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Geocaching Adventure Lab—The Innovative Tool for Exploring and Creating Tourism Space

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Introduction

In recent years (2019–2022), the volume of tourism traffic has significantly decreased in virtually all countries in the world, due to the prevailing epidemiological situation regarding the COVID-19 disease caused by the SARS-CoV-2 coronavirus and the related recommendations of the WHO regarding movement (people's mobility). The restrictions introduced by the governments of countries aimed at limiting the spread of the virus have strongly affected the tourist sphere. As a result, access to potential tourist destinations was limited (closing state borders, closing borders between voivodships or communes), as well as introducing restrictions on the duration of the trip enforced by closing or limiting the activities of the hotel, catering or accompanying facilities. Tourism has become definitely individualised. Human functioning has been extended in relation to virtual space, which also includes tourism space. According to the author, innovative tourist products have gained in importance, enabling exploring and creating space (including tourism), in an individualised way, with the use of e-tools. An example of such an innovative e-tool is the Geocaching Adventure Lab.

The conducted research made it possible to characterise the scope and essence of the Geocaching Adventure Lab's functioning in the context of exploring and shaping the tourism space in its virtual and analogue dimensions. The aim of the research was to identify the scale of geocaching tourist traffic and to characterise Adventure Lab

caches as a necessary element of tourist development on the example of selected coastal areas; on this basis, an attempt was made to answer the following questions: is it possible to manage tourist traffic through prepared and implemented Adventures and can the Adventure cache be treated as a tourist product?

The subject of the research was Adventure Lab caches located and functioning in the tourist space of coastal communes of six countries located in the south-eastern part of the Baltic Sea basin (Poland, the Russian Federation, Lithuania, Latvia, Estonia and Finland). The research area is the coastal areas, which are among the most frequently-chosen tourist destinations, due to their tourist values, mainly recreational and sightseeing. The selected countries have a total coastline length of 52,127 km, which is 75.5% of the total length of the Baltic coastline.¹ Finland has the longest coastline and Lithuania the shortest. In total, there were 804 adventure caches in the selected area, which were created by 31 October 2022 (Table 1).

Table 1. Research area - selected information

Country	Coastline length [km]	Percent of total coastline length	Numer of caches
Estonia	3,794	5.50	49
Finland	46,064	66.73	617
Latvia	496	0.72	72
Lithuania	91	0.13	5
Poland	843	1.22	59
Russia	839	1.22	2
Total	52,127	75.52	804

Source: own study based on A. Pickaver.²

In the research and development of the material, the following methods were used: desk research, which is a result of two groups of methods, namely content analysis, statistical data analysis, and Internet query.

In this regard, at the outset, a literature study was carried out in terms of the theoretical phenomena of Geocaching and tourism space. Data presenting the scale of tourist traffic in selected countries of the Baltic Sea basin for the years 2019, 2020 and 2021 are presented.

1 The total length of the Baltic coastline is 69027 km. See: Alan Pickaver, *Integrated Coastal Zone Management in the Baltic States. State of the Art Report. Background for Coastal Planning and Management in the Baltic Sea Region*. EUCC-The Coastal Union, 2003, accessed 2 January 2023, https://eucc-d-inline.databases.eucc-d.de/files/documents/00000657_EUCC_Baltic_ICZM_State_of_Art.pdf, 90.

2 Ibidem, 90.

Due to the epidemiological situation occurring at that time, the study used only the data on tourist traffic that were available for the indicated countries on the UNWTO website.³ The data concerns the volume of international tourist arrivals and domestic visitors (same-day).

Whereas the caches internet query was based on the statistics and information assigned to each of them, which are available in the Geocaching Adventure Lab application.

Geocaching Adventure Lab

Generally, geocaching is a new form of active recreation implemented in the form of an outdoor game that allows exploring and shaping the tourist space. The word geocaching comes from the combination of the words: Geo, which means the Earth, which indicates the global nature of the game, a reference to geography and other earth sciences, as well as the place of physical or virtual hiding/location of the item and cache, which means a hiding place, referring to hiding treasures or a place in real (analogue) space. Thus, the word geocache means a hidden container and/or a place to be tracked down, and a geocacher means a person involved in geocaching, i.e., one who is involved in both the process of finding and hiding caches.⁴ During the process of searching for caches, the geocacher uses a mobile phone with an installed application that allows the location of caches. It is possible on the basis of geographic coordinates assigned to the cache. Due to the global nature of the game, it was assumed that geographical coordinates should always be given in the same reference system - WGS-84. The largest and most popular service is geocaching.com.⁵ Many countries have their own local services, for example: Finland geocache.fi, Russia Geocaching.su or Poland geocaching.pl and open caching.pl.

Participants of the game must comply with the rules set out in the regulations posted on the geocaching.com website. The guiding principle is safety. The hiding place of the cache (real or virtual) must be in accordance with the applicable local law and the regulations of the land manager, including obtaining consent/permission from

3 *Global and regional tourism performance*, accessed 9 January 2023, <https://www.unwto.org/tourism-data/global-and-regional-tourism-performance>.

4 Olga Smoleńska, "Najnowsze trendy w turystyce eventowej. Gry fabularne i wydarzenia związane z fantastyką i technologią XXI wieku," *Turystyka Kulturowa* 8 (2009): 31–39, accessed 28 December 2022, <http://turystykakulturowa.org/ojs/index.php/tk/article/view/389>; Mateusz Dobek, Marcin Koziel, "Geocaching w Roztoczańskim Parku Narodowym," *Annales Universitatis Mariae Curie-Skłodowska*, section B, Vol. 70, (2015), 2: 191–207, accessed 28 December 2022, DOI: 10.17951/b.2015.70.2.191.

5 Dobek, Koziel, "Geocaching."

the owner or land manager to hide/access the cache in a given place. The Regulations prohibit e.g., destroying the cache's surroundings, indicating that the method of its hiding or location (in relation to a virtual cache or Earthcache) should minimally interfere with the natural environment. Similar rules apply to caches located near or within historic buildings.⁶

The world's first cache was set up near Estacade, Oregon, USA, by Dave Ulmer on 3 May 2000. The author posted the coordinates of its hiding place on an internet forum. Soon after, many people started searching for the cache using GPS receivers and shared their impressions on an online forum. This event is credited with the birth of geocaching and its essential tool, the geocaching.com website. As a result, more enthusiasts of this game created their own caches.⁷ In Poland, the first cache was established on 1 November 2001 in Warsaw (Mazowieckie Voivodeship). This is a virtual cache (still available), which was visited by 3,163 people until 31 October 2022.⁸

The great interest in Geocaching and its great potential (getting to know and shaping the tourist space) made this field game in Poland a new type of qualified tourism. In 2012, the Polish Tourist and Sightseeing Society (Polskie Towarzystwo Turystyczno-Krajoznawcze, PTTK) established the PTTK Geocaching Poland Badge. It can be obtained only in the territory of the Republic of Poland. The badge is established in four tiers: Popular, Bronze, Silver, Gold. To get the first one (the popular one) – you need to find 100 caches of any type.⁹

There are many types of caches in Geocaching, the basic division includes: physical caches (e.g., Traditional Geocache), EarthCache and Adventure Lab., Geocaching events (e.g., CITO) and Legacy Cache Types (e.g., Virtual Cache), that can still be found, but is no longer available for the creation on Geocaching.com (Table 2). The article focuses on presenting the scale of possibilities in exploring and creating space with the use of Adventure Lab caches. The history of the development of these caches dates back to 2011, when a prototype of a mobile responsive web application for creating and playing Adventures was built. In 2013, a new cache type "Lab Cache" was added to Geocaching.com. In the same year, the first public lab caches were available at the Block Party Geocaching HQ event; the adventures were very well received by the geocaching community. In 2015, the Adventure's platform "Lab Caches" gained popularity.

6 *Geocaching*, accessed 29 December 2022, <http://geocaching.com/play>.

7 Joanna Maria Skóra, "Geocaching jako innowacyjna forma odkrywania walorów przyrodniczych i kulturowych w Polsce studium przypadku powiatu poznańskiego," *Warsztaty z Geografii Turyzmu* 1 (2017), 8: 101–110, accessed 28 December 2022, DOI: 10.18788/2544-7440.01.11.

8 *Geocaching Polska*, accessed 29 December 2022, <http://geocaching.pl>.

9 *Badge Regulations PTTK Geocaching Polska*, accessed 29 December 2022, http://www.msw-pttk.org.pl/odznaki/reg_odznak/reg_opttkgp.html.

However, the original prototype did not meet the relevant standards; there was no software used for the proper functioning of the new type of cache in cooperation with the platform. In 2018, the construction of an application that would cooperate with the web interface was undertaken. That same year it was launched in the iOS and Android app stores.¹⁰ Basically, the whole process of shaping the tourism space with the help of Adventure Lab caches started de facto in 2019.

Table 2. Type of caches - examples

Geocache Types	Description
Traditional Cache	This is the fundamental, straightforward type of geocache. These geocaches are some kind of containers, of various sizes, hidden under the given geographic coordinates. Each container contains a logbook, which the player signs in after finding the cache. Larger containers may also include items for trade and/or trackables (travel bugs).
EarthCache	Caches of this type are set up in places of high geological attractiveness. They are educational. Their task is to disseminate knowledge about geology and geological phenomena. In order to confirm finding such a cache in a geocaching service, it is usually necessary to visit the indicated place and send answers to the author's questions regarding the geological phenomena occurring in this place.
Adventure Lab	Lab Geocache is a new type of virtual cache. It allows users to create, play and share location-based experiences and games called Adventures. These Adventures guide players to find clues, solve puzzles and discover/explore interesting new places.
Letterbox Hybrid	It is one of the types of traditional (physical) cache, in which the additional attribute is the fact that each container includes, apart from a logbook, also a rubber stamp. Upon finding a cache, players can stamp the logbook with their personal stamp, as well as stamp their own notebook with a letterbox stamp, as a kind of souvenir of their visit. The stamp and logbook are left in the letterbox for the next players. It is forbidden for them to be taken by the participants of the game. In general, it can be assumed that after adding a stamp to the cache, it changes to Letterbox Hybrid; however, the guidelines for the basic type of cache still apply (traditional cache + stamp = letterbox hybrid).
Cache In Trash Out (CITO) Event	It is the event cache with a pro-ecological character. During the organised environmental meeting, geocachers clean up rubbish, plant trees and other plants, mark trails etc. The purpose of the meetings is to preserve natural areas and keep them clean so that the geocaching community can be enjoyed while geocaching.
Virtual Cache	It is a kind of cache that can be obtained by being at the location (there is no container with a logbook). The requirements for logging in (only in electronic form using the application) depend on the creator of the cache; for example, it is required to answer a question related to the location, take a photo, or perform some kind of task. Then this result should be sent to the creator of this cache. Virtual caches are created in places that are interesting in terms of tourism.

Source: own study based on Geocaching <https://www.geocaching.com>;¹¹ Geocaching Adventure Lab. <https://adventure.geocaching.com>.¹²

¹⁰ Ibidem.

¹¹ *Geocaching*, accessed 16 April 2023, <https://www.geocaching.com/play>.

¹² *Geocaching Adventure Lab*, accessed 8 January 2023, <https://adventure.geocaching.com>.

Geocaching Adventure Lab is an innovative tool/application and platform, developed by the team at Geocaching HQ, which is used to explore and create (co-create) tourism space, which is a part of geographical space with features enabling and conducive to the implementation of various forms of tourism, especially cognitive tourism. The Adventure Lab® application (installed on the smartphone) allows players to participate in the so-called adventure, which is a kind of field game. During such a game, thematic puzzles are solved using the clues provided in the description.¹³ Most often, within one adventure, five places/points/locations are visited (adventure stages) (Figure 1).

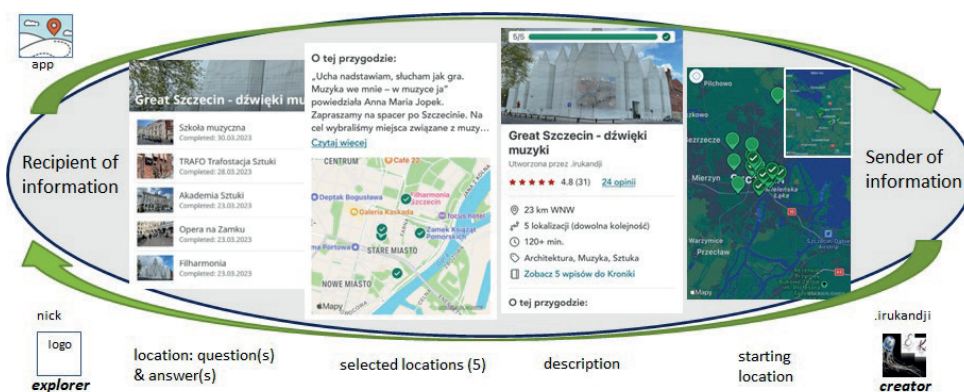


Figure 1. Adventure Lab: Great Szczecin – sounds of music, Szczecin Poland

Source: own study.

The application contains information that can be related to the number of people (cachers) who completed the entire adventure in the form of: the number of opinions issued (comments to a given adventure) and the number of ratings issued. Between these two numbers it is impossible to put an equal sign or add them together. There is no obligation for the player to rate or write an opinion. The participant of the game may provide them separately or not at all. Thus, the total number of people on a given adventure is difficult to estimate.¹⁴ It is highly probable that their number is definitely higher than indicated by the given values. In turn, the process of creating an “adventure” is carried out using the labs.geocaching.com/builder/adventures platform. The prepared/developed “adventure” is a kind of virtual tourist guide used by game participants.

13 *Geocaching & the Adventure Lab*, accessed 8 January 2023, <https://www.youtube.com/watch?v=uEy-rOXjh9bc>.

14 *Geocaching Adventure Lab*, accessed 8 January 2023, <https://adventure.geocaching.com>.

It is a guide that shows the participant particularly interesting values or tourist facilities of the selected area. The theme of the “adventure” itself depends on the creator and presents his abilities and interests.¹⁵ It is important that such an “adventure” can be created regardless of the creator’s place of residence or country. Currently, only Geocaching members who have purchased the Premium option are able to create an Adventure Lab.

Currently, on a global scale, in over 120 countries, there are over 55,000 prepared adventures that allow you to get to know a specific tourist space. Adventures (games) are available in the application in more than 25 languages of the world.¹⁶

Exploring the tourist space with Adventure Lab.

Tourism space is a functionally-distinctive part of the general geographical space. This space is part of the geographic and socio-economic space where tourism phenomena occur.¹⁷ In the subjective approach, it is the effect of the relation of the tourist subject to the space (environment), as well as the experience of this space by the subject.¹⁸ In the literature on the subject, this space is also defined as a set of objects conditioning the satisfaction of the needs of the subject (human).¹⁹ Therefore, tourism space can be considered a part of geographical space in which the phenomenon of tourism occurs (regardless of its size and nature). This indicates the need for a human tourist – a participant in tourism – to appear in this space. The participant (tourist, visitor) both allows to delimit the tourism space, and by making certain decisions, shapes his own, individual space of tourist activity, becoming its most important element.²⁰

15 *Adventure Lab® Top 5 Adventure Tips*, accessed 8 January 2023, <https://www.youtube.com/watch?v=34gVR0PP70I>.

16 *Geocaching Adventure Lab*, accessed 8 January 2023, <https://adventure.geocaching.com>.

17 Jadwiga Warszyńska, “The Main Research Problems in the Geography of Tourism,” *Turyzm/Tourism* 9 (1999), 1: 37–50, accessed 28 December 2022, DOI: 10.18778/0867-5856.9.1.03.

18 Jolanta Latoosińska, “Przestrzeń turystyczna - jedno pojęcie dwa znaczenia. Rozważania na temat indywidualnej przestrzeni turystycznej,” *Turyzm/Tourism* 16 (2006), 2: 93–98, accessed 15 December 2022, DOI: 10.12911/22998993/113422.

19 Andrzej Lisowski, *Koncepcje przestrzeni w geografii człowieka* (Warszawa: Uniwersytet Warszawski, Wydział Geografii i Studiów Regionalnych, 2003), 198.

20 Bogdan Włodarczyk, “Przestrzeń turystyczna – pojęcie, wymiary, cechy,” *Turyzm/Tourism* 17 (2007), 2: 145–158; Bogdan Włodarczyk, “Przestrzeń turystyczna – kilka słów o istocie pojęcia,” in: *Przestrzeń turystyczna. Czynniki, różnorodność, zmiany*, eds. Małgorzata Durydiwka, and Katarzyna Duda-Gromada (Warszawa: WEMA Wydawnictwo-Poligrafia, 2011), 15–27; Bogdan Włodarczyk, “Space in tourism, tourism in space: on the need for definition, delimitation and classification,” *Turyzm/Tourism* 24 (2014), 1: 25–34, accessed 15 December 2022, DOI: 10.2478/tour-2014-0003.

The volume of tourist traffic in the countries included in the study was formed during the period of epidemiological threat. Taking into account the volume of international incoming traffic, in 2020, compared to 2019, the largest decrease (by over 70%) was recorded in Russia and Finland. On the other hand, the smallest decrease was recorded in Poland and amounted to about 60%. Comparing the volume of this movement in 2021 to 2020, some improvement can be observed. In Poland, there was an increase in the number of tourists arriving by 15%, in Finland and Lithuania it remained at the same level (Table 3).

Table 3. Analysis of the dynamics of tourism traffic

Country	2019	2020	2019 = 100	2021	2020 = 100	2019	2020	2019 = 100
	million			million		thousand		
	International tourist arrivals					Domestic visitors (same-day)		
Estonia	3.3	1.0	30.30	0.8	80.00	3.5	2.1	61.27
Finland	2.9	0.8	27.59	0.8	100.00	29.3	23.3	79.60
Latvia	1.9	0.6	31.58	(-)	(-)	2.5	1.4	54.66
Lithuania	2.9	0.9	31.03	0.9	100.00	2.8	2.4	86.27
Poland	21.2	8.4	39.62	9.7	115.48	50.0	38.6	77.20
Russia	24.6	6.4	26.02	(-)	(-)	(-)	(-)	(-)

(-) data not available

Source: own study based on Global and regional tourism performance <https://www.unwto.org/tourism-data/global-and-regional-tourism-performance>.²¹

Analysing the volume of domestic traffic, expressed in the number of visitors, it can be seen that it also decreased in 2020 compared to 2019. The largest decrease was in Latvia (approx. 45%), and the smallest in Lithuania (approx. 14%).

“Movement, moving is what makes tourism.”²² Tourism is characterised by personal contact between the individual and the visited environment and is associated with the process of wandering and migration. It is based on the needs of man and the spatial movements that he makes to satisfy these needs by visiting given places.²³ Tourism phenomena and processes are related to the movement of people and the change of their place of residence take place in a specific space, which is created by its specific tourist development.

21 *Global and regional tourism performance*, accessed 5 November 2022, <https://www.unwto.org/tourism-data/global-and-regional-tourism-performance>.

22 Marc Boyer, *Le Tourisme* (Paris: Du Seuil, 1972).

23 Marika Pirveli, “Istota zjawiska turystyki,” *Wójt i Jego Gmina* 6 (listopad/grudzień 2008), 37: 54–68.

In the analysed case, Adventure Lab caches are a necessary element of this tourist development. In the tourist space of the researched area there were 804 caches of this type, which in total included 4017 places to visit. For each “adventure” there were between three and ten places to visit. The largest number, as much as 96.77% of the examined caches, had five locations (visited places). Looking at the results for individual countries, Finland had the most adventures in the coastal area, as many as 617 with 3073 locations. The size of this number could have been influenced by the presence of the longest coastline and the cities located in this zone, the least adventures were in the studied area of the Russian Federation, only two with five locations each (Table 4).

Table 4. Caches and their locations

Country	Caches		Locations	
	number	%	number	%
Estonia	49	6.09	245	6.10
Finland	617	76.74	3,073	76.50
Lithuania	5	0.62	25	0.62
Latvia	72	8.96	359	8.94
Poland	59	7.34	305	7.59
Russia	2	0.25	10	0.25
Total	804	100.00	4,017	100.00

Source: own study.

The degree of interest in exploring the tourism space using the Geocaching Adventure Lab can be determined by the number of people using the application and realising virtually prepared adventures in real (analogue) space. There were 804 caches in the study area, which had (in total) 91,200 ratings, and the number of written comments was almost 110,000 (Tables 5 and 6). This indicates a great interest in exploring new places using the described e-tool. Looking at the results of basic statistical parameters, due to the number of ratings and comments issued, a large variation in the volume of geocaching tourist traffic in relation to the implemented Adventures is visible. Relatively, the least visited caches were in Lithuania, where 75% of them had a maximum of 71 ratings and 60 comments. This state of affairs may have been influenced by the small number of caches operating in this area. The caches in Estonia had also a relatively low number of visits, respectively: Q3 = 98 and 102. On the other hand, the most numerous adventures were in Finland (75% of the caches had up to 159 ratings and 210 comments) and in Poland (171 and 144, respectively). There are caches in Lithuania for which the number of ratings and comments issued to Adventures is higher than the arithmetic average.

Table 5. Number of ratings given to adventures - selected statistical parameters

Country	Total	Mean	Min	Max	Q1	Me	Q3	CV [%]	A
Estonia	3,892	79	1	360	39	55	98	96.12	2,11
Finland	70,841	115	3	527	56	98	159	68.41	1,36
Lithuania	283	57	25	80	42	65	71	39.87	-0,66
Latvia	9,277	129	6	495	83	108	152	69.44	1,70
Poland	6,867	101	4	408	41	94	171	86.96	1,50
Total ²⁴	91,200	113	1	527	52	97	156	71.35	1,40

Source: own study.

Table 6. The number of opinions given to adventures – selected statistical parameters

Country	Total	Mean	Min	Max	Q1	Me	Q3	CV [%]	A
Estonia	3,926	80	2	310	34	57	102	89.03	1,66
Finlandie	91,408	148	4	622	67	134	210	67.68	0,93
Lithuania	227	45	22	64	34	47	60	38.77	-0,36
Latvia	8,415	117	7	483	73	108	144	69.64	1,79
Poland	5,942	116	3	420	33	79	144	79.84	1,07
Total ²⁵	109,938	137	2	622	57	117	156	71.92	1,05

Source: own study.

Each Adventure Lab type cache in the examined tourist space was rated by the game participants (Figure 2).

In general, caches created in Poland and Lithuania received the highest rating (minimum average rating for a cache was 4.4; Me = 4.7 (PL) and 4.8 (LT)), while the lowest in Finland (minimum average rating 2.6; Me = 4.1). The vast majority of caches created in the surveyed countries had an average score above 4.0, which proves the positive reception of the adventure game participants and the high quality and commitment of the creators in creating adventures.

Taking into account the nature of tourist traffic due to the time dimension, the possible time of implementation of a given adventure in prepared locations is important. The information contained in the application, as one of the statistics, indicates the average time to complete each adventure. The vast majority of adventures in Finland, Poland, Estonia and Latvia were completed within 30 minutes, which means that the locations of these adventures are close to each other, and the tasks are easy to complete. The concept of learning through play is implemented (Table 7).

²⁴ Including data from the territory of Russia.

²⁵ Ibidem.

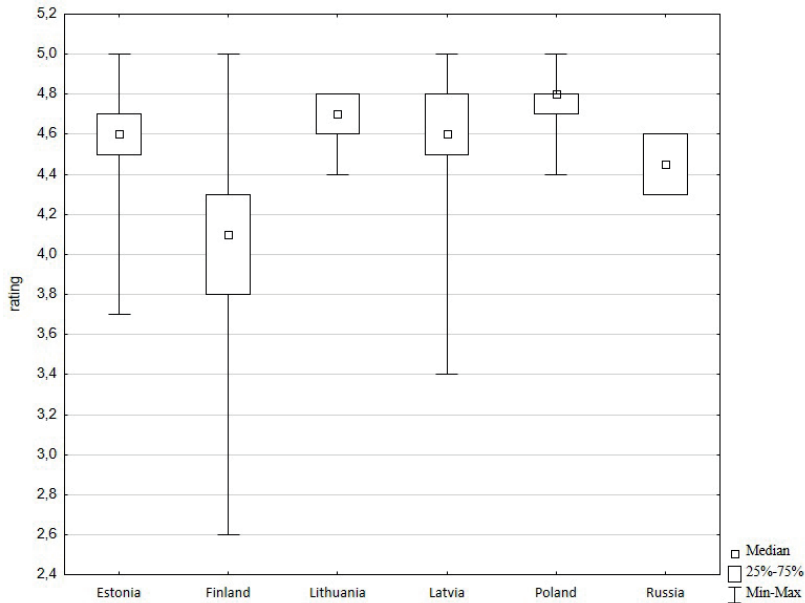


Figure 2. Cache ratings by country – box and whisker plot

Source: own study.

Table 7. Approximate time to complete Adventure

Lead time [min.]	Estonia		Finland		Lithuania		Latvia		Poland	
	caches	%	caches	%	caches	%	caches	%	caches	%
0–30	15	30.6	365	59.2	1	20.0	22	30.6	23	39.0
31–45	9	18.4	83	13.5	2	40.0	17	23.6	7	11.9
46–60	3	6.1	46	7.5	0	0.0	8	11.1	5	8.5
61–90	7	14.3	43	7.0	0	0.0	8	11.1	6	10.2
91–120	4	8.2	15	2.4	0	0.0	6	8.3	8	13.6
120+	9	18.4	65	10.5	2	40.0	11	15.3	10	16.9
indefinite	2	4.1	0	0.0	0	0.0	0	0.0	0	0.0
Total	49	100.0	617	100.0	5	100.0	72	100.0	59	100.0

Source: own study.

Relatively large percentage of caches with a execution time of more than 2 hours can be found in Lithuania, Estonia and also in Poland. The intensity of exploring a given tourist space, expressed in the number of ratings and comments issued, is influenced, on the one hand, by the date of publishing the adventure, previously created caches

have a larger number of them; on the other hand, its broadly understood accessibility, which also translates into the duration of the adventure, namely: the degree of difficulty of the tasks performed (solving puzzles), knowledge of the language (there are adventures that can be completed only by knowing the language of the country in which it is built²⁶), time (the adventure takes place in facilities with limited time access), transport/movement (location of caches in hard-to-reach places for players).²⁷

As part of exploring tourism space with the use of the discussed e-tool, there is a form of tourism whose dominant motive is cognitive goals, mainly through sightseeing activities or short-term recreation, often even without accommodation. The scope of this tourist movement does not exceed the capacity of the area (tourism capacity) on which it is carried out.

Adventure Lab as a tool for creating space

Creating a tourism space with the Geocaching Adventure Lab requires the wizard to be a Premium member. This is a necessary condition to receive a credit from Geocaching HQ which allows you to create your own game/adventure. Each adventure created allows participants to explore and learn through stories and interactive location-based experiences. Adventures are virtual and can take place in open and closed spaces and be located at different (any) distance from each other. This allows adventurers to innovate and test new ideas.

On the one hand, the adventures are in the virtual space (created on the platform and available in the application on the phone), but in order to complete such an adventure, the player must be in the analogue space in the places indicated in the description. The adventure creation location requires an area with strong mobile coverage. The creators are preparing a story that connects the various stages of the adventure (locations). Up to 3 themes (attributes) can be assigned to each adventure, out of 31 listed in alphabetical order in the builder on the labs.geocaching.com/builder/adventures platform, reflecting the nature of the adventure being prepared. Sometimes, at the end of an “adventure,” the builder adds a bonus cache. Most often it is a traditional cache whose coordinates are encoded at each stage of the Adventure Lab cache. Caches of Adventures

26 An example would be Adventure with the title “Pilokaupunki...” (in Helsinki), the description contained information that this Adventure is possible only for people who know the Finnish language.

27 Interesting fact, one of the adventures found during the query – “Kengarags shopping malls” – presents various shopping malls in Kengarags (district of the city of Riga); one of the stages of this adventure concerned a shopping centre and a restaurant, built in Soviet times, with the same name Szczecin (Szczecin is a city located in the north-western part of Poland). It was very common to name public places after cities of “friendly” countries.

Lab can include videos, photos and text for each location. Creators can impose the order of solving puzzles in a given adventure (non-sequential/sequential order of location).²⁸

In the researched tourist space, adventures were created by 463 creators, the largest group were people creating in Finland, which translates into a large number of caches in the researched area of this country (Table 8).

Table 8. Basic information about Adventure Lab caches

Country	Creators	Caches	Non-sequential order of location		Bonus cache		Caches with assigned themes	
	number	number	number	%	number	%	number	%
Estonia	33	49	28	57.1	11	22.4	24	49.0
Finland	349	617	483	78.3	187	30.3	357	57.9
Lithuania	4	5	4	80.0	0	0.0	3	60.0
Latvia	41	72	54	75.0	12	16.7	27	37.5
Poland	34	59	50	84.7	18	30.5	38	64.4
Russia	2	2	2	100.0	0	0.0	1	50.0

Source: own study.

Most of the Adventures have a non-sequential order of location. This is a more convenient form for players, as they can freely choose the order in which they visit individual parts of the Adventure. The largest percentage of adventures (42.9%) carried out in sequential order of location relates to coastal areas of Estonia. Over 30% of Adventures in Poland and Finland ended with a bonus cache, which allowed the game to be extended to an additional location. A relatively large proportion of caches (450, i.e., 56%) have specific attributes (from 1 to 3). To some extent, this indicates the interests of the creators and their knowledge of the area in which they create Adventures. Three attributes were assigned to 278 caches, most often it was a combination of the following themes: Walking tour, History, Nature, Sightseeing, Architecture, Park, Neighbourhood, Art, Trail and For Kids; Two attributes each - up to 92 adventures (main themes: walking, history, nature, and sightseeing) and one attribute each - up to 80 caches (history or nature caches prevailed). Attributes are most often assigned to Adventures by the creators of caches in Poland, Lithuania, and Finland, least often – in Latvia. Table 9 presents the dominant and niche themes of caches in the study area by country.²⁹ For the player, the attributes make it easier to choose adventures based on their own interests.

²⁸ *Geocaching Adventure Lab*, accessed 8 January 2023, <https://adventure.geocaching.com>.

²⁹ Due to the small number of adventures in Russia and Lithuania, they were omitted from this list.

Table 9. Adventures Themes

Country	Estonia	Finland	Latvia	Poland
Caches with assigned themes	56	357	27	38
Dominant themes	History	Walking tour	History	Walking tour
	Walking tour	History	Walking tour	Sightseeing
	Architecture	Nature	Architecture	Architecture
	Sightseeing	Sightseeing	Neighbourhood	History
			Park	
Niche themes	Games	Tribute	For Kids	Games
	Humour	Series	Food & Drink	Humour
	Art	Sustainability	Music	Tribute
	Spooky		Spooky	Trail
	Entertainment			Driving tour
	Mystery			Entertainment

Source: own study.

The creators, in addition to indicating the motifs reflecting the adventure, make a choice regarding the place of the adventure and its assigned locations. Adventures are most often created in big cities (Table 10), whose tourist values (natural and anthropogenic) are well known to their creators. Such a location, looking through the prism of transport and public transport, also affects the turnout of players. Mobile phone coverage is also good in urban areas, a requirement necessary to complete the Adventure.

Table 10. The main locations of Adventure Lab caches

Country	Main areas
Estonia	Tallinn, Parnava
Finland	Turku, Helsinki, Pori, Vantaa, Rauma, Jakobstad, Espoo, Kotka, Vaasa, Oulu, Korsholm
Lithuania	Klaipeda
Latvia	Riga, Windawa
Poland	Gdynia, Gdańsk, Świnoujście
Russia	Sankt Petersburg, Vyborg

Source: own study.

The creators of “adventures” also decide on the language/languages in which the information in the application used for the game is presented (Table 11). Most caches (69.3%) are described in one language. For obvious reasons, it is most often the native language of this country.

Table 11. The language of caches

Country	Estonia	Finland	Lithuania	Latvia	Poland	Russia
Caches	49	617	5	72	59	2
Language of the country (number of caches, %)	42 (85.7)	592 (95.9)	3 (60.0)	60 (83.3)	58 (98.3)	0 (0.0)
English	40 (81.6)	119 (19.3)	5 (100.0)	42 (58.3)	46 (78.0)	2 (100.0)
Swedish	–	45 (7.3)	–	–	–	–
Russian	–	–	–	1 (1.4)	–	–
German	–	–	–	–	3 (5.1)	–
Finnish	–	–	–	–	–	1 (50.0)

Source: own study.

Almost 30% of the adventures are presented in two languages, most often it is the native language and English. It is interesting that the caches located in the study area in Russia are not prepared in Russian, but in English and Finnish. This may lead to the assumption that the creators are not Russian. As already mentioned, it also happens that the creators dedicate their adventure to geocachers who know the language of the country of implementation. Sometimes, adventures are created with the participation of people from the local community, which is involved in promoting their place of residence and shows potential players what is worth seeing in their town.³⁰

Discussion

The study allows us to state that the scale of geocaching tourism traffic is very large. The results of the analysis showed that in the area selected for research, there were 804 Adventure Lab caches, which were visited by over 100,000 people in less than 3 years.

³⁰ Adventure Lab is an example. “Pateniemen Raitti,” which is located in the municipality of Oulu (Finland). The individual stages of the adventure have been prepared together with the students of the school in Pateniemen and the Northern Ostrobothnia Museum, and they refer to important objects of their place of residence.

The spatial differentiation of the analysed tourist traffic (Table 5, 6) depends on the number and specificity of the prepared caches, the presence of which is conditioned by the availability of the mobile network (definitely better within cities; Table 10) and on the number of creators of Adventure Lab caches with access to a Premium account. The highest intensity of the examined tourist traffic, in relation to the research area, was recorded in Finland (over 90,000 people), which, due to the presence of the longest coastline and the cities located in the coastal zone – ranks first place in terms of the number of prepared caches (617 caches with 3,073 locations). The lowest tourist traffic in the study area was in the Russian Federation, where there were two caches with five locations each, which were visited by a total of about 40 people. Most often, the subject matter of the prepared caches was related to the tourist values of sightseeing, i.e., natural and anthropogenic (with particular emphasis on history and architecture) located under the given locations/stages of the adventure. Less often, it is possible to meet a cache with a unique (niche) theme, related to, for example, music, technology, food, and drinks or spooky (Table 9). Most of the descriptions of the caches were prepared in the native languages of the country of their location; however, this is not a problem in taking them up, due to the available online translators (Table 11). The exception is the Adventure Lab prepared only for people who know their native language, then the tasks and related answers take into account the language culture of that country.

The described Adventure Lab caches are an essential element of space development and meet the condition *sine qua non* of (geocaching) tourist space. This space can be treated as a kind of new (contemporary) tourism space, described by Andrzej Stasiak as space that has been used by tourists for a relatively short time and has been a tourist destination for a few to several years.³¹ The new (contemporary) tourism space (here: geocaching tourism space) is internally very diverse and multidimensional. It is based on the concept and activity of the originators (creators of caches). They decide about the individual features of their cache (the unique theme of the adventure, the degree of difficulty of the prepared tasks to be performed, the time of implementation, spatial (terrain) accessibility or the language in which it was prepared. This space is also subjective, so individually perceived and rated (literally and figuratively) by each participant of the game and chosen according to personal tastes and preferences. It is a dynamic space, changing over time, constantly expanded and used more and more intensively, as indicated by the volume of the surveyed tourist traffic. Finally, it is a space full of modern technologies that are necessary for the smooth functioning of geocaching tourism space. The described space, following the rapidly-changing needs and

31 Andrzej Stasiak, "Współczesne przestrzenie turystyczne," in: *Przestrzeń turystyczna. Czynniki, różnorodność, zmiany*, eds. Małgorzata Durydiwka, Katarzyna Duda-Gromada (Warszawa: WEMA Wydawnictwo-Poligrafia, 2011), 39–51.

expectations of contemporary tourists, is evolving, and thus has and will also have an impact on the formation and direction of geocaching tourism.

The conducted analysis also indicates that Adventure Lab caches can be treated as a tourist product. The literature on the subject contains many definitions of a tourism product, which most often present a structural approach and indicate its capacity, complexity and flexibility.³² Kaczmarek et al., treat a tourist product as a set of utilities related to tourist trips, i.e., tourist goods and services available on the market that enable them to be planned, carried out, experienced and gathered experiences related to them. The basic classification includes seven categories of tourist products: item, service, happening, event, object, trail and area, which form two groups. The first group consists of basic (simple) products, such as goods and services, the second group includes more complex products, organisationally and/or spatially integrated.³³ Organisational integration of Adventure Lab caches connects basic products with a common concept and management, and in the tourist product category pyramid they can be classified at the second level of integration, to which the following products belong: object, trail and area. The conducted analysis indicates that each Adventure Lab can be considered as a trail. Therefore, it is a kind of route in the geocaching tourist space, which has been designated for game participants to interesting places, in compliance with the rules set out in the regulations for creating caches, including in terms of player safety, environmental protection, in accordance with applicable local law and regulations of the land manager.³⁴

Adventure includes up to 5 locations (places, objects), that are related to the main idea (subject of adventure) and have been connected with each other by a kind of route, especially clear in the case of caches with a given order of completing individual adventure points. The route is not directly marked, but the location of the points somehow enforces the path that the player follows. Adventure Lab caches also show other features assigned to the tourist product – trail, namely they are spatially determined (their theme, character, course result from the specific heritage and resources of a given area), synergistic (combining many attractions into one route creates a completely new quality), assigned to specific place in space and “produced and consumed” in this place.³⁵

32 Cf. Victor T. C. Middleton, *Marketing w turystyce* (Warszawa: Polska Agencja Promocji Turystyki, 1996); Jacek Kaczmarek, Andrzej Stasiak, Bogdan Włodarczyk, “Produkt turystyczny i jego ewolucja,” *Turyzm/Tourism* 11 (2007), 1: 7–23, accessed 17 April 2023, DOI: 10.18778/0867-5856.11.1.02.

33 Jacek Kaczmarek et al., *Produkt turystyczny* (Warszawa: Polskie Wydawnictwo Ekonomiczne, 2005), 72–78.

34 Cf. Mariola Łuczak, “Znaczenie szlaku jako produktu turystycznego w kreowaniu wizerunku regionu,” *Zeszyty naukowe Uniwersytetu Szczecińskiego* 867, *Problemy Zarządzania, Finansów i Marketingu* 40 (2015): 21–32, accessed 17 April 2023, DOI: 10.18276/pzfm.2015.40-02.

35 Cf. Andrzej Stasiak, “Produkt turystyczny – szlak,” in: *Turystyka i hotelarstwo/Tourism and Hotel Industry* 10, ed. Andrzej Stasiak (Łódź: Wydawnictwo WSTH, 2006), 9–40.

In addition, a properly prepared tourist product should contain content that answers the five basic questions (Figure 3).

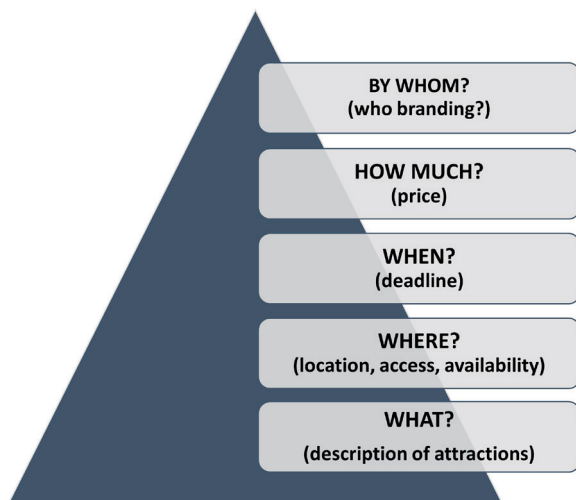


Figure 3. Contents of the tourist product

Source: M. Pirveli 2018.³⁶

Referring the content of the questions to Adventure Lab caches, a certain assignment should be made. Each Adventure contains a description of tourist attractions and tourist facilities in the form of a mini guide (question: what?); indicates the place of implementation (stages of the adventure), which is determined by geographical coordinates available in the application on the smartphone – the distance is also indicated [km] and a specific geographic direction to follow to reach the initial (first) location specified in the adventure (where?); The creator of the adventure decides on the time of its operation and informs, if necessary, in what hours, due to the availability (e.g. of a facility), it can be carried out (when?). Searching and creating caches is available in the app for Premium members, an annual fee is required to access, sometimes transportation to the location of an adventure step requires a fee too (how much?). The created adventure is signed by its builder, who is listed in the application under the nickname assigned to him (by whom?). Based on the presented parallel, it can also be ascertained that the Adventure Lab cache is a tourist product.

36 Marika Pirveli, *Kreowanie Produktu Turystycznego - Wykład 1 (5) / TiR*. (Unpublished materials 2018), accessed 29 December 2023, https://www.researchgate.net/publication/367117866_Kreowanie_produkту_turystycznego_W15.

Conclusions

In conclusion, the undertaken research allowed to achieve the main goal of the work, which was to recognise the size of Geocaching Adventure Lab tourist traffic and to characterize the Adventure Lab caches as a necessary element of development creating the so-called new tourism space. Thanks to the undertaken analysis of the collected material, it was shown that exploring and creating tourism space, in a virtual and real dimension, using the Geocaching Adventure Lab e-tool has great potential. Interest in this active form of spending free time, looking through the prism of the research, is very high, and in the perspective of time it may develop strongly. Having a lot of freedom in creating adventures, creators can influence the direction of tourist traffic, and a properly selected route (Adventure stages) and the theme of the Adventure indicate potential tourist destination areas.

It was also confirmed that the Adventure Lab type cache can be treated as a tourist product, which is, quoting the United Nations World Tourism Organization, “a combination of tangible and intangible elements, such as natural, cultural and man-made resources, attractions, facilities, services and activities around a specific centre of interest which represents the core of the destination marketing mix and creates an overall visitor experience including emotional aspects for the potential customers.”³⁷ Adventure Lab caches can be identified with a tourist product - the trail, which in *sensu largo*, is a composition of activities undertaken by tourists on the trail and the values, devices and services that they use for this purpose.³⁸

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English version: Mark Atkinson

SUMMARY

In the context of changes in tourism traffic, due to the epidemiological situation, e-tools have gained in importance; the example is Geocaching Adventure Lab – a kind of field game that allows participants to explore and create a tourist space in an individual way. The goal of the paper is to identify the scale of geocaching tourism and the description of the Adventure Lab caches as an indispensable element of the development of new tourism, on the example of coastal areas of countries located in the south-eastern part of the Baltic. For this purpose, Internet query of caches was conducted and the obtained data was subjected to statistical description. Significant differences were found in terms of the degree of equipment of geocaching tourism space by caches and related with these tourist traffic in individual countries. The obtained results lead to the conclusion about the possibility of directing and controlling tourist traffic by means of a properly-prepared Adventure. The caches also meet the requirements for a tourist product.

Geocaching Adventure Lab – innowacyjne narzędzie do poznawania i kreowania przestrzeni turystycznej

Słowa kluczowe: Geocaching Adventure Lab, przestrzeń turystyczna, produkt turystyczny, obszary nadmorskie

STRESZCZENIE

W kontekście zmian zachodzących w kształtowaniu się ruchu turystycznego, w związku z zaistniałą sytuacją epidemiologiczną, na znaczeniu zyskały e-narzędzia; przykładem jest Geocaching Adventure Lab, który stanowi rodzaj gry terenowej pozwalający uczestnikom eksplorować i kreować przestrzeń turystyczną w indywidualny sposób. Celem artykułu jest rozpoznanie skali turystyki geocachingowej oraz charakterystyka skrytek Adventure Lab jako nieodzownego elementu rozwoju nowej turystyki na przykładzie obszarów nadmorskich krajów położonych w południowo-wschodniej części Bałtyku. W tym celu przeprowadzono internetową kwerendę skrytek, a uzyskane dane poddano opisowi statystycznemu. Stwierdzono istotne różnice w zakresie stopnia zagospodarowania geocachingowej przestrzeni turystycznej i związanym z nim ruchem turystycznym w badanych krajach. Uzyskane wyniki prowadzą do wniosku o możliwości kierowania i sterowania ruchem turystycznym za pomocą odpowiednio przygotowanej Adventure Lab. Skrytki spełniają również wymagania stawiane produktowi turystycznemu.

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