Article

Approach to Regional Tourism Potential Assessment in View of Cross-Sectoral Ecosystem Development

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Abstract: The regional tourism industry along with its various components and stakeholders involved in the development of regional tourism products (TP) and the value chain can be interpreted as ecosystems. A concept of creating a regional cross-sectoral ecosystem is presented and described. It brings together all interested parties (actors), including government authorities and various business representatives. The approaches to determining the level of attractiveness of a region for the formation of a tourism ecosystem based on the assessment of its tourism potential (TP) are the research subject. The research methodology presents an algorithm for assessing the tourism ecosystem formation attractiveness through assessment of key performance indicators assessing territorial TP. The purpose of the study is to develop strategic guidelines for increasing the efficiency of using tourism potential to form a regional ecosystem (a case study of the Penza Region). The conducted analysis has highlighted strategies (institutional; business image; cultural and educational; innovation and technology) that determine the key vectors for the development of tourism potential of the Penza Region.

Keywords: tourism product; tourism potential; tourism product life cycle; ecosystem concept; tourism ecosystem; assessment approach

1. Introduction

The latest global political issues, the present tourism policy of the Russian Federation and other countries, the impact of socio-economic factors and the COVID-19 pandemic, and the current state of global tourism have stimulated an increase in demand for travel within the country and the development of domestic tourism.

Nowadays, the issues of managing the tourism industry in the Russian Federation are becoming relevant in terms of finding optimal organizational and managerial approaches and solutions. Evidently, a well-structured, sustainable and competitive model is needed for its further development. The regional tourism industry along with its various components and stakeholders involved in the development of regional tourism products (TP) and the value chain can be interpreted as ecosystems. Therefore, ecosystem reference models should be proposed and improved to accelerate regional development.

It is essential that the process of managing the tourism industry should be carried out taking into account the interests of consumers of the tourism product and consumer behavior trends. Its ultimate goal is tourism development in specific tourist areas considering the interests of individual industry participants (tour operators and travel agencies,
accommodation facilities, public catering establishments, transport enterprises, culture institutions, etc.) that form a territorial tourism ecosystem (TE) and participate in the development, implementation and promotion of the tourism product.

In the modern literature devoted to tourism development, the importance of including a wide variety of participants (actors)—consumers, government organizations, financial institutions, local communities, cultural institutions, etc., in the process of joint creation and implementation of a tourism product is actively discussed [1–3]. According to McDonald [2], current research does not take into account the relationship complexity between participants in the tourism industry while creating a tourism product. However, the process of forming a range of competitive tourism products and creating tourist flows in the territory depends on the effectiveness of this interaction. The few papers raising such issues propose no solution thereto [4,5]. In this article, the authors have attempted to present an ecosystem approach to the management and development of the tourism industry. The necessity to ensure the technological sovereignty of the country actualizes the task of analyzing and theoretically understanding the impact of development processes of digital platforms and ecosystems on the creation of new technologies and business models in the tourism industry. For the effective management of the tourism industry in modern realities, it is essential to consider the complexity of tourism processes. Therefore, it is reasonable to talk about competition between integrated business structures in the form of value chains (networks) rather than between individual companies. Much research has been devoted to the role of networks in the modern economy, but the issue of adapting such structures in the context of industry development is currently poorly studied.

The ecosystem approach to tourism is especially relevant due to the development of so-called sustainable tourism. According to [6], sustainable tourism is defined as “tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities.” Thus, it considers numerous interdependent actors, which makes an ecosystem perspective essential for understanding tourism in this context. It is tourism that allows the territories to fully implement and support the processes of sustainable development in three main areas: economic (providing income for the local population and creating new jobs), social (assuming the preservation of traditional and cultural ways familiar to local residents), and environmental (allowing for preserving and cultivating the existing resources of the natural environment).

To achieve a balance of various components of tourism development, it is necessary to carefully consider and develop methodological and integrated approaches to assessing the prerequisites and prospects for using tourism as a system-forming factor that ensures the economic and social well-being of the regions.

Research hypothesis: an efficient usage and development of the territorial tourism potential is a prerequisite for the tourism ecosystem formation and evolution on this territory.

The remainder of this article is organized as follows. After this introduction, in Section 2, we provide a theoretical overview of tourism development, presenting the relevant terminology and underlying concepts. The research object and purpose of the study are also described here. Section 3 presents a conceptual framework including the prospects for using the ecosystem approach in tourism. Section 4 is about a methodological foundations of the research, introducing the authors’ conceptual assumptions and chosen approaches. An algorithm for assessing the level of tourism ecosystem attractiveness is developed, and the system-forming components of territorial tourism potential are developed and assessed here with the example of the Penza Region. Section 5 focuses on the implementation of the proposed methodological approach. We illustrate our assumptions with an empirical case study of the Penza Region. Section 6 highlights the key findings of the study and presents the theoretical contributions and practical significance. The authors identify the strategies that determine key vectors for the development of the tourism
potential of the Penza Region. Finally, in Section 7, some limitations of the research and future research perspectives are proposed.

2. Theoretical Background

The development of tourism in a certain area is accompanied by the ongoing process of developing and forming an assortment of competitive tourism products. Due to the territorial affiliation of the latter, it is critical to discuss the development of a tourism product in the context of the territorial affiliation of tourist services included therein.

At present, there is a variety of tourism products on the tourism market. They can be categorized according to different criteria, including the ones in the context of territorial tourism development:

(1) Tourism products are classified according to a tourist residence, territorial affiliation of tourist services, and the type of tourism. These are developed for purposes of domestic, inbound and outbound tourism focused on various target audiences (e.g., tourism products for the Chinese, Italians, Americans, etc.). One of the objectives of [7] is the all-round development of domestic and inbound tourism by creating conditions for the formation and promotion of a quality tourism product that is competitive on the domestic and global markets. The updated goals for inbound tourism and the total number of tourist trips are as follows: more than threefold increase in the number of tourist trips; an increase of more than eight times in inbound tourist trips of foreign citizens to Russia; and an increase in the volume of exports of services (trips) from USD 2.85 billion (in 2020) to USD 28.6 billion by 2035.

(2) Tourism products are classified according to the purpose of a trip, the availability of certain tourist services in the territory, and the type of tourism. These are developed for cultural and cognitive, event, educational, sports, gastronomic, business, cruise, ski, ecological, and other types of tourism. Such products include tourist services that correspond to the main purpose of the tourist travel. Their development in a particular territory depends on the correspondence of factors and means of production to the needs of tourists and the type of tourism, considering the state of resources and the overall socio-economic state of the territory. One of the objectives of [7] is the formation and development of the tourism product of the Russian Federation, taking into account the cultural, natural and ethnic diversity of the regions of Russia. In the Russian Federation, certain types of tourism (cultural, educational, children, cruise, ski, business, and environmental) that require state support and investment have been identified.

(3) Tourism products are classified into regional, interregional and international ones according to the territorial affiliation of tourism services. These include tourist services of certain territories (one or more) and are developed taking into account the availability of factors and means of production in the territory. Each country specifies areas that have resources to create competitive tourism products (as a rule, specialized ones), with the development of tourism therein being a priority. When defining such areas, the current and potential role of tourism in the socio-economic development of the territory is taken into account. In the Russian Federation, the priority is the development of territories for which tourism is defined as a promising economic specialization [7]. For such territories, the development plans including the concept of development are created; a list of infrastructure and investment projects is formed; and a financial model for implementing the development plan is developed.

Additionally, tourism products are classified depending on the composition of tourism services (automobile, bus, air or rail; with and without meals, etc.); on their orientation to the target audience (for children, youth or people of retirement age; individual or group, etc.); and on the cost of tourist services.

Some authors term a tourism product as a service or a set of services (at least two) that are interconnected and differ in functional features [8]. Such a definition correlates with the one given in the Federal Law No. 132 [9], and it is relevant to consider from the perspective of the activities of tour organizers in the market as a result of agency–operator
production. It emphasizes that the nature of developing a tourism product is to combine different tourism services. Other researchers consider a tourism product as a complex and abstract product, consisting of various tangible and intangible elements such as goods, works and services, intangible benefits, information, intellectual property, etc., necessary to meet the needs of tourists during the trip [10–12]. This definition is relevant in the context of territorial tourism development.

Other authors consider the process of developing a tourism product in terms of the level of individual tourism services, based on production factors (tourist and labor resources), means of production (infrastructure and superstructure of the tourism and hospitality industry), and production technologies (a set of knowledge, experience and methods) [13–15], which is especially important in the context of territorial tourism development. According to [13] and [15], the three components stimulate the process of producing a tourism product that is in demand on the market. These components should meet the following requirements: the number of components should provide opportunities for further growth in production volumes; the quality of the components should ensure the creation of a high-quality tourism product; the temporal and spatial unity of the components should generate conditions for creating a tourism product in a limited space (tourist territory); it is necessary to have those responsible for the use of components (owners, other right holders); and it is necessary to have a coordinating center, being the initiator and the investor of producing a tourism product [12]. This approach considers the process of developing a tourism product at several levels: the level of public catering establishments, accommodation facilities, transport enterprises, cultural institutions (hereinafter referred to as travel service providers); and the tour operator and the territorial level as a whole. It emphasizes the importance of having resources on the territory for the development of tourism products and the role of tourism administrations and investors in the development, implementation and promotion of tourism products.

In this article, the authors understand the term of “territorial tourism product” as a tourism product created on the basis of the unique tourism potential of the territory to meet the needs of tourists.

In our view, the tourism potential is a set of opportunities for using the tourism resources of the territory to form unique demanded tourism products that are attractive for the maximum number of tourists.

Here we consider the following important aspects reflected in this definition:
- Reflection of the basic element of tourism potential—tourism resources of a territory (natural, cultural, human, social, etc.);
- Relationship of tourism potential with demand, as well as with the uniqueness of tourism products;
- Focus on customer satisfaction as a criterion for the use of the tourism resources of a territory.

The importance of the tourism industry and its impact on the socio-economic development of countries and individual territories has been thoroughly studied in recent decades by researchers from different countries and fields of knowledge. These studies recognize tourism as one of the driving factors that determine both economic growth and the overall socio-economic development of the territory [16–18].

Provided the policy of the Russian Federation is aimed at the development of domestic and inbound tourism being a priority for many territories of the country, an important area of modern research is not only assessing the impact of tourism activities on territorial development, but the formation of approaches and methods for assessing the attractiveness of territories for investment in the tourism industry. According to [19], the attractiveness of a territory for investment is viewed from the standpoint of socio-economic, natural and other features, and means, opportunities and restrictions that determine the inflow of capital.
This is especially relevant given the fact that in the process of developing, implementing and promoting a tourism product, providing tourism services in a certain territory, a large number of different participants in the tourism and hospitality industry are involved, forming a territorial tourism ecosystem. The introduction of digital technologies in the process of managing the tourism industry will create an effective system of interaction between process participants at different levels, reduce transaction costs, and create a value proposition for consumers. One of the objectives of the Strategy for the Development of Tourism in the Russian Federation for the period up to 2035 [7] is the introduction of digital technologies in the industry. These allow for collecting and processing a large amount of information and various data in order to create a system of indicators for analyzing and interpreting this information while managing the tourism industry.

At present, there is considerable potential for the development of Russian digital platforms. However, the degree of their influence on the development of the real sector of the economy seems to be insufficient due to the use of outdated organizational and economic management models. In our opinion, it is necessary to restart and expand processes of using the tourist potential of the territory through digital platforms and the formation of ecosystems for intensifying the processes of socio-economic development at the regional level. Wherein, great diversity and unevenness in the socio-economic and other parameters of the development of the internal territory of our country hinder the solution of issues related to assessing the attractiveness of the territory for the formation of a tourism ecosystem in a particular region.

The object of this study is the tourism potential of the region. The approaches to determining the level of attractiveness of a region for the formation of a tourism ecosystem based on the assessment of its tourism resources are the research subject. The purpose of the study is to develop strategic guidelines for increasing the efficiency of using territorial tourism potential to form a tourism ecosystem of the region (a case study of the Penza Region).

3. Conceptual Framework

3.1. Prospects for Using the Ecosystem Approach in Tourism

The development of tourism ecosystems in the regions of Russia plays a decisive role not only for economic growth and development, but also for creating a socially sustainable and safe environment and preserving natural and historical values and cultural heritage.

In biology, an ecosystem is perceived as an ecological community consisting of different populations of organisms that live together in a particular habitat. Its various elements are interdependent in a complex manner, and a change in one element affects the entire ecosystem as a whole. Biological ecosystems have served as a source of inspiration for introducing the term (business) ecosystem to the field of management. Moore [20] was probably the first to do so, and many managers, policy makers and academics have followed him since. Adopting the term ecosystem seems appropriate because, like biological organisms, organizations are embedded in their environment.

Some authors define an ecosystem as a dynamic entity consisting of a heterogeneous, interdependent and continuously evolving set of actors that, positively or negatively, can influence or can be influenced by a value proposition (in the form of a product) [21]. While biological ecosystems tend to be geographically defined, business ecosystems center on a value proposition (the value proposition is created by a tourism product in a tourism ecosystem). Every tourism product has its own ecosystem, and it can include actors localized in this region, from other regions of the country, and from all over the world. Defining an ecosystem in terms of a specific value proposition implies that ecosystems overlap and thus influence each other.

A tourism ecosystem is viewed as a network association of various economic entities with the aim of developing, implementing and promoting tourism products on the basis of their uniqueness, competitiveness and customization.
Due to the indirect influence of some actors, the boundaries of the ecosystem are difficult to formalize. Ultimately, they comply with the general rule: the ecosystem encompasses all actors focused on achieving the results of the value proposition, without reference to geographic boundaries.

The nature of the tourism ecosystem consists in the special principles of combining actors, which allow us not only to implement a value proposition and provide the entire life cycle of a particular tourism product, but also to create a friendly environment based thereon to generate new ones.

A core characteristic of ecosystems is that ecosystems are inhabited by actors that can influence or can be influenced by the value proposition, which makes the actors interdependent [22].

Actors that have no influence on the value proposition and that are also not influenced by it are deemed irrelevant and fall outside the ecosystem. Actors that are not influenced by the value proposition but do have an influence on the value proposition are labeled required actors of a tourism ecosystem, as they hold resources that are required for the success of the value proposition (tourism product). Actors that equally influence and are affected by the value proposition are called interdependent actors. For example, local governments not only can influence the value proposition (e.g., by installing regulations), they also directly feel the consequences of the tourism ecosystem in terms of the socio-economic development of the region and the improvement of its management efficiency.

Another set of actors is fringe actors, that is, actors that are influenced by the value proposition but that have few resources of any importance to the success of the value proposition and thus have little power (e.g., local residents who may experience inconvenience due to rising prices for goods and services in the region where the ecosystem is developing). However, the importance of the fringe actors increases many times over when it comes to sustainable tourism. Furthermore, the very demonstration of attention to the fringe actors also implies the socially responsible behavior of the participants, thereby increasing their reputation, and, as a result, the effectiveness of the implementation of the value proposition.

The classification of actors is presented in Figure 1.

**Figure 1.** Classification of tourism ecosystem (TE) actors in relation to the tourism product (TP). Source: own elaboration.

In previous studies, the authors introduced a classification of ecosystem participants depending on the life cycle of a tourism product (project) implemented through an ecosystem association [23]. These are:
✓ Pacemaker—an actor who initiates an idea, project, or process that inspires ecosystem unification in a given period of time;
✓ Integrator—an actor who unites other actors for an idea or project and analyzes and evaluates the necessary competencies of actors and the degree of their economic security for other participants. This task can be performed by universities, research organizations, project offices, and digital platforms that accumulate knowledge, competencies, and international experience;
✓ Developers—actors involved in the development and prototyping of new processes;
✓ Implementers—actors implementing new projects and processes on their site;
✓ Promoters—actors providing the promotion of implemented projects and conversion of past projects’ experience into new projects and project commercialization.

Following the authors’ terminology, a tourism product is the value proposition or a pacemaker in the tourism ecosystem. TE actors can play different roles in the ecosystem depending on the life cycle stage of the implemented TP.

It can be noted that throughout the entire life cycle of a tourism product (its development, implementation, and promotion, the provision of tourist services), a large number of different TE actors are involved (tour operators and travel agencies, accommodation facilities, catering establishments, transport enterprises, cultural institutions, sectoral ministries and departments, local authorities, the Government of the Russian Federation, etc.), each playing a role in the value proposition creation chain.

Table 1 shows the potential roles of TE actors.

| TE Actors                  | Purpose and Objectives of the Actor in TP Development | Potential Roles of the Actor in TP Implementation, Promotion and Consumption | Potential Roles in TE |
|----------------------------|------------------------------------------------------|------------------------------------------------------------------------------|-----------------------|
| **Tour operator companies** | Fulfill the primary function of developing tourism products; initiate the creation of innovative products, forming a certain range thereof; deal with tourism service providers and select them for inclusion into tourism products and booking systems | Play a key role in TP implementation and promotion via controlling the quality of tourism service performance and working in partnership with travel agency companies and tourism service providers; may sell tourism products on their own or through travel agency companies using booking systems | Integrator, Developers, Implementers, Promoters |
| **Travel agent companies** | Participate in TP development via selecting tourism services and creating tours that meet the request of tourists in the booking systems of tour operators | Carry out TP implementation and promotion through the booking systems of tour operators via direct contact with tourists and informing them about the tourist services included in the product | Developers, Implementers, Promoters |
| **Tourism service providers** | Participate in TP development as the tour operator partner by selecting services from their range that correspond to the product model and service program; the tour operator enters into contracts therewith on the basis of various cooperation schemes by buying/booking blocks or quotas of places in hotels and aircrafts, or from other service providers | Participate in TP implementation, acting as service providers; can be involved in TP promotion | Developers, Implementers, Promoters |
| **Consumers** | Can initiate a new TP | Make purchasing decisions (emergence of a need/problem, search for options, choice of a product for purchase, and the purchase itself); consume individual tourist services according | Pacemaker, Promoters |
In order to assess the feasibility of forming TE and developing strategic proposals, it is necessary to assess both the potential of the territory dominating in TP implementation and the ecosystem potential of each actor.

3.2. The Structure of Territorial Potential for Tourism Ecosystem Formation

As mentioned above, TE is not just an association of various economic entities united by one goal (implementation and promotion of TP), but the formation of a special partner-friendly environment that allows for initiating new innovative tourism products that are customized, mass, intra-regional and integrated into cross-territorial ones.

The formation of such an environment imposes the following principles on each TE actor to comply with:

1. **Client orientation.** A tourism product is created with the aim of maximizing the positive experience of a tourist throughout the trip. Therefore, it is important to create a positive customer experience and take into account consumer preferences when developing, implementing and promoting TP, and providing tourist services. Particular attention should be paid to the consumer properties of tourism products, which make them attractive to different target audiences and competitive both in the domestic and in the global tourism market;

2. **Collaboration, trust, and security.** A large number of various actors in the tourism industry are involved in the development, implementation, and promotion of a tourism product and the provision of tourism services (tour operators and travel agencies, tourism service providers (accommodation facilities, catering establishments, transport enterprises, cultural institutions, etc.), digital intermediaries, and tourism administrations), with each performing its own functions. It is vital to consider the interests of all participants, whose actions should be subject to a single goal, be coordinated, and be aimed at creating a competitive tourism product that meets the needs of tourists, while maintaining its position in the market. The efficiency of the tourism product life cycle (TPLC) management process will depend on the effectiveness of each industry participant at various TPLC stages and their interaction with each other and with consumers, and on the tourism policy of the territory as a whole. The effective interaction between actors is influenced by reputational attitudes and managerial priorities that ensure the security of the partnership;

3. **Promotion of natural, historical and cultural values of the region.** The processes of development, implementation, promotion, and consumption of tourism products are associated and related to a specific territory that possesses certain tourism potential and tourism resources. The participants in these processes should aim at promoting
the values of the region in order to form its image and create tourist flows in the context of sustainable tourism development;

4. **Openness, flexibility, and speed of adaptation to external challenges.** There is an everlasting impact of numerous external and internal influences while implementing a tourism product along the entire value chain. These are climate, political, technological, and personal challenges. Each TE actor should both be ready for such challenges and establish a system of preventive measures to ensure high-quality fulfillment of their goals and objectives within the framework of ecosystem interaction;

5. **Proactivity and innovativeness.** An ecosystem prioritizes cooperation over competition, which implies synergy in the exchange of ideas, information and approaches between ecosystem actors.

The implementation of these principles presupposes not only the desire of individual economic entities to become a part of TE, but also their capabilities, which are often directly dependent on the potential of the territory where the entities operate. Any tourism product is localized in a certain territory, which can be both attractive to potential participants in terms of creating a specific value proposition in this region, and vice versa. In order to assess the attractiveness of a tourism ecosystem for new participants, mainly those having necessary resources (tour operator companies, accommodation facilities, catering enterprises, transport companies, investors, etc.), we propose identifying the system-forming structural elements of a tourism ecosystem. Thus, the general hierarchy of the studied terms will be as follows (Figure 2).

![Figure 2. Hierarchical multi-level structure of territorial tourism potential. Source: own elaboration.](image)
The attractiveness of the formation of a tourism ecosystem for participants is using the tourism potential with the involvement of the management potential of a territory to create unique demanded tourism products based on the principles of the ecosystem described above (client orientation; collaboration, trust, and security; promotion of natural, historical and cultural values of the region; openness, flexibility, and speed of adaptation to external challenges; and proactivity and innovativeness).

Let us consider the components of the tourism potential of a territory.

**Recreation natural potential** is of great importance for the development of tourism. It is subdivided into:

1. Natural resources are “mineral, plant, and animal formations of the Earth’s biosphere when viewed as a means of production of oxygen, water filter, erosion preventer, or provider of other ecosystem services” [24] (p. 52). These are actual tourist areas, natural monuments, water and air resources, and flora and fauna;

2. Ecological resources are “ecosystem resources capable of maintaining and reproducing the ecological balance and the environmental benefits associated therewith” [25], (p. 36), which is particularly relevant in the context of sustainable tourism development;

3. Recreation resources are considered as a part of natural and cultural resources to provide recreation as a means of maintaining and restoring working capacity and human health. In relation to the tourism industry, recreation natural resources can be seen from the standpoint of the territory’s ability to use the total natural and recreational resources in tourism activities without prejudice to itself and, consequently, the population. They are characterized by natural and climatic conditions, land, forest, and water resources, including balneological resorts and sanatoriums; natural landscapes; peculiarities of territorial geological and geomorphological structure; the presence of rare species of flora and fauna and the number of specially protected natural areas; the opportunities for hunting and fishing; territorial hydrological regime; and favorable environmental conditions, etc. [26].

In regard to the tourism industry, the following **socio-cultural potential** components imply the ability of the territory to reproduce the labor force necessary for tourism activities:

1. Social resources are “social relations between people or groups of people whose life activity is connected with a specific territory to be advanced along with for sustainable development” [27] (p. 920). An important component of social resources is a system of social relations between the representatives of a given territory, characterized by affinity, intercourse, networks of informal relations between contractors of business relations, common interests, needs, etc. In relation to the tourism industry, this potential can be represented by specific national and cultural foundations and the goodwill of the local population, and the presence of guarantees for the safety and comfort of tourists;

2. Human resources are “innate abilities and acquired knowledge, skills and motivations that a person possesses, acquiring thereof through general and special education, training, and work experience, the appropriate use of which contributes to an increase in income at the level of an individual, enterprise or society” [28], (p. 34). They are characterized by a set of business investments in the reproduction of the labor force, work organization and personnel development, including education costs and consumer spending (current costs of families and government spending for...
food, clothing, housing, education, health care, culture, etc.). In relation to the tourism industry, human resources are determined by the total qualifications and professional abilities of employees of territorial tourism enterprises; the outcomes of these enterprises in the field of labor organization and staff development; and the accumulated investments of the territory in education, training and retraining of workers in the tourism industry, job-match service and employment [26];

(3) Demographic resources are regulated by the totality of demographic characteristics of the region’s population that affect the development of various areas of the economy;

(4) Cultural resource is, on the one hand, “a set of material objects, complexes of objects located in a given territory, parts of the territory that are of cultural value, works of art, cultural heritage, etc.” On the other hand, it is “intellectual capital in the form of customs, traditions, ideas, beliefs, values that are shared by the social groups of the population living in a given territory” [28] (p. 68). In relation to the tourism industry, cultural resources refer to the presence of historical, cultural, architectural and archaeological monuments, places of famous historical events; well-known cultural events, music and folklore festivals, fairs, exhibitions, and museum complexes; the presence and preservation of traditional folk crafts and settlements, and folklore monuments; and holding traditional and religious holidays and other religious and cultural events [26];

(5) Educational and science resource is “a set of teaching staff, research scientists, educational and scientific institutions, scientific and technical potential, scientific groundwork and contribution to the development of the territory” [28];

**Investment and financial potential** involve the potential that characterizes territorial capacity to reproduce tourism products, and includes the following components:

(1) Industrial production resources involve enterprises that operate on the territory, produce goods and provide services, as well as the means of production involved in production processes (buildings, structures, transport, etc.) [27];

(2) Investment resources include all types of resources of the territory that bring economic benefits and ensure financial and investment well-being thereof, and the accumulated amount of money, securities and other property and rights with a monetary value, invested in objects of entrepreneurial activity and institutional conditions for carrying out entrepreneurial activity in order to make a profit or achieve another beneficial effect. In relation to the tourism industry, these resources are characterized by the amount of funds that the territory can dispose for the implementation of tourism activities, as well as the total opportunities for investing in tourism activities.

**Infrastructure potential** is a system of material objects that have extensive connections, both internal (between objects of the same or different types of infrastructure) and external (with other objects of the regional economic environment) [29]. It is a set of requirements, norms, rules and regulators that affect business processes in the region and establish the rules for the interaction between subjects, as well as the aspects related to transport security and logistics accessibility.

In relation to the tourism industry, these types of potential are characterized by the presence of a modern tourism infrastructure; the number of tourism enterprises, including their ability to accommodate a large number of tourists and meet the needs thereof; satisfactory transport infrastructure; and the availability of a sufficient number and range of tourism products, etc. [26].

**Entrepreneurial potential** involves the resources of small, medium and large businesses, local governments and other economic entities engaged in entrepreneurial activities in a given territory, used to extract entrepreneurial profit. Entrepreneurial potential includes an information component—a set of organizational, technical and information capabilities that provide the preparation and adoption of managerial decisions and influence the nature (specifics) of tourism product production by collecting, saving, processing
and disseminating information resources. In relation to the tourism industry, it is characterized by state protectionism in tourism development; the economic entities being interested in the development of tourism; the presence of organizational and economic opportunities for orienting social production towards serving tourists, forming a single information field in the field of tourism, creating a tourist information center, etc. [26]. This potential can be related to the availability of competent personnel in the field of tourism management; and the formation, organization and creation of appropriate conditions for the functioning of territorial tourism industry and providing tourist services.

Such a division into potential groups is rather contingent since the components of one group can be attributed to another one provided certain conditions. The presented list is not final and exhaustive and may be changed and supplemented depending on the objectives of the study.

According to a systematic approach, the object of tourism creates the so-called tourism potential of needs, having a subjective and changeable nature; the subjects of tourism are the basis for the formation of the total tourism potential of opportunities having an objective nature. In this regard, a tourist plays a decisive role in the tourism ecosystem [30].

4. Materials and Methods

Methods for Assessing Tourism Potential of a Territory

The formation and development of a tourism ecosystem attractive for its participants is due to the aggregate tourism potential, which can be assessed through a comprehensive analysis of the tourism resources in a territory. It is recommended to carry out such an assessment via a system of indicators.

The stages of assessing the level of TE formation attractiveness are given in Figure 4.

Figure 4. An algorithm for assessing the level of tourism ecosystem formation attractiveness. Source: own elaboration.

This algorithm and technique have been previously used and described by the authors in detail [31,32]. Therefore, we will skip individual stages and proceed to the further material based on the final calculation results.

The main criteria (blocks and key performance indicators (KPIs)) are highlighted. It is necessary to evaluate each criterion in accordance with the goals of building a tourism ecosystem by scaling data in the range from 0 to 1.

For this purpose, it is initially essential to single out a list of indicators for assessing the elements that form the tourism potential of a territory.
An allocation of potential-forming elements is not established permanently. These will change depending on the strategic goals of the socio-economic development of the territory.

Potential-forming elements have an unequal influence on TE formation, each being represented by a wider range of indicators. After grouping and processing the results of the primary study, a range of debatable issues is determined to test the status of the evaluation criteria (actual, qualitative, and expert) for assessing the potential for each group.

An assessment of territorial potential is premised on the estimate of threshold values of its component parts. A system for evaluating TP blocks is based on qualitative and quantitative indicators.

The paper proposes to evaluate the level through assessing KPIs for each tourism potential (TP) block (recreation natural, socio-cultural, entrepreneurial potential, etc.), and the indicators are assessed within each block in the complex.

The following scores are determined for further evaluation:
- From 0 to 0.3 (Red zone)—critical values of TP indicators; a low level of territorial attractiveness for TE formation;
- From 0.4 to 0.7 (Yellow zone)—the optimal value of TP indicators; an average level of territorial attractiveness for TE formation;
- From 0.8 to 1 (Green zone)—the high level of territorial attractiveness for TE formation.

Each KPI value is assigned a score depending on the indicator result.

The level of TP assessment as a whole (taking into account its blocks) is proposed to be determined in the following sequence [33]:

1. First of all, it is necessary to calculate the relative estimates of KPI indicators for each TP block according to the Formula (1):

   \[ O_i = \frac{1}{N_i} \times n_i \]

   where \( O_i \) is the relative assessment of the \( i \)-th TP block;
   \( N_i \) is the number of KPIs in the TP block;
   \( n_i \) is the score in accordance with the zones of KPI threshold values of the \( i \)-th block.

2. Further, the weights \( B_i \) of each TP block are determined. In this work, a scale from 1 to 5 is used, where 1 is the least significant value and 5 is the most significant value.

   The total value of the weights must be equal to 5.

3. As a result, the integral TP assessment is calculated as a weighted average of all values. If the integral assessment is equal or closer to 1, this indicates a high level of TP development and high attractiveness for TE formation in the region. Therefore, a value less than 0.5–0.4 indicates a weak potential. The analysis of individual blocks will allow for determining the least-stable indicators.

Twenty experts were involved in the calculation of weight coefficients by means of an expert assessment in the Penza Region. Expert groups are formed from representatives of regional and local authorities (Coordinating Council under the Government of the Penza Region on the tourism development and implementation of legislation of the Russian Federation in the tourism sector in the Penza Region; the Center of cluster development of the Penza Region, etc.), representatives of the tourism businesses, higher-educational institutions and public organizations, as well as consumers.

To assess the degree of consistency of views by the experts involved in the study, it is proposed to use the coefficient of concordance, defined by the following formula:

\[ W = \frac{12S}{n^2(m^3-m)} \]

where \( S \)—a sum of squared deviations of all grades of ranks of each object of examination from the average value;
\( n \)—a number of experts;
The value of the coefficient of concordance is in the range from 0 to 1, indicating, respectively, either the inconsistency of the experts’ opinions, or their complete consistency. The significance of the coefficient of concordance is assessed using the Pearson approval criterion ($\chi^2$), the calculated value of which is compared with the table value, and a conclusion is made about whether the level of expert consistency is satisfactory or unsatisfactory.

The coefficient of concordance according to the results of the expert survey was 0.73, which indicates its significant level and the satisfactory consistency of experts’ opinions. Pearson’s matching ratio was 13.96. This value was compared with the tabular value at a confidence level of significance of 0.05, which also confirms the possibility of using the results of the expert survey conducted in further calculations to form integral indicators for each TP block.

It is assumed that the highest integral assessment of territorial TP indicates the attractiveness of a territory for the formation of a tourism ecosystem.

The regional TP assessment platform can be expanded with a dashboard instrument panel containing information on key indicators and metrics. This program (service) is designed to collect and visualize information using information from all sorts of sources, including tabular and textual ones.

A regional image attractiveness index is proposed to be used as a generalized potential-forming element in view of TE. The structure of its component indicators, being the most variable, highlights a general idea of the territory.

The conducted evaluation according to the KPI system using the traffic light principle has enabled us to identify groups (blocks) with the highest and lowest TP indicators. Then, there is a need to make conclusions about the territorial attractiveness in terms of the tourism ecosystem formation, where a starting point is “red zones”, which need to be converted into “yellow” or “green” zones in order to further develop the tourism potential of the territory.

5. Results

We tested our approach on the data of the Penza Region. System-forming components (blocks and indicators) of territorial tourism potential are presented in Table 2.
Table 2. System-forming components of territorial tourism potential.

| Regional TP Blocks and Indicators, Unit of Measurement (Source) | Actual Data 2020 | Expert Assessment of Tourism Resources |
|---------------------------------------------------------------|------------------|---------------------------------------|

Block 1. Recreation Natural Potential

| Component | Actual Data | Expert Assessment |
|-----------|-------------|--------------------|
| Number of UNESCO Natural World Heritage Sites, units (Ministry of Culture and Tourism of the Penza Region) | 0 | 0.00 |
| Number of reserves, units (Department of Industry, Transport and Energy of the Penza Region) | 1 | 0.10 |
| Specially protected natural areas, units (Ministry of Culture and Tourism of the Penza Region) | 86 | 0.50 |
| Area of specially protected natural areas, thousand hectares (Ministry of Culture and Tourism of the Penza Region) | 16.6 | 0.50 |
| Number of health resort organizations, units (Unified Interdepartmental Statistical Information System—UISIS) | 10 | 0.50 |
| Number of rooms in health resort organizations, units (UISIS) | 919 | 0.60 |
| Number of places in health resort organizations, units (UISIS) | 2049 | 0.60 |
| Number of tourist bases, units (Ministry of Culture and Tourism of the Penza Region) | 36 | 0.40 |
| Number of children’s health camps, units (Ministry of Culture and Tourism of the Penza Region) | 19 | 0.40 |
| Environmental quality, % (UISIS) | 94.88 | 0.80 |

Overall level

| Component | Actual Data | Expert Assessment |
|-----------|-------------|--------------------|

Block 2. Socio-cultural potential

| Component | Actual Data | Expert Assessment |
|-----------|-------------|--------------------|
| Resident population (annual average), thousand people (Rosstat) | 1298.23 | 0.40 |
| Share of urban population in total population, % (UISIS) | 68.9 | 0.40 |
| Employment rate, % (UISIS) | 60.1 | 0.60 |
| Number of people employed in the field of tourism, thousand people (Ministry of Culture and Tourism of the Penza Region) | 2.7 | 0.10 |
| Average monthly nominal accrued wages of employees at organizations (excluding small businesses), rubles, including: - Activities of full-service restaurants and cafes, cafeterias, fast food and self-service restaurants (UISIS) | 39,466.6 | 0.30 |
| Average consumer expenditure per capita (per month), rubles (Rosstat) | 19,465 | 0.40 |
| Share of the population with cash incomes below the subsistence level to the total population, % (Rosstat) | 13.0 | 0.30 |
| Consumer price index, % (Rosstat) | 106.1 | 0.50 |
| Indicator                                                                 | Value   | Weight |
|--------------------------------------------------------------------------|---------|--------|
| Volume of paid services to the population, million rubles (Rosstat)      | 54,505  | 0.50   |
| Retail trade turnover, million rubles (UISIS)                            | 222,343.6 | 0.50   |
| Public catering turnover per capita, million rubles (Rosstat)            | 8961    | 0.50   |
| Number of visits to the museums of the Ministry of Culture of the Russian Federation, thousand people (UISIS) | 285.3   | 0.40   |
| Average number of spectators at theater events per 1000 people, persons (UISIS) | 66,315  | 0.30   |
| Number of certified guides, persons (Ministry of Culture and Tourism of the Penza Region) | 0       | 0.00   |
| Rating of Russian regions for scientific and technological development (Russian Regional Science and Technology Development Ranking 4), place in the ranking | 23      | 0.72   |
| Overall level                                                            |         | 0.42   |

**Block 3. Investment and financial potential**

| Indicator                                                                 | Value   | Weight |
|--------------------------------------------------------------------------|---------|--------|
| Gross regional product per capita, rubles (UISIS)                        | 379,820.4 | 0.40   |
| - Culture, sports, leisure and entertainment activities (UISIS)         | 4631, 441.6 | 0.25   |
| Number of enterprises and organizations (as of the end of the year; according to state registration data), units (Rosstat) | 22,264  | 0.40   |
| Industrial production index, % (UISIS)                                   | 117.8   | 0.75   |
| Index of physical volume of fixed capital investment, % (Rosstat)        | 100.2   | 0.40   |
| Fixed capital investment per capita in actual prices, million rubles (Rosstat) | 94,678  | 0.40   |
| Consolidated budget revenues of the subject, million rubles (Rosstat)    | 81,381  | 0.35   |
| Volume of paid services to the population, including:                    |         |        |
| - Services provided by hotels and similar accommodation facilities, rubles (UISIS) | 345.2   | 0.30   |
| - Services provided by travel agencies, tour operators and other booking and related services, rubles (UISIS) | 155.1   | 0.30   |
| - Services provided by health resort organizations, rubles (UISIS)       | 214.5   | 0.35   |
| - Services provided by cultural institutions, rubles (UISIS)             | 400.2   | 0.35   |
| - Transport services, rubles (UISIS)                                     | 4429.6  | 0.35   |
| Number of citizens of the Russian Federation placed in collective accommodation facilities, persons (Ministry of Culture and Tourism of the Penza Region) | 318,229 | 0.25   |
| Number of foreign citizens placed in collective accommodation facilities, persons (Ministry of Culture and Tourism of the Penza Region) | 17,223  | 0.10   |
| Number of overnight stays in hotels and other accommodation facilities, units (Ministry of Culture and Tourism of the Penza Region) | 782,429 | 0.30 |
| Number of points in the National Tourist Rating, units (National Tourist Rating’s) | 56.8 | 0.35 |
| Financing of the state program “Development of Culture and Tourism of the Penza Region”, approved by the Decree of the Government of the Penza Region dated October 22, 2013, No. 783-pP (with subsequent changes), thousand rubles (Ministry of Culture and Tourism of the Penza Region) | 4,468.3 | 0.40 |

| Overall level |  | 0.35 |

### Block 4. Infrastructure potential

| Length of hard-surface public roads, km (Rosstat) | 12,268 | 0.50 |
| Road density per 1000 square kilometers of surface area, km | 291 | 0.35 |
| Number of federal highways, units (Government of the Penza Region) | 2 | 0.20 |
| Public railway network density per 10,000 square kilometers of surface area, km | 191 | 0.22 |
| Number of passenger railway stations, units (Ministry of Culture and Tourism of the Penza Region) | 21 | 0.00 |
| Length of inland waterways with guaranteed dimensions for fairways (UISIS) | 0 | 0.00 |
| Number of facilities (marine stations—terminals, river stations—berths), units (UISIS) | 0 | 0.00 |
| Availability of operational buses for regular transportation routes, units (UISIS) | 1,618 | 0.35 |
| Passenger turnover by bus, million person-km (UISIS) | 1,098 | 0.70 |
| Number of bus stations, units (Ministry of Culture and Tourism of the Penza Region) | 10 | 0.40 |
| Number of facilities (buildings, air terminals) used for passenger service, units (UISIS) | 1 | 0.30 |
| Number of seats in public catering facilities, units (UISIS) | 41,950 | 0.40 |
| Number of rooms in collective accommodation facilities, units (UISIS) | 41,440 | 0.35 |
| Number of UNESCO World Heritage Sites, units (Ministry of Culture and Tourism of the Penza Region) | 0 | 0.00 |
| Number of cultural heritage objects, units (Ministry of Culture and Tourism of the Penza Region) | 95 | 0.25 |
| Number of estates, units (Ministry of Culture and Tourism of the Penza Region) | 30 | 0.30 |
| Number of cultural institutions (Ministry of Culture and Tourism of the Penza Region) | 1,032 | 0.40 |
| Number of theaters of the Ministry of Culture of the Russian Federation, units (UISIS) | 5 | 0.25 |
| Total number of auditorium seats in the theaters of the Ministry of Culture of the Russian Federation, units (UISIS) | 1,506 | 0.25 |
| Number of theaters beyond the jurisdiction of the Ministry of Culture of the Russian Federation, units (UISIS) | 0 | 0.00 |
### Block 5. Entrepreneurial potential

| Metric                                                                 | Value | Level |
|------------------------------------------------------------------------|-------|-------|
| Number of sports facilities (UISIS)                                    | 3736  | 0.80  |
| Number of travel agencies, units (UISIS)                              | 88    | 0.60  |
| Availability of a digital platform for the formation of a tourism ecosystem | 0     | 0.00  |
| Overall level                                                          | 0.29  |       |

| Metric                                                                 | Value | Level     |
|------------------------------------------------------------------------|-------|-----------|
| Share of small- and medium-sized businesses in the gross regional product, % (UISIS) | 33.1  | 0.4       |
| Annual number of tourism and hospitality industry subjects — participants in federal competitions for the development of domestic and inbound tourism, persons (Ministry of Culture and Tourism of the Penza Region) | 19    | 0.20      |
| Number of specialized public organizations and trade unions in the tourism and hospitality industry (associations of hoteliers, tour operators, guides, etc.), units (Ministry of Culture and Tourism of the Penza Region) | 0     | 0.00      |
| Share of costs for innovation activities, in the total volume of shipped goods, performed works, services, % (Mediabank) | 3.1   | 0.60      |
| Share of Internet users in the total population, % (Rosstat)           | 83.7  | 0.90      |
| Number of tourist information centers (TIC), units (Ministry of Culture and Tourism of the Penza Region) | 1     | 0.25      |
| Overall level                                                          | 0.39  |           |

**Source:** developed by the authors using sources [34–46].  
1. Decree of the Government of the Penza Region, dated October 29, 2021, No. 625-rP “On Approval of the Tourism Development Strategy in the Penza Region for the period up to 2035”.  
2. Unified Interdepartmental Information and Statistical System. Federal State Statistics Service. URL: https://fedstat.ru.  
3. Regions of Russia. The main characteristics of the subjects of the Russian Federation. 2021. Rosstat M., 2021. P. 480–487. URL: https://rosstat.gov.ru/folder/210/document/13205.  
4. Rating of Russian regions by scientific and technological development. RIA Novosti. URL: https://ria.ru/20211025/tehnologii-1756053678.html.  
5. National tourist rating—2020//Center for Information Communications “Rating”. URL: https://russia-rating.ru/info/18797.html.  
6. Costs for innovative activities of organizations, by constituent entities of the Russian Federation, 2010–2020. Rosstat. URL: https://rosstat.gov.ru/storage/mediabank/1.2.3(1).xls.  
From 0 to 0.3 (Red zone) — a low level of territorial attractiveness for TE formation; From 0.4 to 0.7 (Yellow zone) — an average level of territorial attractiveness for TE formation; From 0.8 to 1 (Green zone) — the high level of territorial attractiveness for TE formation.
As can be seen from the conducted analysis, the recreation natural potential and socio-cultural potential of Penza Region correspond to the yellow zone (0.49 and 0.40, respectively). Investment and financial potential, as well as infrastructure and entrepreneurial potentials, correspond to the red zone (0.35, 0.29 and 0.39, respectively) and therefore they first require a major improvement.

Further, it is vital to carry out a thorough analysis of the components of the tourism potential blocks with a low level of current development for the Penza Region to formulate strategies for their improvement, in order to enhance the level of the regional tourism potential.

To develop territorial tourism potential to increase attractiveness in view of the formation of a tourism ecosystem, it is necessary to apply means to stimulate demand in the field of tourism, aimed at numerous producers of tourism services, intermediaries (travel agents, tour operators), and regional contact audiences (mass media, financial and insurance companies, public organizations).

The conducted analysis has highlighted strategies that determine the key vectors for the development of tourism potential in the Penza Region. These can be divided into the following groups:

1.1. Institutional;
1.2. Business image;
1.3. Cultural and educational;
1.4. Innovation and technology.

The institutional strategy should be based on an analysis of the institutional environment of the region, which ensures the functioning of the tourism industry. The development of market institutions, the legal framework, the mechanism of support and incentives from the regional and local authorities, improvement of legal regulation in the field of tourism, and taking into account the trends in the development of the tourism industry may be considered as institutional conditions. The infrastructural component is the major one in the structure of the institutional environment.

In order to increase the TP block of the infrastructure component in the Penza Region, it is necessary to ensure the integrated development of tourism areas, to equip the tourism space, including the development of communal and transport infrastructure, and the construction and reconstruction of main infrastructure facilities. Unfortunately, the Penza Region lacks high-quality infrastructure and seamless logistics.

Taking into account the growth in the number of independent tourists coming to the region, it is also necessary to develop roadside infrastructure (roadside services, campsites, recreation areas, parking lots for tourist transport, etc.). At present, the use of tourist navigation (electronic scoreboards, Internet solutions and mobile applications) contributes to the growth of the tourist flow [47].

The construction of hotels or other accommodation facilities is required in the immediate vicinity of tourist sites: in the city of Nikolsk (Penza Region, Russia) to receive tourists and participants in the International Symposium on Art Glass and Sculpture The Crystal Heart of Russia, and in the village of Radishchevo (Kuznetsk district, Penza Region, Russia) near the Radishchev Memorial Museum. It is necessary to provide for the possibility of subsidizing interest rates on the construction of hotels and complex facilities, and co-financing mass events. Grant financing of initiatives of entrepreneurs and regions can be an effective tool (for legal entities—for camping and tourism infrastructure (eco-farms, eco-villages, swimming pools, etc.; and for regions—for the improvement of freshwater beaches and the formation of local points of attraction in rural areas and villages) [48].

The public catering system in the Penza Region is made up of over 1200 public catering facilities. However, at present, the links between public catering enterprises and tourist organizations are very weak. The offer of catering service is rarely included in the tourism product formed on the tourist territory of the Penza Region. It is necessary to strengthen the connection of Penza tour operators for domestic tourism with public catering enterprises in the region due to the state support thereof. The weakness of interaction
is typical both for the designated actors and for the rest of the participants in the tourism industry. Today, the creation of an integrated tourism product by the actors (Figure 1, Table 1) interested in maximizing the efficiency and increasing the competitiveness of the created value tourist offer in the Penza Region is increasingly being discussed.

The tourism transport infrastructure is provided both by Penza Vissarion Belinsky Airport, operating on domestic airlines, and by the rail and road transportation of passengers. It is advisable to consider the possibility of creating a network of airfields for small aircraft, and heliports.

The existing interregional bus routes connect the Penza Region with Moscow, Ryazan, Tambov, Lipetsk, Saratov, Volgograd, Samara, Ulyanovsk, Nizhny Novgorod regions, the Republics of Chuvashia, Mordovia, Mari El and the Krasnodar Krai (Gelendzhik). The major volume of intraregional transportation is carried out by road transport, which accounts for more than 90% of passenger traffic.

Given the prospects for the growth of traveling by road, the problem of fuel diversification is becoming urgent, especially in the context of the sustainable development of tourist areas—physical spaces (municipalities or groups of municipalities) characterized by a common tourism product. In the next two decades, it is planned to increase gas consumption attributable to the share of gas motor fuel by 20%, with the achievement of 3.4 trillion cubic meters by 2040. The share of engines operating on alternative traditional fuels should be at least 49% of the total by 2030. In this regard, it is necessary to plan the arrangement of electric and gas (methane) filling stations in the territory of the Penza Region.

The business image strategy should focus on the growth of the investment attractiveness of the tourism sector in the region, the creation of a business climate (development of small businesses, tolerance of the authorities towards third-party investors), infrastructure, the comfort of the business environment, etc.

It is feasible via the formation of special tourism territories (tourist and tourist-recreational clusters, territories of advanced socio-economic development of the tourist type), including investment objects in the system of cluster interactions, offering certain tax, administrative and organizational preferences. Benefits will be provided to the residents of the territories under the special regime on the basis of relevant agreements. Those investors whose investment projects comply with the development plan for tourist areas, including indicators of the financial model, targets and localization in accordance with the master plan, will be able to obtain the status of a resident in the territory of a special preferential regime [47].

It is also advisable to include tourism as a promising area of activity in the region in the system of regional support for small- and medium-sized businesses. Enterprises engaged in the field of tourism and in the development of tourism infrastructure should be supported via specialized development institutions; a system of instruments for credit and guarantee support; microloans; the implementation of programs of preferential leasing; subsidizing interest rates on loans; the implementation of measures to remove barriers and accelerate the subjects of small- and medium-sized businesses in the field of tourism; measures to create tourism infrastructure facilities for certain types of tourism; the implementation of a set of measures to promote entrepreneurship in the field of tourism; and the introduction of information and marketing support services that provide an opportunity to more efficiently open/expand/continue running a tourism business. This will shorten payback periods and operational risks, reduce barriers to investment in tourism, and thereby increase the investment attractiveness of the industry and stimulate the emergence of high-quality tourism products.

Additionally, it is worth working out measures to stimulate local governments to develop tourism; measures to change the composition of tax revenues of regional and local budgets; and measures to change the accounting system for tax revenues from tourism when determining the level of budgetary security for the distribution of inter-budgetary transfers and the system of grant support for municipalities that succeed in developing domestic and inbound tourism.
Furthermore, it is necessary to stimulate the implementation of measures to ensure fair competition among participants in the tourism industry, aimed at reducing the share of the shadow sector.

These actions will contribute to stimulating the demand for tourism services, which is ultimately aimed at shaping regional image in the Russian tourism market.

**The cultural and educational strategy** is aimed at the formation of a tourism culture and raising the patriotic sentiment of the population in the region.

The key objectives of cultural and educational strategies are to overcome the deepening gap between mass, commercial culture financed on a market basis, and professional culture and art; to introduce new information and communication technologies; and to implement public–private partnership mechanisms in this area.

The creation of a positive tourism image is based on the satisfaction of tourists and brand images of tourism destinations approved by the public. The widespread dissemination of information about the tourist opportunities of the Penza Region is necessary to increase its attractiveness for target consumer segments, which may include both tourists and representatives of the business community.

Assistance in the promotion of the tourism product will be provided by the development of tourist information systems using modern technologies, including the use of a cross-sectoral digital platform for tourism development.

Closing the interaction between regional authorities, municipalities and business representatives interested in the development of tourism in the Penza Region is the basis for the effective implementation of measures to promote the tourism product through the creation of a platform for open dialogue, regularity and consistency of interaction, joint planning, and active promotion of a regional tourism product and that of specific territories.

**The innovation and technology strategy** is premised on the level of digitalization in the region, information access to tourism resources, staff qualifications, and the focus of regional government on the quality of tourism services.

The internal tourism image of the territory is formed via the recognition of natural, cultural and other objects of attraction as fascinating and interesting ones for the local community. It is advisable to conduct desk research using modern end-to-end IT technologies, such as Big Data analytics to assess the judgment of the Penza Region by local residents and tourists. To do this, the largest regional higher educational establishment—Penza State University—exploits information software within the framework of the University Consortium of Big Data Researchers, being a full member thereof (https://opendata.university/), including PolyAnalyst and Kribrum software systems to perform data collecting, importing, cleaning, and analyzing, and exporting results and creating reports.

There are two data streams being used for these purposes: (a) specialized resources and mass media (Rosstat, Rostourism, guidebooks, press releases on the portals of regional authorities); (b) social media (reviews on travel portals and review sites: ratings from tourists and local residents, and visual representation of regions, e.g., via the VKontakte social networking service).

Furthermore, it is necessary to provide regular monitoring and reporting containing the results of achievements and detailed analytics on market development.

Such end-to-end IT technology as a distributed ledger has gained ground in the travel and tourism industry since 2020 [49]. The key vector is the development of smart platforms for the implementation of new systems and methods of conducting tourism activities [50].

The further development of the tourism industry is closely related to the development of smart platforms, which are similar to technological ones.

Tyan et al. [50] highlighted the following positive features of developing a smart platform for tourism: instilling “sustainable” behavior; providing benefits to the local community; reducing privacy concerns, etc. Raluca-Florentina [51] reviewed the most important advantage of such a system, being the creation of new forms of communication between the supplier and the consumer. There is no need for outside support to complete
of a transaction in decentralized systems. This occurs due to a consensus mechanism that protects the network and provides a tool for the interaction between its participants. The development of this technology will especially affect the sector of small- and medium-sized enterprises (SMEs) with the highest pressure from large companies [52].

6. Discussion and Conclusion

As mentioned above, the attractiveness of tourism ecosystem formation for participants is using the tourism potential with the involvement of the management potential of a territory to create unique demanded tourism products based on the principles of the ecosystem.

The management potential of the territory allows for forming the composition of management mechanisms, methods and tools that can ensure the sustainable and effective development of the territory, as well as creating conditions for this development. The management potential should be based on the improvement of the tourism management system in the Russian Federation, including the system for collecting, processing and analyzing statistical data on tourism development.

It is feasible to identify the priorities for TP development and improvement, based on the methodology for assessing regional tourism potential blocks in this article.

First of all, it is necessary to renew the functions of the state in the field of tourism. These are as follows:

1. Planning of territories to focus on tourism;
2. Ensuring financing by forming a budget consistent with the tasks;
3. Increasing the level of interdepartmental and interregional coordination;
4. Updating the regulatory framework;
5. Developing statistics for analysis and decision-making;
6. Improving the skills of employees in the tourism and hospitality industry [48].

Here is a scheme for the formation of a regional tourism ecosystem through the assessment of its potential components (Figure 5).

Figure 5. Schematic for the formation of a regional tourism ecosystem. Source: own elaboration.
This approach should encompass:

- A comprehensive analysis and an objective assessment of the existing tourism resources of the territory;
- The results of a comprehensive study of tourism potential, territorial prerequisites and factors of social development and economic growth;
- Setting goals and objectives and the principal ways to solve the problem of developing tourism potential to determine the key priorities and development scenarios;
- Generalized indicators for the prospective development of tourism potential, reflecting the level and dynamics of social development, and the scale, pace and proportions of the economic growth of the territory.

The issues of formation of tourism ecosystems are not well developed in the literature [53–55]. However, ecosystems cannot be created [56]; they evolve [20] over time. Becoming a tourism ecosystem in a region requires patience, strategic management and continuous evaluation and change. Perceiving the tourism industry as an ecosystem is essential, as are a vision and a clear set of goals for the creation of the necessary conditions for ecosystem participants.

In this article, we offer an original approach to assessing the attractiveness for participants’ involvement in a tourism ecosystem through the assessment of regional tourism potential. Tourism potential, in turn, is a result of the synergetic interaction of various types of territorial tourism resources (natural, ecological, human, cultural, and entrepreneurial, etc.). The fundamental category in this case is the concept of a unique territorial “tourism product”, the creation of which becomes possible through the interaction of the tourism and management potential of a territory. Due to the management potential, the efficiency of using the tourism potential of a territory increases, and tourism products in demand by the market are created. The proposed approach to the assessment of the TP of a territory allows us to determine the “red”, “yellow” and “green” zones in the development of the TP of a particular region, and based on this assessment, develop strategies for enhancing tourism potential (institutional; business image; cultural and educational; innovation and technology).

Undoubtedly, it is the state that should take an active part as a key actor in tourism ecosystem development. It is advisable to make the value creation networks, represented by their coordinating companies, key partners of the state in order to develop the tourism industry in new economic realities, taking into account continuous changes.

7. Future Research

The recommended TP blocks and the key indicators possess numerous criteria, which are unequal for various actors of a tourism ecosystem. Therefore, in the future, it is proposed to determine the weighting coefficients of the criteria for each actor, depending on their role in the tourism ecosystem, to obtain integral estimates.

An integrated approach to the selection of target domestic and foreign markets and the definition of tourist segments should be an important factor in the effective promotion of the tourism product [47]. It is not feasible without regular marketing research to analyze and identify consumer preferences, barriers and prejudices, and to form a value proposition by identifying the most effective channels of communication with each segment of the target audience. The value proposition should be tailored to the specifics of the selected markets.

It is also advisable to conduct a broader scope of benchmarking. Given the need to manage the life cycle of tourism product implementation, and the different goals of the participants in the tourism ecosystem, their economic interests and KPIs should be taken into account while assessing in the future.

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methodology, L.G. and T.T.; performed the first data analysis, L.G. and S.V.; project administration, L.G.; funding acquisition, L.G. All authors have read and agreed to the published version of the manuscript. All authors have read and agreed to the published version of the manuscript.

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