

Operationalizing Smart Specialization in Emerging Economies: A Quintuple Helix Framework for Smart Tourism and Regional Innovation in Vlora, Albania



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Abstract: This study examines how a place-based Smart Specialization Strategy (S3) can be operationalized in the Vlora region of Albania by connecting smart city development, smart tourism, and the Quintuple Helix Innovation Model. A qualitative exploratory design combined territorial diagnosis, purposive stakeholder mapping, structured briefing templates, a stakeholder survey, and an in-person Post-it Wall workshop. The preliminary consultation covered government, higher education, business-support, civil-society, media, and environmental organizations, while six decision-makers and experts representing the five helices participated in the final workshop. Written questionnaires, workshop materials, stakeholder maps, and policy documents were analyzed through a structured framework combining S3 categories with themes emerging from stakeholder deliberation. Results identify sustainable tourism, agriculture and agri-food, the blue economy, and digitally enabled public and business services as interconnected opportunity domains. Their development is constrained by fragmented governance, weak regional data, digital and managerial skills gaps, environmental pressures, tourism seasonality, and insufficient rural-urban integration. Stakeholders emphasized networking, human-capital development, accessible infrastructure, citizen participation, and environmental management as cross-cutting conditions for specialization. The paper proposes a university-anchored Smart City and Smart Tourism Innovation Center to support training, incubation, technology transfer, policy experimentation, regional intelligence, and public engagement. The study demonstrates how the Quintuple Helix can structure entrepreneurial discovery in an emerging regional innovation system while treating a small qualitative workshop as diagnostic rather than representative evidence.

Keywords: smart specialization; Quintuple Helix; smart city; smart tourism; regional innovation; Albania.

JEL Classification: O32; O33; O38; R11; Q56; Z32.

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Introduction

Smart Specialization Strategy (S3) has become a central instrument of European regional innovation policy. Its defining premise is that regions should not imitate generic models of competitiveness; they should concentrate knowledge, investment and institutional effort in domains that combine existing capabilities with credible opportunities for transformation. This place-based logic is especially relevant to emerging and peripheral economies, where resources are limited and the costs of fragmented intervention are high (Foray, 2015). Yet the institutional conditions assumed by S3-reliable data, sustained entrepreneurial discovery, capable intermediary organizations and coordinated multilevel governance-are often incomplete in EU-enlargement settings.

Albania illustrates this implementation challenge. The country has engaged with the European Commission's S3 process and has undertaken national mapping of economic, scientific and innovation potential, but regional actors still face weak innovation linkages, uneven evidence, limited research-industry collaboration and insufficient familiarity with entrepreneurial discovery (Fabbri *et al.* 2022). These constraints are particularly visible in Vlora, a coastal region whose economy is strongly influenced by tourism, agriculture, fisheries, construction and services. Vlora's natural and cultural assets create opportunities for diversification, while rapid coastal development, tourism seasonality, environmental stress, rural depopulation and infrastructure gaps threaten the sustainability of growth.

This paper investigates how S3 can be translated into a regional process that connects smart city development with smart tourism. Rather than treating technology as the primary objective, the study understands 'smartness' as the capacity to coordinate knowledge, institutions, infrastructure, citizens and environmental resources around locally meaningful development problems. The Quintuple Helix Innovation Model is used to organize this coordination across academia, government, industry, civil society and the natural environment (Carayannis *et al.* 2012).

The study addresses three research questions:

RQ1. Which territorial assets and constraints shape the potential for smart specialization in the Vlora region?

RQ2. How do stakeholders representing the five helices understand their roles, resource needs and opportunities for collaboration?

RQ3. Which institutional mechanism and priority actions could convert stakeholder diagnosis into a feasible smart city and smart tourism pathway?

1. Literature Review and Conceptual Framework

1.1 Smart Specialization and Entrepreneurial Discovery

S3 is a process of prioritization under conditions of uncertainty. It seeks to identify domains in which research, innovation and entrepreneurial capabilities can generate structural change, rather than simply selecting large existing sectors (Foray, 2015). Its central operational mechanism is the entrepreneurial discovery process: an iterative dialogue through which firms, researchers, public authorities and other actors combine distributed knowledge about technologies, markets and societal needs. Diagnosis, stakeholder engagement, policy-mix design, implementation and monitoring should therefore form a continuous learning cycle rather than a one-off strategy exercise.

In less-developed innovation systems, S3 can strengthen policy learning, but it can also expose institutional weaknesses. Limited regional data may encourage priorities based on visibility rather than evidence; dominant public organizations may crowd out entrepreneurial knowledge; and consultation may become symbolic if it is not connected to resources and implementation. For countries covered by the EU enlargement and neighbourhood policies, the Joint Research Centre therefore emphasizes institutional capacity, qualitative mapping, and stakeholder dialogue alongside quantitative analysis (Joint Research Center, 2018; Fabbri *et al.* 2022).

1.2 Quintuple Helix and Regional Innovation Governance

The Quintuple Helix extends university-industry-government models by incorporating civil society and the natural environment. Knowledge and innovation circulate among five subsystems: education, the economy, the political and legal system, the media- and culture-based public, and the natural environment (Carayannis *et al.* 2012). This extension is important for territorial strategies in which competitiveness depends on ecological limits, public legitimacy and behavioral change. It also reframes the environment from a passive constraint to a source of knowledge, societal challenges and innovation opportunities.

For regional governance, the model offers both an actor map and a test of inclusiveness. A proposed priority is institutionally fragile if it lacks a knowledge base, entrepreneurial carriers, public authority, social acceptance or environmental compatibility. Universities can serve as boundary-spanning organizations by convening these actors, translating evidence and providing continuity when local innovation networks are thin. Their role is not to replace government or firms, but to create shared infrastructure for learning, experimentation and capability development.

1.3 Smart Cities, Smart Tourism and Sustainability

Smart-city strategies frequently emphasize digital infrastructure, data platforms and technology-intensive services. Hollands (2008), however, warns that the label can conceal market-led and technology-centric development that does not necessarily improve inclusion or democratic governance. A place-based interpretation must therefore connect digital tools with accessibility, institutional capacity, public value and environmental performance.

Smart tourism applies this logic to destination ecosystems. Digital information, interoperable data, mobile services and analytics can improve visitor experiences and destination management, but competitiveness also depends on transport, skills, business networks, cultural authenticity and the stewardship of natural assets. For a coastal region such as Vlorë, smart tourism is most valuable when it supports diversification beyond seasonal beach tourism, connects coastal and rural economies, and helps manage pressure on water, waste, landscapes and protected areas.

1.4 Universities and Regional Innovation Systems

Regional innovation-system research emphasizes the relationships among firms, knowledge institutions, public bodies and intermediaries. In emerging economies these relationships may be discontinuous, project-dependent and weakly institutionalized. Universities can address some of these gaps through applied research, skills development, technology transfer, entrepreneurship support and neutral convening. Erasmus+ capacity-building initiatives can reinforce this role, but sustainability depends on embedding project outputs in regional governance and service models rather than treating them as temporary activities.

1.5 Research Gap and Analytical Framework

Existing literature provides strong conceptual accounts of S3, helices and smart destinations, but fewer studies show how these ideas can be operationalized through a transparent regional diagnostic process in the Western Balkans. This study addresses that gap through an analytical framework with three linked layers: territorial assets and pressures; Quintuple Helix actors, resources and relationships; and transformative actions that connect current capabilities to smart city and smart tourism outcomes. The framework treats stakeholder dialogue as diagnostic evidence and the proposed innovation centre as an implementation hypothesis to be tested through further entrepreneurial discovery.

2. Method

2.1 Research Design

The study adopted a qualitative, exploratory design to investigate the potential for developing an S3 in the Vlorë region, with particular emphasis on smart city and smart tourism development. This design was appropriate because regional innovation systems are context-dependent and require an understanding of institutional roles, stakeholder priorities, resource dependencies and interactions that cannot be captured through sector statistics alone.

The research followed a participatory, policy-oriented approach incorporating elements of action research. Stakeholders were treated as contributors to territorial diagnosis and priority formation, not merely as respondents. The Quintuple Helix provided the sampling and interpretive framework, while the S3 approach structured the diagnosis and stakeholder-dialogue stages.

2.2 Study Area

The empirical setting was the Vlorë region in southern Albania. Vlorë combines a strategic Adriatic-Ionian location with tourism assets, agricultural and agri-food traditions, fishing and aquaculture, protected landscapes, cultural heritage and growing transport investment. It also faces uneven accessibility, rural depopulation, informal or intensive coastal development, environmental degradation, waste-management challenges and strong tourism seasonality. This combination of opportunity and pressure makes Vlorë a relevant case for place-based innovation policy.

2.3 Sampling and Participants

Purposive sampling was used to identify actors with relevant expertise, resources or decision-making influence. A preliminary questionnaire was distributed among potential representatives of local government, higher education, business-support organizations, civil society, media and environmental or international-development organizations. Candidates were considered in relation to the economic, structural, professional, technical, legal, civic and environmental resources they could contribute.

A stakeholder-engagement map connected candidate roles with the five helices. Respondents were asked which critical decision-makers they would need at the table to achieve their territorial-development objectives. The resulting decision-maker matrix informed the final selection. The preliminary consultation covered 11 clearly identified institutional or stakeholder categories; because the source report records categories rather than a respondent-level register, these are not reported as 11 distinct individual participants.

Six stakeholders participated in the final in-person Post-it Wall workshop (Table 1). Together they represented the five helices; civil-society perspectives were expressed through both tourism/culture and media representation.

Table 1. Participants in the Final Participatory Workshop

Helix perspective	Participant/role	Representation
Education/academia	Lecturer @ University of Vlora	University of Vlora, Faculty of Economy, Business Department
Government	Head	Regional Council of Vlora
Business/culture-based public	Tourism operator	Local tourism sector
Economic system	Regional Coordinator	Vlora Regional Chamber of Commerce and Industry
Civil society/media	Local journalist	Media and Journalists Association of Vlora
Natural environment	Environmental expert	UNDP, Vlora branch

Source: Authors' elaboration based on the University of Vlora focus-group report.

2.4 Data Collection

2.4.1 Territorial diagnosis

Approximately 15 days before the focus-group activities, the research team reviewed regional statistics, academic literature, national and regional strategies, territorial plans and national and international project reports. The diagnosis examined population and employment, tourism, agriculture, infrastructure, urbanization, protected areas, environmental vulnerability, waste management and major development projects. The national mapping of potential S3 domains informed the discussion of productive and innovation dynamics (Fabbri *et al.* 2022).

2.4.2 First briefing: perceived differential value

In the first briefing, conducted in person or remotely, participants completed a Perceived Differential Value template. They reflected on their background, originality, motivations, relevant audiences and the value generated by collaboration. The group then considered what made its shared purpose original, relevant, valid and visionary. This stage identified nine discussion areas: smart city development, smart tourism, digital skills, a tourism laboratory, tourism-development projects, city projects, metropolitan positioning, regional networking and promotion, and technology, innovation and entrepreneurship.

2.4.3 Second briefing: inputs and outputs

A structured survey asked each stakeholder to identify four outputs generated by their institutional action and four inputs required to transform these outputs into outcomes. Inputs included technical and relational resources, management capacity, know-how, licenses or authorizations, hardware, infrastructure and other resources. This exercise made institutional interdependencies visible and provided a common basis for comparing roles.

2.4.4 Post-it Wall workshop

The final session used the participatory Post-it Wall method described within the progressive focus approach (Contin & Mormina, 2021). Participants first constructed a 'Region of Today' vision by identifying realities, threats, reasons or strengths, ambitions, needs and opportunities. A facilitated debate then addressed obstacles to regional S3 planning, possible solutions, evidence supporting those solutions, stakeholder benefits, and immediate processes and priority projects. The categories and proposed actions were displayed, discussed and negotiated before consolidation in an action-plan matrix.

2.5 Data Organization and Analysis

The analysis used the written materials generated by the process: questionnaires, completed briefing templates, stakeholder-map entries, Post-it Wall contributions, facilitator records and the negotiated action-plan matrix. The source report does not document audio recording or verbatim transcription; consequently, the analysis is described as framework-based organization of structured written materials, not transcript-based coding.

Deductive categories derived from S3 and the Quintuple Helix included governance, knowledge and skills, business innovation, civic participation, environmental sustainability, institutional resources, digital infrastructure and inter-organizational collaboration. Inductive issues emerging during the workshop were clustered into six categories: reality, threats, reasons/strengths, ambitions, needs and opportunities. Contributions were compared

across actor groups and triangulated with regional statistics, policy documents and previous studies. The final interpretation integrated a stakeholder-engagement map, a resource map informed by the Hexagon Model and the negotiated action-plan matrix.

2.6 Trustworthiness, Ethics and Limitations

Credibility was strengthened through data-source triangulation, stakeholder-group triangulation and collective validation during the workshop. Standardized questionnaires and templates created a consistent trail from stakeholder selection to priority formation. The displayed categories and actions were discussed and refined by participants, allowing disagreement to be addressed through negotiation. No intercoder coefficient is reported because the source material does not indicate independent double coding.

Participants' names and institutional roles are reported because they appear in the project report and establish helix representation; specific critical statements are not attributed to individuals. The source documentation does not provide a formal ethics-committee reference or detailed consent protocol, so no unsupported claim of ethical approval is made.

The study is exploratory. Six participants cannot represent the full diversity of the region, and purposive selection may privilege visible institutional actors. The written workshop record captures negotiated positions more clearly than minority views, and incomplete regional innovation data limits quantitative validation. The results should therefore be treated as a structured diagnosis and agenda for further entrepreneurial discovery, not as a definitive regional S3 or a statistically generalizable account.

3. Case Study: Operationalizing S3 in the Vlorë Region

The application focused on translating the stakeholder diagnosis into an institutional mechanism capable of maintaining entrepreneurial discovery after the workshop. The negotiated action logic converged on a Smart City and Smart Tourism Innovation Centre conceived as an intermediary rather than a technology showcase. Its purpose is to connect actors, convert regional challenges into portfolios of experiments, and maintain knowledge circulation across the five helices.

The proposed centre combines five functions: training in digital, managerial, sustainability, and innovation skills; incubation and acceleration for tourism, service, agri-food, and blue-economy ideas; technology transfer and applied research; public engagement and participatory diagnosis; and regional intelligence through shared indicators, stakeholder mapping, and project monitoring. The University of Vlorë provides continuity and knowledge infrastructure, while public bodies contribute mandates and data, firms contribute entrepreneurial knowledge, civil society supports inclusion, and environmental actors define ecological safeguards.

The application is staged to avoid premature institutional expansion. It begins with a cross-helix steering group and minimum regional indicator set, proceeds through thematic discovery laboratories and small pilots, and scales only those activities that demonstrate adoption, public value, and environmental compatibility. This structure treats the center as a learning institution that progressively narrows regional priority hypotheses through evidence.

4. Research Results

4.1 Territorial Assets and Candidate Transformation Domains

Stakeholders described Vlorë as a region whose development potential rests on the interaction of tourism, agriculture, the blue economy, cultural heritage, natural assets and infrastructure. Tourism was consistently viewed as the principal market-facing domain, but not as a stand-alone sector. Participants linked destination competitiveness to local food, olive production, fisheries, aquaculture, mountain and coastal landscapes, cultural sites, mobility and public services. This suggests a domain-oriented priority-sustainable and digitally enabled visitor and territorial services-rather than a narrow priority defined only as accommodation or beach tourism.

Agriculture and agri-food activities were seen as sources of authenticity and diversification, particularly where they connect rural villages with coastal demand through agritourism, gastronomy and local supply chains. The blue economy offered related opportunities in fisheries, aquaculture, maritime services and marine heritage. Digital transition was understood as a horizontal capability that could improve destination information, public services, business processes and regional data rather than as an isolated ICT sector.

4.2 Fragmented Governance and Weak Innovation Coordination

The most persistent institutional problem was fragmentation. Participants identified insufficient coordination among municipalities, regional bodies, universities, businesses and community actors, together with weak links between local initiatives and national policy. The region contains multiple development projects and sectoral capabilities, but

lacks a durable mechanism for sharing information, aligning priorities and sustaining joint action after individual projects end.

This fragmentation also affects the S3 process. Limited awareness of smart specialization, uneven trust and the absence of regular regional innovation data make it difficult to move from broad sector preferences to evidence-based transformative activities. Stakeholders therefore emphasized networking and partnership formation as substantive capabilities, not merely communication activities.

4.3 Human Capital, Digital Skills and Knowledge Circulation

Human-capital constraints cut across all candidate domains. Tourism and service businesses require digital, managerial, language and customer-experience skills, while public bodies need capacity in data use, participatory planning and innovation procurement. Migration and seasonal employment intensify recruitment and retention problems. Participants also observed a gap between university provision and the changing needs of employers and public institutions. The university was consequently assigned a central intermediary role. Its potential contribution includes applied research, curriculum renewal, professional training, entrepreneurship support and the translation of policy concepts into locally usable tools. However, participants' inputs-and-outputs exercise implies that the university cannot perform this role alone: access to public data, business problems, mentors, investment networks and demonstration sites is required for knowledge to circulate.

4.4 Infrastructure, Accessibility and Rural-Urban Integration

Stakeholders viewed accessibility as both physical and digital. Major transport investments can improve Vlora's position as a southern gateway, but internal connectivity between the city, coast, rural settlements and protected areas remains essential. Weak public transport, uneven services and disconnected development reduce the ability of rural communities and small enterprises to benefit from tourism growth.

The desired smart-city pathway therefore includes accessible urban transport, improved public-service delivery, digital information and stronger coastal-rural linkages. The aim is not simply to increase visitor numbers, but to distribute benefits, extend the tourism season and integrate local production into the destination economy.

4.5 Environmental Vulnerability as an Innovation Driver

Environmental issues were treated as immediate development constraints: waste management, water treatment, coastal pressure, damage to marine ecosystems, loss of agricultural land and climate-related risks. At the same time, these challenges were recognized as potential drivers of innovation. Waste reduction and separation, resource-efficient tourism, protected-area management, marine monitoring and nature-based urban solutions can generate public value while strengthening destination quality.

This finding demonstrates the practical relevance of the fifth helix. Environmental expertise changes the content of regional priorities: a tourism initiative is not considered 'smart' merely because it uses digital technology; it must also protect the assets on which the regional economy depends and improve the capacity to monitor cumulative pressures.

4.6 Participation, Identity and Public Value

Participants linked territorial innovation with citizen inclusion, social cohesion and a shared image of the region.

Table 2. Synthesis of Empirical Themes and Strategic Implications

Empirical theme	Main evidence from stakeholder process	Implication for S3
Connected territorial domains	Tourism linked with agriculture, agri-food, blue economy, heritage and services	Prioritise transformative activities across related capabilities, not isolated sectors
Governance fragmentation	Weak coordination, data exchange and continuity	Create a permanent regional discovery and coordination mechanism
Skills and knowledge gaps	Digital, managerial and innovation capabilities insufficient	Combine curricula, professional training and applied research
Accessibility and integration	Uneven coastal-rural links and public services	Use mobility and digital services to distribute tourism benefits
Environmental vulnerability	Waste, water, marine and land-use pressure	Make ecological performance a priority-selection criterion
Participation and identity	Need for citizen voice, authenticity and shared vision	Embed public engagement and communication in implementation

Source: Authors' elaboration from stakeholder questionnaires and workshop materials.

Rapid construction and unplanned development were perceived as threats not only to the environment but also to authenticity and quality of life. Media and civil-society actors can broaden awareness, communicate evidence and create channels through which residents influence development choices.

The workshop's collective vision combined modernized services and infrastructure with protection of landscapes, marine parks and cultural identity. This indicates that legitimacy is a condition of implementation: priorities require public explanation, visible benefits and opportunities for co-creation if they are to survive political and project cycles.

5. Discussions

5.1 From Sector Selection to Related Diversification

The findings support a domain-based interpretation of S3. Tourism is economically visible, but its transformative potential depends on connections with food, fisheries, mobility, cultural heritage, environmental services and digital capabilities. Selecting 'tourism' alone would be too broad to guide investment. A more actionable domain is sustainable and digitally enabled territorial experience systems, within which specific entrepreneurial opportunities can be discovered and tested.

This approach is consistent with Foray's (2015) emphasis on activities rather than administrative sectors. It also reduces the risk that S3 simply reinforces existing mass-tourism patterns. Related diversification can connect established capabilities to new services: destination data, smart guides, local-food traceability, marine and environmental monitoring, visitor-flow management, circular hospitality and integrated rural experiences.

5.2 The Quintuple Helix as an Operational Governance Test

The Quintuple Helix proved useful beyond stakeholder classification. Each proposed action can be tested for whether it mobilizes knowledge, entrepreneurial capacity, public authority, social legitimacy and environmental responsibility. The workshop showed that weaknesses in any one helix can block implementation. For example, a digital tourism platform without business adoption, public data, citizen trust or environmental objectives would remain a technical project rather than a regional innovation intervention.

At the same time, the small workshop exposes the need for broader inclusion. The six participants provided informed diagnosis, but future discovery rounds should add municipalities beyond Vlorë city, SMEs, farmers, fishers, protected-area managers, technology firms, students, residents and underrepresented communities. The model should therefore guide an expanding process rather than certify that all helices have already been fully represented.

5.3 The University as an Innovation Intermediary

Positioning the University of Vlorë as the anchor of the proposed center responds to a genuine institutional gap: no single actor currently combines convening capacity, research, training and relative continuity. This supports literature on universities as regional innovation intermediaries. Yet an effective center must be demand-driven and jointly governed. Otherwise, it risks becoming an academic unit disconnected from firms and public implementation.

A portfolio approach can mitigate this risk. The center should begin with small, measurable pilots proposed by cross-helix teams, publish learning and discontinue activities that do not generate adoption. Such experimentation would convert stakeholder dialogue into evidence and allow priorities to become more selective over time.

5.4 Policy and Theoretical Implications

For policy, the study suggests that emerging regions need institutional infrastructure for discovery before they need a fully elaborated strategy document. A recurring forum, shared data practices, skilled facilitation and a portfolio of pilots can build the capabilities required for formal S3 governance. External funding should support this learning infrastructure while requiring local ownership and continuity.

Theoretically, the case connects S3 with the Quintuple Helix by distinguishing their roles. S3 explains how places should discover and prioritize transformation opportunities; the Quintuple Helix identifies whose knowledge, authority, legitimacy and ecological perspective must be combined. Smart city and smart tourism provide the applied problem space. Their integration yields a process model in which territorial challenges stimulate cross-helix learning and progressively more focused innovation portfolios.

5.5 Staged Implementation Framework

The evidence supports a staged approach rather than immediate large-scale institutionalisation. Table 3 translates the diagnosis into a feasible sequence.

Table 3. Proposed Staged Framework for Regional S3 Operationalization

Stage	Priority action	Lead configuration	Illustrative output
1. Mobilise	Formalise a cross-helix steering group and participation rules	University + municipality/regional council	Governance charter and expanded stakeholder map
2. Evidence	Create a minimum regional indicator set and data-sharing protocol	University + public bodies + business associations	Baseline dashboard and data-gap register
3. Discover	Run thematic discovery labs around defined regional challenges	Cross-helix working groups	Ranked opportunity statements and pilot calls
4. Experiment	Fund small pilots in skills, destination services, circularity and rural-coastal links	Mixed implementation teams	Pilot results, adoption evidence and lessons
5. Scale	Select validated activities for larger investment and policy integration	Regional/national authorities + investors	Regional S3 roadmap, financing and monitoring framework

Source: Authors' elaboration based on the study findings.

Monitoring should combine process and outcome measures. Early indicators include diversity and continuity of participation, data-sharing agreements, training completion, cross-sector project formation and pilot delivery. Later measures should track business adoption, new services, employment and skills outcomes, rural supplier participation, environmental performance and public-service improvement. These measures would allow the regional priority portfolio to evolve on evidence rather than remain fixed by the initial workshop.

Conclusions and Further Research

This study examined how smart specialization could be operationalized in Vlorë through a participatory process connecting smart city development, smart tourism and the Quintuple Helix. The evidence identifies a coherent opportunity space around sustainable tourism linked with agriculture and agri-food, the blue economy, heritage, infrastructure and digital services. It also shows that the principal barriers are systemic: fragmented governance, limited data, skills gaps, uneven territorial integration and environmental pressure.

The proposed Smart City and Smart Tourism Innovation Center offers a plausible institutional response if it functions as a jointly governed intermediary for discovery, training, experimentation, technology transfer, regional intelligence and public engagement. Its value would lie less in physical infrastructure than in its capacity to maintain relationships, translate knowledge and build a portfolio of validated interventions.

The study's claims remain deliberately bounded. A six-person workshop provides expert, context-rich diagnosis but cannot establish regional consensus or prove economic impact. The next step is an expanded entrepreneurial-discovery process supported by quantitative mapping, wider participation and pilot evaluation. With these safeguards, Vlorë can move from broad aspirations for smart tourism toward a selective, evidence-led and environmentally responsible regional innovation strategy. More broadly, the case demonstrates that emerging economies can begin S3 not by importing mature-region templates, but by constructing the institutional capacity to discover, test and revise their own place-based priorities.

Further research should broaden participation to additional municipalities, SMEs, farmers, fishers, protected-area managers, technology firms, students, residents, and underrepresented communities. It should also combine repeated entrepreneurial-discovery rounds with quantitative regional mapping and longitudinal evaluation of pilot outcomes. These steps would test whether the proposed governance mechanism improves collaboration, business adoption, skills, territorial inclusion, and environmental performance.

Declarations

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Credit Authorship Contribution Statement

Fioralba Vela: Conceptualization, investigation, methodology, project administration, formal analysis, data curation, validation, writing - original draft, writing - review and editing, and supervision;

Dorjana Feimi: language editing, structural revision, and document formatting.

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