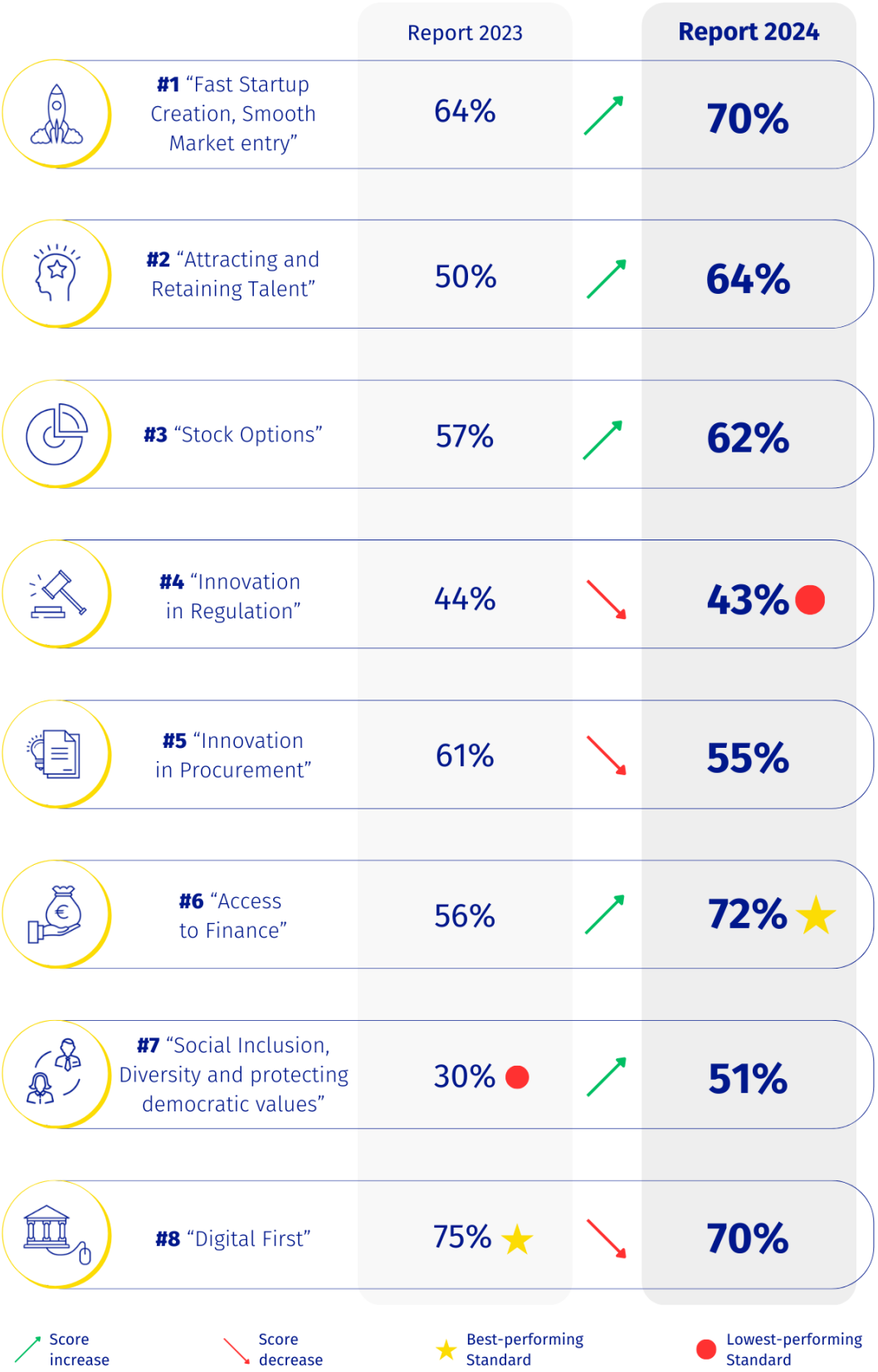


Figure 1. The eight Startup Nations Standard implementation level progress

SOURCE: ESNA, based on official data from Member Countries (Survey 2023 & 2024)

Introduction

01.

01. Introduction

The EU Startup Nations Standard (SNS) Report 2024 marks the third release of the EU SNS Report, following the foundational EU SNS Report 2022 (Baseline) and its subsequent iteration with the EU SNS Report 2023. By monitoring the evolving framework of the EU startup ecosystem through the lenses of the eight Standards, the SNS Report serves as a key resource for stakeholders all around Europe, offering a comprehensive and clear overview of how participating countries in the ESNA Survey are progressing towards a strong startup ecosystem. As an EU-wide reference document - aligned with broader EU startup strategies envisioned for the block - it highlights significant steps towards the common goal of making Europe a global hub for innovation and entrepreneurship.

The EU SNS Report 2024 presents a detailed overview of the implementation status of the eight Standards stemming from the EU Startup Nations Standard of Excellence Declaration (EU SNS Declaration) endorsed by ESNA's 28 Signatory Countries. Each Standard, illustrated in Figure 2 below, serves as an anchor for fostering more supportive and stronger environments, as well as guiding participating countries in adopting effective policies.

Figure 2. The eight SNS from the EU SNS Declaration

SOURCE: ESNA from EU Startup Nations Standard of Excellence Declaration

This report focuses on evaluating the implementation levels of each Standard as set forth by the EU SNS Declaration. The scores provided reflect specific measures and policies that align with its goals, offering an implementation-focused view. Such distinction underscores the SNS Report's purpose as a policy-tracking resource, rather than an indicator of the national ecosystems' performance.

Notwithstanding, the EU SNS Report aims not only to track the implementation of each SNS but also to highlight its importance within the broader EU strategy for fostering dynamic and competitive startup ecosystems. Through these annual updates, the report provides a transparent, data-driven basis for assessing progress and refining policies that strengthen the role of startup policies as key drivers for economic growth and innovation in Europe.

As one of the novelties in this year's report, greater attention is given to good practices included in each Standard's analysis. These sections present a curated selection of programmes and initiatives that illustrate how various European countries are aligning their national strategies with the SNS recommendations. It is important to stress that the featured practices serve solely as examples and are not exhaustive, as they were selected based on the contributions provided by ESNA's network of Focal Points (FPs). Such policies, while varied, collectively exemplify how diverse European approaches contribute to the overarching objectives of the EU SNS Declaration, without implying any ranking. Signatory Countries interested in further details on these highlighted initiatives may reach out to the ESNA team for deeper insights and tailored support through its dedicated Service Line.

In essence, this third edition of the EU SNS Report reaffirms ESNA's commitment in fostering robust and competitive startup environments, and serves as a transparent, data-driven resource to inform and inspire startup-friendly policies throughout Europe.

Methodology

02.

02. Methodology

1. Introductory Note

The following methodological notes include all the relevant considerations on the methodological decisions made in the process of producing the Scoreboard 2024. This edition is built upon its previous versions and aims to improve the information gathered continuously and work on the precision of the results, thereby allowing policymakers to use the report as a basis for setting priorities and supporting decision-making when it comes to developing public policies for startups.

The current methodology was previously submitted to the Steering Committee, to collect their additional inputs and finalise the methodological notes of the SNS Report 2024.

2. Data and Methods

The methodology adopted for the Scoreboard 2024 was developed to provide a clear monitorisation of the implementation of the eight SNS. The methodology described below in this chapter is sound and offers reliable outputs that can be reproduced on an annual basis.

The previous edition – EU SNS Report 2023 – suggested areas for further methodological considerations such as: addressing a restricted number of indicators and data to cover all eight SNS; improving the survey structure; refining indicators and some gaps in the reference year; analysis methods; and information collection. Consequently, the current edition underwent enhancements to obtain a reliable analysis and reflect the SNS more accurately, presenting a robust methodology.

To this end, advice was also sought from experts in relevant fields by setting up a Steering Committee, and external specialists were consulted to support the Scoreboard Survey 2024 development process.

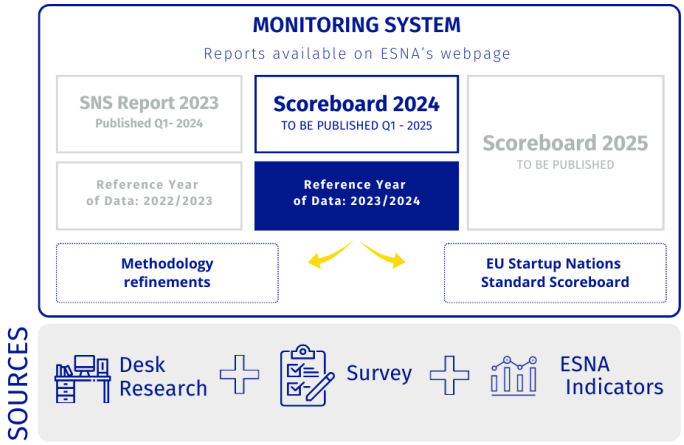


Figure 3. Structure of the SNS monitoring system

SOURCE: ESNA Monitoring System

The Scoreboard 2024 analysis was prepared based on the following main sources: (i) desk research, involving the collection of indicators from reliable third-party sources; (ii) a survey directed at ESNA's FP network, entrusted by national governments; (iii) ESNA's indicators.

2.1 Scope

Framework

The current version covers the following **24 European countries**[1]: Austria (AUT), Belgium (BEL), Bulgaria (BGR), Croatia (HRV), Cyprus (CYP), Czechia (CZE), Denmark (DNK), Estonia (EST), France (FRA), Germany (DEU), Ireland (IRL), Italy (ITA), Lithuania (LTU), Luxembourg (LUX), Malta (MLT), the Netherlands (NLD), Poland (POL)[2], Portugal (PRT), Romania (ROU), Slovakia (SVK), Slovenia (SVN), Spain (ESP), Sweden (SWE), and Ukraine (UKR).

The vast majority of the data is referenced to 2024 to highlight the main progress made by countries during the same year, except indicator 2.2.2 from the Organisation for Economic Co-operation and Development (OECD) which is not updated on an annual basis. Additionally, it is worth highlighting that all numbers presented in this report were **rounded to the closest unit**, which means that a few sums of the scores could be close to 100%. Nonetheless, all the calculations were made with exact values, supported by Microsoft tools, such as Excel.

During the process of preparing the report, ESNA was in close contact with the FPs, through the promotion of webinars, to notably prepare and support the countries in collecting data for the survey and to present the preliminary results, allowing them to share their contributions and necessary clarifications.

Comparability

Even though some changes have been introduced since last year as part of a methodological improvement exercise, the report aims to be comparable with the previous one, as well as to create a solid basis for a progressive analysis in the future. The results from the Scoreboard 2024 will be compared with the previous edition (2023), and the analysis will reveal insights on the progress made from 2023 to 2024. It should be emphasised that although this comparison is made both at the level of country implementation and Standards implementation, the introduction of four new countries may have some influence and should therefore be taken into consideration when interpreting the results.

A comparability test was conducted on the indicators, which revealed that changes in the survey and scoring criteria may impact the direct comparison between the two years in some substandards. It is also worth highlighting the indicators where these conditions apply: 1.2.2, 1.2.3, 4.1.1, 4.2.1, 5.2.1, 5.2.3, 5.3.1, 7.1.1, and 8.2.1.

All improvements introduced that could affect comparability with the past edition were clearly identified to prevent inaccurate conclusions or potentially biased interpretations. In order to address such a possibility, the qualitative analysis refers not only to the new score

[1] Signatory Countries missing in this analysis: Finland, Greece, Iceland, and Latvia.
[2] Poland partially participated in the Scoreboard Survey 2024, therefore its answers are only considered in the general indicators' calculations, and no specific scoring exercise was made for Poland.

but also to the previous one without breakdown when a new indicator is introduced for the scores' calculation.

Additionally, it was found that some variations in the results between the different years were caused by the fact that, in some countries, different officials had answered the survey - the main source of information for the indicators. Thus, the FPs were also given the opportunity to make any necessary and applicable adjustments to the 2023 results.

2.2 Data Collection

Survey

Data included in the Scoreboard 2024 is collected mainly through a yearly survey, designed to cover all different dimensions of the SNS. The FPs play a fundamental role in the process of gathering information, as they are responsible for providing official information on each country through the survey.

Some areas for improvement were identified in the previous edition of this report, namely concerning the survey structure. With the aim of improving continuously, as well as gathering more and better information in an efficient way, the survey has been subject to significant improvements in this edition.

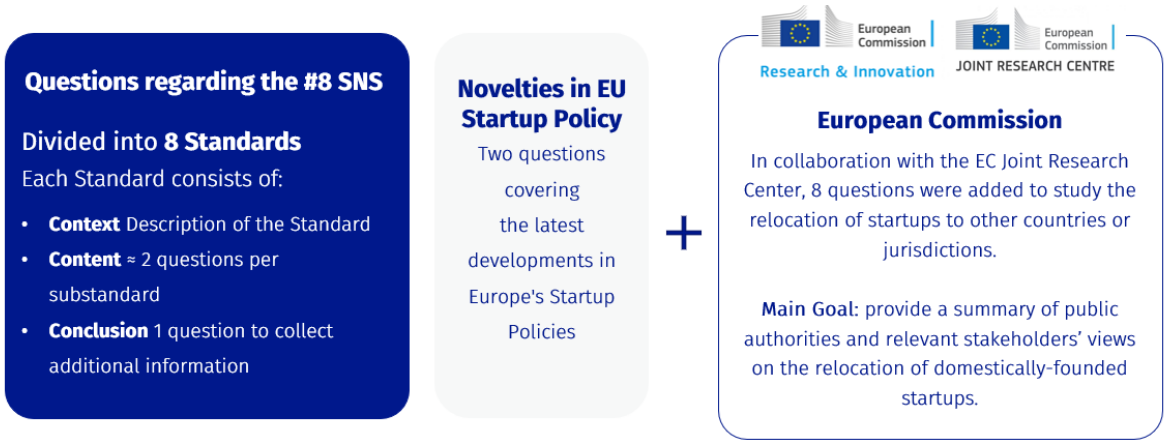


Figure 4. Structure of the Scoreboard Survey 2024

The survey – Scoreboard Survey 2024 – is divided into three sections:

- The first section is composed of questions related to the eight SNS implementation. It is therefore divided into eight subsections – one for each Standard. Each subsection begins with a description of the Standard and is made up of assessment questions regarding the best practices outlined in the EU SNS Declaration. Additionally, each subsection has an additional field, where the FPs are allowed to provide any sort of additional information, they deem relevant on the topic of each Standard.
- The second section refers to new developments in the startup ecosystem of each country, resulting in a new section. Here, FPs share all novelties from the last 12 months, as well as the policies to be prepared and/or implemented, and expectations for the coming year.

- The last section is the result of ESNA's collaboration with the European Commission, more precisely the Joint Research Centre (JRC) and the Directorate-General for Research and Innovation (DGRTD). This collaboration aims to contribute to a different study carried out, over the SNS Scoreboard about the relocation of European startups.

Following the aforementioned changes, it was still possible to increase the quality and quantity of the information gathered while also reducing the workload for the FPs. In 2023, the survey had 73 questions, whereas the survey was shortened to 46 questions plus sub-questions in this year's edition. All main questions are presented to all recipients, however more details on certain topics are only disclosed if applicable.

Another shortcoming identified last year was the time provided to the FPs to collect the information requested and answer the questions. The response time for this year's analysis was therefore extended from one month to approximately three months.

Additionally, some questions were reformulated with greater clarity to reduce potential ambiguity. As a result, the type of questions remains the same as last year, with the survey being organised into closed and open-ended questions, both single and multiple-choice questions (multiple answers and binary questions).

Indicators selection

The data collected from the survey was complemented by information from third parties, as the ESNA team conducted desk research by utilising a diverse range of reliable and official sources. The selection of the indicators and their sources has been carefully considered, encompassing different aspects such as the data treatment and methodology used by the third-party sources; a clear framework within the Standard in question; the frequency with which the indicators are evaluated, ensuring the scope of information available every year, and maintaining the comparability with other years; the metadata available; ensuring the geographical coverage of the countries analysed in the report.

The third-party sources used span from international organisations such as the OECD, the World Intellectual Property Organisation (WIPO), World Bank, to European institutions such as the European Commission (EC). Beyond their established credibility, these sources were sought for their relevance considering the topics tackled by the eight SNS.

As a result, ESNA gathered 44 indicators based on the official information provided by the participating countries through the Scoreboard Survey 2024, and additional indicators gathered from third-party sources. The majority of these indicators (40 indicators) were used for the composite index calculation, while the remaining ones were used exclusively in the analysis carried out in this report.

2.3 Data Analysis

Composite index

The composite index represents the degree of implementation of the best practices inscribed in the EU SNS Declaration. Therefore, the scores, meaning the respective implementation level by country and indicator, were aggregated in a Composite Index.

The Composite index is constructed by combining several variables or indicators, whose objective is - by including all the identified indicators - to reflect the overall status of the set of quantifiable targets - in this case, the eight Standards implementation.

In addition to the advantages described in the table, the decision to aggregate the indicators using a composite index is also based on recognised benchmarks that use this method, such as The World Bank or the OECD.

As ESNA adopted the composite indicators methodology, its generic strengths and limitations are highlighted below. Please note that the table is not exhaustive.

	Strengths	Limitations
Data Aggregation	Simplifies complex data sets into a single, interpretable figure. Single, informative statistic that summarises several indicators into one.	Loss of detailed information when aggregating multiple dimensions.
Comparative Analysis	Allows for comparative analysis between countries.	-
Support decision-making	Useful to guide policymakers and highlight areas of improvement in an easy way.	Focus highly on score rather than complex problems
Multiple dimension	Captures multiple dimensions in a single measure, allowing for a holistic view.	Selection and different weighting
Types of data	Incorporates different types of data: quantitative and qualitative information.	The standardisation may affect the comparability
Weighting	-	Different weights may lead to prioritise specific policies

Table 1. Methodology strengths and limitations

SOURCE: Methodology Report, ESNA (2024)

Nonetheless, it is worth mentioning some limitations such as having indicators with different reference years, since some external indicators, such as indicator 2.2.2 Index of Talent Attractiveness, are not updated on an annual basis. The fact that there is no transversal definition of startup can change from one country to another, impacting the answers and the results. In addition, some indicators assess a broader scope than startups, such as SMEs or even businesses in general.

Despite the limitations, the results and conclusions can be regarded as an additional tool for analysing the complexity of reality, establishing benchmarks between different practices in various countries, and monitoring the implementation of the EU SNS Declaration across nations.

Categorical scale

A **0-100% categorical scale was adopted for scores** based on closed questions of the survey. Here, 100% denotes evidence of full implementation, and 0% means non-implementation. The formulation of this scale involves distinct criteria tailored to the scope of each question. Cross-checking was conducted using the evidence provided by the FP when available. The scales were developed to include intermediate results, illustrating a gradual approach towards full implementation of the SNS.

Data transformation

The **min-max transformation was used to standardise indicators** expressed into different units. It involves a linear projection to normalise indicators, ensuring they have the same range. This process entails subtracting the minimum observable value and dividing by the range of observable values in the sample. As a result, all data values are rescaled to a value ranging from 0% to 100%, where 0 is the lowest attainable score, and 100 represents the highest possible score. Even though this normalisation method may serve the composite index, it may affect the comparison of the results over the years due to its distortion upon extreme and new values. For more information on the scoring criteria, please refer to A.3 Scoring Criteria.

Aggregation

The Overall index implies that an SNS' score is the simple average of its substandards' scores. Substandards' scores result from the simple average of the indicators it is composed of.

In instances where substandards are composed of a sole indicator, the value of the substandard is equal to the score of the single indicator that comprises it. This rationale is illustrated in Table 2 below.

Overall index	SNS	Substandards	Indicators
EU SNS Declaration Overall index Simple average of the eight Standards' scores	SNS #1 Simple average of the respective substandards	Substandard 1.1 Simple average of the indicators	Indicator 1.1.1
			Indicator 1.1.2
			Indicator 1.1.3
		Substandard 1.2 Simple average of the indicators	Indicator 1.1.2
			Indicator 1.2.2
			(...)
		(...)	(...)

Overall index	SNS	Substandards	Indicators
	(...)	(...)	(...)
	SNS #8 Simple average of the respective substandards	(...)	(...)
		Substandard 8.2 Simple average of the indicators	Indicator 8.2.1

Table 2. Structure of the composite index

SOURCE: ESNA (2024)

Simple averages were used in order to respect the principles of the EU SNS Declaration. The decision to calculate the Standards' scores using simple averages was made after some deliberation. In the considerations of the previous report, it was noted that different weights may potentially be used for different indicators. However, the analysis carried out is based on the EU SNS Declaration of Excellence, where there is no discrimination or differentiation in the best practices relevance. It is therefore clear that the EU SNS Declaration can only be monitored correctly if all the principles are considered at the same level. Any changes require unanimity in the policy arena, implying the necessity of a political rectification by the countries that signed the EU SNS Declaration in 2021, conveying a varying relevance of the different indicators.

The overall index was calculated using the following formula:

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

I: Score of the overall index
n: Nº of substandards, $1 \leq n \leq 8$
k_i: Nº of indicators composing substandard i, of the respective standard n
x_{ij}: value of indicator j in substandard i

2.4 Data and sources

The Scoreboard 2024's structure relies on an analysis that comprises 40 indicators. The tables below provide a detailed breakdown of the indicators used in this report for each SNS and its substandards, along with their respective sources. For more information on the scoring criteria please see A2. Metadata.

Substandard	Indicator	Source
1.1 Time & Cost	1.1.1 Number of days to start a business online	Scoreboard Survey 2024, Q7b: "How long does it take for an entrepreneur to establish a startup as a legal entity online?"
	1.1.2 Number of days to start a business in the commercial registers	Scoreboard Survey 2024, Q8: "How long does it take for an entrepreneur to establish a startup as a legal entity in the commercial registers?"
	1.1.3 Administrative costs for establishing a startup	Scoreboard Survey 2024, Q6: "What is the administrative fee for establishing a legal entity in your country?"
1.2 Startup Fast Lane	1.2.1 Existence of an online service to set up a company	Scoreboard Survey 2024, Q7a: "Is there an online option to set up a company?"
	1.2.2 Existence of fast lane & helpdesk available for entrepreneurs	Scoreboard Survey 2024, Q9a: " Is there a single online location where aspiring entrepreneurs can find all the necessary information about national regulations and funding opportunities?"
	1.2.3 Existence of a virtual helpdesk for regulatory issues for startups and scaleups	Scoreboard Survey 2024, Q10a: "Is remote support available for startups and scaleups from other EU Member States who have encountered regulatory issues or impediments? "
1.3 Cross-Border Services	1.3.1 Index of the cross-border services	European Commission (EC), 2023. eGovernment Benchmark 2024 Insight Report: Connecting Digital Governments
	1.3.2 Utilisation of legal documents from other EU countries for startup establishment or expansion within the single market	Scoreboard Survey 2024, 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?"

Table 3. SNS #1 "Fast Startup Creation" - Substandards, indicators and sources

Substandard	Indicator	Source
2.1 Visa Applications	2.1.1 Time to complete visa applications for founders	Scoreboard Survey 2024, Q13b: "What is the processing time for visa applications for experienced workers, when submitted by startups?"
	2.1.2 Time to complete visa applications for experienced workers	Scoreboard Survey 2024, Q13a: "What is the processing time for visa applications for founders, when backed by a trusted partner in the Member State?"
2.2 Programmes for Talent	2.2.1 Existence of return of EU tech talent programmes	Scoreboard Survey 2024, Q14a: "Are there any programmes and/or incentives in place to encourage the return of EU tech talent who emigrated to third countries?"
	2.2.2 Index of talent attractiveness for entrepreneurs	Organisation for Economic Co-operation and Development (OECD), 2023. The OECD Indicators of Talent Attractiveness 2023

Table 4. SNS #2 "Attracting and Retaining Talent" - Substandards, indicators and sources

Substandard	Indicator	Source
3.1 Taxation	3.1.1 Taxed only upon cash liquidity	Scoreboard Survey 2024, Q16a: "At what moment(s) are employees' stock options taxable?"

Substandard	Indicator	Source
3.2 Non-Voting Rights	3.2.1 Existence of stock options with non-voting rights for startups	Scoreboard Survey 2024, Q17: "Are startups allowed to issue stock options with non-voting rights?"
	3.2.2 Minority Shareholders & Bureaucracy	Not Optional, Index Venture, 2024
3.3 Stock Options Scheme	3.3.1 Existence of a country-specific stock options scheme	Scoreboard Survey 2024, Q18a: "Are there any specific legislations or programmes for stock options in your country?"

Table 5. SNS #3 "Stock Options" - Substandards, indicators and sources

Substandard	Indicator	Source
4.1 "Think Small First"	4.1.1 "Think Small First" principle implementation level	Scoreboard Survey 2024, 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?"
4.2 Compliance Exemptions	4.2.1 Existence of compliance exemptions/alternatives for startups	Scoreboard Survey 2024, Q21a: "Are there confirmed exemptions or alternative methods for startups to achieve compliance, in areas such as impact assessment?"
4.3 Regulatory Sandboxes	4.3.1 Existence of regulatory sandboxes	Scoreboard Survey 2024, Q22a: "Are there regulatory sandboxes available to encourage and facilitate experimentation and innovation for startups?"
	4.3.2 Number of established regulatory sandboxes in the country	Scoreboard Survey 2024, Q22b: "How many regulatory sandboxes are established in your country?"
	4.3.3 Number of startups engaged in consortia within regulatory sandboxes	Scoreboard Survey 2024, Q22d: "How many startups are participating currently in regulatory sandboxes in your country?"

Table 6. SNS #4 "Innovation in Regulation" - Substandards, indicators and sources

Substandard	Indicator	Source
5.1 Procurement Opportunities	5.1.1 Existence of administrative impediments to startup participation	Scoreboard Survey 2024, Q24: "Are there legal or administrative impediments that would put startups/scaleups at a disadvantage compared to other participants in innovation procurement opportunities overseen by national authorities?"
	5.1.2 Encouraging public buyers and procurement services to procure innovation from startups	Scoreboard Survey 2024, Q22d: "Are public buyers and procurement services officially encouraged to procure innovations from startups?"
5.2 Intellectual Property Rights	5.2.1 Possibility of ownership of IPR for startups in innovation procurement	Scoreboard Survey 2024, Q27a: "Can the ownership of intellectual property rights (IPR) usually be retained by the startup/scaleup participating in innovation procurement opportunities?"
	5.2.2 Intellectual property receipts as percentage of total trade	World Intellectual Property Organization (WIPO), 2024. Global Innovation Index 2023: Innovation in the face of uncertainty

Substandard	Indicator	Source
	5.2.3 Existence of exceptions for public sector Intellectual Property Rights (IPR) ownership based on overriding public interests	Scoreboard Survey 2024, Q27b: "Please specify the situations where the public sector can retain ownership of Intellectual Property Rights (IPR)."
5.3 Open-Source Assets	5.3.1 Existence of startups actively supported and contributing with open-source assets	Scoreboard Survey 2024, Q28a: "Are startups actively encouraged to contribute to open-source assets?"
5.4 Tech Transfer Policies	5.4.1 Existence of policies for smooth tech transfer	Scoreboard Survey 2024, Q29a: "Are there policies to facilitate a smooth transfer of the technology developed in universities and research institutes to startups?"

Table 7. SNS #5 "Innovation in Procurement" - Substandards, indicators and sources

Substandard	Indicator	Source
6.1 Public Grants	6.1.1 Existence of RRF for Venture Capital for startups	Scoreboard Survey 2024, Q31a: "Does your country use part of its Recovery and Resilience Facility (RRF) funding to enhance access to venture capital for startups?"
6.2 Indirect Access to Finance	6.2.1 Utilisation of EIB and promotional banks for VC investment gap bridging	Scoreboard Survey 2024, Q32a: "Does your country use European Investment Bank (EIB) programmes, Promotional Banks or other dedicated vehicles, leveraging private investments, and distributing funds to VC firms to address the existing investment gap?"
	6.2.2 Adoption of initiatives to diversify private capital for high-growth startup co-investment	Scoreboard Survey 2024, Q33a: "Have public authorities adopted initiatives to diversify private capital available for co-investing in high-growth startups?"
6.3 Tax Relief Measures	6.3.1 Existence of tax relief for BA	Scoreboard Survey 2024, Q35a: "Are there any tax relief measures in place aimed towards Business Angels to stimulate and support early-stage funding?"

Table 8. SNS #6 "Access to Finance" - Substandards, indicators and sources

Substandard	Indicator	Source
7.1 Incentives for startups	7.1.1 Existence of national awards and policies for startup role models	Scoreboard Survey 2024, Q37a: "Does your country actively promote diverse role models in the startup community through awards, public recognition or mentorship programmes?"
	7.1.2 Existence of social inclusion mobilisation initiatives	Scoreboard Survey 2024, Q38: "Do state 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?"
	7.1.3 Existence of incentives for diversity hiring	Scoreboard Survey 2024, Q39a: "Are there any specific incentives for startups to focus on hiring a diverse workforce, including considerations of ethnicity, gender, religion, age, and sexual orientation?"

Substandard	Indicator	Source
7.2 Incentives for Founders	7.2.1 Support to founders from underprivileged backgrounds	Scoreboard Survey 2024, Q40a: "What support is provided to founders from underprivileged backgrounds to create companies?"

Table 9. SNS #7 "Social Inclusion, Diversity and Protecting Democratic Values" - Substandards, indicators and sources

Substandard	Indicator	Source
8.1 "Digital First"	8.1.1 Index of digital public services for businesses	Digital Economy and Society Index (DESI) for the Digital Decade, 2024
	8.1.2 Digital public services availability by percentage of areas covered	Scoreboard Survey 2024, Q42: "Which public services in your country are designed to be carried out digitally?" (The options provided were "company creation"," filing of taxes", "participation in public procurement opportunities", and "consultation of official records")
	8.1.3 Existence of national digitalisation strategy implementation	Scoreboard Survey 2024, Q43a: "Is your country currently implementing a global and cross-sector digitalisation strategy at national level?"
8.2 Knowledge Sharing	8.2.1 Existence of proactive engagement for digital knowledge sharing and best practices	Scoreboard Survey 2024, Q44a: "Are startups and scaleups proactively approached and engaged by state authorities to share knowledge and best practices regarding digitalisation?"

Table 10. SNS #8 "Digital First" - Substandards, indicators and sources

2.5. Steering Committee

In the current edition of the Scoreboard 2024, a Steering Committee has been set up to advise the ESNA team on several dimensions of the report, giving special attention to the methodology. The Steering Committee thrived to support the present work through accurate recommendations, such as providing new tools, indicators and sources of quantitative data, contributing to the data collection through the survey and the analysis of the subsequent results, and lastly, valuable insights on the technical tools used and data treatment.

Considering the numerous changes and efforts to improve the analysis, the Steering Committee's contributions were collected at different stages of the Scoreboard's development and incorporated into the analysis.

The invited members were selected based on their expertise and experience in different scientific areas and knowledge relevant to the analysis carried out. It is composed of five members from different organisations: the World Bank, Joint Research Centre - European Commission (EC), IPSOS, NOVA Information Management School (NOVA IMS), Index Ventures and Not Optional. For further information and biographies of the members, please see A3. Steering Committee - Members.

Overview of the Standards and the Startup Ecosystem

03.

03. Overview of the Standards and the Startup ecosystem

3.1 Implementation level by SNS

When considering the startup policy ecosystem across Europe in 2024, in regards to the eight SNS, it features a positive implementation level of 61%. Compared with last year's results, a positive trend is recorded with a seven p.p increase from 2023 (54%). Despite promising results, there is still a significant disparity between the Standards, with some having lower levels of implementation that require attention. At the same time, the increase compared to the previous year is also not linear, as some Standards improved while others decreased their level of implementation.

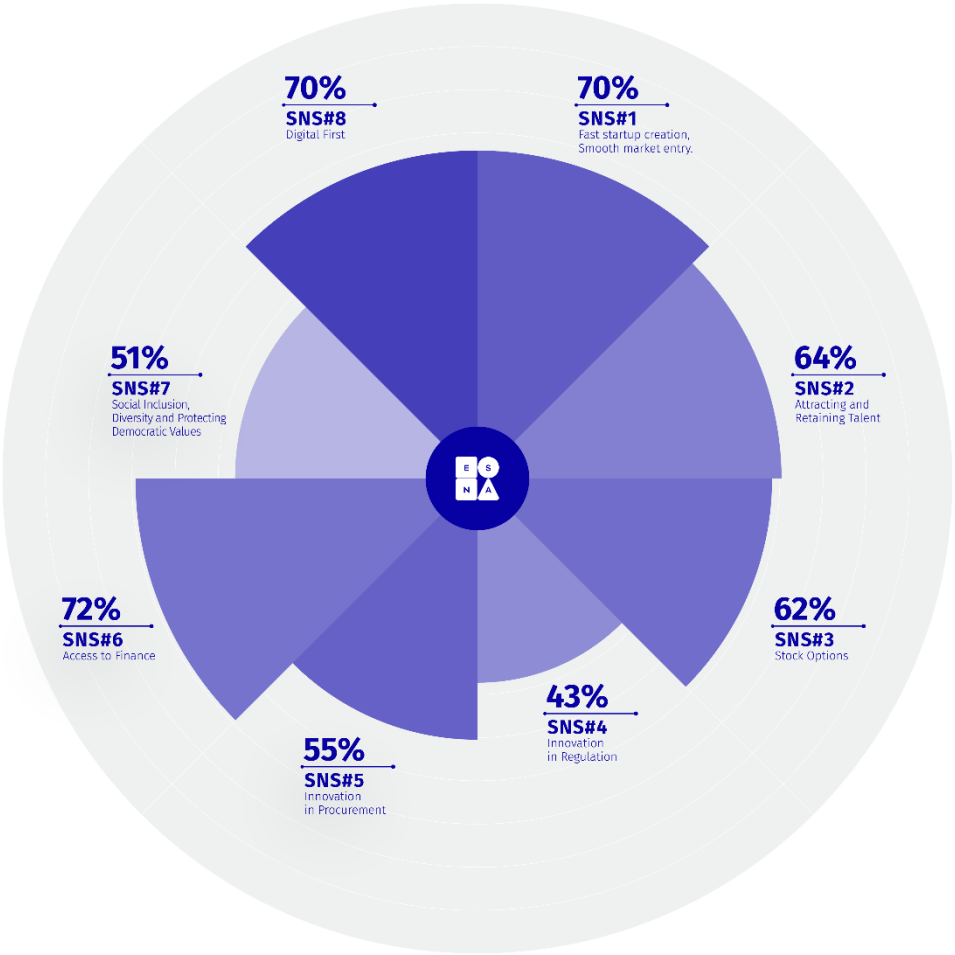


Figure 5. SNS implementation level

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

Standard #6 Access to Finance is the best-performing Standard standing out with its high level of implementation and substantial increase from last year. With its 72% score, Access to Finance reflects European countries' efforts to decrease the financial gap in the EU, through new and different funding instruments. These mechanisms span from direct investments through public grants, indirect investments through VC funds, and tax incentives to investors. This growth of 16 p.p since last year reveals how this is an unequivocal priority in Europe and

how new mechanisms have been designed and deployed through national efforts and with the support of European organisations such as the European Investment Fund (EIF) and the EIB.

Standards #1 Fast Startup Creation and #8 Digital First, are the second and third best performing, both scoring 70%. Both follow last year's trend, where SNS #8 Digital First occupied first place with 75% implementation and SNS #1 Fast Startup Creation the second place with 64%. However, only SNS #1 Fast Startup Creation has increased its level of implementation, while SNS #8 Digital First has decreased.

The good performance of these two Standards is interconnected. In order to be able to set up a company in a fast and streamlined way, it is essential that related processes are digitalised, as it is the only way to make the procedures more agile. Therefore, a high performance of one Standard implies the other one's high performance.

SNS #8 Digital First scores 70% this year (minus five p.p than 2023[3]), reflecting a substantial level of public digitalisation in European countries, characterised by strong digital public services, implying the general application of the "Digital First" Principle. However, it is worth highlighting that the path to digitalisation is not entirely complete, with some efforts being necessary for knowledge sharing between innovative companies such as startups and governments.

Similarly, SNS #1 Fast Startup Creation scores 70% this year (plus six p.p than 2023) reflecting a Europe with streamlined processes to start a company. It demonstrates that there is an ongoing effort to simplify and digitalise processes across Europe, thereby making them speedy and affordable. Beyond the processes of establishing a company, there is a concern about providing useful information to entrepreneurs on topics such as national regulation and funding. Furthermore, support tools are becoming increasingly sophisticated, although there is still a general shortfall in direct support for founders through helpdesks.

Although these three are the Standards with the best implementation levels, some improvements in the implementation of other Standards may be noted - such as SNS #2 Attracting and Retaining Talent, growing to 64% with a 14 p.p increase, reflecting more programmes to attract talent and faster visa programmes. In addition, the 62% score achieved in SNS #3 Stock Options, demonstrates that there has been an evolution in SO frameworks across Europe with an increase of five p.p.

While acknowledging recent progress is essential, it is equally important to emphasise areas that present opportunities for improvement, such as SNS #4 Innovation in Regulation, and SNS #7 Social Inclusion & Diversity, achieving the lowest scores.

SNS #7 Social Inclusion & Diversity is the second lowest performer with 51%. This outcome, although not as good as other Standards, marks an impressive increase from the 30% implementation level in 2023. More efforts should be put in place in developing programmes focusing on social inclusion, namely supporting startup creation for underprivileged founders. Aiming at more diversity in the startup ecosystem is fundamental for closing the gender gap and ensuring more inclusive economies.

[3] It should be noted that some of the changes may be justified by the improvements implemented in this year's methodology. For more information see 02. Methodology.

SNS #4 Innovation in Regulation is the lowest-performing Standard in 2024, with an implementation level of 43%. Even though the decrease from 2023 is only one p.p - almost maintaining its implementation level - the lowest-performing Standard in 2023 (SNS #7 Social Inclusion) had a significant increase, thereby climbing the Standards' ranking.

Therefore, innovation in regulation is not up to par. Despite a positive effort to implement the Think Small First Principle in policy-making processes, there is a lack of support to startups through exemptions. Besides, regulatory sandboxes are a key instrument to innovation, where startups must have a role. However, this is not the case observed in the analysed countries.

3.2 Implementation level in Europe

Upon analysing the overall performance of ESNA Members in the different SNS, Figure 6 illustrates some variations in the implementation level by country. The results indicate that 14 of the 24 countries considered surpass the overall average (61%), while the remaining ten are yet to reach it.

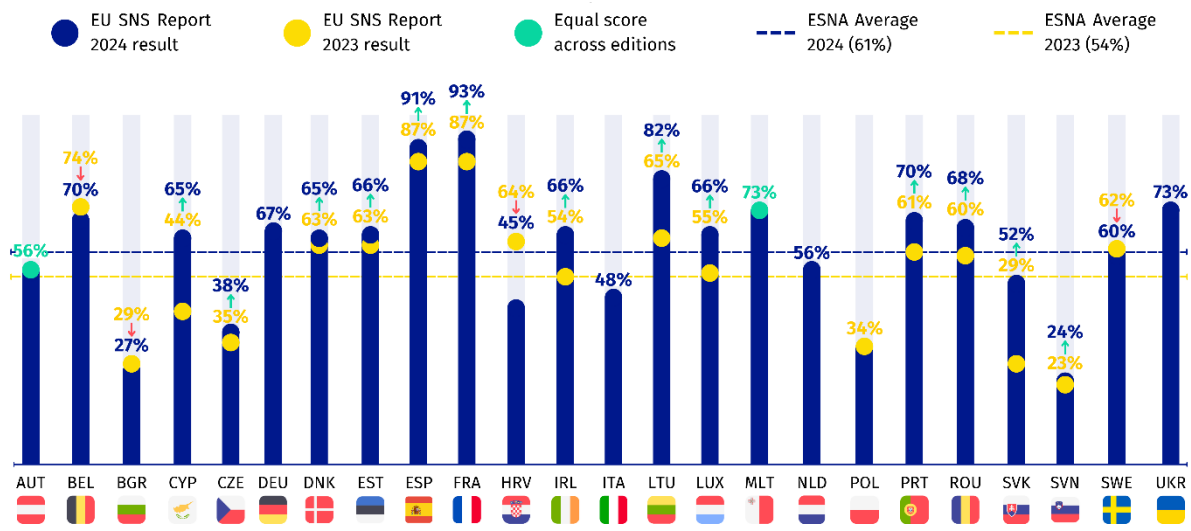


Figure 6. SNS implementation level in Europe (%) – overall score and progress

SOURCE: ESNA, based on official data from Member Countries (Survey 2023 & 2024)

The results reveal that although there is a positive trend as some countries increase their Standards implementation, the results still vary greatly, revealing disparities between countries. Despite these positive trends, some score declines also deserve special attention.

The analysis shows that the highest performing group of countries in 2024 is composed of France, Spain, Lithuania, Belgium, and Malta.

France achieves the highest possible score (100%) in SNS #3, #6, and #7. The Business creator share subscription warrants (BSPCE) enable startups to offer their employees and certain managers the right to subscribe for shares at a pre-set price in a flexible and tax-efficient programme. France also counts on an Investment Programme for the Future (PIA4) with 2.5

billion euros to finance VC. It is worth highlighting its three p.p increase in the level of implementation since 2023.

Spain follows closely by achieving the highest possible score (100%) in SNS #4, #6, and 99% in SNS #8. Although it is not a novelty this year, the Spanish Startup Law provides a legal framework that benefits startups and promotes important mechanisms ranging from regulatory sandboxes, optimal SO schemes, tax benefits, as well the development of a digital platform that supports company creation. The country recorded a four p.p increase in the level of implementation since 2023.

Lithuania achieves the highest possible score (100%) in SNS #6, #7, and 99% in SNS #8. Lithuania has several incentives in place to foster VC investment, among which a mechanism targeting BAs, working as a co-investment fund to encourage more angel investors to invest in startups. Lithuania recorded a substantial increase from 65% in 2023 to 82% in 2024, reflecting a notable evolution.

Malta scores 73%, maintaining its result from 2023. The country achieves the highest possible score (100%) in SNS #2 and SNS #8. Malta introduced a measure to foster employment for non-residents with skills not addressed by the local labour market through a fiscal incentive – a 15% flat rate on income earned (over 52 thousand euros).

Ukraine – a new contributing country this year – also reaches a 73% implementation level. It is one of the highest performers in SNS #3 and #6 (100%). The Ukrainian Startup Fund actively engages with private investors, VC firms and corporate partners to promote co-investment strategies. It notably developed grant programmes designed to attract private capital by de-risking investments through early-stage funding.

3.3 Developments and expectations for the startup ecosystem

The year 2024 witnessed new policies and initiatives in Europe to promote entrepreneurship and startups in Europe. The latest developments that occurred over the past 12 months are highlighted in this chapter. Please note all the information included in this section is based solely on Focal Points' feedback, no additional desk research was conducted.

With the increased prominence of startup policies and the need for a new strategic vision aimed at promoting a thriving technological and entrepreneurial economy, one of the main developments was the launch of specific strategies for startups. Denmark developed a new national entrepreneurship strategy titled *"A World-Class Entrepreneurial Country"*, and Germany released its second Progress report on the Startup Strategy implementation. The Netherlands published the National Technology Strategy focusing on ten key technologies, Ukraine developed the Ukrainian Global Innovation Vision 2030, and Slovenia launched the Slovenian Startup Strategy.

Even though education is not directly covered in ESNA's Standards, new initiatives are worth highlighting, such as Malta's youth education tool to foster an entrepreneurial mindset and culture, featuring mascots Stella the Star and Ricky the Rocket to explain startup concepts. With a different approach, Ukraine implemented a Startup School – Incubator - Accelerator Network based on Higher Education Institutions and Research Institutions.

Regarding 4.1 SNS #1 "Fast startup creation, smooth market entry" and 4.3 SNS #3 "Stock Options", Austria and Bulgaria adopted a similar measure for companies. In Austria the new Flexible Company brings new features that benefit prospective entrepreneurs and startups, facilitating the process of establishing a company and reducing the necessary funds to set up a company, as well as allowing the issuance of SO without voting rights. Similarly, Bulgaria now offers the Variable Capital Company, which aims to simplify processes for startups. This framework establishes an Employee Stock Ownership Plan scheme allowing the issue of SO with no voting rights. It does not require Capital registration in the Commercial register nor has a minimum capital requirement.

Lastly, Spain launched a web portal for the National Office of Entrepreneurship under the Startup Law. It offers a variety of features for different stakeholders of the entrepreneurial ecosystem such as a support service to help founders clarify any doubts related to the startup law, or a self-assessment tool to evaluate the business model and the user's profile as an entrepreneur.

Regarding 4.2 SNS #2 "Attracting and Retaining Talent", it is worth highlighting Estonia's introduction of the Scaleup visa to support a faster scaling of companies older than ten years. This visa streamlines non-EU talent's hiring processes, offering benefits similar to the Startup Visa, including a simpler application process for visas and residence permits.

On 4.5 SNS #5 "Innovation in procurement", some novelties in tech transfer policies arose, with Austria's Spin-off Initiative for academic spin-offs and spin-ins that meet the requirements of international venture capitalists. To this end, both startup financing is provided to attract private investors as well as support for professional spin-off structures at universities.

Regarding 4.7 SNS #7 "Social Inclusion, diversity and protecting democratic values", Ireland stands out with 45 women-led startup companies receiving approval for investment, highlighting a commitment to gender diversity in the startup community.

However, most developments occurred within the framework of 4.6 SNS #6 "Access to finance", with several countries reporting new funds and financing mechanisms dedicated to startups.

Malta launched the Government Venture Capital Limited (MVC), a VC company responsible for investing ten million euros in companies operating in innovative economic sectors. Similarly, Czechia approved its first VC investment fund for digital startups in the pre-seed stage, in which it will co-invest with other VC funds on the Czech market.

Alongside this, Cyprus also launched a blended finance scheme by the Research and Innovation Foundation (RIF) offering €1,5 million equity free for startups/scaleups that have secured at least 1 million from regulated funds across the European Economic Area (EEA). Lithuania launched new international accelerators and new funds emerged (Scale Wolf, Baltic Sandbox, Firstpick). Lastly, Enterprise Ireland invested 24 million euros in startups through its High Potential Start-Up (HPSU) and Pre-Seed Start Fund (PSSF) programmes.

Despite significant efforts in terms of new initiatives and programmes to promote startups and entrepreneurship, it is important to note that the Standards with the lowest level of implementation, such as #4, are the ones where no development was reported.

After looking at what happened in the past 12 months, one may look forward to what might be new next year, or to an extent understand the priorities of each country for 2025. The anticipated initiatives analysed are different from the previous ones. They were therefore not grouped by Standards, as many of them have a macro view of the policy. This is why the following categorisation will be done by country.

Austria intends to create a new Fund of Funds to increase the economic potential of startups.

Belgium plans to implement a new vision for the Walloon government by making entrepreneurship a pillar of regional recovery, supporting entrepreneurs and promoting success stories, namely in education.

Bulgaria aims to allow pension funds to invest in VC. Also, an online platform for the Blue Card and other visa mechanisms will be developed to attract talent.

Czechia will propose a more favourable Employee Stock Ownership Plans (ESOP) legislation. Additionally, new funds are expected to be released under the Recovery and Resilience Facility (RRF).

Denmark aims to create a new Fund of Funds to increase the economic potential of startups.

Estonia will have a new tax incentive pilot for innovative companies, working on the basis of cashback on R&D employee income tax.

France aims to increase its deep tech Initiatives. The French government, through Bpifrance, is intensifying efforts to support deep tech startups, as well as clean tech.

Germany will launch a reform of procurement law, the Procurement Transformation Package, to make procurement procedures faster and less bureaucratic, reducing the efforts required from startups and Small and Medium Enterprises (SMEs) to participate, and expanding the contracts awarded directly to young companies. Additionally, a new legal framework for regulatory sandboxes (the General Regulatory Sandboxes Act) will be adopted. Lastly, the country aims to pass the Future Financing Act II to further facilitate access to the capital market for innovative startups and to improve the absorption of equity capital.

Ireland plans to launch a new policy on incubation and acceleration programmes that will increase the internationalisation of High Potential Start-Ups (HPSUs). It follows the completion of a White Paper on Enterprise Implementation Plan with the OECD on incubation and acceleration programmes to support the internationalisation of HPSUs released in 2024.

Lithuania aims to set up a new Information and Communication Technology (ICT) accelerator as well as new funding opportunities for startups. Additionally, establishing InnoHub in Silicon Valley should help Lithuanian startups scale to the US (United States) market.

Luxembourg will elaborate a roadmap for the development of the startup ecosystem, proposing actions that will contribute to increasing Luxembourg's competitiveness by developing a complete, attractive and inclusive startup landscape.

Malta intends to set new regulations surrounding share options/awards under a new scheme to be launched. A new tax benefit will be put forward for business entities that opt for investing in startups directly, facilitating access to finance for startup founders and co-

founders. Additionally, efforts will be made to develop a new framework for residency by investment when linked to startups.

Portugal plans to create an Ignition fund to finance growing startups, as well as a deep tech investment fund to finance sustainability innovation. Additionally, the country will implement a new scheme to attract talent.

Slovenia will make it a priority to strengthen the role of the startup registry, as well as the development of a robust database of all Slovenian startups to measure the success and progress of the startup ecosystem.

Spain will run an evaluation on the impact of the Startup Law as a basis for promoting the development of the innovative entrepreneurship ecosystem with the OECD. Additionally, the country aims to create an inter-ministerial collegiate consultative and collaborative body between public administrations, universities, public research organisations and technology centres.

Ukraine expects the approval of new laws regarding the innovation sector, such as “On Support and Development of Innovation Activities”, which is currently at the stage of approval by the central executive authorities, or “On Approval of the Procedure for Providing Financial Support for the Establishment of High-Tech Production with the Participation of Higher Education Institutions and Scientific Institutions on Co-financing Terms”, to update the institutional structure of governance in the field of innovation, identifying those responsible for policy development and implementation of the removal of bureaucratic restrictions.

SNS adoption: Status

04.

04. SNS adoption: Status

4.1 SNS #1 “Fast startup creation, smooth market entry”

4.1.1 Overview

The first Standard presented in the EU SNS Declaration emphasises the importance of streamlined startup creation and a smooth market entry process for aspiring entrepreneurs and everyone who wishes to innovate or create.

One key element to cultivate a strong, healthy ecosystem in which innovation and knowledge-based developments can thrive is to have seamless administrative procedures in place to start and fuel promising ideas. This may involve easier paths to explore business opportunities to expand to other EU countries, setting up a business fully online and in a matter of a few hours, and having support available in different languages, among other aspects of a smooth and quick company setup process.

A fast and simple company creation, together with smooth market entry mechanisms, is one of the cornerstones to bringing more successful entrepreneurs into our European startup ecosystem. For this purpose, administrative procedures should not be a barrier to innovation: lengthy bureaucratic processes, high administrative fees, unclear procedures, and time spent looking for sparse information online are some elements that may slow down or even prevent the creation of new ventures.

As underscored in the previous edition of the SNS report, notable progress was made through investments in digital public services tools such as the Single Digital Gateway (SDG), Points of Single Contact (PSCs), electronic IDentification, Authentication and trust Services (eIDAS).

As the most recent feature from the SDG, complementary to other initiatives, the Once Only Technical System (OOTS) was released in December 2023 by the EC. It aims at facilitating cross-border operations by overcoming digital barriers and lack of interoperability across data sources. The OOTS is expected to improve SMEs and self-employed workers’ journeys when scaling their businesses to other EU countries.

When covering this topic, the answers provided in the Scoreboard Survey 2024 and the Index of the Cross-border Services from eGovernment Benchmark 2024 demonstrate that an overall positive implementation was achieved on SNS #1 "Fast Startup Creation, Smooth Market Entry". As shown in Figure 7 below, with an average ESNA score of 70%, this is the second-highest score achieved by a Standard in this year’s edition. While no country reached a score of 100%, SNS #1 records an increase of six p.p in comparison with the EU SNS Report 2023, in which the ESNA average was 64% - making it the second-best scoring Standard in that year as well.

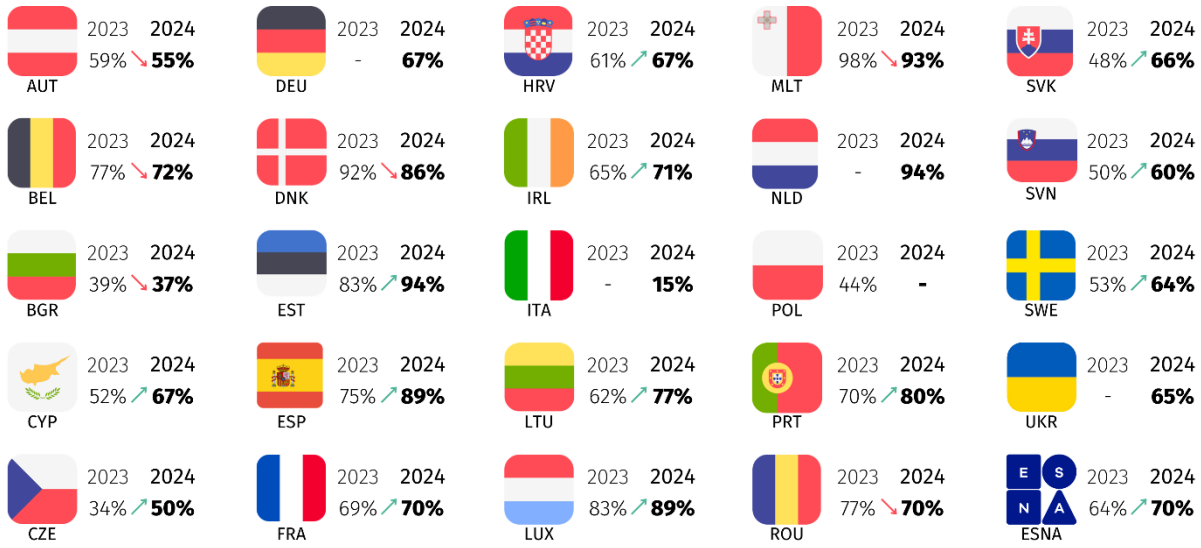


Figure 7. Countries' scores for level of achievement of SNS #1

SOURCE: ESNA, based on official data from Member Countries (Survey 2023 & 2024) & eGovernment Benchmark 2024

Despite a visible increase in SNS #1's score, six countries that replied to the survey in the past and current edition (2023 & 2024), decreased their overall implementation level in this Standard. Such a decrease is explained by the introduction of new indicators paired with additional evidence and information requirements for each answer provided by the respondents. Some countries' scores also decreased due to higher costs related to business setup.

In order to provide a better understanding of this Standard and bring more depth to the analysis, a breakdown of the substandards that compose SNS #1 may be found in Figure 8 below. The full description of this SNS #1 can be found in the Annexes, A1. EU Startup Nations Standards – Description.

Substandard 1.1 – Time & Cost
At the moment of starting a business, time spent setting up the company is an important factor, and the administrative burden may pose an obstacle. The cost associated with the creation of a company also holds significance, particularly in facilitating business creation. Early-stage companies entail subsequent investment costs, making a high fee for setting up a company a potential deterrent. Administrative costs should not be an impediment to business creation and entrepreneurship.
Substandard 1.2 - Startup Fast Lane
Administrative processes for setting up a business are typically complex. Consequently, it is recommended that countries support entrepreneurs extensively by establishing helpdesks to assist them. Additionally, providing comprehensive information on setting up a business, specific regulations, funding opportunities and facilitating market entry can significantly contribute to initiating successful ventures.

Substandard 1.3 - Cross-Border Services

The European ecosystem places a high value on freedom of movement and the possibility of establishing companies across borders, ultimately benefiting the countries in which the new companies are formed. It is therefore imperative to create favourable conditions for the establishment of companies by non-nationals.

Figure 8. SNS #1 substandards description

SOURCE: ESNA (2024)

In overview, the Substandard 1.2 – Startup Fast Lane increased a total of 11 p.p, going from an implementation level of 59% to 70%. Likewise, Substandard 1.3 – Cross-Border Services, increased its score by ten p.p, growing from 63% to 73% of implementation level. On the other hand, Substandard 1.1 – Time & Cost, showed a decrease of three p.p, going from 69% to 66% of implementation level. Regarding this Standard in specific, it should be noted that some of the changes may be justified by the improvements implemented in this year's methodology[4]. For a deeper understanding of Standard #1 results variation, illustrated in the Figure 9 below, please refer to each substandard analysis.

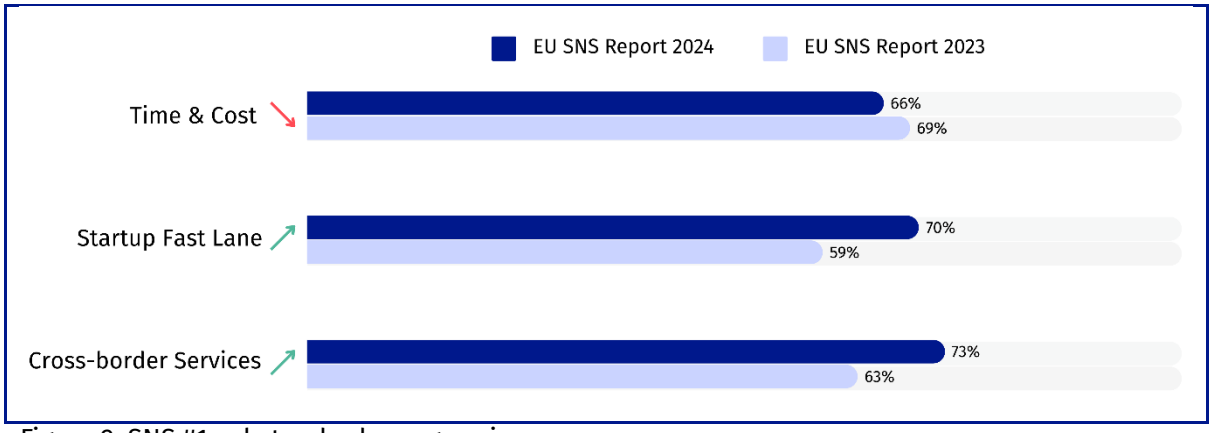


Figure 9. SNS #1 substandards progression

SOURCE: ESNA, based on official data from Member Countries (Survey 2023 & 2024)

For a quick assessment of the key insights gathered on the SNS #1 analysis, please refer to the main takeaways below.

[4] In particular due to the increase in the sample analysed. For more information please refer to 02. Methodology.

MAIN TAKEAWAYS

1. In **17%** of the countries it is possible to **set up a company in 1 day**, both online and in the commercial registers, for **100 euros or less**.

2. **Remote support for startups and scaleups** both in the host country's language and in a foreign one is **available in 46% of the countries**.

3. In **79%** of the countries, **printed and digital documents from other EU countries are considered valid** to establish a business or create a subsidiary.

4.1.2 Substandards analysis

Substandard 1.1 – Time & Cost

Three indicators were considered to analyse the time and cost involved during the process of setting up a startup: "Number of days to establish a business online", "Number of days to establish a business in the commercial registers", and "Administrative costs to establish a startup". The first two indicators, recently introduced, reflect an improvement made in this year's survey, resulting from splitting the indicator used in the previous edition: "Number of days to start a business". With this improvement, it was possible to collect more data and elaborate an enhanced assessment of the modalities and time associated with setting up a new venture.

Substandard 1.1 - Time & Cost demonstrates an overall implementation level of 66%, with four out of 24 countries (17%) achieving 100% of implementation level: Malta, the Netherlands, Romania, and Spain. Based on the answers provided, in these countries, it is possible to setup a business both online and in the commercial registers in one day with a cost between €0 and €100. Such results demonstrate an ideal effectiveness in the processes related to the aforementioned indicators.

When assessing the number of days to establish a business online, there are eight out of 24 countries achieving a score of 100%. As indicated in the Figure 10 below, entrepreneurs can create a startup in one day in Denmark, Estonia, Malta, the Netherlands, Poland, Romania, Spain, and Ukraine. On average, countries achieved a score of 60% on this indicator.

In the remaining countries, the time to establish a business online varies between one week - possible in 11 countries out of 24 - and two to four weeks, visible in four countries out of the 24 (17%); and more than four weeks, only visible in one country.

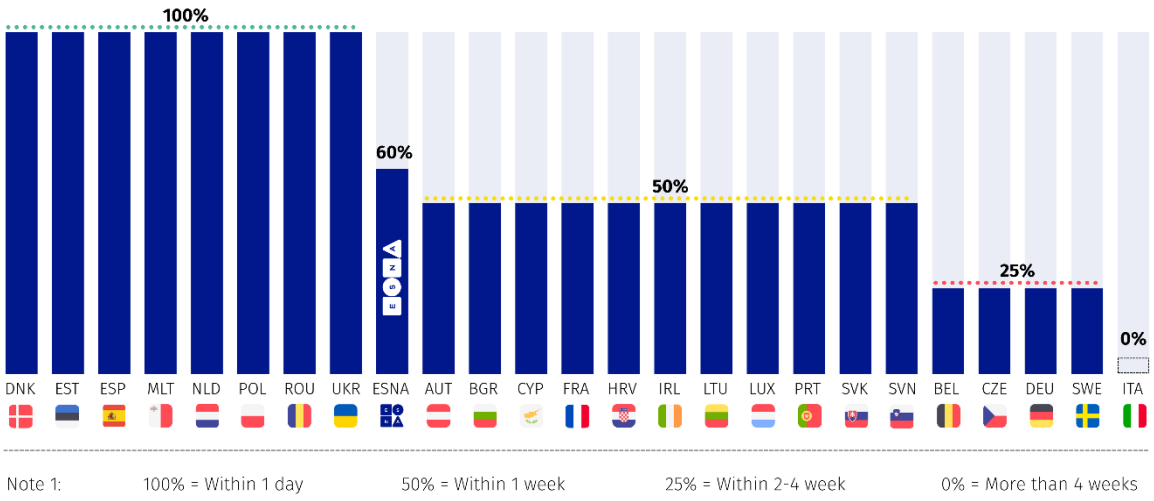


Figure 10. Number of days to establish a business online (Indicator 1.1.1)

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

When evaluating the **number of days to establish a business in the commercial registers**, nine of the 23[5] surveyed countries achieved the maximum score (100%). In Belgium, Estonia, Lithuania, Luxembourg, Malta, the Netherlands, Portugal, Romania, and Spain, it is possible to set up a business in the commercial registers in one day only.

In the majority of the countries, the required time to register a business in the commercial registers may go from one working week, as seen in 11 countries, to four working weeks or more, which is the case in three countries, as illustrated in the Figure 11 below. The average score achieved by countries in this indicator is 66%.

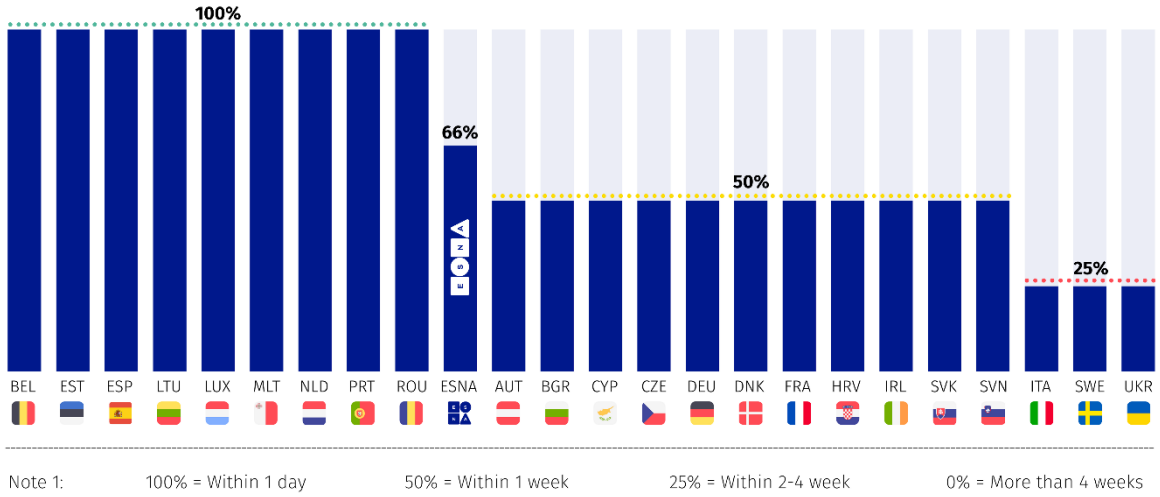


Figure 11. Number of days to establish a business in the commercial registers (Indicator 1.1.2)

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

[5] Poland was not included in the analysis due to lack of information provided.

According to a recent report on the Once-Only Technical System (European Commission, 2024), it is estimated that the Total Time of Journey (TTJ)[6] for creating an extension of a business in another EU country would be 14.4 weeks for an SME, and 10.2 weeks for a self-employed worker. In both cases, the most time-consuming part is planning and researching, as well as preparation. This highlights the need for a more centralised process for business setup, further developed in Substandard 1.2's analysis, and to promote a faster and seamless startup creation process.

Regarding the **administrative costs for establishing a startup**, the fees required to establish a legal entity are below €10 in three countries, and less than €100 in 12 out of the 24 surveyed countries. Therefore, considering their 100% implementation level, it is possible to establish a business with less than €100 euros in 12 countries, just over half of the 23[7] countries covered: Bulgaria, Croatia, Denmark, France, Ireland, Lithuania, Malta, the Netherlands, Romania, Slovenia, Spain, and Ukraine, as shown in Figure 12, below. On average, countries achieved a 72% score in this indicator.

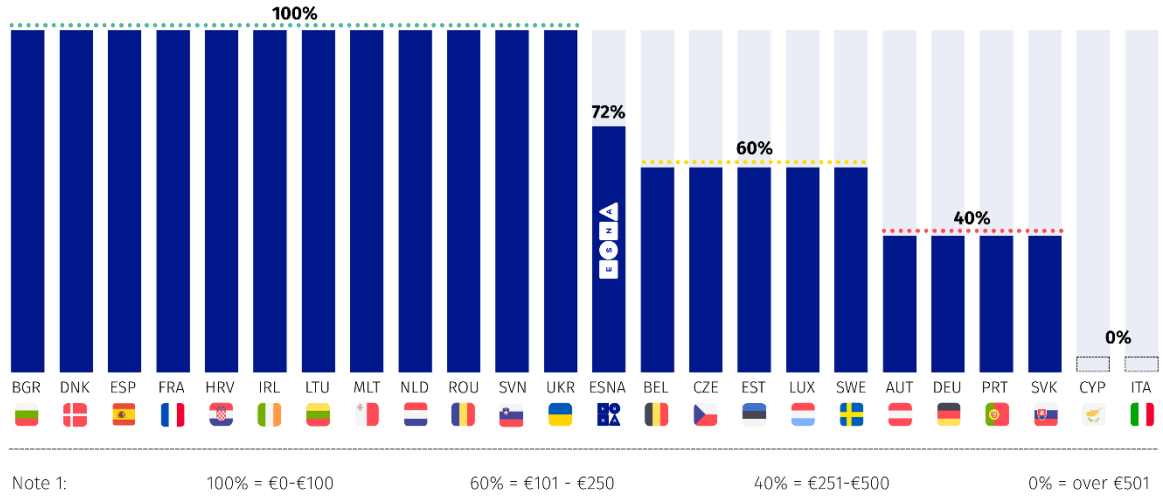


Figure 12. Administrative costs for establishing a startup (Indicator 1.1.3)

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

Furthermore, in five countries it is possible to set up a legal entity with fees ranging between €101 to €250, while in four other countries administrative services associated with business creation are set between €251 and €500. In the remaining countries, scoring 0% in this indicator, the fees go from €501 to €1000, and above €1000 in one case.

According to the previously mentioned Report (European Commission, 2024), when analysing the total cost of the journey, it was estimated that one of the most expensive phases is the procedure itself, estimated to cost around €3,218 for SMEs, and €646 for self-employed workers.

[6] The report considers the TTJ to entail four phases: planning & research, preparation, procedure, and follow-up & closing.
[7] Poland was not included in the analysis due to lack of information provided.

Box 1.1 Signatory Member's Initiative – Netherlands

The Netherlands Chamber of Commerce's (KVK) website enables a variety of entities – from sole proprietorship to European public limited companies – to set up their businesses online. When it comes to startups, this process takes one business day on average, for a cost that stays below the €100 threshold.

Substandard 1.2 – Startup Fast Lane

Three indicators were considered to evaluate the countries' performance in this Substandard: "Existence of an online service to set up a company", "Existence of fast lane & helpdesk available for entrepreneurs", and "Existence of a virtual helpdesk for regulatory issues for startups and scaleups".

Additionally, two new indicators that are not considered in the calculations were introduced to enhance the extent of our analysis: "Number of countries providing an online service to establish legal entities in the country's official language(s) and at least one foreign language", and "Number of countries providing a fast lane & helpdesk in the country's official language(s) and at least one foreign language".

Strongly contributing to the overall score of the Substandard, the Indicator 1.2.1 "Existence of an online service to set up a company" registered an overall score of 80%, with ten out of the 24 surveyed countries showing a full implementation level. This amounts to four more countries scoring 100% compared to the previous edition. As illustrated in Figure 13 below, Belgium, Denmark, Estonia, Ireland, Luxembourg, Malta, Poland, Portugal, Slovakia, and Sweden report having robust online services for setting up a company, with an accessible business setup website, by providing the necessary evidence requested to that end.

Due to some limitations identified in the evidence provided[8], nine out of 24 countries (38%) scored 75% in this indicator. A positive improvement in relation to last year's results, in which seven out of 21 countries (33%) achieved a score of 75%.

Furthermore, in a minority of five countries, the process can only be partially completed online, as certain official documents and bureaucratic procedures are required to be sent to more than one administrative entity and/or a certain degree of actions from the applicant (e.g. submitting the same document more than once or collecting signatures for document approval).

[8] For more information on the limitations considered and scoring criteria please check A2. Metadata

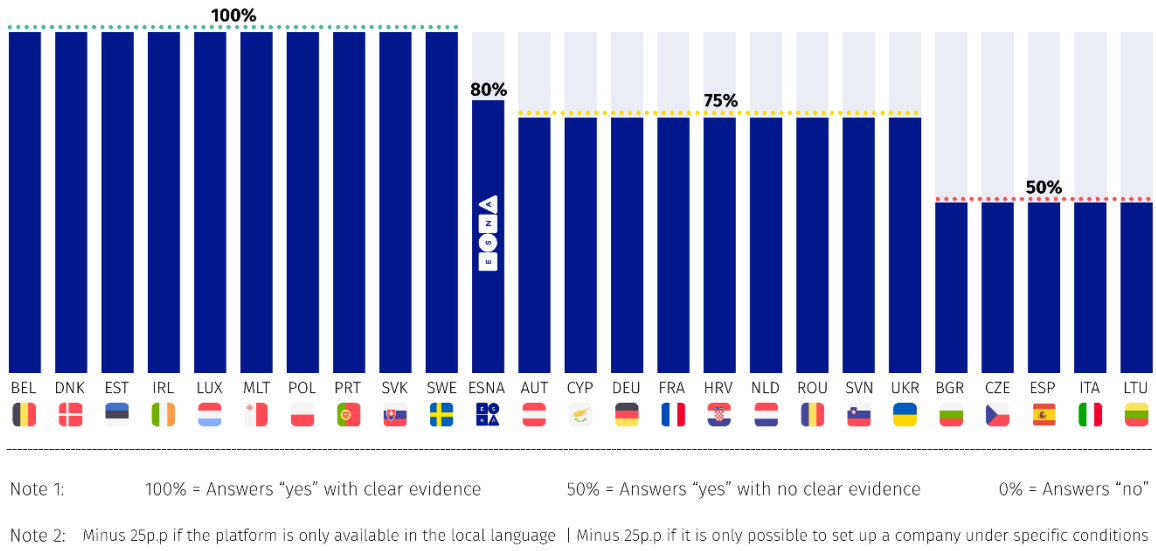


Figure 13. Existence of an online service to set up a company (Indicator 1.2.1)

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

When asked **how many languages websites dedicated to company formation are available**, 11 out of the 24 analysed countries indicated that the website is accessible in one additional language besides the national ones. In contrast, eight countries reported that only their national language was available on the website dedicated to online business creation. Furthermore, five countries demonstrated that they provide this content in two or more languages in addition to the official home country language(s), showcasing enhanced accessibility for non-native speakers.

It is important to bear in mind that this indicator, illustrated in Figure 14, was not directly considered for the composite index calculation.

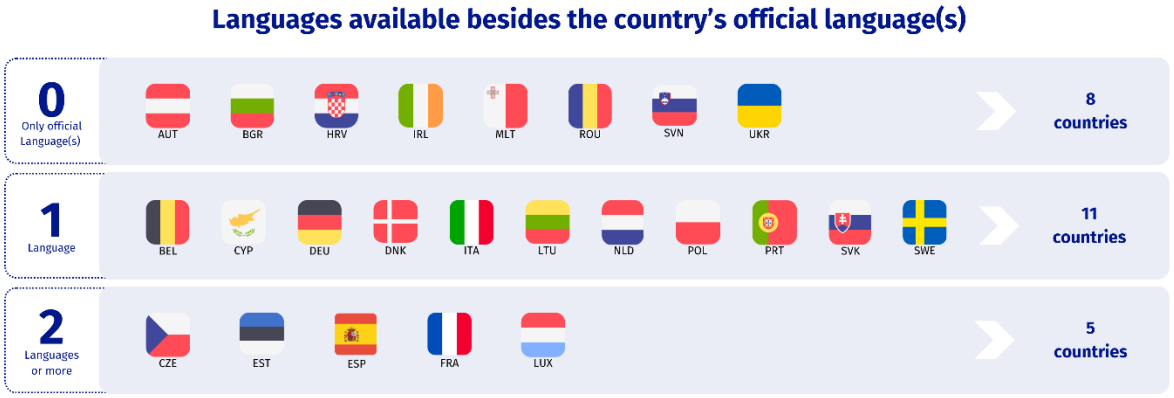


Figure 14. Number of countries providing an online service to establish legal entities in the country's official language(s) and at least one foreign language

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

Box 1.2.1 Signatory Member's Initiative – Estonia

Estonia claims to be "the world's most digital country", and the E-residency programme certainly is no stranger to this. Established in 2014, this is a government-issued digital identity that provides entrepreneurs from all over the world secure, remote access to the company setup process.

In line with the SDG guidelines and the 'once-only' principle, seven out of the 24 countries demonstrated with clear evidence the existence of a single online location where aspiring entrepreneurs can resort to a comprehensive service with a market access helpdesk for national regulations and funding opportunities.

As a result, Croatia, Estonia, Luxembourg, Malta, Netherlands, Spain, and Sweden, achieved a 100% implementation level regarding the indicator **existence of fast lane & helpdesk available for entrepreneurs**. An increase when looking at the EU SNS Report 2023 results, in which three out of 21 countries scored 100% in this indicator.

Regarding the existence of a single location where aspiring entrepreneurs can find all the necessary information about national regulations and funding opportunities, ten out of the 24 countries reached an implementation level of 75%, revealing that this only exists partially as some information may be missing. The surveyed countries shared that regulation framework resources are mainly lacking in these platforms, as well as specific information on funding access.

As illustrated in Figure 15 below, only two countries scored 0% as there was no centralised online resource for aspiring entrepreneurs to access such information at the time the survey was carried out. Overall, the implementation attained by countries in this indicator was 71%.

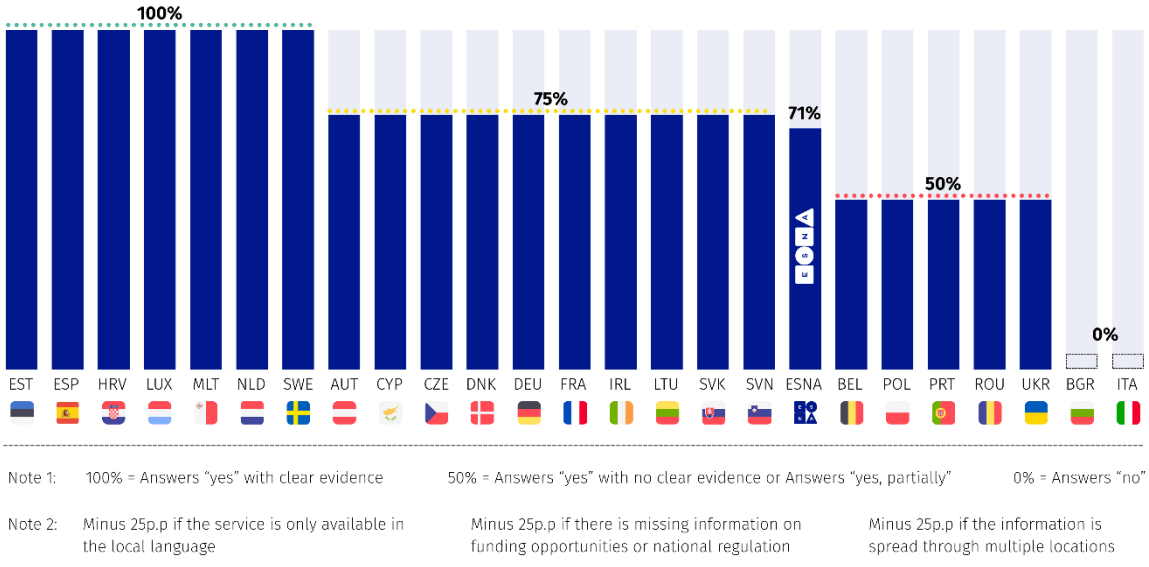


Figure 15. Existence of fast lane & helpdesk availability for entrepreneurs (Indicator 1.2.2)

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

In order to further analyse the accessibility of fast lane & helpdesk mechanisms embodied by a centralised online location designed for entrepreneurs, countries were requested to provide the number of languages these services are available, besides the national one. To this extent, while four countries reported that such websites are only available in their national language(s), 13 participating countries demonstrated to have one foreign language available. Additionally, four other countries indicated the availability of two or more foreign languages available, as illustrated in the Figure 16 below[9].

Figure 16. Countries providing a fast lane & helpdesk in the country's official language and at least one foreign language

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

When creating a new business, applicants typically seek help and tracking tools during the setup process of a new company (European Commission, 2024). To this end, the **existence of a virtual helpdesk for regulatory issues for startups and scaleups** indicator evaluates the availability of a remote support available for startups and scaleups from other EU Member States who have encountered regulatory issues or impediments.

Such mechanisms, provided both in official language(s) and in English, are essential to ensure that this support is accessible to all. As illustrated in Figure 17, 11 out of the 24 surveyed countries demonstrated with clear evidence having support both in English and in their official language(s) available, thus scoring 100%. That represents an increase in relation to the last year edition, in which eight out of the 21 participants provided evidence of operating a service that achieved 100% implementation.

On the other hand, seven out of the 24 surveyed countries admitted not having direct remote support for startups and scaleups from other EU countries that face regulatory issues, thus scoring 0%. Last year, there were eight countries with the same implementation level as well. Additionally, six countries - scoring 50% - reported having a remote support platform in place but did not provide the required evidence to support their statement, as illustrated below.

[9] Three countries did not provide an answer.

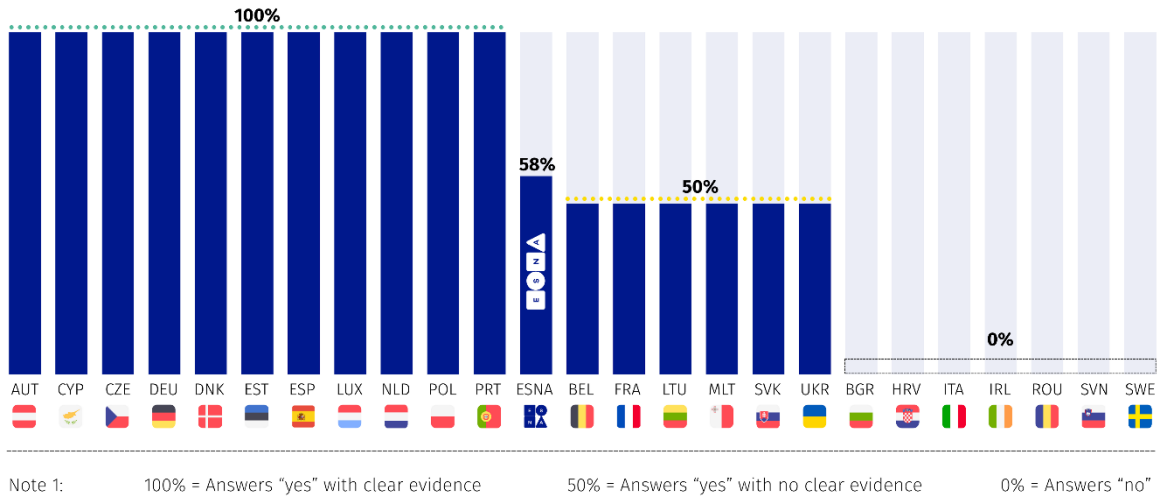


Figure 17. Existence of a virtual helpdesk for regulatory issues for startups and scaleups (Indicator 1.2.3)

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

As underscored by the Draghi Report, "during their early stages, start-ups are very vulnerable and need enhanced support. Currently, support is extremely fragmented, as also witnessed by the emergence of so-called 'one-stop shops', which makes it impossible for start-ups to find the most suitable instruments". Following this concern, the Report advocates for a better alignment of EU instruments and an enhanced coordination of other tools across Member States in order to ensure a level playing field. Such features "should be facilitated by providing an EU-level platform bringing together all relevant information and developing an ecosystem of services for start-ups. Such a platform should help start-ups to analyse their situation and needs, and to find the most appropriate solutions".

With such measures in place, as mentioned in the Draghi Report and endorsed in the EU SNS Declaration, countries are able to strengthen their local ecosystems and ultimately contribute to the EU-wide startup context. A positive implementation of the advocated policies can be observed in the implementation level increase in Substandard 1.2 – Startup Fast Lane.

Box 1.2.2 Signatory Member's Initiative – Spain

Spain's National Entrepreneurship Office (ONE) and its associated website is a comprehensive portal targeted at entrepreneurs in Spain. Offering a variety of services from facilitating networking to refining a business model, it also includes dedicated updates and news as well as tailored events. Additionally, details on how to access funding or work in Spain are available. Support on processes related to the Startup law or any procedure relevant to startups is also provided. This hub serves as startups' go-to resource in Spain.

Substandard 1.3 – Cross-Border Services

Two indicators were considered to evaluate the countries' performance in cross-border services available for applicants when creating new ventures or conducting market

operations within the EU. These are "Index of the cross-border services" and "Utilisation of legal documents from other EU countries for startup establishment or expansion within the single market".

When assessing the first indicator of this Substandard, **Index of cross-border services[10],** (Digital Decade 2024: eGovernment Benchmark, 2024) no country achieved a full implementation note. The eGovernment Benchmark, which bases its scores on four key dimensions - User Centricity, Transparency, Key Enablers and Cross-Border Services -, reveals that Estonia, Luxembourg, and Malta are the countries with the highest performance in this Substandard, with a score of 92% in cross-border services.

As outlined by the eGovernment Benchmark report, the progress achieved in the EU's digital transformation underscores a significant commitment by governments to improve digital service delivery for citizens and businesses. As a consequence of such efforts, the Cross-Border Services dimension addressed by the eGovernment Benchmark shows the greatest improvement, with an increase of seven p.p in its biennial average over four years. As illustrated in Figure 18 below, the majority of the countries displays a positive implementation level, with 14 of the surveyed States scoring above 65%.

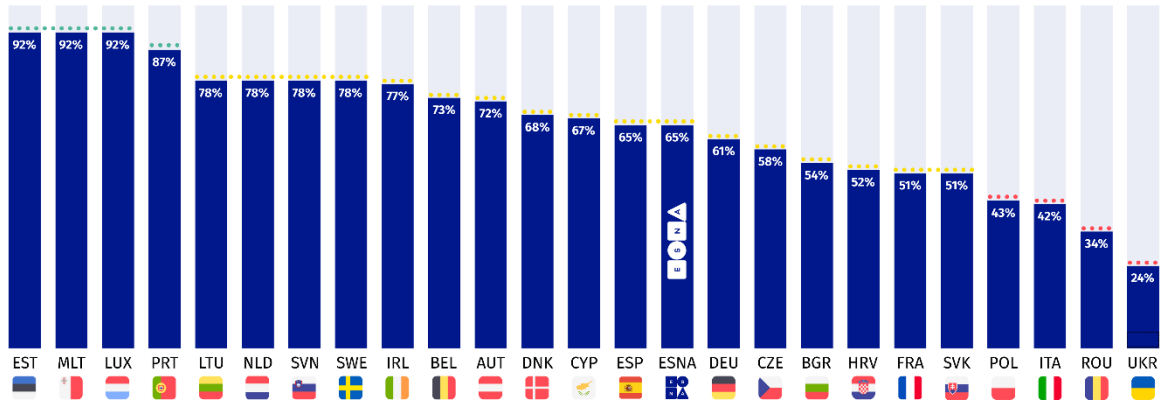


Figure 18. Index of the cross-border services (Indicator 1.3.1)

SOURCE: eGovernment Benchmark 2024

Beside some exceptions, the report outlines that the persistent gaps highlighted in previous eGovernment Benchmark reports are gradually narrowing. One of the critical gaps pointed out in the report is the difference between national and cross-border services. Currently, the availability level of services for national users is at 88%, whereas availability for cross-border users[11] only reaches 56%. Furthermore, the report also identifies that significant disparities persist between the percentage of national (76%) and cross-border (37%) services offering eID capabilities. Although these gaps have slightly decreased over the past four years, some barriers continue to hinder international users in cross-border operations.

[10] Cross-border services correspond to the "extent to which citizens and entrepreneurs from other European countries can access online information and services in a usable and integrated way through electronic identification and eDocuments" (European Commission, 2024)

[11] Cross-border users are "citizens or entrepreneurs that seek information and services in a European country other than their own." (*ibid.*)

As recognised under the New Interoperable Europe Act , implementing cross-border services is vital to foster a structured EU cooperation that will directly impact the startup ecosystem. A stronger framework for public administrations across the EU will contribute to a seamless cross-border data exchange, thereby saving time and costs for citizens and businesses.

The same concern is also covered in the SDG framework, under the 'once-only' principle. The EU advocates for a stronger interoperability between governments by recommending cross-border exchanges allowing users to request the direct exchange of evidence between authorities in different Member States.

For the full implementation of such interoperability between different states, countries must ensure the **utilisation of legal documents from other EU countries for startup establishment or expansion within the single market**. Regarding this indicator, ESNA's survey results reveal that 19 out of 24 participants achieved a full implementation level, demonstrating with clear evidence that both printed and digital documents may be submitted when establishing a startup or creating a subsidiary. A relevant improvement from last year's edition, in which only ten out of 21 countries allowed the use of legal document from other EU countries as evidence.

As illustrated in Figure 19 below, only four countries do not provide such feature when conducting cross-border administrative procedures for startup creation or expansion within the single market. The average implementation level of this indicator is 81%.

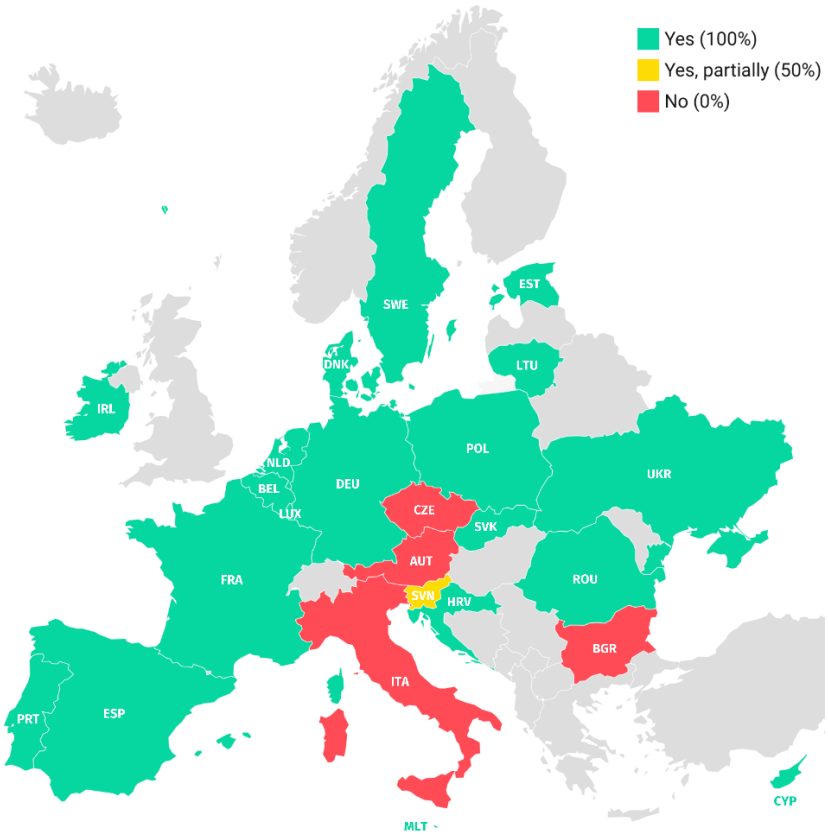


Figure 19. Utilisation of legal documents from other EU countries for startups within the single market (Indicator 1.3.2)

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

Beside the considerable identified challenges related to time, cost and administrative procedures associated with cross-border operations, startups face other challenges. Hiring abroad and facing bureaucracy in a foreign language may imply extra work for startups that wish to expand. Simplifying access to procedures such as employment regulations, legal frameworks and bureaucracy can feed into a seamless expansion and operations within the single market.

Box 1.3 Signatory Member's Initiative – Portugal

Portugal has been offering a variety of services - also available in English - ranging from online information targeted at entrepreneurs, to a One Stop Shop to find guidance on how to set up operations in Portugal, free of charge. Stepping into cross-border services for startups, e-documents from foreign entities are accepted, thereby streamlining the documentation process.

4.2 SNS #2 "Attracting and Retaining Talent"

4.2.1 Overview

Attracting and retaining talent is paramount for fostering favourable conditions for high-impact startups to set up a base in Europe, and eventually scale globally.

The highly technological nature of startups and the need for innovation is dependent on talented individuals and is therefore a fundamental condition for startups to thrive. Hence, it is necessary for Europe to have a favourable environment for creating, attracting and retaining such talent within its borders.

Talents are essential in driving innovation, developing cutting-edge technologies, and ultimately for economic growth. Broadly defined as the stock of knowledge, skills and other personal characteristics that make people productive, it is a prerequisite for the effective operation of businesses and public services (OECD, 2023). Across Europe, there has been a concerted effort to attract international talent, especially tech talent.

More than a necessity, the availability of highly qualified personnel is already an issue for entrepreneurs and innovative companies. Studies find that the biggest challenge SMEs face is finding employees with the right skills (European Commission, 2023), even before common hurdles such as regulation, bureaucracy, and access to finance.

ESNA therefore promotes in this Standard the implementation of initiatives to foster such an environment by facilitating visa processes for highly qualified profiles in the technology sector, and for self-employed founders who want to set up their businesses in Europe, as well as programmes to attract talent back.

Providing the right conditions to attract and retain highly skilled tech professionals and entrepreneurs to set up their businesses in Europe is key, notably in ensuring their smooth relocation and development in Europe.

Based on the survey answers and the Talent Attractiveness Index, an overall score of 64% implementation level is observed, a significant increase of 14 p.p when compared with 2023

results - 50%. Cyprus, Malta, and Romania achieved a 100% level of implementation on this Standard among the 24 countries, as shown in Figure 20 below.

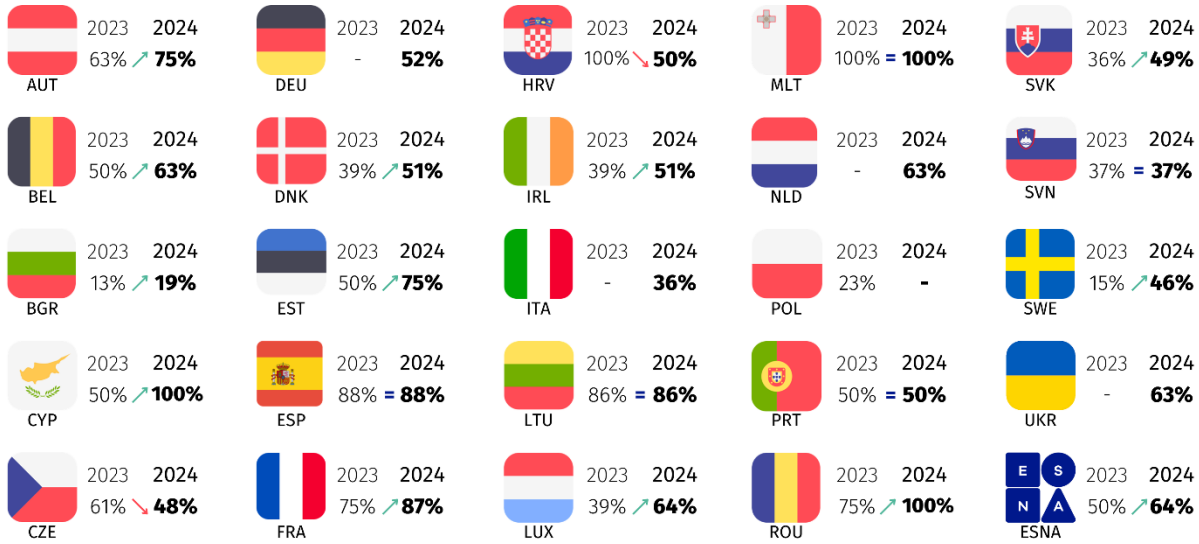


Figure 20. Countries' scores for level of achievement of SNS #2

SOURCE: ESNA based on official data from Member Countries Focal Points (Survey 2023 & 2024) & OECD Talent Attractiveness Index (2023)

With a steady increase in SNS #2, 12 countries that replied to the survey in the past and current edition (2023 & 2024), as displayed above, recorded a higher overall implementation level in this Standard this year.

To enhance the depth of the analysis, the SNS is divided into two substandards. More information about the substandards can be found below. The full description of the SNS #2 can be found in the Annexes, A1. EU Startup Nations Standards – Description.

Substandard 2.1 – Visa Applications
Visas play a crucial role in talent attraction, as they are usually a fundamental condition for relocating to another country. Visa acquisition processes are often perceived as time-consuming and burdensome, and thus represent a setback in the decision-making process to move abroad. The focus of this Substandard is to monitor measures aimed at streamlining these procedures.
Substandard 2.2 - Programmes for Talent
Attracting and retaining talent implies creating and developing programmes tailored for highly qualified individuals possessing a specific set of skills, namely in the tech sector. The Substandard also entails programmes designed to reattract talent back to their home regions.

Figure 21. SNS #2 substandards description

SOURCE: ESNA (2024)

The Substandard 2.1 – Visa Applications focuses on the time required to process visa applications, demonstrates an implementation level of 78%, and a positive trend, with an additional 18 p.p, compared with 2023 results, thereby impacting the SNS as the best-achieving Substandard. In contrast, Substandard 2.2 – Programmes for Talent displays a lower level of implementation at 49%, an increase of eight p.p regarding last year (41%).

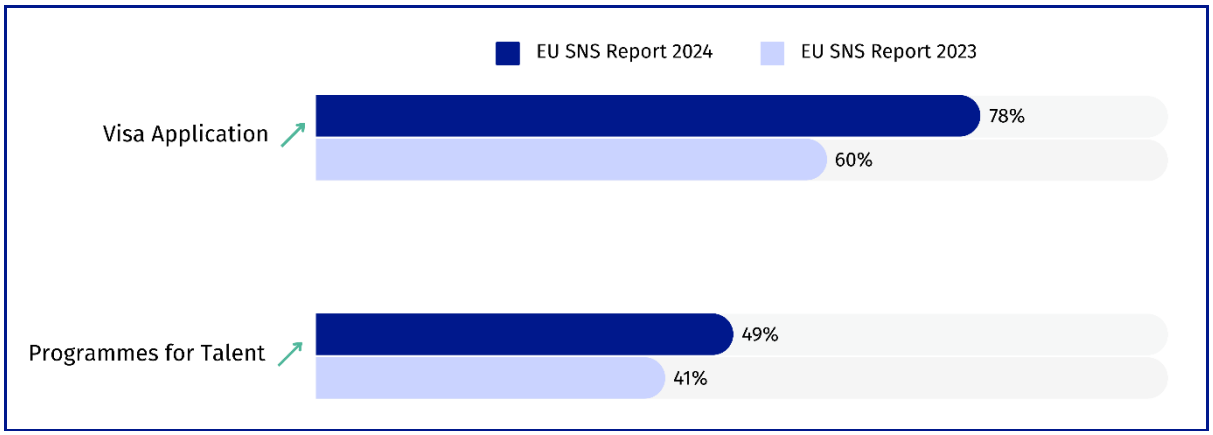


Figure 22. SNS #2 substandards progression

SOURCE: ESNA, based on official data from Member Countries (Survey 2023 & 2024)

For a quick assessment of the key insights gathered on the SNS #2 analysis, please refer to the main takeaways below.

4.2.2 Substandards analysis

Substandard 2.1 – Visa Applications

Visas play an important role in attracting talent. Long processes are a deterrent, as are high refusal rates, as well as demanding and bureaucratic processes with low digitalisation.

In order to analyse how long these processes take, the countries under analysis were asked about the time frame in which these processes are typically carried out for founders ("Time to complete visa applications for founders") and experienced workers ("Time to complete visa applications for experienced workers").

Box 2.1.1 Signatory Member's Initiative – Malta

Malta set up the Startup Residence programme, through which key employees who relocate to Malta are offered a variety of benefits. The workers, along with their immediate family, are granted residency for an initial period of three years, which may be extended to another three years. When it comes to co-founders and founders, they and their immediate family members are provided with residency for an initial period of three years that on successful completion is extended by an additional five years.

Considering that the benchmark included in the EU SNS Declaration is for the visa process to take less than a month, there was a 78% implementation level both for founders' and experienced workers' visas.

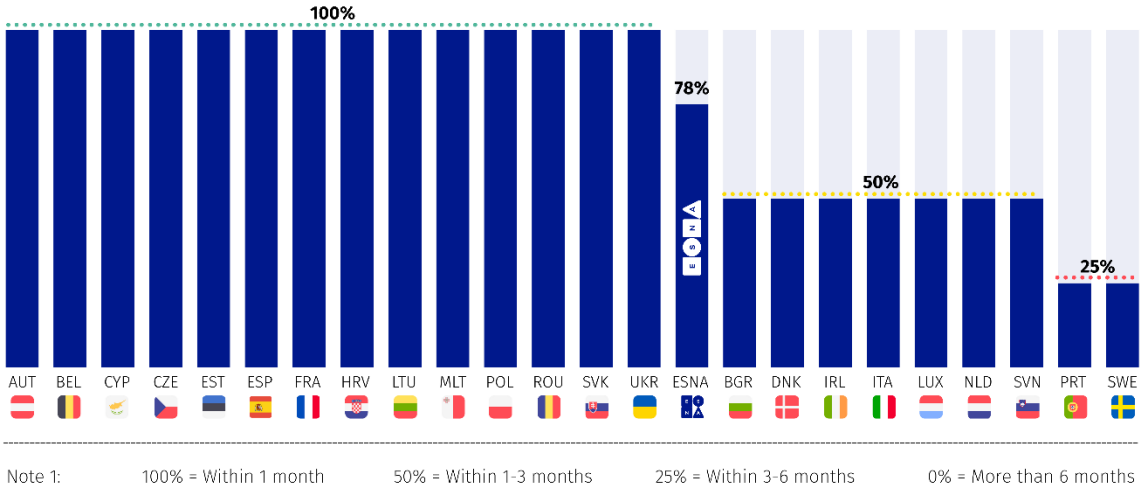


Figure 23. Time to complete visa applications from founders – time & implementation level in % (Indicator 2.1.1)

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

Although both indicators display the same level of implementation, there are inverse patterns in some countries. In countries such as Bulgaria, Czechia, Slovakia, and Ukraine, the founder visa is implemented more promptly, while in Denmark, Ireland, and Sweden, the opposite occurs. Consequently, processes for founder's and experienced workers were carried out in the timeframe of one month only in 14 countries out of 23[12].

[12] Germany was not included in the analysis due to lack of information.

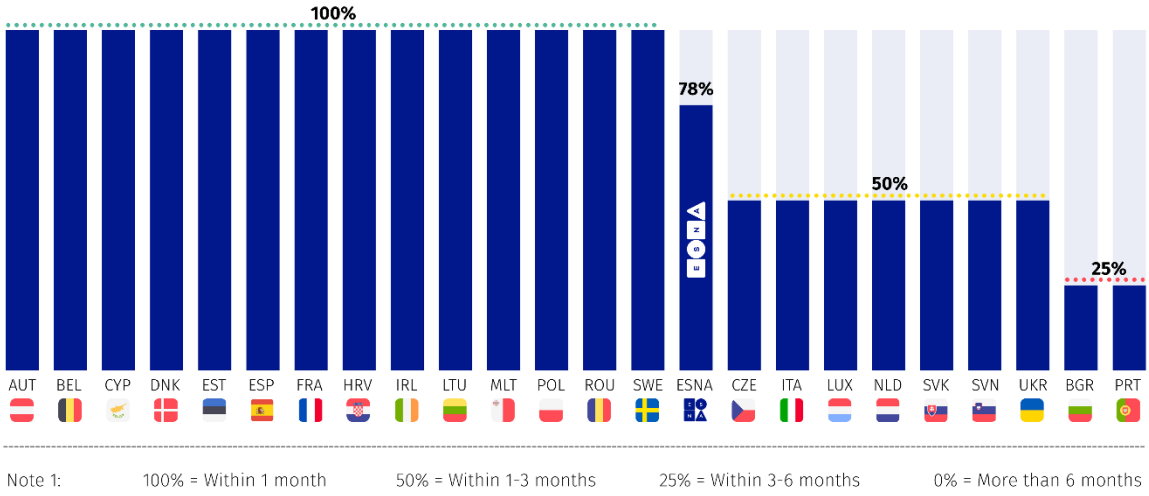


Figure 24. Time to complete visa applications for experienced workers (Indicator 2.1.2)

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

A wave of startup visas has been launched in the past few years to attract entrepreneurs with innovative ideas, responsible for generating jobs, new solutions and revolutionary technologies.

The startup founder visa candidate is typically a migrant with an innovative idea but without the necessary funding to pursue the idea. Visas for entrepreneurs and self-employed workers often have requirements that are difficult for startup founders to meet, notably when it comes to business track record, job creation and minimum capital investment. They may also fall short of the requirements for formal education in selective skilled migration programmes (OECD).[13]

Box 2.1.2 Signatory Member's Initiative – Cyprus

Cyprus intends to attract talented non-EU nationals with its Digital Nomad Visa targeted at location-independent workers and their families residing in the country temporarily. The visa is initially valid for a year and can be renewed for two more years. It can apply to both self-employed individuals and those employed by a company registered abroad.

Substandard 2.2 – Programmes for Talent

Access to talent is one of the key conditions to make an ecosystem attractive. Being able to recruit talented and qualified individuals globally is key for entrepreneurs, as startups are often in need of highly skilled workers, particularly in the fields of science, technology, engineering, and mathematics (STEM). It is thus important to consider both access to local skilled workers, and the ability to recruit highly skilled migrants. That is why retention and re-attraction of talent is an essential pilar (OECD, 2023).

[13] Please visit this page for further information, accessible here

The visas covered in the previous subchapter are an important component in building an attractive ecosystem for talent, but there needs to be a complementary implementation of programmes aimed not only at bringing new talent in, but also at retaining and returning professionals.

ESNA therefore analysed the countries to identify whether they have any programmes and/or incentives in place to encourage the return of EU tech talent who emigrated to third countries. As a result, only nine countries out of 24 showed evidence of having implemented this type of programme, and another five countries reported having this type of programme in place, but not in a clear way. As a result, this indicator has an implementation level of 48%, increasing by 15 p.p since last year in 2023.

It is worth highlighting the countries such as Cyprus, France, Lithuania, Luxembourg, Malta, Netherlands, Portugal, Romania, and Spain, which achieved 100% implementation level, as shown in Figure 25 below.

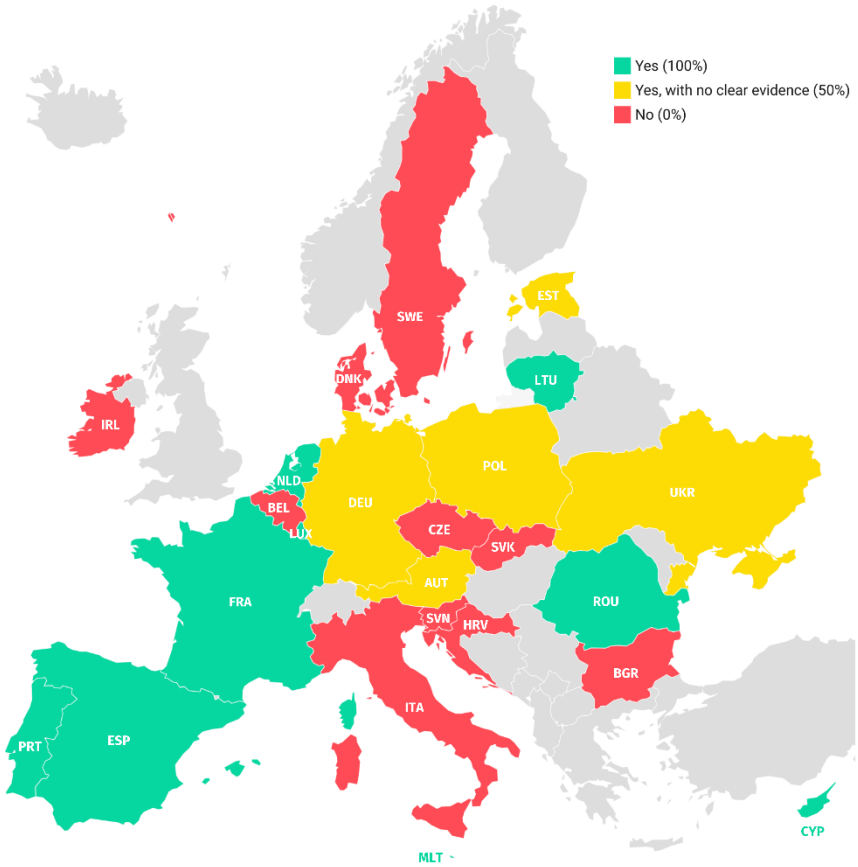


Figure 25. Existence of return of tech diaspora programmes (Indicator 2.2.1)

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

Lastly, regarding the Index of talent attractiveness[14] (OECD, 2023), there is still some space for improvement for the countries, despite being at a comparable level. The country achieving

[14] The OECD Indicators of Talent Attractiveness (ITA) "capture(s) the strengths and weaknesses of OECD countries regarding their capacity to attract and retain different types of talented migrants". It covers the quality of

the highest level is Sweden with 61%, followed by Luxembourg with 55%, next to Denmark and Ireland, both scoring 54%, as shown in Figure 26 below[15]. The ESNA average achieved by the surveyed countries is equal to last year's SNS Report.

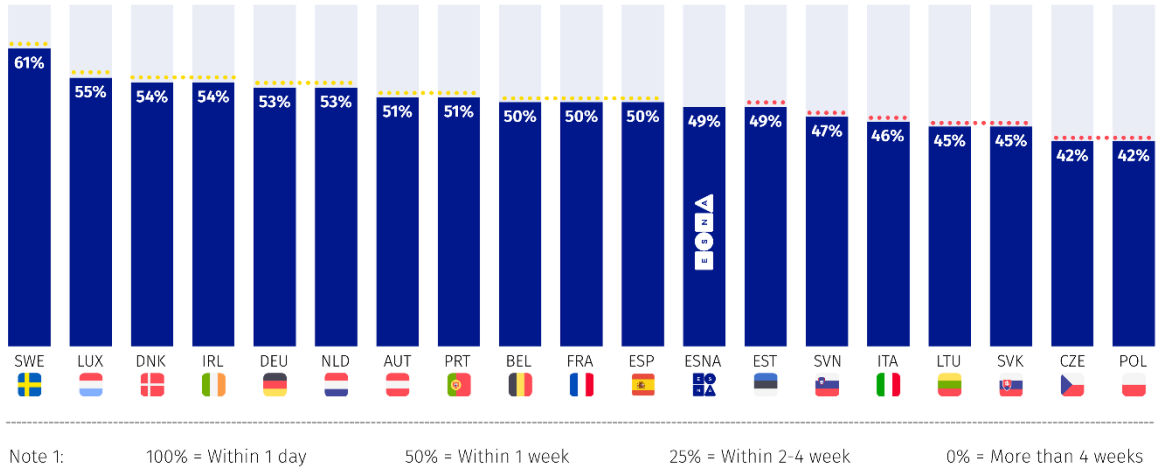


Figure 26. Index of talent attractiveness for entrepreneurs (Indicator 2.2.2)

SOURCE: OECD Talent Attractiveness Index (2023)

It is worth highlighting that the OECD report in question concludes that key factors, such as processing time and acceptance rates, impact the attractiveness of countries. It is also stated that entrepreneur visa programmes enhance countries' attractiveness to high-skilled workers. The OECD considers Sweden to be the most attractive nation for entrepreneurs among the surveyed countries (OECD, 2023). Please note that the OECD and ESNA consider different factors to assess a country's score. The OECD assesses indicators such as employment protection, earnings of highly educated workers, price level, and English proficiency, among others that are not considered in ESNA's methodology. Finally, Luxembourg is the country experiencing the largest progression in the ranking in the past four years, which is attributed to an overall more favourable economic and regulatory environment, coupled with a slight decrease in the corporate tax rate.

Lastly, it is worth mentioning that the OECD considers and highlights other dimensions that are important when moving abroad such as quality of opportunities (strictness of employment protection, product market regulation, trade openness), income and tax (earnings of highly educated workers, price level index, corporate tax), future prospects (acquisition of nationality, ease of status change from temporary to permanent), family environment (right for the spouse to join and to work), skills environment (English proficiency, patents volume), inclusiveness (gender equality indexes), and overall quality of life.

opportunities, income and tax, future prospects, family environment, skills environment, inclusiveness, quality of life and healthcare (OECD, 2023[4]).

[15] The index does not have available information regarding Bulgaria, Croatia, Cyprus, Malta, Romania and Ukraine.

Box 2.2.1 Signatory Member's Initiative – Spain

Spain's Startup Law introduced a special taxation regime for expatriates, which is available to individuals who had not been tax residents in the country at least 5 years prior to their arrival. Additionally, this move must be related to having either an employment contract; the acquisition of the status of Director of an entity; carrying out an entrepreneurial activity of an innovative nature and economic interest for Spain; being a highly qualified professional providing services to startups or carrying out training, research, development and innovation activities, receiving remuneration that represents in total more than 40% of the total business, professional and personal work income.
This regime implies that workers who are granted this status will be taxed on their income from employment at a 24% flat rate up to 600.000 euros (47% for income exceeding 600,000 euros).

4.3 SNS #3 "Stock Options"

4.3.1 Overview

SO refer to a kind of equity compensation a company grants its employees and/or executives. It bears benefits for employees, founders, and the overall startup ecosystem. SO have emerged as an appealing mechanism for employee accountability and engagement, designed to motivate and reward workers for their performance while attracting talent.

Besides the benefits mentioned above, SO make startups more attractive to employees, allowing them to compete with the benefits of large companies and reward productivity. They also have a multiplier effect, as former employees whose SO turned into valuable shares may use them as a foundation to start their businesses.

Each country in Europe has a unique legal framework and tax code, resulting in variations in SO depending on when taxation incurs – upon grant, exercise of rights, and/or sale of SO. Although the scheme entails many benefits, SO are not a practice shared by all European countries in Europe. Some European countries are yet to include the option to grant SO in their national legal frameworks.

Recognising SO as capital rather than income, as well as avoiding SO double taxation are significant challenges for European countries. Additionally, it is imperative to develop solutions that improve the accessibility and efficiency of processes, thereby facilitating greater adoption of this practice among startups in Europe. The fragmented SO tax systems across Member States create hurdles for startups, along with varying reporting obligations and other requirements.

Nonetheless, SO taxation and their operationalisation have been at the centre of discussion, namely due to their attractiveness, complexity, and high taxation.

The level of achievement records an overall positive result of 62% in this SNS, a slight increase from last year (57%). However, a positive trend has been observed, with more countries implementing SO that benefit startups. Notably, five out of 24 countries have fully implemented the SNS (100%), including Cyprus, Estonia, France, Portugal, and Ukraine. Figure 27 illustrates the current variations between countries.

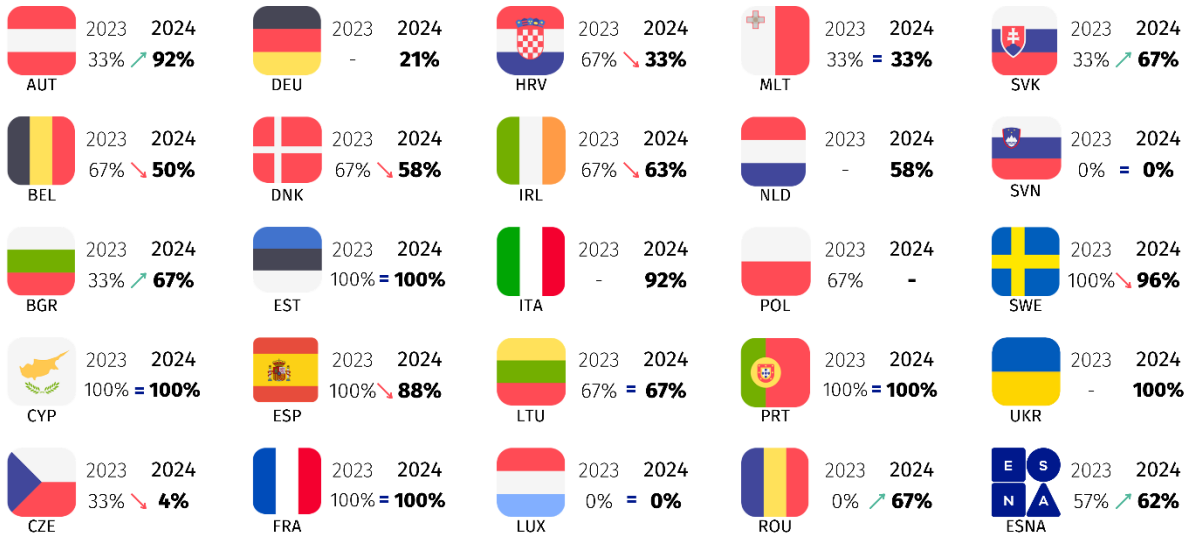


Figure 27. Countries' scores for level of achievement of SNS #3

SOURCE: ESNA, based on official data from Member Countries (Survey 2023 & 2024)

SNS #3's overall score increased, however it is important to note that eight countries that replied to the survey in the past and current edition (2023 & 2024), as displayed above, maintain their overall implementation level in this Standard over the years.

To enhance the depth of the analysis, the SNS is divided into three substandards. More information about the substandards can be found below. The full description of this SNS #3 can be found in the Annexes, A1. EU Startup Nations Standards – Description.

Substandard 3.1 – Taxation
Taxation of SO may occur during three different moments: moment of grant, moment of exercise, and moment of sale. In order to establish a favourable system and encourage this practice in Europe, it is recommended to implement a tax framework which entails only one moment of taxation and treats SO as capital gains instead of income.
Substandard 3.2 - Non-Voting rights
Ownership of shares is usually tied to voting rights. However, with regards to employee SO, this custom may become an impediment. Having shares associated with voting rights can lead to entropies such as an excessive number of people involved in core decision-making processes, potentially interfering with the company's smooth management and governance. It is therefore advised to offer SO without voting rights to mitigate potential management problems in the company.
Substandard 3.3 - SO Scheme
This Substandard addresses the fundamental principle of the existence of a national scheme or legal regime that regulates and allows the issuance of SO.

Figure 28. SNS #3 substandards description

SOURCE: ESNA (2024)

Substandard 3.3 – SO Schemes, showcases the best implementation level of 71% and the most significant increase from 2023 (57%), therefore impacting the SNS as the best-achieving Substandard. Substandard 3.2– Non-voting rights scores 69%, a lower result when compared with last year, which can be justified by the introduction of a new indicator in this dimension. Lastly, Substandard 3.1 – Taxation keeps the lowest level of implementation at 46%, in spite of the increase when compared with 2023 (38%).

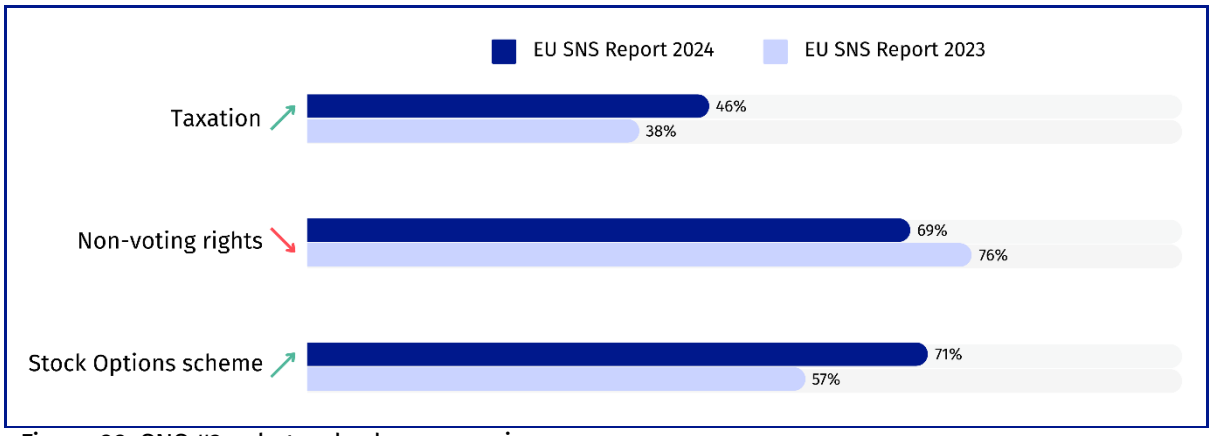


Figure 29. SNS #3 substandards progression

SOURCE: ESNA, based on official data from Member Countries (Survey 2023 & 2024)

For a quick assessment of the key insights gathered on the SNS #3 analysis, please refer to the main takeaways below.

4.3.2 Substandards analysis

Substandard 3.1 – Taxation

Taxation plays a highly relevant role in the attractiveness of these schemes as they are a type of compensation that should be beneficial and rewarding in relation to other types of benefits.

SO should be taxed as capital gains, therefore only at the moment of sale. When SO are taxed at the moment of grant, they are usually taxed as income with progressive rates in addition to salary contributions, while at the moment of exercise, it is challenging to evaluate the stock's value and may require a professional appraiser. Lastly, there are no gains in both case, which implies that it is not beneficial to the employee.

Comprising one indicator only, this Substandard's overall result coincides with the result obtained in the indicator that assesses the countries' taxation application on SO: "Stock Options taxed only as capital gains".

In the process of analysing whether the countries surveyed by ESNA have favourable tax frameworks, it was found that only 11 out of 24 countries are considering SO as capital gains, resulting in 46% level of implementation. The countries are Austria, Croatia, Cyprus, Estonia, France, Italy, Poland, Portugal, Spain, Sweden, and Ukraine, as illustrated in Figure 30 below.

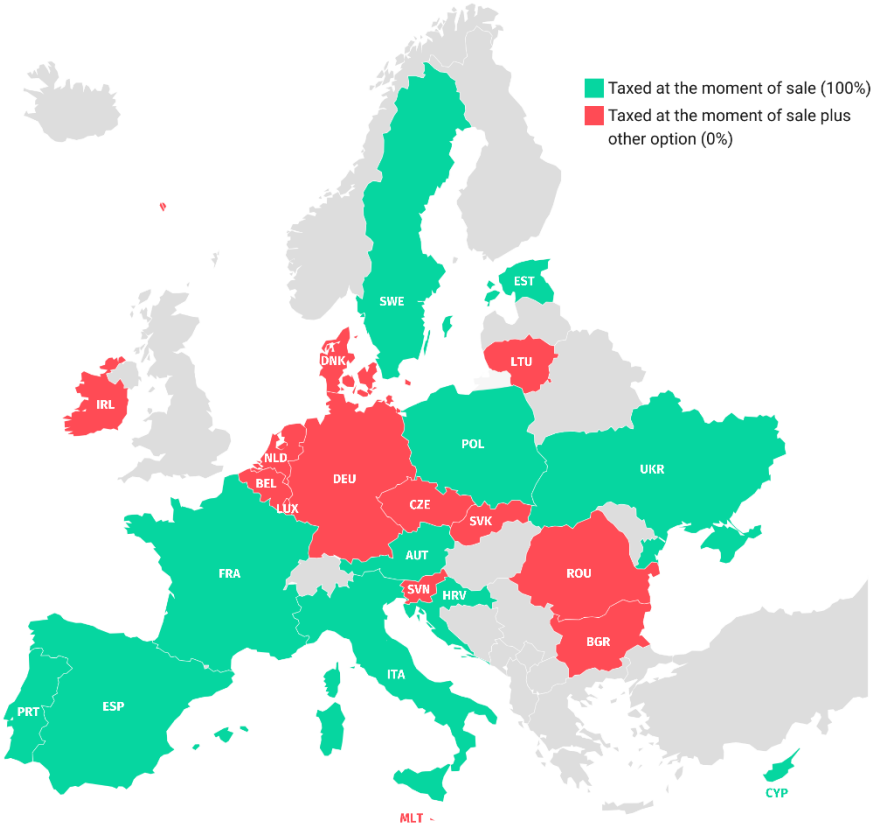


Figure 30. Stock Options taxed only as capital gains (Indicator 3.1.1)

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

Although this particular Standard only considers the moment of taxation when scoring the taxation aspect, its respective rate is also worth analysing. The average tax rate in the surveyed countries is 20% (this calculation was based on countries whose SOs are taxed at the moment of sale or at the moment of exercise, since the SO taxed at the moment of grant are taxed in accordance with the country's income tax). As shown in Figure 31 below, the tax rates can go up to 33%. Please note that this aspect was not considered in the calculations.

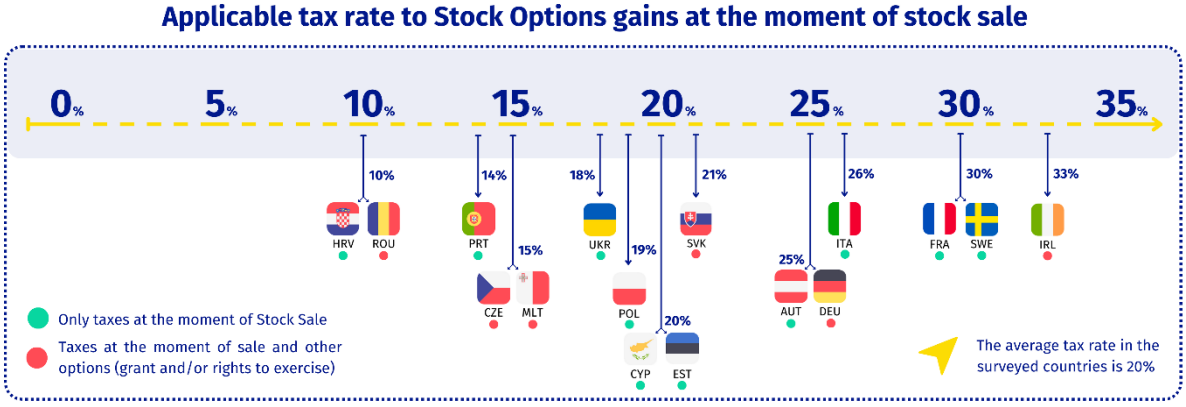


Figure 31. Tax rate applicable to Stock Options gains

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

It is also worth mentioning that most countries do not have a flat rate. The rate may change according to the price of sale. In some cases, when companies meet specific criteria, they may be subject to some tax exemptions.

On the other hand, other responsibilities applicable to employers were also analysed. It was concluded that there were additional obligations such as withholding tax and social security, namely in countries where stocks are taxed as income at the moment of grant, but there may also be others such as reporting obligations.

Box 3.1 Signatory Member's Initiative – France

The Business creator share subscription warrants (BSPCE) were created by France to enable specific companies to offer their employees and certain managers the right to subscribe for shares at a pre-set price. This scheme promotes value-sharing in small caps or young firms, especially those established less than 15 years ago. It was recently extended to startup employees in foreign subsidiaries and supervisory board members or administrators. Employers are liable for a 30% flat rate contribution.

Substandard 3.2 – Non-Voting Rights

The possibility of issuing SO with non-voting rights has an impact on companies' decision to make use of this specific scheme, as when stocks are distributed employees become minority shareholders. When having voting rights, companies are required to consult their shareholders on company-related decisions, which may create an entropy. Indeed, having more decision-makers involved can create obstacles to effective management and decision-making processes.

The Substandard entails two indicators that were considered to analyse the non-voting rights "Existence of stock options with non-voting rights for startups", and "Minority Shareholders & Bureaucracy".

In what regards the **existence of stock options with non-voting rights for startups**, a significant implementation level of 79% is worth noting, with 19 countries out of 24 having this framework in place within stock option schemes, as shown in Figure 32. When compared with last year's results, there is a slight increase when compared with the 76% attained in the last SNS Report, which results from the addition of new countries.

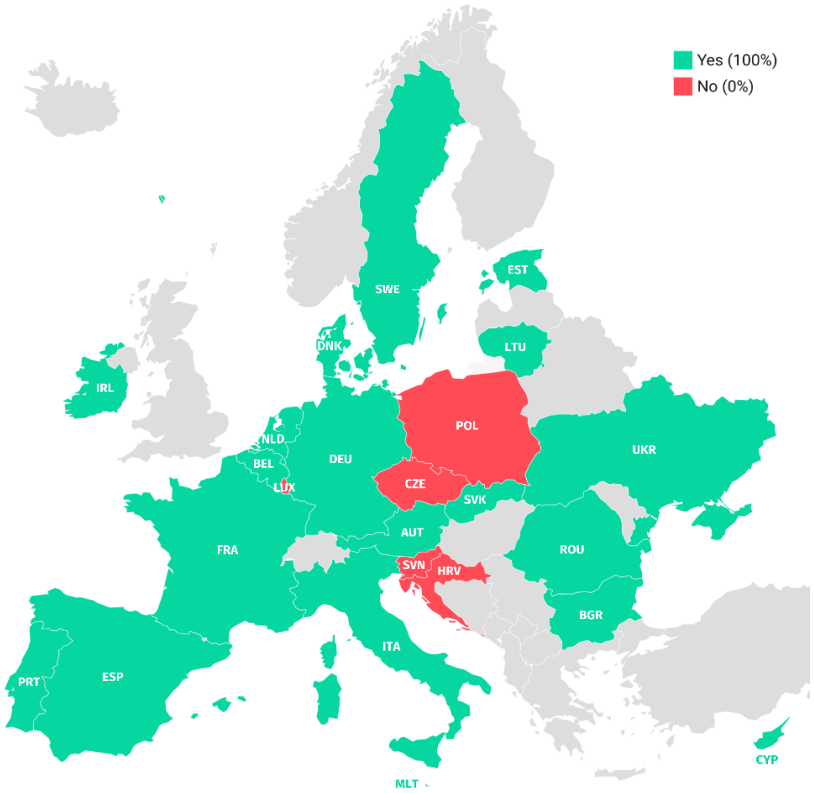


Figure 32. Existence of stock options with non-voting rights for startups (Indicator 3.2.1)

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

A new indicator was added to feed into the analysis this year: **Minority Shareholders & Bureaucracy**, by "Not Optional". This indicator evaluates whether SO may involve minority shareholders, as well as the administrative burden and costs associated with creating and maintaining the plan, the results are shown below. According to the source, there was only data available to assess 15 countries (Not Optional, 2024).

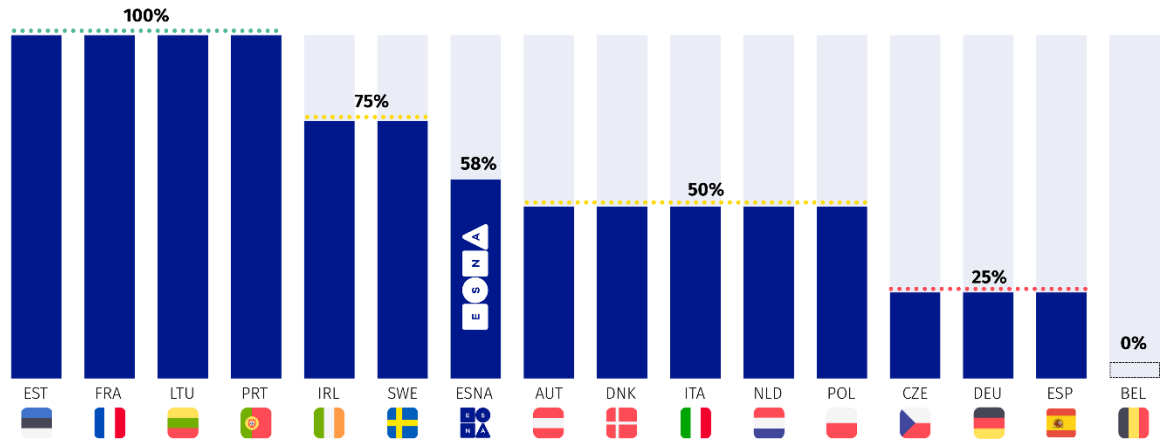


Figure 33. Minority Shareholders & Bureaucracy (Indicator 3.2.2)

SOURCE: Not Optional "Latest Country Rankings"

Box 3.2 Signatory Member's Initiative – Portugal

The Portuguese Startup Law includes a beneficial SO scheme. In order to benefit from this scheme, companies must meet specific criteria to be officially recognised as a startup. Taxation occurs only at the moment of sale, with a tax rate set at 28% - half of the gain is taxed at this level, resulting in an effective tax rate of 14% - with the option to bundle it with progressive rates. The gains are calculated as the positive difference between the realisation value and the exercise price of the option, minus what was paid to acquire that option or right. If an employee is no longer a resident of Portugal, the gain is calculated as the positive difference between the market value and the exercise price of the option or right, minus the amount paid to acquire the option or right.

Substandard 3.3 – SO Schemes

Lastly, SO schemes are assessed through one indicator: **"Existence of a country-specific stock options scheme"**. This indicator addresses the fundamental principle of the existence of a national scheme or legal regime that regulates and allows the issuance of SO.

Developing a **dedicated legal framework for employee SO** is fundamental to enabling startups to leverage this mechanism, sustaining national innovation ecosystems, and fostering entrepreneurial endeavours. As shown in Figure 34, 17 of the 24 (71%) surveyed countries answered that they already provided tailored regimes for SO. Is worth highlighting that compared with last year (2023), some countries have adopted new and specific schemes such as Austria and Bulgaria.

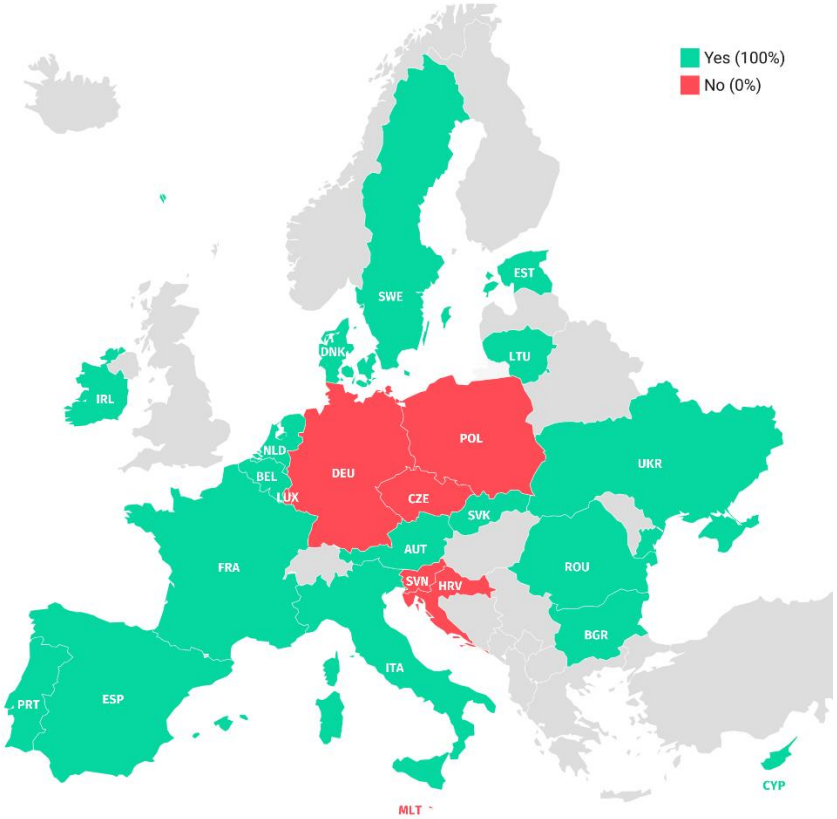


Figure 34. Existence of a country-specific stock options scheme (Indicator 3.3.1)

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

4.4 SNS #4 “Innovation in regulation”

4.4.1 Overview

Regulation and its related bureaucracy are often identified as an obstacle to innovation. The excessive weight of regulation and compliance can suffocate and even devastate small companies such as startups that are unable to match the demands for larger companies considering the time and human resources involved.

However, regulation constitutes an essential part of the policy frameworks that can support more competitive startups and scaleups in Europe, as their potential for success can be either enhanced or stifled by regulation. To unlock the innovative potential of startups, their active participation in decision-making processes, alongside the adoption of innovative regulatory initiatives empowered by cutting-edge instruments, is key.

The EU SNS Declaration urges European governments to apply the “Think Small First” principle (European Commission, 2009) derived from the Small Business Act (reviewed in 2011 and replaced by the SME envoys). It also encourages the exploration of favourable exemptions (European Commission, 2008) for startups, and mechanisms such as regulatory sandboxes for streamlined development of new products, services, and business models.

While regulation is fundamental for general safety and consumer protection, it must also actively promote innovation in controlled environments that facilitate progress. Startups play

a key role in innovation ecosystems, as they can leverage their unique, innovative capabilities and technologies in these environments.

Regulation is crucial in enhancing the competitiveness of the European startup scene and fostering an innovative environment. Initiatives such as regulatory sandboxes, government-promoted test beds, and innovation hubs are currently used to address regulation's main bottlenecks.

This year's 'Innovation in Regulation' Standard has the lowest level of implementation, with a score of 43%, slightly lower than the previous year (44%).[16] This is a Standard that requires an in-depth analysis and due attention from policymakers, as the promotion of startup-friendly regulation is crucial for a strong and innovative ecosystem.

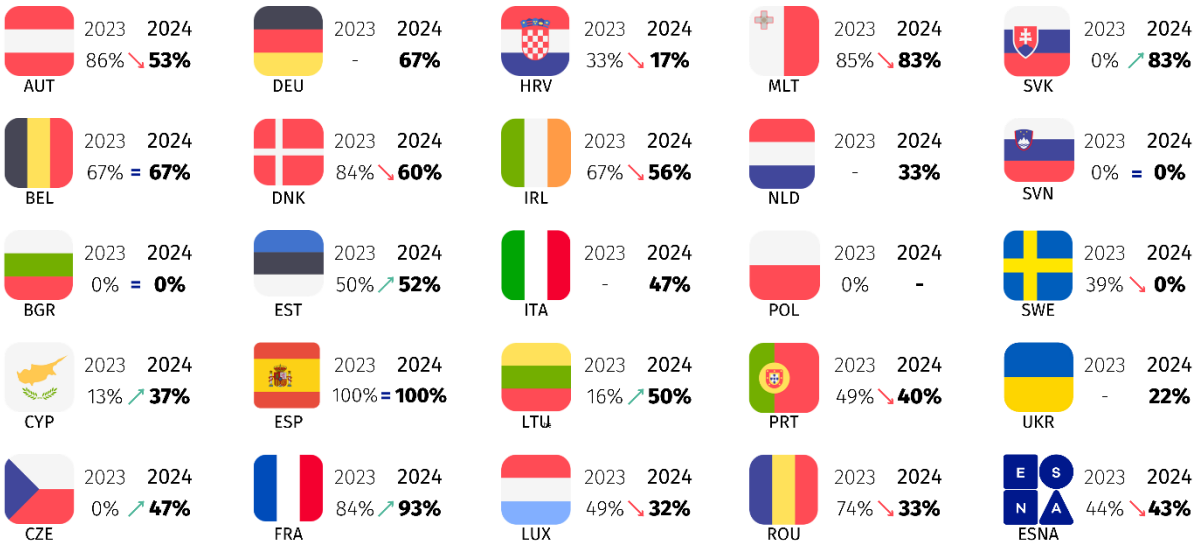


Figure 35. Countries' scores for level of achievement of SNS #4

SOURCE: ESNA, based on official data from Member Countries (Survey 2023 & 2024)

With a slight decrease between the past and current editions of the survey (2023 & 2024) for SNS #4, nine countries decreased their overall implementation level in this Standard, which is a direct result of the methodology enhancements.

To enhance the depth of the analysis, the SNS is divided into three substandards. More information about the substandards can be found below. The full description of this SNS #4 can be found in the Annexes, A1. EU Startup Nations Standards – Description.

[16] It should be noted that some of the changes may be justified by the improvements implemented in this year's methodology. For more information see 02. Methodology.

Substandard 4.1 – "Think Small First"
The "Think Small First" principle advocates for considering startups and SMEs' interests when framing policies, applying the idea that "one size does not fit all". It also implies that measures impacting businesses should be created from an SME's point of view (European Commission, 2009).
Substandard 4.2 – Compliance Exemption
Startups have unique identities and characteristics that sets them apart from other companies, such as their innovative nature and scale. These specificities may make it difficult to meet usual compliance standards. It is therefore recommended to develop exceptions and special regimes to address startups' specific needs, enhancing their competitiveness.
Substandard 4.3 – Regulatory Sandboxes
Regulatory sandboxes are designated physical or digital spaces with special legal frameworks for testing innovative solutions. They are a convergence point for regulatory and technological innovation. Within this Substandard, regulatory sandboxes are acknowledged as a valuable innovative tool for which startups must be key players.

Figure 36. SNS #4 substandards description

SOURCE: ESNA (2024)

Substandard 4.1 – "Think Small First" principle showcases a positive implementation level of 60%, and despite the decrease from last year, still is the best-achieving Substandard. Nonetheless, Substandard 4.2 – Compliance Exemption and Substandard 4.3 – Regulatory Sandboxes indicate a lower level of implementation, at 29% (a decrease compared to 2023 – 33%), and 39% (an increase from 2023 – 31%), respectively[17].

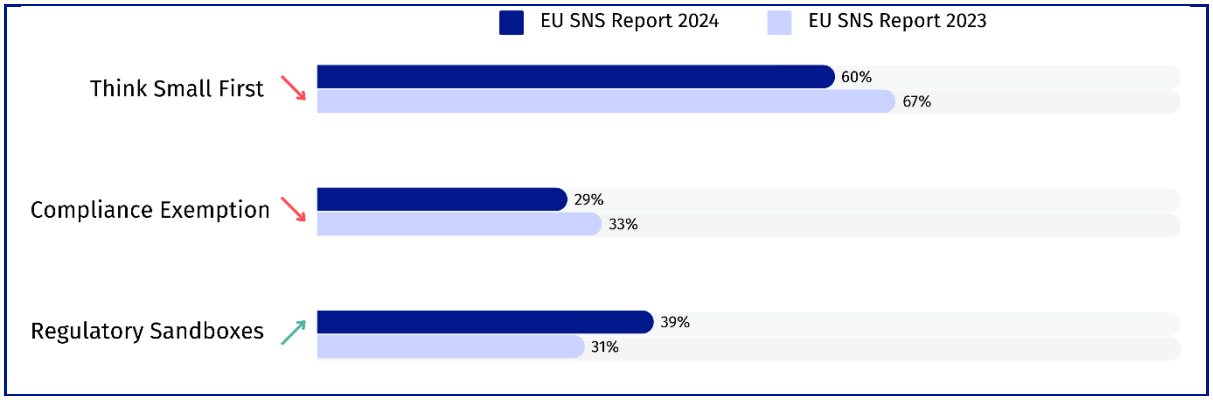
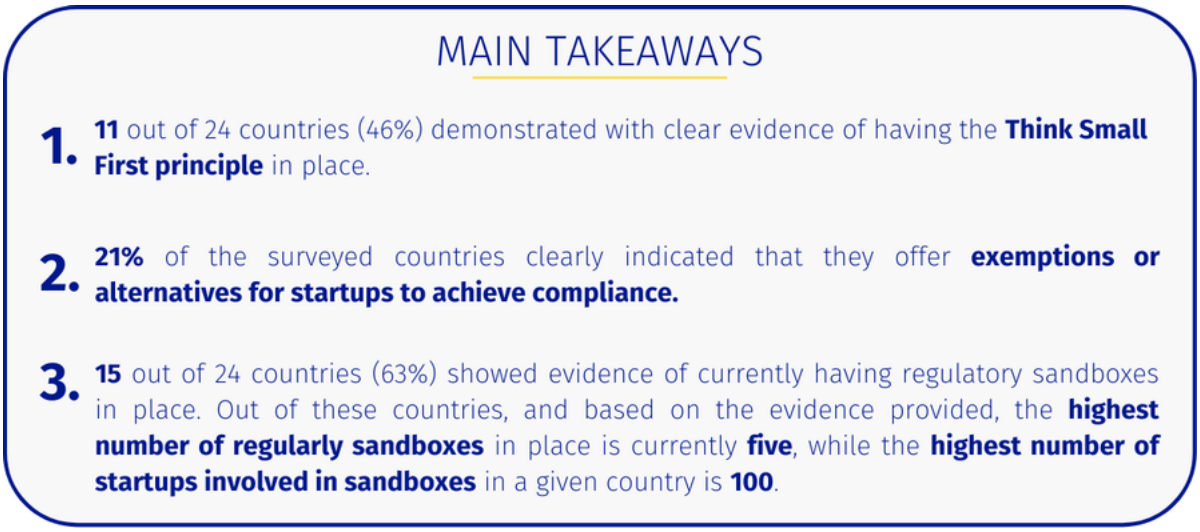


Figure 37. SNS #4 substandards progression

SOURCE: ESNA, based on official data from Member Countries (Survey 2023 & 2024)

[17] This decline may be result of changes made in the scoring criteria. For more information about the methodology improvements, please check 02. Methodology

For a quick assessment of the key insights gathered on the SNS #4 analysis, please refer to the main takeaways below.



4.4.2 Substandards analysis

Substandard 4.1 – "Think Small First"

The expert group report Models to reduce the disproportionate regulatory burden on SMEs asserted that on average, where a big company spends one euro per employee to comply with a regulatory duty, a medium-sized enterprise might have to spend around four euros and small businesses up to ten euros (European Commission, 2007).

It is therefore necessary for policymakers to take startups and SMEs into account when regulating, as stated in the 'Think Small First' principle. According to the EC:

"The definition of the 'Think Small First' principle implies that policymakers give full consideration to SMEs at the early policy development stage. Ideally, rules impacting on business should be created from the SMEs point of view or in other words, SMEs should be considered by public authorities as being their 'prime customers' as far as business regulation is concerned. The principle relies on the fact that 'one size does not fit all' but a lighter touch approach can also be beneficial to larger businesses. Conversely, rules and procedures designed for large companies create disproportionate, if not unbearable burdens for SMEs as they lack economies of scale." (European Commission, 2009).

In the belief that the "Think Small First" should be an established principle and practice in European countries, the analysis aims to understand if countries' policymakers are guided by a 'Think Small First' principle when formulating laws and regulations for startups, with the aim of minimising unnecessary bureaucracy and red tape.

Comprising one indicator only, this Substandard's overall result coincides with the result obtained in the indicator that assesses this specific practice: "Think Small First" principle

implementation level". 11 out of 24 countries showed clear evidence of having the principle in place. The indicator shows a 60% level of implementation, a decrease from 2023 (67%)[18].

However, is worth highlighting Austria, Belgium, Czechia, Estonia, France, Ireland, Italy, Luxembourg, Malta, the Netherlands, Slovakia, and Spain consider startups and SMEs during the initial phases of policy development, as shown in Figure 38 below. For this analysis, complete fulfilment of the "Think Small First" principle is considered to reach a 100% level of implementation.

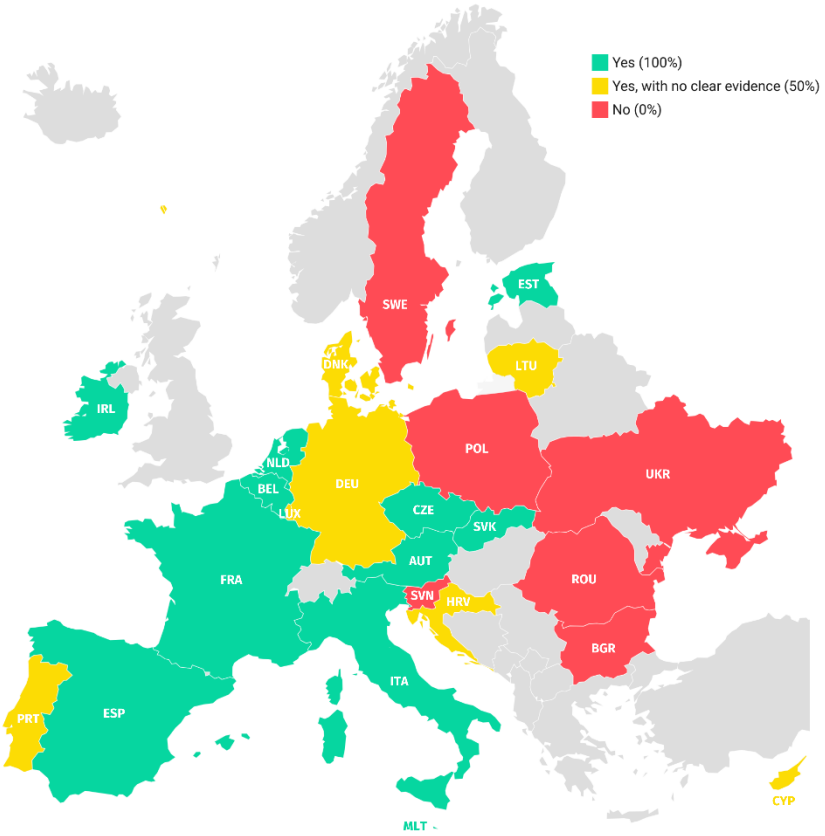


Figure 38. "Think Small First" principle implementation (Indicator 4.1.1)

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

Box 4.1 Signatory Member's Initiative – Belgium

Belgium's Regulatory Impact Analysis (RIA) is a self-assessment tool designed to raise awareness among those developing regulations. It is used to prepare, consult, and assess the impacts of proposed regulations. The RIA is mandatory for all primary legislation submitted to the federal Council of Ministers and also for Royal decree deliberated in the council of Ministers. RIA are published alongside parliamentary documents and are freely accessible.

[18] This decline may be result of changes made in the scoring criteria. For more information about the methodology improvements, please check 02. Methodology

Substandard 4.2 – Compliance Exemption

One indicator **"Existence of compliance exemptions/alternatives for compliance"** was considered to assess the implementation of this Substandard. Regarding adopting specific measures for startups to achieve compliance, it is observed that only five out of 24 countries showed clear evidence of addressing regulation compliance for startups to foster innovation, resulting in an overall 29% of implementation, a decrease compared with 2023.[19] France, Malta, Romania, Slovakia, and Spain achieve a 100% implementation score for this Substandard, as shown in Figure 39 below.

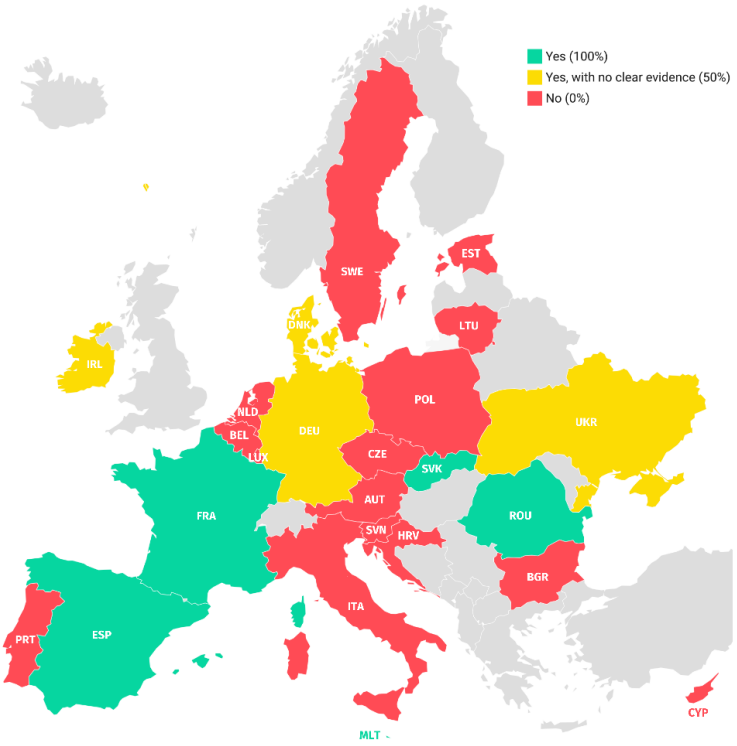


Figure 39. Existence of compliance exemptions/alternatives for startups (Indicator 4.2.1)

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

Box 4.1 Signatory Member's Initiative – Malta

Malta set up the Coordination of Government Inspections Act, which includes a specific provision related to startups. The Act states that one of the objectives of the Inspections Coordination Office may include the application of moratoria for startup companies, where appropriate. This provision indicates that the Office has the authority to temporarily suspend or delay certain requirements or obligations for startup entities, thereby reducing the administrative burden and red tape on these businesses.

[19] It should be noted that some of the changes may be justified by the improvements implemented in this year's methodology. For more information see 02. Methodology.

Substandard 4.3 – Regulatory Sandboxes

Technology has been developing at a fast pace, and regulation often fails to keep up with new developments, ending up either stifling innovation or failing to protect consumers in light of new trends. Regulatory sandboxes are therefore a tool to enable technology and

innovation progress, but also to guarantee safety, ensuring the risks related to innovation are studied, foreseen, and prevented through adequate regulation. Additionally, innovation testing allows entrepreneurs and companies to reduce the time and cost inherent to bringing new ideas to the market (Attrey, Lessher, & Lomax, 2020).

Regulatory sandboxes pose an opportunity for the regulators to gain a better understanding of innovation in multiple sectors, and for businesses to better grasp the regulatory and supervisory expectations against the backdrop of rapid technological advancement (ESMA, EBA, EIOPA, 2018). Ultimately, regulatory sandboxes culminate in a dual innovation: technological innovation by testing new solutions and regulatory innovation through the adaptation of regulations to new technologies based on objective examples, thereby addressing current needs.

Therefore, regulatory sandboxes bear benefits for innovators, regulators, and for consumers. The benefits for the innovators are very clear since the opportunity to experiment and test innovative solutions reduces the regulatory obstacles and expedites time-to-market for innovation. Consequently, it allows greater access to finance. Additionally, innovators can benefit from fewer regulatory obstacles and uncertainty that usually pushes innovation back. Regulators also benefit from these mechanisms as testing allows them to efficiently create or update some regulations that stifle innovation and, at the same time support robust long-term policy through learning and experimentation (ECON committee, 2020). Lastly, consumers benefit from novel, innovative solutions by gaining access to products and services that are utilised without the insecurity of innovation and unknown risks. Ultimately, innovation always benefits consumers through better and more efficient solutions.

15 out of 24 countries (63%) showed evidence of currently having regulatory sandboxes in place, achieving a 100% implementation score, as shown in Figure 40 - a slight increase in relation to last year's results.

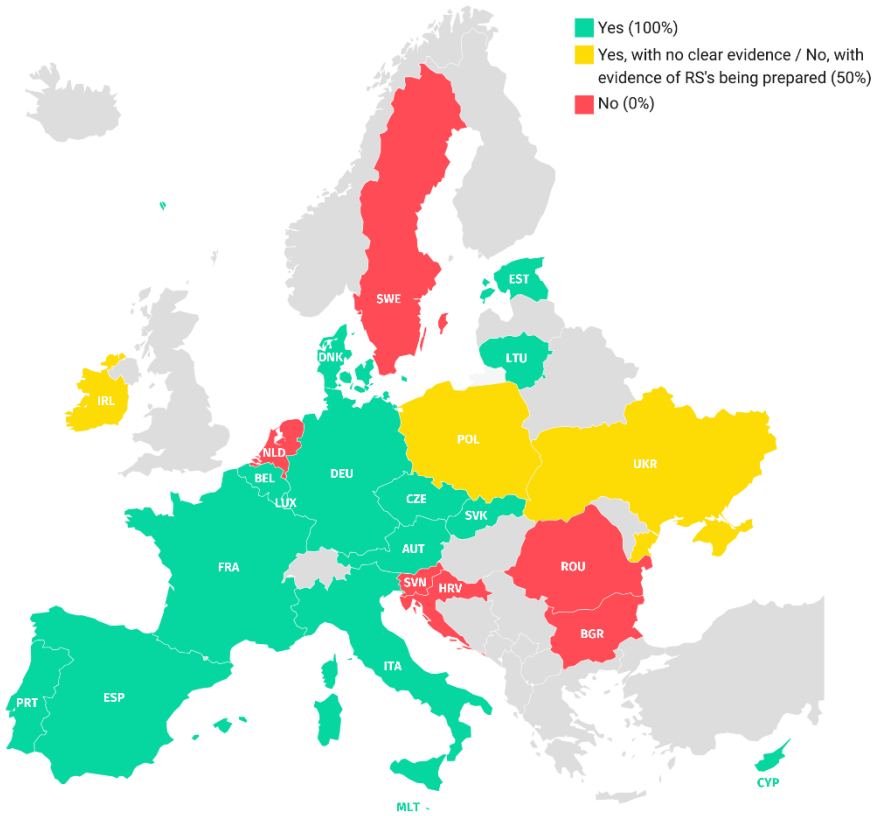


Figure 40. Existence of Regulatory Sandboxes (Indicator 4.3.1)

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

Lithuania and its five sandboxes stand out. Nevertheless, Austria, Denmark, Estonia, and France are also worth mentioning as each currently has three regulatory sandboxes in place, achieving a 60% score, as shown in Figure 41 below.

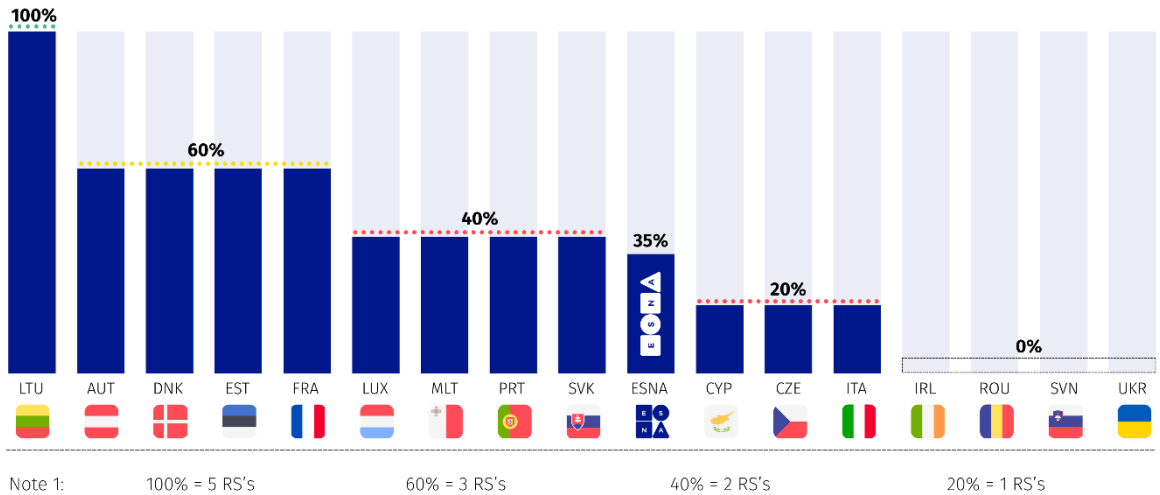


Figure 41. Number of established regulatory sandboxes - number & level of implementation in % (Indicator 4.3.2)

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

Box 4.1 Signatory Member's Initiative – Spain

Spain has about 100 startups involved in sandboxes. They cover a variety of sectors such as finance, artificial intelligence (AI), electricity, renewable energy, as well as local-scale sandboxes. This may be a reflection of the new Startup Law ("Ley de Fomento del Ecosistema de la certificación Empresas Emergentes") that includes efforts on the implementation of regulatory sandboxes. One example worth mentioning is Law 7/2020 November 13th for the digital transformation of the financial system ("Ley para la transformación digital del sistema financiero"), which implements a sandbox specifically in the financial sector. It launches projects such as "Sistema Multilateral de Negociación Basado en Technología de Registro Descentralizado" (technology-driven multilateral trading system), "Proyecto Akura" (AI-supported app to identify behavioural patterns), and "Open Brick" (real estate token market), among others.
Moreover, Spain is currently developing its most recent project in collaboration with the EC for a pilot of the first regulatory sandbox on the AI Act. This sandbox aims to bring competent authorities close to companies that develop AI in order to define best practices that will guide the implementation of the most recent regulation (AI Act).

According to the OECD, an effective and fruitful approach to reviewing regulation and fostering innovation involves a combination of a robust sandbox methodology and productive interactions between regulators and innovators.

Startups have a crucial role in the innovation path. Startups hold great innovation capital and offer disruptive solutions and their involvement is necessary. Regulatory sandboxes must consider startups and actively support their solutions' testing. Furthermore, startups must be engaged in testing consortia, ensuring co-creation and knowledge-sharing measures between companies and public agencies are in place.

There are several types of sandboxes, just as there are different types of startup involvement. On the one hand, startups can take an active role in directly testing their solutions in sandboxes by submitting applications. Alternatively, startups can be involved in consortia to test collaborative solutions with other companies, as well as collaborate with sandboxes in the public sector. In either configuration, there must be mechanisms for such participation, and to ensure fair conditions.

There should therefore be some programmes that grant financial support to companies with fewer resources than large companies. Some countries offer grants and other forms of aid for startups' participation in regulatory sandboxes such as Malta.

The overall startup involvement remains fairly low, with the only exception being Spain with 100 startups engaged in regulatory sandboxes. The analysis reveals that the level of involvement of startups in regulatory sandboxes is 13% across the 24 countries analysed. Although it is a very low implementation level, it is still an increase from 2023 (eight p.p).

Austria, Estonia, Luxembourg, Malta, Slovakia, and Spain are the only countries involving startups in regulatory sandboxes, as shown in Figure 42 below.

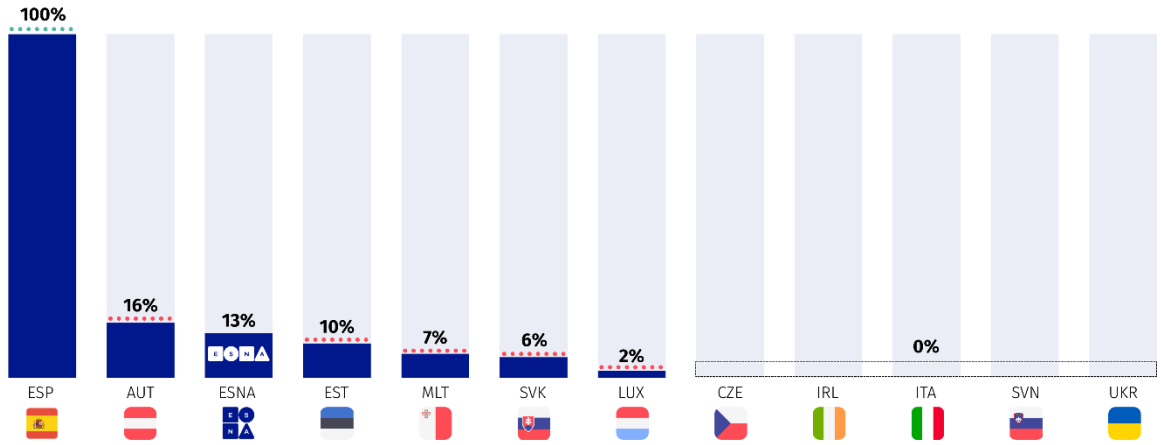


Figure 42. Number of startups involved in regulatory sandboxes consortia – number & level of implementation in % (Indicator 4.3.3)

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

4.5 SNS #5 “Innovation in procurement”

4.5.1 Overview

Public sector organisations and institutions can play a significant role in fostering entrepreneurial and innovation values through procurement practices, supporting open-sources and tech transfer policies. As public buyers, the ‘how’, ‘where’ - and for startups, the ‘when’ -, they allocate their capital plays a substantial role in fostering a knowledge-based economy that favours innovation. In light of this, the EC has been promoting an innovative public procurement approach as a "leverage for start-ups and start-ups as leverage for a better world" (European Commission, 2023).

Innovation in Procurement serves as a powerful tool to foster innovative solutions, support the growth of new ideas, and create an ecosystem where small businesses can implement their ideas for the public good. Each year, more than 250 thousand public authorities in the EU spend approximately 14% of Gross domestic product (GDP) on public procurement, which amounts to around €2 trillion yearly. This spending goes towards services, works, and supplies across various sectors such as energy, transport, waste management, social protection, health, and education (European Commission, n.d.).

In essence, public procurement plays a significant role in the EU. If empowered to access more deals and procurement chances, startups can play a bigger role in finding solutions and implementing their disruptive ideas. In order to promote such synergies, governments and policymakers can enhance procurement processes through the adoption of foundational policies, such as the strategic utilisation of technology and AI, reducing bureaucracy in procurement processes, seeking quality and affordable technologies, supporting open-source assets, and seeking startup-friendly IPR. Ultimately, leading innovation through the public sector. When executed with foresight, procurement has the potential to significantly bolster the future of not only businesses but also specific sectors.

Carefully considering procurement strategies is essential for both governmental entities and private ventures aiming to thrive in an increasingly competitive technological landscape. Following the Standards adopted by the Signatory Countries in the EU SNS Declaration, ESNA addresses such issues in the present SNS #5 "Innovation in Procurement", and the implementation level achieved by the countries participating in the survey.

Based on the responses gathered in the survey and the insights from WIPO, SNS #5 achieved an overall score of 55%. It is worth noting that the score denotes a decrease of six p.p, - in the previous edition (2023), the 21 surveyed countries obtained a score of 61% of implementation level[20].

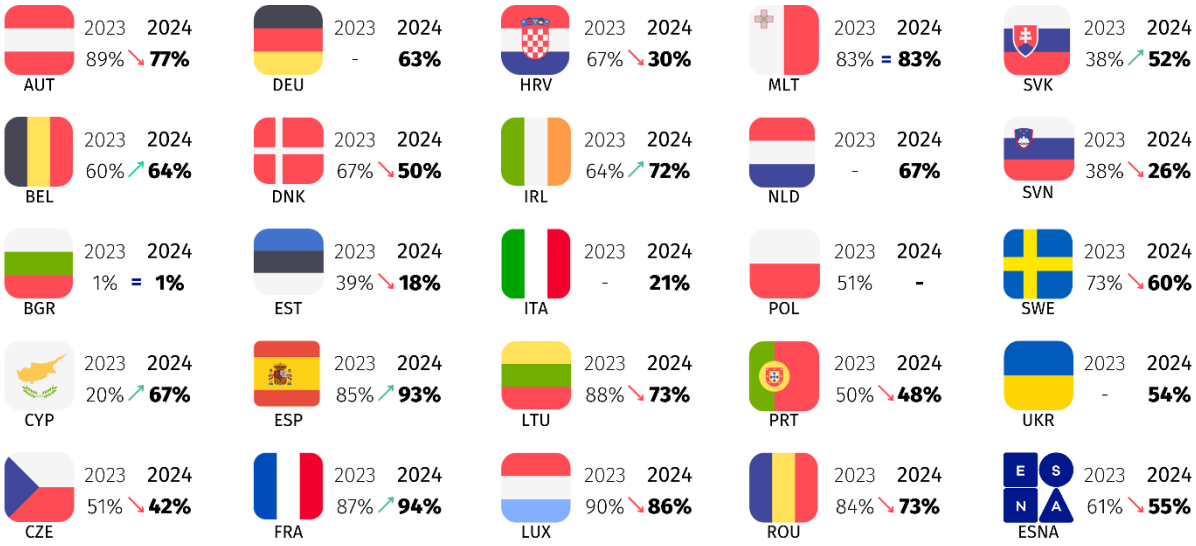


Figure 43. Countries' scores for level of achievement of SNS #5

SOURCE: ESNA, based on official data from Member Countries (Survey 2023 & 2024) & WIPO Global Innovation Index (2024)

While no country achieved a full implementation score in this year's edition, it is relevant to point out the discrepancy in scores achieved by the countries in this SNS #5, as they span from 1% to 94% as illustrated in Figure 43 above.

To enhance the understanding of this Standard and provide a more in-depth analysis, a breakdown of the substandards comprising SNS #5 is presented below. The full description of the SNS #5 can be found in the Annexes, A1. EU Startup Nations Standards – Description.

Substandard 5.1 – Public Procurement Opportunities

To foster active participation of startups in the public procurement market, it is crucial to eliminate any disadvantage that startups might face, due to the intrinsic differences between startups and other companies.

[20] This decline may be result of changes made in the scoring criteria. For more information about the methodology improvements, please check 02. Methodology

Substandard 5.2 - Intellectual Property Rights
Ownership of Intellectual Property Rights (IPR) is an important factor for startups and their growth. Rights transfer to a contracting company can act as a deterrent for startup participation, whose intensive efforts in developing innovative solutions must be safeguarded and preserved.
Substandard 5.3 - Open-Source Assets
Promoting an open asset environment in Europe provides startups with access to technologies that would otherwise be challenging to obtain. In return, startups provide access to their own technology. This unlocks new avenues for innovation through access to reliable and affordable technologies. Opening access to technology serves as a driving force for development with a spillover effect.
Substandard 5.4 - Tech Transfer Policies
Bridging knowledge and research with companies and commercialisation is critical to the development of innovative solutions, as well as the overall competitiveness of the ecosystem. Policies are therefore necessary to anticipate, facilitate, and actively promote the transfer of this knowledge to the markets, namely to startups.

Figure 44. SNS #5 substandards description

SOURCE: ESNA (2024)

Considering the overall results per substandard, SNS #5's total score was mainly impacted by a considerable decrease in Substandard 5.1 – Public Procurement Opportunities' score, as illustrated in Figure 45 below. While three out of the four substandards of this SNS decreased, with Substandard 5.2 – Intellectual Property Rights (IPR), and Substandard 5.3 – Open-Source Assets, the Substandard 5.1 demonstrated the biggest decline: it reached a 61% score in this year's edition, a 25 p.p. drop-off when compared with the 86% implementation level achieved in 2023 (this change may be related to methodology improvements and to the addition of a new indicator)[21].

Along those lines, Substandard 5.2 – Intellectual Property Rights (IPR) decreased by two p.p, dropping from a 44% implementation level in 2023 to 42% in this year's edition. Similarly, Substandard 5.3 – Open-Source Assets fell three p.p, scoring 40%, down from the 43% registered in the previous SNS Report edition. In contrast, Substandard 5.4 – Tech transfer policies, was the only one showing some improvement. By raising its overall score by six p.p, from 71% to 77% in this SNS Report edition, it is the highest-scoring Substandard in SNS #5.

[21] This decline may be result of changes made in the scoring criteria. For more information about the methodology improvements, please check 02. Methodology

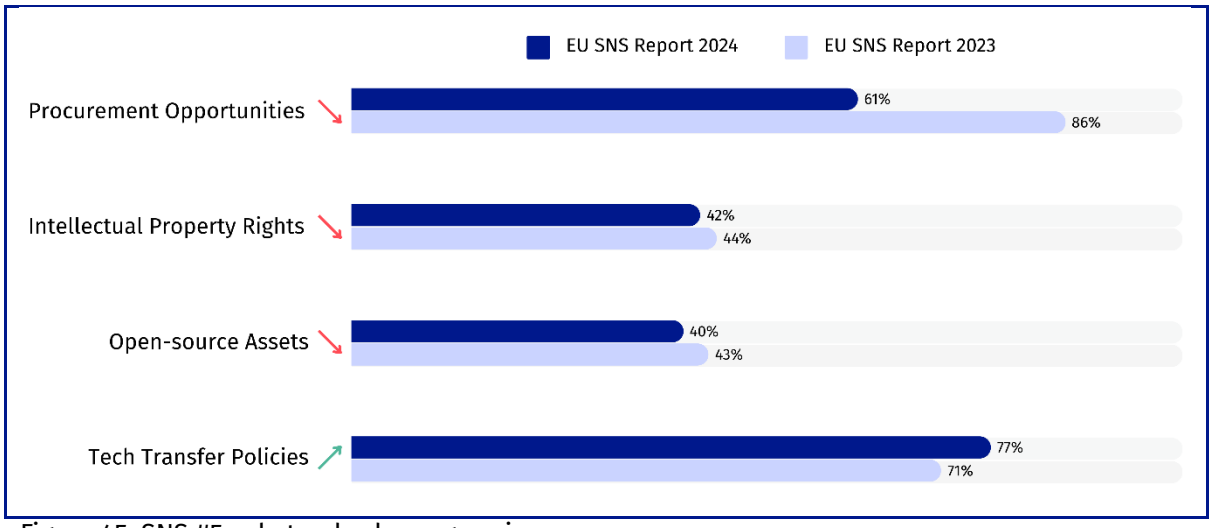


Figure 45. SNS #5 substandards progression

SOURCE: ESNA, based on official data from Member Countries (Survey 2023 & 2024)

For a quick assessment of the key insights gathered on the SNS #5 analysis, please refer to the main takeaways below.

MAIN TAKEAWAYS

1. **67%** of the participants reported not having **legal or administrative impediments** that may disadvantage startups and scaleups in procurement tenders.
2. **43%** of the countries have **incentives for public buyers to procure from startups** in place.
3. **82%** of the countries have specific **tools to foster innovation in procurement,** with many having more than one in place.
4. The **retention of IPR ownership by the startup or scaleup** participating in an innovation procurement tender is only possible in **10 countries (42%).**
5. **67%** of the countries have fully applied policies to facilitate a **smooth technology transfer from academia to startups and companies**.

4.5.2 Substandard analysis

Substandard 5.1 – Public Procurement Opportunities

Four indicators were used to assess the first Substandard of SNS #5, three of which are a novelty for this year's edition. Two of the indicators serve to enhance the analysis, without being directly used in calculations.

These indicators are "Existence of administrative impediments to startup participation", "Existence of incentives for public buyers and procurement services to procure innovation from startups" (new) - used for calculations - and "Existence of innovation procurement tools" (new), and "Use of innovation procurement tools by type" (new), that will be used to strengthen the Substandard analysis but not part of the calculation.

Substandard 5.1 - Public Procurement scored 61%, a decrease compared with last year. One of the factors behind such decrease can be the introduction of the Indicator 5.1.2 **"Existence of incentives for public buyers to procure innovation from startups".** The scores attained in this Indicator show that, while most countries do not have administrative barriers to startup participation, many lack more solid incentives.

Similarly to last year, the majority of the countries reported not having any **legal or administrative hurdles that may be an impediment to the participation of startups and scaleups** in procurement opportunities, reflecting a 67% level of implementation. In this edition, 16 out of the 24 surveyed countries - Austria, Belgium, Croatia, Cyprus, Czechia, Denmark, Estonia, France, Ireland, Lithuania, Luxembourg, Netherlands, Portugal, Romania, Slovakia, Spain - scored 100% as illustrated in Figure 46.

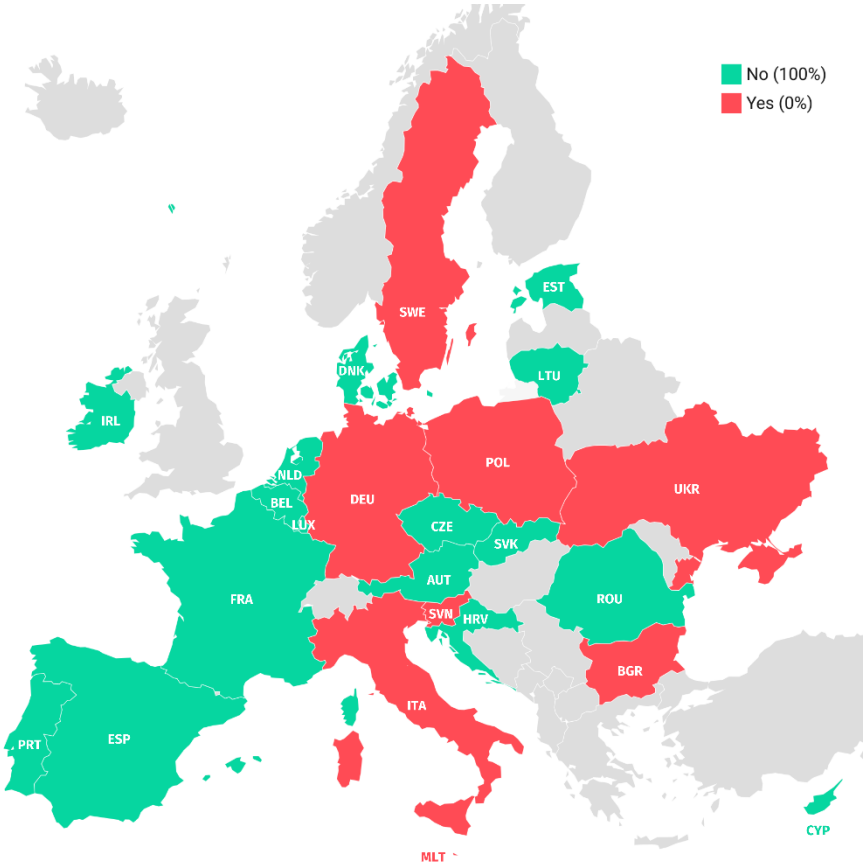


Figure 46. Existence of administrative impediments to startup participation (Indicator 5.1.1)

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

The absence of such impediments on procurement opportunities are crucial to create a level playing field for large companies, SMEs, startups, and other models in the business

landscape. This is most important for countries that aim to foster innovation, entrepreneurship, and lead the developments in fields such as health, tech, AI, and machine learning, as startups are known to bring breakthrough ideas from these sectors to the market.

According to the EC, the EU public procurement rules have already allowed for the public sector to design tenders that can fit not only large companies but also small ventures and innovative suppliers, including startups (European Commission, 2023).

Despite the investment size of the EU public procurement market, as well as the opportunities for innovative products and services that it already contributed too, the EC believes that "its potential is underused" (European Commission, 2023). This said, there is an ongoing effort to, "promote demand for innovative goods, services and works in Europe, and foster the uptake of innovation in the EU" (*ibid.*).

The substantial bureaucratic challenges associated with procurement can impose significant impediments on small startups, which often lack the resources to navigate these complexities effectively. On a different side, larger companies can easily bid for procurement deals as they not only have the resources in advance to prepare a solid proposal, but also additional human resources to follow the process.

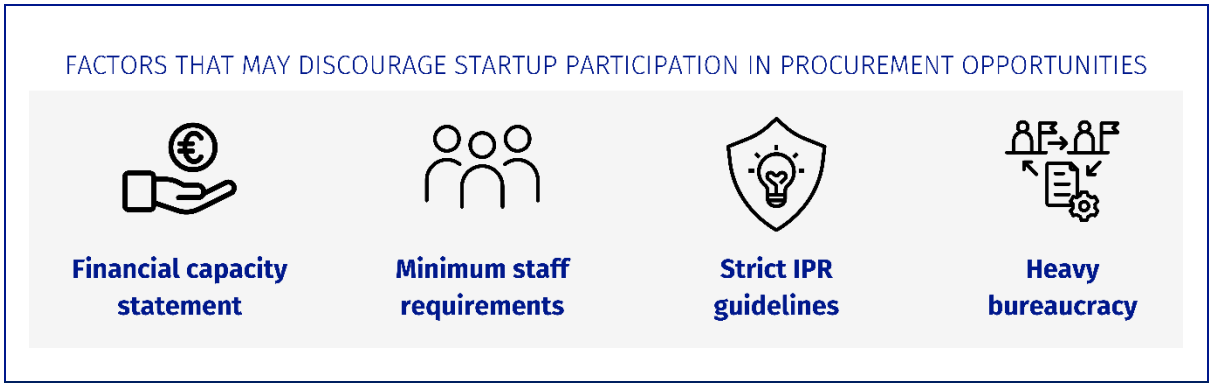


Figure 47. Administrative impediments for startups in procurement opportunities

SOURCE: ESNA, based on official data from Member Countries (Survey 2024) & ESNA Desk Research

Additionally, requirements such as financial capacity status may pose another impediment for startups to access procurement opportunities. Such requirement does not necessarily ensure a good contract performance and may exclude potential applicants that have a lower turnover from the beginning - as it is the case of newly created startups.

As the EU SNS Declaration advocates, as well as other EU recommendations, it is crucial to lower the bureaucracy burden and red tape in order to reduce potential impediment factors for innovative deals to grow and access growing opportunities equally[22].

To overcome some of the difficulties and impediments that startups face, governments are incentivised to adopt measures to create mechanisms for public buyers and the public sector in general to procure innovation from startups - a factor measured in this document through

[22] For more details on minimising unnecessary bureaucracy and red tape, please refer to SNS #4, Substandard 4.1 – "Think Small First".

the Indicator 5.1.2 **"Existence of incentives for public buyers and procurement services to procure innovation from startups"**, scoring 54%.

According to this year's survey, ten out of 23[23] countries demonstrated with clear evidence to have **incentives for public buyers and procurement services to procure from startups in place**. Consequently, Austria, Belgium, Cyprus, France, Germany, Ireland, Luxembourg, Malta, Netherlands, and Spain achieve the highest possible score in this indicator, as illustrated in Figure 48 below.

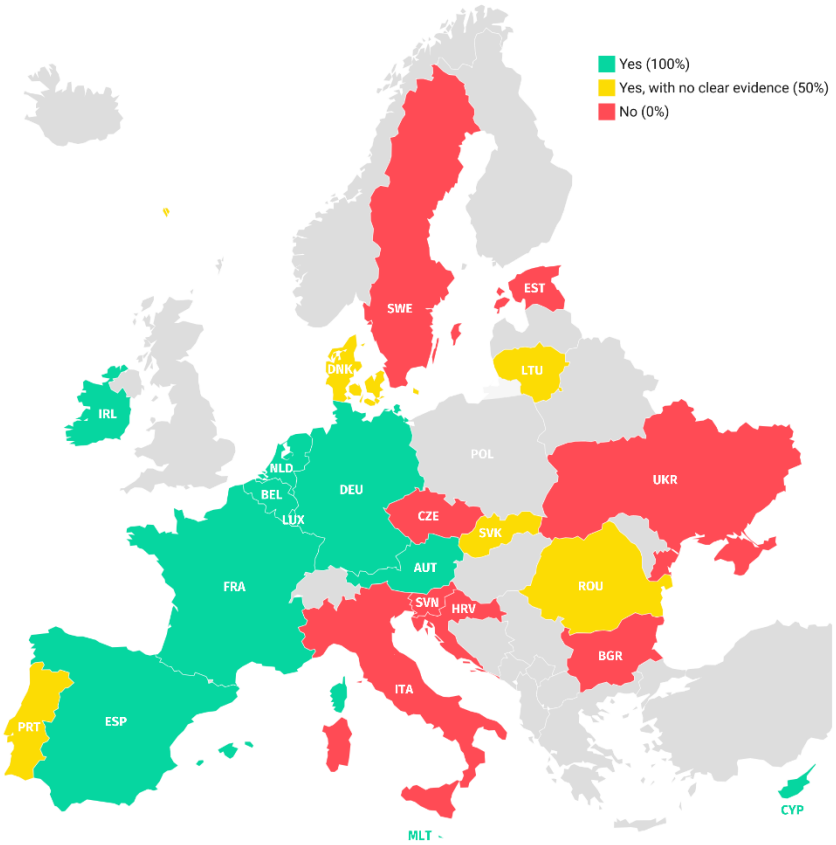


Figure 48. Existence of incentives for public buyers and procurement services to procure innovation from startups (Indicator 5.1.2)

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

The use of digital tools contributes to the desired level playing field in procurement services, as it can reduce costs for parties involved, save time during the process, reduce bureaucracy and administrative burdens, democratise the access to opportunities as they are posted on a platform, and ultimately, boost innovation. Such improvements are deeply connected to the eGovernment tools and are some of the main drivers. However, although digital tools are crucial and directly influence public tenders in positive ways, there are more efforts policymakers and governments can make to continuously improve the landscape.

[23] Poland was not included in the analysis due to lack of information provided.

Box 5.1 Signatory Member's Initiative – Netherlands

The Netherlands has established a policy around innovation procurement named PIANOO, which includes new methods to improve SMEs' access to government tenders. Additionally, Startup in Residence (SiR) is a programme where the government sets up a challenge and only startups can provide potential solutions. The selected startup will then collaborate with the government to further develop that solution.

When asked whether **any tools were being used to foster innovation in procurement,** a significant majority of the countries - 19 out of 23[24] -, responded to have such tools in place. Only four countries answered negatively, as illustrated in the Figure 49 below.

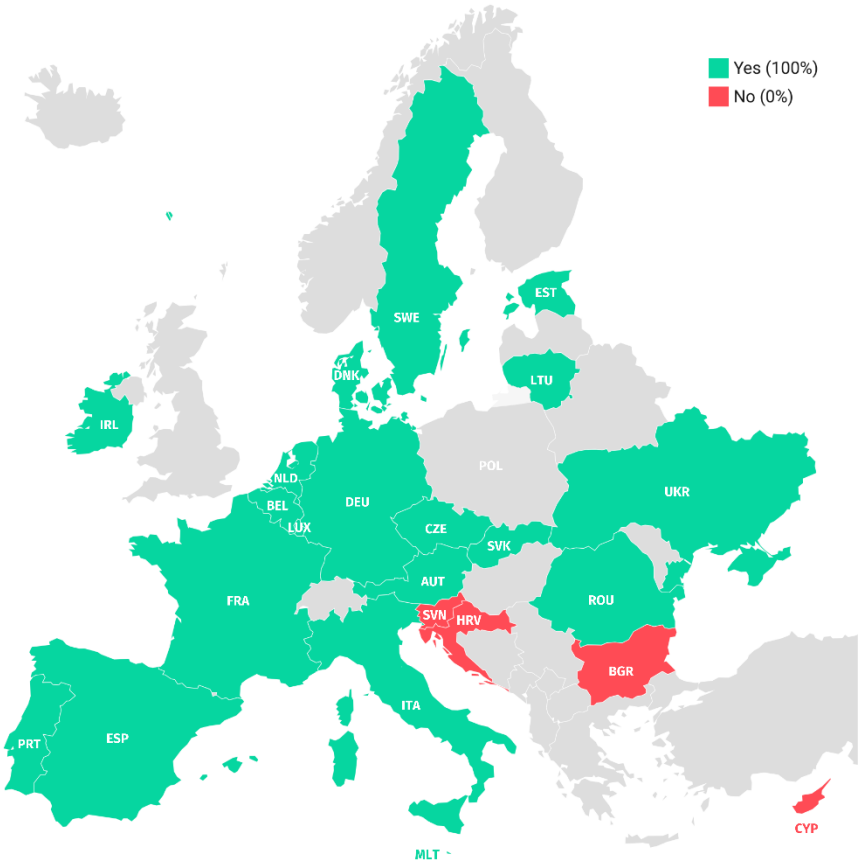


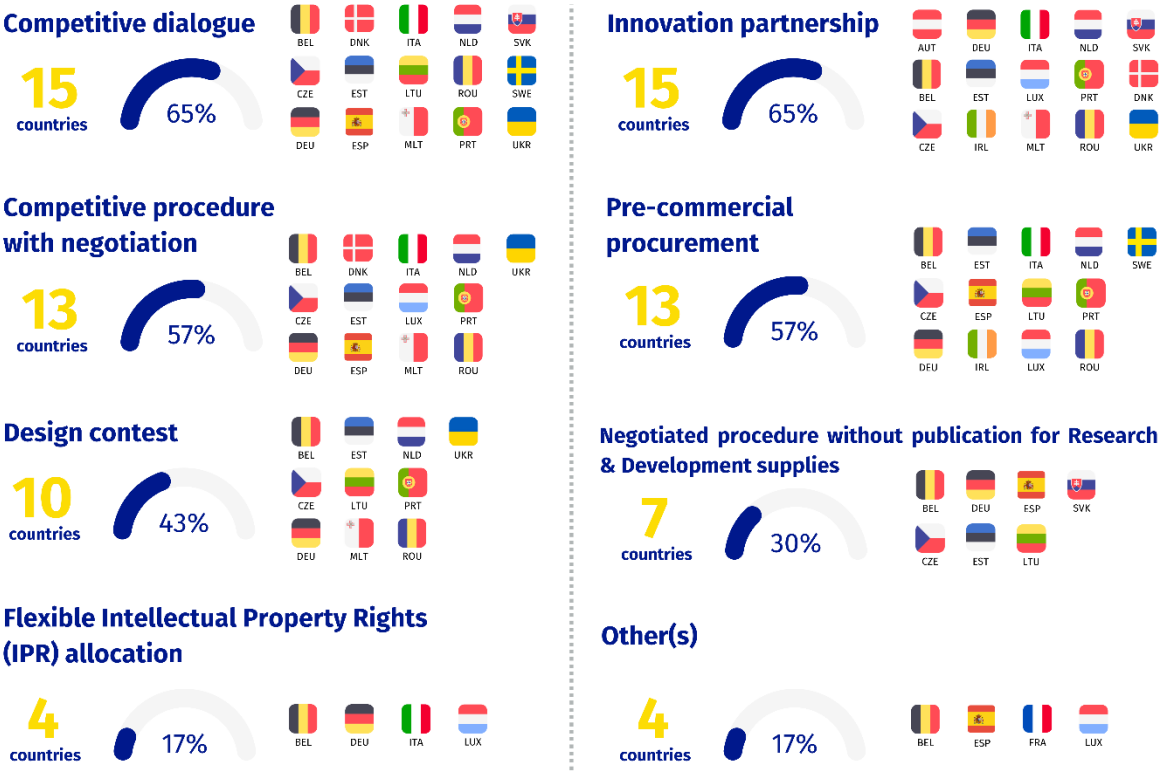
Figure 49. Existence of innovation procurement tools

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

Regarding the tools being used, countries reported to have a range of different instruments in place such as competitive dialogue, innovation partnership, competitive procedure with negotiation, among others. As represented below, the majority of the countries demonstrated to have, at least, more than one tool to incentivise public administration services to procure innovation from startups. Only four countries - Bulgaria, Cyprus, Croatia, and Slovenia - reported not having any incentive tools to encourage public buyers to procure from small

[24] Poland was not included in the analysis due to lack of information provided.

businesses. On the other hand, countries such as Belgium, Estonia, Germany, and Portugal are among the participants that have more mechanisms implemented, as illustrated in Figure 50, below. Belgium was the only country adopting every tool covered in the survey[25].



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

Figure 50. Use of innovation procurement tools by type

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

Albeit countries are strongly advised to implement innovation procurement tools and programmes, as advocated in the EU SNS Declaration and in official documents from EU entities, there is a certain degree of cautiousness that countries need to exert in order not to violate EU State Aid rules.

The EC's Guidance on Innovation Procurement underscores that attention should be paid "to check whether or not a company being awarded a contract receives a payment which exceeds what it would receive on market terms" (European Commission, 2021). This helps maintaining not only transparency but mostly serves to keep a fair competition among applicants.

Substandard 5.2 – Intellectual Property Rights (IPR)

Three indicators were used to assess the Substandard related to IPR, a vital consideration for startups and providers of innovative solutions during procurement processes. These

[25] For a deeper understanding of the procurement tools mentioned, please refer to the European Commission's Notice, "Guidance on Innovation Procurement", accessible here.

indicators are "Possibility of IPR ownership for startups in innovation procurement", "Intellectual property receipt as percentage of total trade", retrieved from the Global Innovation Index (WIPO, 2023), and "Existence of exceptions for public sector IPR ownership based on overriding public interests".. All indicators in this Substandard were considered for calculations.Substandard 5.2 - Intellectual Property Rights experienced a setback, decreasing by two p.p, dropping from a 44% implementation level in 2023 to 42% in this year's edition[26]. No country achieved a full implementation level, similarly to the previous edition, and the scores range from 2% to 86%. As the highest scoring countries in this Substandard, France, Ireland, and Malta registered 78%, 86% and 81% of implementation level respectively.

When addressing innovation, entrepreneurship, and breakthrough solutions through technology and emerging software, IPR carry an important role. They are not only important to protect both parties in procurement arrangements, but also have a **strategic role in guaranteeing the financial stability and long-term success of startups**, as having protection over a technique, a method or specific technologies brings value to recently created ventures.

When it comes to public entities, they must be encouraged to purchase from startups, however they should have some safeguards or specific conditions included in the tenders to avoid sensitive situations such as a future supplier lock-in[27]. To avoid this and other complications, and at the same time promote friendly IPR guidelines for innovation, IPR measures are a cornerstone of procurement processes.

To address this, ESNA inquired about the **possibility of the ownership of IPR being retained by the startup or scaleup participating in an innovation procurement tender**. It is observed that ten out of the 24 countries scored 100% in this indicator. Consequently, only Austria, Cyprus, Denmark, France, Germany, Ireland, Luxembourg, Netherlands, Slovakia, Spain, and Ukraine, allow startups and scaleups to retain IPR when taking part in procurement opportunities.

Furthermore, in this year's edition, three countries demonstrated not having this possibility at all, thus scoring 0%, and 11 other countries stated that is only partially possible to implement such option, as illustrated in Figure 51 below. On average, countries scored 65% in this indicator.

[26] For more information about the methodology improvements, please check 02. Methodology

[27] The EC "Interoperable Portal Europe" defines lock-in as a difficulty to change suppliers. More specifically, ICT "lock-in means that when you need to amend a system, buy new hardware, or build a new component, then you don't have much option in the short term other than to use the current supplier. This can increase cost, decrease flexibility, and close the market to new and innovative companies".

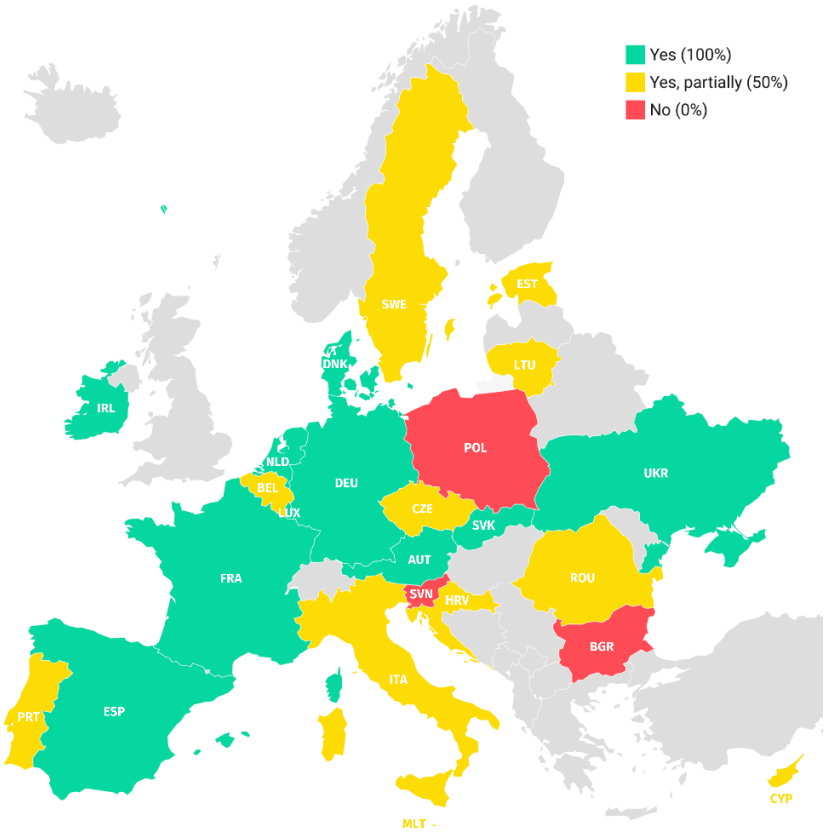


Figure 51. Possibility of ownership of IPR for startups in innovation procurement (Indicator 5.2.1)

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

According to a report by the Procurement of Innovation Platform, supported by the European Parliament, governmental contractors used to allow the contracted supplier to retain IPR by default, but such practice could lead, in some cases, to a "vendor lock-in". To avoid this, public buyers changed their approach by deciding to retain the IPR. However, if one issue seemed to be solved, others emerged, such as higher costs for public authorities, and less innovation in the market as startups were not allowed to keep IPR, and thus were less motivated to innovate. This brought abouts less self-investment from suppliers, and national authorities would have to pay for all the required Research & Development expenses, the report says.

Currently, as the EU SNS Declaration advocates, the ownership of IPR can normally be retained by startups and scaleups participating in innovation procurement opportunities unless there is the risk of overriding public interests. That way, startups are able to explore the commercial potential of their own inventions/ideas.

However, considering the benefits that startups and scaleups could gain from IPR, the Draghi Report highlights that "**only 9% of SMEs in the EU own formal IPR** such as patents, trademarks and designs, compared to more than 55% of large companies". It also identifies that, paired with a lack of knowledge on the importance of protecting these rights, the low numbers are explained by complex and expensive IPR application processes, and the fragmentation of national systems.

According to the Global Innovation Index 2023 (WIPO, 2023), the **European region "still hosts the highest number of innovation leaders among the top 25** - 16 in total, one more than in

2022. Out of 39 European economies covered, 19 move up the ranking this year (seven more than last year)". This is the case of Belgium, Denmark, Estonia, France, Ireland, Italy, Lithuania, Portugal, Romania, Slovakia, and Ukraine, for example.

Shedding a similar light on this topic, the Draghi Report also mentions that the EU is responsible for producing almost one-fifth of scientific publications around the world, ranking second ahead of the US and only surpassed by China. Additionally, the EU has a strong "yet eroding" patenting rate: in 2021 it "accounted for 17% of the world's patent applications, compared with a share of 21% for the US and 25% for China", the report states.

The Draghi Report later brings attention to an **insufficient commercialisation of research outputs in the EU**, since a considerable part of the knowledge produced through research in institutions remains underexplored commercially. Referring to the European Patent Office (EPO), the report underscores that only approximately one-third of "patented inventions registered by European universities or RTOs are commercially exploited. EU companies, especially SMEs, underutilise the possibility of formally protecting their IPR, which is often necessary to compete globally".

During times in which technology development is thriving, leading countries in innovation also rely on IPR as a source of income by 'exporting' the right to use their breakthrough products, innovative solutions, or services. **Leading countries that sell the most IPR are normally seen as leaders in innovation**, as they create unique products or services that can be patented or trademarked. This indicator, besides serving as a benchmark for innovation, can also be used to grasp competitiveness incentives, as countries are more encouraged to innovate in order to possess IPR over disruptive technologies, ideas, or solutions.

To address the **intellectual property receipts as percentage of total trade,** ESNA based its analysis in WIPO Index to evaluate this indicator's results, with an average score of 26%. Based on this, the Netherlands was the only country achieving a 100% score in this indicator, followed by Malta (94%) and Sweden (69%). The majority of the remaining countries - 17 out of 24 -, scored less than 50% as illustrated in Figure 52 below.

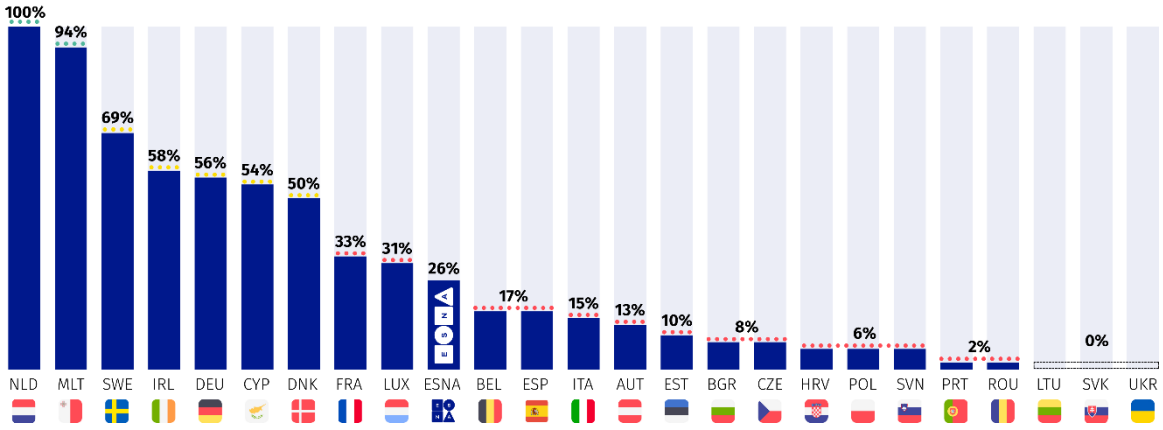


Figure 52. Intellectual property receipts as percentage of total trade (Indicator 5.2.2)

SOURCE: Global Innovation Index (WIPO, 2023)

Although countries are, in general terms, encouraged to allow startups and scaleups to retain IPR, there may be a few exceptions in which public authorities can or may need to adopt

stricter IPR terms when procuring innovation. As previously mentioned, it is the case when certain intellectual property holds such a significant value that may end up overriding public interests. In that case, such exception is accepted as part of the EU SNS Declaration recommendations.

Considering the aforementioned criteria, seven out of the 20[28] countries responded that in certain circumstance the IPR rights may be held by public authorities for **overlapping concerns with public interests**, as illustrated in Figure 53 below. These countries are Belgium, Cyprus, France, Ireland, Malta, Spain, and Ukraine. On average, participating countries scored 35% on this indicator.

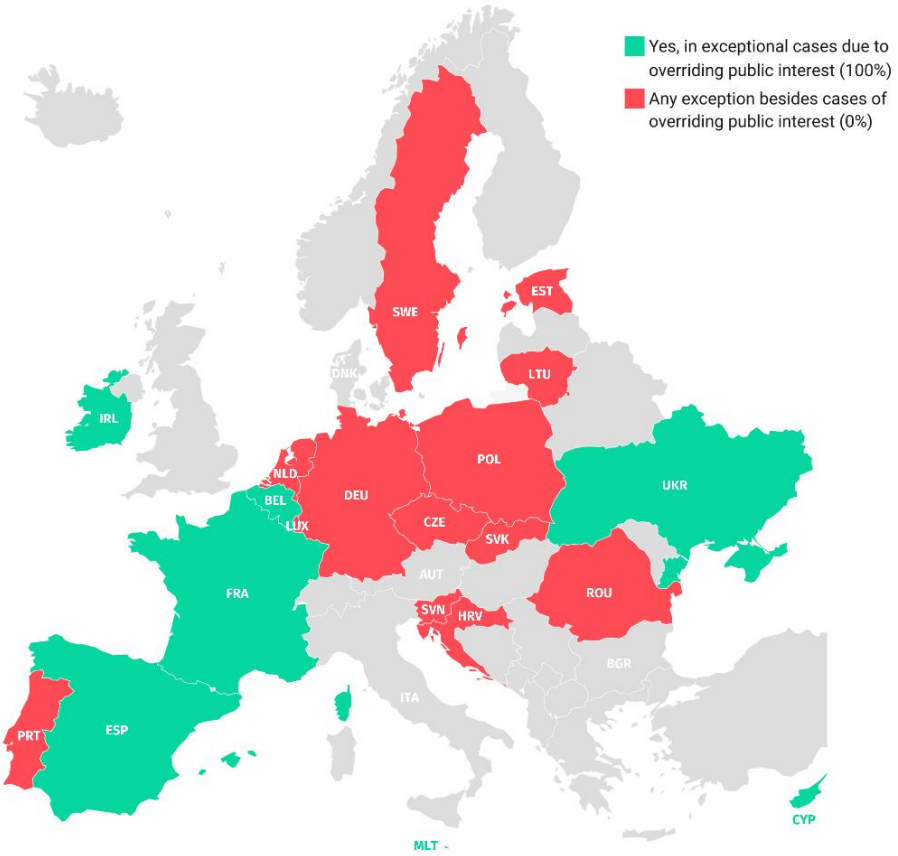


Figure 53. Existence of exceptions for public sector IPR ownership based on overriding public interests (Indicator 5.2.3)

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

As the main reasons mentioned to justify the retention of IPR by national authorities following public interests' concerns, countries indicate that such action is taken when a certain technology, practice, service, or product is subject to undermine security matters, public safety, public welfare, or **strategic areas for national development** such as defence, health/medicine, and scientific research.

[28] Austria, Bulgaria, Denmark, and Italy were not included in this analysis due to lack of information provided.

The results in this Indicator showcase a noteworthy increase regarding last year's score, in which only two out of 17[29] states proved to have the same exception in place (eight countries replied yes but only two provided the required evidence) – 13 out of 19 countries allow IPR rights to be retained by public buyers in procurement innovation opportunities (nine countries last year).

Some countries specified that national entities may hold IPR rights when: the respective project is completely funded by public funds; a designated project is developed to fit very specific needs of a national authority; arrangements can be made, in a negotiation case by case, in which the public buyer must define in the procurement the arrangements applicable to IPR; if the public buyer intends to further develop the item or service in the future.

As a successful solution to avoid disadvantages for both parties in case the public buyer decides not to obtain IPR ownership, the public tender must be very specific on the terms of IPR in order to safeguard the public authority's interests and the product provider.

Ultimately, public buyers invest in the future of startups and scaleups akin to VC, but with the distinction that no shareholders are demanding a financial return on their investment. Instead, the **public buyer measures its return on investment through the societal benefits that the innovative solutions procured from startups can deliver** (European Commission, 2023).

Box 5.2 Signatory Member's Initiative – Ireland

In Ireland, the public sector can retain ownership of Intellectual Property Rights in specific situations, when there are overriding public interests involved, including situations when the public sector needs to ensure access to a specific technology or innovation that is crucial for public welfare, safety, or security.

Substandard 5.3 – Open-Source Assets

Furthermore, beyond the procurement realm, Open-Source initiatives, platforms, and practices are paramount to push the limits of technology forward such as AI-based software's and Large Language Models (LLMs). As the EC puts it in the Interoperable Europe Portal, "open-source software enables users to use, study, redistribute, and modify software freely. It fosters interoperability by promoting standards-based development and collaboration among stakeholders".

In order to assess the incentives conceded to startups to contribute to Open-Source assets and the number of ventures actively contributing, ESNA inquired the countries on such practices and mechanisms currently in place.

One indicator was considered to assess this Substandard covering the use of open-source assets initiatives - "Existence of startups actively supported and contributing with open-source assets", included also in last year's Report.

[29] Akin to this edition, some countries were not considered due to lack of information, such as Cyprus, Czechia, Estonia, and Slovakia.

The Substandard 5.3 - Open-Source Assets, similarly to the previous two substandards analysed, decreased in its overall implementation level in relation to last year's results. With an implementation level of 40%, it's falling three p.p behind the 43% registered in the previous SNS Report edition[30].

As this Substandard only has one indicator used for calculations, the overall score of the Substandard is equal to the implementation level achieved by countries in Indicator 5.3.1 "Existence of startups actively supported and contributing with open-source assets".

With this in mind, the majority of the surveyed countries do not actively encourage startups to contribute to open-source assets. Only nine out of the 24 surveyed countries show evidence of having this incentive in place, while one the countries scored 50% due to lack of evidence provided. As illustrated in Figure 54 below, the remaining 14 countries responded negatively when asked if they have such incentives in place. On average, countries scored 40% for this indicator.

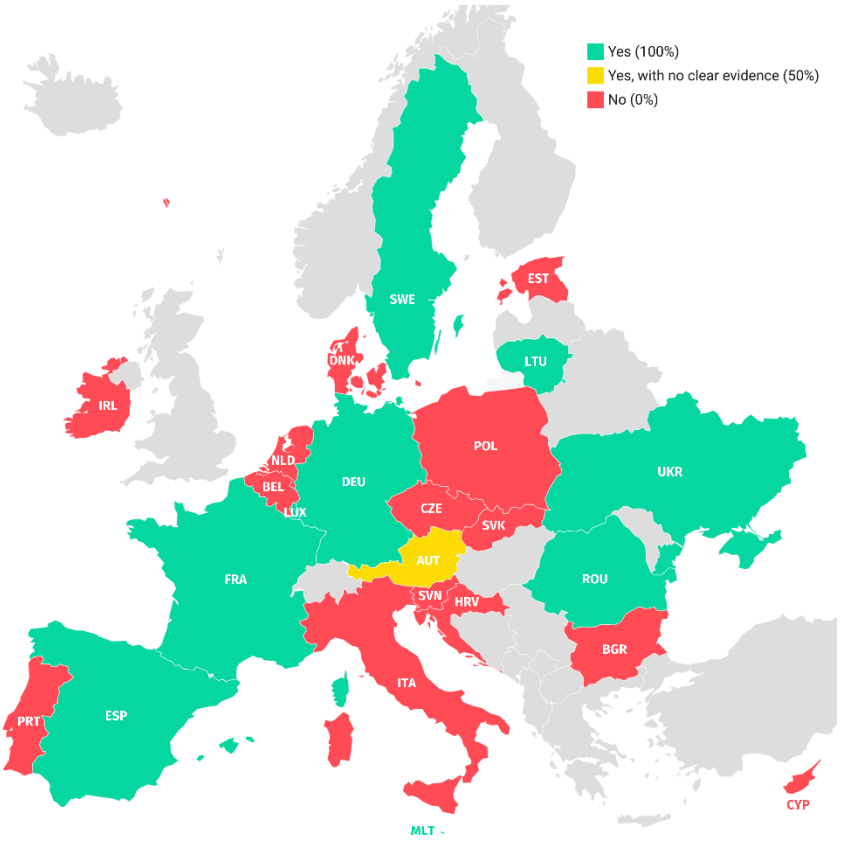


Figure 54. Existence of startups actively supported and contributing with open-source assets (Indicator 5.3.1)

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

To measure to what extent countries are applying such incentives, ESNA collected data on specific mechanisms that serve as incentives for startups to contribute to open-source assets. The mechanisms in place include: tax incentives and tax benefits for startups contributing to open-source projects; collaboration programmes with public authorities

[30] For more information about the methodology improvements, please check 02. Methodology

aiming to develop open-source assets; **open-code initiatives** allowing for licensed use to accelerate digitalisation; **funding, grant, and/or subsidies** opportunities for startups that are engaged in innovative and collaborative projects such as active contributions to **open-source development**; availability of integrative platforms condensing data from different administrations of the government to be used in projects from the private sector and civil society that benefit society at large; **open-source platforms** providing access to machine learning models and tools that aim to promote open AI solutions and their economic and technological development benefits.

Finding the right balance between keeping intellectual property ownership and encouraging Open-Source assets is an important fact to consider when building effective policies to promote innovation. As also referred by the Draghi report, software and tech instruments should be "as open as possible and as closed as necessary to mitigate the risks of unintended knowledge and technology transfer".

Box 5.3 Signatory Member's Initiative – Romania

Romania has incentives in place to encourage startups to contribute to open-source projects, such as public funding for open-source projects. Startups can access grants, subsidies, and tax incentives for developing open-source solutions. Additionally, startups are encouraged to work with government entities to develop open-source software for public use.

Open-source assets and other trademarked tech practices can bolster the ability of small innovators or self-employed entrepreneurs to have a greater participation in projects that would usually be out of their reach. These open software have the potential to significantly cut costs and time for small ventures, as they do not have to begin their innovation process from scratch. By using existing technologies or methods, individual entrepreneurs and innovators can easily **push the boundaries of science, technology, AI**, and craft even more game-changing solutions.

Substandard 5.4 – Tech transfer policies

Consisting of one indicator, **"Existence of policies for smooth tech transfer"**, this Substandard was the only one from SNS #5 demonstrating an increase in its overall implementation level. Such positive improvement occurs because, when asked if **there were any policies to facilitate a smooth transfer of the technology developed in universities and research institutes to startups**, 21 out of the 24 surveyed countries - 88% of the participants - replied positively. However, due to the lack of evidence provided in a few cases, five countries scored 50%. Consequently, 16 out of 24 participants achieve the maximum implementation level.

Such result translates in an increase of six p.p for this Substandard, from 71% in 2023 to 77% in this SNS Report edition. This was also the highest-scoring Substandard in SNS #5. As illustrated in Figure 55 below, the countries scoring 100% were Austria, Belgium, Cyprus, Czechia, France, Ireland, Lithuania, Luxembourg, Malta, the Netherlands, Portugal, Romania, Slovakia, Slovenia, Spain, and Sweden. Additionally five countries scored 50%, due to limited

evidence, and the remaining countries replied negatively, thus scoring 0% in this indicator and Substandard.

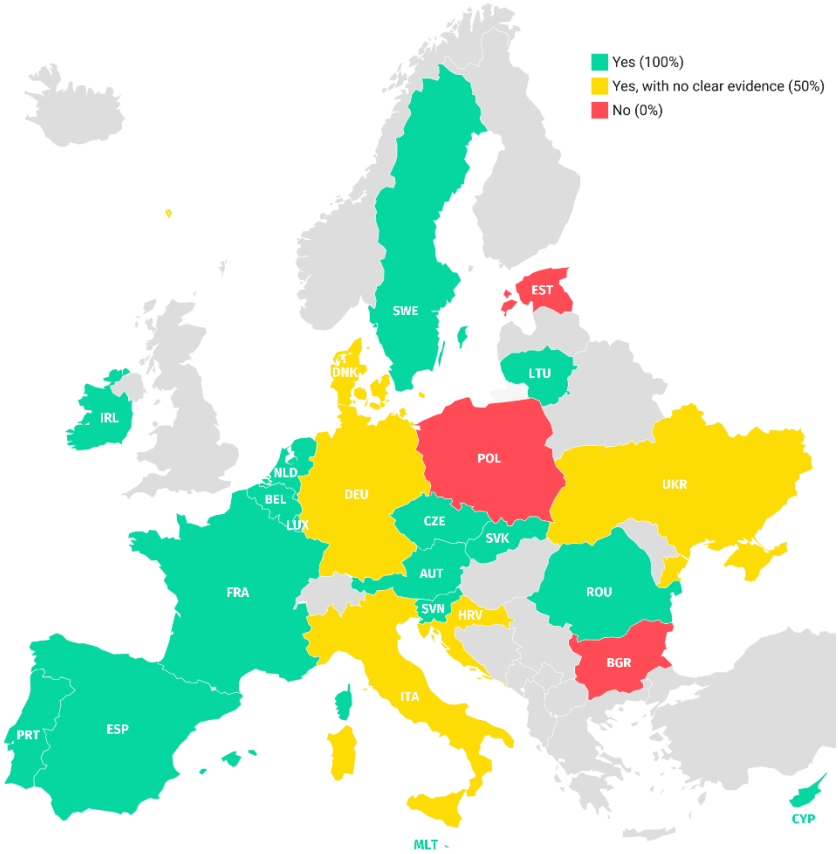


Figure 55. Tech transfer policies (Indicator 5.4.1)

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

Box 5.4.1 Signatory Member's Initiative – Ireland

Ireland's Innovation Vouchers offer SMEs to collaborate with public knowledge providers such as universities and research institutions. This encourages startups to utilise academic expertise to solve technical problems and develop new products or services. Vouchers equate to €10,000 worth of time with an expert or researcher to help these companies face a specific challenge or to develop an idea or product.

As an example to support their answers, several countries report having Tech Transfer Offices (TTOs) in place to streamline knowledge transfer from universities to companies, and this way improve the commercialisation of research. In these countries, there are targeted policies in place allowing for the creation of spin-offs in collaboration with startups, and the possibility of licensing innovations to be used by existing companies.

These offices boost innovation by helping research teams protecting their IPR, identifying market needs, and connect with startups and scaleups. Ultimately, they act as an incentive

for students, professors, and the academic community in general to push their boundaries, knowing that their products can have a real and commercial use thanks to the TTOs. Also, some countries have specific programmes in place promoting the commercialisation of research through specific funded initiatives.

The Draghi Report underscores a generalised difficulty in the EU in attracting the academic research to the markets, and advocates for the capacitation of TTOs in order to make them more proactive as bridge-makers between the market and the academia. Additionally, it recommends a stronger focus to remove legal obstacles for universities and researchers to register their inventions' IPR. Furthermore, the report elaborates on ways of easing the exploration of IPR by companies through licensing. But as startups and starting ventures may lack the financial capacity, and "since licensing is sometimes too costly for start-ups with limited financial resources, the EU could promote the issuance of shares and SO to finance the cost of using IPR owned by universities and RTOs".

The generalised implementation of such tech transfer and suggested policies, as recommended in the EU SNS Declaration, helps the startup ecosystem expand as a whole. To target and actively contribute to this matter, the Draghi Report sheds light on the importance of scale as a motor to growth: scale, not only for individual companies but in market access, resources, and bridges between different players. More "interconnectedness of innovation" between ecosystems is required, as indicated in the report. In order to achieve this desired scale referred by Draghi, EU countries should develop a large collaboration model between researchers, innovators, and businesses. Akin to what the EU SNS Declaration advocates and did in its foundation: the ecosystem needs to bring the players together.

Box 5.4.2 Signatory Member's Initiative – Luxembourg

The University of Luxembourg collaborates with TechnoPort, the Ministry of the Economy, and the National Research Fund (FNR) to support spin-offs from proof of concept to development. The Entrepreneurship Programme, including events such as the Ideation Camp, equips participants with business skills. The newly established Office for Partnership, Knowledge, and Technology Transfer (PaKTT) aims to promote science, disseminate knowledge, and support innovation through partnerships and IPR transfers. As per the Luxembourg Institute of Science and Technology (LIST), it emphasises technology transfer by creating spin-offs and licensing innovations to existing companies. This process contributes to product development, economic growth, and job creation, with agreements potentially involving capital interests or royalties.

4.6 SNS #6 "Access to finance"

4.6.1 Overview

Providing a healthy investment environment in Europe is fundamental to the economic development of the European area, enabling the establishment and growth of highly innovative, value-added companies where startups have a prominent role. Standard #6 thus

promotes public policies that stimulate the private investment ecosystem, such as VC funds, and create mechanisms that mitigate risk, allowing for a greater flow of capital.

Access to finance is vital for startups, as it is a transversal need at various stages of maturity. Establishing a robust investment ecosystem is essential to bring together companies and investors, both public and private. Financing options, from VC investments to direct public grants, may vary. Adequate funding allows startups to scale and pivot to adapt to market needs and to innovation cycles. Funding also tends to be linked with mentoring or networking opportunities, fostering a favourable landscape for entrepreneurship.

Given the influence and impact of funding, governments play a vital role in providing incentives and support. This support is particularly critical for companies that might not otherwise have the means to launch or grow due to the characteristics of investments in startups such as long timeframes, high development costs, and inherent risks related to innovation.

It is worth mentioning European efforts in creating a strong market Union, through the promotion of a Capital Markets Union (CMU) - by introducing a series of measures to diversify EU businesses' funding, strengthening cross-border capital flows and providing investors with better investment opportunities. However, it is important to mention that the access to capital in Europe still has room for improvement, especially when compared with other regions such as the United States.

Standard #6 achieve a 72% of implementation level, an increase of 16 p.p compared to last year, with seven countries achieving 100% level of implementation. These countries are Belgium, France, Lithuania, Portugal, Spain, Sweden, and Ukraine, as shown in Figure 56.

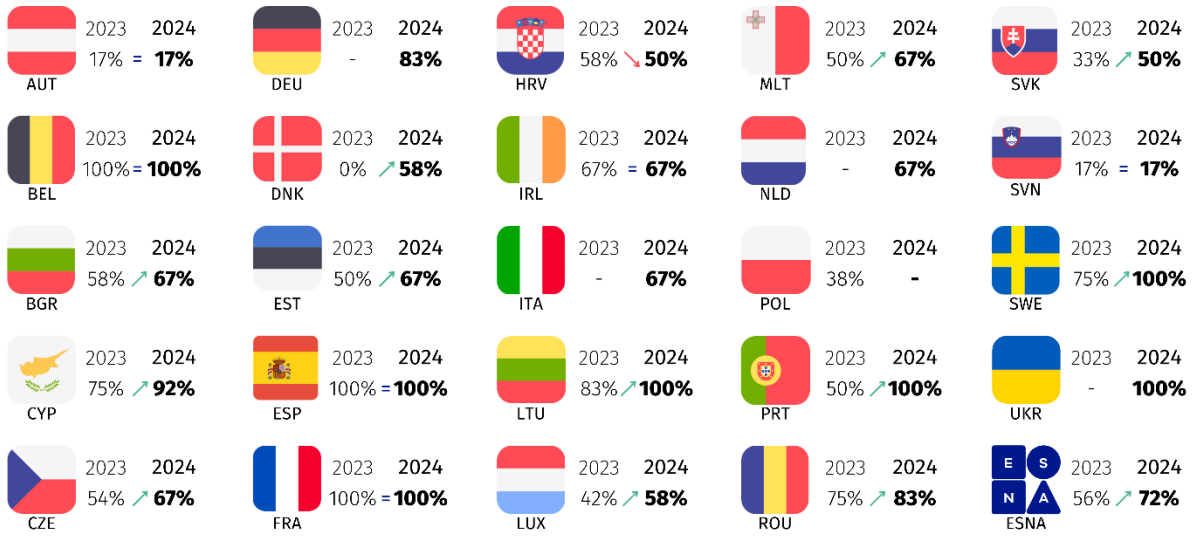


Figure 56. Countries' scores for level of achievement of SNS #6

SOURCE: ESNA, based on official data from Member Countries (Survey 2023 & 2024)

With a significant increase in SNS #6, 12 countries that replied to the survey in the past and current edition (2023 & 2024) followed this trend and increased their overall implementation level in this Standard. This result reflects governments' dedication to foster a healthy investment ecosystem through direct and indirect investment in SMEs and startups.

Therefore, most countries set up mechanisms and funding schemes to bridge the funding gap.

To enhance the depth of the analysis, the SNS is divided into three substandards. More information about the substandards can be found below. The full description of this SNS #6 can be found in A1. EU Startup Nations Standards – Description.

Substandard 6.1 – Public Grants
Public grants play an important role in facilitating access to finance, notably by supporting companies in the early stages of maturity that may be less attractive to private investors, allowing innovation to jumpstart. Public funding serves a public role in financing innovations with the potential to transform society and the economy, which often entails a greater level of risk.
Substandard 6.2 - Indirect Access to Finance
Indirect access to finance is particularly important in this SNS. Its benefits and motivations align with those of public grants; however, the support is provided indirectly with the goal of increasing available capital and private investment. This is achieved by supporting the investors who, in turn, will subsequently invest in startups, fostering a dynamic flow of capital within the ecosystem.
Substandard 6.3 - Tax Relief Measures
Tax relief operates as an incentive for investment by reducing the tax burden on investors' capital gains, thereby increasing the attractiveness of investments, and drawing more capital into the ecosystem.

Figure 57. SNS #6 substandards description

SOURCE: ESNA (2024)

Substandard 6.1 – Public Grants showcases a positive implementation level of 70%, while Substandard 6.2 – Indirect Access to Finance achieves an 85% score, therefore impacting the SNS as the best-performing Substandard. Conversely, Substandard 6.3 – Tax Relief Measures, displays the lowest implementation level at 61%.

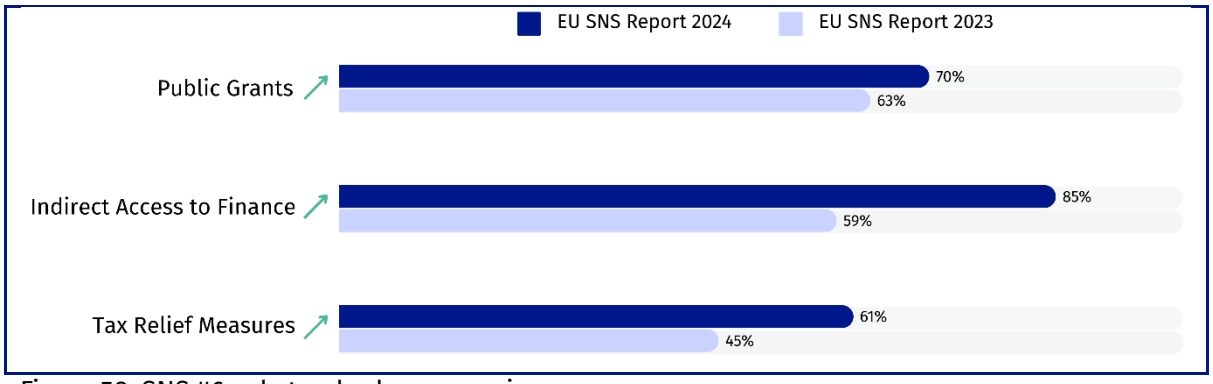


Figure 58. SNS #6 substandards progression

SOURCE: ESNA, based on official data from Member Countries (Survey 2023 & 2024)

For a quick assessment of the key insights gathered on the SNS #6 analysis, please refer to the main takeaways below.

4.6.2 Substandard analysis

Substandard 6.1 – Public Grants

Public actors have an important role to play in establishing stable and conducive regulatory environments for sustainable finance and investment, through different mechanisms such as grants (OECD, 2024).

Grants and other financial mechanisms can be used to support entrepreneurs who are seeking to develop and grow their innovative ideas. They are particularly well suited to support technologies that are further away from the commercialisation stage. They can also be used to incentivise the adoption of green technologies that may have broader environmental and social benefits.

Countries have different grant and direct funding scheme in place, of which it is important to emphasise the framework of the RFF, responsible for boosting direct investment by European governments in startups, following the economic recovery in the post-pandemic world.

This is exemplified by the 70% level of implementation for this Standard, with 14 out of 22[31] of the countries surveyed showing evidence of using part of their RRF funding to enhance access to VC for startups, demonstrating full implementation of the Substandard (100%), as shown in Figure 59.

[31] Sweden and Ukraine excluded from this indicator.

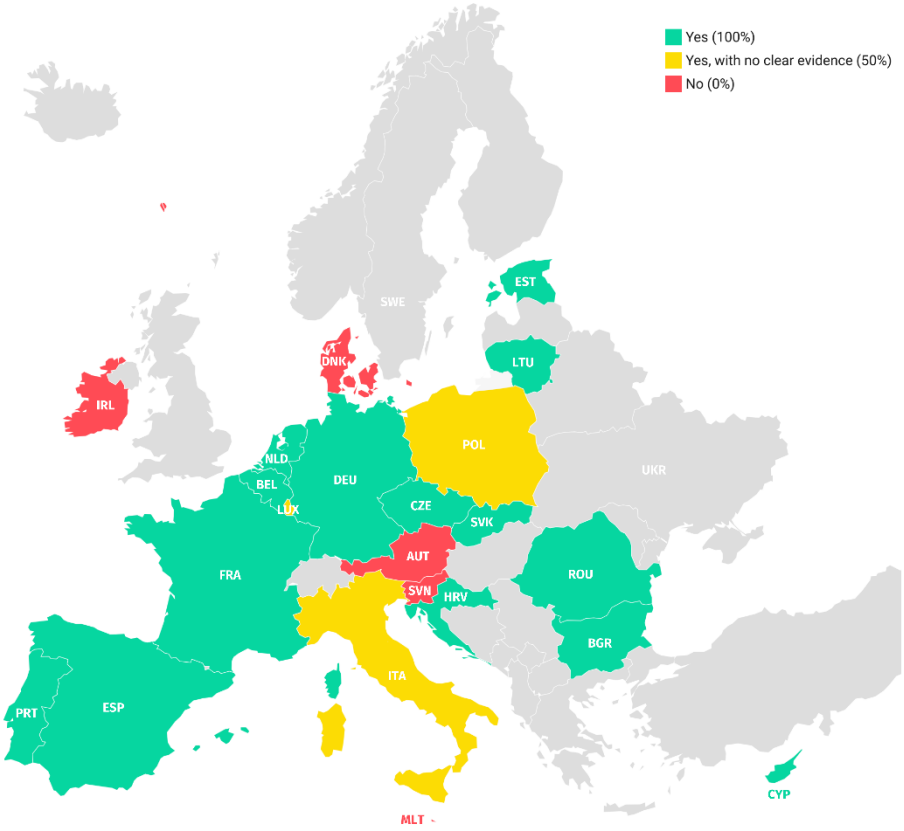


Figure 59. Existence of RRF support for Venture Capital for startups (Indicator 6.1.1)

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

The RRF is being used in different ways such as to support VC, to boost financial instruments such as equity investments and loan guarantees, as well as through other direct startup incentives (e.g. grants and vouchers).

Box 6.1 Signatory Member's Initiative – Slovakia

Slovak Investment Holding a.s. plans to allocate resources amounting to a total of €15 million euros as part of the RRF to companies in the seed phase. The financial instrument aims to stimulate the development of innovative business entities and provide startups with the initial capital needed to kick-start their businesses.

Substandard 6.2 – Indirect Access to Finance

Two indicators were considered to analyse the Indirect Access to Finance Substandard: "Utilisation of EIB and promotional banks for VC investment gap bridging" and "Adoption of initiatives to diversify private capital for high-growth startup co-investment". This specific Substandard reflects a positive increase from 59% in 2023 to 85% in 2024.

Indirect access to finance plays a key role in promoting a healthy and dynamic investment ecosystem. This involves financing investment vehicles for the subsequent distribution of capital. Thus, indirect investment guarantees a greater amount of capital in circulation for

investment in startups, thereby bridging the financial gap and lack of access to finance in Europe.

This practice is widespread in European countries, albeit on different scales. European countries also have the support of institutions such as the EIB and the EIF. Also noteworthy is the specialised nature of these funds. It is also worth highlighting the focus and specialisation of these funds on green technologies, which are strategic for European countries.

When analysing the utilisation of EIB programmes, Promotional Banks or other dedicated vehicles - leveraging private investments, and distributing funds to VC firms to address the existing investment gap - almost all countries declare having some measures in place, achieving 93% of implementation, compared to 74% in 2023. Notably, 21 out of the 23[32] surveyed countries showed evidence of **using the EIB and promotional banks for VC investment gap bridging**: as shown in Figure 60 below.

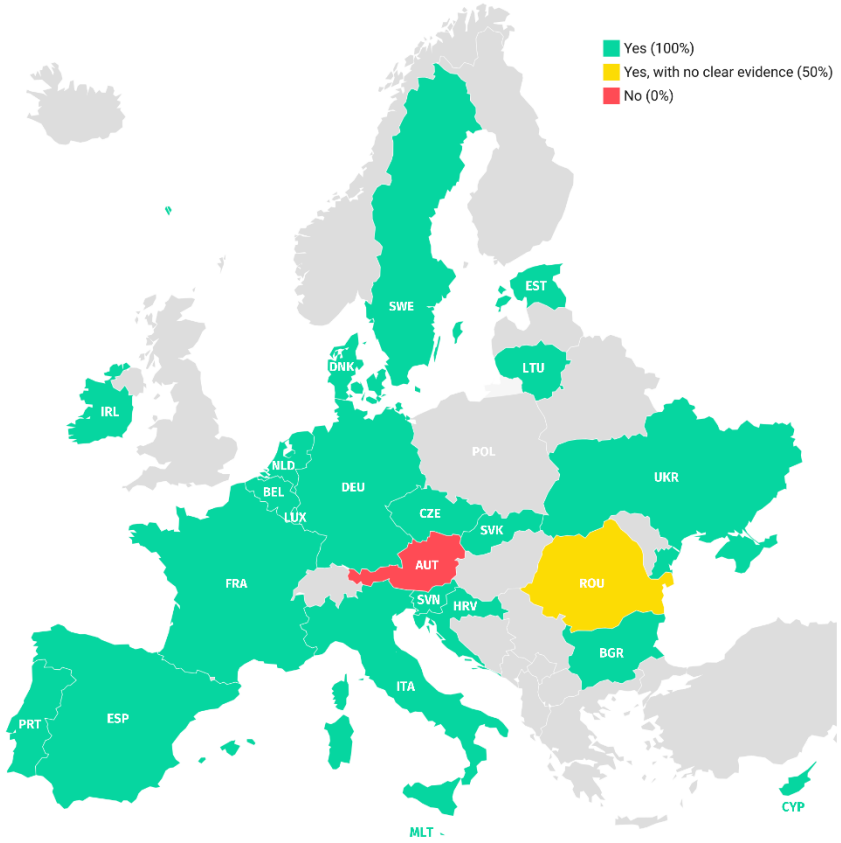


Figure 60. Utilisation of EIB and promotional banks for VC investment gap bridging (Indicator 6.2.1)

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

[32] Poland was not included in the analysis due to lack of information provided.

Box 6.2.1 Signatory Member's Initiative – Germany

Germany's financing toolbox provides grants, guarantees and dedicated financing instruments suited for innovative SMEs and startups and new entrepreneurs, but also BAs, venture capitalists and venture debt funds. These schemes cover all steps, from pre-seed to growth and internationalisation stages. Spearheaded by the Federal Ministry for Economic Affairs and Climate Action, funding can come in the shape of grants, advisory services, reduced interest rates, or also co-financing from private sector investors.

The EIB is present in all EU countries and funds tailor-made programmes and specific projects, namely in strategic sectors and with social impact (climate, technology, security and defence, bioeconomy, etc.). The EIB aims to act as a bridge between capital markets and the economy, being at the forefront of EU-wide financial instruments to build a true capital markets union to finance European tech champions, innovators, and unicorns[33]. On the other hand, the EIF invests in VC and Private Equity Funds, directly in banks and guarantee institutions, along with other country-specific financial solutions.

The private sector's involvement is also essential to bridge the financing gap. Private financial institutions must contribute toward creating a conducive ecosystem. Their involvement complements public financial institutions, which can also help SMEs by facilitating their participation in capital markets and supporting financial innovation to foster the development of relevant digital financial solutions (OECD, 2024).

In this regard, it is worth highlighting the countries' efforts in promoting public-private partnership programmes and incentives for private investors to participate in co-investment schemes, such as the establishment of fund-of-funds to invest in startups and innovative projects.

However, the approach towards the level of maturity of startups also differs between countries. For example, countries such as Spain use their funds to support and propel projects into more advanced stages, enabling them to scale up, while countries like Sweden mainly deploy these funds for early-stage ventures, in order to boost projects at the initial phase.

Some countries, such as France also foster large companies' investment in high-growth SMEs, enabling them to pay off their minority subscription to innovative SMEs' capital or mutual funds. Other countries such as Portugal and Slovenia develop specific funds for technological transfers.

[33] For more details on the EIB's core strategic priorities, please visit this page.

Box 6.2.2 Signatory Member's Initiative – Ukraine

The Ukrainian Startup Fund (USF), under the guidance of the Ministry of Digital Transformation, plays a crucial role in promoting co-investment strategies by actively engaging private investors, VC firms, and corporate partners. For example, the USF has introduced grants designed to attract private capital by de-risking investments through early-stage funding. It fosters a more favourable environment for private investors to co-invest alongside public grants, which accelerates the growth of high-potential startups. Additionally, the Corporate Innovations Programme, launched by the USF, collaborates with corporations to foster co-investment opportunities. This scheme encourages corporations to invest in startups as a way to explore innovative solutions while diversifying their capital.

It is also worth highlighting that some countries have some sector-specific funds in place, namely for deep-tech and sustainable solutions. Countries such as Denmark and Germany report having investment funds to support high-growth and technological companies - they are however not solely focused on startups, but on companies in general.

When deep diving on initiatives to diversify capital available for co-investing, the indicator follows the trend of the respective Substandard with a substantial increase from 44% to 76%, despite being slightly lower than "Utilisation of EIB and promotional banks for VC investment gap bridging". Additionally, 16 countries out of 23[34] showed evidence of having different initiatives in place, therefore achieving 100% level of implementation.

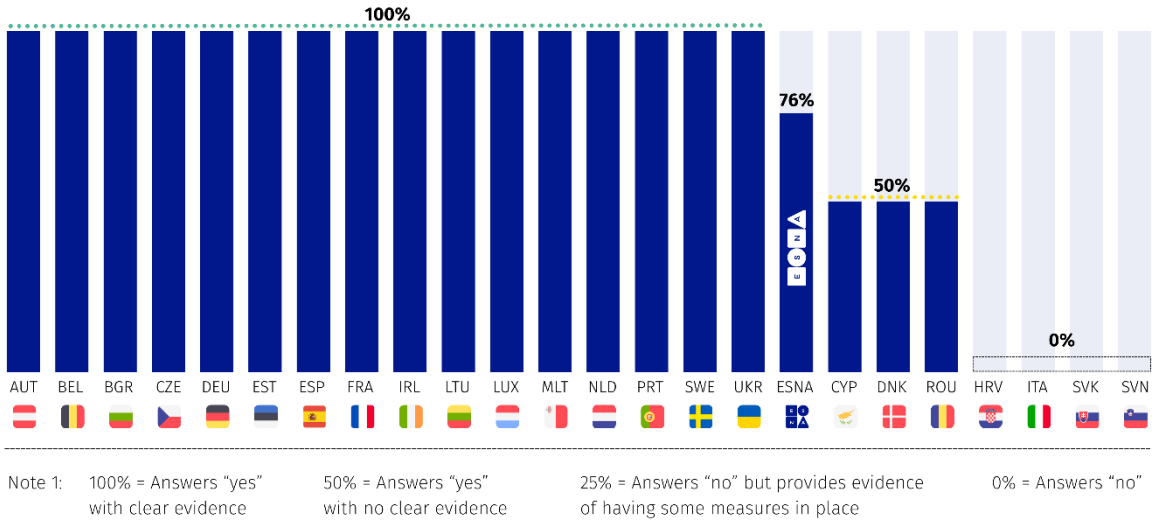


Figure 61. Adoption of initiatives to diversify private capital for high-growth startup co-investment (Indicator 6.2.2)

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

With regards to indirect access to finance, there is a potential for new mechanisms to increase and diversify private capital, such as pension funds. Pension funds hold a great potential to foster private investment in startups, while managing the risk with different classes of shares.

[34] Poland was not included in the analysis due to lack of information provided.

A small increase of EU pension funds in VC would bring about a great increase of capital going to startups.

Pension funds are a valuable tool for innovative companies such as startups, as their long-term investment strategies align with the growth needs of these enterprises. Furthermore, pension funds can contribute to bridging gaps by supporting various maturity stages, thereby fostering the development of local economies.

Pension funds have a transformative potential that remains to be fully explored in Europe. Even though pension funds hold large amounts of assets, their participation in VC investment, namely in startups, is limited. In 2023 European pension funds committed 6.5 billion euros, representing 11% of the new funds raised by private equity funds, and only 0.6 billion euros, of the new funds raised by VC funds. These amounts represent 0.4% and 0.02% of the total assets of pension funds, respectively.

Even in the EU countries with the highest levels of VC investment by pension funds, there is still a wide gap when compared with the US. Investments by US pension funds account for more than 50% of private equity and VC investments[35]. Despite this investment difference between the US and the EU, 50% of the surveyed countries (12 out of 24 countries) have pension funds investing in VC.

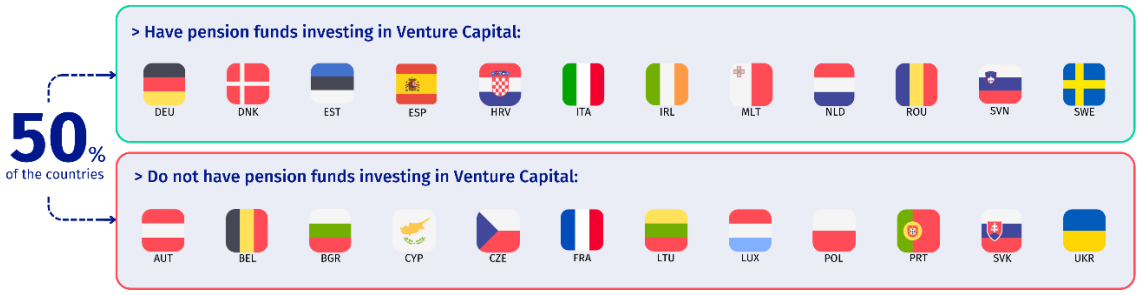


Figure 62. Percentage of countries using Pensions Funds to promote startup investment

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

Although 50% of the surveyed countries have pension funds investing in startups, the percentage of this allocation varies and is substantially low. Pension funds in Romania allocate a portion of their portfolios to VC funds, approximately 5-10% of their alternative investments may be directed toward startups and high-growth companies. Similarly, in Sweden, startup investment represents under five p.p of pension fund portfolios, even though there is an increasing demand for more investment in startups and scaleups.

On the other hand, in Spain, Ireland, and the Netherlands, this percentage corresponds to no more than 1%. Estonia presents an in-between percentage, slightly higher, with 2.85% of the portfolios invested in VC, the biggest share being 31% of a fund's portfolio.

It should also be noted that although ESNA has not collected sufficient information on the type of companies in which these funds invest, some countries (e.g. Ireland) mention that many of the startups invested are based in the US and not in Europe.

[35] For more details please refer to the European Capital Markets Institute report, accessible here

Substandard 6.3 – Tax Relief Measures

Only one indicator **"Existence of tax relief for BA"** was considered to analyse the application of tax relief measures.

BAs play an important role in the economy. In many countries, they constitute the second-largest source of external funding in newly established ventures[36] (EC). Studies also found that BA investments are 93% targeted to the process of product innovation in early-stage phases. Furthermore, BAs have been requesting a set of tax incentives, mainly relating to no/fewer capital gains, front-end relief, and loss relief (INOVA+; Business Angels Europe (BAE); EBAN; Tiago Botelho; Zentrum für Europäische Wirtschaftsforschung;, 2017).

In line with this idea, the Indicator **"Existence of tax relief for BA"** was considered to analyse the application of tax relief measures. The implementation rate for these tax relief measures, specifically **incentives for BA**, reveals an implementation score of 61%. 14 out of 24 countries (58%) show evidence of implementing this type of incentive.

Those countries are Belgium, Cyprus, Denmark, France, Ireland, Italy, Lithuania, Malta, Poland, Portugal, Romania, Spain, Sweden, and Ukraine as shown in Figure 63 below.

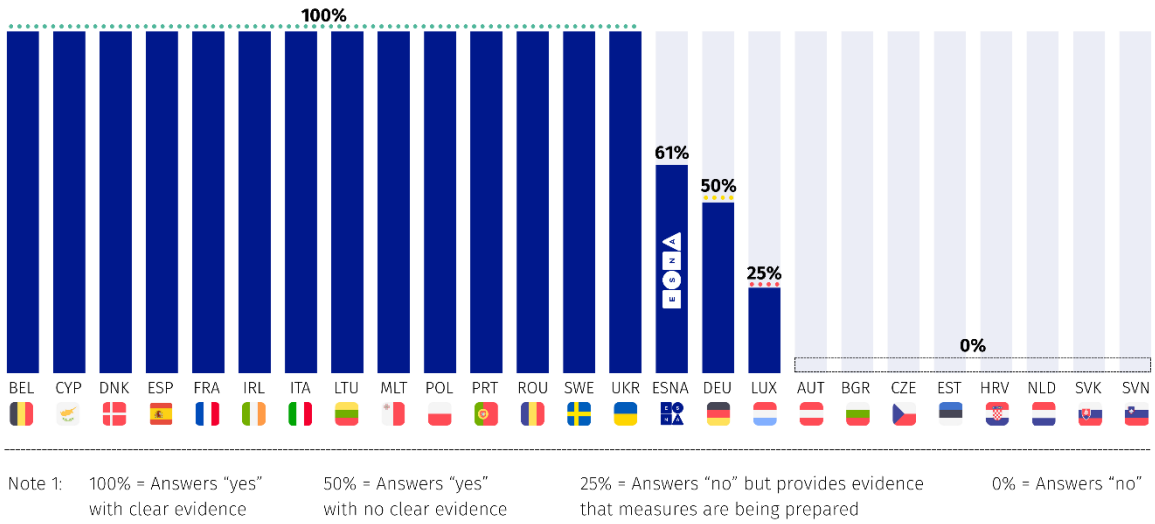


Figure 63. Existence of tax relief for Business Angels (Indicator 6.3.1)

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

Although some countries have not implemented tax exemptions, some countries such as Luxembourg display evidence of having some measures in place to stimulate investment by individual investors, therefore scoring 25%.

[36] Business angels - European Commission

Box 6.3 Signatory Member's Initiative – Lithuania

Lithuania created a series of tax relief measures aimed at supporting BAs to stimulate early-stage funding, particularly for startups and high-growth ventures. One of them is the Personal Income Tax Exemption: BAs who invest in qualifying startups can benefit from personal income tax exemptions on the capital gains earned from their investments. This exemption is aimed at reducing the tax burden on profits earned from selling shares in startups after a minimum period of typically 3 years. Corporate angel investors may benefit from corporate tax deductions thanks to the Corporate Tax Exemption for Qualifying Investments. BAs participating in VC or seed funding rounds may also benefit from reduced tax rates on capital gains or tax deferrals, provided that they meet certain investment criteria laid out by Lithuanian tax authorities.

4.7 SNS #7 "Social Inclusion, diversity and protecting democratic values"

4.7.1 Overview

Guaranteeing that every potential founder, entrepreneur, and innovative mind has equal opportunities to put their ideas into concrete actions is paramount to an inclusive, diverse, and strong startup ecosystem. With the rise of digital transformation, ensuring digital rights and entrepreneurial inclusion is an important step towards technological development in the civil society.

In acknowledgement of such endeavour, both the EU SNS Declaration and the European Declaration on Digital Rights and Principles reflect the efforts towards the creation of a level playing field for everyone. Without fair access to technologies, the appropriate skillset, and an online space for all, startups and scaleups not only have a shorter range of people to hire but great breakthrough ideas might also be lost.

The transition to a digital society carries democratic challenges, but also a chance to improve and strengthen the way democracies function. By addressing diversity and equality concerns, it is possible to foster stronger ecosystems for everyone, regardless of gender, race, education, cultural level, socio-economic status, religion, sexual orientation, or disabilities.

In order to target such dynamic and complex conditions in each ecosystem, a complete guide from the International Labour Organisation (ILO) sets out an approach that identifies six key components that are critical to a mature entrepreneurship ecosystem: 1) Human capital; 2) Policy; 3) Appropriate finance; 4) Culture, 5) Support; and 6) Markets. In essence, the ILO's (2024) approach towards an Inclusive Entrepreneurship Ecosystems Development intends to "promote the inclusion of marginalised groups into functioning ecosystems, (...) making business creation and entrepreneurship a viable path to decent work" for disadvantaged people.

Based on the answers gathered in the survey, which align with the recommendations outlined in the EU SNS Declaration, ESNA monitored social inclusion and diversity in national startup ecosystems. With a significant increase of 21 p.p, SNS #7 moved from being the lowest-scoring Standard in 2023 with 30%, to the second Standard with the lowest implementation level in

2024, with 51%. As illustrated in Figure 64 below, France, Lithuania and Luxembourg achieve the highest score (100%).

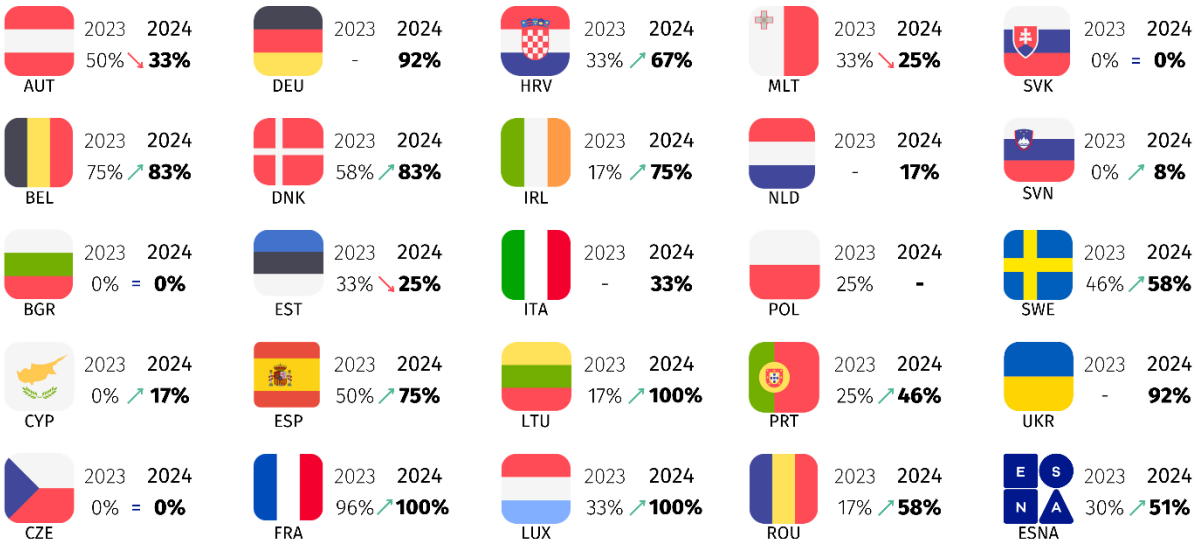


Figure 64. Countries' scores for level of achievement of SNS #7

SOURCE: ESNA, based on official data from Member Countries (Survey 2023 & 2024)

Additionally, 13 out of the 20 countries that participated in both surveys (2023 & 2024), increased their overall score - this makes up for 65% of the participants.

To enhance the depth of the analysis, the SNS is divided into two substandards. More information about the substandards can be found below. The full description of the SNS #7 can be found in the Annexes, A1. EU Startup Nations Standards – Description.

Substandard 7.1 – Incentives for Startups
Establishing an inclusive ecosystem requires the implementation of appropriate incentives for startups to hire and include individuals from diverse backgrounds, avoid social exclusion linked to low income, limited education, location, culture, or disability. In addition to these incentives, the goal is to highlight and recognise successful examples of startups led by different and diverse profiles.
Substandard 7.2 - Incentives for Founders
Encouraging entrepreneurship among people from disadvantaged backgrounds is a priority. The objective is to actively encourage and promote the creation of companies by individuals from disadvantaged groups, ensuring the right balance and inclusion in Europe's entrepreneurial ecosystem.

Figure 65. SNS #7 substandards description

SOURCE: ESNA (2024)

The positive increase in Standard #7's overall implementation level is evident as both substandards' scores increased. Substandard 7.1 – Incentives for Startups showcases an implementation level of 59%, an increase of ten p.p in regard to last year's edition in which

this Substandard registered 49%. In the same light[37], Substandard 7.2 – Incentives for Founders, grew significantly, moving from ten to 43% of implementation level.

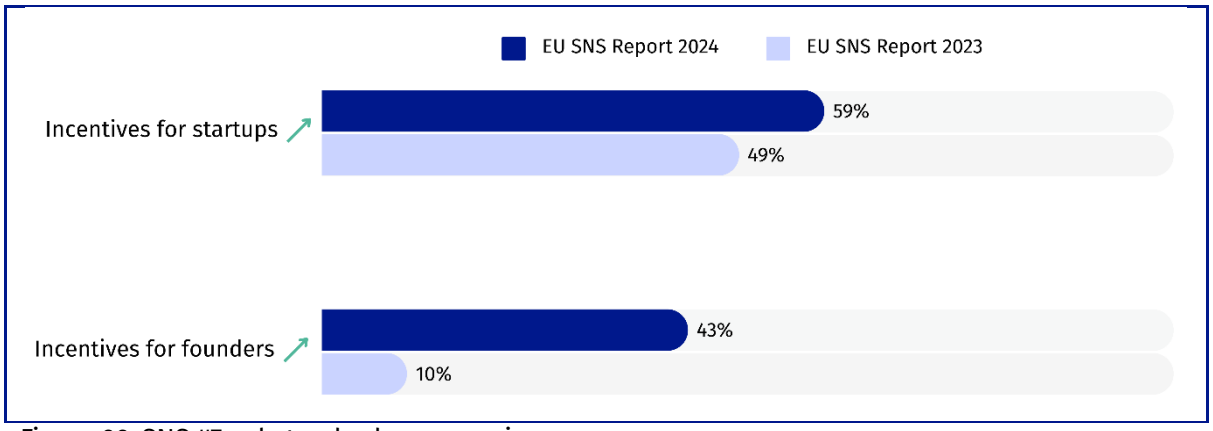
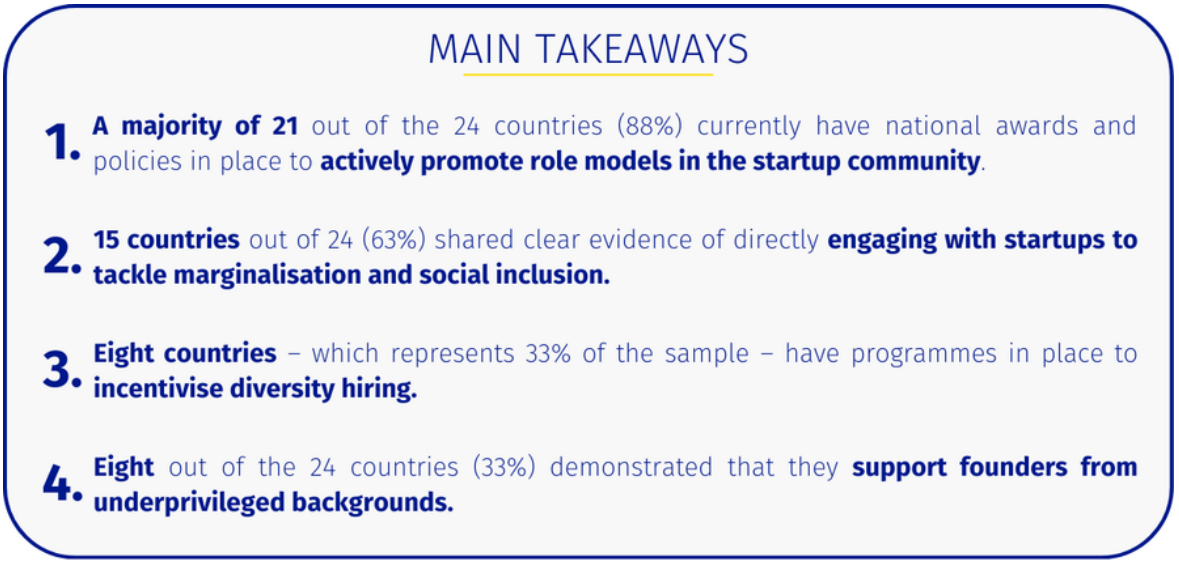


Figure 66. SNS #7 substandards progression

SOURCE: ESNA, based on official data from Member Countries (Survey 2023 & 2024)

For a quick assessment of the key insights gathered on the SNS #7 analysis, please refer to the main takeaways below.



4.7.2 Substandards analysis

Substandard 7.1 – Incentives for Startups

Three indicators were used to evaluate the overall implementation level under this Substandard, all used for calculations: "Existence of national awards and policies for startup role models", "Existence of social inclusion mobilisation initiatives", and "Existence of incentives for diversity hiring".

[37] For more information about the methodology improvements, please check 02. Methodology

Overall, countries demonstrated to have more policies and incentives in place, resulting in a ten p.p growth of this Substandard, from 49% to 59%. While the numbers are encouraging, more effort is still needed to achieve the desired level of inclusion.

One way of tackling existing disparities is to utilise dedicated mentorship programmes, with targeted training, or by recognising excellence through the attribution of awards. Many participating countries in ESNA's survey shared that they had dedicated programmes to promote diversity. Among these, awards and diversity-friendly initiatives seek to ensure better recognition and a non-discriminatory setting.

In this realm, when countries were asked if they **actively promoted diverse role models in the startup community through awards, public recognition or mentorship programmes,** the majority of the participants (21 countries) responded positively (88%) but not all provided clear evidence. Consequently, 12 out of the 24 countries, half of the participants, score 100%: Belgium, Croatia, Denmark, Estonia, France, Ireland, Italy, Lithuania, Luxembourg, the Netherlands, Portugal, Spain, Sweden, and Ukraine. The remaining countries that replied positively but did not provide enough evidence score 50%, as illustrated in Figure 67 below.

This indicator's overall result demonstrates an increase in relation to the past edition[38], in which 14 out of 21 countries scored 100%, showcasing a variety of awards and programmes. On average, in the present SNS Report the surveyed countries achieved a 69% implementation level.

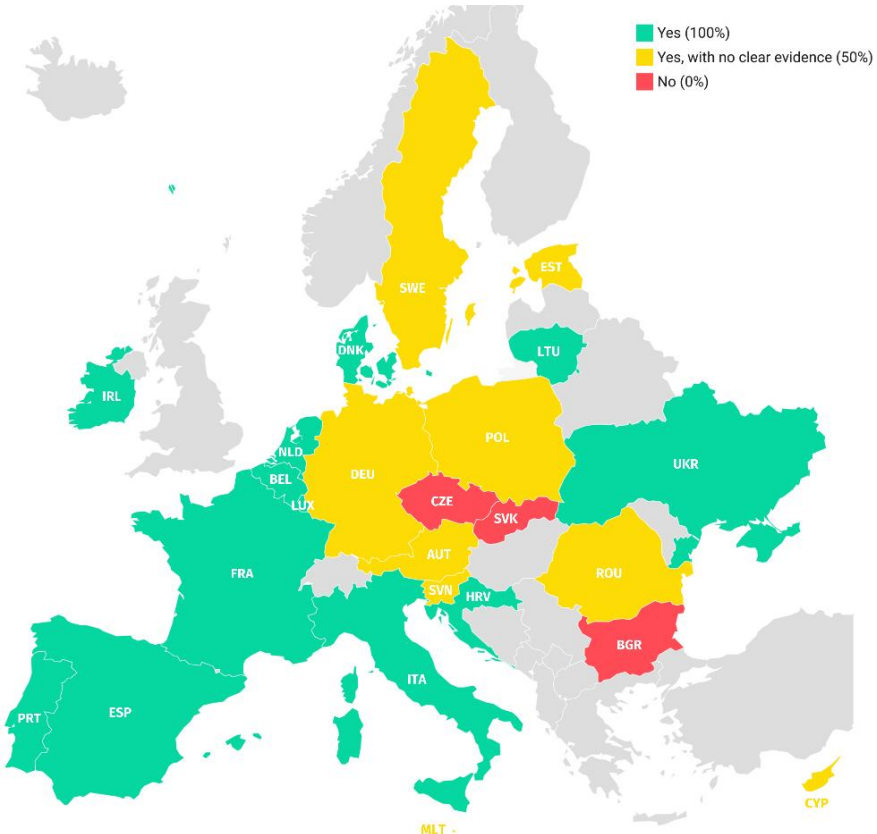


Figure 67. Existence of national awards and policies for startup role models (Indicator 7.1.1)

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

[38] Changes in the scoring criteria. More information on the Methodology notes.

According to the latest State of European Tech Report, Europe's tech talent scene has grown in the last decade, but some problems persist, such as the gender gap in engineering and finance jobs in European startups. In more details, "the high unadjusted pay gaps are driven by a lack of women in senior positions, whilst the high adjusted pay gaps point to a genuine pay equity issue, where men are paid more than women even after adjusting for factors like role, seniority, and location" (Atomico, 2024). Zooming in, there are only 5% of women in executive positions in the engineering field.

Under the efforts to tackle such issues, ESNA conducted an analysis to assess to what extent **countries' authorities engage with startups to specifically address issues of marginalisation and social inclusion** among underprivileged communities[39] impacted by low income, limited education, geographic location, cultural background or disabilities. From the 24 answers received, 15 countries (63%) responded positively and showed clear evidence that they directly engage with startups to tackle the aforementioned issues. As illustrated below, Austria, Croatia, Estonia, France, Germany, Ireland, Italy, Lithuania, Luxembourg, Malta, Poland, Portugal, Romania, Spain, and Ukraine scored 100%. The remaining countries responded negatively, therefore scoring 0%, as illustrated in Figure 68 below. On average, the countries score 63% in this indicator.

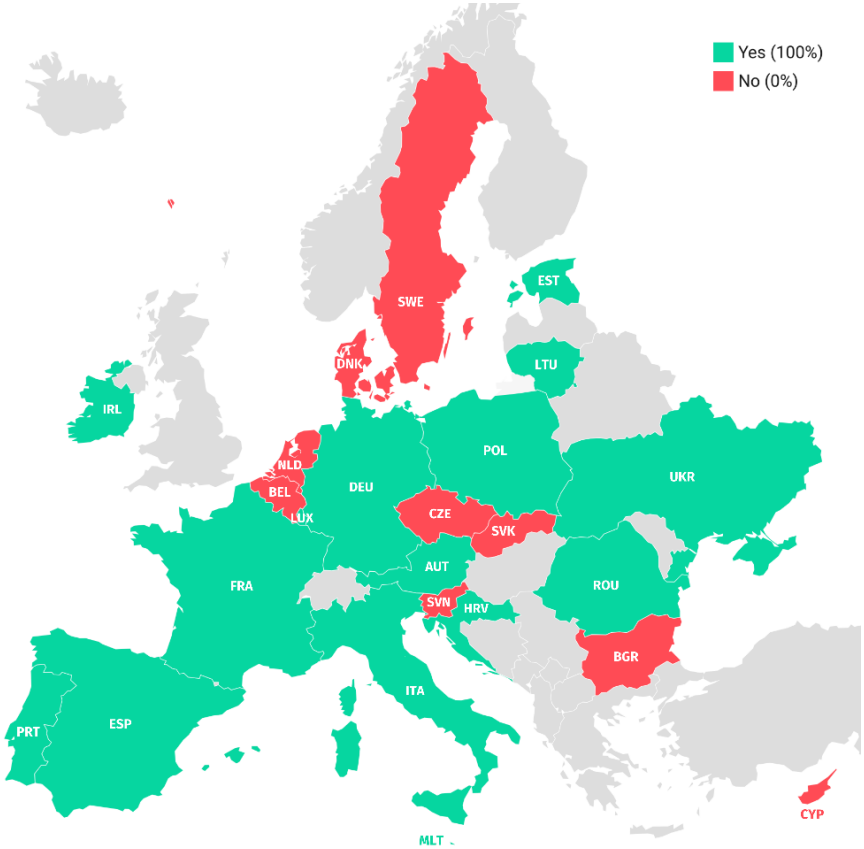


Figure 68. Existence of social inclusion mobilisation initiatives (Indicator 7.1.2)

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

In the last indicator from Substandard 7.1 - Incentives for Startups, ESNA addressed the **existence of incentives for diversity hiring**, addressing workers from underprivileged

[39] Definition retrieved from the European Institute for Gender Equality, accessible here

backgrounds. Based on the answers provided in the survey, eight countries scored 100%: Belgium, Denmark, France, Germany, Ireland, Lithuania, Luxembourg and Spain. Despite the low average implementation level, this indicator shows a slight increase of nine p.p, going from 38% in the past edition, to 47% in the current, as illustrated in Figure 69 below.

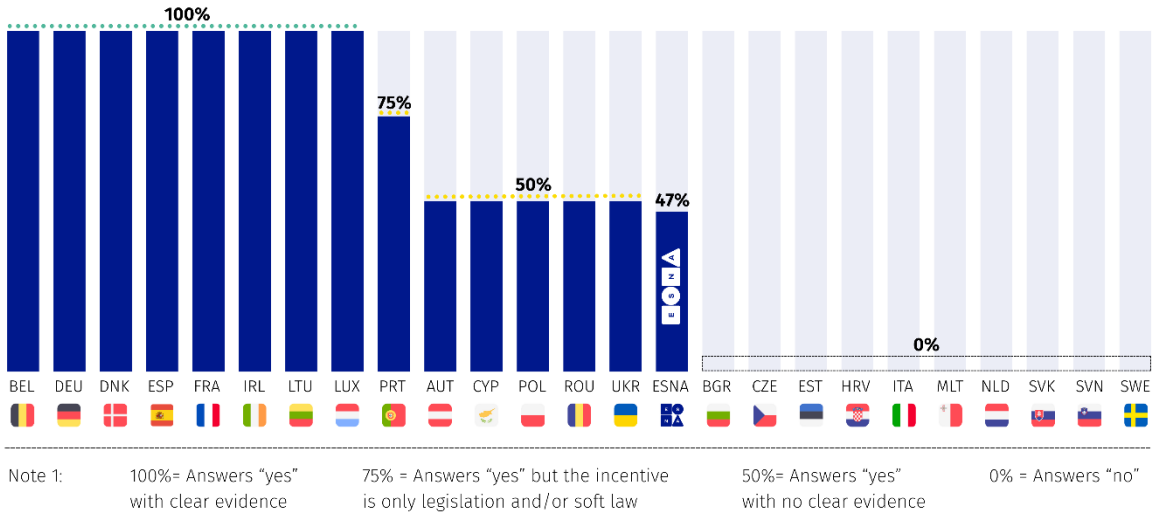


Figure 69. Existence of incentives for diversity hiring (Indicator 7.1.3)

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

Box 7.1 Signatory Member's Initiative – Denmark

People Prize is an award for companies (both small and large) that make an effort to employ marginalised groups. The initiative is run by CABI, an autonomous institution under the Danish Ministry of Employment, focused on an inclusive labour market. Moreover, Innowomen is an initiative by Innovation Fund Denmark through which 12 female entrepreneurs and researchers have been selected as role models for potential applicants to inspire more women to become entrepreneurs. Tech Nordic Advocates/Industriens Fond's International "Women-in-Tech" growth support programme is Europe's only international mentoring, accelerator and umbrella venture fund programme designed to help women in tech launch, grow and scale digital/tech businesses.

Substandard 7.2 – Incentives for Founders

A single Indicator was considered to evaluate this Substandard's performance: **"Support to founders from underprivileged backgrounds",** which was used to assess incentives given to founders when creating a company. Following the information provided by the countries, this Substandard (and indicator) demonstrated a significant increase of 33 p.p, growing from ten p.p to 43%.

Such result demonstrates the countries' efforts to provide more tools to underprivileged founders to start their ventures, and is reflected in a substantially higher number of countries

scoring 100%. It went from only one country last year, to eight out of the 23[40] surveyed countries: Belgium, Denmark, France, Germany, Lithuania, Luxembourg, Sweden, and Ukraine scored 100%, as illustrated in Figure 70 below.

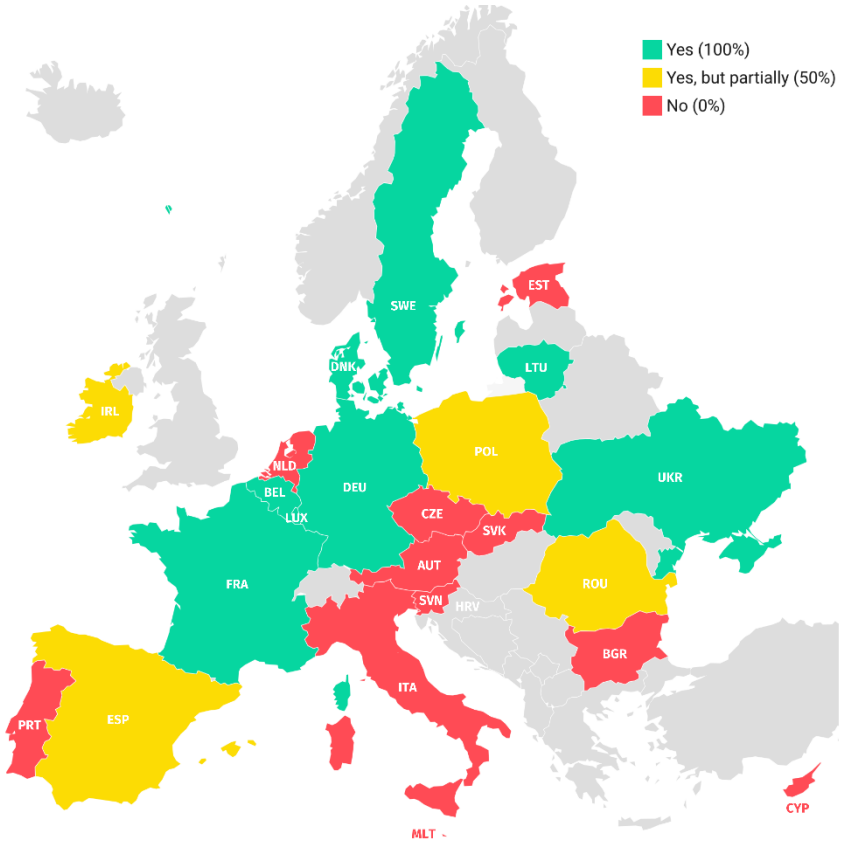


Figure 70. Support to founders from underprivileged backgrounds (Indicator 7.2.1)

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

The global startup ecosystem has been increasingly adopting inclusive initiatives to support underprivileged groups in the entrepreneurial landscape. Governments, private organisations, and public-private partnerships are introducing tailored programmes to address these challenges faced by disadvantaged groups, including women, migrants, individuals with disabilities, and those from low economic backgrounds. These initiatives can include financial instruments such as loans and grants, alongside mentorship, training, and capacity-building programmes designed to upskill participants and enhance their potential. Innovation-focused schemes, regional development funds, and programmes targeting specific demographic areas to create fair access to resources and opportunities are other examples.

In addition to financial and educational support, several ecosystems intend to tackle structural inclusion by aligning their initiatives with broader societal goals, such as poverty reduction, digital transformation, and gender equality. Incubators, accelerators, and other community-driven networks can play a pivotal role in empowering entrepreneurs through tailored guidance, technical support, and access to markets. Public policies also encourage collaboration between startups, research institutions, and investors to drive transformative

[40] Croatia was not included in the analysis due to lack of information provided.

projects with widespread social and economic impact. These strategies highlight a shared commitment to inclusive growth, leveraging entrepreneurial values to bridge gaps within the startup ecosystem.

Box 7.2 Signatory Member's Initiative – Lithuania

Lithuania's Invega (Investment and Business Guarantees) provides various financial instruments such as subsidised loans, microfinancing, and loan guarantees targeted at early-stage entrepreneurs, including those from underprivileged backgrounds. Microloans and startup grants help founders with limited access to traditional financing to launch their businesses. Funding programmes such as Inostartas focus on reducing the barriers to innovation and company creation for individuals facing economic or educational challenges. Additionally, schemes such as Women Go Tech provide mentorship, training, and networking opportunities aimed at underprivileged groups, including women and minorities. These initiatives focus on upskilling and providing the knowledge needed to start and scale a business.

4.8 SNS #8 "Digital First"

4.8.1 Overview

Technological developments have the potential to boost multiple sectors and fields of study, with effects that are transversal from the public to the private sectors. By providing innovative solutions and pushing forward outdated modus operandi, technology can completely reshape the relation between the civil society and public administration. Beyond that, it has the capacity to push forward the administration ecosystem and multiple fields that are, directly or indirectly, related to public administration, by creating a data-driven, cloud-based, and online public service.

The digital transformation of nations, guided by the Digital First Principle, is oriented towards modernising multiple sectors that embrace technology, such as AI models and blockchain, as a revolutionary motor for innovation, growth, enhancement of digital tools, and process simplification. Multiple governments have been adopting such principles, reflected in concrete actions as demonstrated by the constant investment in cutting-edge technology, infrastructure and cybersecurity centres for public data, or crucial components such as semiconductors. Consequently, countries are becoming more efficient, more data-driven, more interconnected, and better prepared to respond to subsequent needs.

As Europe tries to improve its startup ecosystem and explore all the potentialities of high-performance computing tools, it is crucial for governments to accompany such efforts. In this realm, countries are preparing their public platforms to implement the SDG principles, as well as the Once Only Principle, hence transforming most of the operations to being one click away for individuals and companies, including startups.

Such transformation requires efforts, and carries challenges such as continuous ICT (Information and Communications Technology) training for citizens and public workers, strong and secure infrastructure to hold the immense bytes of information generated. Security, transparency, and data protection concerns are also raised.

In order to evaluate the path towards a full digital transformation, ESNA follows the Standard #8 "Digital First" as part of its founding EU SNS Declaration. Based on the answers provided in the survey and the Digital Economy and Society Index (DESI) for the State of the Digital Decade Report (2024), the countries achieved an overall score of 70%. Estonia and Malta, the same two countries as last year's edition, achieve 100% of implementation level, as illustrated in Figure 71 below.

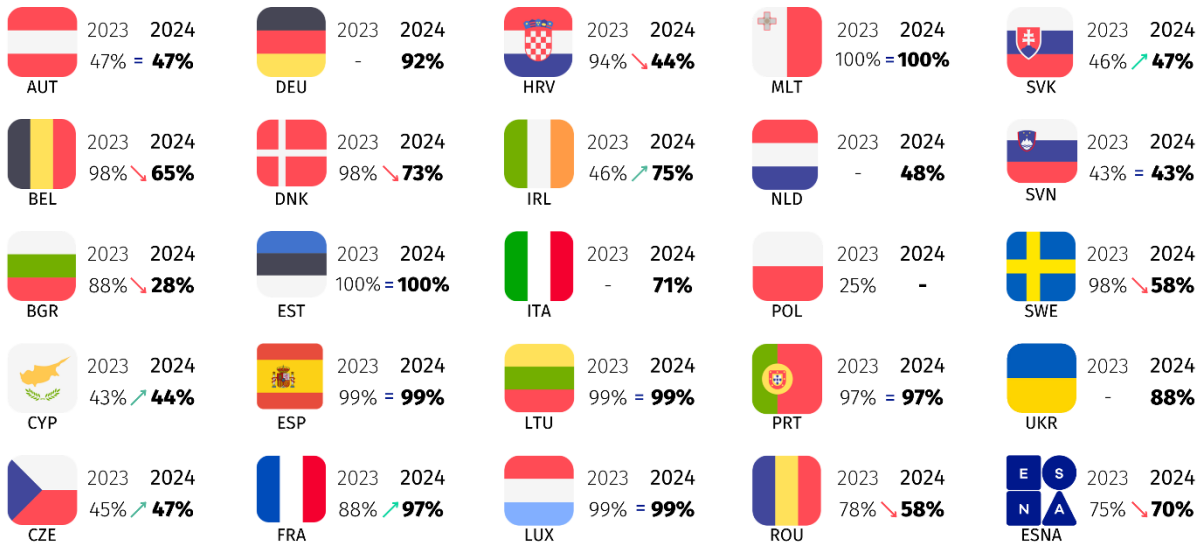


Figure 71. Countries' scores for level of achievement of SNS #8

SOURCE: ESNA, based on official data from Member Countries (Survey 2023 & 2024) & DESI Dashboard for the Digital Decade (2024)

Such a result translates in a five p.p decrease in the overall implementation score, going from the best scoring Standard, 75% in 2023, to 70% currently[41].

To enhance the understanding of this Standard and deepen its analysis, a breakdown of the Substandards that compose the SNS #8 is provided below. The full description of the SNS #8 can be found in the Annexes, A1. EU Startup Nations Standards – Description.

Substandard 8.1 – Digital First
The digitalisation of States and public services has a substantial impact on the daily activities of startups and on their interactions with public administrations. It is therefore important that the innovation ecosystem in which startups operate is as efficient and digital as possible.
Substandard 8.2 – Knowledge Sharing

[41] C

Given the high level of innovation provided by startups, the implementation of communication channels between startups and public entities has the potential to accelerate the digitalisation process and to achieve greater efficiency in public services. Best practice exchanges should be promoted, benefiting both startups and public organisations.

Figure 72. SNS #8 substandards description

SOURCE: ESNA (2024)

The implementation level's decline in this SNS #8 does not necessarily translate into a regression in the digital transformation efforts conducted by governments, as demonstrated by the score achieved in Substandard 8.1 – "Digital First" Principle. As illustrated in Figure 73 below, Substandard 8.1 slightly improved regarding the score achieved in the previous SNS Report edition, increasing one p.p. The implementation level achieved in the Substandard 8.2 – Knowledge Sharing is where the difference lies: this Substandard dropped ten p.p, moving from the 62% recorded in 2023 to 52% in the present edition[42], as illustrated below.

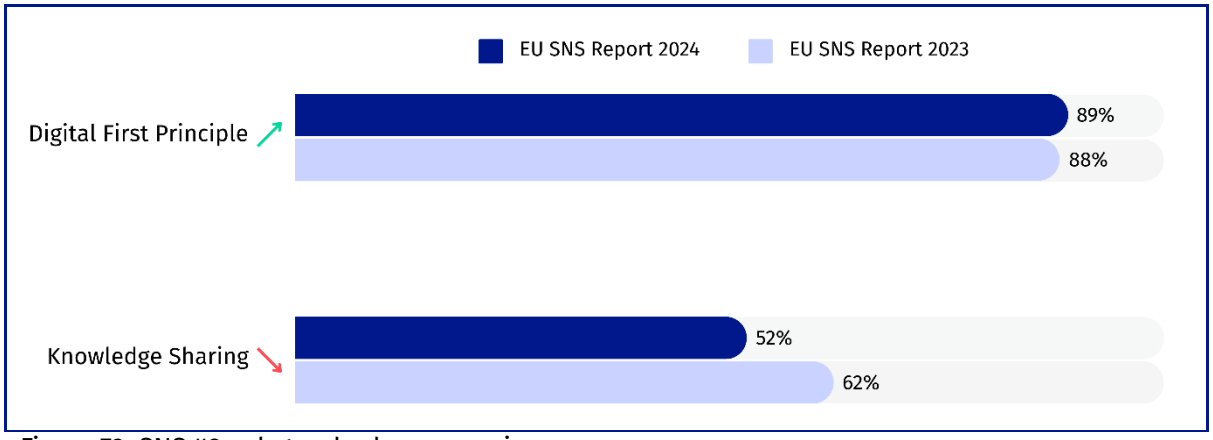


Figure 73. SNS #8 substandards progression

SOURCE: ESNA, based on official data from Member Countries (Survey 2023 & 2024)

For a quick assessment of the key insights gathered on the SNS #8 analysis, please refer to the main takeaways below.

[42] This decline may be result of changes made in the scoring criteria. For more information about the methodology improvements, please check 02. Methodology

MAIN TAKEAWAYS

1. The surveyed countries show a **high availability of public services online (96%)**, including allowing company creation, filing of taxes, and participation in public procurement opportunities to be done online.
2. With an overall score of 85%, the implementation of **digitalisation strategies is common practice among countries.**
3. The 10% decrease in the Knowledge Sharing Substandard, to 52%, raises **concerns about knowledge and best practices sharing related to digitalisation.**

4.8.2 Substandards analysis

Substandard 8.1 – "Digital First" Principle

Three indicators were considered to assess the implementation level of the Substandard related to the Digital First Principle: "Index of digital public services for businesses", retrieved from the Digital Economy and Society Index (DESI) for the State of the Digital Decade Report (2024), "Digital public services availability by percentage of areas covered", and "Existence of national digitalisation strategy implementation", sourced from this year's survey.

Substandard 8.1 - Digital First Principle remains in the same position as last year's edition, at 88%. Although some of its indicators' scores may have fluctuated, the increase of national digitalisation strategies made up for it.

In a general view, the result indicates that governments keep embracing technology - not as new feature, but as an ordinary element of public administration services. Perhaps not as quick as hoped, as the State of the Digital Decade 2024 report unveils concerns with the general EU performance in the digital transformation path, urging for more actions to speed up the process. As examples, the report points a slower than expected development pace in startup ecosystems, data analytics by businesses, semiconductors, high-quality connectivity and on users' skillset (European Commission, 2024).

Another field mentioned, as it raises concerns, was the adoption of AI. In this realm, some countries have been investing in their own LLMs, as a way to protect their digital sovereignty and contribute to creating AI models "with design choices that reflect EU values" (Digital Decade 2024: eGovernment Benchmark). Both for citizens and public bodies, the goals are to make services more effective, reduce time spent on each process, decrease costs of each operation, simplify procedures by cutting unnecessary steps, and ultimately, leave more room to explore innovative ideas.

However, countries can do more, and benefit from the fast growth of AI-powered services, software, and operations to be a central engine of these digital efforts, as they provide innovative, sustainable, and quick results for a diverse range of challenges that public services face.

The Indicator 8.1.1 "Index of digital public services for businesses" measures the user-centricity of such services applied to the business operation's needs. Following this indicator

prepared as part of the Digital Decade (2024), two countries achieved 100% implementation score (Ireland and Malta). Overall, this indicator registered a result of 85%, with the majority of the surveyed countries scoring above the 80 p.p, as illustrated in Figure 74 below[43].

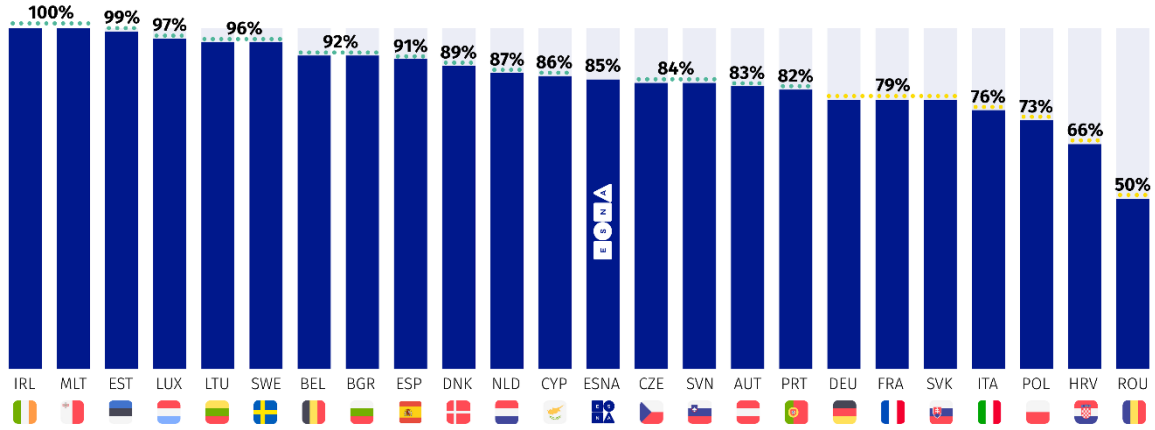


Figure 74. Index of digital public services for businesses (Indicator 8.1.1)

SOURCE: DESI 2024 Dashboard for the Digital Decade

Public administration services and national authorities need to keep pushing to embrace digital technology and data age methods in order to change the current paradigm between users and public services - but such change must start at the beginning of the policymaking process. Regarding these efforts from governments to adopt new technologies, the Digital Government Policy Framework (OECD, 2020), put in a simple way: **countries need to be "digital by design"**. This means adopting tech tools from scratch, in every development, managerial and monitoring phase of internal governmental processes, and not only in later stages.

To evaluate to what extent countries have been adopting digital solutions in public services, ESNA questioned the participating countries about **digital public services available**.

This indicator records an increase of ten p.p, going from 86% in the previous SNS Report edition to 96% this year. Such an increase is clearly reflected in the countries' results. 20 out of the 24 surveyed countries achieved 100% implementation level, which means that they have the following public services available online: company creation, filing of taxes, participation in public procurement opportunities, and consultation of official records. The remaining four countries scored 75%, demonstrating that they have three of the options outlined above in place, as illustrated in Figure 75 below.

[43] Ukraine was not included in the external indicator source.

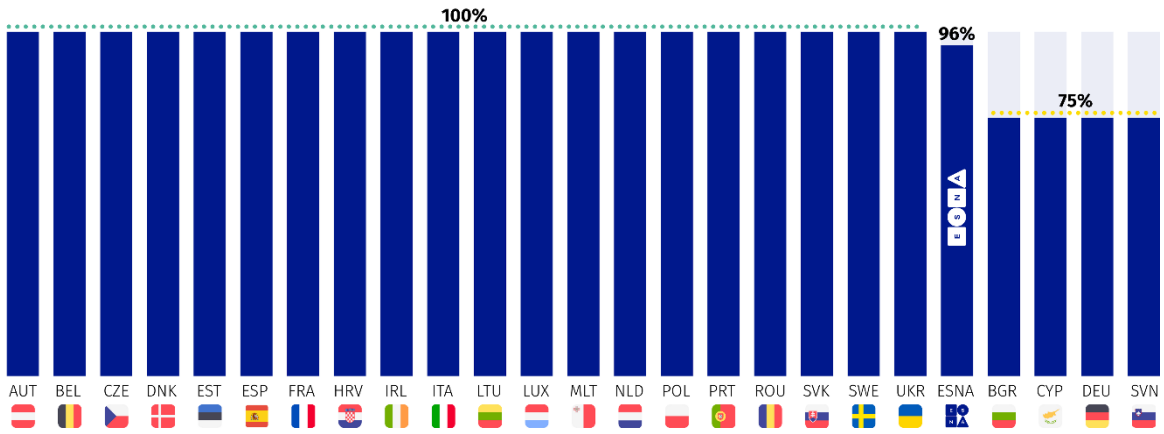


Figure 75. Digital public services availability by percentage of areas covered (Indicator 8.1.2)

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

As illustrated in Figure 76 below, the public services provided in the survey demonstrate high levels of adoption from the participant countries. This highlights the countries' commitment to the transition to digital services. Even though all countries said that company creation is digital by design, according to the answers analysed in Standard #1, Indicator 1.2.1, it is possible to know that company creation is a service offered not entirely online and often with some limitations.

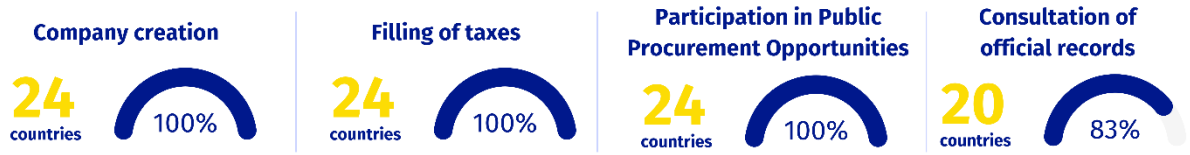


Figure 76. Areas covered by digital public services available

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

Regarding the **existence of national digitalisation strategy implementation,** the participating countries achieve an overall score of 85%, an eight p.p decrease in relation to the last edition. Additionally, 19 out of the 24 participants achieved 100% of the implementation level, proving with clear evidence they are currently implementing a global and cross-sector digitalisation strategy at a national level, as illustrated in Figure 77 below. The remaining countries that replied affirmatively but provided unclear or limited evidence score 50%.

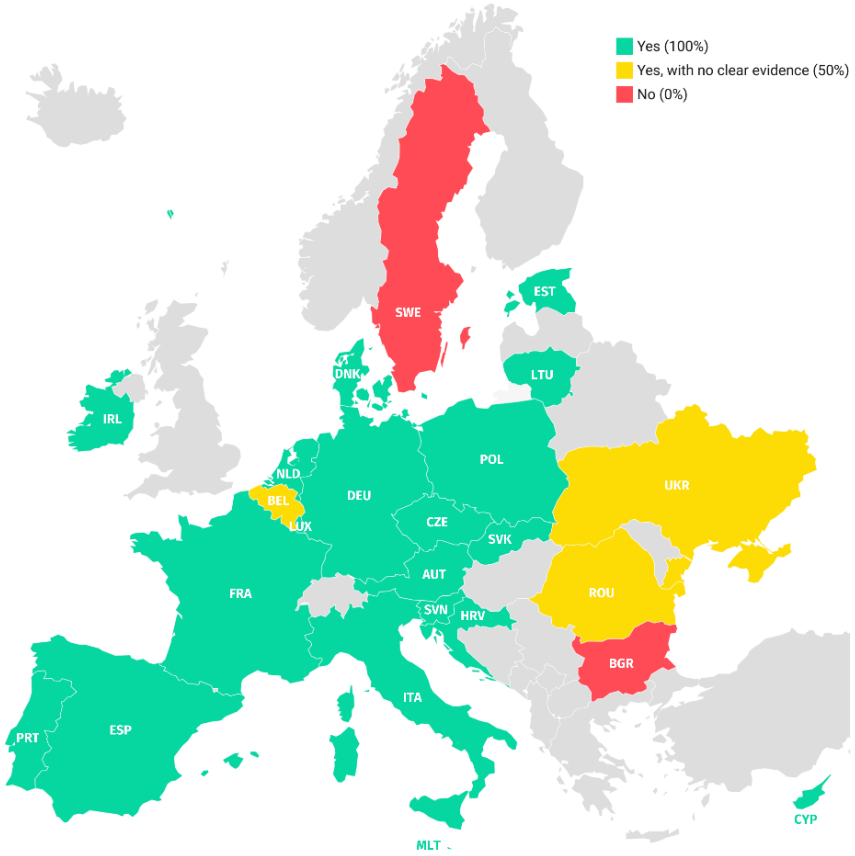


Figure 77. Existence of national digitalisation strategy implementation (Indicator 8.1.3)

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

Despite the positive results and increase in the overall score in this Substandard, the Draghi Report also brings to light some of the previously mentioned concerns regarding the sectoral gap in digital and advanced technologies. Despite having a diversified industrial innovation basis and relevant potential in green technologies, manufacturing, advanced materials, biotechnology, and automotive industry, the report says that the EU lacks further development in digital tech such as AI, cybersecurity, IoT (Internet of Things), blockchain, and quantum computing. Additionally, specific recommendations were elaborated to improve digital tools, namely AI to reduce the compliance burden.

Substandard 8.2 – Knowledge Sharing

Comprising one indicator only, this Substandard's overall result coincides with the result obtained in the indicator that assesses the countries' knowledge-sharing practices: "Existence of proactive engagement for digital knowledge sharing and best practices".

Box 8.2.1 Signatory Member's Initiative – Germany

Germany has created GovTech Campus in order to foster collaboration between startups and state institutions for digital innovation and technological resilience of the state and administration, developing digital solutions for the public sector. In a productive environment with know-how and central infrastructure, exploration takes place to develop and test new ideas and solutions, which can then be put into practice in Germany.

Considering the answers provided by the surveyed participants in 2024, a significant backdrop is striking when it comes to this Substandard's (and indicator) overall performance. In the past SNS edition, countries achieved an overall level of 62%, ten p.p more than the 52% achieved in the present edition[44].

Nine out of the 24 surveyed countries score 100%, which represents a significant decline in comparison with last year's result, in which 13 out of 21 countries achieved the maximum implementation level. As illustrated in Figure 78 below, Estonia, France, Germany, Lithuania, Luxembourg, Malta, Portugal, Spain, and Ukraine have established practices in which **startups and scaleups are proactively approached and engaged by state authorities to share knowledge and best practices regarding digitalisation.** The remaining countries that scored 50% responded affirmatively as well but provided limited evidence. Countries that scored 0% responded negatively to the question.

[44] For more information about the methodology improvements, please check 02. Methodology

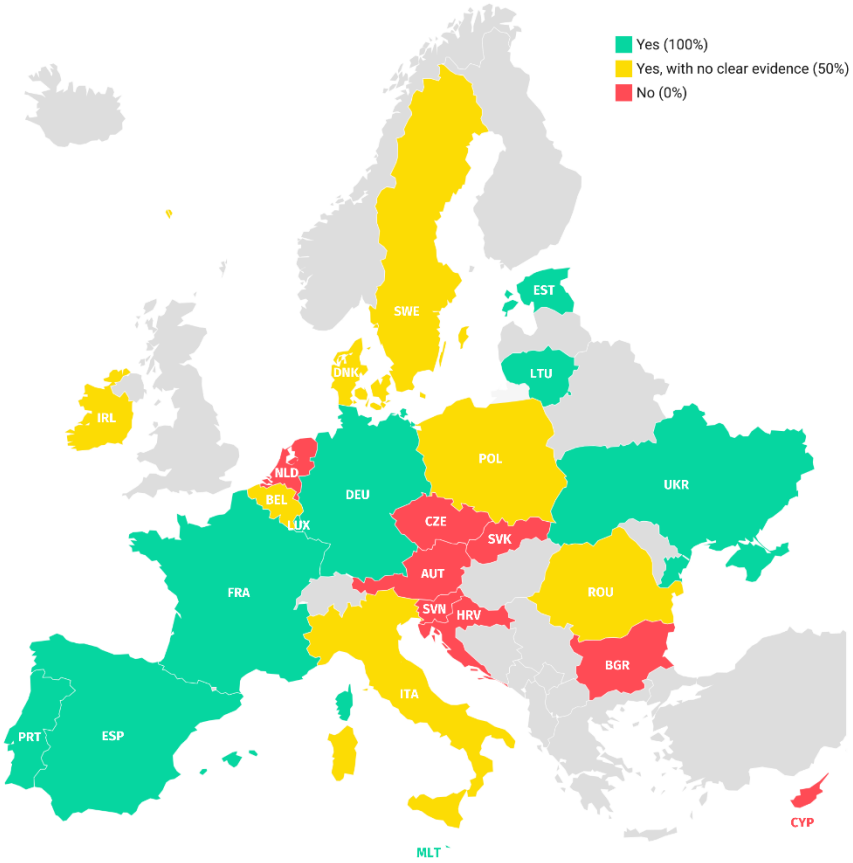


Figure 78. Existence of proactive engagement for digital knowledge sharing and best practices (Indicator 8.2.1)

SOURCE: ESNA, based on official data from Member Countries (Survey 2024)

Box 8.2.2 Signatory Member's Initiative – Estonia

In Estonia, startups and their representative organisations are regularly involved in the Prime Minister's roundtable discussions. The community was also engaged in the creation of Startup Estonia's white paper.

For a successful digital transition, governments are encouraged to follow a concrete plan and actions towards digitalisation in multiple sectors, from its design to the final execution. In this realm, the involvement of the civil society and startups & scaleups is essential to foster coordination among all the actors. Innovative startups can play a crucial role in promoting digitalisation best practices among their peers and civil servants, thus pushing digital literacy forward and a public ecosystem in which technology is, gradually, a common language for all.

One of the major challenges in this process is to ensure that governments bring everyone along, making sure that a lack of tech skills or access to equipment is not a factor leading to staying behind.

Conclusions

05.

05. Conclusions

The 2024 edition of the SNS Report provides an analysis of ESNA Signatory Members' implementation of the eight Standards, as laid out in the EU SNS Declaration. As the SNS' average score takes a significant leap from 54% (2023) to 61% (2024), the document offers greater geographical coverage while applying a stronger methodology. While there is a lower disparity between the Standards' scores this year, some still persist.

A variety of financing instruments have been developed by the surveyed countries to boost investment in startups, thereby demonstrating that initiatives have been taken to promote access to finance. However, tax incentives for BAs for example are not yet that widespread. On another note, Europe keeps pushing its efforts towards digitalisation. Digital options are becoming the norm, whether it is for offering digital services or having digitalisation strategies in place. However, the business setup process is far from being accessible to all, both financially but also in terms of timing and support. Knowledge exchange opportunities between startups and administrations are fairly low when both parties could highly benefit from it: national administrations could streamline their processes, and startups would have the option to test their solutions.

Europe already boasts a great pool of talent however, further efforts are required in order to meet competitiveness goals. They revolve around two actions: attracting and retaining talent. Streamlined visa application processes for highly skilled professionals can make a significant difference, as it can be a decisive factor for founders or experienced workers, as well as their families. Few countries also have programmes in place to incentivise returning EU tech talents, when it is vital to ensure they feel welcome to innovate in their home continent. Regarding incentives, SO are probably one of the most beneficial ones for innovative companies that are just starting off. They are however an overall underutilised tool in Europe, as their framework is not yet optimised in quite a few countries. While a good portion of them has a dedicated scheme in place and allow for the issuance of SO with no voting rights, few tend to tax SO as capital gains only. Having the option to issue SO with no voting rights is particularly critical for growing companies to ensure a smooth management of the business, and it appears to be on the right track. However, the most significant hurdle remains taxation: some states tax SO more than once, making them a less attractive option for employees, resulting in a fairly low adoption of this fringe benefit.

This report highlights the need for more innovation in public procurement, as well as the necessity to consider startups' specificities in these processes. Indeed, few countries created incentives for public buyers to procure from startups, however a large majority are implementing tools to foster innovation procurement. There are limited possibilities for startups to retain IPR ownership when participating in these tenders, which can potentially discourage them from participating. While having made significant progress in the past year as per its dedicated Standard, social inclusion and diversity are not at the forefront of the startup ecosystem. While many countries have initiatives in place to promote role models, there is a limited number of incentives that foster diversity in the hiring process, but also when it comes to supporting founders from an underprivileged background. Promoting the inclusion of startups early on in law-making processes, the Think Small First principle is not yet widely applied. This principle paired with compliance exemptions for smaller businesses would make startups' day-to-day management much smoother, thereby boosting their

efficiency. This Standard also covers regulatory sandboxes, which enable testing of innovative solutions in specific regulatory frameworks. While there is a clear interest in these instruments, they are not widely implemented for the time being.

By the continuous monitoring of Europe's startup ecosystem through the lens of the eight SNS, this analysis demonstrates a variety of challenges but also shows that a number of good practices currently in place. Positive progress has been made in the past 12 months, taking Europe closer to being at the forefront of the global startup ecosystem.

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 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"
Substandard	1.1 Time & Cost
Data description	The statistic measures the number of days required to set up a business online in each country
Unit of measure	Days
Country Coverage	All 24 countries included in the analysis
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If answers one day = 100% If answers one working week = 50% If answers 2-4 working weeks = 25% If answers other (more than 4 weeks) = 0%
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2024 Q7b: "How long does it take for an entrepreneur to establish a startup as a legal entity online?"
Frequency of Data collection	Annually
Reference Year	2024

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"
Substandard	1.1 Time & Cost
Data description	The statistic measures the number of days required to set up a business in the commercial registers in each country
Unit of measure	Days
Country Coverage	23 countries (all except Poland)
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If answers one day = 100% If answers one working week = 50% If answers 2-4 working weeks = 25% If answers other (more than 4 weeks) = 0%
Data Collection method	Survey

Data Source	ESNA Scoreboard Survey 2024 Q8: "How long does it take for an entrepreneur to establish a startup as a legal entity in the commercial registers?"
Frequency of Data collection	Annually
Reference Year	2024

Metadata Attribute	Description
Indicator Name	**Administrative costs for establishing a startup**
Indicator nº (code)	1.1.3
Standard	SNS #1 "Fast Startup Creation"
Substandard	1.1 Time & Cost
Data description	The statistic measures the cost of establishing a legal entity in each country
Unit of measure	Euros
Country Coverage	23 countries (all except Poland)
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If answers "€0-€100" = 100% If answers "€101 - €250" = 60% If answers "€251-€500" = 40% If answers "over €501" = 0%
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2024 Q6 "What is the administrative fee for establishing a legal entity in your country?"
Frequency of Data collection	Annually
Reference Year	2024

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"
Substandard	1.2 Startup Fast Lane
Data description	The indicator measures if it is possible to fully establish a business entirely online in each country
Unit of measure	Implementation level (%)
Country Coverage	All 24 countries included in the analysis
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If answers "yes" and provides clear evidence =100% If answer "yes" but does not provide any evidence = 50% If answers "no" =0%

	Furthermore, if all the conditions implied in the indicator are not met in the justification, points will be removed, as stipulated below: Minus 25p.p if the platform is only available in the local language. Minus 25p.p if it is only possible to set up a company online under specific conditions. e.g. Yes, but in local language only and only under specific conditions (100% - 25% - 25% = 50%)
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2024 Q7a “Is there an online option to set up a company?”
Frequency of Data collection	Annually
Reference Year	2024

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”
Substandard	1.2 Startup Fast Lane
Data description	The indicator measures if there is an online location where entrepreneurs can find all relevant information about national administrative requirements and funding opportunities
Unit of measure	Implementation level (%)
Country Coverage	All 24 countries included in the analysis
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 "yes, partially" = 50% If answers “no” =0% Furthermore, if all the conditions implied in the indicator are not met in the justification, points will be removed, as stipulated below: Minus 25% if the service is only available in the local language. Minus 25p.p if the information is spread through multiple locations. Minus 25p.p if there is missing information on funding opportunities or national regulation.

	e.g. Yes, but in local language only and in different locations (100% - 25% - 25% = 50%)
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2024 Q9a "Is there a single online location where aspiring entrepreneurs can find all the necessary information about national regulations and funding opportunities?"
Frequency of Data collection	Annually
Reference Year	2024

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"
Substandard	1.2 Startup Fast Lane
Data description	The indicator measures if there is a helpdesk for startups and scaleups from other EU Member States when trying to enter the market, who have come across regulatory issues and/or impediments
Unit of measure	Implementation level (%)
Country Coverage	All 24 countries included in the analysis
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% Furthermore, if all the conditions implied in the indicator are not met in the justification, points will be removed, as stipulated below: Minus 25p.p if the helpdesk is only available in the local language
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2024 Q10a "Is remote support available for startups and scaleups from other EU Member States who have encountered regulatory issues or impediment?"
Frequency of Data collection	Annually
Reference Year	2024

Metadata Attribute	Description
Indicator Name	**Index of the cross-border services**
Indicator nº (code)	1.3.1
Standard	SNS #1 “Fast Startup Creation”
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) online availability; (II) user support (III) eID (IV) eDocuments.
Unit of measure	% of cross-border services usability
Country Coverage	All 24 countries included in the analysis
Transformation	From 0-100% using min-max transformation
Scoring Criteria (Classification System)	European Commission methodology (here, updated every 4 years)
Data Collection method	Third-party source
Data Source	European Commission
Frequency of Data collection	Annually
Reference Year	2024

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”
Substandard	1.3 Cross-border Services
Data description	The indicator measures if 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	All 24 countries included in the analysis
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If answers “Yes, both printed and digital documents may be submitted” =100% If answers ""Yes, but only paper-based documents may be submitted"" = 50% If answers “no” =0%
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2024 Q11 “Q11. 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?"
Frequency of Data collection	Annually
Reference Year	2024

Metadata Attribute	Description
Indicator Name	**Time to complete visa applications for founders**
Indicator nº (code)	2.1.1
Standard	SNS #2 "Talent Attraction"
Substandard	2.1 Visa Applications
Data description	The indicator measures the time in months necessary to process founders' visa applications supported by a trusted partner in the respective Member State.
Unit of measure	Months
Country Coverage	23 countries (all except Germany)
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If answers "within 1 month" = 100% If answers "1-3 months" = 50% If answers "3-6 months" = 25% If answers "more than 6 months" = 0%
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2024 Q13.b "What is the processing time for visa applications for founders, when backed by a trusted partner in the Member State?"
Frequency of Data collection	Annually
Reference Year	2024

Metadata Attribute	Description
Indicator Name	**Time to complete visa applications for experienced workers**
Indicator nº (code)	2.1.2
Standard	SNS #2 "Talent Attraction"
Substandard	2.1 Visa Applications
Data description	The indicator measures the time in months necessary to process experienced workers' visa applications supported by a trusted partner in the respective Member State
Unit of measure	Months
Country Coverage	23 countries (all except Germany)
Transformation	From 0-100% using scoring criteria
Scoring Criteria	If answers "within 1 month" = 100%

(Classification System)	If answers “1-3 months” = 50% If answers “3-6 months” = 25% If answers “more than 6 months” = 0%
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2024 Q13b “What is the processing time for visa applications for experienced workers, when submitted by startups?”
Frequency of Data collection	Annually
Reference Year	2024

Metadata Attribute	Description
Indicator Name	Existence of return of tech diaspora programmes
Indicator nº (code)	2.2.1
Standard	SNS #2 “Talent Attraction”
Substandard	2.2 Programmes for talent
Data description	The indicator measures if there are any programmes or incentives to encourage the return of EU tech talent who emigrated to third countries, not exclusively designed for non-EU countries. Tech talent means experienced workers in technological fields
Unit of measure	Implementation level (%)
Country Coverage	All 24 countries included in the analysis
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%
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2024 Q14a “Are there any programmes and/or incentives in place to encourage the return of EU tech talent who emigrated to third countries?”
Frequency of Data collection	Annually
Reference Year	2024

Metadata Attribute	Description
Indicator Name	Index of talent attractiveness for entrepreneurs
Indicator nº (code)	2.2.2
Standard	SNS #2 “Talent Attraction”
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	Index score
Country Coverage	17 countries (all except Bulgaria, Croatia, Cyprus, Malta, Netherlands, Romania, Ukraine)
Transformation	From 0-100% using scoring min-max transformation
Scoring Criteria (Classification System)	Organisation for Economic Co-operation and Development (OECD), 2023. The OECD Indicators of Talent Attractiveness 2023
Data Collection method	OECD methodology (here)
Data Source	OECD "Index of talent attractiveness for entrepreneurs"
Frequency of Data collection	Every 4 years
Reference Year	2024

Metadata Attribute	Description
Indicator Name	**Stock Options taxed only as capital gains**
Indicator nº (code)	3.1.1
Standard	SNS #3 "Stock Options"
Substandard	3.1 Taxation
Data description	The indicator measures if stock options are recognised and subject to capital gains taxation only at the moment of cash receipt and not before in each country
Unit of measure	Implementation level (%)
Country Coverage	All 24 countries included in the analysis
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If answers "at the moment of sale" =100% If answers any other option or "at the moment of sale" plus other option =0%
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2024 Q14.a "Are there any programmes and/or incentives in place to encourage the return of EU tech talent who emigrated to third countries?"
Frequency of Data collection	Annually
Reference Year	2024

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 if stock options can be issued with non-voting rights in each country
Unit of measure	Implementation level (%)
Country Coverage	All 24 countries included in the analysis
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If answers “yes” =100% If answers “no” =0%"
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2024 Q17 “Are startups allowed to issue stock options with non-voting rights?”
Frequency of Data collection	Annually
Reference Year	2024

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 impact of stock options for minority shareholders
Unit of measure	Score
Country Coverage	15 countries (all except Bulgaria, Croatia, Cyprus, Luxembourg, Malta, Romania, Slovakia, Slovenia, Ukraine)
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	Not Optional, 2024. Latest Country Rankings, Minority Shareholders & Bureaucracy
Data Collection method	Not Optional methodology (here)
Data Source	Not Optional “Latest Country Rankings”
Frequency of Data collection	Annually
Reference Year	2024

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 if each country has a specific legislation or a specific programme for Stock Options
Unit of measure	Implementation level (%)
Country Coverage	All 24 countries included in the analysis
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	"If answers “yes” =100% If answers “no” =0%"
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2024 Q17 “Are there any specific legislations or programmes for stock options in your country?”
Frequency of Data collection	Annually
Reference Year	2024

Metadata Attribute	Description
Indicator Name	**Think Small First 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 if the Think Small Principle is being applied in legal provisions and policies, therefore targeting startups
Unit of measure	Implementation level (%)
Country Coverage	All 24 countries included in the analysis
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If answers “yes” =100% If answers “no” =0
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2024 Q20.a “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?”
Frequency of Data collection	Annually
Reference Year	2024

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 if each country has confirmed exemptions or alternative methods for startups to achieve compliance
Unit of measure	Implementation level (%)
Country Coverage	All 24 countries included in the analysis
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If answers “yes” =100% If answers “no” =0
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2024 Q21.a “Are there confirmed exemptions or alternative methods for startups to achieve compliance, in areas such as impact assessment?”
Frequency of Data collection	Annually
Reference Year	2024

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 if there are regulatory sandboxes available to encourage and facilitate experimentation and innovation for startups.
Unit of measure	Implementation level (%)
Country Coverage	All 24 countries included in the analysis
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 provides evidence that regulatory sandboxes are being prepared =50% If answers “no” =0%"
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2024 Q22.a “Are there regulatory sandboxes available to encourage and facilitate experimentation and innovation for startups?”
Frequency of Data collection	Annually
Reference Year	2024

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 number of regulatory sandboxes established in each country
Unit of measure	Nº of regulatory sandboxes
Country Coverage	16 countries (all except Belgium, Bulgaria, Croatia, Germany, Netherlands, Poland, Spain, and Sweden)
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	Min-Max transformation
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2024 Q22b. How many regulatory sandboxes are established in your country?
Frequency of Data collection	Annually
Reference Year	2024

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 number of startups involved in regulatory sandboxes consortia
Unit of measure	Nº of startups involved in regulatory sandboxes consortia
Country Coverage	11 countries (Austria, Czechia, Estonia, Ireland, Italy, Luxembourg, Malta, Slovakia, Slovenia, Spain, Ukraine)
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	Min-Max transformation
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2024 Q22d. How many startups are currently participating in regulatory sandboxes in your country?
Frequency of Data collection	Annually
Reference Year	2024

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 if there are no legal or administrative impediments that would put startups/scaleups at a disadvantage compared to other participants in innovation procurement opportunities.
Unit of measure	Implementation level (%)
Country Coverage	All 24 countries included in the analysis
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 provides evidence that regulatory sandboxes are being prepared =50% If answers “no” =0%"
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2024 Q22.a “Are there regulatory sandboxes available to encourage and facilitate experimentation and innovation for startups?”
Frequency of Data collection	Annually
Reference Year	2024

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 assesses whether there are incentives for public buyers and procurement services to procure innovation from startups
Unit of measure	Implementation level (%)
Country Coverage	All 24 countries included in the analysis
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%
Data Collection method	Survey

Data Source	Q25a. Are public buyers and procurement services officially encouraged to procure innovations from startups?
Frequency of Data collection	Annually
Reference Year	2024

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 average of three most recent years of the % of total trade. Receipts are 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	% of total trade
Country Coverage	All 24 countries included in the analysis
Transformation	From 0-100% using min-max transformation
Scoring Criteria (Classification System)	WIPO methodology (here)
Data Collection method	Third-party source
Data Source	WIPO
Frequency of Data Collection	Annually
Reference Year	2024

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 if there are any situations where the public sector can retain ownership of Intellectual Property Rights
Unit of measure	Implementation level (%)
Country Coverage	20 countries (all except Austria, Bulgaria, Denmark, and Italy)
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If provides evidence of the only exception being exceptional cases due to overriding public interest = 100% If answers any exception besides cases of overriding public interest = 0%
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2024 Q27.b "Please specify the situations where the public sector can retain ownership of Intellectual Property Rights (IPR)? "
Frequency of Data collection	Annually
Reference Year	2024

Metadata Attribute	Description
Indicator Name	**Existence of startups actively supported and contributing with open-source assets**
Indicator nº (code)	5.3.1
Standard	SNS #5 "Innovation in Procurement"
Substandard	5.3 Open-source assets
Data description	The indicator measures if there are any encouragement measures for startups to contribute to open-source assets
Unit of measure	Implementation level (%)
Country Coverage	All 24 countries included in the analysis
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%
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2024 Q28.a "Are startups actively encouraged to contribute to open-source assets? "
Frequency of Data collection	Annually
Reference Year	2024

Metadata Attribute	Description
Indicator Name	**Existence of startups actively supported and contributing with open-source assets**
Indicator nº (code)	5.3.1
Standard	SNS #5 “Innovation in Procurement”
Substandard	5.3 Open-source assets
Data description	The indicator measures if there are any encouragement measures for startups to contribute to open-source assets
Unit of measure	Implementation level (%)
Country Coverage	All 24 countries included in the analysis
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%
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2024 Q28.a “Are startups actively encouraged to contribute to open-source assets? ”
Frequency of Data collection	Annually
Reference Year	2024

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 if there are policies in place to ensure technology developed at universities and research centres can be transferred leading to new ventures.
Unit of measure	Implementation level (%)
Country Coverage	All 24 countries included in the analysis
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%
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2024 Q29.a “Are there policies to facilitate a smooth transfer of the technology developed in universities and research institutes to startups?”

Frequency of Data collection	Annually
Reference Year	2024

Metadata Attribute	Description
Indicator Name	**Existence of RRF support for Venture Capital for startups**
Indicator nº (code)	6.1.1
Standard	SNS #6 “Access to Finance”
Substandard	6.1 Public Grants
Data description	The indicator measures if the country is using the Recovery and Resilience Facility (RRF) funding to foster access to venture capital for startups
Unit of measure	Implementation level (%)
Country Coverage	22 countries (all except Sweden and Ukraine)
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%
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2024 Q31.a “Does your country use part of its Recovery and Resilience Facility (RRF) funding to enhance access to venture capital for startups?”
Frequency of Data collection	Annually
Reference Year	2024

Metadata Attribute	Description
Indicator Name	**Utilisation of EIB and promotional banks for VC investment gap bridging**
Indicator nº (code)	6.2.1
Standard	SNS #6 “Access to Finance”
Substandard	6.1 Indirect Access to Finance
Data description	The indicator measures if the country is using EIB Promotional Banks or other dedicated vehicles leveraging private investments and distributing funds to established VC firms to address the existing investment gap.
Unit of measure	Implementation level (%)
Country Coverage	23 countries (all except Poland)
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%
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2024 Q32.a “Does your country use European Investment Bank (EIB) programmes, Promotional Banks or other dedicated vehicles, leveraging private investments, and distributing funds to VC firms to address the existing investment gap?”
Frequency of Data collection	Annually
Reference Year	2024

Metadata Attribute	Description
Indicator Name	**Adoption of initiatives to diversify private capital for high-growth startup co-investment**
Indicator nº (code)	6.2.2
Standard	SNS #6 “Access to Finance”
Substandard	6.1 Indirect Access to Finance
Data description	The indicator measures if the country has in place initiatives to diversify private capital available for co-investing in high-grow startups.
Unit of measure	Implementation level (%)
Country Coverage	23 countries (all except Poland)
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%
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2024 Q33.a “Have public authorities adopted initiatives to diversify private capital available for co-investing in high-growth startups?”
Frequency of Data collection	Annually
Reference Year	2024

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 if tax relief measures Business Angels are in place to stimulate and support early-stage funding
Unit of measure	Implementation level (%)
Country Coverage	All 24 countries included in the analysis
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%
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2024 Q35.a “Are there any tax relief measures in place aimed towards Business Angels to stimulate and support early-stage funding?”
Frequency of Data collection	Annually
Reference Year	2024

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 if the country has any national awards, public recognition or mentorship programmes in place.
Unit of measure	Implementation level (%)
Country Coverage	All 24 countries included in the analysis
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%
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2024 Q37.a “Does your country actively promote diverse role models in the startup community through awards, public recognition or mentorship programmes?”
Frequency of Data collection	Annually
Reference Year	2024

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 if the country has 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
Unit of measure	Implementation level (%)
Country Coverage	All 24 countries included in the analysis
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If answers “yes” and provides clear evidence =100% If answers “no” =0%
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2024 Q38 “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?”
Frequency of Data collection	Annually
Reference Year	2024

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 if the country has any specific incentive or legislation to hire a diverse workforce with considerations such as ethnicity, gender, religion, age, or sexual orientation.
Unit of measure	Implementation level (%)
Country Coverage	All 24 countries included in the analysis
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% being prepared =25% If answers “no” =0%
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2024 Q39a “Are there any specific incentives for startups to focus on hiring a diverse workforce, including considerations of ethnicity, gender, religion, age, and sexual orientation?”
Frequency of Data collection	Annually
Reference Year	2024

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 if the country provides any support to founders from underprivileged backgrounds to start a company.
Unit of measure	Implementation level (%)
Country Coverage	All 24 countries included in the analysis
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If shows evidence of having national/federal programmes or incentives that promote the creation of companies by women = 50% If shows evidence of having national/federal programmes or incentives that promote the creation of companies by under-privileged founders (other than women) = 50% No measures = 0% Countries that met both of the above conditions were rated 100% (50%+50%)
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2024 Q40a “What support is provided to founders from underprivileged backgrounds to create companies?”
Frequency of Data collection	Annually
Reference Year	2024

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 broadly reflects the share of public services needed for starting a business and conducting regular business operations that are available online for domestic as well as foreign users.
Unit of measure	Score (0-100)
Country Coverage	All 24 countries included in the analysis
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	DESI methodology (here)
Data Collection method	Third-party source
Data Source	Digital Economy and Society Index (DESI) for the State of the Digital Decade Report (2024)
Frequency of Data collection	Annually
Reference Year	2024

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 number of digital public services designed to be carried out digitally, among key services: company creation, filling of taxes, participation in public procurement opportunities, and consultation of official records
Unit of measure	Digital public services available
Country Coverage	All 24 countries included in the analysis
Transformation	From 0-100% using scoring criteria
Scoring Criteria (Classification System)	If selects “company creation” ,“filing of taxes”, “participation in public procurement opportunities”, “consultation of official records” = 100% If selects only three of the options outlined above = 75% If selects only two of the options outlined above = 50% If selects only one of the options outlined above = 25%

	If selects “none” = 0% 10% will be distributed additionally to those that provide “other” services
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2024 Q42: “Which of the following public services in your country are designed to be carried out digitally? (Options are: - Company creation, - Filling of taxes, -Participation in public procurement opportunities, - Consultation of official records, - Other)”
Frequency of Data collection	Annually
Reference Year	2024

Metadata Attribute	Description
Indicator Name	**Existence of national digitalisation strategy implementation**
Indicator nº (code)	8.1.3
Standard	SNS #8 Digital First
Substandard	8.1 Digital First
Data description	The indicator reflects if countries are currently implementing a global and cross-sector digitalisation strategy at national level.
Unit of measure	Implementation level (%)
Country Coverage	All 24 countries included in the analysis
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%
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2024 Q43: “Is your country currently implementing a global and cross-sector digitalisation strategy at national level?”
Frequency of Data collection	Annually
Reference Year	2024

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 reflects there are measures/initiatives from state authorities to engage and proactively approach startups and scaleups in order to share knowledge and best practices regarding digitalisation.
Unit of measure	Implementation level (%)
Country Coverage	All 24 countries included in the analysis
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%
Data Collection method	Survey
Data Source	ESNA Scoreboard Survey 2024 Q44a: “Are startups and scaleups proactively approached and engaged by state authorities to share knowledge and best practices regarding digitalisation?”
Frequency of Data collection	Annually
Reference Year	2024

A3. Steering Committee - Members

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.

Bruno Damásio - Assistant Professor at NOVA Information Management School

Holding a PhD in Applied Mathematics, a Master's in Econometrics, and a Bachelor's in Economics from the University of Lisbon, his research focuses on econometrics, causal inference, policy evaluation, data science, and applied economics. His work is featured in journals such as Telecommunications Policy, Habitat International, Physica A, Statistics and Probability Letters, Applied Economics, PLoS ONE, among others. Bruno teaches at NOVA IMS, and advises organisations such as the OECD and, European Commission, Central Banks, Regulators, Court of Auditors and Ministries.

Vojtech Horna - VP Communications at Index Ventures Not Optional

Has spent the last decade advising startups and challenger brands on strategic communications. At Index Ventures, he provides marketing counsel to the firm's companies in Europe and the US. His international perspective stems from growing up in Prague, studying in California, and working in San Francisco and London. He has collaborated with agencies such as Edelman, Weber Shandwick, and Atomic PR. Recognized in PR Week's "30 Under 30," Vojtech is mutually inspired by the entrepreneurs he supports.

Valeria Perotti - Manager of the Business Enabling Environment Unit

Valeria Perotti is the Manager of the Business Ready unit at the World Bank. Before this role, she held several positions within the World Bank. As a Senior Economist with the Enterprise Surveys team, she led the implementation of the survey in 16 countries around the world. Earlier, Valeria managed a cross-country survey to develop methods for measuring financial capability. Before joining the World Bank in 2010, Valeria worked on the design and analysis of labour force surveys at ISFOL in Italy. She holds a PhD in Econometrics and Empirical Economics from Tor Vergata University in Rome.

Marina Petrucci - Country Manager (Portugal) at IPSOS-APEME

Currently works as Portugal Country Manager at Ipsos-APEME, bringing her leadership experience from previous roles at APODEMO and APEME. Marina Petrucci holds a Master of Business Administration in Marketing from the Warwick Business School. With a robust skillset that includes market research, business development, qualitative research, strategic communications and more, Marina Petrucci contributes valuable insights to the market research industry.

Acronyms

A

Artificial Intelligence (AI)
Austria (AUT)

B

Belgium (BEL)
Bulgaria (BGR)

C

Capital Markets Union (CMU)
Croatia (HRV)
Cyprus (CYP)
Czechia (CZE)

D

Denmark (DNK)
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 Patent Office (EPO)
European Union (EC)

F

Focal Point (FP)
France (FRA)

G

Germany (DEU)
Gross Domestic Product (GDP)

H

High Potential Start-Up (HPSU)

I

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

L

Large Language Models (LLM)
Lithuania (LTU)
Luxembourg (LUX)

M

Malta (MLT)

N

Netherlands (NLD)
Nova IMS (NOVA IMS)

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

Venture Capital (VC)

W

World Intellectual Property Organization (WIPO)

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