# Managing DMOs through Storytelling: A Model Proposal for Network and Value Co-creation in Tourism

Silvia Gravili<sup>1</sup>, Pierfelice Rosato<sup>2</sup> & Antonio Iazzi<sup>2</sup>

<sup>1</sup>Marketing Department, Troisi ricerche srl, Bari, Italy

<sup>2</sup>Department of Management and Economics, University of Salento, Lecce, Italy

Correspondence: Silvia Gravili, Marketing department, Troisi Ricerche srl, via de Rossi 57, Bari, Italy.

Received: April 20, 2017	Accepted: May 31, 2017	Online Published: June 7, 2017
doi:10.5539/ibr.v10n7p8	URL: https://doi.org/10.5539	/ibr.v10n7p8

# Abstract

The rise of new business models based on shared content and experience has required tourism destinations to adopt appropriate tools for the construction and promotion of their identity based on sociality, emotions, interaction and connectivity. The aim of this paper is to analyse actors, actions, processes and relations related to the adoption and development of storytelling practices in tourism destination management, analysing critical aspects linked to the generation of content and the narration of territories. As an attempt to understand the processes of innovation and value-creation underlying the development of storytelling in destination management ("destination telling"), the Service Dominant Logic, and the actor-network theory interpretative framework have been adopted. The study was conducted following the qualitative methodology of multiple case studies. In view of the interviews and the analyses conducted, Destination Telling preconditions, contents, managerial criteria and outcomes have been identified, in reference to each of the three stages ("planning", "narration" and "assessment") the process has to be split. Finally, managerial implications for an involving construction and sharing of stories to happen have been examined and discussed.

**Keywords:** collaborative practices, destination management, destination marketing, DMO, network, storytelling, tourism destination, value co-creation

## 1. Introduction

In managerial literature, tourist destination is defined as a geographical space in which exists an «accumulation of tourist resources and attractions, infrastructure, equipment, service providers, other support sectors and administrative organizations, whose integrated and coordinated activities provide customers with the experiences they expect» (Wang, 2011, p. 2), that is to say: an appealing sum of products, services and activities variously arranged in a geographically defined space but recognised as a unified offer by the tourist's experience of it (Franch, 2010).

In these terms, destination management strategies are called to predict the development of "offers" or, better, "value propositions" that create a total experience for the customer. In fact, the transformation of *product economies* first into *service economies* and then into *experience economies* (Vargo & Lush, 2014), the characterisation of the contemporary era as a *data-intensive age* (Gerlitz & Helmond, 2013) and the rise of the mobile channel, with personalization and peer-to-peer travel services being the main disruptors (Lucarelli & Olof Berg, 2011), are all made such an experience to be actively constructed by each tourist, through personalized interaction.

In more detail, a new tourist can be identified, who creates value not only for him/herself and the company, but also for other customers as he/she often shares his/her travel experience in online social networks (Shaw, Bailey, & Williams, 2011), This, in turn, has marked the rise of business models based on continuously reconfigurable collaborative relationships and networking, leading to a significant reassessment of the role of the brand from a question of "image" to one of "relationships", from "control" to "collaboration". Namely, from a "*lovemark*" (Roberts, 2005), understood as "something that is loved" in that it is the expression of precise inspirational values, the brand has evolved into a "*wikibrand*" (Moffit & Dover, 2012), i.e. "something in which one participates", an incontrovertible sign of interaction and integration with the consumer, able to bring benefits in terms of distinctiveness, profitability, and the ability to develop innovation and make people live memorable

experiences (Prebensen, Chen, & Uysal, 2014).

When viewing tourism in this light, customers become co-producers in the tourism experience as they are not merely interested in buying the product but also buying the stories behind the product (Woodside & Megehee, 2010).

In this regard, it is of interest to observe that McCabe and Foster (2006, p. 196) recognised that «tourist experiences are essentially 'stories' about events, places and people», while Chronis (2012, p. 445) noted that a story «transforms an otherwise indifferent space into [an] attractive tourist destination».

In order to reach this goal, and to face the ever-increasing competitive pressures, such a destination is expected to be constantly active and resilient; smarter in defining a well thought-out wikibranding strategy; more open and connected with its stakeholders; and more skilful in drawing on its brand assets as a lever for creating value and winning loyalty by means of participation and engagement. Hence there is a need to use creativity and experiences as a source of differentiation (Tan, Kung, & Luh, 2013), and to promote tourism destinations' identity by such means as sociality, emotions, interaction and connectivity (Russo Spena, Colurcio, & Melia, 2013).

Today, Destination Management Organizations (DMOs) are increasingly adopting storytelling – or «the interactive art of using words and actions to reveal the elements and images of a story while encouraging the listener's imagination», according to the definition by the National Storytelling Network (2011) – in order to involve, entertain and activate the participation of actual and potential visitors. However, to the authors' knowledge, the managerial literature has considered storytelling only by emphasising its connection to product development (Von Hippel, 1986), the provision of memorable experiences (Mossberg, 2008; Martin & Woodside, 2011; Campos, Mendes, Oom do Valle, & Scott, 2015), which also serves to build customer satisfaction (Prebensen, Kim, & Uysal, 2016) and customer loyalty (Lichrou, O'Malley, & Patterson, 2008).

The processes and ways in which storytelling contributes to the development of a tourism destination are still poorly studied, as are the effects of the joint construction of a story in terms of increasing the capacity of a destination's stakeholders for cooperation. As a result, the issue of modelling storytelling in destination management and linking it to the marketing outcomes remains a challenge for researchers.

Based on such considerations, this paper aims to: a) study the key factors and practices of storytelling in destination management, analysing critical aspects relating to content generation and place narration by both managers and users; b) test the hypothesis that the application of storytelling to destination management activities (what we refer to here as "*destination telling*") could represent a fundamental managerial tool not only outside but also within the destination itself, as it supports the construction of the destination identity and enhances the stakeholders' capacity for cooperation; c) model destination telling managerial practices, by identifying the actors, actions, processes and relations linked to the generation of content and the narration of territories by both managers and users. To this end, the value co-creation perspective (Prahalad & Ramas wamy, 2004; Cabiddu, Lui, & Piccoli, 2013; Roseira & Brito, 2014) and Service-Dominant Logic (Lusch & Vargo, 2006, Grönroos, 2008; Polese & Di Nauta, 2013) are adopted, and combined with the actor-network theory interpretative framework (Latour, 2005; Lugosi & Erd & yi, 2009; Van der Duim, Ren, & J & fannesson, 2013).

## 2. Managing Stories and Networks for Value Co-creation

Ever since the studies of "organizational sagas" (Clark, 1972) and "epic myths" (Mitroff & Kilmann, 1975), narration has been considered one of the oldest and most effective devices for the creation, interpretation and consolidation of identity, used by companies and individuals to confer sense and meaning on one's experience (Barthes, 1964). Indeed, on the one hand, by means of clarification, narration makes the participants' knowledge and experiences explicit (Snowden, 2001) and sets out common interpretative coordinates for events, choices and behaviours, which in turn construct new forms of organisational knowledge that are able to orient people's acts. On the other hand, by means of disseminating knowledge, narration influences the development of networks (Cross & Parker, 2004), subjecting the organization's relational capital to an analytical process that allows the identification of the most successful managerial practices (Mossberg, Therkelsen, Huijbens, Björk, & Olssen, 2010), guarding against the threat of oblivion (Bruner, 1991).

Developing as multi-authorial and de-institutionalised forms of communication that are able to integrate cognitive and emotional elements (Chronis, 2012), when applied to the business context (i.e. the DMO), stories come to life in an iterative "dialogic loop" (Kent & Taylor, 1998), in which the public of reference are not mere recipients in a one-directional process, but actors that participate in the construction of (*destination*) conversations, which are designed to both identify and represent the culture, values, habits and traditions of the

community living in it (i.e. the destination), in a symbolic but original way (Lugosi, 2014). That is to say, to stimulate the development of a representative, distinctive and attractive identity (Woodside, Sood, & Miller, 2008) that can also be perceived as "authentic" by potential customers (i.e. visitors) (Wang, 1999). This has the purpose of:

a) capturing the attention, conferring a distinctive personality on the organization (i.e. the destination) brand (Crouch & Ritchie, 1999), while making it highly desirable and memorable (Chronis, 2005);

b) involving the participants, in that they immerse the narrators in the stories of their characters, with whom they identify (Tussyadiah, Park, & Fesenmaier, 2011);

c) prompting the readers to act (i.e. to visit) on their own initiative, enabling a highly personalised experience of the product (i.e. the destination offer) (Suvantola, 2002);

d) favouring the development of emotional 'loyalty' connections that can act positively on the consumer's memory (McGregor & Holmes, 1999) and on his/her ways of learning, by stimulating expectations with regard to the outcome of the story (Denning, 2006);

e) making customers "delight" in and achieve deeply satisfying levels of sense making (Pera, 2014).

In these terms, the participatory narration of experiences while living the destination (the proper trigger of storytelling) can be analysed through the *collaborative innovation* perspective, which has been widely discussed by both marketing and managerial literature (Franke, von Hippel, & Schreier, 2006; Fuller, Jawecki, & Muhlbacher, 2007). A perspective where the distinction between "producers" or "active players" and "consumers" or "passive audiences" disappears, as value is not only created by the seller who delivers it to the buyer.

Rather, in most cases it is co-created by both parties through collaborative processes that involve the access to mutual resources and capabilities as well the coordination of such resources and capabilities (Grönroos, 2011; Day, Fawcett, Fawcett, & Magnan, 2013). A perspective in which all the actors who participate in the process of value creation (companies, employees, consumers, social partners and all other parties with an interest in sharing operationally available resources each according to their specificities and needs) are no longer seen as mere suppliers of goods and services, but as systems, constellations, or networks of resources and expertise working together, with a view to mutual exchange and benefit. Then, the act of narrating, or reading, or sharing stories makes the consumer (i.e., the visitor) the key player in the value-creation process (Payne, Storbacka, & Frow, 2008), while (DMO) managers have the task to support it and foster with adequate services, by leveraging the deep knowledge of the product/service (i.e. the destination) while in use by the consumer and, therefore, by leveraging his experience, history, and location.

As tourism destinations are characterized by multi-scalar and multi-level stakeholder networks - including destination management organizations (DMOs), public administration at municipality or regional level, public and private attractions, various types of tourism-related service providers and actual storytellers, all of them with different interests and agendas - managing such inter-organizational relations has proven crucial (Therkelsen & Halkier, 2010).

However, in order to reach this goal, participation is a necessary but not sufficient condition: as highlighted by the Service Dominant Logic (Vargo & Lusch, 2004), value is the result of both "operant" and "operand" resources, which have to be combined through commitment, integration, and mutual communication, in a holistic perspective.

It arises the need to ensure the broadest possible consensus and to make stakeholders acknowledge the legitimacy of the destination management's actions (Wang, 2011), which in turn leads to new opportunities and a greater level of effectiveness, which would not have been achieved by the stakeholders acting alone (Bramwell & Lane, 2000). In detail, stories create conversations that highlight, by means of metaphor, the destination's tangible and intangible assets (Iazzi, Rosato, & Gravili, 2015), making it possible to find innovative managerial solutions and combine profitability with sustainability (Carrubbo, Moretta Tartaglione, Di Nauta, & Bilotta, 2012), understood as the safeguard of the cultural heritage and values of the destination and its residents (Ryan, 2002; Alkier, Milojica, & Roblek, 2015).

In fact, storytelling enables the destination's stakeholders and residents to rethink their experiences and actions, reconstructing their meaning to share the same vision and values, and highlighting their potential for development in accordance with a common interpretative approach (Rasmussen, 2005). This in turn generates trust and commitment (Barone & Fontana, 2005), encourages cooperation (Herskovitz & Crystal, 2010), makes potential visitors group the lived or liveable experiences into themes (Pine & Gilmore, 1998), and creates a tourist offer that will be perceived as a rich but unified range of products/services (Bramwell & Lane, 2000),

eliminating any distortions and/or discrepancies (Hsu, Dehuang, & Woodside, 2009).

In this perspective, the application of storytelling to destination management (what we refer to as "destination telling" - DT) consists of seeking and fostering social and emotional interaction and connectivity (Papadatos, 2006), which leverage participatory processes even from a Service-Dominant perspective and makes activities such as collaborative projecting and "content communitying" the preferred channels for the construction of a common ethos, able to spread rapidly through different social circles.

# 3. Methodology

As an attempt to understand the processes of innovation and value-creation underlying the development of storytelling in destination management, as well as to analyse the actors, actions, processes and relations linked to the generation of content and the narration of territories by both managers and users, the actor-network theory interpretative framework (Latour, 2005; Lugosi & Erd dyi, 2009; Van der Duim, Ren, & J ohannesson, 2013) has been adopted.

The conceptual framework and other extended issues relating to DT have been developed based on previous theory as well as multiple interviews with destination staff, business representatives and (online) community members at four destinations in Italy, in accordance with a multiple case study qualitative approach (Yin, 2013).

To this end, after a preliminary literature review, an on-desk survey of all (20) Italian DMOs was undertaken, looking at cases of DT practices. This survey revealed that not all the (12) monitored projects could be considered suitable exemplars; then, each of them was evaluated in detail, specifically assessing:

- a) the degree of innovation (Novelli, Schmitz, & Spencer, 2006; Aquilani & Abbate, 2015);
- b) the ability to highlight the potential of tools based on Web 3.0 (Ferrari, 2015);

c) the ability to develop long-term horizontal participatory processes (Bailey & Koney, 2000; Saxena, 2005);

d) the ability to integrate on- and off-line promotional activities (Fog, Budtz, Munch, & Blanchette, 2011).

The performance of each criteria was measured on a 5-point Likert scale (1 = very poor, 5 = very good), in order to compare DT processes' effectiveness against competitors.

However, it would be problematic if the performance results were aggregated and used directly as a measure of DT effectiveness, because variance exists in the degree of complexity associated with them. As a solution, the degree of complexity was rated, based on managerial literature, on a 5-point Likert scale (1 = not complex at all, 5 = very complex), in order that the more complex criteria applications to be weighted more compared with their less complex counterparts. Then, the effectiveness score in each criteria was finally calculated by using the product of the rated value of performance and complexity (i.e. effectiveness = performance  $\times$  complexity), and a rank was obtained.

With this model, if for instance one DT project performs fairly well only in with complex criteria, its overall effectiveness score should not be very high from the perspectives of value co-creation processes or available (operand and operant) resources allocation effectiveness. In comparison, project implementing more complex applications should obtain high effectiveness scores. In detail, the latter were obtained from the following regions: Emilia Romagna, Puglia, Umbria and Friuli Venezia Giulia.

A series of in-depth interviews (about two hours each) with different managers of the DMOs promoting the specific projects of interest, as well as with among-industry representatives and both online and offline community members were conducted, in order to identify relationships, functions and challenges arising from the development of DT projects, as well as to test the hypothesis that the application of storytelling to destination management activities could represent a managerial tool not only outside but also within the destination itself. The interviews were transcribed, codified, and analysed. Data saturation (Glaser, 2002) was achieved after conducting in-depth interviews with 7 DMO managers and 30 among-industry representatives, online and offline community members over a four-week period (see Table 1).

#### Table 1. Sample description

	Stakeholder Sector	Position	Age	
1	Regional DMO	Director	45	
2	Regional DMO	Director	40	
3	Regional DMO	Social Media Manager	30	
4	Regional DMO	Community Manager	32	
5	Regional DMO	Social Media Manager	35	
6	Regional DMO	Social Media Manager	30	
7	Regional DMO	Director	43	
8	Accommodation (hotel)	Social Media Manager	38	
9	Accommodation (holiday farm)	Social Media Manager	33	
10	Accommodation (hotel)	Owner	36	
11	Accommodation (holiday farm)	Director	31	
12	Accommodation (hotel)	Director	50	
13	Accommodation (Convention service)	Owner	53	
14	Accommodation(b&b)	Social Media Manager	51	
15	Incoming	Director	48	
16	Incoming	Owner	46	
17	Incoming	Owner	49	
18	Attractions	Director	46	
19	Attractions	Director	41	
20	Attractions	Communication Manager	39	
21	Arts and culture (archeological park)	Director	52	
22	Arts and culture (museum)	Social Media Manager	43	
23	Arts and culture (museum)	Director	57	
24	Arts and culture (museum)	Content Manager	35	
25	Events organization	Artistic Director	44	
26	Events organization	Social Media Manager	33	
27	Events organization	Owner	49	
28	Events organization	Social Media Manager	29	
29	Non-profit	Director	37	
30	Non-profit	Social Media Manager	33	
31	Retail	Owner	61	
32	Retail	Director	54	
33	Travel blogger		37	
34	Travel blogger		31	
35	Travel writer		43	
36	Press agent		56	
37	Travel Journalist		44	

Then, a conceptual framework of Destination Telling was drawn up, in order to make explicit the contribution of storytelling to the broader process of tourism destination management. In detail, the theoretical model was defined by three major constructs (besides an analysis of DT contents in themselves), with the emphasis on the nature and dynamics of DT marketing. These include: (i) the *activation* construct, which refers to those elements without which the narrative, social and environmental conditions for stories to flow could not be delineated; (ii) the *stage* construct, which captures the actors, dynamics and infrastructure of DT processes; and (iii) the *outcome* construct, which describes the consequences of DT activities.

Finally, managerial implications for an involving construction and sharing of stories to happen were examined and discussed.

This ensured consistency with the objectives of the study and provided substantial clues to the nature of the phenomena, even with reference to their ground, accuracy, and generalization (Eisenhardt & Graebner, 2007).

## 4. Destination Telling: A Conceptual Framework

The results of the interviews conducted show that DT, as a form of narration, is characterised by multiplicity and interactivity, which both involve all the key elements of textuality – themes, characters, tools and resources - and by a high degree of dynamism and inclusivity in the creation and use of what is narrated, which always makes "the teller" and "the reader" switch their roles, in a deeply empathic loop.

This is achieved via the development of a collaborative process that is both broad and deep, informal and among equals, but does, however, require the presence of an "authority" that guides it from a long-term perspective. The absence of such an authority may result in a more limited willingness among narrators and readers to engage in dialogue – an essential condition if narration is to succeed.

In this regard, DMO management is called upon to act as catalyst and facilitator: on the one hand, it has to gather

the demands of the destination's stakeholders (i.e. Operators, Residents, and Public Institutions), activating participatory processes founded on listening; on the other, it has to create platforms for the involvement of the stories' potential "readers", as well as for the management of relations and feedback. And it is precisely the development of these platforms, characterised by a high level of transmediality (Jenkins, 2006), which enables the management to encourage participation in the narrative process, to activate dialogue among various authors and readers, and thereby to participate itself in the narration as a proper actant (Figure 1).

#### ACTIVATION

STAGE

## OUTCOME

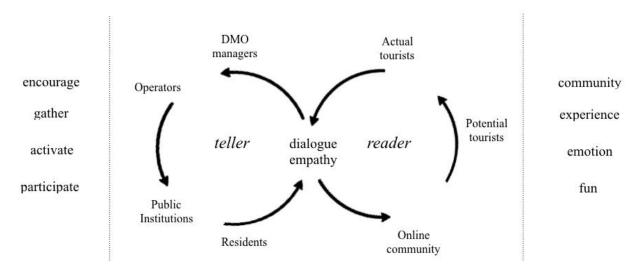


Figure 1. Destination telling dialoguing loop: actors and relations

Indeed, DT aims at the construction, around the destination, of an *ecosystem of meaning*, where each subject involved in the shared narration of content and services - a narration that, as a matter of fact, acts as a proper form of planning - suggests a possible way of experiencing the destination itself, potentially exploitable in terms of promotion and marketing.

Both DMO managers and community members agree that the process that leads to the construction of such an ecosystem consists of three essential stages (planning, narration and assessment of results) and it cannot begin without first meeting certain fundamental requirements, including:

a) the adoption of an attitude of honesty and respect for the ideas thus gathered (an attitude which is strongly required by online community tellers and readers), recognising the creative contribution of each of the participants in the narration, which starts with the realisation that they are the ones who confer rhetorical force on the story, in that they infuse their personal stories, motivations and choices.

b) the creation of empathy, which allows the management of the destination to draw on the storytellers' collective intelligence, with the aim of generating innovation, providing increasingly memorable experiences and thereby maintaining the competitiveness of the destination itself (Tung & Ritchie, 2011).

During the planning phase, the objectives of the storytelling activity and the theme of the story to be told are identified, the narrative framework (e.g. characters, media, timing, literary genres, etc.) is set (Note 1), strategies to attract and maintain interest are drawn up (this, because of the secondary role played by incentives of an economic nature), the *servicescape* is established (Booms & Bitner, 1981), and the key players who are able to activate the growth – both sequential and intertwined – of the narrative units are identified. Destination managers do this by selecting, on the basis of the destination's resources, the most interesting ideas to propose, with the aim of suggesting, during the narration phase, new points of view and/or relations between characters, thereby prompting the storytellers to deploy special narrative effects that can draw the interest of readers and induce them to keep reading. It is via this growth that ideas proposed by some users are taken up and developed by others, making use of the pleasure that people feel when cultivating their own interests and transmitting to others the results of their intuitions.

Listening carefully to the passions, interests and needs of current and potential consumers is also useful, from DMO managers' and business operators' perspectives, for identifying first and foremost the *conditions of* 

*credibility* of the narration and, subsequently, the narrative cores that are most compelling for the public. It is on these that the narrated stories will be developed by means of a series of touch points that can positively influence the perceptions, actions and relations between storytellers.

However, in order for this to happen, the "authority" that makes the narration flow from a long-term perspective needs to be aware of the bidirectional, multi-modal, modular, authentic and non-extemporaneous nature of DT, as properly managerial criteria.

- *Bidirectionality* refers to the situation in which the destination manager and the tourist (current and/or potential) continuously exchange the roles of reader and (co)author, sender and recipient of the message.
- *Multimodality* is the case in which each user, like a modern *bricoleur* (Levi-Strauss, 1964), can at any time, on the basis of his or her specific needs and interests recreate the touch points on which the narration is based, and can thereby experience the destination's resources in a highly-personalised way. It is therefore not a question of a merely "additive" activity or one that affects only the narrative forms and structures, but of a different system of signifying that is able to make full use of the transmedial dimension via which the narration develops, and to create narrative sub-plots, designed for particular niches of consumers/readers.
- *Modularity* is an expression of the shift away from the canonical scheme, which is linear and mono-authorial. In contrast, with modular narration, each story takes shape as the result of a broader sequence of stories. As the narration proceeds, the individual tales of the users are configured as separate objects that can also be selections, adapted and combined to meet the need for a personalised aesthetic experience.

This enables us to better understand the notion of *authenticity*, as the narrated stories construct tools for the effective representation of the self (Kim & Jamal, 2007). This is also shown by the fact that the narrators rarely use pseudonyms, choosing rather to appear in the stories in which they are characters with their own names. In this sense, participation in the narration is «easily at hand and simple to use» [Lundby (2008), p. 4], because it draws directly from one's own personal experience; the act of narrating one's lived experiences thus becomes one of the preferred ways of attributing meaning to a mass of available information, as well as a way of constructing – fulfilling from the recreational point of view – a universe of meanings that are shared by the members of the community, which is then defined precisely in these terms.

However, DMO managers and operators agree that the effectiveness of this activity is closely dependent on careful planning (hence its *non-extemporaneous nature*), which is also necessary in order to reduce the risks arising from the redistribution, in accordance with the principles of democratic empowerment, of processes that were once the exclusive prerogative of destination management, which could then lead to the loss of full control over the destination's identity.

The actual launch of the narration enables the content of the six Ws (D'Autilia, 2013) – Who, What, Where, When, Why and While – to be made explicit, so as to amuse and intrigue narrator and reader alike, and above all to make them feel emotions by deploying the following strategies identified by Fontana (2011):

- Penetration, understood as the ability of the narration to enter the readers' lives;
- Multiplicity, i.e. the plurality of communicative channels and media on which the narration is provided;
- Construction of a world that is able to become an integral part of the "real" one;

• *Extractability*, understood as allowing the reader, via the story and its characters, to identify new lines of development of his or her own identity;

• *Seriality*, which means that the segments of stories that constitute the main narration can be opened up, closed and reopened, not only within the same medium but also between different media;

• *Subjectivity*, i.e. inducing the reader to see the story through the eyes of a character, in order to obtain a greater identification with what is being narrated;

• Performance, understood as the activation of a community around the narrated object.

Thanks to the immediacy, apparent simplicity and originality of the story, the words, images and sounds through which the narration unfolds thus become the expression of the culture, ethics and values – in addition to the past relational investments – of the destination's internal (typically: the DMO, the public and private operators, the community of residents) and external (the current and potential tourists, as well as the communities of users already active online that often act as "catalysts") stakeholders.

It is precisely these aspects that makes it necessary to conduct a systematic and neutral survey, in order to determine the degree to which the story has actually involved the users and supported the DMO in the pursuance of the desired goals. So, the assessment phase is based on such activities as the analysis of conversations, ethnographic observations, mapping of social graphs and influencers, and measurement of engagement, whose results will then be shared among the destination's internal stakeholders.

For these reasons, the monitoring must be conducted by the DMO in compliance with the principles of *transparency* (seen in the clarity of the criteria and the tools used to verify effectiveness and efficiency in the pursuance of the desired benefits), *meaningfulness* (i.e. the relevance to strategic decision-making of the parameters used for assessment), *reliability* (manifested in the adoption of clear, objective and verifiable assessment parameters), *circularity* (i.e. dissemination of the results of monitoring to all the actors of the DMO) and the *continuity* (or constant periodicity) of the surveys.

Therefore, in view of the interviews and the analyses conducted, Destination Telling can be systematized as described in Table 2. In detail, preconditions, contents, managerial criteria and outcomes are identified, in reference to each of the three stages ("planning", "narration" and "assessment") the process has to be split.

	STAGES		
	Planning	Narration	Assessment
PRECONDITIONS	• Honesty	Immediacy	Neutrality
	• Respect	<ul> <li>Simplic ity</li> </ul>	<ul> <li>Systematicness</li> </ul>
	Empathy	<ul> <li>Originality</li> </ul>	<ul> <li>Willingness to share</li> </ul>
CONTENTS	<ul> <li>Objectives</li> </ul>	• Who	<ul> <li>Conversations</li> </ul>
	Resources	• What	<ul> <li>Social graphs</li> </ul>
	<ul> <li>Key-players</li> </ul>	• Where	<ul> <li>Influencers</li> </ul>
	<ul> <li>Touch point</li> </ul>	• When	<ul> <li>Engagement</li> </ul>
	<ul> <li>Conditions of credibility</li> </ul>	• Why	
	-	While	
MANAGERIAL	Bidirectionality	Penetration	Transparency
CRITERIA	Multimoda lity	Multiplicity	<ul> <li>Meaningfulness</li> </ul>
	Modularity	<ul> <li>Construction of a world</li> </ul>	Reliability
	Authenticity	<ul> <li>Extractability</li> </ul>	Circularity
	<ul> <li>Non-extemporaneity</li> </ul>	Seriality	Continuity
		<ul> <li>Subjectivity</li> </ul>	
		Performance	
OUTCOMES	Narrative framework	Stories	Service experience
	• Engagement strategy	Common values	Visibility
	Servicescape	Shared ethos	• Destination image

Table 2. An integrative framework for destination telling management

In these terms, and in order to strengthen destination identity while promoting it significantly to a wider audience, DMOs should focus their storytelling strategies on the integrative framework and not on single encounters, tailoring marketing actions to specific stages in a DT management process.

# 5. Managerial Implications

We have described DT as a multi-authorial process that, by creating a proper ecosystem of meaning, can provide the DMO with elements of knowledge useful for consolidating the value of the destination brand from the perspective of co-creation. In fact, if stories get «the brand to work coherently and consistently because [...] pull together pieces of a picture into a more emotional and meaningful whole» [Douglas (2009), p. 23], this is particularly true when we consider that a tourism destination is a complex entity driven not just by competitive dynamics with regard to the world outside it (the destination vs. its competitors), but also by those practices which, in a context of co-opetition, develop within it (Wang & Fesenmaier, 2007).

Therefore, it is increasingly necessary to develop managerial actions based on the understanding of the informal, collaborative and network dimensions underlying the narrative process, an additional aim of which is to configure participatory models of governance that are based on flexible structures, in which information flows easily, in a framework of continuous learning. This, by transversally applying, in each of the essential stages (*planning*, *narration* and *assessment*) the construction and sharing of the stories, consists of a proper storytelling management, which may be understood in three ways:

• *interaction management*, here defined as the ability to develop horizontal and collaborative processes among all subjects potentially involved in the narrative project;

• *content management,* understood as the ability to make the best use of the storytelling skills of the narrators, with the aim of increasing the emotional link with the destination itself by making the stories about the destination attractive and compelling;

• *crisis management*, seen in the ability to respond in a personal, rapid and effective way to all claims and/or comments that might damage the destination's brand value, in order to neutralise any negative word-of-mouth publicity and prevent such judgements being repeated in the future.

As observed, DT can act as an innovative, relevant and effective management tool not only in reference with the relationship between destination as a whole and its external stakeholders, but also in defining relationships among all the different kind of subject working within it.

In particular, when appropriately governed by the DMO, these practices allow to enhance the contribution of the various stakeholders in enhancing destination identity and, in this way, in strengthening the sense of belonging of each person involved in the process of destination development.

Indeed, by emphasising the elements of interactivity, involvement and participation implicit in narrative practices, it is possible to develop long-term inclusive and collaborative behaviours that are able to increase the brand's online recognisability, fuelling viral word-of-mouth phenomena, as reflected by the interviews conducted. From the content of these stories it is also possible for the management to draw more specific indications concerning the needs, desires, expectations and experiences of their targets of reference (both internal and external), which they can make use of when it comes to the construction of the integrated tourism product, enhancing the distinctiveness and competitiveness of the destination.

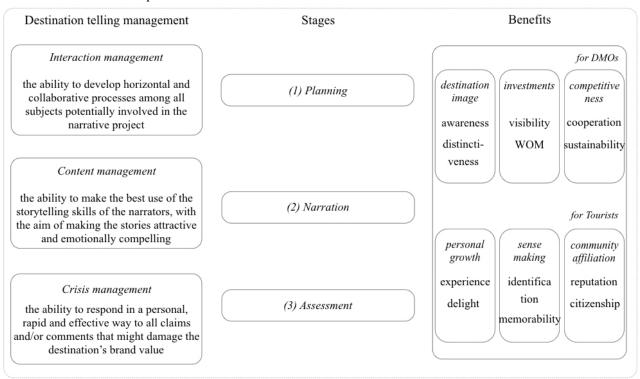


Figure 2. Destination telling management, stages and benefits

In this sense, the shared construction of stories favours the development of lasting relationships, which can boost operational efficiency in relations with stakeholders, even at the intersectoral level. In fact, the analysis conducted clearly shows that one of the elements that most strongly influences the contribution of DT to a broader process of destination development is precisely the nature of the relations that are established between the public and private actors operating within it.

In addition, stories provide a real framework within which to aggregate the entire destination offer, guaranteeing comprehensibility, uniformity and consistency to all the promotional and marketing activities developed by the various subjects operating in the DMO. In these terms, while one of the main objectives of the adoption of DT practices is to provide a more intense and richer user experience of the destination, it is also true that the shared development of stories helps to perpetuate and safeguard its cultural and environmental heritage.

Finally, it must not be forgotten that today's always-connected travellers seek information and assistance not only before, but even during their trips. This results in a shift of focus for tourism operators from the time of the booking to that of the travel and staying, in order to become mobile travel assistants. Then, through DT DMOs can offer consumers versatile and culturally appropriate experiences, both online and offline, not only by showing the multitude of travel options, but also by offering – through stories – trusted reviews and accurate local information.

In these terms, DT acts as a value co-creation catalyst at all stages of the buying process, including post-purchase, which supports both the DMO and storyteller in the pursuance of the desired benefits. On the basis of the data collected, with regard to destination, such benefits can be assigned to three macro-categories: the construction or consolidation of the destination's image, with due consideration of de-seasonalisation; its visibility, given the reduced investment in communication (compared to the budget necessary for a traditional media campaign); and the construction of a user service/experience that is increasingly fulfilling and memorable. On the other hand, through participation in the narration process, customers are supported in their personal growth, in achieving deeply satisfying levels of sense making, and in gaining reputation and credibility in community affiliation, by feeling like proper citizens (Figure 2).

## 6. Conclusions

The analyses conducted allowed to depict a conceptual framework of Destination Telling where subjects, relations, and operational logic are identified, in order to ensure effectiveness and efficiency in its application in terms of destination management.

In detail, they have shown that the application of these tools can become useful to destination management practices both in the relationship with external stakeholders, and in the key of innovative communication and relationships with internal stakeholders, as they strengthen those aspects of destination identity building and promotion which are at the base of the whole enhancement processes.

The adoption of storytelling in the overall destination management plan will on the one hand support the marketing information system, making it possible to obtain useful information on the development of a distinctive destination identity in real time, as well as identify and satisfy the needs of current and potential tourists by providing memorable experiences. On the other hand, it will help to consolidate collaborative practices among the stakeholders of the DMO, as it is a tool for integrating the various experiences of the actors in the destination, which works thanks to the sharing of interpretative schemes that are able to positively influence commitment, climate and motivation and, consequently, the level of service offered.

This paper represents a fresh attempt at expanding the framework on destination marketing and management. Conventional research usually focuses on developing tools and techniques to understand and approach consumer markets, then places the emphasis on the external environments for tourism destinations. However, in the tourism context, the destination products are produced in such a way that different elements are assembled at the time of consumption in order to provide the total customer experience, then require a value-creation network based on simultaneous coordination and cooperation among various (both operand and operant) stakeholders, who have to work together harmoniously in order to achieve a common goal. As such, successful DT practices entail a profound understanding of the critical aspects in the collaboration process, which is a possible future research perspective in order to improve the model developed here.

Moreover, limitations lie mainly in the risk of restricting the observation to certain experiences of storytelling which, while partly justified by the exploratory nature of the research, reduce its generalisation. It is therefore expected that the results of the interviews and, more importantly, the frameworks proposed, will broaden their informational basis, through a study of the structural data pertaining to the network of interactions that stories generate, which would also make reference to consumer perceptions, the results of individual projects and the consequences of storytelling practices for destination performance.

#### References

- Alkier, R., Milojica, V., & Roblek, V. (2015). A holistic framework for the development of a sustainable touristic model. *International Journal of Markets and Business Systems*, 1(4), 366-387. https://doi.org/10.1504/IJMABS.2015.074213
- Aquilani, B., & Abbate, T. (2015). Open innovation through customers: open innovation intermediary services supporting firms. An exploratory study. *International Journal of Markets and Business Systems*, 1(3), 244-259. https://doi.org/10.1504/IJMABS.2015.073533
- Bailey, D., & Koney, K. M. (2000). Strategic Alliances Among Health and Human Services Organizations.

London: Sage Publications. https://doi.org/10.4135/9781483328546

- Barone, M., & Fontana, A. (2005). Prospettive per la comunicazione interna e il benessere organizzativo. Appartenere, integrarsi e comunicare nell'organizzazione che cambia, Milano: Franco Angeli.
- Barthes, R. (1964). Rhetoric of the Image. Communications, 37-51.
- Booms, B. H., & Bitner, M. J. (1981). Marketing strategies and organization structures for service firms. *Marketing of Services*, 25(3), 47-52.
- Bramwell, B., & Lane, B. (Eds.) (2000). *Tourism collaboration and partnerships: Politics, practice and sustainability* (Vol. 2), Clevedon: Channel View Publications.
- Bruner, J. (1991). The narrative construction of reality. Critical Inquiry, 1-21. https://doi.org/10.1086/448619
- Cabiddu, F., Lui, T. W., & Piccoli, G. (2013), Managing value co-creation in the tourism industry. *Annals of Tourism Research*, 42, 86-107. https://doi.org/10.1016/j.annals.2013.01.001
- Campos, A. C., Júlio Mendes, J., Oom do Valle, P., & Scott, N. (2015): Co-creation of tourist experiences: a literature review. *Current Issues in Tourism*, 1-32. https://doi.org/10.1080/13683500.2015.1081158
- Carrubbo, L., Moretta, T. A., Di Nauta, P., & Bilotta, A. (2012). A service science view of a sustainable destination management. *China-USA Business Review*, 11(11), 1017-1035.
- Chronis, A. (2005). Co-constructing Heritage at the Gettysburg Storyscape. Annals of Tourism Research, 32(2), 386-406. https://doi.org/10.1016/j.annals.2004.07.009
- Chronis, A. (2012). Tourists as story-builders: Narrative construction at a heritage museum. *Journal of Travel & Tourism Marketing*, 29(5), 444-459. https://doi.org/10.1080/10548408.2012.691395
- Clark, B. R. (1972). The organizational saga in higher education. *Administrative Science Quarterly*, 17(2), 178-184. https://doi.org/10.2307/2393952
- Cross, R. L., & Parker, A. (2004). *The hidden power of social networks: Understanding how work really gets done in organizations*. Cambridge: Harvard Business Press.
- Crouch, G. I., & Ritchie, B. J. R. (1999). Tourism, competitiveness, and societal prosperity. *Journal of Business Research*, 44(3), 137-152. https://doi.org/10.1016/S0148-2963(97)00196-3
- D'Autilia, V. (2013). While. La sesta W del web journalism. H-Ermes Journal of Communication, 1(1), 155-172.
- Day, M., Fawcett, S., Fawcett, A., & Magnan, G. (2013). Trust and Relational Embeddedness: Exploring a Paradox of Trust Pattern Development in Key Supplier Relationships. *Industrial Marketing Management*, 42(2), 152-165. https://doi.org/10.1016/j.indmarman.2012.12.004
- Denning, S. (2006). Effective storytelling: strategic business narrative techniques. *Strategy & Leadership*, 34(1), 42-48. https://doi.org/10.1108/10878570610637885
- Douglas, K. (2009). The power of story. Campaign, 4, December.
- Eisenhardt, K. M., & Graebner, M. E. (2007). Theory building from cases: Opportunities and Challenges. *Academy of Management Review*, 50(1), 25-32. https://doi.org/10.5465/AMJ.2007.24160888
- Ferrari, S. (2015). Marketing Strategies in the Age of Web 3.0. In T. Issa, & P. Isaias, P. (Eds.), *Artificial Intelligence Technologies and the Evolution of Web 3* (pp. 307-324). Pennsylvania: Hershey.
- Fog, K., Budtz, C., Munch, P., & Blanchette, S. (2011) *Storytelling: Branding in practice*. Frederiksberg: Springer Science & Business Media.
- Fontana, A. (2011). Lo story-factor d'impresa. L'impresa Rivista italiana di management, 52(7-8), 104-108.
- Franch, M. (2010) Marketing delle destinazioni turistiche. Milano: McGraw Hill.
- Franke, N., von Hippel, E., & Schreier, M. (2006). Finding Commercially Attractive User Innovations: A Test of Lead-User Theory. *Journal of Product Innovation Management*, 23(4), 301-315. https://doi.org/10.1111/j.1540-5885.2006.00203.x
- Fuller, J., Jawecki, G., & Muhlbacher, H. (2007). Innovation Creation by Online Basketball Communities. Journal of Business Research, 60(1), 60-71. https://doi.org/10.1016/j.jbusres.2006.09.019
- Gerlitz, C., & Helmond, A. (2013). The like economy: Social buttons and the data-intensive web. *New Media & Society*, *15*(8), 1348-1365. https://doi.org/10.1177/1461444812472322
- Glaser, B. G. (2002), Conceptualization: on theory and theorizing using grounded theory. International Journal

of Qualitative Methods, 1(2), 1-31. https://doi.org/10.1177/160940690200100203

- Greimas, A. J. (1984) Del senso II. Narratività, modalità, passioni. Bologna: Bompiani.
- Grönroos, C. (2008). Service logic revisited: who creates value? And who co-creates?. *European Business* Review, 20(4), 298-314. https://doi.org/10.1108/09555340810886585
- Grönroos, C. (2011). A Service Perspective on Business Relationships: The Value Creation, Interaction and Marketing Interface. *Industrial Marketing Management*, 40(2), 240-247. https://doi.org/10.1016/j.indmarman.2010.06.036
- Herskovitz, S., & Crystal, M. (2010). The essential brand persona: storytelling and branding. *Journal of Business Strategy*, *31*(3), 21-28. https://doi.org/10.1108/02756661011036673
- Hsu, S. Y., Dehuang, N., & Woodside, A. G. (2009). Storytelling research of consumers' self-reports of urban tourism experiences in China. *Journal of Business Research*, 62(12), 1223-1254. https://doi.org/10.1016/j.jbusres.2008.11.006
- Iazzi, A., Rosato, P., & Gravili, S. (2015). Competitive processes in tourism destinations: the role of intangible assets. *International Journal of Management Cases*, 17(4), 134-148.
- Jenkins, H. (2006). *Convergence culture: Where old and new media collide*. New York: New York University Press.
- Kent, M. L., & Taylor, M. (1998). Building dialogic relationships through the World Wide Web. Public Relations Review, 24(3), 321-334. https://doi.org/10.1016/S0363-8111(99)80143-X
- Kim, H., & Jamal, T. (2007). Touristic quest for existential authenticity. *Annals of Tourism Research*, 34(1), 181-201. https://doi.org/10.1016/j.annals.2006.07.009
- Latour, B. (2005). *Reassembling the social: An introduction to actor-network-theory*, Oxford: Oxford University Press.
- Levi-Strauss, C. (1964). Il pensiero selvaggio. Milano: Il Saggiatore.
- Lichrou, M., O'Malley, L., & Patterson, M. (2008). Place-product or place-narrative(s)? Perspectives in the Marketing of Tourism Destinations. *Journal of Strategic Marketing*, 16(1), 27-39. https://doi.org/10.1080/09652540701794429
- Lucarelli, A., & Olof Berg, P. (2011). City branding: a state-of-the-art review of the research domain. *Journal of place management and development*, 4(1), 9-27. https://doi.org/10.1108/17538331111117133
- Lugosi, P. (2014). Mobilising identity and culture in experience co-creation and venue operation". *Tourism Management*, 40(February), 165-179. https://doi.org/10.1016/j.tourman.2013.06.005
- Lugosi, P., & Erd Ayi, P. (2009). From marketing to market practices: assembling the ruin bars of Budapest. In A. Fyall, M. Kozak, L. Andreu, J. Gnoth, & S.S. Lebe (Eds.), *Marketing innovations for sustainable destinations: Operations, interactions, experiences* (pp. 299-310). Home Close, Oxford: Goodfellows Publishers.
- Lundby, K. (2008). Digital storytelling, mediatized stories: Self-representations in new media. Bern: Peter Lang Publishing.
- Lusch, R. F., & Vargo, S. L. (Eds.) (2006). The Service-Dominant Logic of marketing. Armonk, NY: M.E. Sharpe.
- Martin, D., & Woodside, A. G. (2011). Storytelling research on international visitors: Interpreting own experiences in Tokyo. *Qualitative Market Research: An International Journal*, 14(1), 27-54. https://doi.org/10.1108/13522751111099319
- McCabe, S., & Foster, C. (2006). The role and function of narrative in tourist interaction. *Journal of Tourism and Cultural Change*, 4(3), 194-215. https://doi.org/10.2167/jtcc071.0
- McGregor, I., & Holmes, J. G. (1999). How storytelling shapes memory and impressions of relationship events over time. *Journal of Personality and Social Psychology*, 76(3), 403-419. https://doi.org/10.1037/0022-3514.76.3.403
- Mitroff, I. I., & Kilmann, R. H. (1976). On organization stories: An approach to the design and analysis of organizations through myths and stories. In R.H. Kilmann, L.R. Poundy, & D.P. Slevin (Eds.). The management of organization design (Vol. 1, pp. 189-207). New York: North Holland.

- Moffit, S., &, Dover, M. (2012). Wiki brands. Reinventa il business nell'era della partecipazione. Milano: Franco Angeli.
- Mossberg, L. (2008). Extraordinary Experiences through Storytelling, *Scandinavian Journal of Hospitality and Tourism*, 8(3), 195-210. https://doi.org/10.1080/15022250802532443
- Mossberg, L., Therkelsen, A., Huijbens, E. H., Björk, P., & Olssen, A. K. (2010) *Storytelling and destination development*. Oslo: Norden Nordic Innovation Centre.
- National Storytelling Network. (2011). What is Storytelling? Retrieved from http://www.storynet.org/resources/whatisstorytelling.html
- Novelli, M., Schmitz, B., & Spencer, T. (2006). Networks, clusters and innovation in tourism: AUK experience". *Tourism Management*, 27(6), 1141-1152. https://doi.org/10.1016/j.tourman.2005.11.011
- Papadatos, C. (2006). The art of storytelling: how loyalty marketers can build emotional connections to their brands. *Journal of Consumer Marketing*, 23(7), 382-384. https://doi.org/10.1108/07363760610712902
- Payne, A. F., Storbacka, K., & Frow, P. (2008), Managing the co-creation of value. Journal of the Academic Marketing Science, 36, 83-96. https://doi.org/10.1007/s11747-007-0070-0
- Pera, R. (2014). Empowering the new traveller: Storytelling as a co-creative behaviour in tourism. *Current Issues in Tourism*, 1-8.
- Pine, J., & Gilmore, J. H. (1998). Welcome to the experience economy. Harvard Business Review, 76(4), 97-107.
- Polese, F., & Di Nauta, P. (2013). A viable systems approach to relationship management in SD logic and service science. *Business Administration Review*, 73(2), 113-129.
- Prahalad, C. K., & Ramas wamy, V. (2004). Co-creation experiences: The next practice in value creation. *Journal* of interactive marketing, 18(3), 5-14. https://doi.org/10.1002/dir.20015
- Prebensen, N. K., Chen, J. S., & Uysal, M. (2014). *Creating experience value in tourism*, Boston: Cabi. https://doi.org/10.1079/9781780643489.0000
- Prebensen, N. K., Kim, H., & Uysal, M. (2016). Cocreation as Moderator between the Experience Value and Satisfaction Relationship. *Journal of travel research*, 55(7), 934-945. https://doi.org/10.1177/0047287515583359
- Rasmussen, L. B. (2005). The narrative aspect of scenario building. How story telling may give people a memory of the future, New York, NY: Springer-Verlag.
- Roberts, K. (2005). Lovemarks. Il futuro oltre i brands. Milano: Mondadori.
- Roseira, C., & Brito, C. (2014). Managing Value Co-Creation through Interfaces with Suppliers. *International Business Research*, 7(4), 11-30. https://doi.org/10.5539/ibr.v7n4p11
- Russo, S. E., Colurcio, M., & Melia, M. (2013). Storytelling and web communication. *Mercati e competitivit à*, *1*, 97-117.
- Ryan, C. (2002). Equity, management, power sharing and sustainability: Issues of the 'new tourism'. *Tourism Management*, 23(1), 17-26. https://doi.org/10.1016/S0261-5177(01)00064-4
- Saxena, G. (2005). Relationships, networks, and the learning regions: case evidence from the Peak District National Park. *Tourism Management*, 26(2), 277-289. https://doi.org/10.1016/j.tourman.2003.11.013
- Shaw, G., Bailey, A., & Williams, A. (2011). Aspects of service-dominant logic and its implications for tourism management: Examples from the hotel industry. *Tourism Management*, 32(2), 207-214. https://doi.org/10.1016/j.tourman.2010.05.020
- Snowden, D. J. (2001). Simple but not Simplistic: the Art and Science of Story. *Strategic Communication Management*, *4*, 1-7.
- Suvantola, J. (2002) Tourist's Experience of Place. Farnham: Ashgate Publishing.
- Tan, S. K., Kung, S. F., & Luh, D. B. (2013). A model of 'creative experience' in creative tourism. Annals of Tourism Research, 41, April, 153-174. https://doi.org/10.1016/j.annals.2012.12.002
- Therkelsen, A., Halkier, H., & Jensen, O. B. (2010). Branding Aalborg: Building Community or Selling Plance?. In G. Ashworth, & M. Kavaratzis (Eds.), *Towards Effective Plance Brand Management*. Cheltenham, UK: Edward Elgar Publishing. https://doi.org/10.4337/9781849806398.00014

- Tung, V. W. S., & Ritchie, J. R. B. (2011). Exploring the essence of memorable tourism experiences. Annals of Tourism Research, 38(4), 1367-1386. https://doi.org/10.1016/j.annals.2011.03.009
- Tussyadiah, I. P., Park, S., & Fesenmaier, R. (2011). Assessing the Effectiveness of Consumer Narratives for Destination Marketing. *Journal of Hospitality & Tourism Research*, 35(1), 64-78. https://doi.org/10.1177/1096348010384594
- Vargo, S. L., & Lusch, R. F. (2004). Evolving to a new dominant logic for marketing. *Journal of Marketing*, 68, 1-17. https://doi.org/10.1509/jmkg.68.1.1.24036
- Vargo, S. L., & Lusch, R. F. (eds) (2014). The Service-dominant logic of marketing. Dialog, debate and directions, London: Routledge.
- Von Hippel, E. (1986). Lead Users: A source of Novel Product Concepts. Management Science, 32(7), 791-805. https://doi.org/10.1287/mnsc.32.7.791
- Wang, N. (1999). Rethinking authenticity in tourism experience. Annals of Tourism Research, 26(2), 349-370. https://doi.org/10.1016/S0160-7383(98)00103-0
- Wang, Y. (2011). Collaborative Destination Marketing: Principles and Applications. In Y. Wang, & A. Pizam (Eds). Destination Marketing and Management – Theories and Applications (pp. 259-283). London: CAB International. https://doi.org/10.1079/9781845937621.0259
- Wang, Y., & Fesenmaier, D. R. (2007). Collaborative destination marketing: A case study of Elkhart county, Indiana. *Tourism Management*, 28(3), 863-875. https://doi.org/10.1016/j.tourman.2006.02.007
- Woodside, A. G., Sood, S., & Miller, K. E. (2008). When consumers and brands talk: Storytelling theory and research in psychology and marketing. *Psychology & Marketing*, 25(2), 97-145. https://doi.org/10.1002/mar.20203
- Woodside, A. G., & Megehee, C. M. (2010). Advancing consumer behaviour theory in tourism via visual narrative art. *International Journal of Tourism Research*, 12(5), 418-431.
- Yin, R. K. (2013). Case study research: Design and methods, Sage Publications, London.

# Notes

Note 1. The roles of the characters and the system of relations between them are generally defined by applying the classic model by Greimas (1984), which can be analysed as the result of the tension between a Subject - typically the Tourist, an Object of value – his/her needs, expectations, experiences, an Opponent – often consisting of obstacles of an economic nature or a time limit, and the Helper – a role generally played by the DMO, which in this way enables the fulfilment of a dream.

# Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (http://creativecommons.org/licenses/by/4.0/).