



Avrupa Birliği tarafından
finanse edilmektedir

POLICY REPORT

YOUNG GREEN ENTREPRENEURSHIP

ACROSS EUROPE: A COMPARATIVE POLICY ANALYSIS

Exploring how policies, skills, funding and support systems empower young people to turn green ideas into sustainable businesses.



2026

EU Member States, Candidate Countries

Project Partners: Türkiye | Iceland | Romania | Italy



TABLE OF CONTENTS

Executive Summary	5
1. Introduction	6
1.1 Background and Rationale	6
1.2 Scope and Methodology	6
1.3 Structure of the Report	7
2. Conceptual Framework	8
2.1 Defining Green Entrepreneurship	8
2.2 Why Youth? The Generational Dimension	8
2.3 The Entrepreneurial Ecosystem Framework	9
3. Youth Participation in the Green Entrepreneurship Ecosystem	10
3.1 European Trends in Youth Entrepreneurship	10
3.2 Sectoral Distribution of Youth Green Entrepreneurship	10
3.3 Gender Dimensions	11
3.4 Rural-Urban Disparities	11
4. The European Policy Framework	12
4.1 The European Green Deal and Its Implications for Entrepreneurship	12
4.2 The SME Strategy and Startup/Scaleup Agenda	12
4.3 The Youth Strategy and Erasmus+	12
4.4 Horizon Europe and the Innovation Ecosystem	13
4.5 Policy Coherence Challenges at the European Level	13
5. Ecosystem Analysis: Six Dimensions	14
5.1 Dimension 1: Strategy and Governance	14
5.2 Dimension 2: Education, Competence, and Skills	14
5.3 Dimension 3: Infrastructure and Incubation	15
5.4 Dimension 4: Financing	15
5.5 Dimension 5: Market Creation and Regulation	15
5.6 Dimension 6: Inclusiveness and Equity	16
6. The Financing Landscape for Youth Green Entrepreneurship	17
6.1 Overview: A Complex and Fragmented Landscape	17
6.2 EU-Level Financing Instruments	17
6.3 National Financing Instruments	18
6.4 The Crowdfunding Revolution and Its Limits	18
7. Skills, Education, and Competency Development	20
7.1 The Green Skills Imperative	20

7.2 Curriculum Integration: Progress and Gaps	20
7.3 The Digital-Green Skills Nexus	20
8. Barriers and Challenges	22
8.1 Structural Barriers	22
8.2 Institutional and Administrative Barriers	22
8.3 Cultural and Attitudinal Barriers	23
9. Good Practice Examples	24
9.1 EIT Climate-KIC: Greenhouse Programme (Pan-European)	24
9.2 Denmark: Circular Economy Startup Programme	24
9.3 Netherlands: MIT and Green Startup Delta	24
9.4 Finland: Startup Sauna and the Helsinki Cleantech Innovation Centre	25
9.5 Estonia: e-Residency and the Digital Green Startup	25
10. Strategic Policy Recommendations	26
Pillar I: Strategy and Governance	26
Recommendation 1: Develop National Green Entrepreneurship Strategies	26
Recommendation 2: Create One-Stop Digital Portals	26
Pillar II: Education and Skills	26
Recommendation 3: Integrate GreenComp and EntreComp into All Educational Levels	26
Recommendation 4: Establish a European Green Entrepreneurship University Network	26
Pillar III: Financing	27
Recommendation 5: Create a European Youth Green Entrepreneurship Fund	27
Recommendation 6: Strengthen and Expand Green Guarantee Instruments	27
Pillar IV: Infrastructure and Incubation	27
Recommendation 7: Build a Pan-European Network of Green Incubators	27
Recommendation 8: Scale ClimateLaunchpad and Similar Competition Programmes	27
Pillar V: Market Creation and Regulation	27
Recommendation 9: Mandate Ambitious Green Public Procurement Targets	27
Recommendation 10: Expand Regulatory Sandboxes for Green Innovation	27
Pillar VI: Inclusiveness and Equity	28
Recommendation 11: Launch a European Women in Green Entrepreneurship Programme	28
Recommendation 12: Develop Rural Green Entrepreneurship Programmes	28
Recommendation 13: Include Green Entrepreneurship in Candidate Country Pre-Accession Support	28
Recommendation 14: Establish a European Green Entrepreneurship Data Observatory	28
11. Country-Specific Analyses: Project Partner Countries	29
Current Situation and Context	29
Ecosystem Strengths	29
Ecosystem Weaknesses and Challenges	30
Turkey-Specific Policy Recommendations	30
Current Situation and Context	31
Ecosystem Strengths	31

Ecosystem Weaknesses and Challenges	32
Iceland-Specific Policy Recommendations	32
Current Situation and Context	32
Ecosystem Strengths	33
Ecosystem Weaknesses and Challenges	33
Romania-Specific Policy Recommendations	33
Current Situation and Context	34
Ecosystem Strengths	35
Ecosystem Weaknesses and Challenges	35
Italy-Specific Policy Recommendations	36
12. Conclusion	37
References	38

Executive Summary

Europe is at a pivotal moment in its green transition. Meeting the targets set by the European Green Deal climate neutrality by 2050, a 55% reduction in greenhouse gas emissions by 2030, and the broader ambitions of REPowerEU demands not only incremental policy adjustments but transformative systemic change. Young entrepreneurs represent one of the most powerful yet under-leveraged forces available to European policymakers in this effort.

This policy report provides a comprehensive, comparative analysis of the policy environment for youth-led green entrepreneurship across Europe, encompassing both EU member states and EU candidate countries. It examines the current participation of young people in the green entrepreneurship ecosystem, the policy frameworks and governance structures that shape this participation, the support

mechanisms and financing instruments available, the skills and competencies that are required, the barriers that impede progress, and the good practices from which policymakers can learn.

The analysis reveals a broadly encouraging yet deeply uneven landscape. Several northern and western European countries notably Denmark, the Netherlands, Germany, Finland, and Sweden have developed sophisticated, well-resourced ecosystems for green entrepreneurship. However, across much of Central and Eastern Europe, the Western Balkans and the South Caucasus accession region, these ecosystems remain fragmented, underfunded, and poorly integrated into national innovation strategies. EU candidate countries, in particular, face structural challenges that require both domestic reform and targeted EU-level support.

Key Findings

1. **Policy Fragmentation:** Green entrepreneurship support remains dispersed across multiple ministries and agencies, with few countries having established a coherent, unified national strategy.
2. **Financing Gap:** Despite a growing array of public instruments, a critical 'valley of death' persists at the scale-up stage, particularly in capital-intensive cleantech sectors.
3. **Skills Mismatch:** Educational systems across Europe have been slow to integrate the green skills, sustainability literacy, and entrepreneurial competencies required by the emerging green economy.
4. **Infrastructure Deficit:** Specialised green incubators, accelerators, and living labs remain concentrated in a small number of innovation hubs, creating significant geographic inequalities.
5. **Underutilised Demand-Side Instruments:** Green public procurement and regulatory innovation tools such as sandboxes remain far below their potential as market creation mechanisms for young green entrepreneurs.
6. **Data Gaps:** The absence of systematic, comparable monitoring and evaluation data at the European level impedes evidence-based policymaking.

The report concludes with a set of fourteen strategic policy recommendations structured around six pillars: (i) Strategy and Governance; (ii) Education and Skills; (iii) Financing; (iv) Infrastructure and Incubation; (v) Market Creation and Regulation; and (vi) Inclusiveness

and Equity. These recommendations are designed to be applicable at both European and national levels, and are followed by country-specific analyses for the four project partner countries: Turkey, Iceland, Romania and Italy.

1. Introduction

1.1 Background and Rationale

The intersection of environmental sustainability, economic innovation, and generational change has moved to the centre of European policy discourse. The European Green Deal, adopted in 2019 and operationalised through an expanding legislative framework including the Fit for 55 package, the Corporate Sustainability Reporting Directive, and the Net-Zero Industry Act, has fundamentally restructured the terms on which economic activity in Europe is conducted. This regulatory transformation creates both constraints and extraordinary opportunities and young entrepreneurs are uniquely positioned to exploit the latter.

Green entrepreneurship the process of identifying, evaluating, and exploiting business opportunities that contribute to environmental sustainability is not merely a niche economic activity. It encompasses a vast range of activities: the development of renewable energy technologies, circular economy business models, sustainable agriculture, biodiversity-positive land management, clean mobility solutions, green construction, and environmental data services, among many others. Young people, who are both more exposed to climate anxiety and more digitally literate than previous generations, represent a natural constituency for green entrepreneurship.

Yet the evidence consistently shows that youth participation in green entrepreneurship is constrained by structural barriers that policy can and must address. These include access to finance, skills deficits, lack of mentorship and networks, regulatory complexity, and the absence of supportive institutional ecosystems. In many candidate countries and peripheral EU regions, these barriers are compounded by macroeconomic fragility, weak institutional ca-

capacity, and limited exposure to European best practices.

This report is motivated by the conviction that addressing these barriers is not only environmentally imperative but economically strategic. The green economy is one of the fastest-growing segments of the European and global economy. Countries and regions that successfully build ecosystems to support green entrepreneurship will gain durable competitive advantages in the sectors that will define the twenty-first century economy.

1.2 Scope and Methodology

This report covers the full breadth of the European policy space, including the 27 EU member states, the six official EU candidate countries (Albania, Bosnia and Herzegovina, Georgia, Moldova, Montenegro, North Macedonia, Serbia, Türkiye, Ukraine), and relevant partner countries (including Iceland, a member of the European Economic Area). While geographic coverage is pan-European, the depth of analysis varies according to data availability and the specific project partnership context.

The methodology employed is an integrated policy ecosystem analysis, structured around six analytical dimensions: (1) Strategy and Governance; (2) Education, Competence, and Skills; (3) Financing; (4) Market Creation and Regulation; (5) Infrastructure and Incubation; and (6) Inclusiveness and Equity. This framework draws on the OECD's policy framework for green entrepreneurship, the European Commission's SME Strategy, the Youth Entrepreneurship Policy Framework developed by the OECD and the EU, and the entrepreneurial ecosystem literature initiated by Isenberg and further developed by Stam and colleagues.

1.3 Structure of the Report

The report is structured as follows. Section 2 establishes the conceptual framework, defining key terms and situating the analysis within the relevant academic and policy literature. Section 3 examines youth participation in the green economy and green entrepreneurship across Europe. Section 4 maps the current European policy framework at the supranational level. Section 5 analyses the six ecosystem dimensi-

ons comparatively across European countries. Section 6 addresses the financing landscape. Section 7 examines skills and education. Section 8 identifies systemic barriers. Section 9 presents selected good practice examples. Section 10 sets out strategic recommendations. Section 11 provides country-specific analyses for Turkey, Iceland, Romania, and Italy. The report concludes with a comprehensive bibliography.



2. Conceptual Framework

2.1 Defining Green Entrepreneurship

The concept of green entrepreneurship also referred to in the literature as eco-entrepreneurship, ecopreneurship, sustainable entrepreneurship, or environmental entrepreneurship lacks a single universally accepted definition. For the purposes of this report, green entrepreneurship is defined as the creation, development, and management of new ventures that generate economic value while simultaneously reducing ecological harm, enhancing resource efficiency or actively restoring natural systems.

This definition encompasses three principal categories of green ventures. First, clean technology ventures, which develop new technologies, processes, or products that reduce emissions, improve energy or resource efficiency, or substitute for environmentally harmful alternatives. Second, circular economy ventures, which redesign products, services, or business models to eliminate waste and keep materials in productive use. Third, nature-based and ecosystem service ventures, which generate value from the conservation, restoration, or sustainable management of natural systems, including biodiversity markets, carbon sequestration and sustainable land use.

Critically, green entrepreneurship is distinguished from corporate greenwashing or incremental corporate sustainability improvements by its focus on innovation, market entry, and the disruption of existing value chains. It is inherently entrepreneurial. It involves the identification of opportunities created by environmental constraints, the mobilisation of resources under conditions of uncertainty, and the pursuit of scalable business models.

2.2 Why Youth? The Generational Dimension

The focus on youth in this report is grounded in both empirical and normative considerations. Empirically, young people (defined here as individuals between 18 and 35 years of age, following the European Commission's operational definition for entrepreneurship policy) exhibit characteristics that make them particularly well-suited to green entrepreneurship. They tend to show stronger pro-environmental values and greater sensitivity to climate risk than older cohorts; they are more comfortable with digital tools and data-driven business models; they are more likely to have been exposed to sustainability concepts through recent educational reforms; and they are structurally predisposed to the experimental, failure-tolerant mindset required by entrepreneurship.

Normatively, the focus on youth reflects an intergenerational justice argument: young people will live with the consequences of today's environmental decisions for far longer than current policymakers, and they therefore have a particularly strong stake in ensuring that the green transition succeeds. Empowering young people as green entrepreneurs is not merely instrumentally valuable. It is a matter of democratic participation in decisions that will shape their futures.

However, youth entrepreneurship policy cannot assume a uniform category of 'youth'. Significant heterogeneity exists along lines of gender, socioeconomic background, geographic location (urban vs. rural, central vs. peripheral), educational attainment, migration status, and disability. Effective policy must be sensitive to this heterogeneity, targeting support to those most likely to face compound disadvantage.

2.3 The Entrepreneurial Ecosystem Framework

This report adopts an entrepreneurial ecosystem perspective as its primary analytical lens. The ecosystem metaphor, introduced into the management literature by Moore (1993) and subsequently developed by Isenberg (2010) and Stam (2015), among others, captures the relational, systemic character of entrepreneurship. Entrepreneurs do not act in isolation; their ability to create and scale ventures depends on the quality and interconnection of a wide range of contextual factors, including finance, human capital, networks, regulation, markets, and culture.

For green entrepreneurship specifically, the ecosystem framework is particularly apt, because green ventures face a distinctive set of market failures externalities, public goods

characteristics, information asymmetries, and technological lock-in — that require coordinated policy responses across multiple dimensions simultaneously. A piecemeal approach that addresses only one or two dimensions of the ecosystem will fail to generate the systemic change required.

The six analytical dimensions used in this report Strategy and Governance; Education, Competence, and Skills; Financing; Market Creation and Regulation; Infrastructure and Incubation; and Inclusiveness and Equity represent an adaptation of the OECD green entrepreneurship policy framework to the specific context of young green entrepreneurship in Europe. Each dimension identifies a distinct set of policy levers and a corresponding set of potential failures.



3. Youth Participation in the Green Entrepreneurship Ecosystem

3.1 European Trends in Young Entrepreneurship

The Eurobarometer survey on entrepreneurship (2023) reveals that 45% of young Europeans between 15 and 35 years of age would prefer to be self-employed, compared to 37% of older cohorts. However, the actual rate of entrepreneurial activity among young Europeans remains lower than this aspirational level, reflecting the structural barriers discussed throughout this report. The Global Entrepreneurship Monitor (GEM) European data for 2022-2023 shows that Total Early-Stage Entrepreneurial Activity (TEA) among individuals aged 18-34 averages approximately 10.2% across EU member states, compared to 14.7% in non-EU OECD countries.

Within this broader pattern, green or sustainability-oriented entrepreneurship represents a growing but still minority segment. The European Investment Fund's (EIF) 2023 survey of European startups found that 28% of early-stage ventures reported sustainability as a core element of their business model, up from 19% in 2020. Among ventures founded by entrepreneurs aged under 35, the proportion was slightly

higher at 31%, suggesting that younger cohorts are somewhat more likely to embed sustainability into their business models from inception.

Geographic disparities are pronounced. Scandinavia, the Netherlands, Germany, and Austria consistently show the highest rates of youth green entrepreneurship activity. Southern European countries particularly Italy, Spain, Greece, and Portugal show high aspirational levels but lower realisation rates, reflecting both macroeconomic constraints and structural weaknesses in their entrepreneurship ecosystems. Central and Eastern European member states show highly variable patterns: Estonia and Czechia perform comparably to Western European peers, while Bulgaria and Romania lag significantly.

3.2 Sectoral Distribution of Young Green Entrepreneurship

Young green entrepreneurs are active across a wide range of sectors, though with notable concentrations in certain areas. The following table provides an indicative mapping of the primary sectors of activity based on available European data:

Sector	Share of Youth Green Ventures (est.)	Key Countries of Activity
Clean Energy (solar, wind, storage)	22%	Germany, Denmark, Spain, Poland
Sustainable Agriculture & Food	18%	Netherlands, France, Italy, Turkey
Circular Economy & Waste Management	15%	Netherlands, Belgium, Sweden, Romania
Sustainable Mobility	13%	Germany, Netherlands, Norway, Finland
Green Construction & Buildings	10%	Sweden, Austria, Finland, Iceland
Environmental Data & Digital Services	9%	Estonia, Finland, Germany, UK
Nature-Based Solutions & Biodiversity	7%	France, Italy, Portugal
Other / Cross-cutting	6%	Various

Agriculture and food systems represent one of the most significant entry points for youth green entrepreneurship, particularly in countries with strong agricultural traditions such as Romania, Italy, and Turkey. The rapid growth of agritech, precision farming, and sustainable food value chain startups reflects both technological opportunity and consumer demand shifts.

3.3 Gender Dimensions

Gender inequality in entrepreneurship is a well-documented phenomenon in Europe, and green entrepreneurship is not immune. Across Europe, women account for approximately 34% of early-stage entrepreneurs (GEM, 2023) and a somewhat lower proportion of the technically intensive green sectors such as cleantech and energy. Women are better represented in sustainable food, social enterprise, and nature-based solution ventures.

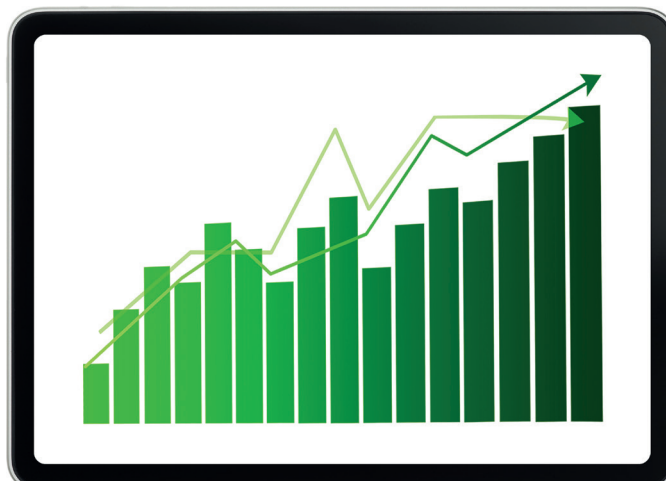
The gender gap in green entrepreneurship is attributable to several reinforcing factors: unequal access to technical education and STEM pathways; lower access to informal investor networks, which remain male-dominated; risk aversion and household resource constraints; and the concentration of women in sectors with lower average capitalisation levels. Several European programmes — notably the European Institute of Innovation

and Technology's (EIT) WomenTech programme and the EIT Food's women-in-agri-food initiative have targeted these gaps, with promising early results.

3.4 Rural-Urban Disparities

Urban-rural disparities in youth green entrepreneurship are a persistent challenge across Europe. Urban centres particularly capital cities and established innovation hubs concentrate the infrastructure, networks, capital, and talent pipelines that support entrepreneurship. Rural areas, which cover approximately 83% of EU territory and are home to 30% of its population, face a very different environment: limited broadband connectivity, sparse innovation infrastructure, weaker access to finance, and outmigration of young people.

Rural green entrepreneurship nevertheless holds significant potential, particularly in the areas of sustainable agriculture, rural tourism, biomass energy, and ecosystem service markets. Policies such as the European Agricultural Fund for Rural Development (EAFRD) and the LEADER programme have begun to explicitly incorporate green entrepreneurship objectives, but uptake among young entrepreneurs remains limited due to administrative complexity and awareness gaps.



4. The European Policy Framework

4.1 The European Green Deal and Its Implications for Entrepreneurship

The European Green Deal (EGD), launched in December 2019 under Commission President Ursula von der Leyen, represents the most comprehensive transformation of EU economic policy in a generation. Its central ambition to make Europe the world's first climate-neutral continent by 2050 has generated a cascade of legislative, regulatory, and investment initiatives that cumulatively reshape the incentive environment for green entrepreneurship.

The Fit for 55 package, comprising 13 legislative proposals, tightens existing climate policy tools (the EU Emissions Trading System, the Energy Efficiency Directive, the Renewable Energy Directive) and introduces new ones (the Carbon Border Adjustment Mechanism, the Social Climate Fund). Each of these measures affects the competitive dynamics of specific sectors, creating new market opportunities for green entrepreneurs while potentially displacing incumbent technologies and business models.

The EGD's sectoral strategies Farm to Fork Strategy, Biodiversity Strategy, EU Hydrogen Strategy, Renovation Wave and Sustainable and Smart Mobility Strategy identify specific areas where innovation and new business models are needed, effectively signalling opportunity spaces for green entrepreneurs. The New European Bauhaus initiative, launched in 2021, explicitly invites design-led entrepreneurial activity at the intersection of sustainability, inclusivity, and aesthetics.

4.2 The SME Strategy and Startup/Scaleup Agenda

The 2020 SME Strategy for a Sustainable and Digital Europe provides the primary policy vehicle for linking green transformation with the SME and entrepreneurship agenda. It commits the Commission to reducing administrative burden, improving access to finance, enhancing digital and green skills, and promoting international expansion for European SMEs. The

Strategy's explicit integration of sustainability a departure from earlier SME strategies reflects the growing recognition that the green and digital transitions are not separate agendas but mutually reinforcing imperatives.

The Startup and Scaleup Initiative, which grew out of the Startup Europe initiative launched in 2013 and has been revitalised under the Von der Leyen Commission, aims to create a more favourable regulatory and investment environment for high-growth innovative ventures. Proposals for a European Startup Nation Standard a set of best practices for national startup policies have gained traction, and the 2023 European Startup Nations Alliance (ESNA) progress report shows convergence in some dimensions, particularly around equity compensation schemes and visa frameworks for startup talent.

4.3 The Youth Strategy and Erasmus+

The EU Youth Strategy 2019-2027, built around three pillars of Engage, Connect, and Empower, provides the explicit framework for EU-level investment in youth participation, including entrepreneurship. While not exclusively focused on green entrepreneurship, the Strategy increasingly incorporates sustainability as a cross-cutting theme, reflecting both political priorities and demonstrated youth demand.

Erasmus+ 2021-2027, with a budget of €26.2 billion, is the EU's flagship programme for education, training, youth, and sport. Its explicit commitment to green and digital priorities with 10% of budget earmarked for climate action integration creates significant opportunities for developing and disseminating green entrepreneurship curricula, tools, and competency frameworks across European educational systems. The European Solidarity Corps, which mobilises young people for voluntary and professional activities, represents an additional channel through which young people can engage with environmental challenges in ways that may stimulate entrepreneurial intent.

4.4 Horizon Europe and the Innovation Ecosystem

Horizon Europe (2021–2027), with a budget of €95.5 billion, is the EU's primary research and innovation programme. Its five Mission Areas, Adaptation to Climate Change; Cancer; Healthy Oceans, Seas, Inland and Coastal Waters; Climate-Neutral and Smart Cities; and Soil Health and Food provide substantial funding for innovation with direct relevance to green entrepreneurship. The European Innovation Council (EIC), established as a dedicated pillar within Horizon Europe, provides equity investment, grants, and business acceleration services to deep-tech startups and SMEs, with a strong emphasis on breakthrough green technologies.

The European Institute of Innovation and Technology (EIT), operating through its Knowledge and Innovation Communities (KICs), provides particularly relevant support for young green entrepreneurs. EIT Climate-KIC, EIT Food, EIT Energy, and EIT Manufacturing together run a network of education, business creation, and acceleration programmes that serve thousands of young innovators annually across Europe. EIT Climate-KIC's Greenhouse programme, which provides structured learning pathways for climate entrepreneurs, is frequently cited as a European best practice.

4.5 Policy Coherence Challenges at the European Level

Despite this rich array of European-level instruments, a recurring critique from academic literature, stakeholder consultations, and evaluations concerns policy fragmentation and lack of coherence. Youth green entrepreneurship falls at the intersection of at least five major policy domains climate, innovation, entrepreneurship, education, and youth each with its own institutional home, budget cycle, and logic of intervention. The result, as the European Court of Auditors and numerous external evaluations have noted, is a landscape that is difficult to navigate, prone to duplication, and insufficiently integrated.

There is also a persistent tension between the ambitions of the EGD and the capacities of the member states to implement the associated regulatory reforms and investment commitments. The Just Transition Mechanism acknowledges this by explicitly directing resources to regions and communities most affected by the green transition. But the entrepreneurship and innovation dimensions of just transition ensuring that the new green economy creates opportunities for young people in structurally disadvantaged areas remain underdeveloped in the current policy architecture.



5. Ecosystem Analysis: Six Dimensions

5.1. Dimension 1: Strategy and Governance

A national green entrepreneurship strategy provides the institutional architecture within which all other policy interventions are nested. Such a strategy typically establishes objectives, defines target groups, allocates responsibilities across agencies, sets monitoring frameworks, and signals political commitment to stakeholders.

Across Europe, the quality and coherence of national strategies for green entrepreneurship vary enormously. A small number of frontrunner countries most notably Denmark, the Netherlands, and Finland have developed sophisticated, integrated strategies that explicitly link green economy objectives with entrepreneurship and youth policy. Denmark's National Strategy for Green Business Development (updated in 2023) represents a particularly strong example, with explicit targets for green startup formation, dedicated funding streams, and a whole-of-government coordination mechanism chaired by the Ministry of Business and Growth.

The majority of European countries, however, approach green entrepreneurship through a patchwork of partial strategies: a national climate strategy that mentions innovation but not entrepreneurship; a startup strategy that mentions sustainability as an afterthought; a youth strategy that does not engage with entrepreneurship at all. This fragmentation creates the navigability problems that entrepreneurs consistently identify as one of their most significant practical challenges.

Governance of green entrepreneurship policy is also complicated by multi-level complexity. In federal or quasi-federal systems such as Germany, Austria, Belgium, and Spain, significant policy competences lie at the regional or L nder level. Regional strategies and programmes can be highly effective Germany's Energie-region Lausitz initiative and Spain's Regional Industrial Transition Plans are good examples

but can also create inconsistency and barriers to scaling.

5.2. Dimension 2: Education, Competence and Skills

The skills dimension of the green entrepreneurship ecosystem is arguably the most important, and the most challenging to address rapidly. Building the human capital required for a green entrepreneurial economy requires changes to curricula at all levels of the educational system, the development of new pedagogical approaches, the training of educators, and the creation of non-formal learning pathways that can reach young people outside formal education.

The EntreComp framework, developed by the European Commission's Joint Research Centre, provides a structured competency framework for entrepreneurship education that has been adopted or adapted by many member states. Its applicability to green entrepreneurship has been enhanced by the subsequent development of GreenComp, the European Sustainability Competence Framework, which maps the sustainability literacy and action competencies required for individuals to contribute to a sustainable society. The integration of EntreComp and GreenComp into a coherent green entrepreneurship competency framework remains a work in progress, but several organisations including Junior Achievement Europe and the EIT community have made significant strides.

At the higher education level, the percentage of European universities offering sustainability entrepreneurship programmes has grown rapidly. A 2022 survey by the European University Association found that 67% of member universities reported some form of sustainability-related entrepreneurship education, up from 41% in 2018. However, these programmes are highly variable in quality, and they remain elective rather than embedded in core curricula in most institutions.

Vocational Education and Training (VET) represents a critical and often undervalued channel for green skills development. The Osnabrück Declaration on VET (2020) committed EU member states to embedding green competencies in VET systems, and the EuroVoc Green Skills initiative provides a common vocabulary and assessment framework for green VET qualifications. However, implementation has been slow and uneven, with particular weaknesses in candidate countries where VET systems have historically been under-resourced.

5.3. Dimension 3: Infrastructure and Incubation

Physical and virtual infrastructure incubators, accelerators, co-working spaces, maker spaces, living labs, and testbeds provides the environment in which young entrepreneurs learn, collaborate, access mentorship, and develop their ventures. The concentration of such infrastructure in major urban centres creates significant geographic inequalities.

Specialist green incubators and accelerators represent a growing segment of the European innovation infrastructure. The most prominent include: ClimateLaunchpad (operating in 50+ countries with EIT Climate-KIC support), Greenhouse (EIT Climate-KIC's flagship education and incubation programme), the Climate-KIC Accelerator, ENGIE Factory, the Climate Change Accelerator based in the EIC, and a growing number of national-level green accelerators such as Climate-KIC Sweden's Ignite programme and Germany's Greentech Festival accelerator.

The geographic distribution of these facilities is deeply unequal. A 2023 mapping exercise by EIT Climate-KIC identified over 180 specialist green incubator or accelerator programmes across Europe, but approximately 65% were located in Western Europe, with particularly strong concentrations in Germany, the Nether-

lands, the United Kingdom, France, and the Nordic countries. Central and Eastern Europe, and particularly EU candidate countries, are significantly underserved.

5.4 Dimension 4: Financing

The financing of green entrepreneurship is discussed in depth in Section 6. At the ecosystem level, the key observation is that the financing landscape for youth green entrepreneurship is characterised by abundance at the extremes a growing array of early-stage grant and prize programmes at one end, and increasing volumes of institutional venture capital and private equity for mature green tech firms at the other and critical scarcity in the middle, at the pre-seeded to Series A scale-up stages where young entrepreneurs most urgently require patient, risk-tolerant capital.

5.5 Dimension 5: Market Creation and Regulation

Market creation policies green public procurement, mandatory standards, carbon pricing, subsidy schemes are the demand-side complements to the supply-side support provided by financing, skills, and infrastructure programmes. They create the market signals and demand certainty that attract private investment and make green business models economically viable.

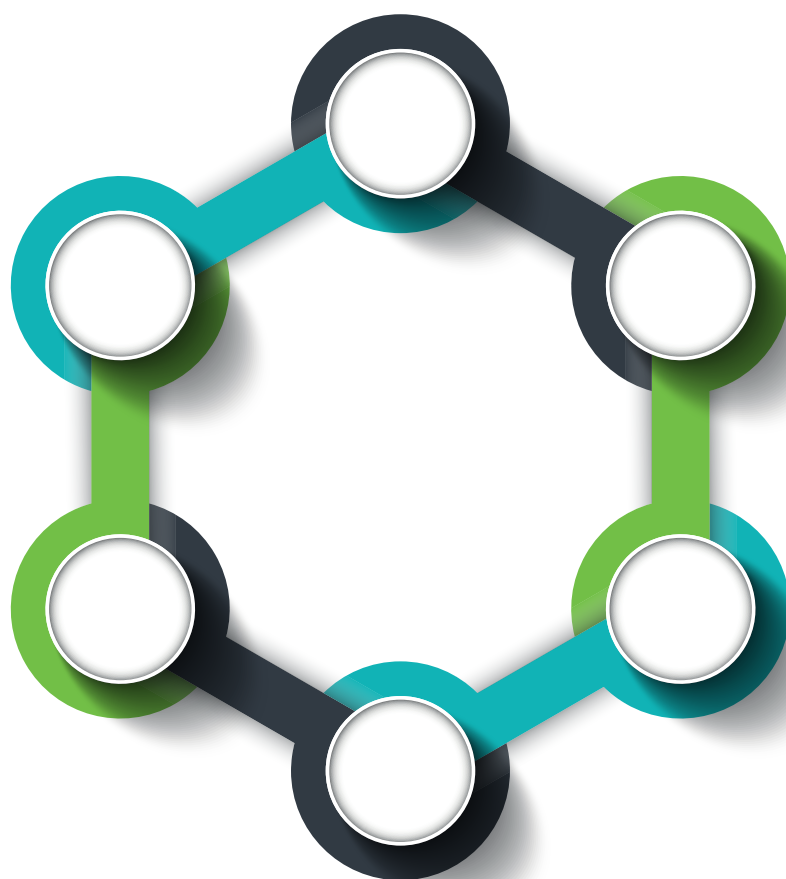
Green public procurement (GPP) represents one of the most powerful and underutilised instruments in this domain. Public procurement accounts for approximately 14% of EU GDP. If a significant proportion of this spending systematically favoured green products and services, it would create enormous market opportunities for green SMEs and startups. The EU's GPP Action Plan and National GPP Strategies have established frameworks for this, but enforcement is weak, ambitions are often modest, and SME participation in public tenders remains low due to administrative barriers.

Regulatory sandboxes controlled environments in which innovators can test new products and services under regulatory supervision without full compliance with existing rules are an increasingly popular tool for enabling green innovation in regulated sectors. The EU's AI Act regulatory sandbox has attracted attention, but similar mechanisms for green chemistry, sustainable finance, autonomous energy management, and circular economy data platforms are less developed. The EIC Sandbox programme represents a promising step, but its uptake among young entrepreneurs is limited by complexity.

5.6 Dimension 6: Inclusiveness and Equity

Inclusiveness is not merely a social justice concern; it is also an economic efficiency argument. Systematically excluding potential entrepreneurs on the basis of gender, geography, ethnicity, disability, or socioeconomic background wastes human capital and narrows the diversity of approaches to the green transition. Research consistently shows that diverse entrepreneurial ecosystems are more innovative and more resilient.

The most significant inclusion gaps in European young green entrepreneurship concern: gender (discussed in Section 3.3); geography (rural and peripheral areas); socioeconomic background (first-generation entrepreneurs from non-entrepreneurial families); and migration status (young people with migrant backgrounds who face additional regulatory and cultural barriers). The European Commission's forthcoming Action Plan on Social Economy and the EIC Women Leadership Programme represent positive steps, but the scale of intervention remains far below what is required to close these gaps systematically.



6. The Financing Landscape for Youth Green Entrepreneurship

6.1 Overview: A Complex and Fragmented Landscape

Access to finance consistently ranks as the single most frequently cited barrier to youth entrepreneurship in European surveys, and green entrepreneurship faces particularly acute financing challenges. Green ventures typically require more capital, carry higher technical risk, have longer paths to revenue, and generate social and environmental returns that are not fully captured by private investors. These characteristics systematically disadvantage green entrepreneurs in conventional capital markets.

The financing landscape for youth green entrepreneurship in Europe encompasses multiple tiers: (1) personal savings and friends-and-family financing; (2) grants, prizes, and subsidies; (3) crowdfunding and community finance; (4) business angels; (5) venture capital and private equity; (6) bank debt and guarantee schemes; (7) public development finance institutions; and (8) EU-level financial instruments. Each tier has a characteristic scale, risk appetite, and selection mechanism, and effective green entrepreneurship finance policy must consider how these tiers interact.

6.2 EU-Level Financing Instruments

The European Investment Bank (EIB) Group

comprising the EIB and the European Investment Fund (EIF) is the primary vehicle for EU-level support for green venture financing. The EIB's Climate Bank Roadmap commits the Group to devoting 50% of its financing to climate action and environmental sustainability by 2025. The EIF's equity and guarantee instruments support green SMEs through intermediary financial institutions across Europe.

The European Innovation Council (EIC) represents a significant advance in European public venture capital for deep-tech green startups. The EIC Accelerator, with grants of up to €2.5 million combined with equity investments of up to €15 million, provides a unique blended financing instrument that bridges the valley of death for capital-intensive green technologies. By 2023, approximately 40% of EIC Accelerator beneficiaries operated in climate or cleantech sectors.

InvestEU, the EU's flagship public-private investment programme with a guarantee of €26.2 billion mobilising over €372 billion in total investment by 2027, provides backing for green investment through its Sustainable Infrastructure, Research, Innovation and Digitisation, and SME windows. Its Green Transition window specifically targets investments in climate change mitigation and adaptation, biodiversity, and sustainable food systems.

Instrument	Managing Body	Relevance to Youth Green Entrepreneurs	Scale
EIC Accelerator	EIC (Horizon Europe)	Direct equity + grant; deep-tech green focus	Up to €17.5M per beneficiary
InvestEU	EIB Group	Guarantees for green SME loans and equity	€372B total mobilised
EIF Equity	EIF	VC fund-of-funds; co-investment	Billions annually
COSME	EISMEA	Guarantees for SME loans incl. green	Pan-EU coverage
LIFE Programme	EC DG ENV/CLIMA	Grants for environmental and climate innovation	€5.4B (2021-27)
Erasmus+ Innovation	EACEA	Partnerships, KA2 / KA3 for green entrepreneurship education	€26.2B (2021-27)
EAFRD/LEADER	EC/National	Rural green enterprise development	€95B (2021-27)
JTF	EC DG REGIO	Just transition regions; green economy diversification	€17.5B (2021-27)

6.3 National Financing Instruments

National development finance institutions, public venture funds, and grant programmes represent the next tier of the financing landscape. Several European countries have developed particularly sophisticated national instruments for green entrepreneurship:

Denmark's Green Future Fund (Grøn Fremtid Fond), established with DKK 1 billion in public capital, provides equity investment for Danish green SMEs and startups, with a mandate to prioritise ventures led by young entrepreneurs. The fund operates as a co-investor alongside private venture capital, using public capital to de-risk investments that the private sector would not make alone.

The Netherlands Enterprise Agency (RVO) administers a comprehensive suite of green entrepreneurship financing instruments including the WBSO R&D tax credit, the SDE++ renewable energy subsidy, and the Mit grant scheme for SME innovation in climate and sustainability. Critically, these instruments are integrated into a single digital portal that simplifies access for young entrepreneurs.

Finland's Business Finland agency combines public R&D grants with equity co-investment and a sophisticated ecosystem of acceleration services, providing a model of integrated public sup-

port that has been widely studied across Europe. Its Green Deal Challenge programme specifically targets young climate entrepreneurs.

6.4 The Crowdfunding Revolution and Its Limits

Equity and reward crowdfunding have emerged as important complementary financing channels for young green entrepreneurs, particularly at the early stages. Platforms such as Seedrs, Crowdcube, Green Crowding, and Bettervest have channelled hundreds of millions of euros into green ventures across Europe. The European Crowdfunding Service Providers (ECSP) Regulation, which came into force in November 2021, established a harmonised regulatory framework for crowdfunding across the EU, facilitating cross-border crowdfunding and improving investor protection.

However, crowdfunding has significant limitations as a primary financing mechanism for green entrepreneurship. Successful crowdfunding campaigns require substantial pre-existing network capital, marketing resources, and public communication skills that may disadvantage entrepreneurs from lower-resource backgrounds. The average successful European green crowdfunding campaign raises approximately €80,000-150,000 sufficient for idea validation but insufficient for the capital expenditures required by many hardware-intensive green ventures.

7. Skills, Education and Competency Development

7.1 The Green Skills Imperative

The European Commission's Green Skills Agenda, launched in 2023, estimates that achieving the EU's 2030 climate and energy targets will require a significant expansion of the green workforce, with up to 1 million additional workers needed in the renewable energy sector alone, and comparable demand increases in construction, manufacturing, transport, and agriculture. But green skills are not only needed by employees; they are also required by entrepreneurs who must understand sustainability dynamics, navigate green regulatory frameworks, and communicate environmental value propositions to customers and investors.

Green entrepreneurship requires a distinctive combination of competencies that spans multiple traditional educational domains. At minimum, a green entrepreneur needs: (1) domain-specific technical knowledge in their sector (e.g., energy systems, agricultural science, materials science); (2) general business and entrepreneurial competencies (market analysis, business model design, financial management, team building); (3) sustainability literacy (life cycle thinking, carbon accounting, biodiversity concepts, circular economy principles); (4) systems thinking (understanding of complex socio-ecological systems and their dynamics); and (5) communication and advocacy skills (ability to articulate green value propositions to diverse stakeholders).

7.2 Curriculum Integration:

Progress and Gaps

The integration of green entrepreneurship content into European educational curricula has accelerated significantly since 2019, driven by a combination of political pressure from the

European Green Deal, student activism, and employer demand. However, implementation is highly uneven.

At the primary and secondary level, environmental education has been a feature of most European curricula for decades, but the link to entrepreneurship and economic agency remains weak in most systems. The European Commission's DigComp and GreenComp frameworks provide competency standards, but their translation into curriculum reform and teacher training has been slow.

At the higher education level, several European universities have become global leaders in sustainability and entrepreneurship education. The Copenhagen Business School, Rotterdam School of Management, Stockholm School of Economics, and Bocconi University in Milan are among the institutions that have integrated sustainability most thoroughly into business education. The challenge is to diffuse these good practices more widely, particularly to universities in Central and Eastern Europe and candidate countries where resource constraints limit curriculum development capacity.

Non-formal learning pathways — youth organisations, volunteer programmes, online platforms, and entrepreneurship competitions — are increasingly important channels for green entrepreneurship education. The EIT Climate-KIC's Greenhouse programme, which engages over 5,000 young people annually across 17 countries, the Junior Achievement Eco-Innovation Challenge, and the ClimateLaunchpad competition all provide practical, peer-learning environments that are often more effective than formal classroom instruction.

7.3 The Digital-Green Skills Nexus

The convergence of digital and green skills represents one of the most important and underappreciated dimensions of the skills challenge for youth green entrepreneurship. Digital technologies artificial intelligence, machine learning, Internet of Things, blockchain, remote sensing, and advanced data analytics are transforming the economics and operational possibilities of virtually every green sector. Young entrepreneurs who combine digital fluency with green domain knowledge are among the most sought-after talent in the European economy.

Precision agriculture, which uses sensor networks, satellite data, and AI-driven analytics to optimise farm management, is one of the most rapidly growing applications of this convergence. Energy management systems, smart grid technologies, biodiversity monitoring platforms, and circular economy traceability tools all similarly require the integration of digital and green competencies. Educational programmes that develop these combined competencies such as the EIT Digital's Digital Cities of Tomorrow programme and EIT Food's FoodTech programme are oversubscribed relative to available places.



8. Barriers and Challenges

8.1 Structural Barriers

Structural barriers are rooted in the architecture of economic systems, financial markets, and regulatory frameworks, and cannot be overcome by individual effort alone. For youth green entrepreneurship, the most significant structural barriers are:

- **The dual market failure problem:** Green ventures face both the general market failures associated with entrepreneurship (information asymmetries, inability to appropriate full returns from innovation) and the specific market failures associated with environmental externalities (the divergence between social and private returns from environmental improvement). This double burden creates exceptionally high risk profiles that private investors are reluctant to absorb.
- **Regulatory complexity and instability:** The rapidly evolving EU regulatory environment while necessary for the green transition creates compliance costs and uncertainty that disproportionately burden young, under-resourced startups. Frequent changes to subsidy frameworks, carbon pricing regimes, and product standards increase planning horizons and reduce the predictability that investors require.
- **Capital market failures in peripheral regions:** Venture capital markets in Europe remain geographically concentrated. Studies consistently show that approximately 70% of European venture capital investment flows to just five countries: the United Kingdom (even post-Brexit), Germany, France, the Netherlands, and Sweden. Young green entrepreneurs in peripheral regions face a structurally thinner capital market and must often relocate to access the investment they need.
- **Technology readiness and commercial risk:** Many of the most promising green technologies advanced electrolysis for hydrogen, direct air capture, solid-state batteries, precision fermentation are still at low technology readiness levels (TRL 4-7), and bridging the gap from laboratory to commercial scale requires

patient, risk-tolerant capital that public markets are poorly equipped to provide.

8.2 Institutional and Administrative Barriers

Institutional barriers relate to the capacity, culture, and processes of the organisations public agencies, universities, financial intermediaries, business support organisations through which support for green entrepreneurship is delivered.

- **Bureaucratic burden:** Young entrepreneurs consistently cite administrative complexity as one of their most significant practical challenges. Grant applications, regulatory compliance, tax administration, and business registration processes all impose time and resource costs that fall most heavily on early-stage ventures with limited staff.
- **Policy fragmentation:** The distribution of responsibility for green entrepreneurship policy across multiple ministries and agencies typically including environment, economy, education, and youth creates coordination problems, duplication, and gaps. The absence of a designated policy lead or champion at the national level is a particular problem in many European countries.
- **Capacity constraints in support organisations:** Many national and regional business support organisations, enterprise agencies, chambers of commerce, development agencies lack the specialised knowledge of green technologies and business models required to provide high-quality advisory services to green entrepreneurs. Mentors and coaches who combine green domain expertise with business advisory skills are in short supply across Europe.
- **Educational system inertia:** Universities, vocational schools, and secondary schools are large, complex institutions that change slowly. Curriculum reform requires faculty buy-in, regulatory approval, and resources for teacher training. The pace of curriculum change in most European educational systems significantly lags the pace of green economic transformation.

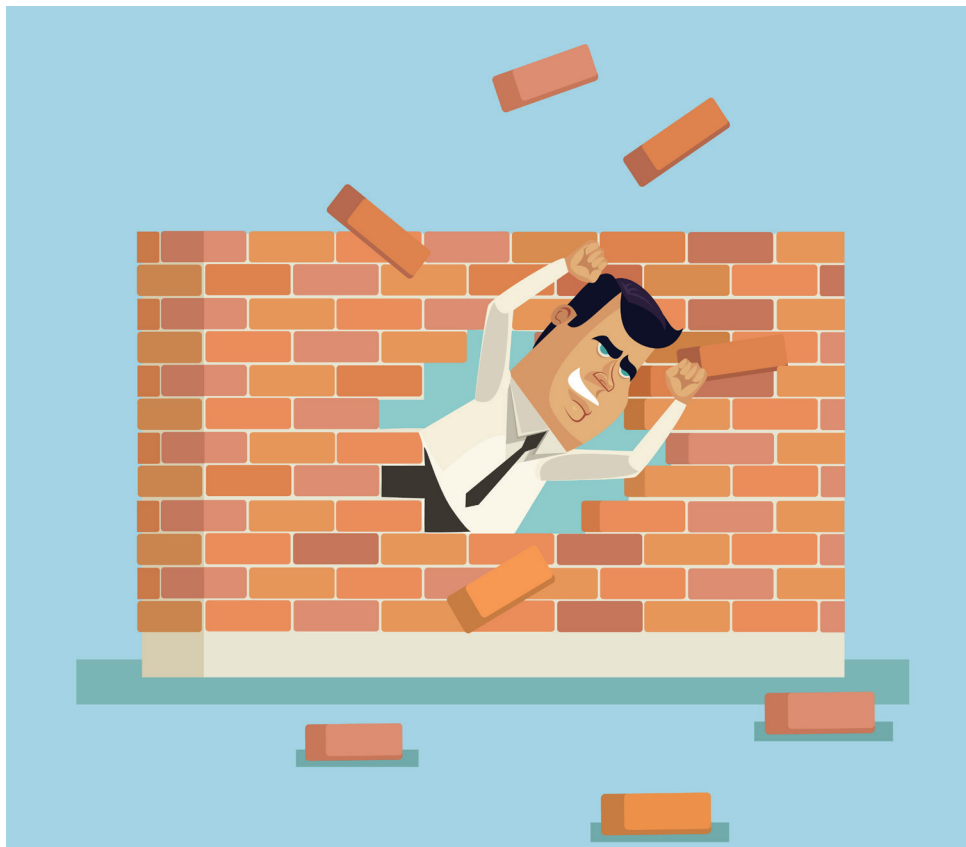
8.3 Cultural and Attitudinal Barriers

Cultural factors, attitudes towards risk, failure and entrepreneurship; social norms around career choices; trust in institutions; and environmental values shape the aspirational and motivational dimensions of the green entrepreneurship landscape.

- Fear of failure: Survey data consistently shows that fear of failure is a major inhibitor of entrepreneurial intent in Europe, particularly in Central and Eastern Europe and Southern Europe. The cultural stigma attached to business failure, combined with harsh personal consequences in bankruptcy law in some jurisdictions, deters risk-taking.
- Low entrepreneurial role models in green se-

ctors: Young people are significantly influenced by the presence of visible, relatable role models. While Silicon Valley tech entrepreneurship has generated a global culture of startup aspiration, the green sector has produced fewer celebrated young entrepreneurs who can inspire and normalise green entrepreneurial identity.

- Scepticism about commercial viability: Some young people motivated by environmental values distrust the market system and are reluctant to engage with entrepreneurship as a vehicle for change. This ideological barrier, while not universal, is present in environmental activism communities and can reduce the pipeline of green entrepreneurship talent.



9. Good Practice Examples

9.1 EIT Climate-KIC: Greenhouse Programme (Pan-European)

The Greenhouse programme, delivered by EIT Climate-KIC across more than 17 European countries, provides a structured six-month learning journey for aspiring climate entrepreneurs. Participants receive a combination of online learning modules, in-person bootcamps, peer coaching, and access to EIT Climate-KIC's expert network and alumni community. The programme has a strong emphasis on systems thinking, design thinking, and the specific competencies required for climate entrepreneurship, including stakeholder engagement, impact measurement, and fundraising.

Key success factors include: the quality and diversity of the facilitator community; the integration of peer learning and cross-country networking; the explicit focus on climate impact alongside commercial viability; and the connection to EIT Climate-KIC's broader ecosystem of incubators, investors, and corporate partners. By 2023, Greenhouse had engaged over 25,000 participants and generated over 3,000 climate startups, making it one of the largest and most impactful green entrepreneurship education programmes in the world.

9.2. Denmark: Circular Economy Startup Programme

The Danish Environmental Protection Agency's Circular Economy Startup Programme provides tailored support specifically for startups developing solutions to circular economy challenges. The programme combines direct grants (up to DKK 500,000 for early-stage ventures), technical advisory services provided by the Danish Technological Institute, access to corporate partners for pilot testing, and a dedicated acceleration pathway leading to larger EIC or InvestEU applications.

The programme's design reflects several principles that distinguish it from more generic startup support: it is explicitly sector-focused, recognising that circular economy ventures have distinctive needs; it links grants to technical assistance, addressing the skills gap alongside the financing gap; and it uses corporate partnerships to provide the market access and real-world testing environments that accelerate commercial development. A 2022 evaluation found that 68% of programme participants had achieved revenues within 18 months of programme completion, compared to 43% for a matched control group.

9.3. Netherlands: MIT and Green Startup Delta

The Netherlands has developed one of the most integrated green entrepreneurship ecosystems in Europe, combining a coherent national strategy (the Dutch Climate Agreement), sophisticated public financing instruments (MIT grants, WBSO R&D credits), and a vibrant private sector infrastructure (Green Startup Delta, Rockstart, YES!Delft, and others). The MIT (MKB Innovatiestimulerend Topsectoren) grant scheme specifically supports SME innovation in top sectors including energy, agriculture, and water, providing grants of €20,000–350,000 that are accessible to early-stage ventures.

Green Startup Delta, a private initiative supported by public co-funding, provides dedicated acceleration, investment facilitation, and ecosystem building for Dutch climate tech startups. Its distinctive features include: a community of practice that connects young entrepreneurs with experienced mentors from both the startup world and large corporations; a structured investment readiness programme; and an international market access service that helps Dutch green startups scale beyond the Netherlands.

9.4. Finland: Startup Sauna and the Helsinki Cleantech Innovation Centre

Finland's cleantech entrepreneurship ecosystem has been systematically built over two decades, combining strong university-industry links (particularly through Aalto University), a supportive regulatory environment, and dedicated public-private co-investment facilities. The Helsinki Cleantech Innovation Centre (HCIC), operated as a public-private partnership, provides both physical incubation space and business advisory services specifically for cleantech and sustainability startups, with a particular focus on international scaling.

Startup Sauna, Finland's leading accelerator, has integrated sustainability criteria into its selection process and provides a cohort-based acceleration programme with strong international mentorship and investor networks. Finland's 2030 National Startup Strategy explicitly includes green sector targets and commits to expanding green startup support through increased public venture funding and curriculum

reform in higher education.

9.5. Estonia: e-Residency and the Digital Green Startup

Estonia's world-leading digital governance infrastructure including e-Residency, X-Road data exchange, and one of Europe's most efficient business registration systems provides a distinctive advantage for digital green startups. The administrative simplicity of Estonian business formation has attracted green entrepreneurs from across Europe and beyond, demonstrating that governance innovation can be a powerful enabler of green entrepreneurship.

The Garage48 hackathon series, which has a dedicated Environment and Climate vertical and the Climate Corps Estonia programme, provide youth-specific green entrepreneurship pathways. Estonia's Green Digital Government initiative, which integrates sustainability reporting into public administration data systems, also creates market opportunities for environmental data and reporting startups.



10. Strategic Policy Recommendations

The following fourteen strategic recommendations are addressed to policymakers at the European, national, and regional levels. They are structured around the six analytical dimensions and are intended to be complementary and mutually reinforcing.

Pillar I: Strategy and Governance

Recommendation 1: Develop National Green Entrepreneurship Strategies

Every European country member state and candidate country alike should develop and implement a dedicated national green entrepreneurship strategy that: (i) sets quantified targets for green startup formation and employment; (ii) designates a lead ministerial coordinator with cross-departmental authority; (iii) establishes a multi-stakeholder advisory council including young entrepreneurs; (iv) creates a monitoring and evaluation framework with publicly available annual reporting; and (v) aligns with and actively leverages EU-level instruments including Horizon Europe, InvestEU, and Erasmus+.

This strategy should be developed through a participatory process that gives young entrepreneurs, civil society organisations, and regional actors a substantive voice. Strategies that are designed by ministries without meaningful stakeholder participation consistently underperform against those developed through co-design processes.

Recommendation 2: Create One-Stop Digital Portals

Each European country should establish a single, authoritative digital portal for youth green entrepreneurship support that: aggregates information on all relevant national, regional,

and EU-level funding programmes, mentorship services, incubator networks, and regulatory pathways; provides personalised navigation tools that guide young entrepreneurs to the most relevant resources based on their sector, stage, and location; and is available in accessible language, with translation into the principal languages of migrant communities where relevant.

Pillar II: Education and Skills

Recommendation 3: Integrate GreenComp and EntreComp into All Educational Levels

The European Commission's GreenComp and EntreComp frameworks should be mandated as core reference standards for curriculum development at all educational levels across Europe. Member states and candidate countries should: (i) develop national implementation plans for these frameworks within two years; (ii) invest in teacher and educator training programmes to build the capacity to deliver green entrepreneurship competencies; (iii) create quality assurance mechanisms to ensure consistent standard across schools and regions.

Recommendation 4: Establish a European Green Entrepreneurship University Network

The European Commission, in partnership with the EUA and EIT community, should establish a dedicated network of European universities and higher education institutions committed to excellence in green entrepreneurship education. Network membership should be conditional on: the integration of green entrepreneurship modules into core business, engineering, and science curricula; the establishment of dedicated green startup incubation services; and the active engagement of local SME and startup communities in teaching and mentorship.

Pillar III: Financing

Recommendation 5: Create a European Youth Green Entrepreneurship Fund

The European Commission, in partnership with the EIF, should establish a dedicated European Youth Green Entrepreneurship Fund with a minimum capitalisation of €500 million. This fund should provide: (i) seed grants of €25,000–75,000 for ventures led by entrepreneurs aged under 35 operating in green sectors; (ii) equity co-investment for scale-up ventures; (iii) technical assistance grants to support investment readiness; and (iv) a blended finance mechanism that leverages private co-investment on preferential terms. The fund should have a geographic equity mandate ensuring that at least 40% of resources flow to underrepresented regions, including candidate countries.

Recommendation 6: Strengthen and Expand Green Guarantee Instruments

The InvestEU and EIF guarantee instruments should be expanded and adapted specifically to address the financing needs of youth-led green ventures, including: (i) higher guarantee coverage rates (up to 90%) for first-time borrowers aged under 35 in green sectors; (ii) dedicated micro-guarantee instruments for very early-stage ventures with loan sizes below €50,000; (iii) mandatory green criteria for all SME guarantee schemes co-financed through EU structural funds.

Pillar IV: Infrastructure and Incubation

Recommendation 7: Build a Pan-European Network of Green Incubators

The European Commission should fund the creation of at least 50 new specialist green incubators and accelerators in underserved regions of Europe, with priority for Central and Eastern Europe, the Western Balkans, and rural areas. Each facility should: provide physical space, laboratory or maker facilities, and fast internet connectivity; offer specialist mentorship from practitioners with combined green and business expertise; connect to national

and European investor networks; and serve as regional hubs for the European Youth Green Entrepreneurship Network proposed in Recommendation 1.

Recommendation 8: Scale ClimateLaunchpad and Similar Competition Programmes

Competition-based programmes such as ClimateLaunchpad, which provide structured ideation support, peer learning, and public visibility, have proven highly cost-effective at stimulating youth green entrepreneurship. These programmes should be scaled significantly with increased EU co-funding, ensuring broad geographic coverage across all member states and candidate countries.

Pillar V: Market Creation and Regulation

Recommendation 9: Mandate Ambitious Green Public Procurement Targets

All European countries should establish legally binding green public procurement targets, with a minimum requirement that 50% of all public contracts above threshold values include substantive green environmental criteria by 2027, rising to 70% by 2030. These targets should be accompanied by: (i) simplified tender processes that reduce administrative barriers for SMEs and startups; (ii) reserved contract procedures for innovative SMEs under Article 31 of the EU Procurement Directive; (iii) mandatory reporting on GPP implementation.

Recommendation 10: Expand Regulatory Sandboxes for Green Innovation

EU member states and candidate countries should establish dedicated regulatory sandboxes for green innovation in key sectors, including: sustainable chemistry and materials; autonomous energy management; circular economy data platforms; novel food and feed systems; and nature-based solution markets. The European Commission should develop a common framework for green innovation sandboxes, building on the EIC Sandbox model and aligned with the Better Regulation Agenda.



Pillar VI: Inclusiveness and Equity

Recommendation 11: Launch a European Women in Green Entrepreneurship Programme

A dedicated programme targeting women aged 18-35 in green entrepreneurship should be established with EU co-funding, modelled on the EIT's WomenTech programme but with broader sectoral scope and deeper coverage of candidate countries. The programme should include: tailored mentorship and peer learning; targeted grant instruments with preferential terms for women-led ventures; advocacy for gender-balanced representation in accelerator cohorts and investor panels; and systematic data collection on gender gaps in green entrepreneurship participation.

Recommendation 12: Develop Rural Green Entrepreneurship Programmes

Dedicated rural green entrepreneurship programmes should be integrated into the Common Agricultural Policy strategic plans and EAFRD Rural Development Programmes across Europe. These programmes should: provide digital infrastructure investments that extend connectivity to rural areas; fund mobile incubation units and travelling green entrepreneurship workshops; support peer networks connecting rural and urban green entrepreneurs; and recognise the distinctive business models associated with rural green entrepreneurship, including agritourism, nature-based solutions, and sustainable land management.

Recommendation 13: Include Green Entrepreneurship in Candidate Country Pre-Accession Support

Green entrepreneurship capacity building should be integrated as an explicit objective of the EU's pre-accession assistance to candidate countries. IPA III (Instrument for Pre-Accession Assistance) programming should include dedicated support for: national green entrepreneurship strategy development; build-up of green incubation infrastructure; curriculum reform in higher education; and access facilitation for candidate country entrepreneurs to EU-level programmes including EIC, EIT, and InvestEU.

Recommendation 14: Establish a European Green Entrepreneurship Data Observatory

The absence of comparable, timely data on youth green entrepreneurship across Europe is a fundamental obstacle to evidence-based policymaking. The European Commission, in partnership with Eurostat, OECD, and national statistical offices, should establish a European Green Entrepreneurship Data Observatory that: (i) develops common definitions and measurement standards for green entrepreneurship activity; (ii) conducts annual comparable surveys of green startup activity, financing, skills needs, and barriers across all European countries; (iii) produces annual European Green Entrepreneurship Report; and (iv) provides open-access data to researchers, policymakers, and practitioners.

11. Country-Specific Analyses: Project Partner Countries

11.1 Turkey (Türkiye)

Current Situation and Context

Türkiye has moved from broad climate commitment to a more operational green transformation framework. After ratifying the Paris Agreement and adopting its 2053 net-zero target, the country added several concrete policy layers: the Climate Law entered into force in 2025, the National Circular Economy Strategy and Action Plan was launched in 2025, and the 2026–2028 Pre-Accession Economic Reform Programme allocated major support for the green transformation of industrial SMEs and organised industrial zones.

For young green entrepreneurship, the ecosystem is becoming more visible through instruments such as TÜBİTAK 1832, GCIP Türkiye, new green transformation programmes opened by YÖK, and the Ministry of Education's 2025–2026 “Yeşil Vatan” agenda.

However, this momentum is still uneven across finance, skills, market access, regulation, and incubation, meaning that the ecosystem is growing, but not yet fully institutionalised across all six dimensions of the report.

Ecosystem Strengths

1) Specialized Support Programs: The World Bank-funded TÜBİTAK 1832 Green Transformation Call creates a demand-driven market for green startups by focusing on industry decarbonization. The programme supports commercialization-oriented, green R&D and innovation projects, especially those linked to greener production, energy efficiency, water

efficiency, waste reduction, validation, scaling and pilot implementation. In this sense, it does not only finance innovation; it also creates a more demand-driven market environment for green solutions toward decarbonization and resource-efficiency investments.

2) Pre-Seed Support Mechanisms: The TÜBİTAK BİGG (1812) program plays a vital role in the incorporation phase of technology-based green business ideas. It supports entrepreneurs from idea to market and plays a critical role in the incorporation phase of innovation-oriented business ideas. The programme combines acceleration, mentoring and pre-seed investment, making it one of the most important institutional entry points for young technology entrepreneurs. In the 2026-1 call, startups awarded the Seal of Excellence are also eligible for direct investment from the TÜBİTAK BİGG Fund.

3) Advanced Technopark Infrastructure: With over 100 Technology Development Zones, Türkiye provides a strong physical foundation for the “Incubation” needs mentioned in Pillar III of the report, offering significant tax exemptions for green ventures. These zones also offer important tax incentives, including exemptions on income and corporate taxes for eligible R&D, software and design activities, VAT exemptions for certain software outputs, and tax advantages for R&D personnel. This infrastructure is a major strength for green entrepreneurship because it helps reduce startup costs while improving access to technical ecosystems.

4) **Sectoral Diversity:** Young entrepreneurs' participation in Ag-Tech, renewable energy, and circular economy sectors is at a level that can compete with European averages. In addition, while the broader startup ecosystem is still led by digital verticals such as AI, SaaS, health-tech and fintech, the policy and support architecture for green entrepreneurship is expanding across multiple sectors, including energy efficiency, renewable energy, waste valorisation, water efficiency, green buildings, transportation, and advanced materials. A relevant example is GCIP - Global Cleantech Innovation Programme Türkiye, implemented by TÜBİTAK with broad public-sector stakeholder support. GCIP Türkiye demonstrates that the country already has a structured clean-tech pipeline rather than a narrow or single-sector approach. This is important because it creates multiple entry points for young entrepreneurs interested in sustainable business models.

Ecosystem Weaknesses and Challenges

1) **The Financial “Valley of Death”:** As highlighted in Pillar VI, young green entrepreneurs in Türkiye face a significant lack of capital when transitioning from the pre-seed stage to Series A scaling. Recent ecosystem evidence shows that Türkiye performs strongly at the pre-seed and seed stages, supported by public instruments and an expanding early-stage investment base. However, the same reports also state that the capital shortage becomes visible after Series A, with a clear post-Series A and late-stage financing gap. This is particularly problematic for green startups, because climate-tech and resource-efficiency ventures often require longer validation periods, pilot production, regulatory testing and industrial partnerships before they can scale commercially. In other words, Türkiye is increasingly capable of helping young founders start, but still less capable of helping them scale.

2) **Education and Skill Mismatch:** The integration of European competence frameworks like GreenComp and EntreComp into the national curriculum—especially at VET level—is still in its early stages. In addition, Türkiye has clearly moved green and digital transition into the policy agenda. The 2025 National Employment Strategy explicitly includes improving skill matching with green and digital transformation, and the Ministry of National Education's VET reform agenda states that curricula are being updated to incorporate climate change, sustainability and twin transition skills. At the same time, these reforms are still framed as ongoing updates, the World Bank-backed Education for Job Market Readiness Project is only now scaling teacher training in digital, green and job-relevant skills: implementation is still in progress. framework-based integration of green entrepreneurship competences into VET is still uneven and emerging.

3) **Regulatory Complexity:** Administrative processes specific to green technologies, such as carbon certification and waste management licensing, create high bureaucratic barriers for resource-constrained young entrepreneurs. In addition, with the adoption of the Climate Law in 2025, the country formally established the legal basis for the Emissions Trading System, carbon-market instruments, greenhouse gas permits and related monitoring responsibilities. This is an important strategic step for the country, but for young green entrepreneurs it also means entering a business environment where carbon accounting, emissions monitoring, verification, permits and compliance literacy are becoming more necessary. These are manageable requirements for large firms with dedicated compliance units, but they create a proportionally heavier burden for small startups.

policy and market demand are advancing faster than ecosystem readiness in some green sectors: Türkiye has strengthened its climate policy architecture through the Climate Law, the 2024–2030 mitigation strategy and the 2025 circular economy strategy, and it is also trying to protect competitiveness against the EU Carbon Border Adjustment Mechanism.

This faster policy movement creates pressure on SMEs, suppliers and startups to adapt quickly in areas such as emissions data, resource efficiency, recycled content, reporting and environmental verification. For young entrepreneurs, the problem is access to finance, to specialized mentors, legal guidance, testing infrastructure, accredited service providers and first customers that can absorb these compliance costs.

Turkey-Specific Policy Recommendations

Pillar I & V: Strategy and Market Creation

Green Public Procurement Quotas: A quota or point advantage (ranging from 5-10%) should be defined for products and services offered by young green entrepreneurs in public tenders, in line with Pillar V objectives.

Regulatory Sandboxes: To foster innovation, “Regulatory Sandboxes” should be established to allow the testing of innovative green solutions (e.g., waste-to-energy) without being hindered by rigid existing legislation.

Add an internationalisation track for climate-tech founders. Türkiye already has a current policy lever that can be used more strategically: the Türkiye Tech Visa, which offers privileges and ecosystem access for technology-based startups and talent. A climate-tech or green entrepreneurship soft-landing track could be added under this logic to attract foreign mentors, founders, and technical partners working in decarbonisation, circular economy, energy storage, or environmental monitoring. This would strengthen both local ecosystem quality and international visibility.

Pillar II: Education and Skills

National GreenComp Integration: In cooperation with the Ministry of National Education and the Council of Higher Education (YÖK), sustainability literacy and green entrepreneurship

competencies should be added as mandatory modules at all levels of the curriculum.

Build a national “Green Skills and Green Entrepreneurship” curriculum pathway instead of relying only on fragmented initiatives: Türkiye has already started moving in this direction.

The Ministry of National Education placed the 2025–2026 school year under the “Yeşil Vatan” theme, explicitly linking education to the twin transition, while the Council of Higher Education announced nine new green transformation programmes in 2025, including Carbon Management Technician, Renewable Energy Technician, Water and Waste Management Technician, and Green and Ecological Building Technician. These are strong starting points, but they should now be connected into a more coherent national skills pathway that includes sustainability literacy, resource efficiency, entrepreneurial problem-solving, carbon literacy, and circular business model design from school to VET to higher education.

Prioritise applied green skills, not only awareness: The World Bank’s 2025 Education for Job Market Readiness project documentation states clearly that Türkiye faces a growing skills mismatch linked to digital transformation, AI, and greener jobs, and that the country has a lower share of green jobs than peers in Europe and Central Asia. For that reason, curriculum reform should not stop at awareness modules. It should include micro-credentials, challenge-based learning, internships, SME placements, and lab-based training in areas such as carbon accounting, energy efficiency audits, recycling technologies, eco-design, environmental data systems, and green compliance. Link GreenComp-like competences with Türkiye’s new employment-oriented programmes: Instead of presenting GreenComp as an imported framework to be adopted abstractly, the report can recommend translating GreenComp and EntreComp into Türkiye’s own employment-sensitive education agenda. This is especially relevant because YÖK is already redesigning programmes around future-oriented labour market needs, including green transformation. A practical recommendation is to create a national competence matrix that maps sustainability

literacy, entrepreneurship, systems thinking, and applied technical skills onto new VET and higher education programmes.

Pillar III: Finance

Blended Finance Models: Public grants (TÜBİTAK/KOSGEB) should be merged with “Green Venture Capital Co-Investment Funds” to stimulate private sector investment appetite, as suggested in Pillar VI.

Use public money to de-risk private climate-tech investment: The most realistic Turkish model is not replacing the private sector, but crowding it in. This could be done through first-loss layers, matched investment mechanisms, guarantee support, or green fund-of-funds structures for climate-tech and circular startups. This recommendation is strongly supported by the World Bank’s Green Industry project logic, which explicitly aimed not only to support firms’ decarbonisation and green technology investment, but also to help develop the private equity industry through a demonstration green fund approach. **Introduce a dedicated “pilot-to-procurement” finance instrument:** Many young green ventures fail not at the idea stage, but between prototype validation and commercial adoption. Türkiye should therefore create a new financing window for TRL 6–8 ventures that need demonstration funding, certification support, pilot-site deployment, industrial testing, or municipal validation before attracting full Venture Capital interest. This would directly address the “valley of death” problem that remains visible in the Turkish startup ecosystem despite stronger seed infrastructure

Pillar IV: Infrastructure

Anatolian Green Incubation Network: Parallel to the vision in Pillar IV, incubators containing “Green FabLabs” and testing centers should be expanded to industrial hubs like Konya, Gaziantep, and İzmir, moving beyond just Istanbul and Ankara.

Embedded “Green FabLabs” and testing cent-

res into technoparks, model factories, and Green OIZ ecosystems: Türkiye already has more than 100 Technology Development Zones and a broad technopark ecosystem, which means the physical infrastructure base already exists: upgrading existing infrastructure with specialised climate-tech capabilities such as materials testing, prototype validation, life-cycle analysis, environmental data labs, circular design workshops, low-carbon process testing, and carbon measurement services.

Use model factories as green transition accelerators for youth-led ventures: Türkiye’s reform documents already position model factories as tools to increase SME productivity and support digital transformation. The next step should be to widen their mandate so that selected model factories also become green transition acceleration centres where startups and SMEs can jointly test resource efficiency, energy optimisation, low-carbon production methods, and circular manufacturing applications. This would be especially valuable in Anatolian production centres where industry access matters more than generic startup networking.

11.2 Iceland

Current Situation and Context

Iceland occupies a distinctive position in the European green entrepreneurship landscape. As a member of the European Economic Area (EEA), Iceland benefits from full access to the EU internal market and participates in many EU programmes including Erasmus+, Horizon Europe, and the LIFE programme, but does not receive cohesion policy funding. With a population of only 370,000, Iceland is one of the smallest economies in Europe, but it has one of the highest GDP per capita levels, an exceptionally skilled workforce, and world-leading expertise in renewable energy and sustainable resource management.

Iceland's natural advantages are extraordinary: approximately 99% of electricity generation and 90% of heating come from renewable sources (geothermal and hydropower), giving Icelandic green entrepreneurs a unique operational context and a globally recognised brand association with sustainability. This natural resource base has supported the development of internationally competitive industries in renewable energy consulting, geothermal technology, sustainable aquaculture, and carbon capture.

Despite these advantages, Iceland's small scale creates specific challenges. The domestic market is too small to sustain most green ventures at commercial scale, meaning that internationalisation must be built into business models from inception. Brain drain is a concern, particularly as talented young Icelanders have access to attractive opportunities across the EEA. And the island's geographic isolation imposes logistical costs and limits physical access to European incubation and investor networks.

Ecosystem Strengths

- 100% renewable electricity: Iceland's grid provides a unique competitive advantage for energy-intensive green industries and positions Icelandic entrepreneurs as globally credible sustainability practitioners.
- Rannís - The Icelandic Centre for Research: Provides grants for applied R&D and technology commercialisation, with a strong track record in renewable energy and sustainable resource management research.
- Technology Development Fund (Tækniþróunarsjóður): Provides co-financing for innovative SME R&D, with increasing emphasis on sustainability objectives.
- University of Iceland and Reykjavik University: Both institutions have strong engineering and natural science programmes with emerging

sustainability and entrepreneurship integration.

- Carbon capture leadership: CarbFix, the world's leading direct air capture and mineralisation project, and Carbfix's spinout ecosystem, position Iceland as a global hub for carbon removal entrepreneurship.

- Arctic advantage: Iceland's position as a gateway to the Arctic creates opportunities in sustainable tourism, Arctic research services, and cold-climate green technology testing.

- High level of education: around 17% of 25–34 year-olds in Iceland hold a master's degree or equivalent (in line with the OECD average of 16%), and this share has grown since 2019. Higher education is clearly tied to labour market outcomes: unemployment stands at 6.2% for those without upper secondary education, falling to just 2.5% for those with tertiary qualifications.

- Near-Universal Internet Access: Iceland has near-ubiquitous connectivity with virtually no meaningful digital divide across geography, gender, or education level. As of January 2024, the internet penetration rate stands at 99%, with over 530,000 mobile connections — equivalent to a mobile penetration rate of 140.8%: A key driver of Iceland's digital success is its national eID system, held by more than 90% of adults, which gives citizens seamless access to public services. Iceland is recognized by the European Commission as Europe's eID front-runner.

- Close cooperation between key stakeholders is a fundamental strategy in Iceland. For instance public-Private Platforms such as Green by Iceland platform. A dedicated platform for cooperation between the private and public sectors on climate issues and green solutions, working to strengthen collaboration on climate action across different stakeholders and support Iceland's reputation as a sustainability leader.

Ecosystem Weaknesses and Challenges

- **Small domestic market:** The Icelandic domestic market cannot sustain most green ventures at commercial scale. This is structural and requires systematic policy support for internationalisation. It makes it difficult for startups—especially green ventures requiring scale—to grow sustainably within national borders. Green solutions (e.g. energy, circular economy) often need large customer bases to become viable so startups must internationalize very early, often before reaching full maturity. This creates higher risk for young entrepreneurs with limited experience: early-stage ventures face pressure to scale globally too quickly, increasing failure risk.
- **Limited domestic venture capital:** Iceland's VC market is nascent, with few domestic funds able to provide meaningful scale-up capital. Dependency on foreign investment creates vulnerability to global VC cycle fluctuations. Iceland's venture capital ecosystem is still relatively underdeveloped compared to larger European markets. Few domestic funds can support Series A/B scale-up phases, startups rely heavily on foreign investors
Exposure to global VC trends creates instability (e.g. downturns funding dries up quickly)
For green startups that often require capital-intensive development
Funding gaps are especially critical in hardware, energy, and climate tech
- **Geographic isolation from European networks:** Physical distance from European innovation hubs limits the informal networking, investor exposure, peer learning that is critical for entrepreneurial development. Higher cost and effort to participate in European startup ecosystems, so for young entrepreneurs it is harder to build international networks early and there is less access to mentors and role models
-

Skilled workforce constraint: With a total population of 370,000, the absolute pool of green entrepreneurship talent is small, and competition for skilled people is intense. With a very small population, Iceland faces a limited talent pool. High competition for: engineers, sustainability experts, Green sectors (e.g. renewable energy, biotech) require specialized skills

Iceland-Specific Policy Recommendations

Pillar I: Strategy and Governance

The development of a National Green and Blue Economy Innovation Strategy would provide national vision, prioritising youth entrepreneurship and internationalisation, including dedicated resources for market development in EEA and Nordic countries, ensuring that Icelandic startups can scale beyond the domestic market from an early stage.

Also reducing fragmentation across the support landscape creating a central access point for support services would significantly improve accessibility, coordination, and efficiency. This program should integrate funding, advisory services, and internationalisation support.

Pillar II: Education and Skills

To sustain long-term growth in green entrepreneurship, Iceland must strengthen its talent pipeline. This requires embedding green entrepreneurship competencies across higher education institutions, particularly at the University of Iceland and Reykjavik University. Curricula in engineering, business, and natural sciences should incorporate practical training in sustainable innovation, venture creation, and international market development. Interdisciplinary approaches will be critical, enabling students to combine technical expertise with entrepreneurial and commercial skills. In addition, stronger links between universities and industry can help ensure that graduates are equipped to address real-world challenges in the green economy.

Pillar III: Financing

Limited access to early-stage finance remains one of the most significant barriers for green startups. Addressing this gap requires both national and international solutions.

Domestically, efforts should focus on early-stage funding instruments tailored to green and young entrepreneurs. At international level, Iceland should take a proactive role in establishing a Nordic-Arctic Green Entrepreneurship Fund, in partnership with Nordic countries and EEA/EFTA institutions, providing investments targeting ventures with strong international growth potential.

Such a mechanism would attract co-investment, reduce risk for private investors, and strengthen regional collaboration in green innovation.

Pillar IV: Infrastructure and Incubation

While Iceland has a solid foundation of innovation infrastructure, there is a need to expand and specialise support systems for green entrepreneurship.

Strengthening incubators and accelerators with a sector-specific focus on green technologies will provide startups with tailored mentoring, technical expertise, and scaling support. At the same time, physical infrastructure should be complemented by a virtual incubation programme that connects Icelandic entrepreneurs to European innovation ecosystems.

A flagship initiative in this area would be the creation of a “Green Iceland Lab” programme. By utilising Iceland’s unique renewable energy systems as testbeds, the country can position itself as a living laboratory for early-stage green

technologies. This programme would attract international entrepreneurs to develop and pilot solutions in Iceland, generating foreign direct investment, fostering knowledge exchange, and reinforcing Iceland’s role as a global innovation hub.

Pillar V: Market Creation and Regulation

Given the small size of the domestic market, internationalisation must be a central component of Iceland’s green entrepreneurship strategy. Supporting startups in accessing EEA and Nordic markets will be critical for their growth and long-term viability.

An Icelandic Green Brand Programme can play a key role in this effort. By leveraging Iceland’s strong global reputation for sustainability, this initiative would help position Icelandic green ventures in international markets, it should provide branding support and export facilitation.

Regulatory frameworks and public procurement policies can be used to stimulate demand for green solutions, creating domestic market opportunities that enable startups to test and validate their innovations before scaling internationally.

Pillar VI: Inclusiveness and Equity

Ensuring that the benefits of green entrepreneurship are widely shared is essential for both social and economic sustainability. Policies should promote the participation of young people and underrepresented groups, including women and individuals in rural areas.

This requires targeted measures to ensure equitable access to finance, education, mentorship, and incubation services.

11.3 Romania

Current Situation and Context

Romania's green entrepreneurship ecosystem is still in an emerging phase, characterized by gradual development but limited scale and coherence. While the broader startup ecosystem has grown significantly in recent years, reaching over 2,000 startups and gaining increasing regional visibility, green startups represent only a small niche segment, estimated at around 100–150 ventures. This indicates that, although sustainability is gaining traction, it has not yet become a central pillar of entrepreneurial activity in the country.

Geographically, the ecosystem is highly concentrated in major urban centers. Bucharest serves as the primary hub, hosting the majority of startups, investors, and support organizations. Secondary centers such as Cluj-Napoca, Timișoara, and Iași are also developing dynamic entrepreneurial communities, though they remain less influential at the national level. This spatial concentration creates disparities in access to resources, funding, and opportunities across regions.

From a sectoral perspective, green entrepreneurship in Romania is primarily oriented toward areas with strong local relevance and unmet needs. These include agri-food and agri-tech, reflecting the country's large agricultural base, as well as circular economy initiatives focused on waste management and recycling.

Clean energy, mobility, and smart city solutions are also emerging fields, driven in part by European climate targets and the need for infrastructure modernization. Despite this diversity, most startups operate at an early stage and are typically structured as micro-enterprises, with limited turnover and modest growth rates.

Romania's integration within the European Union provides an important contextual advantage. Access to major funding frameworks, such as the European Green Deal and the Re-

covery and Resilience Plan (PNRR), creates significant opportunities for financing green innovation and supporting sustainable business models. However, the absorption and effective use of these funds are often hindered by administrative complexity and limited institutional capacity.

Overall, the ecosystem remains fragmented and underdeveloped, with weak coordination between key actors, including government institutions, academia, investors, and entrepreneurs. While there is clear potential for growth—supported by talent, market needs, and European funding—the current context reflects a system that is still in transition, moving from isolated initiatives toward a more structured and mature green entrepreneurship landscape.

Ecosystem Strengths

Strong technical talent pool Romania has consistently produced a highly skilled workforce in IT, engineering, and the natural sciences — a foundation that directly enables the development of green-tech solutions. Romania has a growing tech sector, a skilled workforce, and a vibrant startup scene, particularly in cities like Bucharest, Cluj-Napoca, and Timișoara. This talent base is increasingly being applied to sustainability challenges: green startups are leveraging AI, IoT, and digital platforms to build proprietary products, often at internationally competitive quality levels.

High innovation orientation A defining feature of Romanian green startups is their product-led approach. 83% of startups develop their own products or technologies, of which 55% already have the product on the market. This is a meaningful indicator of market readiness and genuine innovation rather than service replication. As one industry assessment noted, green startups in Romania are no longer just stories of sustainable idealism — they are becoming relevant players, with scalable technologies, validated markets, and measurable impact.

- EU funding access: Romania's EU membership creates a structurally significant advantage in terms of financing. Access to Horizon Europe, structural funds, and the PNRR provides a broad set of instruments for green innovation. Key opportunities identified for Romanian green startups include the expansion of the digital market and the adoption of technologies like AI and blockchain, as well as increased access to European funds.

- Growing startup ecosystem and support infrastructure The broader entrepreneurial ecosystem is expanding rapidly in scale and ambition. In 2024 there were over 2,300 startups in Romania, with a total estimated value of approximately EUR 19 billion. This growth is matched by increasing institutional support: programs exist that provide young founders with grants of up to €50,000, exposure to various industries, and personalized mentoring, with a stated objective of helping them develop green technology, digital innovation, and resilience-focused businesses. Organizations such as Impact Hub Bucharest and Startarium are playing an anchoring role in building community, publishing annual green startup reports, and running dedicated acceleration programs like the Romania ClimAccelerator

- High potential sectors: The sectoral composition of Romania's green startups reflects genuine structural opportunities. AgriFood tech accounts for 34% of analyzed green startups, followed by circular solutions and waste management (17%), clean energy and energy efficiency (12%), sustainable mobility (10%), green construction and smart cities (9%), and water and biodiversity (6%) This distribution is not arbitrary — it maps directly onto Romania's large agricultural base, its coal phase-out commitments, its very low circular material use rate (1.4% versus an EU average of 11.5%), and growing urbanization pressures. These gaps represent not just problems but innovation markets.

Ecosystem Weaknesses and Challenges

- Limited access to finance: The financing gap is arguably the most acute structural barrier. Romania has a strong tradition of bootstrapping, and compared to Western Europe, Romanian startups are less likely to receive venture capital backing; the number of VC-backed startups lags behind the European average. This is particularly damaging for green and climate tech, which tends to be capital-intensive and to require longer development cycles before generating returns. Challenges related to insufficient financing and the lack of venture capital funds persist, with a high failure rate (20% of startups close within the first two years and 45% within five years).

- Fragmentation of the ecosystem: Coordination between the key actors (government, academia, private sector, and NGOs) remains weak. While Romania's ministries are working toward common innovation objectives, they tend to develop their plans in parallel rather than collaboratively; in a 2024 World Bank report, no formal consultation had occurred between the two main ministries involved in innovation agency design. This institutional fragmentation means that policies, funding instruments, and support programs often work at cross-purposes or fail to reach entrepreneurs in a coherent way.

- Low scaling capacity: Most green startups remain micro-enterprises with limited international reach. The vast majority of companies — 90 out of 104 analyzed — are micro-enterprises. Despite a 10% growth in entrepreneurship between 2014 and 2018, the share of high-growth firms remains very low at around 3%, significantly below the European average of 11.4%. For green startups specifically, the challenge of scaling is compounded by the need to navigate complex regulatory environments and establish supply chains for sustainable products.

- **Weak national innovation performance:** Romania's systemic underinvestment in R&D creates a structural handicap. Firm investments declined, with Romania performing at only 14.1% of the 2024 EU average on this dimension, with a 33.5 percentage point drop in non-R&D innovation expenditures compared to 2017. University-industry collaboration, which in more mature ecosystems acts as a pipeline for green innovation, remains limited. To fully unlock Romania's potential, stronger collaboration between the private sector, government, and academia is needed.

- **Regulatory and bureaucratic barriers** The administrative environment creates real friction for green entrepreneurs. Accessing EU funds, theoretically a major asset, is in practice often difficult due to procedural complexity and limited institutional capacity. Romania's circular material use rate stands at just 1.4%, far below the EU average of 11.5%, underscoring not only an environmental gap but also the absence of regulatory incentives and market mechanisms that would encourage circular business models. The lack of stable and predictable regulatory frameworks makes long-term investment planning risky, particularly in capital-intensive green sectors like energy and mobility.

- **Low market demand for green solutions:** Domestic demand for green products and services remains underdeveloped. Public institutions have been slow to use procurement as a lever for green innovation, and private sector adoption is limited by cost sensitivity and low environmental awareness among consumers. Romania has a higher percentage of non-innovators without any disposition to innovate (62.4% versus a 30.6% EU average) indicating a significant portion of the business community that is not inclined to engage with innovation at all, let alone green innovation. This structural inertia dampens the demand signal that would otherwise pull green startups toward scale.

Small share of green startups within the broader ecosystem

Despite positive momentum, sustainability has yet to become a core entrepreneurial priority. Romania ranks 25th in Europe among the most popular countries for starting a startup, but the green ecosystem is still emerging and data on it remains scarce. With roughly 100–150 green startups out of over 2,300 total, green entrepreneurship represents a small fraction of overall startup activity — reflecting both limited awareness and the absence of systemic incentives to orient new ventures toward sustainability from the outset.

Romania-Specific Policy Recommendations

Pillar I: Strategy and Governance

Romania's green entrepreneurship ecosystem is emerging but fragmented and lacks policy coherence through a unified national vision.

A National Green Entrepreneurship Strategy that explicitly positions sustainability as a core pillar of Romania's startup ecosystem, rather than a niche segment should be the objective of a team to strengthen coordination mechanisms between government, academia, private sector, and NGOs to overcome current fragmentation. This could include formal innovation councils or cross-sector task forces.

National policies should be aligned with EU frameworks (e.g., Green Deal, PNRR) while improving institutional capacity to absorb and manage funds effectively.

Stable and predictable regulatory frameworks, particularly in sectors like clean energy, where policy inconsistency currently discourages investment, should be established.

Prioritizing high-potential sectors such as agri-tech, circular economy, and energy transition, building on Romania's existing economic structure and needs can be a long term policy to maximize the technical potential of Romania.

Pillar II: Education and Skills

Romania's strong technical talent should be leveraged, while addressing gaps in entrepreneurial and green-specific skills: the country's strong IT and engineering talent base could be enhanced by integrating sustainability into technical education (e.g., AI for climate, IoT for energy efficiency).

There is the need to expand green entrepreneurship education, combining innovation, business development and environmental sustainability strengthening university–industry collaboration, which is currently weak, through joint research programs, internships, and co-developed curricula.

To prepare the workforce for the green transition, especially in regions affected by industrial change, there should be a strong support to applied, practice-oriented learning, to enable students to develop real green business solutions, particularly in key sectors like agriculture and energy as well as the promotion of reskilling and upskilling programs.

Pillar III: Financing

Romania is suffering from the limited presence of green venture capital that can be helped by establishing targeted public-private funds focused on climate-tech and sustainable innovation: increase availability of early-stage financing, particularly for startups developing innovative but high-risk technologies to sustain a capital-intensive green innovation.

State-backed guarantees and blended finance instruments to crowd in private investment and reduce perceived risks may be used. In addition EU funding (Horizon Europe, PNRR, structural funds) should be more accessed, by simplifying procedures and supporting applicants.

Encouraging the development of impact investing and alternative financing mechanisms, including green bonds and crowdfunding can provide investment readiness support to startups,

helping them scale beyond the local market and attract international capital.

Pillar IV: Infrastructure and Incubation

Strengthen ecosystem capacity to support innovation, scaling, and commercialization.

Build on the growing network of accelerators and hubs (e.g., Impact Hub, Startarium) by expanding their focus on green and climate-tech startups.

Develop specialized climate-tech incubators and testing facilities, particularly in sectors like renewable energy, agri-tech, and circular economy.

Increase public R&D investment, addressing Romania's currently low innovation performance and supporting the development of proprietary technologies.

Foster university spin-offs and technology transfer, bridging the gap between research and market applications.

Encourage collaboration between startups, corporates, and research institutions to strengthen innovation pipelines.

Support infrastructure development in secondary cities (Cluj-Napoca, Timișoara, Iași) to reduce over concentration in Bucharest.

Pillar V: Market Creation and Regulation

To stimulate demand and remove regulatory barriers that limit the growth of green businesses the priorities should be to address low market demand for green solutions by scaling up green public procurement, making the public sector a lead customer for innovation while introducing targeted subsidies and incentives to encourage adoption of sustainable products and services by businesses and consumers.

Also, the simplification of bureaucratic procedures for funding access, which are currently complex and biased toward specific sectors (e.g., energy) may implement fast-track approval processes for green projects, especially in infrastructure and clean energy.

Regulatory stability and clarity should be introduced, reducing uncertainty for investors and entrepreneurs: the promotion of standards and certification systems that validate green products may increase market trust.

Pillar VI: Inclusiveness and Equity

Reduce regional disparities and ensure broad participation in the green transition.

Address the strong geographic concentration in Bucharest by investing in regional ecosystems and improving access to funding and support services in smaller cities and rural areas.

Develop regional green innovation clusters, particularly in areas aligned with local strengths (e.g., agri-tech in rural regions, circular economy in industrial areas).

Support rural and agricultural entrepreneurship, leveraging Romania's large agricultural base to drive sustainable innovation.

Promote inclusion of underrepresented groups, including youth, women, and entrepreneurs from less-developed regions.

Encourage scaling and internationalization, helping startups move beyond local markets and integrate into European and global value chains.

Ensure alignment with just transition principles, supporting communities affected by structural economic shifts (e.g., coal-dependent regions).

11.4 Italy

Current Situation and Context

Italy is the third largest economy in the Eurozone and one of the most complex national contexts for green entrepreneurship in Europe. The country combines world-class strengths in design, manufacturing, food, fashion, and tourism with structural weaknesses in the startup ecosystem: heavy administrative burden, limited venture capital, fragmented public support instruments, and significant North-South economic disparities. Italy is also the EU country

with the highest number of family-owned SMEs, creating both a distinctive asset (craftsmanship, long-term orientation, sectoral depth) and a distinctive challenge (succession barriers, risk aversion, limited exposure to open innovation).

The Italian government has made significant commitments to the green transition through its National Energy and Climate Plan (NECP) and its PNRR allocation, the largest in the EU at €191.5 billion. The PNRR's 'Revolution Green' mission allocates €59.4 billion to renewable energy, hydrogen, sustainable mobility, and energy efficiency investments. These commitments, if effectively implemented, will create major market opportunities for green entrepreneurs.

Italy has one of the strongest circular economy records in the EU, driven by both regulatory leadership (Italy implemented the EU Circular Economy Package early) and industrial tradition in sectors such as chemical recycling, leather goods and furniture. The circular economy represents a particular comparative advantage for Italian green entrepreneurship, building on existing industrial competencies and supply chain relationships.

The Italian startup ecosystem, while growing, remains relatively small compared to the economic size of the country. Italy had approximately 14,000 registered innovative startups as of early 2024, a significant increase from 2000 in 2013 when the Startup Act was introduced. However, the survival rate, scale, and internationalisation of Italian startups lag behind comparable European economies. Green startups represent an estimated 15-18% of total innovative startups, with particular concentrations in agrifood, clean energy, and sustainable fashion.

Ecosystem Strengths

Startup Act and legislative foundation: Italy's pioneering Startup Act (D.L. 179/2012) created a comprehensive framework of fiscal incentives, administrative simplifications, and financing facilitation measures that has demonstrably grown the ecosystem. The number of registered innovative startups rose from around 2,000 in 2013 to over 14,000 by early 2024, a seven-fold increase in just over a decade. The Act's recent extension and updating reinforces this legislative foundation. Importantly, this policy architecture benefits green entrepreneurs specifically, given that a significant share of Italy's innovative startups (estimated at 15–18%) are now oriented toward sustainability.

Cassa Depositi e Prestiti (CDP) and institutional finance: CDP's role as Italy's national development bank gives the ecosystem a powerful institutional anchor. In 2024, the EIB signed a major agreement with LIFTT to create a €100 million platform for equity investments in high-impact sectors, including cleantech, and CDP Venture Capital has been identified as a co-investor in several climate tech ventures.

Circular economy excellence, an internationally recognized competitive advantage

Italy's leadership in the circular economy is perhaps its most distinctive green entrepreneurship asset. In 2023, Italy recycled 92.6% of total waste, far surpassing France, Germany, Spain, and the European average, a capability that in a global context marked by raw-material scarcity represents a decisive competitive advantage. For young green entrepreneurs, this creates a mature industrial environment in which to embed new ventures: Italy now counts over 800 startups and SMEs born with circular-by-design models, with Italian circular economy startups raising over €800 million between 2022 and 2024.

Agrifood heritage

Italy's agrifood sector provides one of the wor-

ld's most distinctive platforms for sustainable entrepreneurship, combining millennia of agricultural biodiversity with a globally recognized premium brand. The combination of geographical indications, organic production tradition, and a world-class food culture creates natural market positioning for green agrifood ventures, particularly in export markets where "Made in Italy" sustainability credentials command significant price premiums.

Strong research universities: Italy's leading technical universities (Politecnico di Milano, Politecnico di Torino, Università di Bologna, and Federico II in Naples) are world-class institutions with growing sustainability and entrepreneurship programmes. Politecnico di Torino is recognized among Europe's top engineering institutions, producing approximately 1,000 graduates annually, while strategic partnerships between universities and innovation centers are deepening. These institutions generate a significant pipeline of technically skilled founders, and their growing integration with incubation facilities means that more research is being translated into green ventures.

Mediterranean sustainability leadership: Italy's geographic position, at the center of one of the world's most climate-sensitive regions, gives Italian green entrepreneurs structural first-mover advantages. Sectors such as water management, sustainable coastal tourism, Mediterranean-adapted agriculture, and marine environmental monitoring are areas where the Italian context gives entrepreneurs unique insight and market access. The growing focus on environmental and social issues has opened up new prospects in renewable energy, circular economy, and sustainable tourism sectors, with these opportunities particularly significant in southern regions that face disproportionate climate exposure.

A measurably greening economy

The macro-level green transition is creating genuine market pull for entrepreneurs. Over the past six years, more than 578.000 businesses have invested in the green economy, and in 2024, 13.8% of employment contracts were linked to sustainability roles, involving 3.3 million workers. This broad-based corporate greening creates a growing B2B customer base for green startups selling sustainability solutions to established firms. Italy has already met ten years ahead of schedule the EU recycling targets set for 2030, signaling that the regulatory and market environment is genuinely supportive of circular innovation.

Ecosystem Weaknesses and Challenges*Administrative complexity*

The Italian public administration is one of the most challenging regulatory environments in EU for entrepreneurs. Italian SMEs acknowledge that the challenges they face stem not so much from a lack of awareness of green practices but from the absence of suitable tools, business skills, and a supportive regulatory framework. For green startups specifically, the permitting burden is compounded by overlapping environmental, energy, and urban planning regulations, creating friction that delays time-to-market and raises costs.

North-South divide

The territorial disparity between Northern and Southern Italy represents one of the deepest structural weaknesses of the national ecosystem. Geographically, the North remains the focal point for circular economy initiatives and investments. Milan is the only Italian city in the global top 100 startup ecosystems, and its score is roughly three times that of Rome, with secondary cities far further behind. For green

entrepreneurs in the south, the combination of limited venture capital presence, weaker university-industry links, and lower institutional capacity makes the ecosystem fundamentally different and harder to navigate.

Limited scale-up capital

While early-stage funding has improved, late-stage capital remains critical. The biggest hurdle for Italian climate tech startups is scale: while this is a challenge shared globally, it is particularly acute in Italy, where late-stage capital remains scarce. For deep-tech green ventures with long development timelines (such as carbon capture, advanced materials, or novel energy storage) the absence of patient growth capital represents an existential constraint on ambition. Companies moving from Series A to Series B need investors willing to bear higher risks and dilutions, making it essential to attract international funds and facilitate institutional investors to participate in venture growth.

Youth unemployment and precarious labor

The Italian youth labor market creates a paradoxical environment for green entrepreneurship: urgent need alongside structural barriers to entry. In 2025 the youth unemployment rate in Italy was around 20%, and 23.9% of 25-34 year-olds were employed on temporary contracts, well above the EU average. The share of young people who were NEET (Not in Education, Employment, or Training) in Italy in 2025 was around 15%, a cohort largely disconnected from the pathways that lead to entrepreneurship. High youth unemployment reflects structural labor market rigidities that also discourage risk-taking: when stable employment is already scarce, the prospect of founding a startup with uncertain income becomes even less attractive relative to peer countries.

Brain drain

Italy's talent outmigration is an accelerating structural problem with direct consequences for green entrepreneurship. Italy's youth unemployment rate remains higher than the European average, and workplaces are widely seen as unmeritocratic, with salaries not rising in line with years spent in higher education. Young graduates routinely find that their profiles are more valued and better compensated abroad. The average starting salary for a university graduate in Italy is significantly lower than in countries like Germany or the UK, and combined with the rising cost of living, this drives the decision to leave. For the green startup ecosystem, this means that Italy's world-class universities are partly serving as talent pipelines for other countries' ecosystems rather than its own.

Ecosystem concentration and fragmentation

The centralization of the startup ecosystem around Milan highlights both a local competitive advantage and a systemic risk: if talent and capital remain concentrated, the rest of the country struggles to emerge. Outside the Milan-Turin-Bologna corridor, the ecosystem is thinly spread and poorly coordinated, with weak linkages between regional innovation actors, universities, and investors. This fragmentation means that Italy's genuine sectoral strengths, in agrifood, sustainable fashion, marine technology, and circular manufacturing, are not being systematically leveraged into coherent green entrepreneurship clusters with national and international reach.

Italy-Specific Policy Recommendations

Pillar I: Strategy and Governance

A National Green Startup Strategy as an integrated component of both PNIEC (National Plan for Energy and Climate) and PNRR implementation. Including quantified targets, a coordination mechanism with a dedicated inter-ministerial working group on green entrepreneurship. Increased coordination is necessary to effectively manage the complex policy environment

that results from policies relying on numerous public and private actors across various levels of government. The National Green Startup Strategy must ensure that momentum built through PNRR-funded initiatives is institutionalized in permanent policy instruments rather than lost when the funding cycle concludes.

Pillar II — Education and Skills

Green Competencies in Universities and ITS. Develop a national curriculum framework embedding sustainability and entrepreneurship competencies across all major degree programmes. Create a dedicated green track within the ITS system for technical green professions. Fund university-linked green incubation facilities, support faculty international exchange, and introduce a "Green Brain Return" scheme to recover diaspora talent.

Pillar III — Financing

Green Startup Track in the Startup Act. Within the existing legislative framework, create a certified green startup category with enhanced fiscal incentives and capital gains exemptions extended to institutional investors in green VC funds.

Scale up CDP Venture Capital's Green Mandate. Allocate a part of new CDP fund-of-fund commitments to climate-focused VC. Establish a dedicated Climate Tech Seed Fund for early-stage green ventures, with at least half of investments targeting founders under 35. Develop blended finance instruments for deep-tech green ventures with long development timelines.

Pillar IV — Infrastructure and Incubation

Green Startup Window at Chambers of Commerce. Create a one-stop service at Italy's Chamber of Commerce network integrating business registration, environmental permit pre-assessment, and grant application assistance. Back this with trained green startup advisors, a parallel digital portal, and links to established regional industrial clusters offering mentorship and supply chain integration.

Pillar V — Market Creation and Regulation

Fast-Track Public Procurement and Regulatory Reform. Reserve a procurement lane for certified green startups with simplified qualification criteria. Set binding Green Public Procurement targets covering at least 50% of procurement by value in key sectors. Introduce pre-commercial procurement mechanisms, green regulatory sandboxes in energy and mobility, and accelerate CSRD (Corporate Sustainability Reporting Directive) implementation to expand the domestic market for green solutions.

Pillar VI — Inclusiveness and Equity

Mezzogiorno Green Entrepreneurship Programme. Provide dedicated youth grants for green founders under 35 in Southern Italy, Sardinia, and Sicily. Deploy mobile incubation

networks to reach founders outside major urban centers. Launch a transnational Mediterranean Green Innovation Network and introduce tax relief for green companies hiring locally in the South.

Made in Italy Sustainability Programme. Co-fund access to international sustainability certifications (EU Ecolabel, Cradle to Cradle) for young entrepreneurs in fashion, design, and craftsmanship. Build mentorship links to established artisan districts, provide export promotion support through the system of the Italian Chambers of commerce in Italy and abroad, facilitate the transition to circular business models, and set explicit inclusion targets for female-founded and minority-led green ventures.



12. Conclusion

Europe's green transition is not simply a regulatory and technological challenge. It is fundamentally a question of human action. The transition to a climate-neutral, circular, and nature-positive economy will require millions of individuals to identify opportunities, develop solutions, build organisations, and create markets in sectors that are simultaneously technically complex, politically contested, and socially vital. Young people, who will inherit the consequences of today's decisions and who already demonstrate the values, digital fluency, and systems-level thinking required for green entrepreneurship, are not merely beneficiaries of this transition. They are essential agents of its delivery.

This report has documented both the extraordinary potential of youth-led green entrepreneurship and the significant structural barriers that currently prevent this potential from being realised at the necessary scale. The barriers are real, but they are not intractable. The good practices reviewed in Section 9 demonstrate that well-designed policy interventions can make a measurable difference and that the countries and institutions that invest systematically in their green entrepreneurship ecosystems reap significant competitive, economic, and environmental dividends.

The country-specific analyses of Turkey, Iceland, Romania and Italy illustrate the diversity of national contexts within the European green entrepreneurship landscape. Each country has distinctive strengths and challenges: Iceland's

renewable energy infrastructure and global sustainability brand; Romania's agricultural land resources and just transition imperative; Italy's circular economy tradition and PNR-R-driven market opportunities; and Turkey's youthful population, agricultural scale, and EU alignment momentum. The common thread across all four countries is the need for more coherent, better-resourced, and more youth-centred policy ecosystems.

The fourteen strategic recommendations set out in Section 10 addressing strategy and governance, education and skills, financing, infrastructure and incubation, market creation, and inclusiveness provide a comprehensive action agenda. Their implementation will require commitment, coordination, and sustained investment from policymakers at European, national, and regional levels. But the urgency of the climate challenge, the scale of the economic opportunity, and the readiness of Europe's young green entrepreneurs to lead make that investment not merely worthwhile but essential.

The vision underlying this report is of a Europe in which every young person regardless of gender, geography, background, or nationality who has a compelling idea for a green venture can access the skills, finance, infrastructure, and markets needed to bring that idea to life. That is the Europe that the green transition demands. Building it is both the challenge and the opportunity of our generation.

References

- Audretsch, D. B., Bönte, W., & Tamvada, J. P. (2013). Religion, social class, and entrepreneurial choice. *Journal of Business Venturing*, 28(6), 774–789.
- Belz, F. M., & Binder, J. K. (2017). Sustainable entrepreneurship: A convergent process model. *Business Strategy and the Environment*, 26(1), 1–17.
- Bocken, N. M. P., Short, S. W., Rana, P., & Evans, S. (2014). A literature and practice review to develop sustainable business model archetypes. *Journal of Cleaner Production*, 65, 42–56.
- Cohen, B., & Winn, M. I. (2007). Market imperfections, opportunity and sustainable entrepreneurship. *Journal of Business Venturing*, 22(1), 29–49.
- Davidsson, P. (2015). Entrepreneurial opportunities and the entrepreneurship nexus: A reconceptualization. *Journal of Business Venturing*, 30(5), 674–695.
- Dean, T. J., & McMullen, J. S. (2007). Toward a theory of sustainable entrepreneurship: Reducing environmental degradation through entrepreneurial action. *Journal of Business Venturing*, 22(1), 50–76.
- European Commission. (2019). The European Green Deal. COM(2019) 640 final. Publications Office of the European Union.
- European Commission. (2020). An SME Strategy for a Sustainable and Digital Europe. COM(2020) 103 final. Publications Office of the European Union.
- European Commission. (2021). Fit for 55: Delivering the EU's 2030 Climate Target on the Way to Climate Neutrality. COM(2021) 550 final. Publications Office of the European Union.
- European Commission. (2022). GreenComp: The European Sustainability Competence Framework. Publications Office of the European Union.
- European Commission. (2023). EU Youth Strategy Progress Report 2019–2023. Publications Office of the European Union.
- European Commission (2023–2025) – Green Deal & Romania Country Reports
- Romania Insider (2022, 2025) – Green startup ecosystem reports
- The Romania Journal (2023–2024) – Startup ecosystem data
- Reuters (2024) – Energy transition and renewable investments in Romania
- OECD (2022–2024) – SME and entrepreneurship policy reviews
- World Bank (2023) – Romania innovation and competitiveness reports
- European Environment Agency. (2022). Nature-based Solutions in Europe: Policy, Knowledge and Practice for Climate Change Adaptation and Disaster Risk Reduction. EEA Report No 01/2021. EEA.
- European Investment Fund. (2023). EIF Research and Market Analysis — European Startup Monitor. EIF.
- Fayolle, A., & Liñán, F. (2014). The future of research on entrepreneurial intentions. *Journal of Business Research*, 67(5), 663–666.
- Global Entrepreneurship Monitor. (2023). GEM 2022/23 Global Report: Adapting to a 'New Normal'. GEM Consortium.
- Isenberg, D. J. (2010). How to start an entrepreneurial revolution. *Harvard Business Review*, 88(6), 40–50.
- Kuckertz, A., & Wagner, M. (2010). The influ-

- ence of sustainability orientation on entrepreneurial intentions — investigating the role of business experience. *Journal of Business Venturing*, 25(5), 524–539.
- Lüdeke-Freund, F. (2020). Sustainable entrepreneurship, innovation, and business models: Integrative framework and propositions for future research. *Business Strategy and the Environment*, 29(2), 665–681.
- Moore, J. F. (1993). Predators and prey: A new ecology of competition. *Harvard Business Review*, 71(3), 75–86.
- Muñoz, P., & Cohen, B. (2018). Sustainable entrepreneurship research: Taking stock of the field and tackling new challenges. *Journal of Business Venturing Insights*, 9, 21–31.
- OECD. (2021). *Financing Green Entrepreneurship in the Post-COVID-19 Recovery*. OECD Publishing.
- OECD. (2022). *Policy Framework for Investment: Green Investment*. OECD Publishing.
- OECD/EU. (2023). *Supporting Youth Entrepreneurship: Key Findings from OECD/EU Scoreboard*. OECD Publishing.
- Parrish, B. D. (2010). Sustainability-driven entrepreneurship: Principles of organisation design. *Journal of Business Venturing*, 25(5), 510–523.
- Schumpeter, J. A. (1942). *Capitalism, Socialism and Democracy*. Harper & Brothers.
- Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25(1), 217–226.
- Shepherd, D. A., & Patzelt, H. (2011). The new field of sustainable entrepreneurship: Studying entrepreneurial action linking ‘what is to be sustained’ with ‘what is to be developed’. *Entrepreneurship Theory and Practice*, 35(1), 137–163.
- Stam, E. (2015). Entrepreneurial ecosystems and regional policy: A sympathetic critique. *European Planning Studies*, 23(9), 1759–1769.
- Stam, E., & Spigel, B. (2016). Entrepreneurial ecosystems. In R. Blackburn, D. De Clercq, & J. Heinonen (Eds.), *Handbook for Entrepreneurship Research*. SAGE.
- Terjesen, S., Bosma, N., & Stam, E. (2016). Advancing public policy for high-growth, female, and social entrepreneurs. *Public Administration Review*, 76(2), 230–239.
- United Nations Environment Programme. (2022). *Green Economy and Trade: Trends, Challenges and Opportunities*. UNEP.
- Waddock, S., & Steckler, E. (2016). Visionaries and wayfinders: Deliberate and emergent pathways to vision in social entrepreneurship. *Journal of Business Ethics*, 133(4), 719–734.
- World Economic Forum. (2023). *Green Jobs Barometer: Signals for Future Employment*. WEF.
- Zahra, S. A., Gedajlovic, E., Neubaum, D. O., & Shulman, J. M. (2009). A typology of social entrepreneurs: Motives, search processes and ethical challenges. *Journal of Business Venturing*, 24(5), 519–532.