BUSINESS COACHING REPORT
SMART SEDIMENT AND NUTRIENT INTERCEPTION SERVICE

1. Coaching context

The proposed business concept is a modular sediment and nutrient interception service designed for the restoration of Brateș Lake in Romania. The service would combine vegetated buffer strips, natural sedimentation zones or sediment barriers, floating wetlands, and smart monitoring at the most critical inflow and shoreline areas.

Brateș Lake is a ProCleanLakes demonstration site located near Galați. Available project information describes a shallow lake affected by nutrient enrichment and other pollution pressures, while recent research has examined declining water quality in relation to anthropogenic and climatic influences. These conditions support the relevance of interventions that reduce external loads before pollutants and sediments are dispersed throughout the lake.

The concept is modular rather than dependent on one large engineering intervention. Different combinations of nature-based and technical measures could be installed at selected locations, monitored, maintained, and adjusted according to measured performance. This creates the possibility of beginning with a limited pilot and expanding only where results justify further investment.

The participant requested support in defining the nine building blocks of the Business Model Canvas and explaining how they connect. The coaching assignment therefore focused on turning the ecological concept into a coherent service model with identifiable customers, a clear value proposition, appropriate delivery channels, recurring customer relationships, realistic revenue streams, and the resources, activities, partnerships, and costs required for implementation.

2. Coaching objectives

The overall objective of the coaching assignment was to support the participant in developing an integrated and commercially credible Business Model Canvas for the proposed Brateș Lake restoration service.

The first objective was to define each of the nine building blocks in relation to the specific service, rather than using generic business-model descriptions. The analysis identified the organisations that could buy or commission the service, the value created for them, and the operational system required to deliver that value.

The second objective was to establish the connections between the building blocks. Particular attention was given to the relationship between customer responsibilities, measurable environmental outcomes, procurement routes, service contracts, technical capabilities, partnerships, and cost recovery.

The third objective was to identify a practical path from concept to pilot. The model needed to support phased implementation, evidence generation, and recurring revenue while avoiding premature investment in a full-lake solution before critical locations, permissions, maintenance requirements, and performance can be validated.

3. Coaching methodology

The coaching methodology combined Business Model Canvas analysis with ecological service design and pilot validation.

The first stage defined the customer problem. Lake restoration involves multiple stakeholders, but not every beneficiary is a customer. The analysis separated organisations that can commission and pay for interventions from landowners, farmers, researchers, NGOs, and community members whose cooperation or expertise is essential to delivery.

The second stage defined the service outcome. The concept was assessed as an interception and management service rather than a sale of individual buffer strips, barriers, floating wetlands, or sensors. This perspective makes it possible to connect installation with maintenance, monitoring, performance reporting, and future adaptation.

The third stage mapped the nine Business Model Canvas components. Each component was developed in relation to the others: customer segments determine the value proposition; the value proposition determines channels and relationships; delivery requirements determine key resources, activities, and partnerships; and the cost structure must be covered by appropriate revenue streams.

The fourth stage introduced site and environmental validation. Proposed measures require location-specific assessment of hydrology, sediment pathways, nutrient sources, shoreline ownership, ecological sensitivity, access, permitting, land availability, seasonal conditions, and maintenance requirements. The final combination cannot be selected only at business-model level.

The final stage translated the canvas into a pilot sequence: baseline diagnosis, selection of one or two critical areas, co-design with the responsible stakeholders, installation of limited modules, monitoring against agreed indicators, performance review, and a decision on adaptation or expansion.

4. Key insights

The concept addresses a relevant customer problem because sediment and nutrient pressures are not solved only by interventions inside the lake. Where significant loads enter through inflows or shoreline runoff, interception closer to the source can support a more preventive and targeted restoration approach.

The business should not promise restoration of the entire lake through a small number of modules. The defensible value proposition is to diagnose critical pathways, reduce or retain part of the incoming sediment and nutrient load at selected locations, measure performance, and provide evidence for wider restoration planning.

The most likely lead customer is the organisation with legal or operational responsibility for the lake or the relevant water-management works. Local and regional authorities, water-management bodies, public restoration programmes, and project consortia also commission parts of the service. Farmers, shoreline owners, tourism operators, and communities are important stakeholders, but they are not automatically the primary payer.

The solution should be sold as an integrated service. Selling separate physical components would make the offer easy to compare only by unit price and could disconnect installation from ecological outcomes. A service model combines diagnosis, design, permissions, installation, monitoring, maintenance, reporting, and adaptation.

Modularity creates both commercial and environmental advantages. It reduces initial investment, allows site-specific combinations, creates evidence before expansion, and supports phased procurement. It can also generate recurring revenue through monitoring, seasonal maintenance, vegetation management, sediment removal, component replacement, and performance reporting.

The principal commercial risk is excessive customisation. If every site requires a completely new design, supplier set, monitoring protocol, and contract, the business will function as a series of isolated consulting projects. Standard modules, assessment procedures, monitoring indicators, reporting formats, and pricing rules are therefore essential for replication.

Partnerships are central to credibility and delivery. Ecologists, hydrologists, laboratories, universities, sensor providers, civil or hydraulic contractors, nurseries, landowners, authorities, and maintenance teams may all be required. The business should coordinate this network without claiming expertise or authorisations it does not possess internally.

5. Business Model Canvas development

The Business Model Canvas below summarises the recommended structure for the Brateș Lake service (Figure 1). The canvas should be read as a connected system rather than as nine independent lists.

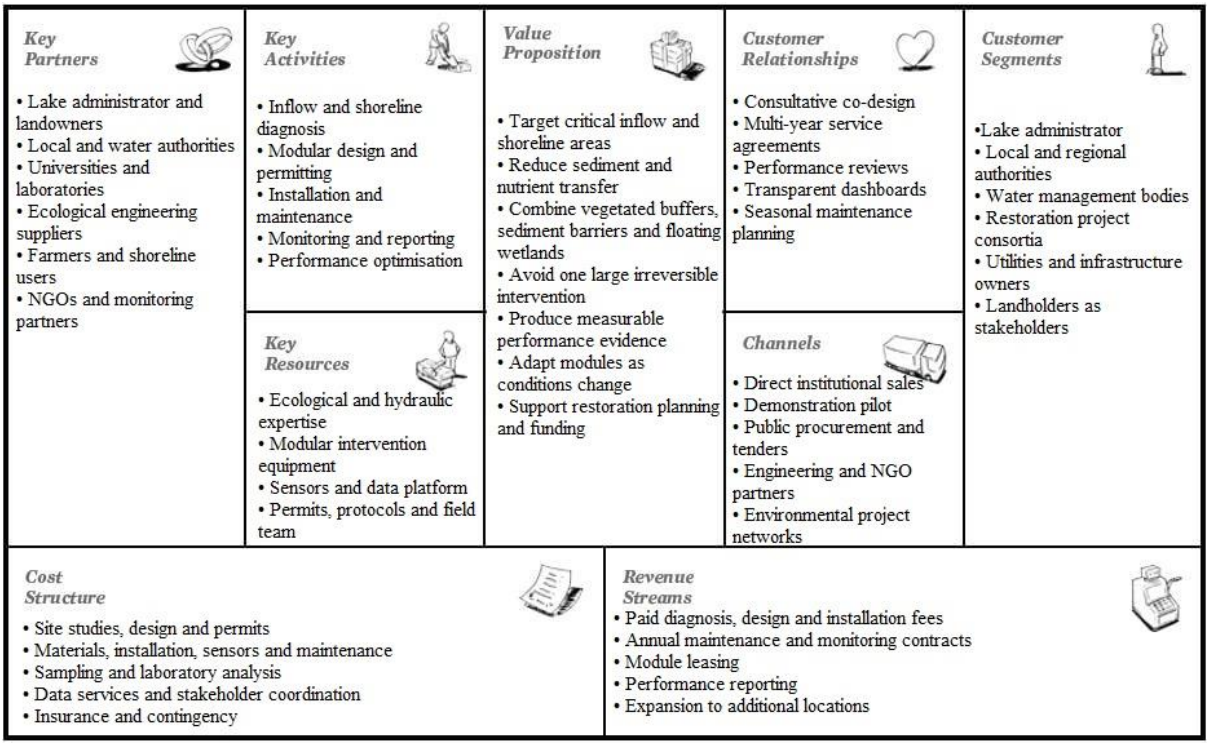


Figure 1 - Business Model Canvas for the Brateș Lake restoration service
Source: developed by the business coach using Business Model Canvas logic

6. Definition of the nine building blocks

1. Customer segments.

The primary customer should be the lake administrator or the public or water-management body responsible for ecological condition, flood or drainage infrastructure, shoreline management, or restoration expenditure. Secondary customers include local and regional authorities, utilities, infrastructure owners, and funded restoration consortia. Landowners, farmers, NGOs, universities, tourism operators, and community groups should be mapped as stakeholders, beneficiaries, partners, or influencers unless they hold a relevant budget and purchasing role.

2. Value propositions

The service should offer targeted reduction or retention of sediment and nutrient loads at critical inflow and shoreline locations, a lower-risk modular alternative to immediate large-scale works, integration of nature-based measures with monitoring, documented environmental performance, and evidence that supports restoration planning, compliance, funding applications, and future investment. Claims should remain linked to measured site-level results.

3. Channels

The principal channel is direct institutional engagement with the lake administrator, authorities, and water-management organisations. Additional channels include public procurement procedures, environmental tenders, demonstration projects, partnerships with engineering or ecological consultancies, university and NGO networks, and ProCleanLakes dissemination activities. A visible pilot site and concise performance report can become the strongest channel for future customers.

4. Customer relationships

The appropriate relationship is consultative and long term. The provider should co-design the intervention, agree on indicators, report progress, organise periodic performance reviews, and plan seasonal maintenance. Multi-year service agreements are preferable to one-off installation contracts because ecological performance and maintenance requirements develop over time.

5. Revenue streams

Revenue combines a paid diagnostic and feasibility study, design and permitting support, installation fees, annual monitoring and maintenance contracts, leasing of selected modular components and sensors, performance-reporting services, replacement or expansion fees, and project-management charges. Outcome-based payments are explored only where indicators, baseline conditions, external influences, and responsibilities can be defined fairly.

6. Key resources

Required resources include ecological, hydrological, and engineering expertise, standard assessment and design protocols, access to modular equipment and plant materials, monitoring sensors and a data platform, sampling and laboratory capacity, field installation and maintenance teams, permits and insurance, baseline data, and trusted relationships with local stakeholders.

7. Key activities

Core activities include diagnosis of sediment and nutrient pathways, prioritisation of locations, technical and ecological design, permissions and stakeholder coordination,

procurement and installation, vegetation establishment, sensor operation, sampling, maintenance, sediment or biomass management, data interpretation, performance reporting, and adaptation of the modules.

8. Key partnerships

Essential partners include the lake administrator, relevant authorities, landowners, farmers and shoreline users, universities, accredited laboratories, ecological engineering suppliers, contractors, plant nurseries, monitoring providers, and environmental NGOs. Partnership agreements should define responsibilities, data ownership, maintenance access, approvals, liability, and communication.

9. Cost structure

The main costs are baseline studies, surveys, design, permitting, materials, transport, civil and installation works, sensors, software or data services, sampling, laboratory analysis, maintenance, vegetation replacement, sediment or biomass removal, reporting, stakeholder engagement, insurance, and project management. Costs should be separated into one-time deployment costs and recurring service costs.

7. Coaching recommendations

The participant should begin by validating the Customer Segments, Value Propositions, and Revenue Streams before finalising the remaining blocks. Interviews should involve the lake administrator, local and water authorities, technical experts, landowners or farmers near potential inflow areas, and organisations that procure ecological restoration services.

The interviews should clarify:

- who is legally and operationally responsible for the critical inflow and shoreline areas;
- which sediment and nutrient pathways are considered most urgent and which evidence supports that priority;
- which outcomes the responsible organisation would pay to achieve or document;
- which permits, land agreements, procurement rules, and maintenance duties apply;
- whether the customer prefers ownership, leasing, or a complete managed service;
- which budget source could finance diagnosis, installation, and recurring maintenance.

The first commercial offer should be a paid diagnostic and pilot-design package. It should include existing-data review, field reconnaissance, stakeholder mapping, preliminary source and pathway assessment, selection of candidate sites, a modular concept, expected monitoring indicators, permitting needs, cost range, maintenance plan, and a proposal for pilot implementation.

The pilot should cover one or two critical areas rather than the whole lake. A baseline period should be established before installation. Indicators include suspended solids, turbidity, sediment accumulation, nitrogen and phosphorus parameters, dissolved oxygen, vegetation establishment, module integrity, and maintenance effort. The final indicators must be selected by qualified specialists according to site conditions and the intended intervention.

The customer contract should separate three phases: diagnosis and design; installation and commissioning; and recurring monitoring and maintenance. This structure makes costs transparent, allows the customer to stop after feasibility if conditions are unsuitable, and creates a clear path to recurring revenue after installation.

8. Pilot validation criteria

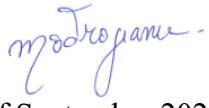
The business model should be considered ready for further development when:

- the responsible customer confirms a priority location and provides access to relevant data and stakeholders;
- site screening identifies at least one technically, legally, and ecologically feasible pilot area;
- the customer accepts a paid diagnostic or co-financed pilot rather than requesting only a free concept;
- baseline indicators and realistic performance expectations can be agreed;
- the annual maintenance and monitoring fee covers recurring delivery costs and a sustainable margin;
- the modules and procedures can be reused at additional locations without complete redesign;
- partners accept clear responsibilities for design, permits, installation, monitoring, and maintenance.

The recommended market position is *a modular restoration service that identifies and treats critical sediment and nutrient pathways, combines nature-based interception measures with smart monitoring, and provides measurable evidence for adaptive lake management.*

9. Reference considerations

The report was informed by ProCleanLakes information on Brateș Lake and by the 2023 study on climatic and anthropogenic influences on its water quality. These sources support the need for site-specific monitoring and restoration planning. Detailed intervention design must be based on updated field data, stakeholder consultation, specialist assessment, and applicable approvals.

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Signature: 

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