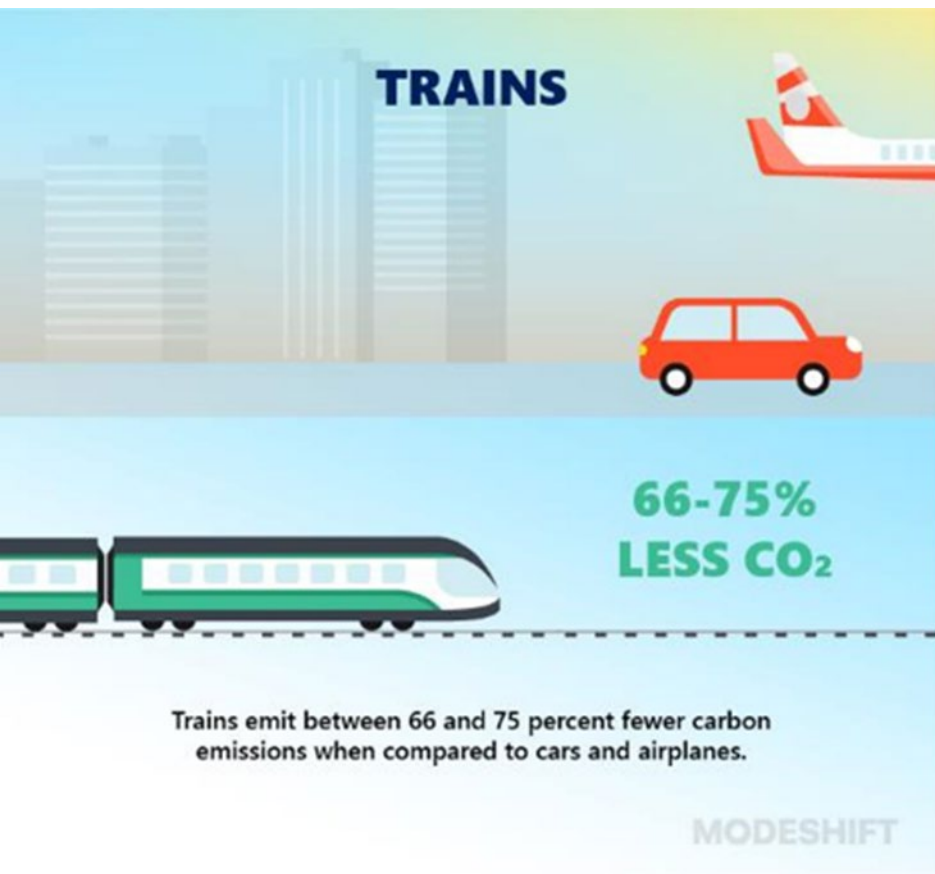




CONNECTING BUCOVINA - TRANSFORMING TOURISM VIA THE MOUNTAIN ARTERY RAILWAY

Student:
Anca Maria (STANCIU) STAMATE

1. Introduction: Motivation and Concept Definition



The development of a sustainable and competitive tourism sector in Suceava County is intrinsically linked to the efficiency of its transport macro-infrastructure.

Currently, the "Bucovina" brand is internationally acclaimed for its cultural and natural heritage, yet it faces a significant structural bottleneck: the systemic degradation of the railway network.

The motivation for this project arises from the urgent need to transition from an automobile-dependent tourism model to a sustainable, rail-based "Slow Travel" paradigm.

In the context of the European Green Deal, rail tourism represents a high-value niche that combines environmental responsibility with premium visitor experiences.



**INVESTING IN THIS
SECTOR IS VITAL
FOR THREE
REASONS:**

Global Competitiveness:
Positioning Suceava
alongside elite European
destinations like the Swiss
Alps or the Austrian Tyrol,
where the train is the
primary "luxury" interface
between the traveler and
the landscape

Economic Decentralization:
Revitalizing small,
intermediate railway
stations (e.g., Frasin,
Pojorâta, Mestecăniș) that
are currently bypassed by
road traffic, thus
distributing tourism wealth
into rural pockets.

Environmental Resilience:
Reducing the carbon
footprint of the thousands
of tourists who currently
transit the fragile alpine
ecosystems of the Eastern
Carpathians by car.



DEFINING THE PUBLIC-PRIVATE PARTNERSHIP (PPP) CONCEPT IN INFRASTRUCTURE

The conceptual framework of this project is based on the PPP model, defined as a long-term, performance-based contractual relationship between the public authority (represented by the Ministry of Transport and CFR Infrastructură) and a private sector consortium.

The public sector retains ownership of the strategic land and tracks, ensuring that national interests and safety standards are met. Simultaneously, the private partner brings the necessary capital for the modernization of the "Imperial-style" railway stations and the acquisition of state-of-the-art panoramic rolling stock.

This project aims to bridge the "trust gap" in Suceava's administration, replacing a model of managed decline with one of entrepreneurial excellence.

2. Sector Characteristics: The Synergy between Rail Infrastructure and Tourism

2.1. Evolution and Current Trends: The Shift Toward Scenic Rail

The global tourism industry is undergoing a "rail renaissance," driven by the Decarbonization of Travel and the rise of the Experience Economy. In Northern Romania, the railway sector is characterized by a dual reality: a profound technical regression of the state-owned infrastructure and a burgeoning demand for authentic, slow-paced travel.



2.2. Benchmarks and Success Stories: National and International Context



While Suceava faces challenges, successful models within Romania provide a blueprint for PPP-driven revitalisation:

The Anina–Oravița Line (The Banat Semmering):

Although primarily managed by CFR Călători, its survival and recent popularity are due to local advocacy and its promotion as a unique heritage asset. It proves that "technical slowness" is a marketable commodity for tourists.

Private Operators in Transylvania:

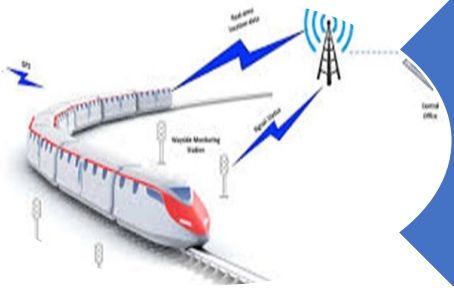
Companies like Astra Trans Carpathic have demonstrated that private investment in rolling stock (modern interiors, catering, and cleanliness) can significantly increase passenger numbers on routes previously deemed unprofitable by the state.

International Reference:

The Bernina Express (Switzerland) operates as a PPP-like model where the cantonal authorities and private shareholders maintain a UNESCO-protected line that generates millions in revenue, proving that rail tourism can be a region's primary economic engine.

2.3. Innovation and Strategies: Redefining the Bucovina Rail Experience

Innovation in the Suceava rail sector must transcend basic track repairs, focusing on a Digital and Ecological Ecosystem:



Smart Infrastructure and GIS Monitoring:

Utilizing Geographic Information Systems (GIS) to monitor the stability of the Mestecăniș pass, ensuring safety while providing real-time data to passengers via mobile applications.



Multi-Modal Integrated Ticketing:

A modern strategy involves a "Bucovina Pass," where a single digital QR code grants access to the panoramic train, local electric shuttle buses to the UNESCO Monasteries, and museum entries.



Eco-Innovation:

The introduction of Hydrogen-powered or Hybrid trains (e.g., Alstom Coradia iLint models) would position Suceava as a leader in green tourism, appealing to the environmentally conscious Gen Z and Millennial demographics.

2.4. Modern Promotion and Digital Presence

Live-Streaming and On-Board Content:

Installing high-definition webcams on the locomotives to broadcast live views of the Bucovina Carpathians, paired with on-board Wi-Fi that provides geo-located historical storytelling via an app.

Immersive Marketing:

Collaborative video campaigns featuring international travel influencers (e.g., Mark Smith - The Man in Seat 61) to showcase the "hidden gems" of the Suceava - Vatra Dornei route.



**SWOT
ANALYSIS
Railway
Tourism PPP
in Suceava**

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Strengths

Optimal Risk Allocation: Under Romanian Law 233/2016, the PPP allows for a balanced distribution of risks;

Managerial Efficiency: Private sector participation introduces advanced management models and high-tech innovation (e.g., smart ticketing, panoramic rolling stock) that are typically absent in state-run entities like CFR.

Leveraged Private Capital: The partnership reduces the immediate fiscal burden on the Suceava County Council by utilizing private financing for capital-intensive upgrades.

Integrated Product Design: The PPP facilitates a "single-window" travel experience, combining rail transit with local Bucovina hospitality and tour services into a unified brand.

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Weaknesses

Complex Legal Framework: The intricate nature of documentation, financing, and technical sub-agreements creates high entry barriers and long preparation periods before project commencement.

High Transaction Costs: The initial costs of competitive dialogue, legal consulting, and feasibility studies can be prohibitive for smaller local municipalities in Suceava.

Conflict of Objectives: Potential friction between the public partner's focus on social welfare (low fares) and the private partner's focus on maximizing Return on Investment (ROI).

Long-term Commitment Rigidity: Contracts lasting 20 – 40 years may lack the flexibility to adapt to rapid technological shifts or sudden changes in regional tourism demand.

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pportunities

Strategic Regional Branding: The existence of a dedicated Tourism Development Strategy for Suceava County provides a political tailwind for the project.

EU Funding Alignment: The National Recovery and Resilience Plan (PNRR) prioritizes green transport and digital transformation, offering significant co-financing opportunities for the railway sector.

Growth in Sustainable Tourism: Increasing global demand for "Slow Travel" and eco-friendly destinations positions Vatra Dornei as a prime hub for international wellness and mountain tourists.

Cross-Border Synergy: Potential to link Suceava's rail network with international scenic routes, enhancing its status as a "gateway" to Eastern European heritage.

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Threats

Systemic Infrastructure Deterioration: The poor state of the national rail infrastructure managed by CFR Infrastructură may lead to delays or technical failures beyond the private partner's control.

Political and Legislative Instability: Frequent changes in government policy or public administration priorities can disrupt long-term PPP agreements.

Climate and Geological Risks: The mountainous terrain of the Mestecăniș pass is susceptible to meteorological disasters and landslides, posing a threat to operational continuity.

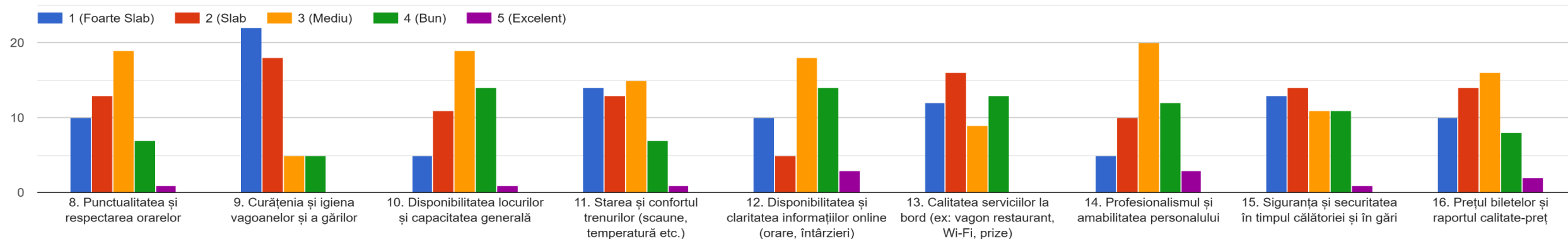
Market Competition: Tourist migration to other regions or countries with better-developed infrastructure (e.g., the Austrian Alps) remains a constant threat to Bucovina's market share.

3.2. Quantitative Component: Data Mining and Passenger Surveys

The quantitative dimension focuses on secondary data and direct primary research:

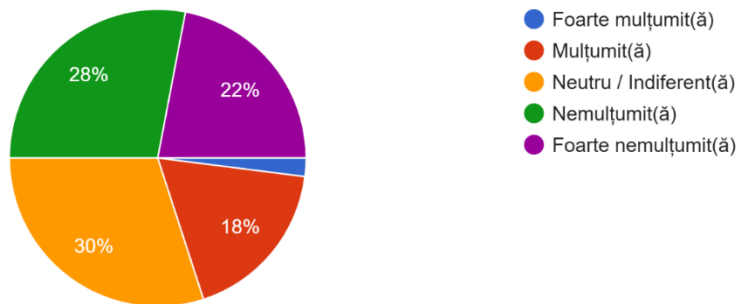
- **Secondary Data Analysis:** We utilize longitudinal data from the National Institute of Statistics (TEMPO Database) and Eurostat regarding regional passenger flows, average train delays, and the correlation between infrastructure quality and tourism arrival rates in Suceava County.
- **The Passenger Survey (N=50):** Given the critical role of the end-user, a structured survey was applied to a sample of 50 passengers currently using the CFR services on the Suceava–Vatra Dornei line. The survey measures:
 - Satisfaction levels regarding on-board cleanliness and thermal comfort.
 - Price elasticity: The willingness to pay a premium (e.g., 25-40% extra) for a "Scenic Rail" service with guaranteed amenities (Wi-Fi, Bistro, Panoramic windows).
 - Perceived Safety: Feelings of security regarding both technical rolling stock and social environment during the journey.

Calitatea serviciilor



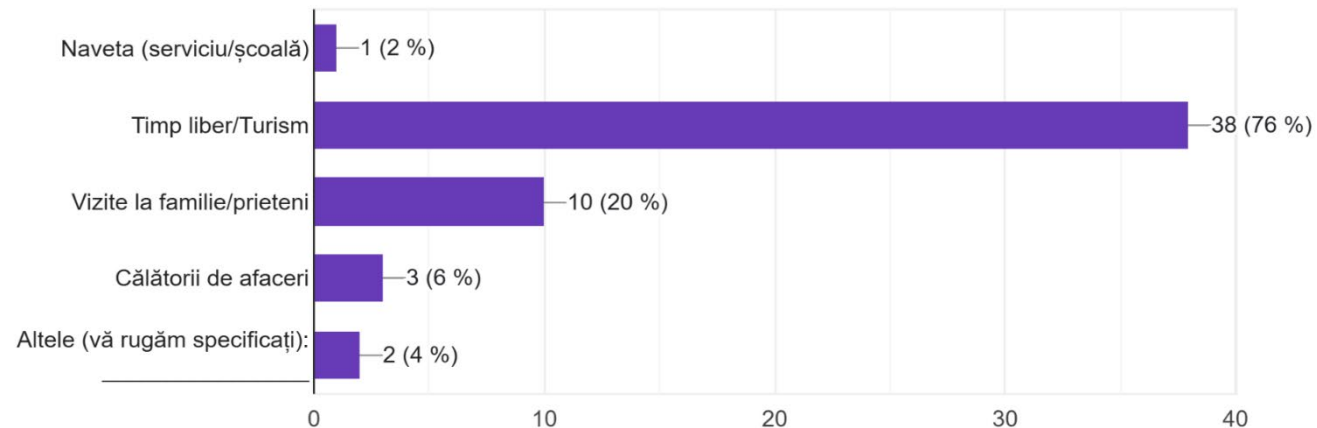
6. În general, cât de mulțumit(ă) sunteți de starea actuală a sistemului feroviar românesc (CFR și alți operatori)?

50 de răspunsuri



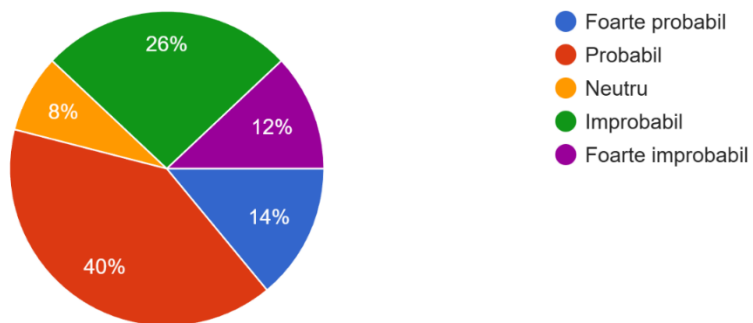
5. Care este scopul principal pentru care folosiți trenul?

50 de răspunsuri



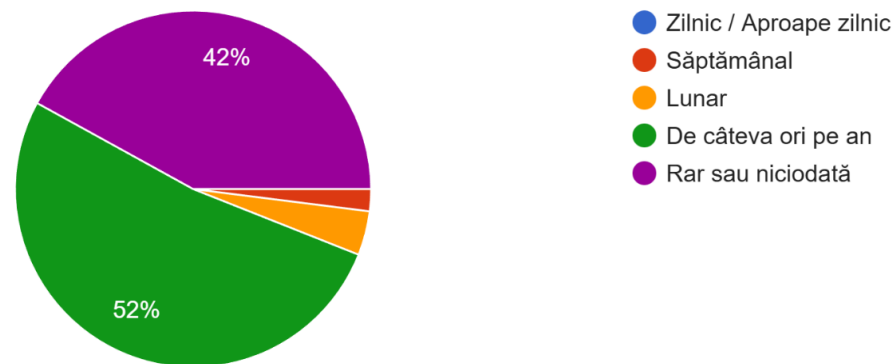
7. Cât de probabil este să alegeți trenul în detrimentul altor mijloace de transport (ex: mașină, autobuz, avion) pentru călătoriile interne?

50 de răspunsuri

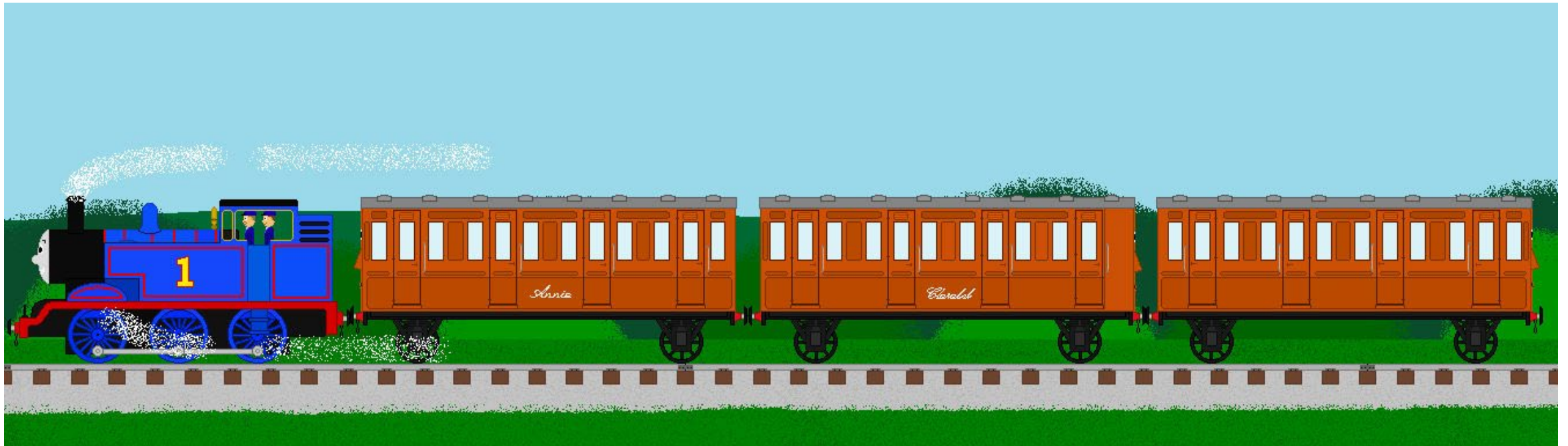
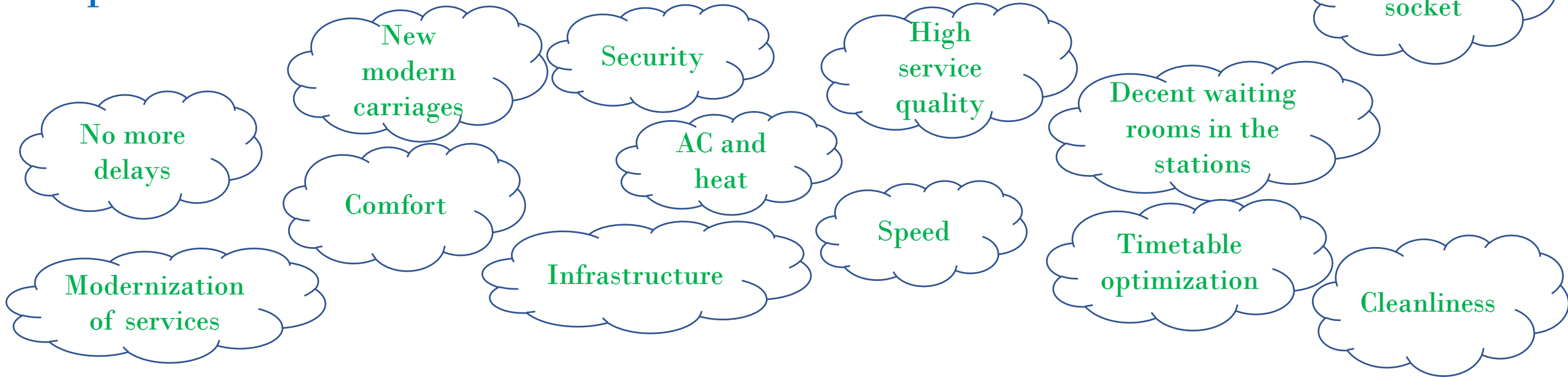


4. Cât de des călătoriți cu trenul pe teritoriul României?

50 de răspunsuri



- The single improvement that would radically change your experience with Romanian trains would be:



3.3. Qualitative Component: Semi-Structured Expert Interviews

To understand the feasibility of a PPP, the research conducts semi-structured interviews with three "Key Informants." This triangulation ensures a 360-degree view of the sector:

The Public Administrator (Suceava County Council/Ministry Rep):

Focused on the legal hurdles of Law 233/2016, the availability of PNRR funds, and the political will to delegate management.

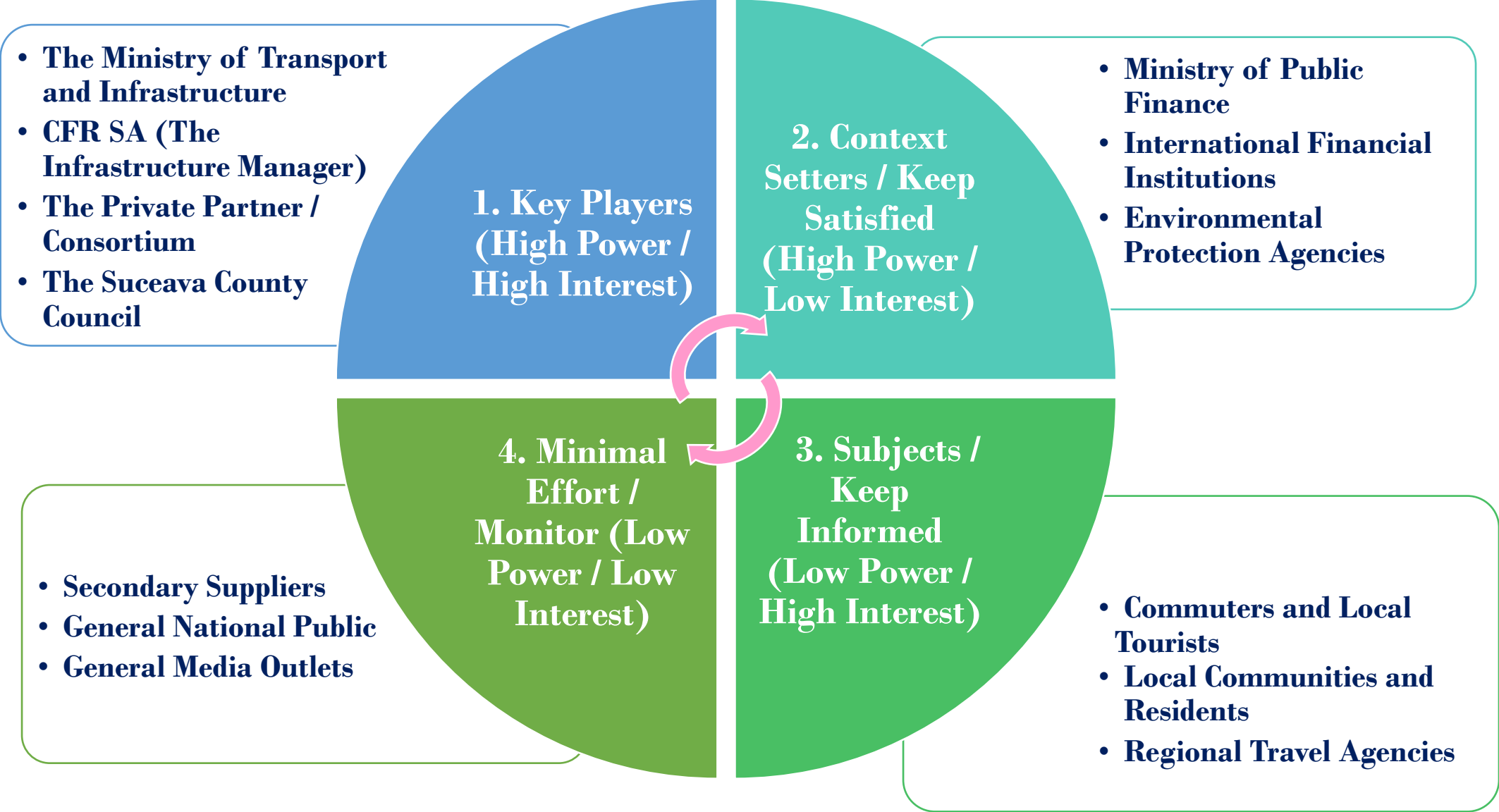
The Private Operator Representative:

Analyzing the "Risk-Reward" ratio. Interviewing a manager from a private railway company (e.g., Softrans) to identify what guarantees the state must provide to attract private capital.

The Tourism NGO Representative: (e.g., Asociația de Turism Bucovina)

This interview focuses on how the railway integrates into the broader "destination management" and the impact of the current "rail-gap" on the international image of the region.

Mapping Stakeholders and Interest Groups: The Ecosystem of Suceava's Railway PPP



4. Mapping Stakeholders and Interest Groups: The Socio-Economic Ecosystem of the PPP

The successful implementation of a Public-Private Partnership (PPP) for the revitalization of Suceava's tourism and railway infrastructure depends on the strategic alignment of a diverse array of stakeholders. In an academic sense, these actors are categorized based on their salience, power, and legitimacy. The following analysis details the three primary sectors involved, highlighting their institutional strengths, inherent weaknesses, and strategic relevance to the proposed partnership.

Stakeholder Group	Strengths	Weaknesses	Role in PPP
Ministry of Transport	Access to PNRR (Recovery Fund) capital.	Bureaucratic inertia; lack of market vision.	Concedant/Regulator.
Private Operator	Technical agility; customer-centric management.	High sensitivity to track access charges.	Investor/Operator.
Civil Society and Research Institutions	High technical expertise and public trust.	No formal decision-making power.	External Audit / Technical Validation.
The Passengers: The Ultimate Stakeholder	Determine the financial viability	Passengers view the current state of CFR as a failure of the state.	Most critical stakeholder.

5. Implementation Stages of the Public-Private Partnership (PPP)

5.1. Analysis of Tourism and Infrastructure Potential

Before any contractual obligations, a rigorous audit of the current regional assets is mandatory. This involves evaluating the technical state of the tracks, the architectural viability of historic stations, and the latent demand for "Slow Travel" in Bucovina.

Practical Example: This mirrors the Swiss "Master Plan 2030" for Rail, where every kilometer of mountain track was assessed for its dual role as both a transport utility and a tourism asset. In Suceava, this step identifies that the Mestecăniș pass has the highest "scenic value" and should be the focal point of the panoramic service.

5.2. Identification and Selection of Private Partners

The public sector must move beyond traditional "lowest-bidder" auctions toward Competitive Dialogue. This allows the Suceava County Council and the Ministry of Transport to discuss technical innovations with potential operators (e.g., Alstom, Siemens, or private operators like Astra Trans Carpathic) before final tenders are submitted.

Practical Example: The selection process for the High Speed 1 (HS1) in the UK, where the concession was awarded based on the operator's ability to maximize both passenger numbers and retail revenue within the stations, not just track maintenance.

5.3. Elaborating the Feasibility Study (FS)

An academic-grade Feasibility Study must analyze the Net Present Value (NPV) and the Economic Internal Rate of Return (EIRR). It must answer if the "Scenic Bucovina Express" can break even through ticket sales, or if it requires "Availability Payments" from the state.

Practical Example: The JASPERS (Joint Assistance to Support Projects in European Regions) framework used for the modernization of the Romanian railway Corridor IV. For Suceava, the FS would include a climate-risk assessment for the mountainous terrain.

5.4. Defining the PPP Contractual Framework

This is the legal bedrock of the project. The contract must clearly define the Risk Allocation Matrix. In railway PPPs, the public sector usually retains "Regulatory and Land Risk," while the private partner assumes "Construction, Maintenance, and Commercial Risk."

Practical Example: The DBFMO model (Design, Build, Finance, Maintain, Operate) used in the Netherlands for the HSL-Zuid high-speed line. The contract specifies penalties if the private operator fails to meet cleanliness or punctuality.

5.5. Infrastructure Implementation and Rolling Stock Procurement

This stage involves the physical restoration of stations (e.g., Vatra Dornei Gara Băi) and the delivery of specialized rolling stock. This is the most capital-intensive phase, requiring synchronized efforts between civil engineers and hospitality designers.

Practical Example: The Rhätische Bahn (RhB) in Switzerland, which successfully integrated modern, panoramic "Goldener Pass" carriages onto century-old tracks, proving that historic infrastructure can host cutting-edge technology.

5.6. Performance Monitoring and Evaluation

The final stage is an ongoing process of auditing. Key Performance Indicators (KPIs) must be monitored through digital systems and passenger feedback. If the private partner maintains high satisfaction and punctuality, they receive "performance bonuses."

Practical Example: The Performance Regime of Network Rail (UK), where delays are tracked to the minute. If a delay is caused by the operator, they compensate the state; if caused by the track, the state compensates the operator. This ensures accountability for the traveller.

5.7. Strategic Integration: Tourism-Driven PPP Synergies

The modernization of the Suceava–Vatra Dornei railway serves as more than a logistical upgrade; it acts as a structural catalyst for the regional tourism economy. By addressing the root cause of regional underdevelopment—geographic and temporal isolation—the railway PPP creates a "platform effect" upon which secondary, high-value partnerships can be built.

Conclusion on Synergies

Ultimately, the railway PPP treats the structural cause of economic stagnation. Without this foundational artery, tourism initiatives remain fragmented and sub-scale. By prioritizing the rail link, Suceava adopts a top-down infrastructure strategy that empowers the bottom-up growth of the private tourism sector, ensuring that the "Gate to Opportunity" remains open for generations to come.

6. Conclusions and Future Directions for Development



Key findings

Bridging the Capital Gap:

Private investment addresses the chronic underfunding of state infrastructure, enabling rapid modernization of rolling stock and station heritage sites.



Enhancing Service Quality:

The shift to performance-based contracts ensures that the "Customer Experience" (punctuality, cleanliness, and amenities) becomes the primary Key Performance Indicator (KPI), a marked improvement over current service levels.



Market Alignment:

The proposed "Scenic Rail" concept aligns with global "Slow Travel" and eco-tourism trends, identified as high-value market segments that generate significantly higher revenues than conventional travel.

Vertical Integration: From Rail to Resort

The Vatra Dornei Spa & Wellness Hub PPP:

A subsequent project could involve a private operator managing the historic mineral water springs and a modern medical-wellness center, linked directly via shuttle services to the main railway station.

The "UNESCO Monasteries" Digital Ticketing PPP:

Integrating access to cultural sites into the transport ticket, managed by a private entity specializing in cultural heritage marketing.

Climate Adaptation and Environmental Resilience

Green Infrastructure:

Investing in hybrid or hydrogen-powered rolling stock is essential, positioning Suceava as a leader in green transport.

Data-Driven Management:

Utilizing data collected from the rail PPP (e.g., real-time weather data from the Mestecăniș pass) to inform regional climate adaptation strategies

Ensuring Social Equity and Community Engagement

Benefit Sharing:

Contractual clauses guaranteeing local employment targets and transparent revenue-sharing models (e.g., a percentage of scenic-ticket sales funding a local infrastructure improvement fund).

Preservation of Authenticity:

Balancing the need for high-end international tourism with the preservation of the unique cultural heritage of the Dorna basin.

Final Prognosis

The current state of Suceava's railways is a symptom of **institutional neglect**, but it holds the blueprint for the **county's future prosperity**. A PPP model allows the state to leverage private efficiency to save the public heritage.

The Public-Private Partnership model offers a **viable, robust, and sustainable solution to unlock Suceava's vast tourism potential**. On a long-term horizon, the success of this strategic shift hinges not just on financial returns, but on adaptability to climate challenges, rigorous environmental protection, and the meaningful **empowerment** of the local Bucovina communities. By transforming the "**Iron Way**" into a "**Scenic Gateway**," Suceava can transition from a peripheral destination to a central node in the European Cultural Routes.



THANK YOU FOR
YOUR ATTENTION!