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Managing regional tourism: the role of economic modelling

Calvin Jones

Cardiff Business School, Cardiff University, jonesc24@cf.ac.uk

Max Munday

Cardiff Business School, Cardiff University

Neil Roche

Cardiff Business School, Cardiff University

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Managing Regional Tourism: The Role of Economic Modelling

1. Introduction

The success of a visitor destination relies on a number of factors. At local scale, the quality of the welcome, the climate and the quality of visitor infrastructure might influence the level of visitation. At national scale, factors such as political stability and exchange rates will matter significantly. Meanwhile, the impacts of visitation are largely *local*; for example in terms of economic benefits, effects on the built environment and the potential over-use of scarce resources; *national* (the balance of payments) or *global* (via the emissions of climate-changing 'greenhouse gases'). Given the multiple spatial 'layers' of effects, it is notable that tourism activities are commonly managed regionally – at a spatial scale higher than the destination but lower than the nation. For example in places such as Andalusia in Spain, or capitals such as London, key policies and regulations; on quality assurance, local environmental protection and destination marketing, are made at this regional (meso) level.

This raises significant issues. The region is usually too large to be typified by one 'kind' of destination or attraction and hence one sort of activity or visitor. Meanwhile, many of the data available to the national policymaker on tourism's scale, nature and impact are not available, at least with a similar level of quality, at regional scale. The complex regional destination might then be managed by agencies facing a significant intelligence shortfall. Regions will encompass multiple activities and heterogeneous places (rural and urban), and hence rely on complex narratives and themes to attract visitors. At the same time, there is a lack of information on how benefits accrue within the region, and on which visitors might be 'high value' or have lower environmental impacts (Jones and Munday, 2008). The interrelationships between different regional visitor amenities, and the kinds of multiple destination trips (and hence spending) visitors undertake will also be largely unobserved.

The regional destination management organisation then faces a difficult task: to maximise the value of regional tourism (or rather optimise this value in relation to other regional goals) with a very limited set of evidence. In recent years, for a number of regions, data on the consumption of visitors (available from published visitor and household surveys) and on the size of the regional supply side (from administrative datasets or business surveys) has been complemented by the development of tourism satellite accounts (TSAs) for regions, and by models that lever these structures (Jones and Munday, 2010; Hoque et al, 2010). Here, then we have tools that deliver estimates of key regional economic impacts: the employment, incomes and value added arising from tourism, and in some cases the ecological implications (Jones, 2013). Still, however, key questions remain unanswered in terms of sub-regional impacts. Compounding this, the use of TSAs in policy has been limited by their lack of timeliness and flexibility to policy questions: for example, the TSA does not report on the visitors which are of the highest value (Smeral, 2006).

The remainder of this paper examines how regional TSAs and associated structures can help provide intelligence on the nature, scale and economic impact of visitation within a region. It uses as a case the Environment for Growth (E4G) project, which included data collection at over 100 specific destinations across the region – ranging from beaches and castles, to countryside centres and the ‘green infrastructure’ Wales Coast Path (http://www.walescoastpath.gov.uk/default.aspx?lang=en_). The next section outlines the issues involved in regional tourism management, and details the accounting structures and modelling tools available to the regional policymaker. Section Three reports our development of such tools in evaluating the E4G programme, over 100 sites and projects developed under five broad themes using European Union Structural Funds. Section Four reflects on the likely integration of this intelligence into regional tourism policy, and Section Five concludes.

2. Managing Regional Tourism: Issues and Tools

There are challenges for regional tourism policymakers in fully understanding the tourism economic landscape of the region, let alone how tourism happens across this region, and with what consequences for specific places. This has long been recognised at different levels. For example, Allnutt (2003) established the significant barriers to the development of 'good' regional tourism policy in the UK (see also Saarinen, 2003 for Finland; and Thomas, 2009 for a wider review on the issues facing a typical region). Some nations have responded by undertaking national programmes to develop economic accounting procedures for their constituent regions. For example Statistics Canada developed the fully featured Provincial and Territorial Satellite Accounts for Canada (albeit now quite old; Barber-Dueck and Kotsovos, 2003) whilst Austria has a developing programme of TSA regionalisation (Laimer, 2012; also see van Ho, et al, for South Australia). The development of Regional TSA structures has been championed internationally by UNWTO as a way of better understanding the economic significance of tourism at regional scale (UNSD, 2008).

The trend toward regional TSA development enables an understanding of tourism's economic impact at this smaller aggregate level. By reconciling regional tourism demand with the supply of tourism products (and the labour involved in that supply) we can now reveal the levels of regional gross value added or GDP, employment and regional incomes that are 'tourism dependent' – in *direct* terms at least. As they stand, however, regional TSAs have significant limitations. They are not often 'up to date'; they do not enumerate the supply-chain or other indirect economic effects of visitor activity, and they rarely present information on the environmental consequences of this tourism (Smeral, 2006; Jones and Munday, 2008).

A number of authors have sought to overcome these limitations, for example by using TSA structures to develop more complex and holistic tourism economic models (see for example Dwyer et al, 2006; see also Cooper and Wilson, 2002). TSAs can also be extended in scope to include the environmental consequences of visitor activity, and this new structure can help policymakers

understand the relative 'eco-efficiency' of different types of visitation (Hoque et al 2010; Jones, 2013). These developments however are either national or, occasionally regional, in scale: they do not seek to further disaggregate key economic or environmental measures below the region. This is a real issue. Local economic and environmental impacts of tourism are important, and likely to be in many ways problematic due to tourism's social and economic structure (McKercher, 1993; Mayer, 2014).

The ability to understand and then manage economic benefits and social and environmental cost is limited by the availability of information on tourism activity at local level. Where tourism studies do have a local focus, this is often on residents' attitudes (by implication an indirect measure of local *impact*), and furthermore with little attempt to develop a regional-local conceptual or statistical model of interactions and implications (see Ross, 1992 for one of dozens of examples of such studies). The next section then reports on the attempt to lever a regional TSA and associated (input-output) impact model to provide management-relevant information to both managers of small destinations and attractions and regional tourism policymakers in Wales, a region of the UK. The project reveals information on the scale and economic impact of visitation to over 100 sites, albeit with this reporting largely *regional* impacts of *local* attractions, and in part reliant on 'regional average' visitor characteristics and impact metrics.

3. Levering a Regional TSA and Impact Model for Local Use

3.1. The Environment for Growth Project

In the 2006-13 round of European Convergence (European Regional Development Fund), ERDF Funding, over 100 initiatives related to the visitor economy in Wales received funding under an "Environment for Growth" (E4G) umbrella. E4G comprises six strategic strands, managed by different stakeholders, covering coastal, nature, heritage and sustainable tourism as well as the

geographically specific projects of Valleys Regional Park and Wales Coast Path. The majority of the support aids improvements to destinations' capital stock, or their accessibility (www.e4g.org.uk). There is a requirement that supported projects and sites provide evidence that the resources have been used appropriately; that projected impacts have been achieved; and that fundamental 'good management' practices have been followed (for example with respect to the cross cutting themes of equal opportunities and environmental sustainability; see <http://wefo.wales.gov.uk/?skip=1&lang=en>).

Estimating the socio-economic or environmental impact of visitor sites, however, presents distinct challenges. Many of the important impacts of visitation will not occur 'onsite' or directly because of the activity, but more widely throughout the regional economy as visitors spend money on accommodation and other services away from the destination in question. Meanwhile, sites will have "supply chain" impacts away from their immediate location through their purchases of goods and labour. Indeed, for many small and remote sites, away from population centres, the notion of "local" impacts is hardly relevant (except in ecological terms). Visitors oftentimes cannot spend at these sites, and there are often no employees based there – for example, at some beaches and smaller castles. The focus here, then was to understand how each individual site or destination contributed to regional impact metrics, and with a consideration of double counting integrated, as far as possible, into the analysis, such that a comparable, consistent and, critically, additive estimate of sites' impacts could be assessed (Armstrong and Wells, 2006).

3.2. The Tourism Satellite Account and Tourism Impact Model for Wales

Such an estimation process relied heavily on the existence of a number of tourism accounting and modelling tools available for Wales. Since 2000, the region has developed its own, bespoke regional tourism satellite account, constructed using UN World Tourism Organisation standards and conceptual approaches. It became clear, post-compilation, that general TSA outputs and structures were inadequate to inform policy in this autonomous region of the UK, and this spurred the

development of the *Tourism Impact Model for Wales*, whereby the regional TSA was situated within an input-output table for the region (Jones and Munday, 2010; Welsh Government, 2010). The model has been used to estimate the regional economic impact of new visitor facilities and sports events, and a further extension enables an assessment of the greenhouse gas emissions associated with tourism to, and within, Wales (Jones, 2013). Critically here, the model also provides estimates of the regional impact of different sorts of visitors – short break, long holiday, business travellers, international visitors and day trippers – per day and per trip, with this in terms of employment and value added supported, and greenhouse gas emissions consequent (Welsh Government, 2010). It is these headline outputs of the model (See Table 1 for examples) that are used to inform impact analysis and evaluation for small sites.

Table 1: The Economic Impact of Visitors to Wales (Direct + Indirect) 2011

	Day Trippers	Short Break	Long Holiday	Business	International	All Staying Visitors
Gross Value Added (£)						
Per trip	£12.65	£106.28	£191.24	£171.03	£238.91	£156.42
Per Night	£12.65	£51.62	£47.47	£73.91	£45.94	£50.70
Employment (FTE)						
Per 1m trips	560	5040	8730	6660	10390	7035
Per 1m Nights	560	2450	2170	2880	2000	2280
<i>Source: Tourism Impact Model for Wales (unpublished)</i>						

3.3. Evaluating E4G

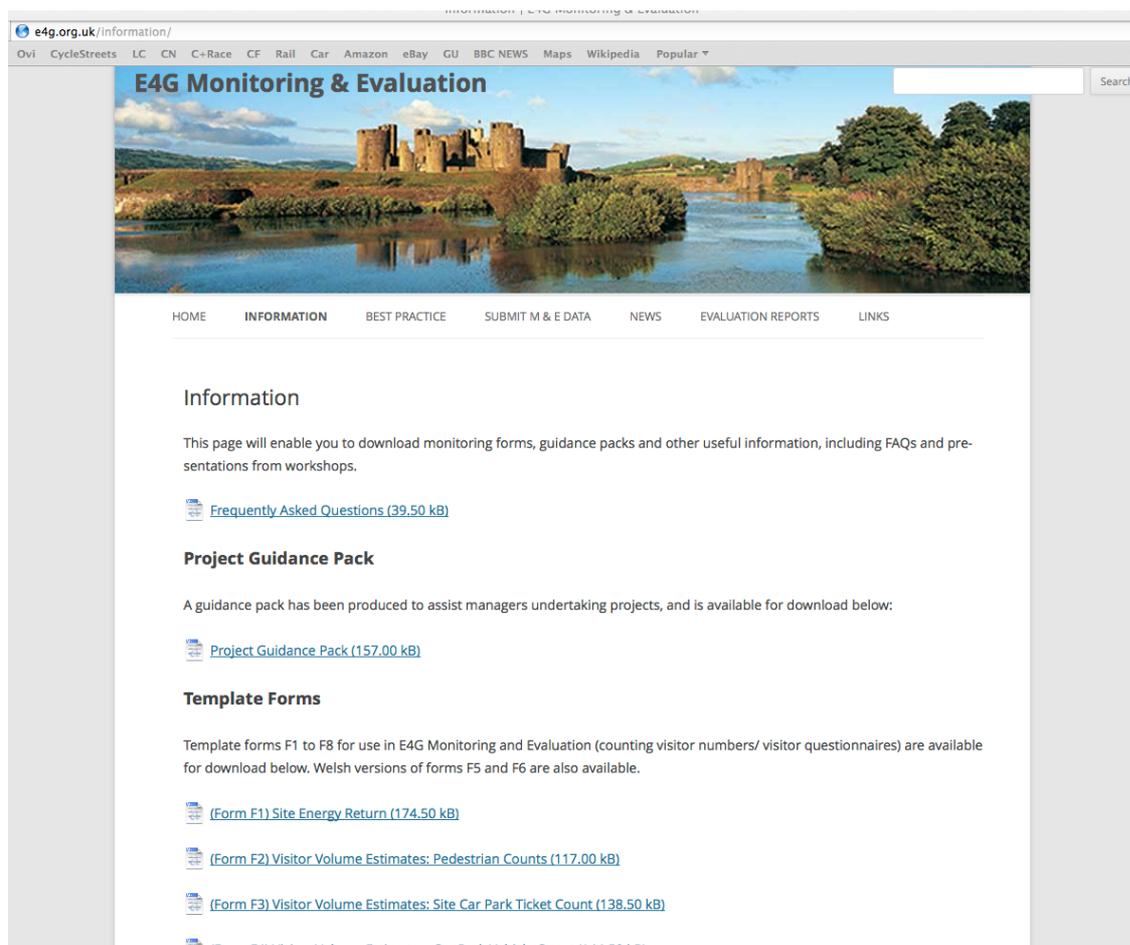
The E4G programme comprised a wide range of developments, from multiple-million pound investments in new visitor centres attracting hundreds of thousands of visitors (see <http://www.bikeparkwales.com> for example), to improvements to facilities, access and interpretation at small and remote beaches and cultural attractions, which perhaps attract only hundreds of visitors per annum. The (ideal) requirement is that the economic impact – in terms of employment at least – can be reported across the whole project, and without inappropriate double counting as the same visitors attend multiple sites. For many of these smaller destinations, bespoke

visitor surveys are cost ineffective or impractical, although an assessment of visitor volumes is usually possible, through either intermittent monitoring (and grossing up procedures) or remotely through mechanical visitor counting devices. The key is to provide useful management information to site managers, whilst collating and combining this information to provide estimates of impact at aggregate project, and regional level.

3.3.1. Standardising Data Capture Approaches and Tools

A critical requirement here was that data be comparable across a variety of sites, heterogeneous in activity and size. This was achieved in two ways. Firstly, site managers were provided with an online suite of standardised but modular survey tools and guidance, hosted at www.e4g.org.uk and applicable to all sites. These tools covered basic visitor counting approaches, and included surveys that addressed visitor characteristics, origin, travel and spending. Site managers could choose from additional 'modules', for example on visitor satisfaction or detailed travel behaviours. The provision of these tools meant individual site managers did not need to construct (or contract for) their own surveys, cutting costs and ensuring data comparability. Indeed, implementation of these tools (and identification of appropriate resource) was one of the requirements of grant approval from the European Union fund (Figure 1). A second 'plank' in this approach was the provision of three workshop/training days for site managers, where the evaluation approach, metrics and tools were introduced and explained. Here, managers were encouraged to think about how they might use E4G information on their project's positive impact to engage with wider stakeholders. Further one-to-one meetings between the evaluation team and site managers ironed out any remaining inconsistencies, and clarified appropriate survey schedules. At this stage, the opportunity was taken to match E4G requirements to existing local and hotspot visitor surveys, and to where possible amend or extend the latter to cover E4G relevant information.

Figure 1: The E4G Online Resource



3.3.2. Levering Regional Information for Smaller Sites

The evaluation of the E4G investment sought to provide information that was both regionally and locally relevant. Smaller sites, where visitor surveys were not possible, are provided with an indication of the nature and impact of visitation to their own sites based on information developed from functionally similar sites in different parts of Wales that benefit from this information. To enable this imputation, a typology of over 40 site/activity types was constructed, with individual sites allocated according to up to three of these characteristics (Table 1). For example, information on the characteristics of visitors to industrial heritage sites derived from E4G surveys can be applied to sites with no relevant survey information (but with relevant volume counts) to provide indicative

information on economic and environmental impact – albeit with the proviso that there is an expectation that visitor characteristics are determined by the type of site they visit.

Table 2: The E4G Classification Matrix

1. Route, link or connection
1.1. Cycle route
1.2. Walking trail
1.3. Bridleway
1.4. Other route or link
2. Museum, gallery or heritage centre
2.1. Museum of industrial heritage
2.2. Museum of history/culture
2.3. Local/Community museum
3. Industrial heritage sites/activity
3.1. House and/or gardens
3.2. Coal
3.3. Metal industries
3.4. Maritime
3.5. Other Industrial heritage
4. Non-industrial Heritage site/Activity
4.1. Medieval
4.2. Roman & prehistoric
4.3. Defence of the Realm
4.4. Linguistic Heritage
4.5. Rural heritage
4.6. Other non-industrial heritage
5. Natural Heritage Sites & reserves
5.1. Country Park/visitor centre
5.2. Woodland or forest
5.3. Hill, mountains or moorland
5.4. Wetland
5.5. River, canal or stream
5.6. Beach
5.7. Other coastal site
5.8. Designated natural reserve
6. Activity Tourism
6.1. Family activities
6.2. Cycling
6.3. Walking
6.4. Riding
6.5. Extreme sports
7. Events
7.1. Popular culture events
7.2. Heritage events
7.3. Community events
7.4. Nature & countryside events
7.5. Other event
8. Non-spatial project

8.1. Interpretation and presentation
8.2. Guiding
8.3. Training, coaching & skills development
8.4. Dissemination & reporting
8.5. Other non-spatial

The integration of local and regional information allows site managers to access information about visitors to their site in a way which is clear, concise and draws on the wider model to supply information about regional economic impact. Figure 2 provides an example of a site level output: this output is flexible to some degree to the range of questions asked (i.e. the application of specific 'modules'. Here, of course, managers can begin to benchmark themselves against similar sites in terms of visitor characteristics, spending and levels of reported satisfaction, with hopefully positive impacts on site management.

Figure 2: Site-Level Evaluation Report

GREAT ORME 2011		CAN	
ATTENDANCE:		SITE SATISFACTION	
	%		% agree
Leisure trip as part of a longer break	66.7	a. "Overall, I have enjoyed my visit"	84.1
Leisure trip from home	31.5	b. "The staff here are friendly & helpful"	87.2
Non-routine work business	1.2	c. "The staff here are knowledgeable"	80.6
Other	0.6	d. "The site facilities are appropriate"	83.3
Total	100.0	e. "The site is easy to find"	82.7
STAYING AWAY FROM HOME IN WALES?		DEMOGRAPHICS	
	%	Respondents resident in the UK?	
Yes	82.6	Yes	95.9
No	17.4	No	4.1
Total	100.0	Total	100.0
Number of nights stayed?		Age breakdown	
	%		%
one to three	30.2	16-24	16.2
four to six	33.6	25-34	5.1
seven	22.4	35-44	18.4
eight or more	13.8	45-54	19.9
Total	100.0	55-64	22.0
Travel to accommodation:			65+
	%	Total	100.0
Private car/van/taxi	74.4	Long term limiting health problem?	
Organised coach	14.5		%
Train	7.7	Yes	16.4
Scheduled bus	1.7	No	83.6
Other	1.7	Total	100.0
Total	100.0	Full Time employment?	
Where did respondents stay?			%
	%	Yes	55.6
Self catering/camping	34.7	No	44.4
Hotel/Motel	33.9	Total	100.0
Guesthouse/B&B	16.1	Ethnic Grouping	
With friends/family	8.5		%
Other	6.8	1. White British/ Northern Irish	95.8
Total	100.0	2. Irish	0.7
Average length of stay at park: hours		4. Any other white	1.4
	2.8	5. White and Black Caribbean	1.4
<i>Over two and three-quarter hours</i>		18. Other ethnic background NEC	0.7
Had respondents visited before?		Total	100.0
	%	ECONOMIC IMPACT	
First time visitor	42.7	Supported Gross Value Added of visitors total trip (site+elsewhere) £8,245,000	
Once or twice before	32.1	Supported employment (FTE) 370	
Not for a while	19.5	<i>Of which expenditure attributable to site (a subset of gross impact shown above, not additional):</i>	
Am a regular visitor	5.7	GVA £2,271,000	Employment 95 FTEs
Total	100.0		
How did respondents travel to the site?			
	%		
Private car/van/taxi	54.6		
Other	22.7		
Bicycle/walk	16.0		
Train	3.3		
Organised coach trip	2.7		
Scheduled bus/coach	0.7		
Total	100.0		
Did respondents spend money on site?			
	%		
Yes	70.2		
No	29.8		
Total	100.0		

3.3.3. Estimating Regional Impacts

Over the evaluation period, some 10,000 visitor questionnaires were collected, including both characteristics and expenditure details. The potential improvement to understanding the regional impact of the E4G sites (and indeed tourism as a whole) is significant. We cannot, however, simply aggregate all the expenditure of E4G visitors on trips to Wales and use this to estimate economic (or indeed environmental) impact. Key issues here are double counting and additionality, and perhaps to a lesser extent, displacement. An individual E4G visitor survey respondent may only in part be motivated to visit the region because of that specific attraction – or indeed may visit more than one attraction during the same regional trip. Counting *whole-trip* impact thus overestimates the impact of E4G sites and attractions. In order to avoid this, the evaluation process also reports a single *day's* impact (including one night's accommodation for staying visitors) to an E4G visit – see Table 1. This softens the assumption on the motivation of the trip, now assuming only that the visit to the E4G site is the main motivator for that day's activities. Information gathered on the length of time spent at the site, and on multi-destination trips, can be used to test the reasonableness of this assumption. Displacement also serves to lower the net additional impact of (here) EU supported activity. For tourism, and in this regional context, displacement refers to how far E4G visitors have been attracted away from other Welsh attractions – and if this is the case, comprising little additional economic impact. As yet it is difficult to adjust the questionnaire returns to account for this element. Additionally, the opportunity cost of public support is wholly outside the remit of this evaluation, so we are still some way from a true assessment of the net additional benefit of EU intervention (see Ecotec, 2003 for the issues).

4. Informing Regional Tourism Policy?

This paper started by suggesting that there was a need to understand the impacts and interrelationships of tourism at below regional scale. This understanding is, as Section 3 shows,

possible to develop, albeit with some caveats – for example quite a high level of data imputation and the presentation of *regional* impacts of *local* projects. There is an assumption here of course that responsible agencies are aware of; interested in; and able and willing to act on consequent information. This has certainly been the case to some degree with wider regional TSA developments: for example (as yet unpublished) Welsh Government strategy suggests benchmarking tourism performance to TSA indicators to the period 2014-2020; and sustainable tourism interventions are already informed by the environmental extension to the TSA (Jones, 2013). For the E4G project it is perhaps too early to assess the impact of the policy, with the support period just ended, and the final report (and regional metrics) due in late 2014. There are, however, particular barriers to policy integration inherent in EU (and other grant funded) interventions.

Firstly, EU cohesion policy is a time limited intervention, here covering the period 2006-13 and with all intervention mechanisms and capital spend ending after this period. This means it is difficult for such funds to fundamentally change project approaches, management or scope: they are much more likely to influence the scale of activities, or to fund *existing* ideas (Ecotec, 2003). This means that domestic approaches to project management and monitoring may not be affected fundamentally by innovations that are (known to be) time limited. The managers, in this case largely public sector, may return to 'old' and less evidence based approaches to management following the end of the EU funding period.

Related to the above, EU interventions have, in the E4G case, resulted in the creation of new project management structures, with staff moved from other duties or 'hired in' to implement evaluation activity. Naturally, as the period ends – and with it the funding – these now knowledgeable staff are re-assigned, or begin to leave for new employment in more permanent roles, taking their skills and knowledge with them. There is naturally a feeling of 'anti-climax' towards the end of the period, and with a commensurate reduction in enthusiasm and interest in forward planning and 'bolting in' of new evaluative structures.

In the Wales case there are additional factors which mitigate against the continuation or wider adoption of E4G type socio-economic evaluation measures. Whilst the region will receive more EU funding between 2014-2020, the regional government has indicated strongly that tourism will not be a significant recipient: monies will be directed largely to research and development, and generic business support activities (see <http://wefo.wales.gov.uk/programmes/westwalesvalleys/erdf-esf-summary/?lang=en> for a summary). Because of the nature of evaluation, and the timing of Structural Funds periods, these decisions are of course made largely without the benefit of thoughtful, full-term evaluation reports covering the previous funding period, leading not only to the potential for ineffective policy development, but also a feeling that the efforts of (here) tourism policy and implementation officers have perhaps been insufficiently appreciated and accounted for in wider policy development.

5. Conclusion

The E4G project is rare, in that it is an example of how tourism satellite account development (albeit at regional scale) has contributed to both improving the understanding of tourism's 'on the ground' impacts amongst policy and implementation officers, and to engaging these officers in wider debate about the nature of economic and social impact, and on how their own activities play into these impacts. The extension of the TSA into an (input-output based) regional economic model has shown to stakeholders that tourism's economic significance can be demonstrated transparently, and with a high degree of quality and bespoke regional data, such that the results have a higher level of visibility and credibility than seen previously (Welsh Government, 2010). This development now enables managers of small, localised projects to engage with their own stakeholders – local populations, politicians and media – based on concrete and standardised data on the nature of visitation to their sites. The opportunities for improved site management are also manifold.

There is however a note of caution. The E4G extension to the regional tourism model was predicated on the evaluation of EU funded interventions, and with appropriate monitoring and evaluation a requirement of EU grant aid. *Without* this requirement it is unclear how far regional policymakers would have been interested in embarking upon the long and difficult path to a robust local-regional evaluative framework for tourism interventions. There is only any point in expending effort on sophisticated evaluations if the policy framework is willing and able to act on the intelligence arising from them. The future of E4G evaluative approaches and data collection structures will be a good test of this regional policy openness and flexibility.

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