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NEXT Black Sea Basin

## Recommendations for Effective and Sustainable International Cooperation

**Project:** DIALOGUE (BSB01104) – Interreg NEXT Black Sea Basin  
Programme



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## Executive Summary

This report outlines a strategic framework for enhancing international cooperation and innovation capacity across the target regions of Türkiye, Bulgaria, and Romania. The analysis, conducted under the DIALOGUE project, identifies structural fragmentation, human capital shortages, and a lack of institutional project management capacity as the primary barriers to regional integration. These bottlenecks often result in a "dual economy" where smaller enterprises and local institutions struggle to keep pace with the rapid green and digital transitions required by the European market.

To address these systemic challenges, the report proposes the establishment of the Black Sea Innovation Platform (BSIP) as a business-driven "Safe Harbour" and innovation broker. Functioning as a non-political entity, the BSIP is designed to provide a stable environment for collaboration, bridging the gap between the private sector, academia, and public administration. Central to this strategy is the introduction of a Synergy Framework and standardized Synergy Pathways. These pathways provide a phased progression model that enables regional actors to mature their initiatives from foundational national research (Phase 1: National Maturation) through territorial crossborder pilots (Phase 2: Territorial Cooperation) to large-scale integration and commercialization within the European Research Area (Phase 3: European Integration).

Key recommendations include a comprehensive capacity-building roadmap focused on grant literacy, advanced proposal writing, and strategic consortium building to ensure that regional actors can compete effectively for international funds. This is paired with a proactive project development model designed to actively initiate partnerships and generate early "success stories," which are essential for overcoming the regional trust deficit. By synchronizing national resources with European funding opportunities such as Horizon Europe and the Digital Europe Programme, the BSIP aims to bridge the innovation divide and foster a sustainable, integrated research and innovation ecosystem across the Black Sea Basin.

## 1. Introduction and Purpose

### 1.1 Background of the DIALOGUE Project

The DIALOGUE project (BSB01104) is a collaborative initiative supported by the Interreg NEXT Black Sea Basin Programme 2021-2027. The project addresses the shared challenge of low innovation capacity and fragmented institutional coordination across the target regions in Türkiye, Bulgaria, and Romania. Its primary objective is to enhance the institutional capacity of, and dialogue between, public and civil society actors within the regional innovation ecosystems. By fostering people-to-people actions and improving cross-sectoral communication, the project aims to build mutual trust and facilitate deeper integration among communities and institutions across the Black Sea Basin.

### 1.2 Purpose of the Report

In accordance with the project's technical specifications, the purpose of this report is to analyze the effectiveness and sustainability of international collaborations among public institutions, non-governmental organizations (NGOs), academia, and the business sector in the participating countries. The report identifies current structural bottlenecks and provides practical recommendations to make policy and governance proposals applicable. Ultimately, this document serves as the foundational reference guide for the design, operating model, and long-term sustainability of the Black Sea Innovation Platform (BSIP).

### 1.3 The Strategic Context

To ensure the long-term viability of the proposed recommendations, the regional goals established in this report are aligned with key European Union priorities. The strategic context connects local ecosystem needs with frameworks such as Horizon Europe (specifically highlighting WIDERA and European Innovation Ecosystems - EIE calls), the Digital Europe Programme, and the European Green Deal. Furthermore, the recommendations are informed by the principles of Smart Specialisation Strategies (S3/S4), ensuring that the Black Sea

Innovation Platform acts as a bridge integrating regional capacities into broader European research and innovation networks. Beyond individual program alignment, this report introduces a **Synergy Framework**. This approach ensures that regional goals are not pursued through isolated projects but through a phased progression—connecting national capacity building with territorial pilots and eventual European-scale integration. This framework serves as the operational backbone for the Black Sea Innovation Platform’s long-term research agenda.

## 2. Methodology

The findings and recommendations presented in this report were developed through a structured, multi-stage methodology combining literature review, direct stakeholder engagement, and collaborative design.

### 2.1 Desk Research

The initial phase consisted of a comprehensive literature and policy review to establish a comparable baseline of the regional innovation ecosystems. This involved analyzing EU, national, and regional policy documents. Key materials reviewed included National Research, Development and Innovation Strategies, regional development plans (such as the TR21 Region Plan), Smart Specialization Strategies (RIS3), and data from the European Innovation Scoreboard regarding the performance levels of the targeted regions.

### 2.2 Field Research

To complement the macro-level policy data, qualitative field research was conducted to capture the immediate realities and needs of regional stakeholders. This phase involved semistructured interviews and focus group discussions with representatives from all four segments of the Quadruple Helix (government, academia, industry, and civil society). The field research gathered primary data from three specific regions:

- **Türkiye:** TR21 Region (Tekirdağ, Edirne, Kırklareli) - 18 semi structured interviews and workshop with key regional actors from all four helices.
- **Bulgaria:** BG33 Region (Severoiztochen) - 11 semi structured interviews and workshop with key regional actors from all four helices.
- **Romania:** RO22 Region (South-East Region, with a focus on Galați) - 11 semi structured interviews and workshop with key regional actors from all four helices.

## 2.3 Participatory Co-Design

The final methodological phase integrated the findings from the desk and field research into a participatory co-design process during the international workshop titled "Innovation Bridges: Co-Creating Innovations in the Black Sea Region," held in Varna, Bulgaria, in January 2026. Regional stakeholders collaborated in targeted working groups to formulate structural solutions. Specifically, Working Group A focused on "Governance & Institutional Cooperation," establishing the operational framework for the platform, while Working Group B addressed "Sustainability & Long-term Cooperation Models," focusing on financial viability and continuous project generation. The outputs of these structured sessions directly inform the policy and operational recommendations detailed in this report.

## 3. Current Situation and Common Problem Areas

Based on the regional needs analysis reports, this section outlines the baseline conditions, structural bottlenecks, and operational capacities of the targeted regions. While each country presents unique local dynamics, the analyses reveal several shared challenges that hinder the formation of a cohesive Black Sea innovation ecosystem.

### 3.1 Regional Needs Analysis: Main Findings by Country

#### 3.1.1 Türkiye (TR21 Region: Tekirdağ, Edirne, Kırklareli)

The analysis of the TR21 region indicates a highly dynamic but structurally divided economic landscape, often described as a "dual economy." On one side, Tekirdağ (specifically the Çorlu and Çerkezköy districts) hosts an advanced, export-oriented industrial base that ranks among the largest energy consumers and logistics hubs in Türkiye. On the other side, Edirne and Kırklareli maintain a more traditional, agriculture-focused economic structure. This division dictates that innovation strategies must simultaneously address high-tech industrial manufacturing and climate-resilient agricultural practices.

A prominent finding from the region is the "Missing Helix" phenomenon. The innovation ecosystem is heavily dominated by a traditional Triple Helix model (Government-University-Industry). Civil society participation remains weak, with non-governmental representation mostly limited to business associations and chambers of commerce rather than citizen-centric NGOs. This limits the social inclusivity of innovation projects and creates a gap in public engagement.

Furthermore, the industrial sector identifies a severe human capital crisis as its primary operational bottleneck. There is an acute shortage of qualified technical personnel and "bluecollar" workers, which limits the capacity of firms to engage in complex R&D projects. Regarding the green and digital transitions, the data shows a clear divide: large, export-driven firms are adapting to the EU Green Deal due to international supply chain requirements, whereas Small and Medium-sized Enterprises (SMEs) generally view green transition investments as an immediate cost burden rather than a competitive advantage, lacking both the financial tools and internal capacity to implement these changes.

Despite these challenges, the region possesses a mature incubation and technology entrepreneurship infrastructure. Institutions such as the regional Technoparks (at Namık Kemal University and Trakya University) and the Chamber-led TEKMER (Technology Development Center) in Çorlu provide functional models for bridging research and commercialization. These structures position the TR21 region as a potential provider of operational know-how for incubation management across the broader Black Sea basin.

### 3.1.2 Bulgaria (BG33 Region: Severoiztochen)

The Bulgarian research and innovation (R&I) system has recorded progress in certain metrics; however, the country continues to be classified as an "Emerging Innovator" in the European Innovation Scoreboard, performing at approximately 46% of the EU average. The regional analysis for BG33 reflects broader national challenges, specifically pointing to poor performance in patenting, knowledge valorization, and the commercialization of academic research results.

A defining characteristic of the Bulgarian R&I landscape is persistent structural fragmentation. The historical model of scientific research in the country relies heavily on academy-based research institutes. Consequently, Higher Education Institutions (HEIs) have relatively weak R&D functions, operating primarily as teaching facilities with limited connection to intensive, market-oriented research activities. This separation between teaching universities and research institutes creates a systemic barrier to industry-science collaboration.

Financial instability further complicates the ecosystem. The system is heavily dependent on European Structural and Investment Funds (ESIF), which account for a substantial portion of the total R&D funding. This reliance on project-based, external funding creates unpredictable operational cycles that hinder long-term strategic planning. Additionally, the availability of numerous, small-budget national funding instruments tends to increase fragmentation rather than consolidating resources for high-impact projects.

Governance fragmentation adds another layer of complexity. The distribution of innovation responsibilities among various ministries often results in uncoordinated policy implementation at the regional level. To address these issues, stakeholders emphasize the need for functional intermediaries that can bridge the gap between academia and SMEs, and a shift towards policies that incentivize practical, industry-driven research rather than purely academic outputs.

### **3.1.3 Romania (RO22 Region: South-East Region)**

The needs analysis for the RO22 region, with a specific focus on Galați and its area of influence, outlines an ecosystem with promising baseline resources but fragmented execution. The region benefits from active universities, emerging industrial clusters, a solid logistics base linked to the Danube and the Black Sea, and a growing institutional interest in the green and digital transitions. However, cross-sector collaboration among industry, research institutions, public administration, and civil society is not dense enough to generate systemic, region-wide effects.

A critical gap identified by regional stakeholders is the shortage of advanced technical and digital skills, particularly within SMEs. There is a strong demand for a "Skills Alliance" that can provide modular training programs, micro-credentials, and project management education. Moreover, SMEs in the region express a clear need for "Test before invest" facilities or Living Labs. Companies require practical demonstrators to test digital, environmental, and agri-tech solutions before committing to large-scale financial investments.

Another major finding is the region's weak integration into broader EU R&I networks. Participation in highly competitive frameworks like Horizon Europe and the Digital Europe Programme remains modest. This is largely attributed to low institutional capacity for complex project development, a lack of structured international networking, and missing matchmaking mechanisms.

To overcome these barriers, stakeholders in RO22 advocate for the establishment of a permanent dialogue and governance structure. Current regional entities do not provide a continuous, multi-actor platform for innovation or cross-border collaboration. Feedback indicates a preference for a transparent governance model with balanced voting rights across the Quadruple Helix and a mixed sustainability model. This model would rely on moderate membership fees, paid consultancy and project writing services, and a shared portfolio of EU-funded projects to ensure continuity beyond initial grant periods.

### 3.1.4 Cross-Regional Mapping and Common Strategic Fields

While each region operates within its unique national context, synthesizing the regional needs analyses reveals distinct areas of shared potential. By mapping the specific regional priorities (from TR21, BG33, and RO22), three primary macro-themes emerge as the most viable subjects for cross-border cooperation within the Black Sea Innovation Platform.

The mapping below outlines the specific regional strengths and needs, grouped into common thematic fields for future working groups:

#### Theme 1: Agri & Bio Tech

- **TR21 (Türkiye):** Strong focus on Agri-Tech, Climate Resilience, Sustainable Food, and Gastronomy. The region requires solutions for drought-resistant crops and value-chain improvements for agricultural products.
- **BG33 (Bulgaria):** Prioritizes Bioeconomy, Biotechnology, and the "Industry for Healthy Living."
- **RO22 (Romania):** Focuses on Food and Bioeconomy innovation.
- **Common Working Area:** Food & Agri-Tech, Bioeconomy, and Gastronomy. This field presents an immediate opportunity for cross-border collaboration on climate-smart agriculture and food security projects.

## Theme 2: Green Tech & Sustainability

- **TR21 (Türkiye):** Emphasizes Green Logistics and Trade, driven by its large industrial zones and European export routes.
- **BG33 (Bulgaria):** Highlights Cleantech, Circular Economy, and Low-Carbon Economy initiatives.
- **RO22 (Romania):** Prioritizes the Sustainable Blue Economy (due to the Danube and Black Sea proximity) and cross-border environmental monitoring.
- *Common Working Area:* Sustainable Blue Economy, Green Logistics, and Circular Economy. This alignment provides a basis for joint proposals targeting European Green Deal funds.

## Theme 3: Digitalization & Ecosystem Innovation

- **TR21 (Türkiye):** Brings strong expertise in Incubation Modelling (e.g., TEKMER, Technoparks) and identifies a need for Social Innovation and Youth engagement.
- **BG33 (Bulgaria):** Focuses on Informatics, ICT, and New Technologies in Creative and Recreational Industries.
- **RO22 (Romania):** Targets Digital Transformation, Smart-City applications, and Digital Health.
- *Common Working Area:* Digital Transformation, ICT, and Incubation Best Practices. This field allows for the transfer of incubation knowledge from Türkiye to Bulgaria and Romania, while leveraging Romanian and Bulgarian strengths in ICT and smart-city applications to support the broader digital transition of SMEs.

This mapping confirms that future platform activities should be organized around these thematic clusters (e.g., as specialized commissions or working groups) rather than generic, geographic boundaries.

### 3.2 Varna International Workshop Results: Participatory Co-Design Insights

Following the regional needs analyses, an international workshop was held in Varna, Bulgaria, where stakeholders from the participating regions engaged in a participatory co-design process. The workshop was structured around two main working groups: Governance (Group A) and Sustainability (Group B). The outputs from these groups directly address the previously identified ecosystem bottlenecks.

#### 3.2.1 Governance and Institutional Cooperation (Group A)

The consensus among stakeholders in Group A highlighted the necessity for a businessdriven, non-political structure. Participants noted that public institutions, such as municipalities, are often subject to political changes that can disrupt long-term continuity.

To mitigate this risk, the group proposed a "Safe Harbor" model where Chambers of Commerce or established business associations (e.g., CISAD in the TR21 region) serve as the primary secretariat or host for the platform. In this arrangement, universities and research institutions would function primarily as data providers and technical partners.

For the operational structure, stakeholders rejected rigid, geographic-based divisions in favor of a flexible "Hashtag" or commission model. This model organizes stakeholders around crossborder thematic sectors (e.g., #AgriTech, #BlueEconomy) rather than regional origins. Furthermore, the group discussed incorporating a "BNI (Business Network International) Logic" into the platform's networking mechanism. This implies creating a trusted, vetted environment where members actively pass business and project opportunities to each other, ensuring that consortia for competitive EU funds are built on established reliability. Lastly, the technical infrastructure is envisioned not as a standalone database, but as a "connector" of existing regional assets, potentially utilizing mobile infrastructure for agile networking.

### 3.2.2 Financial Sustainability and Implementation (Group B)

Group B focused on the financial and operational longevity of the platform, explicitly recognizing that sustainability relies on continuous project generation and technical relevance rather than solely on financial reserves.

The group outlined a two-stage strategy:

1. **Development Stage:** In the initial phase, the platform must prioritize growth, user acquisition, and building trust by offering immediate value through services such as funding opportunity tracking, matchmaking, and knowledge exchange.
2. **Sustainability Stage:** For long-term viability, participants debated and ultimately moved away from a traditional "membership fee" model. Instead, the consensus favored a "Project Factory" approach. In this model, the platform generates revenue through success fees tied to the acquisition of grants (e.g., taking a minor percentage from largescale consortia formed via the platform) and by offering specialized, paid consultancy or training services.

Additionally, to differentiate the Black Sea Innovation Platform from standard databases, stakeholders identified "Addressing Cultural Differences" and "Cross-Sectoral Collaboration" as unique selling propositions. The platform aims to serve as a human connector that bridges regional business cultures. It was also suggested that the platform could monetize "Regional Market Intelligence" by aggregating data and research to provide tailored insights for investors and policymakers, ensuring its technology and offerings remain competitive.

### 3.3 Concrete Project Concepts for Cross-Border Cooperation

The needs analysis and stakeholder interviews directly generated a series of concrete project topics. These topics reflect the immediate demands of the regional ecosystems and are positioned as the initial portfolio of ideas that the Black Sea Innovation Platform will coordinate and develop:

### Agri & Bio Tech Projects:

- **Climate-Resilient Crop Development:** Joint research, breeding, and cross-border field testing of drought-resistant agricultural varieties, specifically focusing on wheat and sunflower.
- **High-Value Crop Adaptation:** Parallel trials in participating regions for adapting alternative, high-value agricultural products, such as medicinal and aromatic plants, to local climatic conditions.
- **Gastronomy and Value Chain Optimization:** Creating cross-border networks to improve the marketing, branding, and distribution channels for local agricultural and food products, addressing the common barrier of "product commercialization."

### Green Tech & Sustainability Projects:

- **Green Logistics Hub Network:** Establishing a coordinated framework to connect the heavy industrial zones and port facilities of the three countries, focusing on optimizing transport routes and reducing carbon footprints in cross-border trade.
- **Cross-Border Environmental Monitoring:** Deploying joint digital monitoring systems for shared natural resources, with a specific focus on the ecological health of the Black Sea and the Danube river basin.
- **Circular Economy Demonstrators:** Implementing regional pilot projects that demonstrate clean technologies and circular resource management within the manufacturing sector.

### Digitalization & Ecosystem Innovation Projects:

- **Cross-Border Skills Alliance:** Developing modular training programs, micro-educational credits, and certification systems to address the severe shortage of advanced digital, technical, and project management skills among SMEs and NGOs.
- **"Test Before Invest" Facilities (Living Labs):** Establishing practical demonstration sites where regional SMEs can test digital, environmental, and agri-tech solutions in real-world scenarios before making large-scale investments.

- **Incubation Model Transfer:** Designing a structured knowledge transfer program where mature techno-entrepreneurship models (such as TEKMER and regional Technoparks) export their operational know-how to assist in the establishment of similar startup incubation centers in partner regions.

#### 4. Barriers to Effective International Cooperation

Drawing from both the regional needs analyses and the discussions held during the Varna International Workshop, this section categorizes the main barriers to forming effective, sustainable international collaborations. The findings show that the obstacles are rarely technical; instead, they are deeply rooted in structural limitations, administrative burdens, and capacity deficits across the participating regions. While these barriers are structural, they are addressed in the concluding sections of this report through Synergy Mechanisms. These mechanisms are designed to de-risk international cooperation by providing low-barrier entry points and professionalized support structures that compensate for regional capacity deficits.

##### 4.1 Structurally Low R&D and Innovation Performance

A primary barrier to advanced international cooperation is the generally low baseline of Research and Development (R&D) performance across the three target regions. Data from the European Innovation Scoreboard categorizes the regions as "Emerging Innovators," characterized by low patent application rates, limited knowledge valorization, and difficulties in commercializing academic research. This low starting point makes it challenging for regional actors to compete on equal footing in highly demanding EU frameworks. When the foundational innovation capacity is limited, engaging in complex, transnational innovation consortia become a secondary priority for local businesses and institutions.

## 4.2 Fragmented Ecosystems and Weak Quadruple Helix Collaboration

Before international cooperation can occur, there must be functional regional cooperation. However, the analysis reveals that collaboration within the regions themselves is highly fragmented. The Quadruple Helix model (Government-University-Industry-Civil Society) is rarely operational in practice. Ecosystems often operate in silos: universities focus on academic outputs rather than market needs, industries struggle to access research, and civil society is almost entirely excluded from the innovation dialogue. Because regional stakeholders lack the habit of collaborating locally, forming structured and trusting relationships with cross-border partners is inherently more difficult.

## 4.3 Low Project Development and Management Capacity

A critical bottleneck identified uniformly across Türkiye, Bulgaria, and Romania is the severe lack of capacity in project writing and management. While stakeholders express interest in accessing international funds, the technical skills required to draft competitive proposals—especially for highly competitive programs like Horizon Europe or complex Interreg calls—are missing. This skills gap is particularly acute among Small and Medium-sized Enterprises (SMEs) and Civil Society Organizations (CSOs). Without dedicated "innovation brokers" or permanent support structures to guide them through the complex application phases, regional actors are systematically disadvantaged in the European funding landscape.

## 4.4 Bureaucratic Hurdles and Financial Constraints

Administrative complexity acts as a major deterrent to international cooperation. Stakeholders report that slow institutional procedures, rigid public procurement rules, and complex cofinancing requirements delay project implementation and discourage participation. Furthermore, many regional institutions and SMEs lack the upfront financial flexibility needed to participate in projects that operate on reimbursement models. The administrative burden of managing transnational budgets often outweighs the perceived benefits for smaller organizations, causing them to withdraw from international networks.

## 4.5 The Trust Deficit and the "Seeing is Believing" Culture

Finally, a deep-seated cultural barrier within the business sector hinders cooperation: the trust deficit. Regional SMEs operate with a pragmatic, risk-averse mindset, often prioritizing immediate commercial returns over abstract R&D activities. There is a general reluctance to engage in long-term, theoretical projects with international partners if there is no immediate, tangible benefit. This "seeing is believing" culture means that without concrete pilot demonstrations or Living Labs to prove the financial viability of an innovation, businesses are hesitant to commit their limited resources to cross-border consortia.

## 5. Recommendations for Effective and Sustainable International Cooperation

### 5.1 Strategic Opportunities: Current EU and National Funding Programmes

The primary focus of the Black Sea Innovation Platform is to foster structured collaboration in Research, Development, and Innovation (R&D&I). While technological and industrial innovation remains the core objective, cross-border cooperation within the Black Sea Basin also presents substantial potential in related sectors, particularly in sustainable tourism, cultural heritage, and creative industries. To effectively implement these joint initiatives, regional stakeholders must navigate a variety of financial instruments at both the national and European levels.

#### 5.1.1 National R&D Funds vs. European Union Funds

All three participating countries operate domestic R&D funding mechanisms managed by their respective national agencies. However, these national funds typically offer lower financial support rates per project compared to European instruments and are often distributed across a fragmented administrative structure. This structural fragmentation limits the scale and impact of the technological transformations that SMEs and research institutes can achieve relying solely on domestic resources.

In contrast, European Union programmes offer significantly larger budgets designed for systemic, transnational impact. The challenge for regional actors is bridging the gap between small-scale national grants and the highly competitive, large-scale European funds.

### 5.1.2 The Role of Bilateral Cooperation Agreements

Before engaging in complex, multi-national EU consortia, bilateral cooperation agreements in R&D provide a practical mechanism for building regional partnerships. Bilateral funds generally require fewer partners (often just one from each participating country) and involve less complex administrative procedures than broad EU frameworks like Horizon Europe. Utilizing these agreements allows institutions in Türkiye, Bulgaria, and Romania to establish direct, one-on-one research ties, share laboratory infrastructures, and fund researcher mobility. This agile approach serves as a stepping stone, facilitating the rapid development of joint initiatives and establishing the foundational trust necessary for future, larger-scale European applications.

Recent mechanisms demonstrate the direct applicability of bilateral funds to the region's operational needs:

- **Türkiye – Bulgaria Bilateral Cooperation (e.g., TÜBİTAK 2502):** The collaborative program operated jointly by the Scientific and Technological Research Council of Türkiye (TÜBİTAK) and the Bulgarian Academy of Sciences (BAS) provides targeted funding for joint research projects. This specific mechanism allows Turkish and Bulgarian scientists and institutions to collaborate directly on shared scientific and technological challenges, fostering deep academic and technical exchange without the heavy administrative burden of a multi-country consortium.
- **Türkiye – Romania Bilateral Cooperation (e.g., TÜBİTAK 2569):** Similarly, the bilateral call between TÜBİTAK and the Romanian Ministry of Research, Innovation and Digitalization (MCID) supports direct joint R&D and innovation projects. This enables cross-border teams from Türkiye and Romania to test new technologies, commercialize research, and develop methodologies collaboratively.

For the Black Sea Innovation Platform, these specific bilateral calls represent an accessible entry point. Regional stakeholders can utilize these bilateral funds as "seed capital" to run initial pilots or feasibility studies for the concrete project concepts identified earlier in this report (such as climate-resilient crop development or digital demonstrator facilities). Once a concept is proven via a bilateral agreement, the established partnership can more easily scale the project to apply for competitive frameworks like Horizon Europe (e.g., WIDERA) or Digital Europe funding.

### 5.1.3 Structural Funds (ESIF) vs. Pre-Accession Assistance (IPA)

When forming cross-border consortia, partners must account for the structural differences in their macro-financial frameworks. As EU Member States, Bulgaria and Romania have direct access to European Structural and Investment Funds (ESIF), which are utilized for regional development, infrastructure, and innovation capacity building.

Conversely, Türkiye is supported through the Instrument for Pre-Accession Assistance (IPA). For the Black Sea Innovation Platform to function effectively, it must assist stakeholders in aligning these distinct funding streams. Successful cross-border projects will require synchronization, ensuring that local matching funds or complementary national grants can fulfil the co-financing requirements of EU-level projects.

### 5.1.4 Major European Union Funding Programmes

To address the technological gaps and leverage the opportunities identified in the regional analyses, the platform should target the following primary EU programmes:

- **Horizon Europe (2021-2027):** This is the principal funding programme for research and innovation within the EU, operating with a total budget of approximately €95.5 billion. The programme is structured around three main pillars and a horizontal widening component, each offering distinct avenues for the Black Sea Innovation Platform:

- **Pillar I: Excellent Science:** Focuses on frontier research and researcher mobility (e.g., Marie Skłodowska-Curie Actions), providing opportunities for academic institutions in the participating regions to build foundational research networks.
- **Pillar II: Global Challenges and European Industrial Competitiveness:** Contains specific clusters directly aligned with the cross-regional mapping (Themes 1, 2, and 3). Notably, Cluster 4 (Digital, Industry and Space), Cluster 5 (Climate, Energy and Mobility), and Cluster 6 (Food, Bioeconomy, Natural Resources, Agriculture and Environment) offer substantial funding for large-scale, cross-border demonstration projects.
- **Pillar III: Innovative Europe:** Aimed at stimulating market-creating breakthroughs and ecosystems. The "European Innovation Ecosystems" (EIE) component is particularly relevant for the platform to fund networking activities and structural cooperation among regional innovation actors.
- **Widening Participation and Strengthening the European Research Area (WIDERA):** This horizontal component is specifically designed to build capacity in regions classified as emerging innovators, such as TR21, BG33, and RO22. Calls under WIDERA (such as Twinning and Teaming) are highly suitable for integrating local stakeholders into established European research and value chains, reducing the innovation divide.
- **Digital Europe Programme (DEP):** Focused on accelerating the digital transformation of businesses and public administrations, DEP is a critical resource for SMEs struggling with digitalization. The programme provides funding for the establishment and operation of European Digital Innovation Hubs (EDIHs), as well as supporting advanced digital skills training. This aligns directly with the "Skills Alliance" and "Living Labs" concepts proposed by regional stakeholders.

- **Erasmus+ (2021-2027):** While traditionally known for academic mobility, Erasmus+ provides essential funding mechanisms for vocational education and training (VET) and institutional capacity building. For the Black Sea Innovation Platform, components such as the "Alliances for Innovation" and specific capacity-building projects under Key Action 2 (KA2) are highly relevant. These funds can be utilized to finance the proposed "CrossBorder Skills Alliance," developing joint curricula, micro-credentials, and targeted training programs to resolve the region's human capital crisis and improve project management capabilities among SMEs and NGOs.
- **Interreg NEXT Black Sea Basin:** Serving as the direct funding source for the DIALOGUE project, this programme continues to be the primary vehicle for regional, cross-border cooperation. It is specifically tailored to support joint initiatives in environmental monitoring, the sustainable blue economy, and cross-border commercial and cultural ties within the basin.
- **Single Market Programme (SMP):** Relevant for SME competitiveness, this fund supports business scaling, access to markets, and the development of industrial clusters. It provides a financial avenue to address the commercialization and marketing barriers identified by local industries. Furthermore, the SMP provides the funding for the European Enterprise Network (EEN) projects, which operate as a vital resource for SMEs in the region. The EEN acts as a crucial support mechanism for technology transfer, internationalization, and achieving the broader networking goals of the Black Sea Innovation Platform.

## 6. Roadmap: Implications for the Black Sea Innovation Platform

Based on the regional needs analyses and the operational requirements of the target groups, this section outlines the structural recommendations, capacity-building requirements, and concrete funding targets for the Black Sea Innovation Platform (BSIP).

### 6.1 Institutional Structure and Ecosystem Support Mechanism

To address the fragmented ecosystems and low innovation capacities identified in the participating regions, the BSIP requires a flexible and business-driven institutional structure. As discussed during the Varna workshop, a non-political "Safe Harbor" model led by Chambers of Commerce or established business associations provides the necessary stability. This structure shields the platform from local political changes while maintaining close ties with the private sector and civil society.

However, establishing a structural framework is only the initial step. Because regional stakeholders currently lack the experience and administrative capacity to navigate complex European frameworks independently, the platform must actively function as an "innovation broker." It must house a dedicated Support and Advisory Unit that offers direct, hands-on guidance to SMEs, NGOs, and academia, helping them translate their regional concepts into competitive EU project proposals.

### 6.2 Capacity Building Roadmap: Essential Training for Platform Members

To ensure that platform members can effectively participate in large-scale funding programs such as Horizon Europe and the Digital Europe Programme, a structured capacity-building roadmap is necessary. The regional analyses identified a severe gap in project development skills. Therefore, before targeting complex calls, the platform should deliver the following sequence of training modules to its members:

1. **EU Grant Literacy and Strategic Intelligence:** Fundamental training on the European funding landscape. This module aims to teach members how to differentiate between Horizon Europe (R&D focus), Digital Europe (capacity and deployment focus), Erasmus+ (skills and education), and Interreg programs, allowing them to select the right fund for their specific needs.
2. **Consortium Building and Networking Strategies:** Practical workshops on finding international partners using platforms like CORDIS and the European Enterprise Network (EEN). This module should also operationalize the "BNI Logic" discussed by stakeholders in Varna, focusing on building reliable, trust-based relationships across borders.
3. **Advanced Proposal Writing and Impact Design:** Moving beyond basic project cycle management to focus specifically on the "Impact" and "Excellence" sections required for Horizon Europe proposals. This includes training on defining clear Key Performance Indicators (KPIs), addressing the European Green Deal objectives, and outlining commercialization strategies.
4. **Financial Management of EU Funds:** Detailed guidance on navigating Horizon Europe's financial rules, including the lump-sum funding model, cost eligibility, and auditing requirements. This training is critical to reduce the administrative apprehension felt by many SMEs and NGOs.
5. **Synergy Planning and Combined Funding Management:** Training on how to sequence different funding instruments (e.g., Interreg and Horizon Europe) to support a single product or service lifecycle without violating 'double funding' regulations.

### 6.3 Targeted EU Funding Calls (2026-2027 Work Programmes)

Once the capacity-building phase is initiated, the platform can begin matching the concrete regional project concepts (outlined in Section 3.3) with specific calls from the European Union's 2026-2027 work programmes. The following opportunities, directly referenced in the needs analysis documents and the latest Horizon Europe Work Programmes, align with the strategic priorities of Türkiye, Bulgaria, and Romania:

### 6.3.1 Widening Participation and European Innovation Ecosystems (EIE)

Given the regions' classification as "Emerging Innovators," horizontal capacity-building calls are the most accessible entry points and were explicitly requested by regional stakeholders.

- **Excellence Hubs (WIDERA):** This call is highly suitable for the "Incubation Model Transfer" concept. It allows experienced structures (such as TEKMER in the TR21 region) to partner with Bulgarian and Romanian institutions to build and integrate joint startup ecosystems.
- **Interconnected Innovation Ecosystems (EIE 2026.2 / 2026.3):** These calls support the networking and structural cooperation of regional innovation actors. The BSIP itself can utilize these calls to fund its cross-border operations, ensure financial sustainability, and strengthen the Quadruple Helix linkages.
- **Research Management Facility (HORIZON-WIDERA-2026-04):** This specific call presents a strategic opportunity to address the severe deficit in regional project development and management capacity. By utilizing this facility, the participating regions can attract, train, and integrate experienced Research and Innovation (R&I) managers into their local ecosystems. Furthermore, establishing joint actions and cross-border research management structures through this facility will elevate the administrative quality of the ecosystem. This shared professional support directly increases the success rate of future individual applications submitted by regional SMEs, universities, and NGOs, effectively removing the technical barriers to entry for European funding.

### 6.3.2 Cluster 6: Food, Bioeconomy, Natural Resources, Agriculture and Environment

This cluster directly supports the "Agri & Bio Tech" priorities identified by all three regions.

- **HORIZON-CL6-2026-02-FARM2FORK-03 (Boosting the competitiveness of protein crops in Europe):** A highly relevant call for joint research, breeding, and cross-border field testing of alternative, climate-resilient crops between the partner countries.

- **HORIZON-CL6-2026-01-BIODIV-04-two-stage (Mainstreaming and scaling-up evidence-based Nature-Based Solutions towards a nature positive and climateresilient economy):** Provides an optimal funding route for cross-border environmental monitoring and climate adaptation projects, particularly around the Black Sea and Danube basins.

### 6.3.3 Cluster 4: Digital, Industry and Space

To address the technological gaps in the heavy industrial zones and support the "Test Before Invest" / Living Labs concept:

- **HORIZON-CL4-2027-01-MAT-PROD-02 (Advanced manufacturing for key products):**  
This call, linked to the Made in Europe partnership, supports innovation in factory processes and automation. Regional SMEs can participate as testing grounds or usecase providers within larger European consortia to accelerate their digital transition.

### 6.3.4 Cluster 5: Climate, Energy and Mobility

For the "Green Logistics Hub Network" and circular economy demonstrators prioritized by stakeholders:

- Calls under the **Batteries and Energy** or **Mobility** destinations for 2026-2027 (such as those addressing energy-efficient urban transport and integrated production for mobility) offer pathways to optimize transport routes, reduce carbon footprints in cross-border trade, and fund clean technology pilot projects across the regional manufacturing sectors.

### 6.3.5 Digital Europe Programme

Based on the Digital Europe Programme (DEP) Work Programme 2025-2027, several deployment-focused calls scheduled for the second half of 2026 and 2027 directly address the capacity-building and technological adoption needs of regional SMEs and public institutions:

- **Advanced Digital Skills (Short-term training and specialized education):** Calls opening in late 2026 and 2027 provide targeted funding for creating the "Cross-Border Skills Alliance." These funds support the design and delivery of modular training programs in AI, cybersecurity, and data analytics for SMEs and civil society.
- **Sectoral Data Spaces (Agriculture and Smart Communities):** Deployment phases for the European Data Spaces will continue into 2027. Participating in the Agriculture Data Space supports the region's Agri-Tech initiatives, while the Smart Communities Data Space aligns with cross-border environmental monitoring and local digital transformation goals.
- **Testing and Experimentation Facilities (TEFs) for AI:** Later calls related to the utilization and expansion of sectoral TEFs (specifically in Agri-Food, Manufacturing, and Smart Cities) offer the practical "Test Before Invest" infrastructure. This allows regional SMEs to validate new digital technologies in real-world environments without heavy initial capital expenditure.
- **Destination Earth (DestinE) Use Cases:** Funding opportunities for developing local use cases based on the DestinE platform (expected in late 2026-2027) will provide advanced simulation capabilities for regional climate adaptation and Sustainable Blue Economy initiatives in the Black Sea and Danube basins.

### 6.3.6 Erasmus+ Programme (Upcoming 2026-2027 Calls)

Based on the Erasmus+ 2026 Annual Work Programme, several specific actions under Key Action 2 (KA2) provide the necessary funding mechanisms to address the regional human capital crisis and empower civil society. The platform should target the following structural calls available from 2026 onwards:

- **Alliances for Innovation (KA2):** This action is highly relevant for establishing the "CrossBorder Skills Alliance." It funds strategic cooperation between higher education, vocational education and training (VET) providers, and enterprises. The platform can utilize these calls to design new curricula, micro-credentials, and targeted training programs that address the specific digital and green skills gaps identified in the industrial sectors of Türkiye, Bulgaria, and Romania.
- **Cooperation Partnerships in VET and Adult Education (KA2):** These calls support the development and transfer of innovative practices in vocational training. Regional stakeholders can apply for these funds to create shared, modular training modules for SMEs, focusing on practical skills for adapting to the European Green Deal and digital transitions.
- **Capacity Building in the Field of Youth and VET:** To directly address the "Missing Helix" and the low institutional capacity of regional NGOs, the platform should target these capacity-building actions. Funding can be used to provide civil society organizations with project management training, ensuring they become structured, capable partners in future innovation consortia.

## 6.4 Proactive Project Development and Consortium Building

While capacity-building programs and the identification of targeted calls are essential steps, they are not sufficient on their own to guarantee successful international cooperation. To overcome the established barriers—particularly the "seeing is believing" culture and the generally low baseline of project management experience—the Black Sea Innovation Platform must adopt a highly proactive approach to project development, especially during its initial operational phase.

Rather than passively waiting for regional stakeholders to independently form partnerships, the platform's Support and Advisory Unit should actively initiate and facilitate consortium building. This involves directly matching regional actors (SMEs, universities, NGOs) with complementary international partners based on the specific thematic calls identified in Section 6.3. Furthermore, the platform should provide direct, hands-on consultancy and proposal writing support to these newly formed consortia. By actively guiding a select number of pilot projects through the complex EU application process, the platform can generate early "success stories." These success stories are critical; they serve as concrete proof of concept, demonstrating the tangible financial and operational benefits of cross-border collaboration to the broader regional ecosystem. Achieving these early, visible wins will effectively break down the trust deficit, accelerate stakeholder engagement, and secure the long-term momentum required for the Black Sea Innovation Platform to function as a self-sustaining ecosystem. To transition from these early 'success stories' to a permanent ecosystem, the platform will adopt the Synergy Pathways detailed in Section 7. This ensures that every pilot project has a clear 'escalation path' toward larger funding streams, preventing the stagnation often seen after the conclusion of initial grant periods.

## 7. Operationalizing Synergies for a Long-Term Research and Cooperation Agenda

To ensure the long-term sustainability of the Black Sea Innovation Platform (BSIP) and the initiatives identified in the regional needs analyses, it is necessary to adopt a "Synergy" approach to funding and cooperation. A synergy occurs when multiple funding instruments are sequenced or combined to support a single strategic goal, such as the digital transformation of SMEs or the development of climate-resilient agriculture across Türkiye, Bulgaria, and Romania.

## 7.1 The Synergy Concept: National to European Progression

No single funding instrument covers the entire lifecycle of an innovation from early research to market scale-up. The BSIP will operate based on a three-phase progression model that aligns national, territorial, and European resources:

1. **Phase 1: National Maturation (Capacity Building):** Regional actors utilize domestic funds (e.g., TÜBİTAK 1000-series in Türkiye, national R&I grants in Bulgaria and Romania) to validate research at TRL 3–5. This phase builds the "proof of concept" required for international credibility.
2. **Phase 2: Territorial Cooperation (Consortium Building):** The BSIP facilitates the entry of these matured projects into cross-border programs like Interreg NEXT Black Sea Basin or Interreg NEXT MED. These programs fund pilot-scale cooperation and establish the cross-border trust identified as a current bottleneck.
3. **Phase 3: European Integration (Scale-up):** Validated cross-border pilots are then positioned for high-scale European instruments such as Horizon Europe (Pillar II or Widening), the Digital Europe Programme (DIGITAL), or the EIC Accelerator.

## 7.2 Strategic Research Agenda (SRA) through Synergy Pathways

The platform will utilize "Synergy Pathways"—standardized combination frameworks—to organize its long-term research agenda around the common strategic fields identified in Section 3.1.4.

### 7.2.1 Pathway: Research-to-Scale-Up (Agri & Bio Tech Focus)

To address the "Climate-Resilient Crop Development" priority, the BSIP will guide consortia through a sequential pathway:

- **Step 1:** Turkish, Bulgarian, and Romanian universities conduct parallel national research on drought-resistant wheat (TRL 3-4).
- **Step 2:** The BSIP assembles these actors into an Interreg NEXT Black Sea project for cross-border field testing (TRL 5-6).
- **Step 3:** The established consortium applies for a Horizon Europe Cluster 6 Innovation Action (IA) or a WIDERA Excellence Hub to integrate these solutions into the European value chain.

### 7.2.2 Pathway: SME Digitalization (Green Tech & ICT Focus)

To resolve the skill shortages and technical gaps in SMEs:

- **Step 1:** SMEs utilize regional European Digital Innovation Hub (EDIH) services for digital maturity assessments.
- **Step 2:** The BSIP identifies "Cascade Funding" (Financial Support to Third Parties) opportunities within existing Horizon Europe projects to provide SMEs with low-barrier entry tickets to European R&I.
- **Step 3:** Matured SMEs are routed toward the EIC Accelerator for market rollout.

### 7.3 Compliance and Sustainability Mechanisms

To maintain the integrity of these combined funding streams, the BSIP Support and Advisory Unit will implement the following compliance standards:

- **Cost-Separation Management:** The platform will provide members with a "CostSeparation Matrix" to ensure that the same activity is not funded twice by different instruments (e.g., avoiding overlapping personnel costs between Interreg and Horizon Europe).

- **Seal of Excellence Recovery:** For high-quality regional proposals that pass the European evaluation threshold but do not receive funding due to budget limits, the BSIP will facilitate a "Fast-Track" to national funding (such as the TÜBİTAK or KOSGEB rerouting channels for Seal of Excellence holders).
- **Widening Participation:** Given the classification of the target regions as "Emerging Innovators," the BSIP will prioritize "Hop On" facilities, allowing regional partners to join already-running Horizon Europe projects with 100% funding and minimal administrative effort.

#### 7.4 The Role of the BSIP as a "Synergy Broker"

The long-term research agenda will not be a static document but a dynamic portfolio of projects at different stages of the synergy pipeline. By acting as a broker between national agencies (like TÜBİTAK and TKDK in Türkiye) and European executive agencies, the BSIP ensures that regional innovation actors have a clear roadmap from their initial local idea to a competitive European-scale operation. This structured approach directly addresses the "trust deficit" and "project management capacity" barriers by providing a clear, risk-managed path for international cooperation.

## 8. Conclusion

The findings of the DIALOGUE project confirm that while the regions of Türkiye, Bulgaria, and Romania possess substantial baseline research and industrial assets, their integration into the European Research Area (ERA) is currently hindered by structural fragmentation and capacity gaps. The barriers identified—ranging from the "dual economy" in the TR21 region to the research-institute silos in BG33—require a shift from ad-hoc project participation to a coordinated, long-term strategy.

The establishment of the Black Sea Innovation Platform (BSIP) represents the technical and institutional response to these challenges. By adopting a business-driven "Safe Harbor" model and functioning as an active innovation broker, the BSIP provides a neutral environment where trust can be built through concrete collaborative actions. The core of this strategy lies in the **Synergy Pathways** introduced in this report. These pathways provide a reliable framework for regional actors to mature their initiatives from national research phases into cross-border pilots and, eventually, into high-impact European consortia.

The implementation of the BSIP and the associated capacity-building roadmap will serve as the mechanism to close the "innovation divide" in the Black Sea Basin. Success will depend on the proactive engagement of all Quadruple Helix actors and the continuous generation of "success stories" that demonstrate the tangible benefits of international cooperation. Through the synchronization of national resources with European opportunities, the targeted regions can effectively transition from "Emerging Innovators" to active contributors within the broader European innovation ecosystem.