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Digital destination branding: A framework to define and assess European DMOs practices

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ABSTRACT

The current tourism scenario is complex, marked by deep crises and changes due to Covid-19 pandemic impacts. Tourist destinations more than ever need to assert their brand on the global market. This paper proposes a framework for setting up destination branding choices in the digital realm and for measuring the choices made by tourism players such as Destination Marketing Organisations (DMOs).

This study proposes a Digital Destination Branding (DDB) framework drawing from the academic literature and practitioners' perspectives. This framework is organised on three dimensions in which the main digital branding choices are grouped to promote a tourist destination, engage visitors and offer them services for a superior visiting experience: Social Network Presence (SNP), Social Network Content (SNC) and Digital Tourism Services (DTS). Each of these pillars is based on multiple items and micro-items. Assigning scores to each element of the framework allows for measuring compliance with the model's requirements for digital destination branding. Applying our proposed framework, the empirical component of the study provides a comparative evaluation of the DDB practices of the 2021 top 10 European destinations. The results provide an overview of how DMOs are currently using digital channels and tools for destination branding.

1. Introduction

According to the latest available data provided by the United Nations World Tourism Organisation (UNWTO, 2022), after the serious crisis caused by the Covid-19 pandemic travel restrictions, international tourism began to recover in January 2022. In particular, Europe posted the strongest results of rebound (+199%), with Western Countries registering four times more arrivals in January 2022 than in 2021. There are, however, new challenges for global tourism posed by the conflict in Ukraine that risk hindering the restoration of trust in global travel. Travels with destinations in European countries could be the most penalised, due to the greatest territorial proximity to current conflicts. Thus, it is vital to globally promote desirable destinations to resume and develop local tourist activities now more than ever before (Pachucki et al., 2022). Every tourist destination, whether it is a city, state, or region within a country, should understand how tourism competitiveness has evolved over time because it is an indicator of the changes the market is undergoing (Liu et al., 2022).

New destination marketing and branding practices are needed if there are new ways to develop the tourism industry on a global scale.

Additionally, tourism professionals should be aware of the fact that the competition between large-scale tourist destinations has been displaced as a result of globalisation, technological advances such as the Internet, social media, and mobile technology. (Parlov et al., 2016). As the amount of online travel information has grown and will continue to grow (Research And Markets Report, 2022, January), tourists have a large number of choices when it comes to decide where to go, how to get there and what to do when they arrive. Social media in particular offers low-cost communication and wide demographic penetration compared to the traditional means of communication and travellers use social media before, during and after their travels (Choe et al., 2017) making social media an important input for the development of tourist destinations. As research has shown over the years, interpersonal influence resulting from the exchange of views between travellers is a further factor influencing tourists' choice and trip planning (Pop et al., 2022). There is no doubt that tourists are becoming content creators and influencers and that this aspect affects destinations' perceptions and tourist destinations' behavior significantly (Iglesias-Sánchez et al., 2020; Oliveira & Panyik, 2015).

Thus, Destination Marketing Organisations (DMOs), which are

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responsible for the marketing of an identifiable tourism destination with an explicit geopolitical boundary, can use social media platforms as the main communication channels for brand positioning and engagement strategies, such as Facebook, Instagram, YouTube, Twitter, Pinterest, and TripAdvisor (Lim et al., 2021).

Despite there being a strong statement in the academic literature about tourism management about how these DMOs can use social media to market the destinations and tourist products, as well as the challenges and opportunities that arise from using social media in marketing and communication (Kolb, 2017; Sotiriadis, 2021), there are very few studies which focus on proposing models for facilitate the use of digital channels and tools in destination promotion, applying different perspectives. Guzzo et al. (2013) propose a framework that illustrates how social media can develop a sustainable tourism involving both tourists and local communities; Pino et al. (2018) framework draws attention to content- and format-related characteristics that trigger users' engagement in destination events; while, using a multi-phased social media analytical framework, Park et al. (2019) assessed the structure of the information exchanges among members of the social network community of a tourism organisation and identified influential actors and the content of the information. This research, on the other hand, by entering the specific research area of tourism destination branding, proposes a framework that brings together those factors deemed to be of significance to the current and future branding of the destination in digital arena, allowing at determining how to assess digital branding practices in order to promote a place as a tourist destination, to engage online users and to offer services that facilitate and enhance travel experience at every stage.

On the empirical level, the framework will be implemented for measuring the current state of compliance to digital destination branding practices carried on by DMOs of the 2021 top destinations in Europe.

The paper is organised as follows. Section 2 presents an excursus on the main academic contributions on destination marketing and branding, defining the main concepts, the factors that influence the decision-making processes of tourists in choosing a destination and the corporate functions that DMOs must perform in order to enhance and promote destinations. Then, the conceptual background reviews the recent studies focused on specific digital challenges in this field. In this same section, the authors also introduce their understanding of digital destination branding, never defined before, identifying its objectives and activities and lay the conceptual foundations useful for building the digital destination branding framework. In Section 3, the research design is explained. This paragraph presents the approach of organisations of digital factors that constitute the tree-structure framework. In addition, the mechanism for attributing scores to various factors is also introduced in order to utilise the framework for measuring and evaluating digital destination branding practices. Hence, an implementation on a sample of European cities' DMOs practices is illustrated. Section 4 analyses the outcomes of the empirical analysis. Section 5 discusses the specificity of the framework in the context of destination branding and the results of empirical analysis on sampled DMOs' practices. Section 7 presents theoretical and managerial implications of the study and, finally, the last section concludes declaring the limits of the research and proposing future directions of the research line.

2. Conceptual background

2.1. Destination marketing and corporate functions of DMOs

The concept of a tourist destination has been extensively studied, from different theoretical approaches. The geography-oriented approach considers it as a defined geographical area, such as a country, region, island, city, or town (Davidson & Maitland, 1997). The marketing management-oriented approach, instead, considers a tourist destination as a collection of tourist products and experiences that satisfy tourists' demands (Bramwell, 1998), or as the agglomeration of

facilities and services designed to meet tourists' needs (Cooper et al., 2005). In this view, conceptualizing destination marketing remains an issue of ongoing study without a universally agreed-upon understanding. The initial definition proposed by Wahab et al. (1976) portrays destination marketing as a management process where organisations identify and communicate with tourists to meet their needs and adapt their products accordingly. However, this definition is regarded as idealistic due to the inherent limitations associated with the specificities of tourism products. As pointed out by Pike and Page (2014), DMOs face constraints imposed not only by the unchangeable geographical and cultural peculiarities of a place but also by the practical and logistical decisions of local authorities. Additionally, they have limited influence over external intermediaries and destination service providers, impacting the placement and pricing aspects of the marketing mix. Consequently, the marketing challenge for DMOs revolves around enhancing the destination's competitiveness in attracting visitors while meeting the expectations of multiple local stakeholders, primarily exerting control over the promotion of the destination (Line & Runyan, 2014; Pike & Page, 2014). Recent destination marketing definitions view it as a series of decisions and communication activities aimed at attracting potential visitors. These activities encompass exploratory market analysis, promoting the destination, and augmenting tourists' perception of goods and services through positioning strategies that support tourism businesses (Uysal et al., 2011). Integrated marketing communications, promotional mix, and destination branding have emerged as prominent topics within destination marketing for tourism (Sotiriadis, 2021).

2.2. Factors affecting the tourists' destination choice

The field of tourism destination marketing has evolved significantly in the past three decades, emphasizing the importance of aligning marketing strategies with tourists' decision-making and experiential processes (McCabe et al., 2016).

Tourists' choices are influenced by their perception of a destination, that means on the image (more or less positive) they have created of the place in their mind (Reitsamer & Brunner-Sperdin, 2017). If the destination corresponds to a negative image or even no perceived image, its chances of being visited are very limited (Bakhshayesh et al., 2022).

Reitsamer and Brunner-Sperdin (2017) have investigated the factors affecting the image of a destination. They classified other factors into two categories: sense-making attributes and exploratory attributes, in addition to natural form and landscape, history and cultural heritage. In the first case, the attributes make sense of the location and provide a sense of security about what's taking place around them and help individuals plan, comprehend, and structure their trip more easily. Among these are accessibility (i.e. tourists' relative ease or difficulty in reaching a destination) and amenities (e.g. accommodation, lodging opportunities, and restaurants). The second group (exploratory attributes) refers to the way tourists are stimulated within a destination and whether they can figure out new things. It includes attractions and activities, entertainment opportunities and local community.

These factors represent the valuable resources that Destination Marketing Organisations (DMOs) should enhance through branding and communication efforts. Tourism destination branding is a pivotal aspect of destination marketing, as it aims to create an attractive and competitive image in the minds of potential visitors (Almeyda-Ibáñez & George, 2017).

2.3. Destination branding

Zenker and Braun (2010) have defined a destination brand as "a network of associations in the consumers' mind based on the visual, verbal, and behavioural expression of a place, which is embodied through the aims, communication, values, and the general culture of the place's stakeholders and the overall place design". Consequently, destination branding is about strategically select and combine coherent

brand elements, such as names, logos, symbols, as well as the heritage, language, myths and legends associated with a place (Morgan et al., 2002), to create a positive and unique image (Lee et al., 2006). According to Hall (1999), it involves creating a targeted communication strategy that builds a brand identity based on the selection of fundamental intangible values already existing in consumers' minds. Gnoth (2002) considered destination branding as a management process aiming to establish a unique identity by selecting destination attributes like competitiveness and desired traits (Gnoth, 2002). The ultimate goal must be to generate a competitive advantage through differentiation and the formation of distinctive associations for the destination (Qu et al., 2011).

As pointed out by Blain et al. (2005), however, destination branding is more complex than building the destination image. They intended it as a set of activities encompasses creating recognizable symbols, conveying a memorable travel experience, reinforcing emotional connections, and reducing consumer search costs and perceived risks.

Certainly, today, the complexity of destination branding is heightened by the impact of the web and social media on tourists' dynamic decision-making (Almeida-Ibáñez & George, 2017; Tham et al., 2020).

2.4. Digital destination branding: a new perspective of research

A growing body of research explores using the digital environment and social media for destination marketing and branding (Cooper et al., 2021; Hanna & Rowley, 2015). Recent studies focus on aspects like the evolution of the traveler's journey due to the Internet (Scott et al., 2017), challenges and opportunities of digital technologies and social media in destination marketing (Oliveira & Panyik, 2015; Parlov et al., 2016; Zainal-Abidin et al., 2023), and the impact of social media on destination image formation (Pop et al., 2022). However, there is limited attention on the practical implications of digital processes for destination brand management, and 'digital destination branding' (DDB) has not been formally defined before.

The present study defines DDB as a comprehensive set of branding choices and activities utilizing the digital environment to raise destination awareness, engage visitors, and create a complete experience. The final goal is proposing a DDB framework that, recalling the traditional destination branding activities (Blain et al., 2005), organises digital factors useful to identify and differentiate the destination online (promotion); to build the expectation of a memorable travel experience, creating an emotional connection with the destination (engagement); to facilitate and improve travel experience at every stage, reducing their perceived risk (tourists experience enhancement).

2.4.1. The tourist's digital experience

Despite the non-linear nature of the tourist experience, it can be delineated into three pivotal stages: the pre-travel stage, on-site travel stage, and post-travel stage.

In the pre-travel stage, tourists look for trip and holiday ideas. Although the DMO's website has always been a primary source of information (Lončarić et al., 2013), today social media takes over and emphasises its functionality, becoming inspirational sources for travellers, along with review and booking portals (Almeida-Santana & Moreno-Gil, 2017). The user-generated content users enjoy on social media such as Facebook or Instagram, in fact, often influence their perception of a place, in addition to their ability to make a destination appealing to those who do not know it and to involve those who have visited it through processes of co-creation and co-promotion (Dai et al., 2022). For example, some portals offer tools for sharing and searching for multimedia content and geotagged reviews and allow tourists to have a virtual preview of the trip (Leung et al., 2017). During this planning phase, tourists compose their trip by combining and booking transport, accommodation and services (excursions, events, etc.). Portals that provide web-based comparison and recommendation services and digital booking systems allow making decisions more easily

(Ammirato et al., 2021). Social media platforms thus intervene to mitigate the risks associated with making wrong travel decisions, increasing tourists' awareness (Kolb, 2017) and supporting the choice of destination, travel arrangements and leisure activities (Choe et al., 2017).

But the use of social media by users is perpetrated even after the destination choice, during and after the experience (Choe et al., 2017). Already during the trip users begin to share their own travel by uploading visual content - i.e. photos and videos. Moreover, the use of mobile devices and apps that allow context-aware systems, augmented reality and environmental intelligence, combined with the use of technologies such as RFID, NFC, BLE beacons, sensors, actuators, and IoT, enrich the on-site enjoyment of the places one is visiting (An et al., 2021; Marasco et al., 2018).

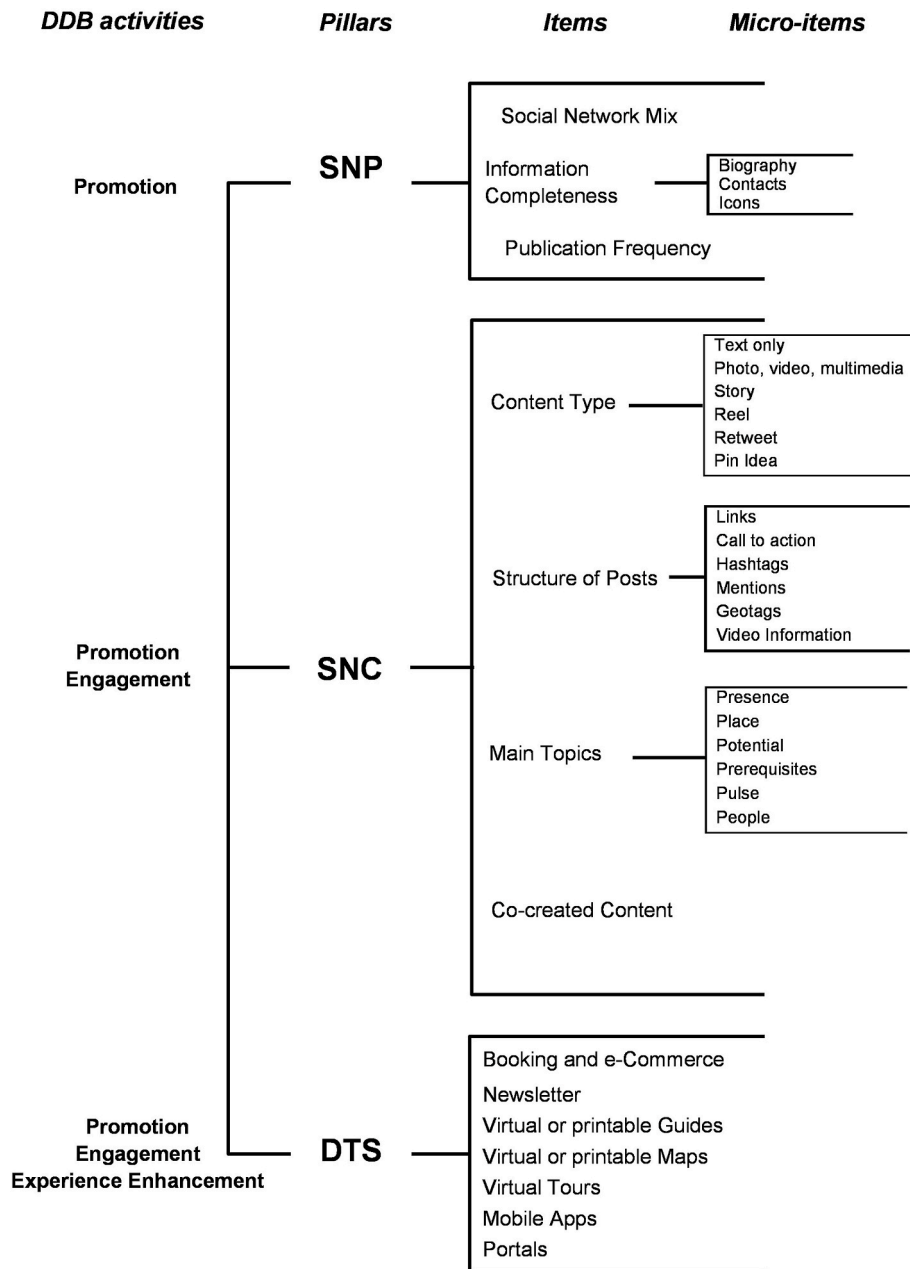
The use of social media reaches a peak at the end of the trip (Fotis et al., 2012). Once back home, in fact, travellers share their personal advice and the level of satisfaction or dissatisfaction about their visit, through the creation of user-generated content (UGC) such as reviews, comments, photos, videos or audio (Leung et al., 2017). Thus, social media acts as a crucial environment for word of mouth that influences the decisions of other users (Tham et al., 2020). Travel blogs, tourist communities on social networks and review portals are among the most popular channels involved in the exchange of experiences between tourists.

2.5. The pillars of digital destination branding

From the complex and articulated usage of digital and social media channels by travellers, it can be seen that the destination branding practices of DMOs have to coexist and often compete with the destination image co-created by network users (Yilmaz, 2021). The consequence for DMOs is learning to plan in aware and effective ways the mix of above-mentioned channels.

2.5.1. Building the social network presence

To attract tourists to their destination, marketers need to know what information is important to tourists in the destination selection stage so that they can make this information available to tourists on digital spaces (Lončarić et al., 2013). The precondition for a DMO is to be present in these spaces through an active participation (Gupta, 2019). To be present and searchable online requires first of all to have a well-structured website (Lončarić et al., 2013) and, above all, well-managed social networks business accounts (Almeida-Santana & Moreno-Gil, 2017). Regarding the website, Choi et al. (2016) stated that destination marketers must convey visitors with relevant, informative, and comprehensive information on the destination, thus providing visitors with what they need to make a destination choice and avoid uncertainty and risk. Informativeness, in fact, includes the quantity and frequency of information and the sincerity and accuracy of information received (Lee et al., 2018). However, today fun, exciting, and imaginative websites help to gratify the intrinsic desire for play during website navigation (Tsai, 2017), and DMOs have therefore begun to invest in the entertainment aspect of their websites (Choi et al., 2016). The context of information and inspiration has in fact been recognized as a fundamental component of influence in the process of choosing a destination (McCabe et al., 2016). Tourism DMOs must intervene in tourists' decision-making processes by engaging them in the most effective contexts, such as social network communities, which, as we have seen, are a continuous source of tourist information. As a consequence, destination marketers need to activate different social network accounts, such as on Facebook, Instagram and Twitter, based on their target audience. Each of these accounts must present the organisation's profile and complete information for contact and interaction. Indeed, despite the limited possibilities of controlling the construction of a destination's identity, social networks provide an ideal platform to facilitate dialogue with target audiences and achieve interactivity,



Graph 1. pictures the main topics detected among Facebook content, published by cities' DMOs.

leading to greater engagement and participation (Kolb, 2017).

2.5.2. *Creating the social network content*

By using social networks, marketers are no longer just incentivizing sales, but building relationships with tourists, aiming to evoke positive emotions to reinforce their desire to visit (Leung, 2019). To be effective, social network presence has to be characterised by continuity, that means communication has to be fresh and frequent (Ashley & Tuten, 2015). More recently, great attention has been paid to value co-creation activities to engage tourists (Oliveira & Panyik, 2015; Yilmaz, 2021). Social networks allow different stakeholders to participate in the construction and maintenance of the destination brand's identity, and thus, eventually, disseminate its core messages in a collaborative or non-collaborative manner (Siano et al., 2022). Local authorities or ordinary users can spread destination branding messages through peer interaction via various actions such as likes, comments, shares, retweets and hashtags, potentially expanding destination brand awareness (Kolb,

2017). Hence, the social network content, their message and format, can play a crucial role in this regard (Pino et al., 2018). The message is the key information embedded in it, while the format of a message is the way the content is delivered to the recipients (Confetto & Siano, 2018). These two dimensions, in turn, identify a number of characteristics that can influence online engagement, but which have not yet been systematically examined. According to Pino et al. (2018), the message content concerns the focal topics (e.g., information about a destination's attractions, amenities, and services), elements of uniqueness (peculiar characteristics of events, places, or customs that could capture users' attention), emotionality (ability to arouse positive or negative emotions) and temporal orientation (the text's focus on past, present, or future events, situations, or experiences); the message format instead regards its interactiveness and vividness. Message interactiveness is determined by its ability to motivate people, its phrase style, and its traceability (the ease with which it can be found online, largely due to the use of hashtags), while its vividness is determined by the presence of images or links

to such content, the message's language, and its length. Deepening the discussion on the format, most of the previous studies focused on the effectiveness of visual content on the perception of a destination brand (e.g. Kim & Stepchenkova, 2015; Leung et al., 2017). In fact, photos and videos help shape and reinforce the existing images in the tourists' minds. User-generated photographs and videos of a destination are particularly important, as they can easily influence previous and potential tourists' preconceived attitudes towards a destination (Kim & Stepchenkova, 2015). This is making photo- and video-sharing platforms such as Instagram, YouTube and Pinterest much more attractive for destination branding activities.

2.5.3. Providing digital tourists services

As social network content inspires tourists to select a destination, digital services (such as reservations and virtual tours) can both facilitate travel selection and planning, and emphasize the entire destination experience. Indeed, tourism is a service-intensive industry focusing on the customers' service experiences not only during their stay, but also prior and subsequent to it (Stickdorn & Zehrer, 2009). Since most tourism services regard making reservations and paid for in advance, a good practice is that DMOs websites allow the accessibility to this type of services. The multiple case study of Ammirato et al. (2018), for example, shows that often DMOs' websites integrate or provide third-party booking and e-commerce systems service products such as transportation, accommodation, entrance tickets for leisure activities, pre-packaged solutions, etc. In academic literature is also recognized the importance of services for public relations, such as newsletters and outbound links to recommendation and review portals (Slivar & Krizman Pavlović, 2012). Other services that allow customers to experience products, services, or places before they purchase, printable or interactive guides and maps are included. This type of service is now much more realistic and augmented, thanks to virtual tours based on 3D reconstructions of the places and augmented reality which make the virtual journey much more immersive (Beck et al., 2019). Often, these types of services technologies are all integrated into mobile apps that provide access to maps, location-based services, recommendation systems, and virtual tours. This is particularly significant nowadays, given that tourists are increasingly empowered by the continuous use of the smartphone at all stages of the travel experience (Dorcić et al., 2019). Avila-Robinson and Wakabayashi (2018), for example, observed the impact of apps, smartphones, GPS technologies, and virtual reality on progress in the field of destination marketing and management. As claimed by Tran and Rudolf (2022) these technologies are essential for marketers not only because they allow them to collect valuable information on subjective aspects of visitors (for example, visitors' emotions and perceptions of the destination), but also for data "mining" previously unavailable (for example, mobility and visitor tracking).

3. Research design

This research design is based on previous studies focused on building destination marketing and branding frameworks. Although there is no standardised procedure, these studies envisage two fundamental phases: the review of the academic literature to identify the theoretical foundations on which to build the framework; the empirical validation that can be carried out through different methodologies. Among others, Morgan et al. (2012) analysed a case study and collected data through a web-based survey, Deepa and Baral (2017) carried out a survey, Florek et al. (2021) have integrated a content analysis with interviews with experts and then developed a city brand effectiveness measurement system. Similarly to these previous studies, the present research design was organised into 2 main steps: (1) academic literature review on the main concepts of destination marketing, destination branding and advantages and use of digital and social media in the tourism field was carried out to identify DDB's framework pillars. The academic references were later integrated with the operative knowledge obtained from

practical manuals of digital and social media marketing and branding, validated by the competencies of two digital marketers and social media managers involved in the research in order to detect the items and micro-items that made up each pillars; (2) empirical implementation of the model was conducted on a sample of 10 European capital cities, through a content analysis on DMOs websites and the application of a measurement system for the assessment of the adequacy of DDB practices to the factors included in the framework.

3.1. Step 1 - building of the DDB's framework structure

The literature review, as presented in the previous paragraphs, served to define: (a) the main activities of digital destination branding, identified in promotion of the place, attraction and engagement of visitors, enhancement of the tourist experience; (b) the channels and tools useful to DMOs for such activities in the digital environment, i.e. website, social network, other digital tools (such as apps, virtual reality and tourist portals). Studying the conceptual bases of destination branding and digital communication practices helps in organising the detected aspects according to a 3-pillars framework (named Digital Destination Branding – DDB framework - Fig. 1):

1. Social Network Presence (SNP) refers to the implementation of appropriate social network accounts to affirm the active participation of the DMO in the digital arena.
2. Social Network Content (SNC) refers to the activity of creating and optimising content to be published on social networks to establish and maintain constant interaction with the target audience;
3. Digital Tourism Services (DTS) refers to the services implemented by the DMOs on the website and social media to facilitate and enrich the tourist experience.

To integrate the academic literature review with practical perspectives, researchers outside the academy and coming from professional fields consistent with the object of study were involved. This is an approach that brings the benefit of reaching some in-depth understanding of such business phenomena (Grant et al., 2001). In this study this choice has two reasons: on the one hand, it responds to the continuous changes in marketing research linked to the succession of digital technological changes (Cluley et al., 2020), to which academic research can't keep up; on the other hand, it guarantees the contribution of operational perspectives in the construction of a framework that has the purpose of evaluating practitioners' decisions. This methodological approach helped in deepening and detailing the 3 pillars (upper level) in several detectable and measurable items (intermediate level) and micro-items (lower level) useful to have a comprehensive evaluation overview of DDB practices.

The result is, therefore, a framework built on a tree-structure whose elements are grouped by hierarchical levels. Hierarchical relationships are based on levels of superordination and subordination, where a (broader) superordinate represents a class or a whole, and a (narrower) subordinate represents a subclass or a part of the whole. To establish the hierarchical relationships between the constituent elements of the framework, each researcher involved in the study (3 academics and 2 practitioners) independently produced their own coding of the framework. From the comparison between the researchers, based on an intercoder reliability of 0.81 on the SNP pillar, 0.92 on the SNC pillar and 0.73 on the DTS pillar (Krippendorff, 2012), respectively, the following structure of the framework was determined.

The SNP pillar's items are:

- a) the *social network mix*, that is the selection of social network channels on which to activate a DMO account;
- b) the *completeness* of the information provided, that is guaranteed by the following micro-items:

- i. The presence on each of the activated social networks of a descriptive *biography* of the organisation;
- ii. The presence on each of the activated social networks of *contacts* (address, telephone, email, other social accounts);
- iii. The presence of the *social network icons* for connecting to social network accounts on the DMO's website;

c) the frequency of posts publication on each social network. The SNC pillar's items are:

- a) type of content, considering the specific formats of each platform. A social media content format can be one of the following micro-items:

- i. Text only,
- ii. Photo, video, multimedia (text + photo/video),
- iii. A story (on Facebook and Instagram),
- iv. A reel (only on Instagram),
- v. A retweet (only on Twitter),
- vi. A Pin Idea (only on Pinterest).

b) structure of posts, which concerns the use of the fundamental micro-items in the creation of a post, considering the specificities of each social network platform. These micro-items are:

- i. Links,
- ii. Call to action,
- iii. Hashtags,
- iv. Mentions (excluding YouTube),
- v. Geotags (only on Facebook and Instagram),
- vi. Video information (only on YouTube).

c) main *topics*, identified reinterpreting the factors of the Anholt's city brand hexagon (2006), regards the subject of the message, that could be one of these micro-items:

- i. Presence, i.e. the value elements of the destination, the acknowledgments and awards received, the objectives achieved and, in general, everything concerning the reputation of the destination in the world;
- ii. Place, i.e. the natural geography of the destination, that is its environment and atmosphere, the scenic beauty of the place, the architecture and territorial planning;
- iii. Potential, i.e. the historical-cultural-artistic heritage, points of interest and all those elements of uniqueness that constitute the attraction potential of the destination, and that are not reproducible in other places (e.g. typical products and dishes);
- iv. Prerequisites, i.e. the essential tourist services offered by the destination, such as accommodation, infrastructure (airports, roads, runways, public spaces, etc.), transport, restaurants, etc.;
- v. Pulse, i.e. initiatives aimed at involving tourists, such as events, festivals, conferences, concerts, exhibitions, etc.;
- vi. People, i.e. services and activities that take to heart caring for people, such as sustainability, well-being, safety and health initiatives.

d) *co-created content*, concerns posting content not original (e.g. directly created by the organisation) but created through the contribution of influencers or created by users (UGC) and re-posted by DMO.

The DTS pillar' items are:

- a) *booking and e-commerce* to reserve and purchase tourist services and products (accommodation, transport, entrance tickets, merchandising, etc.);
- b) *newsletter*;
- c) virtual or printable *guides*;
- d) virtual or printable *maps*;
- e) *virtual tours*;

- f) *mobile apps*;
- g) *link to or integration of third-party review and recommendation portals*.

For the implementation phase, the framework was operationalized for the calculation of a score in cents which expresses the evaluation of digital destination branding. The criterion for scoring is that each pillar contributes equally to the overall assessment. Each pillar therefore "weighs" by one third of the maximum achievable evaluation score (i.e. 100). The mechanism for assigning the score to the factors that make up the DDB framework follows an equal distribution criterion. According to this criterion, the score of each item (or micro-item) contributes equally to the determination of the score of the upper-level to which it belongs. This weighting system of the elements follows a tree distribution of weights: weights are hierarchically assessed with twig level equal ratings (Stillwell et al., 1987). The choice of this approach was determined by the impossibility, in the phase of defining the practices to be implemented, to establish a priori the weight of influence of each factor of the DDB in terms of outcomes.

The implementation of the framework needs to detect the single factors mentioned among the practices implemented by the DMOs in their destination branding activities. This is possible through a content analysis procedure, as explained in the following paragraphs.

3.2. Step 2 - empirical implementation of DDB framework

3.2.1. - The sample of analysis

Destination branding conducted at city level was chosen as the field for the implementation of the framework. In particular, a sample of top ten European cities represented in the "Top100 City Destinations Index 2021 by Euromonitor International"¹ was selected. This index is ranked on a comprehensive and multi-layered analysis of key and emerging city hubs. Using the index, businesses, tourist organisations, and destinations can identify cities which are showing strong tourism growth potential, and identify areas that should be considered when crafting tourism strategies. Euromonitor International compares 54 different metrics across six key pillars for 100 city destinations, to create an overall city attractiveness score. These pillars are: Economic and Business Performance, Tourism Performance, Tourism Infrastructure, Tourism Policy and Attractiveness, Health and Safety, and Sustainability. To conduct the implementation of DDB framework, this index was thus deemed relevant and in line with the research objectives as it for the points of coherence and connection with the aspects investigated in this study.

3.2.2. The content analysis: source of data and approach

Content analysis was chosen as a methodology for the detection of items and micro-items. This is a qualitative approach that allows to determine the manifest or latent presence of certain words, themes, or concepts within some given qualitative data (i.e. text) (Drisko & Maschi, 2016). Using content analysis, researchers can quantify and analyse the presence, meanings, and relationships of such certain words, themes, or concepts.

The content analysis was carried out on the websites and social network accounts of the official DMOs (recognized by the municipality) of the top 10 European cities classified (see Appendix A), over a period of 6 months (between October 2021 and March 2022). The choice to focus the analysis only on European cities is justified by the fact that 8 out of the top 10 cities in the Top 100 City Destinations Index are European.

To evaluate the digital destination branding activities of sampled DMOs, each item and micro-item of the framework is treated as a dichotomous variable. This means that the presence/absence of each

¹ The index is freely downloadable at <https://go.euromonitor.com/whit-e-paper-travel-211202-top-100-city-destinations-index.html>.

Table 1
Digital Destination Branding Index with scores.

#Ranking	Destination	SNP score	SNC score	DS score	DCB score
1	Vienna	87,22	67,50	85,71	80,15
2	London	85,00	81,33	71,43	79,25
3	Munich	82,22	58,58	57,14	65,98
4	Paris	85,00	68,75	42,86	65,54
5	Madrid	73,89	57,75	57,14	62,93
6	Rome	80,56	60,25	42,86	61,22
7	Amsterdam	80,56	54,42	42,86	59,28
8	Berlin	76,11	57,58	42,86	58,85
9	Barcelona	70,00	62,17	42,86	58,34
10	Milan	30,56	20,42	42,86	31,28

Table 2
Score bands to interpret the results.

Score band	Label	Interpretation
$S \geq 80$	Excellent	The setting of digital destination branding largely meets the requirements. No significant improvement actions are necessary but only activities useful to maintain a standard of excellence
$70 < S < 79$	Good	The setting of digital destination branding practices is good, with room for improvement
$60 < S < 69$	Fair	The setting of digital destination branding practices is considered sufficient and therefore acceptable but with a large margin for improvement
$50 < S < 59$	Poor	The setting of digital destination branding practices is not sufficient and present some weaknesses
$S \leq 49$	Bad	The setting of digital destination branding practices is scarce and presents several critical issues

factor has been detected. In case of presence of the factor, the relative score is attributed. In case of absence, the relative score is not attributed.²

The literature review did not provide accurate and updated information on which social networks are most used in destination branding. The empirical analysis conducted showed that the social networks mainly used by DMOs are Facebook, Instagram, YouTube, Twitter and Pinterest.

Three independent researchers carried out a content analysis of official DMOs websites and social media pages using the descriptive approach and human coding described by Neuendorf (2017) to detect the presence or absence of items and micro-items. The intercoder reliability obtained was of 0.83 (respectively, SNP = 0.87; SNC = 0.71, DTS= 0.92) (Krippendorff, 2012).

The scoring range of each pillar varies from 0 to 100. The overall score of Digital Destination Branding is given by the average of the partial scores obtained on each pillar (i.e. Social Network Presence, Social Network Content and Tourism Digital Services scores) and is always expressed as a base of 100. In this way, the score represents an evaluation in percentage terms of compliance with the requirements for destination branding in a digital environment as set up by the framework. The partial scores on the items, on the other hand, highlight any areas of criticality and weakness with respect to which improvements can be made.

4. Findings of analysis

Tables in Appendix B show a summary of the item and micro-item detection analysis of each pillar.

Table 1 shows the ranking of the ten cities of the DMOs analysed, drawn up on the basis of the overall Digital Destination Branding (DDB) score.

² For the item "frequency of posts publication", if the frequency is greater than or equal to at least 3 posts per week, the detection is positive, therefore the score is assigned.

To facilitate the interpretation of the scores (S), these have been organised into score bands, each of which is characterised by a label describing the level of compliance with the established requirements, as shown in Table 2.

As can be seen, the best overall DDB score does not necessarily mean having the best score on all three pillars. Vienna appears to be the European city among those analysed with the best DDB score. In this case, however, while partial SNP and DTS scores correspond to a high-quality setting of the corresponding factors, the SNC score falls instead within the range of acceptability threshold, lowers the mean. Certainly, the lack of some micro-items of *type of content* and of the *main topics* contribute to reducing the Vienna score (see tables B_{2a}, B_{2b}, B_{2c} in Appendix B), with particular reference to the complete lack of content on various *main topics* on video- and photo-sharing platforms (Instagram, YouTube and Pinterest).

It should be noted that, in almost all sample's cases, the pillar on which there is the greatest shortage is DTS (table B₃). In particular, while basic tourism digital services (such as newsletters, guides, maps and reservations) can be found on most of the analysed websites, the most advanced digital services, such as virtual tours and apps, are still poorly implemented.

It should be noted also that the score on the SNC pillar never exceeds the Fair range (excluding London, which is in the Excellent range) (Table B_{2c}). This is determined, in many cases, by the total lack of one or more social networks in the mix of channels implemented (Table B₁), that causes an automatic penalty on all the corresponding micro-items on SNP e SNC. For example, the DMO of the city of Milan, implementing only Instagram and YouTube, is particularly penalised and ranks last in the index.

Again, it should be highlighted that the score on the SNC pillar is conditioned by the item *co-created content*: in fact, only London appears to have recourse to contents generated by influencers. On the other hand, all cities (excluding Milan) share user-generated content (Table B_{2c}).

Particularly interesting are the results on the item of the *main topics*. The following graphs (Graphs 1–5) offer an overview of the topics most dealt with on the various social networking platforms and related to the destination.

Regarding Facebook (Graph 1), the analysis shows that in all cases are communicated at least four of the six topics. Munich and Rome are the only two cities to address all topics on Facebook.

The micro-items Place and Potential were detected in the Facebook posts of all cities. Pulse is detected in 9 cases of 10. On the contrary, the micro-item Presence was the least detected (3 out of 10 cities).

Switching on Instagram (Graph 2), the analysis shows that none of the cities deal with all the six topics. The micro-items Place and Potential also in this case are confirmed for all cities while Pulse in 8 cities out of 10. Munich and Amsterdam are the cities that address fewer topics on Instagram.

Regarding YouTube (Graph 3), Rome is the only city dealing with all topics. While DMOs of Paris and Amsterdam don't use this platform at all and DMOs of Munich and Berlin make extremely limited use of it. Again, the micro-item Potential is detected in all YouTube use cases. Compared to Facebook and Instagram, YouTube is most used to communicate about Presence.

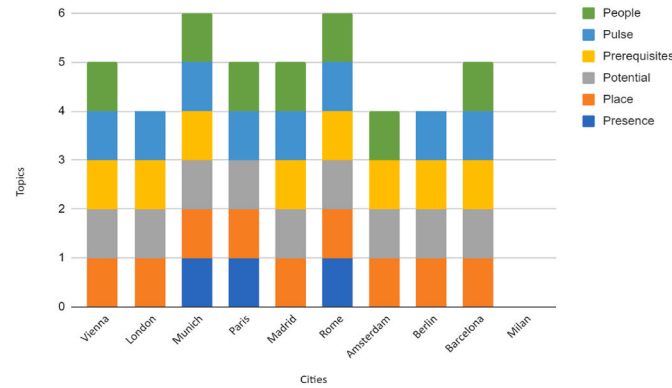
Concerning Twitter (Graph 4), analysis shows that it is used by DMOs of all cities, Milan excluded. The use is massive, always on at least 5 of the 6 topics. Place and Potential are the micro-items always detected. Differently from other platforms, also Prerequisites, Presence and People are most communicated on Twitter.

About Pinterest (Graph 5), first of all it should be noted that it is the least implemented platform among the 5 and that the use of this social network is limited to the only topics of Place, Potential, Prerequisites and Pulse.

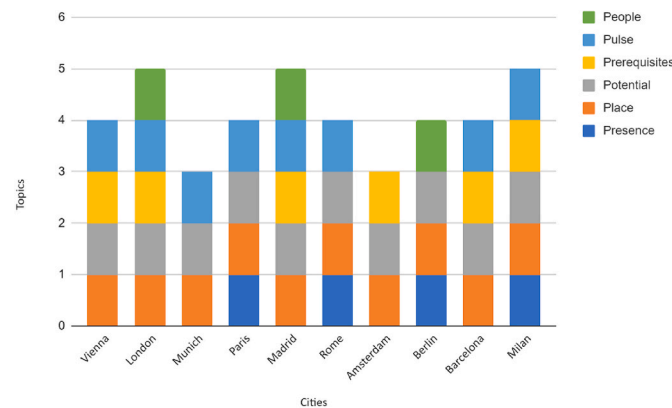
Summarising the analysis of the topics, the empirical implementation of framework lead us to disclose that the communication of DMOs of

Table 3
The score bands of DDB ranking.

#Ranking	Destination	DCB score	Score band
1	Vienna	80,15	Excellent
2	London	79,25	Good
3	Munich	65,98	Fair
4	Paris	65,54	Fair
5	Madrid	62,93	Fair
6	Rome	61,22	Fair
7	Amsterdam	59,28	Poor
8	Berlin	58,85	Poor
9	Barcelona	58,34	Poor
10	Milan	31,28	Bad



Graph 2. pictures the main topics detected among Instagram content, published by cities' DMOs.



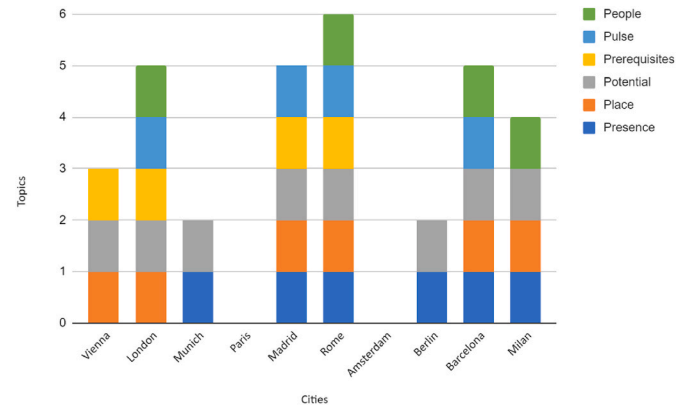
Graph 3. pictures the main topics detected among YouTube videos, published by cities' DMOs.

the cities ranked is more focused on informing the public about the natural characteristics of places (Place), their cultural and artistic heritage (Potential) and the promotion of events, exhibitions and initiatives for engagement (Pulse). Instead, the less relevant social network contents concern the value assets and the reputation of the cities (Presence).

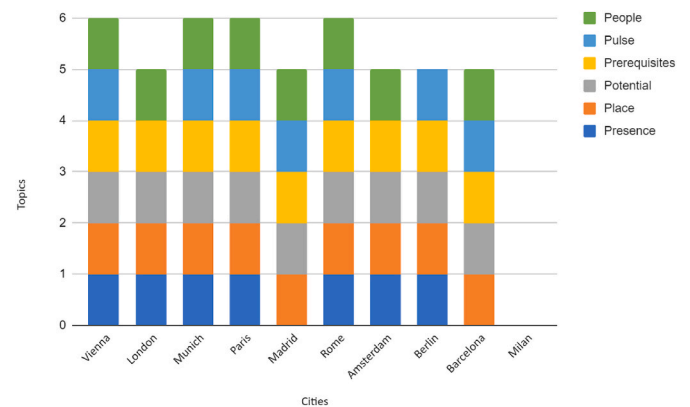
5. Discussion

The aim of this research work was to build an assessment framework for DMOs in the organisation of choices to implement destination branding practices in the digital realm. A detailed literature review on destination branding, together with well-known practices of digital and social media marketing, formed the basis of the DDB framework.

The DDB framework, as structured, allows to evaluate digital destination branding practices by moving along the three pillars that guide



Graph 4. pictures the main topics detected among Twitter content, published by cities' DMOs.



Graph 5. pictures the main topics detected among Pinterest content, published by cities' DMOs.

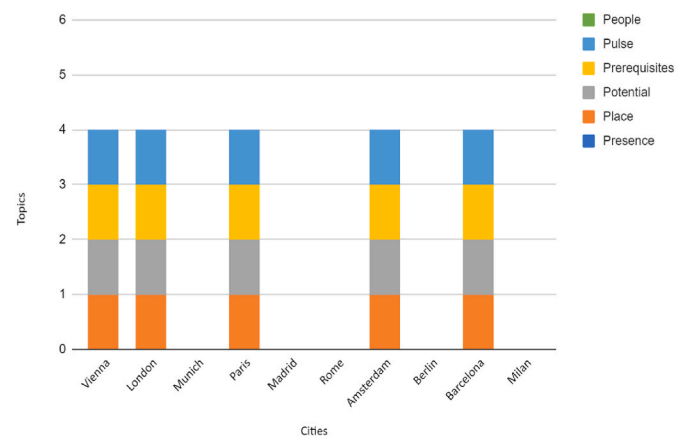


Image 1. The framework of Digital Destination Branding (DDB)
Description: The figure depicts the tree-structure of the Digital Destination Branding framework that organizes the groups of branding activities into 3 pillars, each of which encompasses multiple items
Source: Authors' elaboration

the measurement: social network presence (SNP), social network content (SNC) and digital tourism services (DTS). Each of these three dimensions assumes great and not negligible importance. The SNP, in fact, concerns the determination of DMO's online existence, through the construction of a clear, complete and constant presence on social networks (SNP). Determining DMO's presence among the online tourist

communities serves to create a positive image of the destination, increasing its awareness, the first step so that it can be selected as a tourist destination. The SNC offers indications on how to develop the main online audience engagement tool, i.e. posts for social networks, considering four main perspectives: the type of post, i.e. the most suitable format in consideration of the specifics of each platform; the structure of the post, therefore the incorporation of fundamental elements for engagement (such as cta, hashtag, mentions, etc.); the topic, that is, the aspect of the destination to be enhanced and promoted in the eyes of potential visitors; and finally the use of content co-created with influencers or with the users themselves. These, together with original contents created directly by the DMO, increase the sense of authenticity and reliability of the messages conveyed. Additionally, the DTS provides an array of tools that, from a purely touristic viewpoint, should be accessible to users throughout their travels in order to make their adventures as smooth and enjoyable as possible. The proposed model, therefore, is regulatory in the sense that it identifies and offers a complete overview of the factors necessary for an adequate implementation of destination branding activities. Consequently, the tool assists managers in assessing their work and, as a benchmarking tool, that of their competitors in determining compliance with the identified requirements. It highlights the areas of weakness (items and micro-items neglected or forgotten) and therefore allows to detect the aspects on which to intervene to improve the branding performances.

The empirical implementation served as a first application of the DDB framework, in order to test and improve its functionality but it has offered some interesting results about the work of the DMOs of the most visited European cities destinations. The first general consideration is that the most part of the sample analysed (8 cities out of 10) falls within the Poor or Fair score bands (Table 3). That means that the level of branding through the digital channels of these cities is under-exploited and with ample room for improvement. This can be determined by several issues that are discussed below.

First, the study was narrowed down to five social networking sites as it was previously observed that almost no new channels (such as TikTok) were implemented, indicating that the DMOs studied did not align with what these new platforms were able to provide. The inclusion of the descriptive biography of the organisational profile and contacts are good practices adopted in most cases on all platforms except Pinterest. However, the data on the frequency of publication explicit that social networks with a really active presence are above all Facebook, Instagram and Twitter. This latter, in particular, is prolific and "fast" in communications, especially for institutional communications and to network with other operators in the sector. By contrast, YouTube and Pinterest are largely ignored. Compared to YouTube, this is likely because creating professional videos is more burdensome than other types of content. Four DMOs have activated Pinterest and, probably due to being less popular than the others, this platform generates less engagement, so it requires less frequency in terms of content production.

Furthermore, the findings relating to the SNC pillar show that the deficiencies primarily concern the contents. DMOs pay little attention to enriching the variety of topics and are limited, in most cases, to the mere sharing of UGC. A rich and varied production of original creative content implies the use of dedicated resources (Confetto, 2015). Most public DMOs, however, are non-profit organisations with limited budgets to be devoted to this type of communication activity (Carrillo-Hidalgo & Pulido-Fernández, 2019).

Regarding the variety of topics, the People micro-item was detected in a few cases and almost never on photo and video sharing platforms (Instagram, YouTube and Pinterest). From this it is clear that sustainability issues and all the initiatives that focus on the well-being and safety of people are rarely communicated. Considering the pandemic period during which the analysis was carried out, it was expected to detect greater attention to this micro-item. Branding sustainability is currently a strongly felt need in every field and for every type of organisation (Confetto & Covucci, 2021). In the tourism sector, in particular,

the debate on sustainable tourism is growing rapidly (Streimikiene et al., 2021) especially in reference to urban contexts, such as those analysed (Pasquinelli et al., 2022). In fact, the sector suffers from travel restrictions and health regulations of pandemic threat, coupled with environmental degradation and climate change (Gössling et al., 2020; Wilkins et al., 2018). DMOs need to push towards a strong people-oriented redefinition of destination marketing and branding.

In terms of co-created content, researchers found there was great reuse of user photos, especially those related to Place and Potential, more than publishing original content designed for destination branding purposes. This data allows to interpret differently the result on the Place and Potential topics which are the most dealt with only because they are the ones on which there is more production of UGC. Accordingly, we conclude that the DMOs of the cities in our analysis do not put much effort into creating social media content, preferring to rely on inertia and spontaneous user activity to promote their destinations. The consequence is a general "flattening" of the social network feeds to posts that aim only to spread the beauty of the places which could solicit reduced engagement of users. The re-use of UGCs engages users in the construction of images of cities, but DMOs should do more to involve them through the creation of more appealing and engaging original content (quizzes, web series, reels, contests, etc.). Moreover, it is suggested to implement influencer marketing practices. In tourism, in fact, influential individuals represent a crucial tool for destinations to generate positive eWOM around their offerings, as they can be used to attract more or different type of tourists to a given geographical area and to shape the perception of the destination, among other purposes (Pop et al., 2022).

As already evident from the findings, the DTS pillar is the one that penalises the overall score of all cities the most (excluding Vienna). It is not so much the "basic" digital services, typical of a website for a tourism-related organisation. However, in half of the cases, the newsletter and downloadable maps are missing. What is amazing is the scarce use of virtual tours, implemented only by 3 cities and useable only directly from the website (not linked on social networks) and to apps, developed only by 2 DMOs.

The application of virtual reality in tourism contexts is nothing new. The literature of the sector has been interested in this for two decades (Cho et al., 2002), but it is the advent of smartphones and social media that has given a boost to this technology (Marasco et al., 2018) which, thanks to the pandemic, has found wide application in the last two years to make alternative forms of travel staying physically at home (El-Said & Aziz, 2022). The same goes for mobile applications to support tourists, especially during the visit experience, enabling the so-called e-tourism or smart-tourism (Dorcic et al., 2019). In this case, negligence on the part of the service provider can be found in a budgetary reason, as already mentioned, and they probably count on the presence of many online alternatives that are not perceived as competitors.

6. Theoretical and managerial implications

As far as the researchers are aware, this is the first study to provide a comprehensive overview of digital destination branding, as well as the first to propose a framework for evaluating related practices, which is based on theoretical principles and strengthened by practitioners' perspectives. By providing new insights into the main destination branding digital factors for promotion, engagement, and enhancement of the tourism experience, this study enriches theoretical research on destination branding. As a practical implication, the use of the framework facilitates the decision-making processes of the DMOs' brand managers and also offers itself as an evaluation tool to improve their work. With regard to its assessment function, the model has a double applicability: as an analysis tool for the DMOs of their communication activity, aimed at detecting areas not properly covered for making improvements to their strategy and as a research tool for conducting benchmarking analyses in the field of destination management, both in academic and market research. For instance, it could be used to produce rankings and

identify best in class and best practices in terms of effective digital destination branding practices.

7. Conclusions, limitations and further research

The results of the study offer an overview of the current state of DDB practices related to the main European tourist destinations in 2021. In spite of what could be expected there aren't as many good practices in the field of digital destination branding for big capital cities. Indeed, minus Vienna's best practices, there are some uncertainties surrounding the strategies of the sampled DMOs. The use of digital tools and social networks for destination branding does not reflect the positive reputation all these cities enjoy. It is believed that this picture of just sufficiency is the consequence of an attitude of inertia of the DMOs of large and famous cities such as those of the sample. In fact, these are cities whose cultural, historical, artistic and landscape heritage constitutes a natural baggage of reputation and recognizability that does not need to be promoted all over the world and which allows DMOs to "put their feet up". It is reasonable to believe that the activities of smaller and/or less known tourist realities could lead to different results. Similarly, a sample of private tourism operators would likely have different resources or motivations to plan their branding strategies. A larger sample of European DMOs, including those of less visited destinations, could be included in the future to test the hypothesis that less popular destinations need to work harder to attract tourists. Furthermore, the research could be extended to other geographical areas, for benchmarking analyses. This implies having to expand the mix of social networks considered in the framework to include the most popular platforms in other geographical contexts. In addition, it would be interesting to apply the framework to evaluate digital destination branding activities of other types of DMOs: private DMOs, regional or national DMOs, leisure

or business DMOs.

The empirical implementation of the model aimed to obtain evidence on digital destination branding applied in a tourist perspective. However, branding a destination can also serve to attract residents, investors, companies, and the workforce. Hence, future research could aim to modify the DDB framework to make it more adaptable to different perspectives. As an example, when promoting a place as a destination for new residents, topics that highlight the overall liveability should be considered, such as its quality of life, employment opportunities and smart infrastructure. Tourism digital services should also be changed, including digital governance and public administration services. To better understand the effectiveness of digital destination branding practices, new studies, such as those measuring tourist satisfaction, need to be conducted in order to expand the research line related to digital destination branding.

Authors statement

Maria Giovanna Confetto: Conceptualization, Methodology, Formal analysis, Investigation, Data curation, Validation, Writing – Original draft, Writing – Review & Editing, Project administration, Supervision, **Francesca Conte:** Conceptualization, Methodology, Data curation, Validation, Writing – Original draft, Visualization, **Maria Palazzo:** Conceptualization, Methodology, Formal analysis, Investigation, Writing – Review & Editing, **Alfonso Siano:** Conceptualization, Supervision.

Type of contribution

Research Paper.

Appendix A

Table A1

Websites and social network accounts of sampled DMOs

Destinations	DMO website	Facebook account	Instagram account	YouTube account	Twitter account	Pinterest account
Paris	www.parisinfo.com	@parisjetaime	@parisjetaime	www.youtube.com/user/ParisOTC	@ParisJetaime	@paris_jetaime
Amsterdam	www.iamsterdam.com	@iamsterdam	@iamsterdam		@Iamsterdam	@iamsterdam
Madrid	www.esmadrid.com	@visitamadridoficial	@visita_madrid	www.youtube.com/user/esMADRIDtelevision	@Visita_Madrid	
Rome	www.turismoroma.it/	@tourismrome	@turismoromaweb	www.youtube.com/user/turismoroma	@Turismoromaweb	
Berlin	www.visitberlin.de	@Berlin	@visit_berlin	www.youtube.com/user/Berlin	@visitberlin	
London	www.visitlondon.com	@visitlondon	@visitlondon	www.youtube.com/c/VisitLondonOfficial	@visitlondon	@visitlondon
Munich	www.munich.travel/en	@simplymunich	@simplymunich	www.youtube.com/channel/UCPYZRMmtZ1gbEQ9tmYhgnVg	@Munich_CVB	
Barcelona	www.barcelonatourism.com	@visitbarcelona	@visitbarcelona	www.youtube.com/c/VisitBarcelonaOfficial	@VisitBCN_EN	@visitbcn
Vienna	www.wien.info	@ViennaTouristBoard	@viennatouristboard	www.youtube.com/vienna	@viennainfob2b	@viennatouristboard
Milan	www.yesmilano.it	@turismo.milano	@visit_milano	www.youtube.com/channel/UCbwX67e_swn16-m0blfwLQ		

The table reports the links to DMOs' websites and social network accounts of the top 10 European cities classified in "Top 100 City Destinations Index 2021"

Appendix B

Table B1
Detection analysis of micro-items of the pillar SNP with scores attribution

Destinations	Pillar	SNP																			SNP score						
	Item	Social Network Mix					Information Completeness					Contacts					Social Network Icons					Frequency (≥3posts/week)					
	Micro-item						Biography																				
	Channel	Fb	Ig	YT	Tw	Pin	Fb	Ig	YT	Tw	Pin	Fb	Ig	YT	Tw	Pin	Website	Fb	Ig	YT		Tw	Pin				
Paris		1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	85,00				
Amsterdam		1	1	0	1	1	1	1	0	1	1	1	1	0	1	1	1	1	1	0	1	0	80,56				
Madrid		1	1	0	1	0	1	1	1	1	0	1	1	1	1	0	1	1	1	0	1	0	73,89				
Rome		1	1	1	1	0	1	1	1	1	0	1	1	1	1	0	1	1	1	0	1	0	80,56				
Berlin		1	1	1	1	0	1	1	1	1	0	1	0	1	0	0	1	1	1	0	1	0	76,11				
London		1	1	1	1	1	1	1	1	1	0	1	1	1	0	0	1	1	1	0	1	0	85,00				
Munich		1	1	1	1	0	1	1	1	1	0	1	0	0	0	0	1	1	1	1	1	0	82,22				
Barcelona		1	1	1	1	0	1	1	1	1	1	1	1	0	0	0	1	1	0	0	1	0	70,00				
Vienna		1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	0	1	0	87,22				
Milan		0	1	1	0	0	0	1	1	0	0	0	1	1	0	0	0	0	1	0	0	0	30,56				

The table reports the results of detection of presence (1) or absence (0) of SNP micro-items and the overall SNP score.

Table B2b
Continuation of detection analysis of micro-items of the pillar SNC (Item: Main Topics)

Destinations	Pillar	SNC																													
	Item	Main Topics																													
	Channel	Fb						Ig						YT						Tw						Pin					
	Micro-items*	Pr	Pl	Pt	Pq	Pu	Po	Pr	Pl	Pt	Pq	Pu	Po	Pr	Pl	Pt	Pq	Pu	Po	Pr	Pl	Pt	Pq	Pu	Po	Pr	Pl	Pt	Pq	Pu	Po
Paris		1	1	1	0	1	1	1	1	1	0	1	0	0	0	0	0	0	0	1	1	1	1	1	1	0	1	1	1	1	0
Amsterdam		0	1	1	1	0	1	0	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1	0	1	0	1	1	1	1	0
Madrid		0	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	0	0	0	0	0
Rome		1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
Berlin		0	1	1	1	1	0	1	1	1	0	0	1	1	0	1	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0
London		0	1	1	1	1	0	0	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	1	0
Munich		1	1	1	1	1	1	0	1	1	0	1	0	1	0	1	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0
Barcelona		0	1	1	1	1	1	0	1	1	1	1	0	1	1	1	0	1	1	0	1	1	1	1	1	1	0	1	1	1	0
Vienna		0	1	1	1	1	1	0	1	1	1	1	0	0	1	1	1	0	0	1	1	1	1	1	1	0	1	1	1	1	0
Milan		0	0	0	0	0	0	1	1	1	1	1	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0

The table reports the results of detection of presence (1) or absence (0) of the SNC item *Main topics*. The table continues to the next page.

Legend.

SNC = Social Network Content.

Presence = Pr.

Place = Pl.

Potential = Pt.

Prerequisites = Pq.

Pulse = Pu.

People = Po.

*Consider that in this case the micro-items have been detected on each social network separately. For this reason, in the table the row Channels leads the row Micro-items.

Table B2c
Continuation of detection analysis of micro-items of the pillar SNC (Item: Co-created content) with scores attribution

Destinations	Pillar	SNC		SNC score
	Item	Co-created content		
	Micro-item	Influencers	UGC	
Paris		0	1	68,75
Amsterdam		0	1	52,33
Madrid		0	1	57,75
Rome		0	1	60,25
Berlin		0	1	57,58
London		1	1	75,08
Munich		0	1	58,58
Barcelona		0	1	62,17
Vienna		0	1	63,33
Milan		0	0	20,42

The table completes the previous ones showing the results of detection of presence (1) or absence (0) of the SNC item *Co-created content*.

Table B3
Detection analysis of items of the pillar DTS with scores attribution

Destinations	Pillar	DTS							DTS score
	Items	Booking and e-Commerce	Newsletter	Guides	Maps	Virtual Tours	Mobile app	Links to portals	
Paris		1	0	1	0	0	0	1	42,86
Amsterdam		1	0	1	0	0	0	1	42,86
Madrid		0	0	1	1	1	0	1	57,14
Rome		0	1	1	1	0	0	0	42,86
Berlin		1	1	1	0	0	0	0	42,86
London		1	0	1	1	0	1	1	71,43
Munich		1	1	0	1	1	0	0	57,14
Barcelona		1	0	1	0	1	0	0	42,86
Vienna		1	1	1	1	0	1	1	85,71
Milan		1	1	1	0	0	0	0	42,86

The table reports the results of detection of presence (1) or absence (0) of DTS micro-items and the overall DTS score.

Table 1 shows the DDB ranking with partial scores of Social Network Presence (SNP), Social Network Content (SNC) and Tourism Digital Services (TDS) and the overall Digital Destination Branding score.

Table 2 shows the attribution of labels to score bands to facilitate the interpretation of results on pillars.

Table 3 shows the score bands attributed to Digital Destination Branding (DDB) score of ranked cities.

Graph 1 - Topics on Facebook.

Graph 2- Topics on Instagram.

Graph 3 - Topics on YouTube.

Graph 4 - Topics on Twitter.

Graph 5 - Topics on Pinterest.

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