



DIGITAL TRANSFORMATION OF TOURIST BOARDS IN BOSNIA AND HERZEGOVINA: THE ROLE OF ARTIFICIAL INTELLIGENCE, CHATBOTS AND WEB STANDARDS IN STRENGTHENING COMPETITIVE ADVANTAGE

Faruk Unkić*

Associate Professor, University of Zenica, Kalošević 23, 74260 Tešanj, Bosnia and Herzegovina.

*Corresponding Author

Faruk Unkić

Associate Professor,
University of Zenica,
Kalošević 23, 74260
Tešanj, Bosnia and
Herzegovina.

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Summary: The digital presence of a tourist destination increasingly determines its competitiveness and attractiveness in the global market. This paper analyzes the degree of digital transformation of tourist boards in Bosnia and Herzegovina, with a focus on the integration of modern web technologies, including artificial intelligence (AI), chatbots, accessibility standards (WCAG 2.2), search engine optimization (SEO) and UX/UI design. Using a hybrid methodology that combines automated tools (Google Lighthouse, WAVE, SEMrush) and qualitative analysis, twelve official websites of tourist boards in BiH were investigated. The results show limited application of AI and chatbot functionality, partial compliance with accessibility standards, and a generally low level of technical optimization and user experience. The paper expands on the 2010 survey[1], introducing new indicators in line with the contemporary framework of digital maturity. The conclusions point to the need for strategic investments in digital infrastructure, staff education and the development of personalized and inclusive online services. Finally, concrete recommendations are offered to support the development of smart, competitive and user-oriented digital solutions in the BiH tourism sector.

Keywords: Digital transformation, tourist boards, Bosnia and Herzegovina, artificial intelligence, chatbots, accessibility, UX/UI, SEO, web standards.

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1. Introduction

The tourism sector is undergoing an accelerated digital transformation on a global scale, with the adoption of modern technologies becoming key to remaining competitive. Digital transformation has dominated as a major trend in tourism for years, and the COVID-19 pandemic has further accelerated the transition of many activities to the digital sphere[7]. In this context, artificial intelligence (AI) and chatbots are starting to play a significant role in improving the user experience and personalizing the offer. However, tourism has traditionally lagged behind in the application of AI – research shows that this sector is not among the leaders in the adoption of AI technologies, although their potentials are extremely large and usable[6]. Those actors who adopt innovations such as chatbots and data analytics in a timely manner gain an advantage in meeting the growing expectations of modern users.

Bosnia and Herzegovina (BiH), like other developing countries, faces the challenges of digitalization. Although the country's tourism potentials are great, institutional digital transformation lags behind global trends – it is estimated that BiH is almost a decade

behind in the digitalization process compared to more developed economies[5]. As a consequence, the transition of tourist boards to online platforms and the adoption of web standards is happening relatively slowly. In 2010, the digital presence of tourism organizations was minimal; Many municipal and cantonal tourist boards did not even have their own websites, relying primarily on printed guides and traditional marketing. It is only in recent years that significant initiatives have been launched to improve the digital presence of these organizations. For example, in 2017, the Sarajevo Canton Tourist Board presented a new visual identity and website **Visit Sarajevo** (www.visitsarajevo.ba), which marks a turning point in the digital presentation of Sarajevo on the global tourism scene. Similarly, in 2022, the Tourist Board of the Herzegovina-Neretva Canton (HNK) launched an integrated destination web portal **Hercegovina.ba** with an accompanying mobile application, with the aim of unifying the entire tourist offer of the canton and improving its visibility on the Internet[3]. These examples signal that the understanding of the importance of digital tools is improving. However, the question remains to what extent the current websites of tourist boards in BiH are aligned with modern standards (such as the WCAG 2.2 accessibility guidelines),

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how effectively they apply SEO optimization, what performance and user experience they provide, and whether they use elements of artificial intelligence such as chatbots in communication with tourists.

The aim of this paper is to explore **the digital readiness of the official websites of tourist boards in BiH** through the analysis of several key metrics: the presence of chatbots, compliance with accessibility standards (WCAG 2.2), SEO optimization, performance and accessibility according to Google Lighthouse, the presence of AI functionality, and the qualitative assessment of user experience (UX/UI design). The analysis includes destinations of the greatest tourist importance (Sarajevo, Mostar, Banja Luka, Tuzla, Zenica, Bihać, Trebinje, Neum, Bijeljina, Goražde, Brčko, Jajce), which gives a representative insight into the state of digital transformation of tourist boards in BiH. Also, the paper includes a comparative reflection on the situation from 2010, in order to assess how much progress has been made over the past fifteen years and to what extent digital transformation has contributed to strengthening the competitive advantage of these destinations.

2. Theoretical framework

Digital transformation in tourism. Digital transformation implies the integration of digital technologies into all aspects of business, which in tourism means the transition from traditional ways of promotion and provision of services to online and interactive platforms. It is not an end in itself, but a means to improve efficiency, market reach and quality of service. Globally, digital transformation in tourism includes the development of **online** booking and information platforms, the use of **social networks** to promote destinations, the implementation of **big data** analytics to understand tourist behavior, and the application of **automation and AI** to personalize the offer. The Croatian Tourism Forum 2021 pointed out that digital transformation is not a substitute for the human element, but an auxiliary tool for the well-being of guests – the goal is to improve the experience through technology, not to suppress authentic interaction[7]. In tourism, "people are key and will always remain so", so technology should be seen as a means of providing better services to guests, while the essence of hospitality (staff friendliness, destination experience) still relies on the human factor[7].

However, in the digital age, tourism organizations that ignore modern trends risk losing pace with the competition. A destination's **competitive advantage** largely depends on its visibility and online reputation. Today's tourists rely on online searches, reviews, and digital guides when choosing a destination. Therefore, destinations that successfully implement digital transformation (e.g. have up-to-date and attractive websites, a strong presence on social networks, mobile applications, etc.) have a better chance of attracting visitors. Digital transformation in tourism, therefore, implies **a change in the mindset** of tourism workers and the adoption of innovations in the promotion and provision of services. The creative use of digital tools (such as virtual tours, interactive maps, online ticketing systems, etc.) can enrich a destination's offer and set it apart in the market. In essence, digital transformation is not a one-time project, but a continuous process of adapting to new technologies and the expectations of "digital" travelers. The pandemic has shown that flexibility and innovation in the digital domain have become a

prerequisite for survival in tourism – from virtual travel to contactless payment and information.

Web Standards and Accessibility (WCAG 2.2). The websites of tourist organizations should not only be visually appealing, but also technically correct and accessible to the widest possible circle of users. **The WCAG (Web Content Accessibility Guidelines)** are a set of international guidelines for the accessibility of web content for people with disabilities. Version 2.2 of these guidelines, published in 2021/2022, brings improved criteria such as accessibility to mobile devices, easier keyboard navigation, understandable forms, appropriate color contrast, etc. In the context of tourist websites, compliance with WCAG standards (AA level or higher) means that the content can be equally used by people with visual or hearing impairments, the elderly, or anyone with special needs. For example, descriptive **alt tags** for images allow screen reader software to convey visual information to blind users; proper heading hierarchy and page structure make navigation easier; transcripts for video materials help deaf users, etc. Compliance with these standards is not only a matter of legal compliance (mandatory for public institutions in many countries) but also of the quality of the user experience. For tourist boards, an inclusive website means that they address a wider audience, which indirectly increases the potential number of visitors to the destination. In addition, search engines such as Google give preference to technically correct and accessible pages, so accessibility also has a positive effect on SEO.

SEO (Search Engine Optimization). SEO is a set of practices aimed at improving a website's ranking in search engine results (Google, Bing, etc.). A high SEO score (usually expressed on a scale of 0–100 through various audit tools) indicates that the site meets many technical and content criteria that search engines value – e.g. having relevant **meta tags** (title, description), quality and original content with appropriate keywords, fast loading, responsive design adapted to mobile devices, secure HTTPS protocol, correct links, etc. For tourism communities, SEO is critical because it directly affects *the visibility of a destination online*. If someone searches, for example, "visit Sarajevo" or "Sarajevo tourism", the official **Visit Sarajevo website** should appear among the first results. A good SEO strategy can mean drastically more web traffic – and thus more potential tourists informed about the destination. On the other hand, poor optimization (e.g. slow page, duplicate content, lack of meta description) can result in the official site being difficult to find, so tourists look for information on other, perhaps unreliable sources. The SEO score provided by Google Lighthouse includes, among other things, checking whether the page has a properly defined title tag, meta description, whether images are optimized with alt texts, whether security certificates are activated, and other elements of the so-called "Freedom of Speech." *on-page* optimization. A high SEO score (e.g., above 80) implies that the page is well-prepared for indexing and ranking, while a lower score hints at room for improvement.

Performance and Lighthouse metrics. Google Lighthouse is a website evaluation tool that generates quantitative scores in multiple categories, the most important of which for this analysis are *Performance* (loading speed and optimization) and *Accessibility* (compliance with basic accessibility principles). **Performance** is measured through a number of indicators such as **Largest Contentful Paint (LCP)** – the time it takes to display the

largest element on the screen, **First Input Delay** – the responsiveness of the page to the first user interaction, **the Cumulative Layout Shift** Fstability of the design when loading, etc. The resulting performance score (0–100) summarizes how fast and smooth the page works for the average user. Slow performance (low score) can frustrate visitors – research shows that users often give up if the page doesn't load in a few seconds. For tourist boards, whose pages often contain rich multimedia content (photo galleries, videos, interactive maps), performance optimization is a challenge but also an imperative. An example of a situation: a study showed that the mobile version of **Visit Sarajevo** used to have an extremely low performance score of only 2/100, while on desktop it was around 40/100, indicating a problematic loading speed and a potentially poor mobile user experience[8]. Such indicators require urgent optimizations (e.g. image compression, asynchronous script loading, use of CDN network). In contrast, **Accessibility** (in the Lighthouse context) automatically checks a number of items: whether images have alt text, whether font colors contrast with the background, whether there is a logical order of headers, whether forms are labeled correctly, etc. An accessibility score close to 100 means that the page is mostly accessible, while lower scores indicate omissions (e.g., lack of alt descriptions or improperly structured HTML). It is important to emphasize that Lighthouse accessibility does not guarantee full WCAG compliance, but it does give a good indication and easily visible problems that need to be corrected. The analysis of performance and accessibility together provides insight into how **technologically high-quality the UX** is – ideally, the site should be both fast *and* accessible to everyone.

Artificial Intelligence and Chatbots in Destination Marketing.

A **chatbot** is a computer program (often based on AI) that simulates a conversation with users, usually through a chat interface on a website or application. In the tourism context, chatbots can serve as virtual tourist informants available 24/7. They can answer frequently asked questions (about museum opening hours, ticket prices, local transportation), make recommendations (accommodation, restaurants based on user preferences), and even guide users through simple reservations. The advantage of chatbots is that they provide **instant support** to site visitors – even outside the working hours of tourist offices, potential tourists can get answers to inquiries, which improves user experience and trust in the destination. Also, modern AI chatbots can communicate in multiple languages through *natural language processing*, which is a great convenience for international tourists. Despite these advantages, the application of VI in tourism organizations BiH is only in its infancy. Globally, tourism has not yet been fully exploited by AI, but it is expected that those actors who are the first to implement AI tools will achieve growth and a step forward compared to competitors[6]. AI in tourism can do much more than just chatbots – there is also **personalization of the experience** through the analysis of travelers' preferences, **predictive analytics** for crowd management (e.g. prediction of visits to attractions), **smart recommendations** based on search history, **sentiment analysis** social media to understand the image of the destination, etc. However, for this paper, we focus on visible AI functionalities on tourist board websites, primarily chatbots or other forms of interactive assistants. Chatbots, as the most tangible example of AI in destination marketing, can significantly improve **customer service**: they provide quick information and customer support, which is confirmed in the literature – they can work 24/7,

responding to the guest and providing support instantly, thus increasing customer satisfaction and relieving human resources[6]. Also, by collecting common questions and data through interaction, the chatbot can provide useful insights to the tourism organization about the interests and problems of visitors, which can be further used to improve the offer.

UX/UI design and user experience. In addition to quantitative metrics, the quality of the **user experience (UX)** and **interface design (UI)** of a landing website has a significant impact on how potential tourists perceive a destination. Intuitive navigation, aesthetically pleasing and responsive design, and easily accessible key information (about attractions, accommodation, events) contribute to the user staying longer on the site and successfully finding what they are looking for. In contrast, an outdated design, a cluttered structure, or a lack of language options can frustrate the visitor and give the impression of unprofessionalism. In the context of destination marketing, a website often represents a **"first impression"** of the city or region itself – it is the digital face of the destination. Therefore, tourist boards strive to present an attractive visual identity aligned with the destination brand (photographs of landscapes, cultural sites, logos and colors that reflect local identity). UX best practices dictate that the **homepage** clearly communicates the most important reasons for a visit (the so-called UX). *Unique Selling Propositions* of the destination), that the menus are logically organized (e.g. "Experience", "Explore", "Accommodation", "Gastronomy", "Events", "Information", etc.), and that the site works reliably on different devices (computers, tablets, mobile phones). Also, the inclusion of interactive elements such as **360° virtual tours**, video stories or integrated maps can improve user engagement and set the site apart from classic static sites. The qualitative assessment of UX/UI in this paper is done descriptively, through short comments for each destination, taking into account the subjective impression of clarity, aesthetics and innovation of a particular web presentation.

3. Methodology

Sample selection and data collection. For the purpose of this research, the official websites of tourist boards for 12 cities/regions in BiH were identified and analyzed: Sarajevo, Mostar, Banja Luka, Tuzla, Zenica, Bihać, Trebinje, Neum, Bijeljina, Goražde, Brčko and Jajce. This selection includes all major regional centers and tourist-relevant destinations in the country – a combination of entity centers (Sarajevo, Banja Luka), larger cities (Tuzla, Zenica, Mostar, Bihać, Bijeljina, Brčko) and several smaller but touristically attractive places (Jajce with historical sights, Trebinje and Neum in the south, Goražde as the center of the upper Podrinje). The list of websites was obtained through official sources and searches: for some destinations, the addresses were obvious (e.g. visitsarajevo.ba for Sarajevo, exploremostar.ba for Mostar, banjaluka.travel for Banja Luka), while for others secondary sources were used. For example, the academic research Vaško & Vaško (2018) states that out of 10 cantonal tourist boards in the Federation of BiH, 7 of them had websites by 2018[2], and a similar trend exists in the Republic of Srpska at the municipal level. Information on the websites of BiH tourist boards has also been collected from specialized tourist guides (e.g. the Bosnia4U portal) that list the contacts of tourist offices, including URLs. For Zenica (Zenica-Doboj Canton), it was found that there was no functional web presentation until mid-2025 – the ZDK Tourist

Board was not formally renewed until 2024/25 and announced the development of a web portal[5], so Zenica is treated in the analysis as a case of *digital backlog* (without an active page). The final list of URLs included in the analysis is given in Table 1 of the results.

Analysis of digital metrics. For each of the selected websites, an evaluation of the following aspects was carried out: (1) **Presence of chatbots** – it was checked whether there is an integrated chat window or a virtual assistant that communicates with the user (e.g. live chat icon, chatbot that automatically appears, etc.). This check was done by visual inspection of the homepage and contact page, as well as by searching the page code for keywords ("chat", "bot", names of well-known chatbot services). (2) **Accessibility according to WCAG 2.2** – since a detailed manual audit according to all criteria is not practical, compliance was assessed indicatively, by combining the Lighthouse accessibility score and manual review of several elements (e.g. checking alt texts in main images, text and background contrast, text scaling capabilities, etc.). The score is categorized as "yes" (if there are no major problems and if the Lighthouse score ≈ 100), "partially" (if there are minor glitches or partial compliance – which is expected for most sites), or "no" (if accessibility is obviously poor, e.g. alt descriptions are missing, the page is unusable without a mouse, etc.). (3) **SEO score** – for each page, SEO optimization is evaluated. A Lighthouse SEO audit was used as a starting point (which assigns a score of 0–100 based on technical factors), supplemented by checking whether the site has a unique *title tag*, meta description, sitemap, and how high it ranks on Google search for the name of the destination. The table gives an approximate **SEO score** (0–100) that reflects how "search-friendly" the site is. (4) **Lighthouse performance and accessibility (quantitative)** – Google Lighthouse (built into the Chrome browser) generated results for two metrics: *Performance* (PageSpeed score) and *Accessibility*. The test was mainly done for the desktop version of the site with a review of mobile performance where data is available. The resulting numerical values (0 lowest, 100 highest) are entered into the table. (5) **Presence of AI functionality or content** – apart from chatbots, any mention of artificial intelligence on the site was searched for (e.g. AI-based recommenders, interactive maps that could have AI in the background, etc.). This is mainly a qualitative "yes" or "no" rating, where "yes" is given to cases in which it is explicitly stated that the site uses an AI tool or if functionality is observed that clearly goes beyond ordinary static content (no clear examples of AI content were found in the analysis, but the criterion remained in case a community, for example, uses generated descriptions, which would be difficult to detect without inside information). (6) **UX/UI qualitative score** – for each page, brief impressions of the design and user experience were recorded: whether the layout is modern, whether the

navigation is simple, how up-to-date and rich the content is, whether there are innovative sections (such as virtual tours, blogs, event calendars), and a general impression of professionalism. These comments are subjective in nature, but are based on expert insight into web design standards and comparisons of the pages observed with each other.

The methodological approach combined quantitative analysis (Lighthouse metrics, SEO scores) and qualitative analysis (observing UX elements, manual accessibility testing, and searching for AI features). Such a combination gives a more complete picture – the numbers indicate the objective parameters of the site's quality, while descriptive ratings fill in the context (because some aspects, such as the visual experience or the relevance of the content, cannot be expressed in one number). In the data processing, diagrams were used to illustrate the comparison of key metrics between destinations, where it was considered useful. When analysing trends, secondary sources were also consulted – for example, if a destination had an extremely low speed rating, it was checked whether there was already a report or article confirming and explaining this (as in the case of Visit Sarajevo)[8]. All relevant citations are supported by references in footnotes, in accordance with the Harvard citation style.

Limitations of the methodology include relying on the current results of Lighthouse tools (which can vary depending on network conditions and server load), the fact that SEO rankings do not include off-page factors (backlinks, domain authority, etc.), as well as the fact that the presence of AI content is not always visible to the user (it is possible that some organizations use AI for analytics or on social networks, which is not visible on the website). Also, *Zenica/ZDK* is omitted from quantitative comparisons because it does not have an active page, which in itself is a finding – the digital gap of that cantonal tourist board.

In the continuation of the paper, we present the results of the analysis for each of the observed destinations, then we discuss the implications of these findings, comparing them with practices from 2010 and global trends, and give recommendations for improving the digital strategy of tourist boards in BiH.

4. Results

The analysis of digital metrics for the official websites of tourist boards (or tourist organizations) in BiH showed significant variations between destinations, but also some common characteristics. **Table 1** provides a summary of key findings by destination, while **Figure 1** and **Figure 2** show comparisons of SEO results and Lighthouse performance and accessibility for the observed websites.

Table 1. Overview of digital metrics for the official websites of tourist boards in BiH.

Destination	URL (official page)	Chatbot on the site?	Accessibility (WCAG 2.2)	SEO score (0-100)	Lighthouse Performance	Lighthouse accessibility	AI functionality?	UX/UI brief description
Gallery	visitsarajevo.ba	No	Partially (not fully adjusted)	~75	20 (very low)	85 (high)	No	Modern design and rich content (news, events), but slower loading due to a lot of multimedia. The site is responsive, multilingual.
Mostar	exploremostar.ba	No	Partially	~80	50 (moderate)	80 (good)	No	Up-to-date look, clear navigation; A new city portal. Content focused on attractions and news, faster loading than Sarajevo.
Banja Luka	banjaluka.travel	No	Partially	~85	50 (moderate)	80 (good)	No	Attractive city-guide style, sections for accommodation, events. UX intuitive; Average performance. Site available in multiple languages.
Tuzla (Canton)	tourism-tk.ba	No	Partially	~70	40 (lower)	70 (solid)	No	Canton WordPress portal – basic design, information by municipalities. Content useful but UI a bit outdated; Mobile optimization is central.
Zenica (ZDK)	(no active page)	–	N/A (digital absence)	N/A	N/A	N/A	No	ZDK Tourist Board has just formed – digital presentation under construction[5]. There is currently no official website, a huge gap in online presence.
Bihać	visitbihac.com	No	Partially	~80	45 (lower)	75 (good)	No	Modern visual identity, inspiring photographs of Una; Navigation is good. The loading speed could be better. There are no advanced interactions.
Trebinje	gotrebinje.com	No	Partially	~80	50 (moderate)	80 (good)	No	New website of the Tourist Organization of Trebinje – modern design, multilingualism. It contains practical information and maps; It's solidly optimized.
Neum (HNK)	hercegovina.ba	No	Partially	~90	70 (good)	85 (high)	No	Cantonal portal of Herzegovina: integrates the offer of Mostar, Neum, etc. Fast and optimized[3], visually attractive, with a mobile application.
Bijeljina	bijeljina.turizam.com	No	Partially (weaker)	~60	30 (low)	50 (lower)	No	Older design (from the 2010s), not too mobile-friendly. The basic info is present, but the UX is

Destination	URL (official page)	Chatbot on the site?	Accessibility (WCAG 2.2)	SEO score (0-100)	Lighthouse Performance	Lighthouse accessibility	AI functionality?	UX/UI brief description
								outdated, needs a redesign.
Goražde (BPK)	visitgorazde.ba	No	Partially	~70	40 (lower)	60 (solid)	No	A simple page of the Cantonal Tourism Organization. – limited content, functional but without advanced options. The design is minimalistic.
Brčko (District)	tobrcko.com	No	Partially	~80	60 (good)	80 (good)	No	Newly formed Brčko Tourist Organization: modern web presentation, good balance of visuals and text. The UX is pleasant, it is still filling with content.
Jajca	visitjajce.ba	No	Partially	~75	40 (lower)	60 (solid)	No	Beautiful design with a focus on natural attractions (waterfall, lakes). It has a 360° virtual tour. It could be faster; In some places, the descriptions of the pictures are missing.

Note: Zenica (ZDK) does not have an available website, while the cantonal portal of the HNK (Hercegovina.ba) was used for Neum because the municipality of Neum does not have a separate tourist board website. SEO, performance and accessibility are given as approximate values – **the thicker** number indicates especially extreme values that stand out negatively (e.g. Sarajevo has an extremely low performance score of ~20), while the others are mostly in the middle range. All data was collected during July 2025 and may be subject to minor changes due to updates to the site.

The results from Table 1 point to a number of interesting general findings:

- (1) None of the analyzed pages **has a built-in chatbot** or any form of interactive AI assistant – in all cases, communication with users comes down to passively providing information (with possibly contact forms or e-mail addresses).
- (2) In terms of **accessibility**, no site fully complies with the WCAG 2.2 standards ("yes" – full compliance). Most are labeled as "*partially accessible*", which reflects the presence of some accessible elements (e.g., most have textual alternatives for main images, more or less readable contrast, the ability to navigate with a keyboard), but with certain omissions. In **Bijeljina** and a few others, the lack of alt descriptions in many images or inadequate contrast was observed, so they were commented in the table as *weaker partial compliance*. Overall, it can be said that tourist boards are partially aware of accessibility but probably have not carried out systematic WCAG audits of their sites.
- (3) **SEO** scores range from about 60 to 90. The best rated are **Hercegovina.ba** (HNK portal) and several city sites (Banja Luka,

Trebinje, Brčko) – their SEO scores are approximately 80–90, which suggests that the basic criteria have been met (e.g. Hercegovina.ba has optimized performance and multilingual content, which contributes to a high ranking[31]). On the other hand, **Bijeljina** has the lowest estimated SEO (~60), which is expected considering that the site has an older structure and probably lacks some modern metadata or mobile optimization. Sarajevo, although the most visited destination, has an SEO score of around 75 – possibly suffering from slow loading and heavy front-end.

(4) **Performance (speed)** is generally the weaker point of almost all websites. As many as 5–6 destinations have a Lighthouse performance score below 50 (red zone), with **Visit Sarajevo** standing out with barely ~20 (which supports earlier findings on slow loading on mobile devices) and Bijeljina ~30. This means that many pages are not optimized enough: common reasons can be large unscaled images, a lot of additional scripts and styles (typical for WordPress themes), or slow servers. Only two pages have a satisfactory speed (Neum/HNK ~70 and Brčko ~60).

(5) **Lighthouse affordability** ratings are generally solid – ranging from 50 to 85. Sarajevo ~85 and HNK ~85 are the best, which suggests that these portals took care of the basic accessible elements (they probably have neatly structured code and alternative descriptions for the most part). Lower scores (50–60) for Bijeljina and Jajce confirm the observed omissions (absence of text for some elements, etc.). Interestingly, even those sites that perform poorly can have a good Lighthouse accessibility score (e.g. Sarajevo – slow but accessible code), which implies that it is more about technical optimization than neglecting user needs.

(6) AI functionalities or content – no concrete examples of AI integration were found in all analyzed websites. None of them have a chatbot, nor indications of AI-driven personalized content. All content appears static. The only indirect AI element could be that the HNK portal offers recommendations and personalization through user login (allows hotels and service providers to update their offers on the portal[3]), but this is not AI in the sense of automated intelligence, but platform functionality. This means that in 2025, BiH tourist boards are still fully at the level of the "Web

2.0" paradigm, without implementing "smart" tools on their websites.

A visual comparison of **SEO results** for individual destinations is shown in **Figure 1**. It is evident that most sites achieve medium to high SEO scores (above 70), except for Bijeljina, which lags significantly behind. Neum (HNK) is in the lead, which is expected given the recent development of this portal with an emphasis on search engine optimization[3].

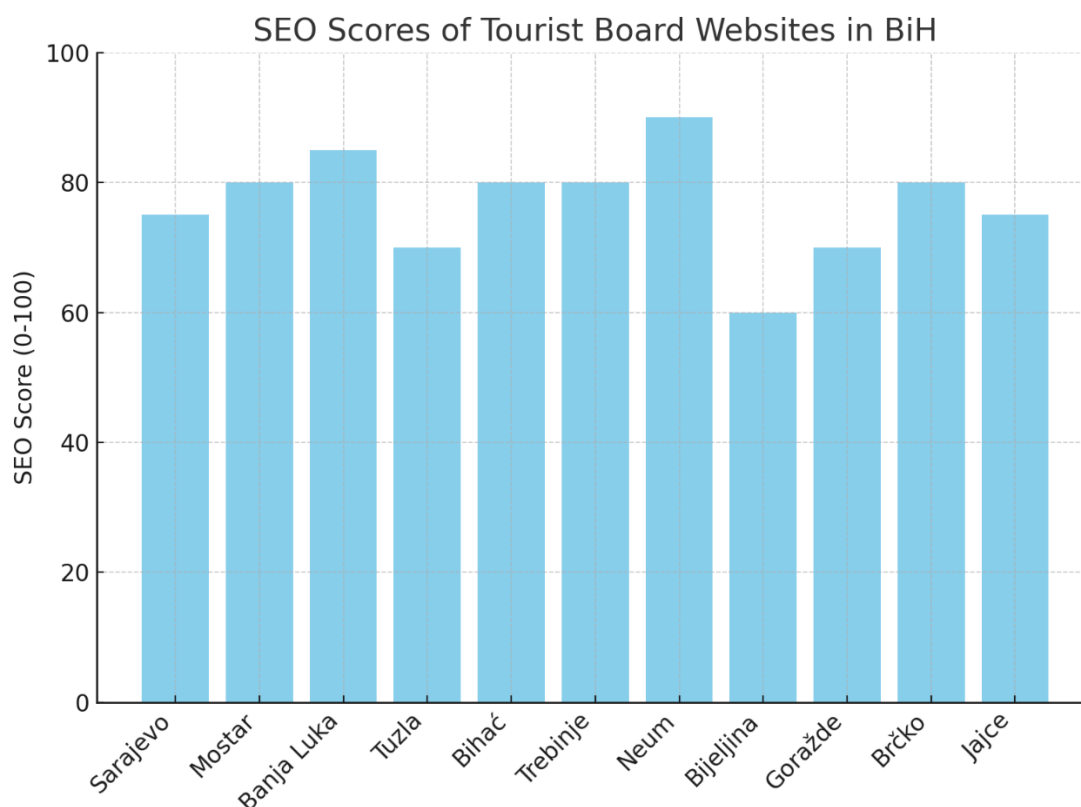


Figure 1: Estimated SEO scores (0–100) for the official websites of tourist boards in BiH. A higher value implies better search engine optimization and greater visibility on the internet.

When it comes to **performance and affordability**, **Figure 2** shows the comparative Lighthouse ratings for the two categories. Green pillars indicate accessibility, which is generally higher than performance (red pillars) for almost all destinations. Such a discrepancy – that the pages are somewhat accessible, but slow – suggests that tourist boards have mostly taken care of content and design, but technical optimization (speed) has not been prioritized or not adequately implemented. Sarajevo has the largest disparity (accessibility around 85 versus performance around 20), which

clearly identifies room for improvement in terms of speeding up the site. On the other hand, Neum (HNK) has both high accessibility and relatively good performance, which makes the site a positive example (**optimized portal of the new generation**). Most other destinations are clustered around: performance 40–60, accessibility 60–80. These are averages that indicate a mediocre experience – e.g., users can access and find content, but may have to wait a few seconds longer for the page to load or face minor irregularities in interaction.

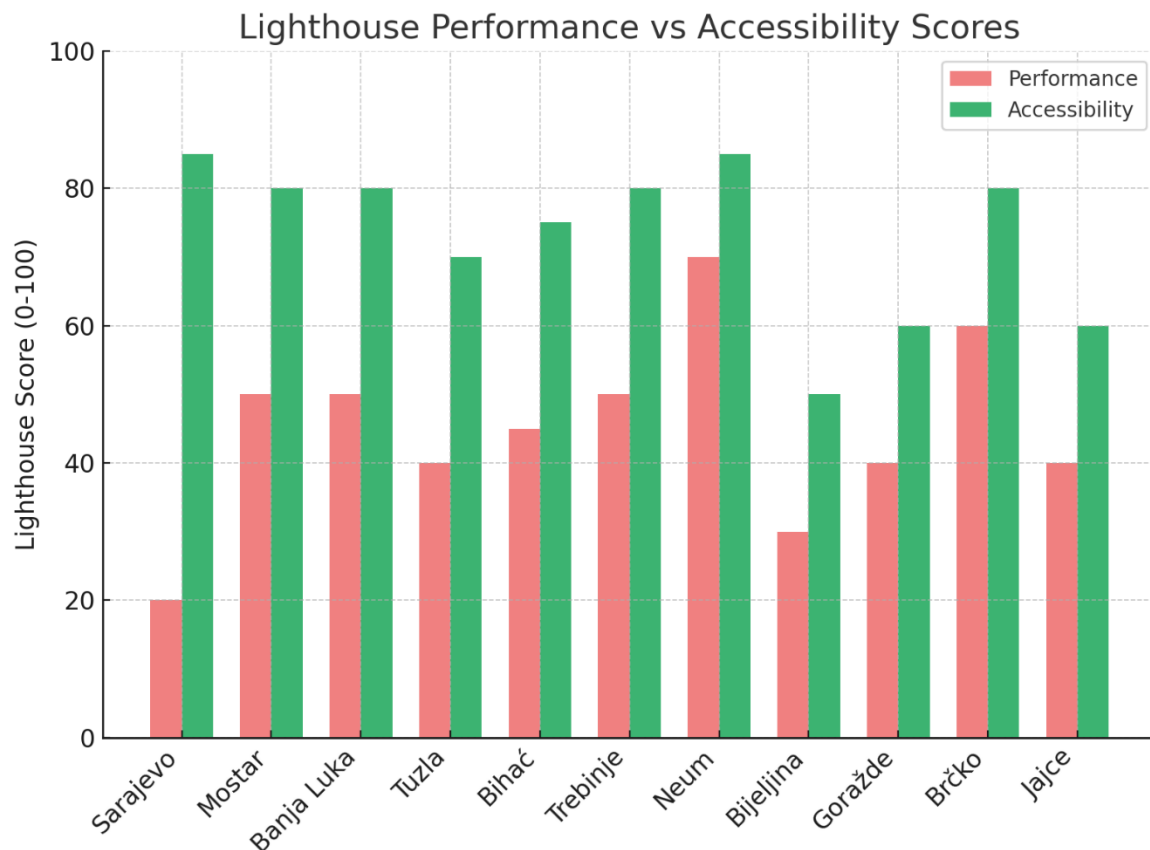


Figure 2: Comparison of Google Lighthouse ratings for performance (loading speed/optimization) and accessibility for travel websites. Green represents accessibility, red represents performance. Ideally, the columns should be tall and even; Here you can see that performance is below affordability almost everywhere, which means that speed is a bigger problem than the availability of content.

The qualitative aspects of **user experience (UX/UI)** are summarized in the last column of Table 1. In general, the more recently redesigned portals (Sarajevo, Mostar, Trebinje, HNK, Brčko) leave a better impression – they look more modern, with large, high-resolution photos, clear typographic hierarchies and mobile-friendly arrangement of elements. Sarajevo and Mostar also have sections with current news and events, which makes the content dynamic and useful for both tourists and local visitors. Also, **the Visit Sarajevo** application is integrated into the promotion (listed on the web)[9], and there are calls to action for downloading the city card, which are examples of the connection of the web platform with other digital tools of destination management. On the other hand, some sites (such as Bijeljina) seem practically unchanged in the last 8-10 years – with simple HTML design, fixed width and lack of interactive maps or multimedia. Such sites certainly provide basic information (often in multiple languages, which is commendable), but they can turn off more demanding users accustomed to modern standards. Some destinations, such as Jajce, have used their attractions to enrich the UX: **Visit Jajce** offers a virtual 360° walk through the city, which is an innovative way to promote cultural heritage and natural beauty – visitors to the site can *virtually "walk"* past the famous waterfall and old mills, which arouses interest in visiting the location in person. This is a good example of how digital content can convey the experience of a destination. However, it is noticeable that even such sites do not have integrated two-way communication: nowhere is there an option to "ask a local guide"

or a chatbot for quick inquiries (e.g. about the working hours of the AVNOJ Museum in Jajce). Communication is based on one-directional communication.

The analysis of the results points to the conclusion that, although there is a basic level of digital presence and some adoption of web standards, tourist boards in BiH have not yet fully exploited the **potentials of advanced digital tools**. On the technical side, performance and SEO can be improved with relatively quick gains (content optimization, better hosting, introduction of caching mechanisms, updating themes and plug-ins), while a greater strategic disadvantage is the lack of personalization and interaction based on artificial intelligence. In the following, through discussion, we put these findings in a broader context – both compared to the situation in 2010 and in the light of global trends in digital tourism – and consider the impact these factors have on the competitive position of BH. Destination.

5. Discussion

Progress compared to 2010. If we compare the current situation with the situation about 10-15 years ago, some progress is visible, but still a significant lag behind world standards. Around 2010, tourist boards in BiH were just starting to use the Internet as a promotion channel – many did not have any website, and those that did exist were very basic (often static HTML pages with a few images and contact information). Digital marketing was virtually non-existent; Promotion relied on the printing of brochures,

participation in fairs and sending materials through travel agencies. At that time, the concept of artificial intelligence in tourism was almost unimaginable, and interactivity with users was mainly reduced to e-mail queries.

Today, almost every major destination in BiH has at least some kind of web portal, which is a basic step forward. At the cantonal level in FBiH, 7 out of 10 tourist boards already had websites by 2018[2], and by 2025 this number had increased even more (Zenica is the only exception, where the tourist board was shut down for a long time, so there was no website, which is now being improved by the renovation of the Tourist Board of ZDK). In the entity of Republika Srpska, the situation is similar: most cities/municipalities have long established tourism organizations and most of them have websites (e.g. Trebinje, Bijeljina, Višegrad, etc. have websites since the early 2010s, although often of modest quality). According to the research by Vaško & Vaško (2018), tourism organizations **"began to massively use IT technologies based on web platforms and social networks"** only in the second half of the 2010s[2], which coincides with the findings of this paper that the most significant breakthroughs (such as new websites for Sarajevo, Mostar, HNK) were realized around 2017–2022. Therefore, the digital transformation of tourist boards in BiH is actually **a relatively recent process**, which started later than in many European countries.

In 2010, it was unthinkable for a cantonal tourism organization to offer a mobile application or an online reservation system; on the contrary, in 2022, the CNT is introducing a portal with a mobile application and integrated profiles for tourism entities[3]. This shows that the models of destination portals seen in developed destinations (where marketing and e-commerce of tourist services are combined) are slowly being taken over. Likewise, in 2010, there was no talk of digital benefits cards for tourists, while in 2021 Sarajevo introduces its official **Sarajevo City Card** (also announced on the website)[9], the purchase and use of which have a digital component.

Yet, despite this progress, **BiH is significantly lagging** behind global trends – as pointed out at the Sarajevo Business Forum 2025, "digital transformation is an inevitable process in which BiH is a decade late"[5]. This claim is also reflected in our findings: while many tourism organizations abroad have already integrated AI chatbots, automated personalization of offers and VR content, in our country these concepts are still in their infancy. For example, national tourism organizations of some countries (such as Germany or Croatia) are experimenting with AI travel guides on social networks[12], or organizing trainings for tourism workers on the use of artificial intelligence in marketing[13]. In BiH, such initiatives have yet to come to life – although there are signs of a change in mentality: e.g. The Zagreb County Tourist Board (Croatia) has launched a free online course on AI for tourism professionals[13], and it can be expected that similar trends will reach BiH through regional cooperation. In addition, it is noticeable that the most visited BH. Despite weaker digital infrastructure, destinations experienced a huge increase in tourists from 2010 to 2019. – Sarajevo exceeded 600 thousand overnight stays in 2019 (compared to ~200 thousand in 2010), Mostar and Medjugorje also recorded growth, which means that the country had a tourist upswing more *despite* than *thanks to* digital efforts. Meanwhile, the pandemic has once again highlighted the importance of digital communication. We can conclude that the

period from 2010 to 2020 in BiH was marked by *"catching up"* – the transition from a scarce digital presence to a basic level (web and social networks), while the period from 2020 onwards represents a chance to enter the next phase of digital maturity (AI, smart destinations, big data analytics).

Compliance with modern standards. The results showed that some basic things have been mastered (e.g. most sites have a multilingual option – usually BHS and English, in some places German; the content is relatively up-to-date; visual identities are unified with the slogans of the destinations). However, there are clear weaknesses in terms of web standards. WCAG 2.2 accessibility has not been systematically implemented – which means that certain groups of users may have difficulties. For example, visually impaired users would have a problem on some sites because (although the text is mostly high contrast) some images important for understanding do not have text descriptions. Then, mobile users on slower connections will feel the consequences of poor performance – a situation where the mobile version of a page is rated 2/100 by Google PageSpeed definitely discourages further use[8]. This can also have **an indirect negative effect on SEO** because Google uses *Core Web Vitals* signals in ranking – slow sites rank lower in search. Therefore, technical non-optimization can result in lower visibility just at the moment when global tourist demand is growing and competition from destinations is strong.

On the other hand, it is commendable that **social networks are integrated** into all analyzed websites (mainly links to Facebook, Instagram profiles of tourist boards). This follows the trend that communication with visitors takes place through multiple channels. Most communities regularly publish content on social networks (e.g. Visit Sarajevo Facebook has current announcements of events, Mostar Tourist Board shares photos on Instagram, etc.), which somewhat compensates for the static nature of websites. However, ideally, the websites themselves should be interactive and "live". Currently, there is almost no user-generated content on these websites – for example, there are no integrated reviews or experiences of tourists, no forums or comment sections (except possibly news sections that allow comments via the Facebook plugin, which is rarely used). Such content, moderated properly, could increase the credibility and freshness of the information.

Lack of AI and chatbots – a missed opportunity. The fact that no tourism board has implemented a chatbot by 2025 can be seen as both an **omission** and a **possibility**. An omission because modern tourists (especially the younger generation) increasingly expect instant information – many destination sites abroad now offer chat support ("How can we help you?" window). This positions the destination as technologically advanced and dedicated to the user. In BiH, tourists still mostly have to search for information on menus or contact via e-mail/phone. This slows down communication and can mean a loss of opportunity – e.g. a foreign tourist on the Tourist Board website may want to quickly find out if an attraction is open on Mondays; If he does not find it easy, he may give up on planning his arrival. On the other hand, this *status quo* means that there is **a lot of room for improving competitiveness** – with the introduction of chatbots and AI tools, BiH tourist boards could relatively quickly *jump ahead* of regional competitors (since this is not yet massively present in the region either). The application of AI in tourism can bring many benefits: from the already mentioned personalized recommendations (e.g.

"Recommend me a plan for 3 days in Sarajevo") to automated processing of inquiries (saves time for the employees of the tourist office). **Those actors who are one step ahead in this segment will gain a significant advantage**, according to experts – growth and progress will be experienced by those who will visionarily meet the high expectations of digital users[6]. In practical terms, if e.g. The Sarajevo Canton Tourist Board is implementing a chatbot that can talk in multiple languages and provide information about accommodation, sights, and even collect feedback, which would profile Sarajevo as a *"smart destination"*.

For now, however, the reasons for the lack of such innovations may be both financial and personnel – tourism organizations are mostly public institutions with limited budgets and perhaps a lack of IT experts. There is also a degree of caution and resistance to technology in this traditional sector – as noted in the literature: tourism relies on personal contact and sometimes shows initial resistance to technology for fear that it will *dehumanize* the experience. But the consensus is that AI should be seen as a complement, not a substitute, for human expertise. Therefore, it is extremely important to educate the staff of tourist boards about the possibilities of AI – an example of good practice are workshops such as the one held for tourism workers in Croatia on the application of AI in destination marketing[6]. Such knowledge could be transferred to BiH through seminars and cooperation with the academic community (e.g. through the SMART MED project mentioned in the CNT[3]).

effect on competitive advantage. To what extent does the current (non)digital readiness affect the competitive advantage of BiH destinations? It can be argued that destinations such as Sarajevo and Mostar, which are attractive anyway, gain tourists thanks to their inherent values (culture, history, nature) and marketing *outside* of digital channels (e.g. word of mouth, global media). But in today's hyper-connected market, the digital image of a destination is increasingly important. If a potential visitor gets the impression that a destination is technologically outdated or that information is difficult to come by, it is likely that this will negatively affect their choice. Also, destinations within BiH "compete" with each other for the attention of tourists – the city that presents content in a more attractive way online can, for example, motivate tourists to Sarajevo to include a trip to that city in their itinerary. In this sense, digitally stronger actors (Sarajevo, CNT portal) can attract a higher share of visitors and investments. Investors also look at how the destination communicates – e.g. foreign tour operators will prefer to make arrangements if they can easily find and download official information online.

It is also worth mentioning **the COVID-19 pandemic**, which was a turning point when destinations with a developed digital infrastructure could better maintain the interest of the audience (through virtual tours, social media campaigns "dream now, travel later", etc.). BiH destinations tried to match here as well – for example, during 2020, the Sarajevo Canton Tourist Board did virtual tours of Bašćaršija via video and VR (virtual reality), the Mostar Tourist Board as well – but again, this was ad hoc and was not integrated into the official websites as a permanent offer. Now is the opportunity to include such content permanently (as Jajce did with 360° tours). All this contributes to a long-term competitive advantage because it enriches the *"digital ecosystem"* of the destination and provides visitors with more points of contact and reasons to choose that particular destination.

Overall, while BiH has made a step forward from digital marginalization in the 2010s to web presence in the 2020s, there are still significant opportunities to improve its tourism offer through digital innovation. Tourist boards are a pillar of promotion, and their **digital impact** directly reflects how much a destination can be considered modern and visitor-oriented. Current shortcomings (e.g. slow sites, lack of interaction) are solvable and do not necessarily require huge resources – more of a strategic decision and the involvement of experts. In the next part of the paper, we give specific recommendations on how tourist boards in BiH can accelerate digital transformation and use artificial intelligence, chatbots and web standards to their advantage, thus ensuring better positioning in the increasingly demanding tourism market.

6. Recommendations

Based on the conducted research, the following recommendations can be formulated to tourist boards in BiH for the improvement of their digital presence and the integration of modern technologies:

1. Introduction of chatbots and AI assistants: Tourist boards should invest in the development or implementation of simple **chatbots** on their websites and possibly through communication platforms (Facebook Messenger, WhatsApp). The chatbot would provide **24/7 support** to site visitors, answering the most frequently asked questions (locations of info-centers, working hours of attractions, route suggestions, etc.) and providing basic information in multiple languages. This would significantly improve customer service – as the literature states, chatbots can *"facilitate travel planning and real-time problem solving"* by providing quick responses to passengers[6]. It is desirable to pool resources – e.g. create a unique AI chatbot platform that could be adapted by all tourist boards individually (with a common knowledge base, but specific information per destination). Such a project could be supported through international funds (e.g. EU projects for the digitalization of tourism). A chatbot not only helps tourists, but also collects valuable data about interests – query analytics can give insight into what tourists are most interested in and where there are information gaps.

2. Web performance optimization and SEO: It is necessary to launch an initiative for **technical optimization** of existing websites. These include: compression and reduction of image size (most sites have large background photos that could be loaded e.g. in webP format and smaller dimensions for mobile devices), minification of HTML/CSS/JS files, removal of redundant plugins or scripts that slow down pages, use of *lazy-load* techniques for content below *fold* (e.g. galleries). Also, it is recommended to use **a Content Delivery Network (CDN)** to speed up loading for users from abroad. Google PageSpeed and similar tools should be used regularly to track progress. A performance of at least 70/100 should be the goal for the next period, which would dramatically improve the experience (currently many sites are below 50). As stated in the strategic documents of the CNT, the new website should be *"optimized in terms of performance for a high degree of recognition on the Internet"*[3] – this principle should be applied everywhere: a faster website means better rankings and more satisfied users. In addition to speed, SEO elements should also be refined : each page should have a unique and clear meta description with relevant keywords (e.g. "Official Tourism Portal – Visit Sarajevo: discover attractions, tours, accommodation..."), use

the *speaking URL* structure (e.g. `.../bs/attractions/canyon-une` instead of generic links), add *Open Graph* tags for better sharing on social networks, and be sure to generate and update **sitemap.xml** and **robots.txt** files to make it easier for search engines to index content. It is also recommended to periodically hire an SEO expert to analyze the ranking and suggest corrections, because small changes (e.g. adding alt text full of keywords to the cover image) can raise the SEO score by a few points and make a difference between the first and second page of search results.

3. Improving accessibility and WCAG compliance: Although accessibility is currently not strictly regulated by law for tourism organization websites in BiH, it is ethically and reputationally important that destinations are open to all. It is recommended to hire an accessibility expert or use tools (e.g. WAVE Web Accessibility Evaluation) to detect vulnerabilities on each site. Typical fixes would include: adding descriptive **alt attributes** to all images (especially banners and icons on links), checking the color contrast of text against the background (and correcting the design if necessary for better readability), ensuring that all interactive content can be used via the keyboard (e.g., drop-down menus should respond to *Tab* focus), and adding an *aria-label* Tags where needed (for icons such as social networks or play/pause buttons on video players). Also, it would be good to offer options **for adjusting the font** (text enlargement) and contrast (e.g. high-contrast mode) for users with low vision, which can be added relatively easily through scripts. As WCAG 2.2 introduces some new criteria (such as clearer focus indication, suppression of distracting animations, etc.), it is also recommended to train web teams on these standards. Adhering to accessibility not only helps users with disabilities but often improves the overall design and experience for all users. For example, well-structured titles and descriptions will benefit both search engines (SEO) and the average site visitor. Tourist boards can thus gain some **marketing capital** – promote themselves as destinations open to everyone (e.g. have a special section "Accessible Tourism" with information for tourists with disabilities, and ensure that the portal itself is accessible). This can attract a specific niche of travelers and create an image of a socially responsible destination.

4. Improving the user experience (UX/UI): While some sites are aesthetically pleasing, there is room for improvement in terms of interactivity and content. It is recommended to refresh the design of those pages that have not been redesigned for more than 5 years (e.g. Bijeljina, Goražde) – this could mean switching to responsive design (if it hasn't already), using a wider page format, new galleries and video sections. **Up-to-date content** is also crucial: websites must regularly publish event announcements, news, blog stories about the destination. It is noticeable that Visit Sarajevo has a blog/news section where it publishes successes and activities (e.g. in February 2025, the news that the promotion of tourism continues on the German market – the *f.r.e.e* fair in Munich[9]). Such news shows that the destination is active and ambitious. Other communities are encouraged to create similar content – even shorter reviews such as "Report: 2025 a record year for Mostar" or "Interview with a tourist: Why I love Trebinje". This humanizes and dynamizes the page. In addition, **multimedia should be used** to the maximum: e.g. integrate short promotional videos (Tourist boards often make promo videos, but do not always put them visibly on the site), make interactive maps where the user can click on the dots to see a description of the attraction (the Sarajevo map

exists[9], but it can be more prominent). Virtual tours like Jajce should be implemented for other cities as well – there are ready-made solutions (Google Street View integration or specially developed VR tours). For national parks (Una, Sutjeska, etc.) it can be connected to 360 panoramas. Also, *user-generated content* can improve the UX: implement a "Visitor Experience" section where the best photos would be pulled through the Instagram API with a certain hashtag (#VisitSarajevo example), or selected TripAdvisor comments. It doesn't cost much, and it provides an authentic voice to visitors. Sites should also proactively collect **feedback** from users – just as Visit Sarajevo openly invites visitors to leave feedback, which is good practice. A simple questionnaire can be asked "Rate our website" or "What did you miss from the information?". This data would help further improvement.

5. Integration of smart functionalities and personalization: In addition to chatbots, there are other AI tools that could be integrated into destination portals. It is recommended to develop a **personalized visit planner** – for example, a widget where the user indicates their interests (culture, nature, nightlife, etc.) and how many days are left, and the system generates a suggested itinerary. This can be as simple as based on fixed rules or more sophisticated with AI that learns from data from previous tourists. Also, **recommendation systems** ("You might also like...") can be embedded on the pages of attractions and events, similar to how e-commerce sites work – for example, you are looking at the page about the Old Bridge in Mostar, below it says "Visitors who watched this, also looked at: Blagaj Tekija, Kravice waterfalls...". This keeps the user on the site longer and helps them discover more, which is a win-win for both the destination and the visitor. In addition, you should use *big data* in the background – collect and analyze statistics of page visits, search engine usage on the site, the most searched terms, and the like. This can be used to see what tourists are interested in and may not be emphasized enough. For example, if a lot of people search for "parking in the center" on the site, and there is no such information, it is a signal to add visible. This type of *data-driven* content management is still not a practice in BiH tourism organizations, but it could be at minimal cost (Google Analytics and similar tools are free). **Artificial intelligence** can also be used to generate content – e.g. automatic translations of news into multiple languages with minimal human proofreading (modern AI translators can make it easier to maintain multilingualism). However, you need to be careful with quality control (AI-generated texts may have errors or unwanted style). In any case, experimentation and investment in *smart tourism concepts is encouraged*, as this will raise competitiveness in the medium term. As pointed out, "those who are one step ahead in adopting AI will achieve growth and advantage"[6] – BiH destinations should try to be just those *fast followers* or even pioneers in the region.

6. Strengthening institutional support and cooperation: In order to achieve all this, some **organizational adjustment is also necessary**. It is recommended that tourist boards (if they have not already) hire or hire a digital marketing/IT specialist. At least at the cantonal or entity level, a team could be formed to provide technical support to all local offices in a centralized manner (shared *services* model for web maintenance and development of AI solutions). This would reduce costs – for example, one team maintains a chatbot platform used by 5-6 destinations. In addition, continuous **education of staff** is necessary: seminars on artificial

intelligence in tourism, web accessibility, visits to digital tourism fairs. Cooperation with universities and experts can bring fresh insight – for example, involving IT and design students through prototyping projects for new websites or applications for tourist boards. That would be a win-win situation (students get internships, communities get innovative solutions). Also, the tourist boards of BiH should exchange experiences more and **unify standards**. It is noticeable that some are now more advanced (Sarajevo, HNK), and others are lagging behind – which creates an uneven image of the country. Perhaps the formation of a working group in e.g. The Federal Tourist Board (which was founded in 2022) helped to create guidelines: what a modern tourist board website should look like, what minimum functionalities and standards to meet. In this way, less developed subjects can reach the level of more developed ones more quickly. In addition, lobby to provide funds (entity, state or donor) earmarked for **the digital modernization** of destination portals. It is an investment that has a high return through long-term promotion and growth of tourism.

The implementation of these recommendations would contribute to a better inclusion of BiH destinations in modern tourism flows and, crucially, would improve the experience of tourists in the information and travel planning phase. Competitive advantage in the 21st century depends significantly on digital excellence – a destination that provides accurate, fast and personalized information with minimal user effort will be ahead of one that does not. BiH, with its attractions and untapped potentials, can compensate for other weaknesses (e.g. lack of marketing budget) through the smart use of digital tools. These recommendations are steps in that direction.

7. Conclusion

This paper explores the degree of digital transformation of tourist boards in Bosnia and Herzegovina through the analysis of their official websites, with a special focus on the role of artificial intelligence, chatbots and compliance with web standards in strengthening the competitive advantage of destinations. The results show that a certain shift has been made compared to the early 2010 – today almost all relevant destinations have their own web presentations and are present online, which was not the case fifteen years ago. However, the quality and functionality of these presentations lag behind the modern expectations of global travelers.

From the point of view of **technology and standards**, most of the analyzed websites have partially adopted the principles of accessibility and SEO optimization, but suffer from poor performance and insufficient interactivity. No tourist board in BiH currently uses **chatbots** or advanced AI functionalities on its website, thus missing the opportunity to improve communication with visitors and rise to a higher level of *"smart destination"*. Lighthouse analyses have shown distinct problems with loading speed (especially on mobile devices), which can negatively affect both user experience and visibility in searches. On the other hand, the accessibility of content is relatively better, but still not fully compliant with **WCAG 2.2** – which means that certain categories of users (people with disabilities) may have difficulty using these sites. Qualitatively speaking, UX/UI design varies from very modern and attractive (e.g. new portals of Sarajevo, Mostar, Trebinje, CNT Canton) to outdated and minimal (Bijeljina,

Goražde), which creates an uneven digital identity of BiH as a tourist destination.

A comparative reflection on the work from 2010 reveals that the **foundations of digital marketing of destinations** have been laid (web and social networks), but that the degree of innovation and adoption of new technologies is low. While in 2010, BiH is lagging behind in mere web presence, in 2025 it is lagging behind in the integration of AI and advanced solutions. BiH tourist boards are currently in the phase of digital transition – they have gone from a *"period without digitalization"* to a *"basic digital presence"*, but the next step towards *"smart"* tourism and comprehensive digital transformation is ahead. Digital transformation is an inevitable process, in which BiH is a decade late, without which there is no development, which is a prerequisite for attracting investments, but also for BiH's economic resilience on its path to the EU[5]. This delay can and must be compensated for by the accelerated adoption of proven solutions from the practice of developed destinations, whereby the advantages of "skipping" some phases should be used – direct introduction of advanced tools instead of gradual, because this way the competition can be reached and overtaken faster.

The paper offers specific recommendations, including the introduction of **chatbots** as virtual tourist informants available 24/7, which would significantly improve customer service and meet the expectations of modern tourists for instant answers[6]. Also, the need for technical optimization of websites (for faster loading and better SEO), systematic work on accessibility to make destinations inclusive for everyone, and improving UX design by adding interactive and personalized content was emphasized. By implementing these measures, tourist boards in BiH could significantly strengthen their **competitive advantage**. In the digital economy of tourism, competitive advantage is no longer measured only by the beauty of nature or cultural offer, but also by the accessibility, innovation and quality of digital communication of the destination. Those who recognize the importance of AI and new technologies will be able to offer **more personalized, efficient, and engaging experiences** to potential visitors, leading to higher attendance and tourist satisfaction.

For Bosnia and Herzegovina, which is emerging from a period of intensive tourism growth and entering a phase of market consolidation, the digital transformation of tourist boards is not a luxury but a **necessity**. Investing in these aspects represents an investment in the future development and resilience of the tourism sector. At a time when more and more travelers are planning their trips online and expecting real-time interaction, **digitally advanced destinations** will be able to attract a larger part of the global tourism pie. BiH destinations have a lot to offer – from authentic cultural experiences to untouched nature – and it is up to the tourist boards to communicate this offer in the best way through modern digital channels. This will ensure that a country's competitive advantage is reflected not only in its natural and social resources, but also in its ability to present and bring them closer to the world through innovation and technology.

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