

Original citation:

Carlisle, Sheena, Johansen, Aleksander and Kunc, Martin. (2016) Strategic foresight for (coastal) urban tourism market complexity: the case of Bournemouth. Tourism Management, 54. pp. 81-95.

Permanent WRAP url:

http://wrap.warwick.ac.uk/74304

Copyright and reuse:

The Warwick Research Archive Portal (WRAP) makes this work by researchers of the University of Warwick available open access under the following conditions. Copyright © and all moral rights to the version of the paper presented here belong to the individual author(s) and/or other copyright owners. To the extent reasonable and practicable the material made available in WRAP has been checked for eligibility before being made available.

Copies of full items can be used for personal research or study, educational, or not-forprofit purposes without prior permission or charge. Provided that the authors, title and full bibliographic details are credited, a hyperlink and/or URL is given for the original metadata page and the content is not changed in any way.

Publisher's statement:

© 2015, Elsevier. Licensed under the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International http://creativecommons.org/licenses/by-nc-nd/4.0/

A note on versions:

The version presented here may differ from the published version or, version of record, if you wish to cite this item you are advised to consult the publisher's version. Please see the 'permanent WRAP url' above for details on accessing the published version and note that access may require a subscription.

For more information, please contact the WRAP Team at: publications@warwick.ac.uk



http://wrap.warwick.ac.uk

Strategic Foresight for Urban Tourism: The case of

Bournemouth

Published Tourism Management - Volume 54, June 2016, Pages 81–95

Sheena Carlisle, Aleksander Johansen and Martin Kunc*¹

Dr. Sheena Carlisle, Email: scarlisle@cardiffmet.ac.uk, Welsh Centre for Tourism Research, Cardiff School of Management, Cardiff Metropolitan University, Western Avenue, Llandaff, Cardiff, South Glamorgan, Wales, CF5 2YB. Tel: 0044 (0) 2920416475, Fax: 0044 (0) 2920 416930

Aleksander Johansen, msb11aj@wbs.ac.uk, 52 Barons Court Rd, London, W14 9DU, Tel: 0044 (0) 7557 343499

Dr. Martin Kunc, Email: martin.kunc@wbs.ac.uk, Warwick Business School, University of Warwick, Coventry, CV4 7AL. Tel: 0044 (0) 2476528203

* Authors listed in alphabetical order.

1 Corresponding author

Acknowledgements: We are very grateful with the time and effort taken by the editor and reviewers who provided constructive and insightful suggestions to improve our paper in a substantial way.

Abstract:

This paper discusses an approach to evaluate and analyse strategic planning in multi-

functional complexities of coastal urban areas with conflicts regarding leisure space which

restricts the diversity of tourism segments using an urban locale. The paper proposes a

holistic and multi-faceted systems approach to analysing such multi-purpose use of urban

spaces with a case study of Bournemouth where the needs of overseas language students and

high spending tourists can present an interesting challenge to urban planners. The systems

approach advocates integration and alliances in investment incentives to help identify

alternative urban use strategies in tourism and leisure contexts which allows for re-branding

of an urban area whilst extending the product offer.

Keywords: Urban tourism planning, Scenario Planning, System modelling; Educational

visitors

2

1. Introduction

Urban tourism is recognised as an important form of tourism to support local economic and cultural development of an urban landscape (Smith, Macleod, & Robertson, 2010; Ashworth & Page, 2011). Despite its significance, urban tourism remains imprecisely defined and vaguely demarcated with little development of a systematic structure of understanding (Ashworth & Page, 2011). This is partly due to its broad variety of tourism related activity within an urban environment (Edwards, Griffin, & Hayllar, 2008) which ranges from Visiting Friends and Relatives (VFR), attending cultural events and visitor attractions, going to the beach, shopping, experiencing nightlife and studying within a city environment and associated leisure activity. Subsequently there is a lack of recognition of possible relationships and interactions between tourism and the multi-faceted entity of the city. Cities and large towns, as the primary focus of urban tourism, are large multi-functional entities that can absorb many different types of tourists and as a result undergo many changes to respond to the associated demands of the market (Law, 1994; 1996; Page & Hall, 2003; Ashworth & Page, 2011). For example, urban tourism planners need to consider a variety of products and experiences for people with a wide range of motivations, preferences and cultural perspectives (Ashworth & Page, 2011) which in turn affects the management of complex relationships and interactions between varied expectations of types of tourists and residents. The aim of this research is to apply a multi-methodology approach to analyse the robustness of Bournemouth Borough Council's long-term market-based strategies for tourism development.

Managing urban tourism through strategic planning can contribute positively to the social and economic life of a destination by mitigating negative externalities, providing a coordinating

mechanism to focus investments involving multiple actors over many years, and informing shared visions of futures (Chettiparamb & Thomas, 2012; Van der Berg & Russo, 2004). Coastal urban environments, such as the large resort town of Bournemouth, that own a maritime heritage, can also provide a cultural and historical interest for tourists if they no longer practice extensive maritime-based industries such as ship-building or fishing. This leads to tourist preferences for marinas and leisure facilities and other unique and authentic products such as heritage and cultural tourism compared to traditional sun, sand and sea (3Ss) tourist experiences (Agarwal, 2002; Gale, 2005; Sedmak & Mihalic, 2008). However, there is limited research that investigates tools and approaches to manage (coastal) urban tourism planning with a long-term perspective (for an exception see Maitland, 2006 and Formica & Kothari, 2008) or more specifically for coastal urban destinations. This paper presents a multi-methodological approach applying system dynamics (Sterman, 2000), scenario modelling (Walsh, 2005) to qualitative and quantitative data collection that supports strategic planning in an (coastal) urban tourism context. This unique approach helps to sustain the creative development of experiences and products whilst evaluating their impact on the destination and supporting and evaluating the vision defined by a tourism strategic planning board or Destination Management Organisation (DMO) of a (coastal) urban setting. Although this paper is set in a coastal urban context, its applicability transcends to many different tourism environments and contexts where complex impacts of tourism, that have inter-related characteristics and factors, need to be evaluated to provide a more sustainable and viable form of tourism.

1.1 Rationale for Study

Bournemouth was chosen as an urban setting with a population of 188,730 and as one of the 20 most visited towns in the UK (ONS, 2010; 2013) with 6.88 million tourists visiting Bournemouth from a total of 30 million visits to Dorset (National Coastal Tourism Academy

NCTA, 2013). This represents a significant impact on local economic development where employment in tourism is approximately 14 per cent of the workforce (Dorset For You, 2014) compared to the United Kingdom (UK) national average of employment in tourism as 6.5% and direct revenues from tourism in Bournemouth accounts for approximately 11% of the tourism expenditure for the Southern Region (South West Tourism Alliance, 2009). The importance of robust tourism strategies for the future development of Bournemouth is evident when local tourism authorities are taking increased attention to: the geographical features, with 8 Blue Flag beaches in the Bournemouth and Poole area; over 200 restaurants and bars; maritime heritage; cultural and retail offerings to students, tourists and residents alike; and the establishment of an innovative tourism multi-stakeholder partnership called Bournemouth Tourism Management Board (BTMB).

Bournemouth forms part of a selected group of coastal towns and cities in the UK, such as Brighton, Weymouth, Aberystwyth, St Andrews, Falmouth and Swansea, which have recognized the need to expand their cultural offering and promote art, music, museums, galleries and heritage sites as well as a attracting a stable student population to compensate for the seasonality and unreliability of only 3S (sun, sand and sea) tourism strategies (Law, 1996; Mullins, 1994). The geographical location of such cities, where they are relatively remote from other major urban centres, provides an interesting dynamic for tourism development in addition to traditional sand, sea and sun tourist experiences. Education-based tourists, (Ritchie, 2003), who travel to a destination to participate in formal learning experiences, expand these traditional coastal elements. This includes the development of activity places, leisure settings and support services (Page, 1995) and the potential to provide educational facilities as part of the elements determining the dynamics of urban coastal tourism. This situation adds complexity to the management of interactions between diverse

tourists segments and residents that has received limited academic analysis in urban tourism planning literature.

This paper assesses diverse scenarios within the context of two main strategic issues. Firstly, there are diverse tourist segments and expectations, including: students; day visitors and residents. Each segment has potentially conflicting interests in the use of the city where overcrowding and the well-known busy nightlife attracts one type of visitor but alienates other segments who search for more culturally-based experiences in visitor attractions, restaurants, cafes, art galleries and events. With a student population of approximately 18,000 at Bournemouth University (Dorset For You, 2014) and thirty English-language teaching colleges, (Language Course Directory, 2015) the cost and availability of appropriate accommodation provision for tourists and students alike are key issues which are considered in this study. Secondly, BTMB is taking diverse actions to achieve the "Bournemouth 2026" vision.

2. The complexities of Coastal Urban Tourism

The coastal tourist city is not necessarily a distinct spatial entity that the visitor can easily recognise, but a collection of consumption experiences, dispersed in the city and coast and grouped into districts and zones (Judd & Fainstein, 1999; Jennings, 2004). Each geographical area, urban entertainment district (Hannigan, 1998) or cultural or creative quarters have their own icons and attractions that differentiate the place of consumption contributing to the patchwork of consumption experiences (Ashworth & Page, 2011; Ashworth, 2012). Thus, a (coastal) city is a series of interconnected sub-systems that co-exist

and offer diverse social and cultural forms to a range of different market segments. The coastal urban city is often seen as a gateway or hub for other regional tourism activities, drawing day trip visitors away from the city. Such diversification within tourism has led to a decline of the traditional seaside resort (Hall, 2001; Gale, 2005) and traditional coastal industries (Lacher et al., 2013) providing new opportunities for urban development (Hall, 2001; Cooper & Hall 2008).

Ashworth and Page (2011) suggest that it is difficult to distinguish between tourists, nontourists and resident uses of the city, particularly according to the time spent within the urban environment and the type of activity and purpose that one is engaged in. Notably Paskaleva-Shapira (2007) underlines how urban tourism should aim to be attractive to all types of visitors responding to the multi-functional approach to urban tourism which in turn can support competitiveness and a distinct city brand which promotes quality of life for tourists and residents. This reiterates the basic principles of developing a sustainable competitive destination which is of equal interest to residents and tourists alike (Ritchie & Crouch, 2003). Coastal urban tourists are difficult to differentiate as there are visitors going to the city purely for shopping or night-life, whilst other tourists may visit for beach related leisure pursuits or business purposes (Ashworth & Page, 2011). It is therefore useful to take an industry-based segmentation approach in addition to tourist segmentation which can detect areas of conflict or strategic challenge. That is, the tourist and the local resident cannot usefully be distinguished purely in terms of motivation or behaviour (Law 1996; Mullins 1994; Ashworth & Page 2011). Instead the joint utilization of service provision of similar urban facilities, illustrated in Ashworth and Page's model in Figure 1, such as shops, catering establishments, entertainment and cultural events leads to the need for better strategic spatial planning and

innovative segmentation approaches. Figure 1 illustrates the linkages between such services, diverse market segments and varying spatial definitions of urban spaces for tourism use.

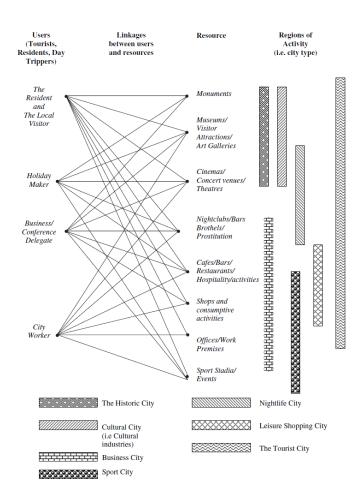


Figure 1: Areas in the Tourist City

Source: Ashworth and Page (2011: 10)

However, Ashworth and Page (2011: 10) do not include students or educational visitors as a key market segment in their model despite thousands of students coming to learn a language or study for degrees in touristic cities providing a significant source of economic and cultural impact within a tourist destination (Van den Berg & Russo 2004). According to the UK Council for International Student Affairs, in the year 2013-2014, 388,250 international students came to the UK to study in higher education (UKCISA, 2015). In addition the UK attracted 50% of the global market for English Language Teaching (ELT) which contributed

£2.5 billion to the economy in tuition fees and living costs (HM Government, 2013; Study Travel Magazine, 2012). Many of those learn English during the peak summer tourist season before they start their University degrees in autumn (Shen, 2005).

In urban coastal contexts the tourist experience is similar to general urban tourism products consumed relatively rapidly since the length of stay in urban tourism destinations are shorter, e.g. city breaks, compared with beach resorts (Richards & Wilson, 2006). Urban tourists spend more per head than longer staying visitors, e.g. students, mainly in the intensive use of entertainment facilities, e.g. restaurants, museum, which supports the multiplier effect of tourism (Ashworth & Page, 2011) but students spend more when rents and college fees are considered. NCTA (2013) reported a lack of self-catering accommodation within Bournemouth and a predominance of hotels, bed and breakfast accommodation. This links to various behavioural factors of urban tourists including predominance of short stays and lack of repeat visits, presenting challenges for tourism authorities and local businesses to attract and encourage tourists to return (Law 1996; Mullins 1994; Ashworth & Page, 2011). Additionally, it cannot be assumed that tourist use of an urban space by one segment does not impact other tourist segments over the long term. For example, educational tourists also use attractions, events and transportation services (Ritchie, 2003) which may cater for day visitors or beach staying visitors. Thus, there is an important overlap between the types of visitors and tourists and how they impact the benefits and costs that can be spatially attributed and evaluated (Ashworth & Page, 2011).

Lacher et al. (2013) highlight the lack of understanding for consumer preference for coastal destination attributes and the need for on-going evaluation of current products and complimentary facilities and development of new products that service the varying needs of tourists. This underpins the importance of effective strategic planning and management of urban spaces. This can be achieved by the integration of urban tourism stakeholders through

alliances and public-private sector partnerships to ensure urban developments and tourist activity supports a united tourism destination strategy and image that supports local economic development (Hall, 2008).

3. The Role and Importance of Urban Tourism Strategic Planning

Strategic tourism planning is largely carried out by government departments to establish coordination and integration of tourism infrastructure and investments to match tourism policy
with the complexity of a city determined by different geographical locations with multiple
uses and different needs and opportunities (Rydin, 2011). Key factors should be assessed and
evaluated during the strategic planning process, including: asset and infrastructure evaluation,
investment incentives, market analysis, formulation of a marketing strategy, training and
impact analysis to inform the planning process and policy consideration (Hall, 2008; Fyall &
Garrod, 2005).

In terms of demand for urban tourism, the more traditional focus is only the description of who visits destinations, reasons for the visit and patterns of behaviour of tourist activities (Page, 1995). A more contemporary analysis also assesses the increased embeddedness of tourism offers within the normal life of a city necessitates the creation of new relationships between people dwelling in cities and people visiting them (Pappalepore, Maitland, & Smith, 2010). As cities become more attractive as tourism destinations, tourists become more experienced and sophisticated in consuming the experience of urbanity. The situation creates problems for city planners in an increasingly crowded tourism marketplace particularly where there is a conflict of interest in the spatial use of a city area.

Chettiparamb and Thomas (2012) highlight the crucial role and importance of spatial and destination planning to ensure the socio-economic quality of life within the city is adequately managed to bring the optimal benefits to residents and tourists alike. In recent years, the idea that spatial planning has a distinctive remit to 'shape place' (Healey, 2006) has gained strength. For example where there are challenges within cities that reflect market failure of certain economic sectors, spatial planning can help to mitigate externalities, bringing together a variety of agencies, businesses, government departments and customers which alter traditional use of the urban space (Klosterman, 1985). Spatial planning can help to formulate the mechanism required to look for relationships between different variables and issues, such as consumer choice and demand, social impacts, economic structures and current land use (Cooper & Hall, 2008). Thus, spatial planning offers extensive opportunities for managing a destination from a multi-stakeholder perspective, an opportunity that is often missed in urban tourism planning (Sheehan & Ritchie 2005).

Thus, urban tourism strategic planning consists of two key processes: spatial planning and demand planning. Spatial planning involves the physical development of towns managed by engineers and architects and related to the promotion of health, economy and beauty of urban settings, and public administration and policy analysis, which focus on achievement of explicit policy goals defined by public agencies in an effective and efficient manner (Healy, 2006). Demand modelling practice in urban tourism ranges from simple to state-of-the-art statistical and econometric techniques (Dwyer & Forsyth, 2006). Song and Li (2008) reviewing studies on tourism demand modelling and forecasting published between 2000 and 2008, found a dominance of quantitative techniques, with only a few papers based on qualitative methods. Fernández-Güell and Collado (2014) also suggest tourism researchers have rarely combined quantitative and qualitative tools in an integrated framework.

Qualitative tools, such as foresight, is commonly used in strategic planning, both for establishing a common vision and to aid various policy-making bodies (Jemala, 2010), and helping spatial planning to be more holistic (Fernández-Güell & Collado, 2014). A particularly useful adjunct to tourism strategic planning is scenario-based planning, which is one of the most popular foresight tools (Gössling & Scott, 2012; Fernández-Güell & Collado, 2014). In addition systems approaches (Page, 1995; Ritchie, 2003) need to be considered when analysing the future of the city by combining it with scenarios to ensure a more holistic strategic planning process.

3.1 Scenario Approach to Tourism Planning

Scenario planning in tourism has evolved from forecast-focused models in the 1980s to complex, integrative and dynamic models in recent years, which combine qualitative and quantitative aspects of tourism development (Gössling and Scott, 2012). Some of these innovative models have evolved into strategic online-based tools for planning (Gössling & Scott, 2012). Applications in tourism cover a range of subjects such as climate change scenarios (for ski and coastal tourism), destination environmental footprint and transition management (Gössling & Scott, 2012; Formica & Kothari, 2008). The evidence of scenarios in tourism has one common trait, they all incorporated stakeholders in the development, which Yeoman and McMahon-Beattie (2004) argued to be crucial in improving the quality of the scenarios. However, Gössling and Scott's (2012) observation that scenarios are less applied in tourism than other industries have been confirmed in the literature review.

The main difference between scenarios and economic forecasting is whilst forecasting assumes that futures can be predicted, scenarios are used to understand how environmental changes affects, rather than predicts, future outcomes (Walsh, 2005). Dyson and O'Brien (2007) classified the approaches to scenarios in three different schools. The first, intuitive

logics, is one of the most used approaches due to its qualitative nature which contains a number of discrete steps, varying from five to 15. The second approach is based on probabilistic modified trends. Time series analysis are used and adjusted to account for various future scenarios, but not widely used due to the technical skills involved. The last approach, 'la prospective', also known as the French school, places emphasis on alternative thinking in long-range decision-making.

3.2 Systems approach to urban tourism planning

Page (1995:17) suggests using a systems approach to analyse urban tourism since a key task is to "reduce the complexity of urban tourism into a number of constructs and components which highlight the interrelated nature of different factors affecting the system". Haugland et al. (2011) suggest that destination development should also consider an integrated multi-level perspective which includes the interdependencies between destination capabilities and coordination at the destination level. Under a systems approach, stakeholders and policy makers learn about the interdependencies and complexities existing in an urban tourist destination formed by multiple players (Sautter & Leisen, 1999). Among the different tools under a systems approach (Mingers & White, 2011), system dynamics (Sterman, 2000) has been widely employed in tourism. Table 1 demonstrates the varied types of analysis in tourism planning and their different modes of use including: forecasting tourism flows; supporting scenario modelling; consensus-making amongst stakeholders; building on learning processes to foster policy making for the future; and development decision support systems addressing sustainable tourism issues. System dynamics can be employed alone or in conjunction with other methodologies, especially with scenarios and operate as a tool employed by experts or a facilitation tool to support stakeholder engagement.

Compared to traditional scenario analysis approaches, system dynamics modelling offers the ability to visualise possible future developments using diagramming techniques in a qualitative manner, e.g. causal loop diagrams (Sterman, 2000), which can be developed with relevant stakeholders (Rouwette, Vennix, & Van Mullekom, 2002; Van den Belt, 2004). Furthermore, system dynamics modelling can be employed as a quantitative modelling technique, e.g. Xing and Dangerfield (2010), using multiple types of data. Stakeholder involvement is an intrinsic feature in system dynamics modelling in two areas: model building in order to create model ownership and ensure implementation (Rouwette et al. 2002) and model use to facilitate learning about complexity and interdependencies in systems (Kunc a& Morecroft, 2007; Kunc, 2012). Group model building processes to develop system dynamics models has been employed in diverse areas, including critical infrastructure crisis management (Hernantes et al., 2013) and with stakeholders in climate change solutions (Tollefson, 2009), but not in urban strategic planning. s

Table 1: Application of Systems Dynamics Approaches to Tourism Planning

Paper	Tourism Area	Destination	Additional Method	Key Lessons
Bosch & Kambiz (2011)	Sustainable Tourism Development	Cat Ba, Vietnam	No	Differing mental models held by the different stakeholders were modelled and root cause to main problem identified. Model showed how different factors cause growth or decline in different parts of the system
Chen (2004)	Visitor dynamics in response to different environmental changes and investment policies	Hypothetical Natural Based Tourism region	No	Develop a natural resource-based tourism decision support system (DSS) to simulate the effect of environmental changes and policies. Five specific suggestions.
Georgantzas (2003)	Model Cyprus' hotel value chain to forecast tourist arrivals, bed capacity and profitability to see the effect of Government strategies	Cyprus	Value Chain Management ; Statistics	Four scenarios were produced, and among the results were specific outcomes in terms of the value chain, tourism growth and hotel room price seasonality. Inconsistencies and recommendation in regards to the current strategies were identified
Jiang & Xu (2010)	Transportation Infrastructure Investment and Cultural Heritage Tourism Development	Xidi, China	Scenarios	To investigate impacts of transportation infrastructure investment on the tourism development of Xidi and Hongcun World Heritage Villages
Koltchanov & Casanova (2004)	Foreign Tourist Flow to France	France	Scenarios	A simulation model to elaborate on the demand of the French ministry of Tourism to test various scenarios. Model presents outputs regarding attractiveness of France and competing countries and market trends of tourists.
Lei et al (2010)	Simulation of Ecological Footprint	Macao, China	No	Build a model consisting of three modules—ecological footprint (EF), city and tourism modules, to study ecological footprint
Schianetz Kavanagh, & Lockington (2007)	Sustainable Tourism	6 case studies	Organisation al Learning	The potential to foster learning in a tourism destination in order to improve sustainability and increased stakeholder participation mainly from tourism organisations and certain scientists (economists and ecologists).

Xing &	Sustainability of mass	Bali,	Visioning,	Demonstrate the contribution for policy analysis. For decision makers	
Dangerfield	tourism in island tourist	Indonesia	Scenarios	to rely on models, focus should be placed on ensuring users confidence	
(2010)	economies			in the models	
Law et al	Green economy planning in	Sharm El	Scenario	A multidisciplinary approach drawing on the fields of sustainable	
(2012)	tourism	Sheikh		tourism, destination management and system dynamics was applied to	
		(Egypt)		identify the requirements for green economy planning in tourism. A	
				Decision Support System assisted destination policymakers, planners	
				and managers with dynamic scenario modelling and planning to help	
				understand and manage the drivers of change.	
Kunc (2009)	Tourism flows in wine	Chile	Survey	A model has been developed to evaluate the historical flows of wine	
	tourism			tourists in Chile and discover issues that affected wine tourism. The	
				author proposes a set of interventions to improve word-of-mouth from	
				wine tourists to expand wine tourism.	

3.3 Strategic Planning in Tourism: Processes and Stakeholders

Strategic planning in tourism is primarily performed by the public sector given its ability to: facilitate the development of infrastructure; regulate activities; manage land planning; define guidelines; preserve historical heritage and perform marketing of the destination (Simão & Partidário, 2010). It involves a set of operations and actions to organise and control the development of the destination based on established objectives (Page, 2007) which may take two positions: proactive or reactive. A proactive position implies anticipation and looking to the future of the destination and bringing change through negotiation and compromise (Hall, 2008). Reactive planning involves ad hoc decisions and disorderly activity (Simão & Partidário, 2010). To assist implementation of strategic planning the process involves four steps: analysis, formulation, implementation and performance evaluation (Hall, 2008; Simão & Partidário, 2010) which are determined as follows: Analysis is the involvement of stakeholders to identify their motivations and interests; Formulation involves the definition of the mission and the vision leading to long-term objectives and guidelines; Implementation implies the commitment of resources and activities to fulfil the plan; Performance evaluation controls the implementation of the strategic plan (Simão & Partidário, 2010). In a destination context this applies to DMOs, which provide leadership and coordination for the destination whilst managing the complexity of the tourism system (Ritchie & Crouch, 2003).

Finally, the process of strategic planning should be contextualised by representing public interest. Dredge (2010) proposes a set of perspectives influencing the involvement of diverse stakeholders in the process. For example, a rational perspective is originated from the rational scientific view of planning and involves the use of tools to provide rigour on the evaluation of tourism plans where public interest is defined by a transparent decision making process (Dredge, 2010). A neoliberal perspective reflects corporatist public policy making where

market forces and coalitions of corporate interests define tourism plans (Dredge, 2010). Participatory planning involves the diffusion of power across broader society and local councils should incorporate all views from diverse stakeholders (Dredge, 2010) and evaluate the trade-offs involving tourism plans.

4. Methodology

Since urban tourism planning processes mostly consist of linking different types of knowledge to actions in the public domain (Friedmann, 1987), system dynamics modelling fits well into the processes of urban tourism strategic planning. This research integrates scenario planning with system dynamics through an analysis of future scenarios for the Bournemouth 2026 Strategic Plan (Bournemouth Borough Council, 2012). This is achieved through simulating the scenarios in a purposely-built simulation Model using system dynamics.

The research methodology involves a case study undertaken within Bournemouth Borough Council in 2012 involving three key sources of research data including eight in-depth semi-structured interviews (detailed in Table 2); email questionnaire and secondary data analysis. This led to the identification of causal relationships between multiple sub-systems (Page, 1995) that co-exist and offer diverse activities attracting different types of urban tourists which helps define the destination image (Chi & Qu, 2008). Subsequently, causal relationships are employed in a simulation model depicting the complexities and interdependencies in the destination (Ritchie & Crouch, 2003).

4.1. The Context of the Research

At a conference in November 2006, entitled the Bournemouth Partnership, representing nearly 200 organizations in the public, business and voluntary sectors of the local community, created a long term vision for Bournemouth. The partnership was renamed "Bournemouth 2026 Trust", a registered charity in 2012, led by the public sector, communities and businesses, to improve the quality of life in Bournemouth via a strategy and a vision for the town formulated in the document "Bournemouth 2026".

In 2006, Bournemouth also established an innovative Tourism Board known as Bournemouth Tourism Management Board BTMB (see www.bournemouth.co.uk/btmb) for a comprehensive list of members which form the multi-stakeholder partnership from all sectors of the visitor economy including transportation, international student organisations, accommodation, town centre security, conferences, entertainment and arts and culture organisations. The BTMB's constitution emphasises how members are collectively responsible for the destination management of the town, similar to a DMO. A Bournemouth councillor stated that the board "enables fully integrated effort and the council working with the private sector is crucial if the resort is to deliver sustainable projects" (Smith, 2011).

BTMB is co-responsible for managing the allocated tourism budget for the council and providing an integral function in the decision making process at the council. However, the ultimate decision is made by the councillors of Bournemouth Borough Council. BTMB is different from more traditional tourism partnerships in that it is not only involved with marketing and promotion of the destination, but also has an advisory role in operational and planning aspects. The BTMB meets once a month, and a representative from each sector is required at each meeting in order to ensure the contribution from all sectors.

In 2012 Bournemouth Borough Council, with support from BTMB, published a long-term strategic document known as "Bournemouth Local Plan: Core Strategy", which formed part

of the Bournemouth Vision 2026, with key objectives of how the council would like tourism to develop by 2026 (Bournemouth Borough Council, 2012). "Bournemouth 2026" includes strategies for how tourism should develop in order to be an even more important contributor to the local economy in the years to come (Bournemouth Borough Council, 2012). The following key strategic priorities were identified in the plan: To improve the quality of parks and countryside; increase regeneration for those areas most in need and improve cultural and entertainment offers to attract families.

Whilst the council was supported by BTMB in the long term vision, the time horizon for the priorities set by BTMB are shorter (typically between 12 to 18 months) in order to govern the interest of its members who are directly involved in local and regional trade. Although BTMB is an advisory partnership, due to its influential role in the council's decision-making process, BTMB act as a spatial and tourism planning forum (Healey, 2006). In addition to BTMB, the Bournemouth Borough Council has involved other parties in the strategy process. Examples include external facilitators and organisations such as the NCTA to harness ideas by the councillors and BTMB members regarding innovation similar to the cases reviewed by Carlisle et al (2013).

Importantly the case study research took place following the stages of analysis and formulation (see section 3.3) of the Bournemouth 2026 strategy that had already been performed by the BTMB with relevant stakeholders prior to the research taking place. This case study evaluates the potential implications of the implementation of the 2026 strategies not their analysis or formulation (see Table 2).

Table 2. Strategic Planning Process for Bournemouth Tourism

Strategic Planning	Key Actions taken in Bournemouth			
Process Steps				
Analysis	Conference in November 2006 with nearly 200 organizations			

	created a long term vision for Bournemouth called "Bournemouth
	2026"
Formulation	Bournemouth established a tourism board known as the
	Bournemouth Tourism Management Board (BTMB).
	Bournemouth Borough Council, with support from the BTMB,
	published in 2012 a long-term strategic document known as
	"Bournemouth Local Plan: Core Strategy", part of the
	Bournemouth Vision 2026, with key strategic priorities.
Implementation	BTMB is co-responsible for managing the allocated tourism budget
	for the council and the tourism board has an integral function in the
	decision making process at the council.
Performance	Bournemouth Borough Council runs the Economy and Tourism
Evaluation	Overview and Scrutiny Panel, comprised of councillors,
	community representative and managers, which meets frequently to
	evaluate the performance of the destination using Quarterly
	Monitoring Reports For Economy & Tourism.

4.2 Data collection methods

A triangulated structure for the data collection (Decrop, 2004) encompassed eight in-depth semi-structured interviews with the Service Director for Tourism and Corporate Communication in Bournemouth Borough Council; the Managing Director of BTMB; Chair of the International Education Forum who sits on the BTMB; Two additional members of BTMB; the International Officer for the National Union of Students (NUS); Associate Director of TRI Hospitality Consulting; the College Administrator of Bournemouth and Poole College. Initially twelve emails were sent out to the BTMB members with a customised reply form questionnaire (see Figure 2) and five replied (42% of responses) stating that they would be willing to contribute to complete the reply form and participate in a semi-structured interview. Usually the elicitation process to identify the causal relationships (figure 2) is performed through facilitated discussions, e.g. Xiang and Formica (2007) and Rouwette et al. (2002), occurring in workshops arranged by a member of the organization. Our research departed from this approach as we did not have a particular BTMB member encouraging the rest of members to participate, which could be contributed to the lack of

knowledge regarding the new methodology, so the BTMB members who participated showed particular interest in the methodology. This provided a strong level of interest expressed in the methodology by BTMB participants (42%) which does not differ from studies evaluating the percentage of people who are interested in understanding complex systems, e.g. Sterman, (1989); Cronin, Gonzalez, and Sterman (2009) and Kunc (2012) Table 3 summarises the purpose of the semi-structured interviews and BTMB reply form data collected for the Systems Dynamics Model and the Scenario based planning process. Analysis of the reply form data demonstrated perceived relationships (second, five, six and last columns) between different sub-systems and activities related to tourism in Bournemouth as suggested in Page (1995:18). The relationships and their importance together with their uncertainty (columns three and four) subsequently were used as a base for further interviews with BTMB members and other interviewees. Further discussion regarding stakeholder engagement in this study is developed in section 6.

#	Factor (able to affect the tourism industry)	Importance to Tourism Industry A-E A=High E=Low	Level of Uncertainty (Regarding future of Factor) 1-5 1 = High 5 = Low	Relation- ship	Positive or Negative	Leads to/Effect
		Exampl	es (not of Bournen	nouth)		
1	Development of new Budget hotels	В	2	\rightarrow	+	Lower average hotel prices
2	Reduced tax on services	A	2	\rightarrow	-	Average service Price
3	Investments in Infrastructure	С	5	\rightarrow	+	Accessibility
4	Accessibility	В	4	\rightarrow	+	Attractiveness of the City
5	Increased number of tourists	A	1	\rightarrow	+	Crowdedness
6	Crowdedness	В	2	\rightarrow	-	Attractiveness of the City
		Factors fr	om BTMB' M	lember		
1	Government legislation regarding student visas	A	5		-	Confusion regarding the visa system; clients switching to competitor countries
2	Positive PR relating to international education pathways in the area	A	1	-	+	Confidence in the area as a destination providing excellence in education
3	Perception of quality service given by existence of accreditation schemes for education providers	В	2	→	+	Confidence in the area as a destination providing excellence in education

Figure 2. Sample Reply form

Finally, to validate the relationships and triangulate the data collection process to develop the simulation model, secondary data analysis of policy and strategy documents and reports from Bournemouth Borough Council, consultancy firms and relevant websites were utilised.

Table 3. Sources and Themes of Primary Data Collection

Institution	Participant	Information
Bournemouth Borough Council	Service Director for Tourism and Corporate Communications	Evaluation and Insights into the strategic planning process, strategic tools and BTMB's role in decision making processes
ВТМВ	Managing Director Chair – International Education Forum Two Undisclosed Members	Key variables representing the factors that determine the coastal urban system and their relationship for the model

Bournemouth & Pool College	College Administrator who is also member of BTMB	Colleges sizes and utilized capacities
TRI Hospitality Consulting	Associate Director	Global Leader in Hotel Development: Bournemouth Accommodation provision, hotel development, completion times and hotel closures
National Union of Students (NUS)	International Officer	Factors affecting student arrivals into the UK, demand for education in Bournemouth. Discuss BTMB views in relation to students

4.3 Applied Methodologies

4.3.1 Scenario Planning

In creating future plausible scenarios for Bournemouth, Dyson and O'Brien's (2007) intuitive logic approach was applied as a popular tool for policy planning due to its qualitative nature and ease of use (Wright & Goodwin, 2009). The method is regarded as a top-down approach, where the scenario themes are set from a set of key uncertainties shaping the future, before projecting the identified factors to be consistent with each of the scenario themes (Dyson & O'Brien, 2007). The steps performed to develop the scenarios were:

1/ Setting the scene - Defining the issues and the people participating in the exercise – Actors involved: BTMB and research team

- 2/ Generating uncertain and important factors affecting tourism in Bournemouth Actors involved: BTMB and research team
- 3/ Reducing the number of factors into two key dimensions: A causally related set of factors and defining their range of values Actors involved: research team

4/ Choosing the scenario's theme for the combination of the key dimensions – Actors involved: research team

5/ Presenting the scenarios in terms of causal relationships and future value of key constructs of the Bournemouth urban tourism system using system dynamics – Actors involved: research team

4.3.2 System Dynamics Modelling Process

The System Dynamics modelling process is based on Sterman (2000) where most of the information employed is not numerical, but qualitative utilising interviews and strategic reports. Qualitative data to develop the System Dynamics model was initially based on the reply forms obtained from BTMB and the information was triangulated with interviews to members of BTMB and other informants as well as secondary data analysis of policy and strategy documents and reports from Bournemouth Borough Council (see section 4.2). In System Dynamics modelling, the results from the interviews are translated into a set of causal relationships between variables (see Figures 2-7) leading to feedback loops (Law et al., 2012). Then, equations are formulated and quantitative data is obtained to populate the model (Xing & Dangerfield, 2010; Law et al., 2012).

5. Results and Analysis

5.1. Urban Tourism Market Complexity Model

The following figures and tables translate the findings of the case study research into implications for the implementation of the Bournemouth 2026 strategy considering Table 4

shows the main visitor segments identified in a Bournemouth Borough Council funded study (Team Consulting, 2008).

Table 4. Main Visitor Segments.

Segment	Description	% of Total
	·	Expenditure
Meeting and	Overall market not of great value, but high yield per	4-5%
conferences	night and helps de-seasonalise the market	
Non-discretionary	Low volume, high yield and contribution. Non seasonal	5%
business tourism		
Educational and	High overall contribution but differing data on impact	30%
language schools		
Domestic short breaks	Degree of seasonality, high spend, some potential of	3%
	development	
Domestic	Important segment focused on relaxation and beach	40%
holidaymakers	holiday	
Visiting friends and	Low potential growth (without population growth), also	3-6%
relatives	a leisure elements in their visits	
Day visits	Largest segment in volume, low yield. Potential of	11-15%
	growth	

Source: Team Consulting (2008)

After analysis of the above statistics in association with the findings from the Bournemouth Visitor Survey (2011) and the BTMB responses, it became apparent that Bournemouth's two main revenue generating market segments, educational and staying visitors (see Table 4), possess conflicting characteristics. According to the Bournemouth Visitor Survey (2011) the main issue affecting the higher spending "staying visitors", who are the domestic holidaymakers and domestic tourists on short breaks, are the increasing concerns regarding disturbance, anti-social behaviour and littering, which are associated with the increasing student population. Other concerns relate to expensive hotels and limited offer of leisure attractions (Bournemouth Borough Council, 2011). From the interview with the Chair of the International Education Forum of BTMB, it was clearly emphasised that the busy nightlife plays an important role in attracting students to the town, with approximately 85% of language college students under 25 years, the prospects of a good nightlife are equally

important for the students as the quality of teaching at the language schools. Subsequently, night-time crowdedness increases the attractiveness for such students, who are looking for an exciting destination to socialise. Such mixed behavioural characteristics and expectations of these two market segments creates important challenges for the destination planning scenarios. The economic value and volume of each of the tourism segments is illustrated in Table 5.

Table 5. Volume and Value of Main Visitor Segments (2007)

Segment	Number of Visitors	Visitors (%)	Average Length of Stay (days)	Total Annual Staying Days	% Total Days	Total Spend (£m)	Spend (%)	Average Spend per Day (£)
Staying Visitors	1,014,000	24.8	4	4,056,000	45.8	238	55.0	58.70
Day Visitors	3,042,000	74.3	1	3,042,000	34.4	65	15.0	21.4
Educational	36,000	0.9	49	1,752,000	19.8	130	30.0	74.2
Total	4,092,000		2.2	8,850,000		433		48.93

Source: Team Consulting (2008)

Table 5 demonstrates how the educational visitor segment, despite less numbers, accounts for approximately 20% of the total visitors' days with an average stay of 49 days contributing significantly to accommodation revenue and language school fees. This results in the student market contributing the highest spending per day (including accommodation spending and college fees), and as such, is viewed by the council to possess great potential in developing Bournemouth.

Based on the information obtained from BTMB and confirmed by the other eight interviewees, four main factors determining the overall attractiveness of studying in Bournemouth, illustrated in Figures 2-7, were identified and employed to create the Urban

Tourism Market Complexity Model. Given the extensiveness of this Model, detailed information on the equations and data sources can be obtained directly from the authors.

The availability of student accommodation and night crowdedness are two significant factors that relate to urban spatial issues whilst confidence in Bournemouth providing quality education and financial attractiveness are factors influencing educational tourism demand, see Figure 3. Figure 3 aims to reflect all relationships identified by the interviewees (see figure 2)

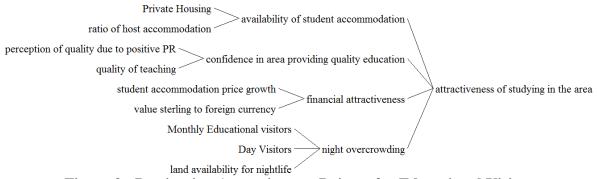


Figure 3: Destination Attractiveness Drivers for Educational Visitors.

5.1.1 The availability of student accommodation was identified as an important growth inhibitor by the BTMB and NUS. Of the 36,000 yearly educational visitors, 92% stay with host families and the remaining 8% stay in commercial accommodation (Team Consulting, 2008). The availability of accommodation for this segment is therefore greatly dependent on the availability of private housing. From the BTMB questionnaire and BTMB interview responses, the number of houses available for students depends on the total number of private accommodation units and the ratio of these willing to be a host family for students. The Bournemouth Local Plan (2012) identified that as property prices increase, smaller hotels and B&B's are converting their properties into private accommodation as it yields a better return than serviced accommodation. Figure 4 below illustrates this relationship.

conversion of hotels to private housing —— Private housing —— availability of student accommodation

Figure 4: Availability of student accommodation

Assuming that the average size of a conversion flat is 80 square meters (Philipson, 2013), the total smaller hotels and B&B's market represents approximately 1,300 potential new residential units. The initial stock of houses in Bournemouth is 69,000, based on data from Bournemouth Statistics (2008) and the Housing Statistical Release (2011). TRI Hospitality Consulting confirmed the conversion of hotels to residential units takes approximately two years, including the planning process. Furthermore, TRI Hospitality Consulting suggested hotels are less likely to convert to residential units if they are experiencing significant occupancy levels so a high growth rate of staying visitors reduces the conversion rate of hotels into residential units. Finally, the conversion rate further depends on the property price growth with the rate increasing as property prices increases (TRI Hospitality Consulting). Figure 5 below presents these variables affecting the conversion of hotels to private housing.

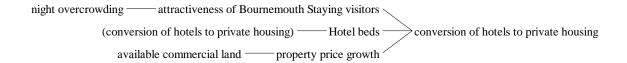


Figure 5: Conversion of hotels to private housing

5.1.2 Confidence in quality education provision. According to the BTMB questionnaire and interview responses, the confidence in Bournemouth as a provider of quality education is one of the main drivers for the attractiveness of educational visitors. The confidence depends both on the actual quality of education within the relevant education institutions and on Public Relations (PR) and its effectiveness. According to the Bournemouth & Pool College administrator, PR activities, e.g. awareness campaigns in European countries, could take one year to affect the perception of quality among potential educational visitors. The PR budget is relative in size to the amount of language schools existing in Bournemouth and their income.

BTMB Chair – International Education Forum, emphasized the factor with the most damaging effect on the quality of education is the seasonal shortage of qualified staff, especially during times when the school capacity is higher than 80%. Higher ratio staff/students reduce the quality of the education. The total student capacity is found by multiplying the number of schools with the capacity per school. In 2009, a total of 28 (16 accredited and 12 non-accredited) schools were located in Bournemouth (Language Course Directory, 2012). Each year 36,000 educational visitors arrive to Bournemouth but, due to seasonality patterns, August experiences the largest number of students: 7,125 students, corresponding to 255 students per school. The average capacity of the schools was found during the interview with the Bournemouth & Poole College administrator who suggested the monthly capacity per school is 300. The variables influencing the confidence in Bournemouth as a provider of quality education is presented in Figure 6.

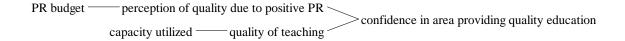


Figure 6: Confidence in area providing quality education

5.1.3 Financial Attractiveness. The financial attractiveness for students is influenced by the price for student accommodation and the exchange rate of Sterling pound with respect to foreign currency (NUS International Officer). Additionally accommodation related costs represent more than one third of students' expenditure and is the main measurement of the financial attractiveness factor. However, the cost of host family-based student accommodation has increased at a lower rate than the growth in property prices. Since the majority of students originate from continental Europe (Chair of International Education Forum), the exchange rate between Sterling pound and Euro is a key factor for the financial

attractiveness for studying in Bournemouth. The variables affecting the financial attractiveness for students are presented in Figure 7 below.

Figure 7: Financial attractiveness for students

5.1.4 Night-time Overcrowding. While overcrowding was an important factor for all of the interviewees except the NUS, they didn't have enough information to measure it, therefore academic literature helped define the issues and identify measurements. An important attraction to students is their preference for beach holidays and having fun and relaxing after their studies (Xu, Morgan, & Song, 2009). While night-time overcrowding improves the study attractiveness of the area for students and enables a landscape of symbolic geographies of student life (Chatterton 1999; 2010), it negatively impacts staying visitors and local inhabitants (Andereck et al, 2005). Townsley and Grimshaw (2013) observed important relationships between levels of crowding and aggression in entertainment precincts and suggested the design of public spaces in entertainment precincts can help to reduce aggression. The total nightlife crowd is the number of day visitors and educational segments divided by the amount of the land available for nightlife, as illustrated in Figure 8 below. This measurement is an accepted and robust method to measure crowding (Manning et al, 2010).

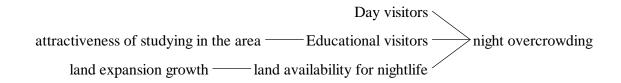


Figure 8: Factors defining night overcrowding

To explore this issue further Figure 9 illustrates the limited capacity of the current night-life scene. The orange discs are the main areas of after-dark activity whilst the white ones could be better used.



Figure 9: Areas for nightlife activity (The Future of Bournemouth's nightlife, bournemouthecho.co.uk, 25/06/2012)

The Bournemouth Visitor Survey (2011) completed by Bournemouth Borough Council in 2011 implies that 30% of day visitors (increasing annually by 1%) may visit Bournemouth's nightlife, whereas 85% of educational visitors frequently go out. Although the attractiveness of Bournemouth for staying visitors is negatively influenced by the level of overcrowding, the impact is only perceived 12 months later because staying visitors, who are usually families on holidays or city break tourists, may return to a holiday back to Bournemouth the following year (Bournemouth Visitor Survey, 2011).

5.2. Scenarios for the Bournemouth 2026 Tourism Strategy

After analysing the above influencing factors of Bournemouth's attractiveness as a destination, the factors for the scenarios were selected through a close examination of the document "Bournemouth Vision for 2026" (2006) and validated with semi-structured interviews from BTMB members.

Table 6. Factors identified from the Bournemouth Vision for 2026.

Investing in People Action Plan	Thriving Economy Action Plan
 Education and skills development gap Children and young people are safe, emotionally healthy Health, achievement and social outcomes for young people Traditionally marginalized and excluded groups feel welcome into mainstream society Local people have choice and influence over local decision making greater role in public service delivery Cultural activities and experiences are available Basic skill levels of people 	 Competitive Economy Supply of sites & premises Employee remuneration Employment land and premises Retail Outlets Destination attractiveness ¹ Employee knowledge Level of innovation Level of research Development investment Level of investment Workforce skills
Safer & Stronger Communities Action Plan	Sustainable Environment Action Plan
 Overall crime Fear of crime Harm caused by illegal drugs Anti-social behaviour Arson and domestic fires ,levels of safety improvements Opportunities regardless of background and poverty Financially secure Health & Wellbeing Actions	 Public transport Congestion Transport and highway infrastructure Public spaces, play areas and physical resources Use of resources Housing quality Housing in Bournemouth is energy efficient

- Hot meals are available for all children
- Carers are supported
- Supported in their choice of care and housing circumstances
- Mental health and well-being

The key factors influencing the five main strategies of Bournemouth's vision were identified in Table 6. These factors were then measured by their importance to tourism development in Bournemouth and their level of uncertainty. In this process, the written and oral responses from the BTMB interviews, key determinants for tourism development in Bournemouth were used, which resulted in a reduction in the identified factors (in bold and underlined in Table 6). Then, the responses from the members of the BTMB served as the basis for selecting two of the 11 factors to set the theme for the scenarios (Dyson & O'Brien, 2007). The factors "Attractiveness for Staying Visitors" and associated "Level of Investment" were identified as highly uncertain and highly important for tourism development in Bournemouth by the eight interviewees, where the level of investment is defined as private, inward investments into the Bournemouth economy. Based on these two factors, four distinctive and plausible Future Scenarios for Bournemouth 2026 have been developed, see Table 7 which presents a summary of the narratives describing each scenario for future planning.

		Attractiveness for	"Staying Visitors"		
		Low	High		
		Urban Decay - A	Little Maritime Village - B		
Level of Investment	Low	The streets are crowded and the town perceived as not being safe, mainly caused by the extended night-life offer. This has reduced the attractiveness for investors and staying visitors.	The town is attractive for overnight visitors due to the tidy public areas and the eliminated issues with nigh-time overcrowding. However, the limited investment in new hotels and cultura activities is limiting growth.		
Level of	High	English Ibiza - C Both public and private investment in night life creates a great base for the town's entertainment development. Issues with nigh-time overcrowding and littering are however alienating the higher spending visitor segments.	English Dubai - D Night-time overcrowding and anti-social behaviour is an issue from the past. New investments has resulted in new higher quality, internationally branded hotels and extended cultural offers.		

Table 7. Scenario Matrix

Scenario B "Little Maritime Village" represents the scenario where Bournemouth continues to develop in line with historic patterns. Scenario A has a higher level of PR budget to promote Bournemouth as an English language learning destination so there is a growing number of educational visitors, who stay longer time as the exchange rate is favourable and find more hosting houses. Scenario C show important developments in the entertainment district compared with scenario A but there is a simultaneous campaign to attract students

(PR budget is high). Consequently, the problem of overcrowding is not solved. Scenario D implies a trade-off between students and staying visitors as the entertainment area is strongly developed aiming to top end of staying visitors but the budget to attract students is reduced substantially reducing the attractiveness of Bournemouth for students. Table 8 presents the values of the model's key variables assumed under each of the four scenarios. The values of the variables for each scenario have been estimated based on variations of Scenario B in order to be consistent with each of the envisaged futures outlined in Table 7.

Variable	Scenario				
	A	В	C	D	
PR Budget Range 1 – 10; 1 = Reduced budget	8	6	5	2	
Available commercial land (Range 0 – 4; measured in additional hectares of land available for commercial activity)	0.5	2	1	3	
Day Visitor Growth rate (%)	0.9	1	0.8	0.7	
Length of stay Educational Visitors (Days)	50	45	50	45	
Value Sterling to foreign currency (Sterling to Euro)	1.05	1.2	1.1	1.3	
Ratio of host accommodation (% of house stock available for students)	15.0	9.0	10.5	8.0	

Table 8. Overview of Key Variable Values under Each Scenario

The simulation results of the model until 2026 under each of the four scenarios is presented in table 9. The results were generated using the model under the diverse conditions indicated by each scenario in Table 8. It is beyond the scope of this paper to detail the more than 30 different equations necessary to illustrate how the following figures are calculated. However, these are available from the authors.

Table 9: Overview of Values of Selected Key Variables under Each Scenario

	Scenario A	Scenario B	Scenario C	Scenario D
	"Urban Decay"	"Little Maritime Village"	"English Ibiza"	"English Dubai"
Annual Educational Visitor Days (000s)	3,338.7	1,500.2	3,801.6	1,873.2
Annual Day Visitors Days (000s)	3,511.1	3,567.6	3,455.6	3,401.0
Annual Staying Visitors Days (000s)	2,511.1	3,025.3	2,962.9	5,696.1
Attractiveness of Studying in the Area (Index, Base=2)	3.74	3.01	3.04	1.75
Residential Dwellings	51,354	51,022	51,144	50,600
Student Accommodation Price Growth (%)	5.0	3.4	4.5	2.7
Night Overcrowding (Index, Base=130)	152.2	146.7	147.0	135.5
Total Tourism Spend (Year 2026) (£million)	550.9	485.8	543.1	598.5

All scenarios foresee an increase in the number of visitors days compared with the current numbers (see table 5). However, the mix between education and staying visitors varies across the four scenarios while day visitors grow in a steady rate. From the demand planning perspective, the number of staying visitors under the different scenarios illustrate the sensitivity of the issue identified by BTMB members regarding night-time overcrowding where the number of people using the nightlife areas increases as the number of tourists increases and the available commercial land remains stable (Scenario A). The result shows

the important trade-offs that may exist between diverse urban tourist segments when there are overlaps in the use of spaces. The current situation, and reportedly the main source of this issue, is that a significant proportion of the night-life activity is clustered in a few areas within the town centre (see figure 9). This issue can be observed by the level of crowdedness (152.2) projected under the "Urban Decay" scenario, in which the numbers of educational and day visitors are high and the availability of commercial land is relatively low (see table 8). On the other hand, when commercial land is vastly available in "English Ibiza" scenario, the Night Overcrowding index (146.7) grows less than Urban Decay even though there is a strong growth in number of annual staying visitors and education visitors. However, the most significant trade-off occurs in "English Dubai" when the index (135.5) barely increases even with high number of staying visitors since students, as growth strategy for visitors, are completely abandoned due to low investment in PR and residential dwellings (see table 8).

6. Discussion

This case study demonstrates the strong interdependence between main tourist segments comprising any tourism system; in the case of Bournemouth: educational visitors, day visitors and staying visitors. The interdependences are significant in the use of 'spatial bottlenecks', such as leisure areas, where the extended use by one segment can alienate the other segments affecting not only the strategic objectives of the community but also reducing the potential economic performance of tourism (see last row in table 9). This poses the question whether the concentration or scatter of tourism resources is desirable and should be implemented accordingly, an area related to spatial planning (Law, 1994), as well as the impact on limitations on tourism resources in future tourism demand. Moreover, the results show the importance of considering educational visitors in urban planning processes, a segment not included in Ashworth and Page's (2011) model.

Managing urban tourism through strategic planning methods based on systems approaches can aid mitigation of problematic or challenging externalities and provide a coordinating mechanism for multiple actors to fulfil the vision for the location (Chettiparamb & Thomas, 2012) and help create innovative segmentation approaches (Ashworth & Page, 2011). One of the main weaknesses of the quantitative techniques applied is the difficulty to actively include stakeholders in the process of building a model due to the high level of technical skills required (Song & Li, 2008) and stakeholders may not have enough confidence in the results to use it for decision making. However, the BTMB members who participated showed particular interest in the methodology revealing interest in understanding tourism as a complex system. Stakeholders are particularly important to achieve sustainable economic impact on tourism destinations (Carlisle et. al. 2013) so techniques, or a combination of them, need to be evaluated in terms of stakeholder involvement. Therefore to overcome this issue, the approach employed in this paper involved key interviewees (Table 3) and secondary data analysis to identify the key relationships in the Urban Tourism Market Complexity model (figure 3) and to participate in the modelling and scenario process (section 5.1). However, our stakeholders are only related to strategy implementation not strategy formulation (see table 2). Their participation transformed the project into an opportunity for learning about the complexity in urban tourism and potential trade-offs within BTMB (Ashworth & Page, 2011). The use of scenarios involving stakeholders, still under-used in tourism (Gössling & Scott, 2012), provides opportunities for checking expectations of stakeholders regarding vision statements and potential investment decisions as discussed in section 5.2. The combination of both methods can be a useful approach in urban strategic planning to analyse the robustness of visions and strategies.

One important lesson from the case study is the contextualisation of systems modelling with respect to the representation of the public interest. In our case, the model was employed within a rational perspective (Dredge, 2010) where the use of the system dynamics modelling provided rigour on the evaluation of tourism plans already defined by the community through "Bournemouth 2026" and being implemented by BTMB similar to other system dynamics works (see table 1). System dynamics can also be employed in participatory mode to support strategic planning by involving stakeholders in group model building processes (Rouwette et al. 2002). In such a case, the sample of stakeholders involved would be completely different bringing a wider set of actors pertaining to the destination. Recommendations for further research will consider this possibility in order to evaluate the issues facing stakeholder involvement in strategic planning in urban coastal situations.

7. Conclusion

Ashworth and Page (2011) identified that as cities become more attractive as tourism destinations, they create problems for city planners to distinguish themselves in an increasingly crowded marketplace particularly where there is a conflict of interest in the spatial use of a city area. However, there is little development of systematic methodologies for understanding urban tourism due to its broad variety and strong interactions between the diverse tourist segments. Therefore multiple products and experiences within a city need diverse sets of assets and infrastructure which impact on their evaluation of the type, of investment incentives, market analysis and formulation of marketing strategies (Hall, 2008). This paper has demonstrated that management of complex relationships through strategic planning based on a systems approach combined with other methodologies can help identify negative externalities and provide coordinating mechanisms for future strategic decisions for urban development.

As Bournemouth has improved its tourism profile and diversity of urban tourist experiences over recent years, the growth of educational visitors and younger tourists visiting for the nightlife has resulted in a conflict of interest with families and other overnight visitors. The results indicate the trade-offs in the tourism destination between staying visitors or educational visitors, an area not completely understood in (coastal) urban strategic planning. Our multi-methodology approach showed trade-offs can be important factors influencing the achievement of the vision and the potential implementation of strategies.

The trade-offs in the tourism destination involve stakeholders from across the visitor economy. Thereby involving them in understanding the relationships between the key components in urban area's tourism system is an important outcome of the methodology employed. Furthermore, by involving the key stakeholders in simulating different plausible futures (Sautter & Leisen, 1999; Carlisle et al. 2013), or scenarios, for specified destinations, the proposed approach could contribute to increased understanding amongst local stakeholders and can potentially be replicated in many situations where there is a conflict of strategic direction for urban or even rural tourism development. Unfortunately, our work involved one set of stakeholders, BTMB members, in a particular step of the strategic planning process, strategy implementation.

Further research will need to consider the impact of multi-methodology systems approaches in other steps of the strategic planning process, under different tourism contexts and with diverse levels of involvement of similar and different stakeholders to confirm our findings. For example, the use of systems approaches during strategy formulation may address issues such as group negotiation, e.g. political dimensions, during the development of strategies with multiple stakeholders in an urban tourism destination.

8. References

- Agarwal, S. (2002) Restructuring Seaside Tourism. *Annals of Tourism Research*, 29 (1), 25-55
- Andereck, K.L., Valentine, K.M., Knopf, R.C., & Vogt, C.A. (2005) Residents' perceptions of community tourism impacts. *Annals of Tourism Research*, 32(4), 1056-1076.
- Ashworth G. & Page S.J. (2011) Urban tourism research: recent progress and current paradoxes. *Tourism Management*, 32, 1-15.
- Ashworth, G.J. (2012). Do we Understand Urban Tourism? *Journal of Tourism Hospitality*, Open Access Journal, 1:4.
- Bosch, T. V. M., & Kambiz, M. E. (2011). Towards a shared systems model of stakeholders in tourism development in the Cat Ba reserve of Vietnam. Paper presented at 29th International Conference of The System Dynamics Society, Washington, DC, USA.
- Bournemouth Vision 2026 (2006). Bournemouth 2026. http://www.bournemouth2026.org.uk.
- Bournemouth Borough Council (2011). *Visitor Survey*. http://www.bournemouth2026.org.uk/ *visitorssurvey2011*.
- Bournemouth Borough Council (2012). *Headline Corporate Plan*, http://www.bournemouth.gov.uk/ CouncilDemocracy/CouncilPerformance/HeadlineCorporatePlan201215.pdf.
- Bournemouth Borough Council (2012). *Bournemouth Local Plan: Core Strategy*. http://www.bournemouth.gov.uk/ PlanningBuildings/Planning/Policy/Local-Plan/CoreStrategy/CoreStrategyFiles/Adopted/Core-Strategy.pdf.
- Bournemouth Statistics (2008). *Population*. http://www.bournemouth.gov.uk/ PeopleLiving/Bournemouth Statistics/ Themes/Population Migration/Population/Population.aspx.
- BTMB (2012). *Bournemouth Tourism Management Board*, http://www.bournemouth.co.uk/business/btmb.
- Carlisle, S., Kunc, M., Jones, E., & Tiffin, S. (2013). Supporting innovation for tourism development through multi-stakeholder approaches: Experiences from Africa. *Tourism Management*, 35, 59-69.
- Chatterton, P. (1999). University students and city centres the formation of exclusive geographies: The case of Bristol, UK. *Geoforum*, 30 (2), 117-133
- Chatterton, P. (2010). The student city: an ongoing story of neoliberalism, gentrification, and commodification. *Environment and Planning A*, 42(3), 509-514.

- Chen, K. C. (2004) Decision Support System for Tourism Development: System Dynamics Approach. *Journal of Computer Information Systems*, Fall, 104 112.
- Chettiparamb, A., & Thomas, H. (2012). Editorial: Tourism and Spatial Planning. *Journal of Policy Research in Tourism, Leisure and Events*. 4(3), 215-220.
- Chi, C. G.Q. & Qu, H. (2008). Examining the structural relationships of destination image, tourist satisfaction and destination loyalty: an integrated approach. *Tourism Management*, 29(4), 624–636.
- Cooper, C., & Hall, M. (2008). *Contemporary Tourism: An International Approach*. London: Butterworth-Heinemann.
- Cronin M, Gonzalez C., & Sterman JD. (2009). Why don't well-educated adults understand accumulation? A challenge to researchers, educators, and citizens. *Organizational Behavior and Human Decision Processes* 108: 116–130
- Decrop, A. (2004). Trustworthiness in qualitative tourism research. In J. Phillimore & L. Goodson (Eds). *Qualitative Research in Tourism: Ontologies, Epistemologies and* Methodologies (pp. 156-169). London: Routledge.
- Dorset for you (2014). Statistics and census information https://www.dorsetforyou.com/statistics
- Dredge, D. (2010). Place change and tourism development conflict: Evaluating public interest. *Tourism Management*, 31, 104-112
- Dwyer, L., & Forsyth, P. (eds.) (2006). *International Handbook on the Economics of Tourism*. Cheltenham, UK: Edward Elgar:.
- Dyson, R., & O'Brien, F. (eds.) (2007). Supporting Strategy: Frameworks, Methods and Models, Chichester: Wiley & Sons
- Edwards, D., & Griffin, T., Hayllar, B. (2008). Urban tourism research: developing an agenda. *Annals of Tourism Research*, 35(4), 1032-1052.
- Fernández-Güell, J.M., & Collado, M. (2014). Foresight in designing sun-beach destinations. *Tourism Management*, 41, 83-95.
- Formica, S., & Kothari, T. H. (2008). Strategic destination planning: Analysing the future of tourism. *Journal of Travel Research*, 46(4), 355-367.
- Fyall, A., & Garrod, B. (2005). *Tourism Marketing: A Collaborative Approach*. Clevedon: Channel View.
- Friedmann, J. (1987). *Planning in the public domain: From knowledge to action*. Princeton: Princeton University Press.

- Gale, T. (2005). Modernism, Post- Modernism and the Decline of British Seaside Resorts as Long holiday Destinations: A Case study of Rhyl, North Wales. *Tourism Geographies*, 7 (1), 86-112.
- Georgantzas, N. C. (2003). Tourism dynamics: Cyprus' hotel value chain and profitability. *System Dynamics Review*, 19, 175–212.
- Gössling, S., & Scott, D. (2012). Scenario planning for sustainable tourism: an introduction. *Journal of Sustainable Tourism*, 20(6), 773-778.
- Hall, C.M. (2001). Trends in Ocean and Coastal Tourism: The End of the Last Frontier? *Ocean and Coastal Management*, 44 (9-10), 601-618.
- Hall, C. M. (2008). *Tourism planning: policies, processes and relationships*. Harlow:Pearson Education.
- Hannigan, J. (1998). Fantasy city. London: Routledge.
- Haugland, S. A., Ness, H., Grønseth, B. O., & Aarstad, J. (2011). Development of tourism destinations: An integrated multilevel perspective. *Annals of Tourism Research*, 38(1), 268-290.
- Healey, P. (2006). Transforming governance: Challenges of institutional adaptation and a new politics of space. *European Planning Journal*, 14(3), 299-320.
- Hernantes, J., Rich, E., Laugé, A., Labaka, L., & Sarriegi, J. M. (2013). Learning before the storm: Modeling multiple stakeholder activities in support of crisis management, a practical case. *Technological Forecasting and Social Change*, 80(9), 1742-1755.
- HM Government (2013). *International Education Global Growth and Prosperity. An accompanying Analytical Narrative*. UK Government Report July 2013.
- Housing Statistical Release (2011). http://www.ons.gov.uk/ons/rel/family-demography/families-and-households/2011/stb-families-households.html, 11 March 2011.
- Jemala, M. (2010). Evolution of foresight in the global historical context. *Foresight*, 12 (4), 65 81.
- Jennings, S. (2004). Coastal tourism and shoreline management. *Annals of Tourism Research*, 31 (4), 899–922.
- Jiang, J., Li, J., & Xu, H. (2010). System Dynamics Model for Transportation Infrastructure Investment and Cultural Heritage Tourism Development: A Case Study of Xidi and Hongcun Historical Villages, Paper presented at 28th International System Dynamics Conference, Seoul, Korea.
- Judd, D. R., & Fainsten, S.S (1999). The Tourist City. New Haven, CT: Yale University Press

- Klosterman, R. E. (1985). Arguments for and against planning. *Town Planning Review*, 56(1), 5.
- Koltchanov, V., & Casanova, P. (2004). *SimTour: The Simulation Model of the Foreign Tourist Flow to France*. Paper presented at 22nd International System Dynamics Conference, Keble College, Oxford, England.
- Kunc, M. (2009). Forecasting the development of wine tourism: The case of Chile. *International Journal of Wine Business Research*, 21, 325-338.
- Kunc, M. (2012). Teaching strategic thinking using system dynamics: lessons from a strategic development course. *System Dynamics Review*, 28(1), 28-45.
- Kunc, M., & Morecroft J. (2007). System Dynamics Modelling for Strategic Development in Dyson, R. & O'Brien, F. (eds.) *Supporting Strategy: Frameworks, Methods and Models*, Chichester: Wiley & Sons.
- Lacher, R. G., Oh, C-O., Jodice, L.W., & Norman, W.C. (2013). The Role of Heritage and Cultural Tourism destination Preferences: A Choice Modelling-Based Analysis. *Journal of Travel Research*, 52 (4), 534-546.
- Language Course Directory (2015). *International Student Statistics*. http://www.language-course-directory.com/language-schools/bournemouth.html
- Law, M. C. (1994). *Urban Tourism: Attracting visitors to large cities*. London: Mansell Publishing.
- Law, M. C. (1996). *Tourism in Major Cities*. London: International Thomson Business Press.
- Law, A., De Lacy, T., McGrath, G.M., Whitelaw, P.A., Lipman, G., & Buckley, G. (2012). Towards a green economy decision support system for tourism destinations. *Journal of Sustainable Tourism*, 20 (6), 823-843.
- Lei, K., Chan, S. K., Cao, J., & Zhou, S. (2010). *Modelling and Simulation of Ecological Footprint of Macao*, Paper presented at 28th International System Dynamics Conference, Seoul, Korea.
- Manning, R., Lawson, S., Newman, P., Laven, D., & Valliere, W. (2010). Methodological issues in measuring crowding-related norms in outdoor recreation. *Leisure Sciences: An Interdisciplinary Journal*, 24 (3-4), 339-348.
- Maitland, R. (2006). How can we manage the tourist-historic city? Tourism Strategy in Cambridge, UK, 1978–2003. *Tourism Management*, 27(6), 1262-1273.
- Mingers, J., & White, L. (2010). A review of the recent contribution of systems thinking to operational research and management science. *European Journal of Operational Research*, 207(3), 1147-1161.

- Mullins, P. (1994). Class relations and tourism urbanisation: the regeneration of the petite bourgeoisie and the emergence of a new urban form. *International Journal of Urban and Regional Research*, 18(4), 591–607.
- National Coastal Tourism Academy (2014). Facts and Figures about Bournemouth's visitors. http://coastaltourismacademy.co.uk/resource-hub/resource/facts-and-figures-about-bournemouths-visitors.
- Office for National Statistics (ONS) (2010, 2013). Detailed Towns Data, International Passenger survey. http://www.visitbritain.org/insightsandstatistics/inboundvisitorstatistics/regions/towns.aspx.
- Page, S. J. (1995). Urban Tourism. London: Routledge.
- Page, S.J. (2007). *Tourism Management: Managing for Change* 3rd Ed. Oxford: Butterworth-Heinemann.
- Page, S. J., & Hall, C. M. (2003). Managing Urban Tourism. London: Pearson Education.
- Pappalepore, I., Maitland, R., & Smith, A. (2010). Exploring urban creativity: Visitor experiences of Spitalfields, London. *Tourism Culture & Communication*, 10(3), 217-230.
- Paskaleva-Shapira, K. A. (2007). New paradigms in city tourism management: Redefining destination promotion. *Journal of Travel Research*, 46(1), 108-114.
- Philipson, A. (2013), http://www.telegraph.co.uk/property/10012254/Average-one-bedroom-new-build-no-bigger-than-an-underground-train-carriage.html
- Richards, G., & Wilson, J. (2006). Developing creativity in tourist experiences: A solution to the serial reproduction of culture? *Tourism Management*, 27(6), 1209-1223.
- Ritchie, B. W. (2003). Managing Educational Tourism. Channel View Publications: Bristol.
- Ritchie, J.R.B., & Crouch, G.I. (2003). *The Competitive Destination: A Sustainable Tourism Perspective*, Wallingford, Oxon: CAB International.
- Rouwette, E.A.J.A., Vennix, J.A.M., &Van Mullekom, T. (2002). Group model building effectiveness: a review of assessment studies. *System Dynamics Review*, 18(1), 5-45.
- Rydin, Y. (2011). *The Purpose of Planning: creating sustainable towns and cities*. Bristol:The Policy Press.
- Sautter, E. T., & Leisen, B. (1999). Managing stakeholders a tourism planning model. *Annals of Tourism Research*, 26(2), 312-328.

- Schianetz, K., Kavanagh, L., & Lockington, D. (2007). The Learning Tourism Destination: The potential of a learning organisation approach for improving the sustainability of tourism destinations. *Tourism Management*, 28, 1485–1496.
- Sedmak, G., & Mihalič, T. (2008). Authenticity in mature seaside resorts. *Annals of Tourism Research*, 35(4), 1007-1031.
- Sheehan, L., & Ritchie, J.R.B. (2005). Destination Stakeholders Exploring Identity and Salience *Annals of Tourism Research*, 32 (3), 711-734.
- Shen, W. (2005). A study on Chinese student migration in the United Kingdom. *Asia Europe Journal*, 3(3), 429-436.
- Simão, JN., & Partidário, M.R. (2010). How does tourism planning contribute to sustainable development? *Sustainable Development*, 20(6), 372-385.
- Smith, S. (2011). *Tourism Chiefs Brief the Minister*. http://www.businessdorset.co.uk/news/news/9224274.Tourism_chiefs_brief_the_minister.
- Smith, M. Macleod, N., & Robertson, M.H. (2010). *Key Concepts in Tourist Studies*. Sage Publications Ltd.
- South West Tourism Alliance (2009). *Volume and Value of Tourism*. http://www.swtourismalliance.org.uk/research-facts-and-figures/regional-tourism-data.
- Song, H. & Li, G. (2008). Tourism demand modelling and forecasting—A review of recent research. *Tourism Management*, 29(2), 203-220.
- Sterman J.D. (1989). Modeling managerial behavior: misperceptions of feedback in a dynamic decision making experiment. *Management Science* 35(3), 321–339.
- Sterman, J. D. (2000). *Business Dynamics Systems Thinking and Modelling for a Complex World*. McGraw-Hill Education: New York.
- Study Travel Magazine (2012). The Global Market. Special Report December 2012. http://www.hothousemedia.com/ltm/ltmbackissues/dec12web/dec12specreport.html.
- Team Consulting (2008). Poole and Bournemouth Strategic Framework and Action Plan 2008 ,http://www.team-tourism.com/results.asp?interest=Select&clienttype =Select&location=UK&submit=Search.
- Townsley, M., & Grimshaw, R. (2013). The consequences of queuing: Crowding, situational features and aggression in entertainment precincts. *Crime Prevention & Community Safety*, 15, 23-47
- Tollefson, J. (2009). Copenhagen: the scientists' view. *Nature*, 462, 714-715.

- UKCISA (2015). *International Student Statistics*. UK Council for International Student Affairs. http://www.ukcisa.org.uk/Info-for-universities-colleges--schools/Policy-research--statistics/Research--statistics/International-student-statistics/.
- Van den Belt, M. (2004). *Mediated modeling: a system dynamics approach to environmental consensus building*. Washington, DC: Island Press.
- Van der Berg, L., & Russo, A. P. (2004). *The Student City: Strategic Planning for Student Communities in EU Cities*. London: Ashgate Publishing.
- Walsh, P. R. (2005). Dealing with the uncertainties of environmental change by adding scenario planning to the strategy reformulation equation. *Management Decision*, 43(1), 113 122.
- Wright, G., & Goodwin, P. (2009). Decision making and planning under low levels of predictability: Enhancing the scenario method. *International Journal of Forecasting*, 25(4), 813-825.
- Xiang, Z., & Formica, S. (2007). Mapping environmental change in tourism: A study of the incentive travel industry. *Tourism Management*, 28(5), 1193-1202.
- Xing, Y., & Dangerfield, B. (2010). Modelling the sustainability of mass tourism in island tourist economies. *Journal of the Operational Research Society*, 62, 1742-1752.
- Xu, F., Morgan, M., & Song, P. (2009). Students' travel behaviour: a cross-cultural comparison of UK and China. *International Journal of Tourism Research*, 11(3), 255-268.
- Yeoman, I., & McMahon-Beattie, U. (2004). Developing a scenario planning process using a blank piece of paper. *Tourism and Hospitality Research*, 5(3), 273-285.