

MANAGEMENT DOCUMENTATION INDICATORS & GOOD PRACTICE AT CULTURAL HERITAGE PLACES

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ABSTRACT:

Documentation for cultural heritage places usually refers to describing the physical attributes, surrounding context, condition or environment; most of the time with images, graphics, maps or digital 3D models in their various forms with supporting textual information. Just as important as this type of information is the documentation of managerial attributes. How do managers of cultural heritage places collect information related to financial or economic well-being? How are data collected over time measured, and what are significant indicators for improvement? What quality of indicator is good enough?

Good management of cultural heritage places is essential for conservation longevity, preservation of values and enjoyment by the public. But how is management documented? The paper will describe the research methodology, selection and description of attributes or indicators related to good management practice. It will describe the criteria for indicator selection and why they are important, how and when they are collected, by whom, and the difficulties in obtaining this information. As importantly it will describe how this type of documentation directly contributes to improving conservation practice. Good practice summaries will be presented that highlight this type of documentation including Pamplona and Ávila, Spain and Valletta, Malta. Conclusions are drawn with preliminary recommendations for improvement of this important aspect of documentation. Documentation of this nature is not typical and presents a unique challenge to collect, measure and communicate easily. However, it is an essential category that is often ignored yet absolutely essential in order to conserve cultural heritage places.

1. INTRODUCTION

1.1 Introduction

Conservation of cultural heritage places can only be ensured through successful management. And management can only be successful if measured then improved through the identification, adoption and implementation of indicators decided upon, standardised and collected over time. In addition, good management practice can only be described, verified and transferred if properly documented. Documentation of management attributes aids in establishing priorities for transformation, transference and implementation of verifiable good practice internally and *between* cultural heritage places. Just as a surveyor measures size and area, a photographer records the visual and a conservator notes conditions - management practice must also be documented. However at many cultural heritage places these management attributes are neither recorded nor measured. This paper will describe research into this topic and seek to answer the questions:

What indicators are important to improve management?

How is such information collected and measured?

When is this data collected over time?

What quality of indicator is good enough?

Are there good examples of this in practice?

And finally, the overarching question:

How can management of cultural heritage places be documented for improvement of conservation practice?

1.2 Objectives

The overall objective of this research is to improve conservation management practice of cultural heritage places. The specific objectives are to gather data then analyse and understand how some of these places are successful in their management and how they use and document indicators, metrics and management attributes. Additional objectives include comparison between similar sites, related fields and finally recommendations for collecting this type of information.



Figure 1 – Visitors at the Ravelin, Famagusta, Cyprus. It is important to know how many visitors, but an indicator is more useful if multidimensional. Visitor origin country, time spent on site and age of visitor is useful for prioritizing interventions.

2. METHODOLOGY

The methodology was one of first defining the problem – Most cultural heritage places lack regularly collected documentation related to attributes and indicators or conduct benchmarking over time or comparison against other locations necessary for improving management. There is generally little importance placed on indicators and good practice examples must be better communicated. The methodology included the hypothesis that with a number of indicators identified then defined along with good examples it would begin to address this problem. Following this secondary research was conducted into collecting and describing characteristics, values and attributes with sources from academic articles, policy guidance papers and other sources. This was followed by primary research through telephone and in-person interviews and emails to verify assumptions. Finally, many sites were visited in person. Secondary research was then later extended along three lines:

- 1) Studies of existing efforts to document management at cultural heritage places specifically for conservation.
- 2) Management indicators used for other cultural institutions such as visual museums and cultural events.
- 3) Documentation of indicators for management, in general, but limited to non-profit organisations, government agencies and environmental conservation.

These lines of investigation revealed interesting results. First of there was substantially more academic research, policy papers and practice guidance for environmental, government agencies and non-profit management. This was not surprising given the high level and long term interest in environmental protection, government accountability requirements and large number of non-profit organisations. This line of investigation revealed numerous interesting results that could be easily adapted to cultural heritage places. There were also numerous extremely useful sources concerning other cultural institutions such as museums and visitor centres. Finally, the research supported the problem statement that at many cultural heritage places management attributes are insufficiently documented.

A mixed methodology was used that including the collection of both quantitative and qualitative data to inform this study. This provided the means to integrate data from a variety of sources and perspectives. The quantitative research included statistics (when rarely available) and this data was combined with interviews and visits for understanding the context. Data from these sources was integrated to draw on the strengths of each in order to answer the research questions and support the thesis.

3. INDICATORS

3.1 Definition

One topic ever present in both the secondary and primary research was the need for appropriate and relevant indicators. As stated by Kuka (2012), the role of an indicator is to measure, compare, report, signal, call for adjustment, damage control or rewards. Cultural indicators are tools for: 1) collecting evidence for analysis, 2) building arguments in advocacy, 3) providing sound evidence and arguments for policy and decision making, 4) monitoring and reporting on weak and strong points. In summary, indicators imply managerial responsibility for both achieved results and non-implemented activities (Kuka, 2012). They are the elements that make up good management practice and provide the unit of measure by which improvements can be evaluated.

These indicators are, of course, much easier to apply to a for-profit organisation that is mainly concerned with money making activities – much more difficult for organisations whose main goal is the public good where production measurement is much less clear. Poole (2015) mentions that indicators share:

Consistency and comparability: indicators should be consistent over time and [compatible] between organisations to enable comparison [and sharing of good practice]

Clarity: Indicators are simple, well-defined and easily understood by management, employees and decision makers

Controllability: Aspects of performance over which there is control by the management should be measured

Limited: The organisation should always concentrate on a limited number of performance indicators that give the most valuable management information

Feasible: indicators that can be measured easily

3.2 Questions and Issues

Developing effective indicators may appear to be simple at first. However the research revealed that very few cultural heritage places have succeeded in using indicators to make substantial improvements. Kotval (2002) has written that, in general, it is clear that [most] methods used to account for work are simplistic and explain very little about true accomplishments. There are other issues with using indicators. One of the main issues is obtaining the data in the first place. Others include:

What information should be collected? and Why?

How often should indicators be collected?

When should they be collected?

Is the data comparable to other cultural heritage places?

Is the feedback received actionable?

How can success be proven?

Does the data align with the goals of the organisation?

As pointed out by Pignataro (2011) the basic questions addressed are two: what to measure and which methodology should be used? Indicators should include information on people, internal processes and include reviews. Importantly, data collected must be tailored specifically to the cultural heritage place in question but simultaneously balanced to ensure an appropriate cost-benefit as well as comparisons over time and with other locations.

Just as there is a danger in not collecting enough information there is the opposite in collecting too much information. This reduces the impact of useful data and distracts attention and may give a false sense of improvement. Another danger is that organisations and even individuals may only focus only on the indicators themselves, gaming the situation, and not the objective of improving management. They should be used as a tool and not the end to the means. Finally, indicators cannot be frequently changed or they cannot be used for comparisons over time. Therefore it is important to study, discuss and then select the indicators necessary for improvement. As pointed out by Kuka (2012) there are many flaws with the use of indicators. Three lessons that were extracted from Cobb and Rixford (1998) extracted the history of social indicators of which some that are applicable for monitoring culture: Numbers alone do not necessarily signify a good indicator, Comprehensiveness may be the enemy of effectiveness, Better information leads to better decisions, but is not easy.

3.3 Quantifiable vs. Qualifiable & Multidimensional

The research revealed that organisations that do use indicators tend to focus on the quantifiable, and this is understandable. Numbers are easier to collect, compare and associated with facts. However, qualifiable indicators should not be forgotten. Often visitor surveys reveal positive phrases and relate experience summaries that are just as powerful and easier to relate with. These two types of indicators must be balanced.

An important aspect of indicators is their multidimensionality. An example indicator is number of visitors. This is an extremely useful figure over time but is relatively flat. A multidimensional indicator not only includes the number of visitors over time but also how long they stay, if they leave knowing more than when they arrived, where they come from – local vs. international, etc.. This multidimensional aspect is much more powerful but must be reasonable and provide an appropriate cost-benefit.

Finally ratios of indicators are also important as they provide and reveal interesting comparisons. One example is a ratio of local community use vs. international visitors per receipts from entry tickets. Such a ratio is useful for discussing conservation projects with local decision makers (and those with funding).

3.4 Alignment with Goals, Monitoring and Evaluation

It is impossible to improve management if it is unknown how indicators meet the needs of the organisation and align with its mission, goals and objectives. Therefore indicators must be well thought out and clearly stated as to how the indicators will assist in achieving these targets. It is of crucial importance to clearly define the goal and expected deliverables that cultural indicators were supposed to measure. Since there are different types of indicators (measuring performance, process, output, outcome, impact, etc.) and different level of indicators (international, national, local, institutional, etc.), each with different use to decision makers, selection of type of indicators that is going to be monitored is one of main preconditions for testing of the efficacy of particular indicators (Kuka, 2012).

But this is insufficient as the indicators must be measured over time – frequently benchmarked to monitor performance. This will help identify if the cultural heritage managers will achieve their missions. It also helps identify small problems before they become bigger and bolsters confidence when management is succeeding. Benchmarking also included comparing one cultural heritage site against another. While this is not always feasible, nevertheless, it is an important exercise and conducted unconsciously by decision makers. Everyone who works at the cultural heritage place should know of both the indicators and how they function to achieving the organisation's mission. They should be easy to understand and communicated frequently both inside the organisation and to stakeholders (when applicable). Individuals should understand how their work relates to indicators and thus impacts the overall management. A useful acronym for indicators uncovered during the research is SMART: Specific, Measurable, Actionable, Relevant, and Timely. Use of such acronyms aids individuals in understanding how their actions impact the success of the management.

Jamieson (2013) mentions that monitoring in all aspects of conservation are complex, monitoring and evaluation in cultural tourism [or conservation] is especially difficult given the wide range of actors and activities which must be considered. The challenge is to ensure that the form of assessment evolving is consistent with the needs.

3.5 Implementing Indicators

What are steps to implement effective indicators?

According to the research many experts suggest that the first steps are to assess the assets and identify problems. Problem statement exercises are often necessary to discover the root of the issues. These are often conducted in stakeholder meetings often constructing a problem tree diagram beginning with the large overarching problem (the trunk) and breaking it down into individual smaller problems (the branches).

Once the problems are understood and analysed and assets are known the goals and objectives of the cultural heritage place can be written, agreed upon and established. Only after this preliminary work can the selection of indicators begin. Once indicators are selected they can then be evaluated as to feasible and balanced with cost effectiveness. Once complete there will be ample evidence as to why, how and when certain indicators were selected. Such work aids greatly in selecting indicators and implementation of a management documentation system.

3.6 Indicators

To begin to propose indicators for use in management it is helpful to divide into categories. Below are five suggested categories followed by brief indicator descriptions.

General Management - personnel, safety, reporting, organisational goals, objectives

Financial, revenue, income, expenditures, external / internal willingness to pay or contribute

Conservation, maintenance, priorities, long term plans, risks identification, cleaning

Projects, number of projects or exhibitions, events or publications. Work beyond the standard daily tasks.

Visitors, public engagement, number of visitors, local or international, digital engagement, interviews and education.

The indicators within these categories can be gross figures such as number of visitors but they can also be subdivided to provide the multidimensional aspect mentioned earlier. Such multidimensional aspects include the visitor's origin, age, how long they stay on site, how they compare to other places, first time or repeat visits, etc. Another very useful indicator is the number of virtual Internet visitors. This number can be compared over time and with the number of actual visitors. This would give an indication of the effectiveness of the on-line presence of a cultural heritage place. The indicators should also be given a weight or multiplier to signify which indicators are more important than others.

Another useful tool with indicators is the type of indicator – what it is measuring; an input or an output. For example, expenditures are output whereas number of visitors is an input. This aids in creating useful ratios such as cost of inputs for resultant outputs. The responses can be both quantifiable and qualifiable and should be described as such for consistency.

Finally, it is essential that the indicators be easily compared to the targets that represent achieving the goals and objectives of the organisation. These must be measured over time and the current indicator compared with past indicators. These proposed indicators, their categories and other information could be listed in a table. Any indicators proposed must be reviewed and used with caution as they must be adapted specifically to each cultural heritage place.

4. GOOD PRACTICE

“A good example has twice the value of good advice”
 Albert Schweitzer

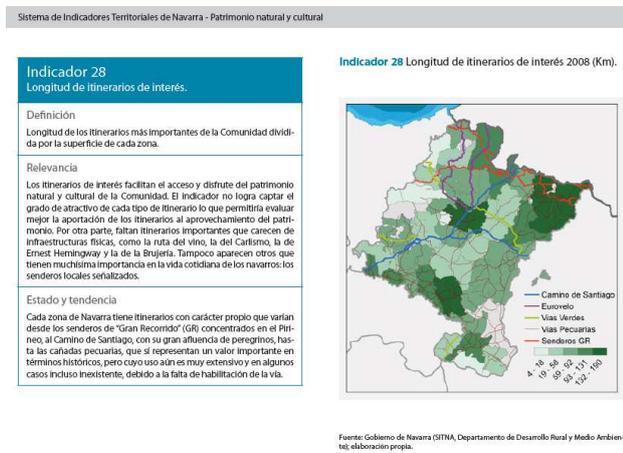


Figure 2- Navarra, Spain lists easy to read indicators, in this case cultural routes with numerous maps including Pamplona.

4.1 Good Management Practice

Indicators document good management practice and record improvements over time. However they are only elements that often fail to tell the entire story. Good management practice examples are easier to understand and therefore make more of an impact. They set precedents, serve as models and can be clearly communicated. However, only if previously mentioned relevant indicators and attributes are identified, documented and described properly can they have an impact and influence.

A management good practice can be defined as an initiative (methodologies, projects, processes, techniques) undertaken in thematic priorities which have already been proven successful and which have the potential to be transferred to other geographic areas or over time. It is significant that the good practice has already provided tangible and measurable results in achieving a set of specific objectives (INTERREG IVC, 2014).

During this research management numerous good practices were investigated at fortified cultural heritage places including Famagusta, Rhodes, Dubrovnik, Valletta, Ávila, Jerusalem, Pamplona, Carcassonne, Elvas, Lucca and Acre. The research was specifically focused on these sites because they include powerful defining elements and features such as city walls, fortresses, ravelins and bastions. The case studies were selected in order to focus research on one specific type of cultural heritage in order to facilitate direct comparisons yet diverse enough to offer differing points of view and unique solutions. In addition, fortifications are expensive, extensive, difficult to maintain and conserve and funding options extremely limited thus management is even more challenging. Common characteristics included complete or nearly complete walls at or near World Heritage status. Uncommon characteristics included epoch and type of construction, physical dimensions, geographic disbursement, various management structures and number of visitors. The case studies were investigated in a way that that permits a consistent analysis of good practice. In limited space of this article not all case studies that were investigated during the research will be described but three good practice examples from Pamplona, Ávila and Valletta will be described briefly to highlight good examples and the use of management documentation.

4.2 Case Studies

Pamplona - The first case study is in Pamplona in the province of Navarra, Spain. The province has developed a system of territorial indicators that includes various forms of cultural heritage (Sistema de Indicadores Territoriales de Navarra – SIOTN / OTN, 2011). This clearly outlines a number of important indicators at the territorial level and was created with easy to understand definitions, relevance, status and tendencies over time. GIS (Geographic Information System) maps are used extensively along with charts and the definitions, relevance and objectives are clearly listed. The risks are outlined with useful comparison grids to national Spanish and European levels. Several aspects of cultural heritage are mentioned including individual towns and cities and their boundaries, buffer zones and cultural routes such as the famous Route of Santiago de Compostela. An important aspect of this system is that it is possible to compare indicators across many different themes unrelated yet have an impact on cultural heritage places such as the environment. However, one unknown factor is how the territorial level indicators and management documentation interfaces with the management of cultural heritage within the city of Pamplona itself at a smaller, local scale.

At the city of Pamplona level their program “Agenda 21” provides a system of 21 indicators of sustainability, classified into four categories: social, economic, environmental and institutional in 12 subject areas (Ayuntamiento de Pamplona, 2014). These indicators are the result of the selection made in 2001 and are associated directly to the major issues in Pamplona (as well as other Spanish cities). This seems to be frequently updated and the city has gone to great lengths to provide all these indicators on-line through their Open Information Policy. Principle No. 6, in particular, directly relates to cultural heritage for the protection and preservation rehabilitation of historic, cultural and architectural values, including buildings, monuments and events; reinforcement and protection of beauty and functionality of spaces and buildings including the extensive fortifications surrounding three sides of the city. As with the territorial indicators it is possible to compare across themes not related to cultural heritage.

One important indicator that was not anticipated in their list is international recognition. In 2012 they were awarded the Europa Nostra prize for their conservation efforts of the fortifications. "The Jury was impressed by the restoration of the fortifications of Pamplona. Since 2006 the municipal government promoted an important plan of action for recovering the entire fortification enclosure, opening it to the public and improving the surrounding area as a recreational site where cultural and natural heritage come together. The restored fortifications are no longer only a defensive wall, but have been transformed into a meeting place and a symbol of unity for the citizens and for the town itself"(Europa Nostra, 2012). This brings up the point that any management documentation system must be open to include extraordinary important indicators.

SÍMBOLO	SIGNIFICADO
😊	tendencia favorable desde el punto de vista de la sostenibilidad, es decir, hay un acercamiento al cumplimiento de los Principios de Sostenibilidad
😞	muestra un alejamiento al cumplimiento de los Principios de Sostenibilidad
😐	los resultados del indicador muestran aspectos positivos y negativos con respecto al cumplimiento de los principios de sostenibilidad
-	los resultados del indicador no permiten determinar la tendencia evolutiva del indicador y su adecuación a los principios de sostenibilidad, o no se dispone de información suficiente.

Figure 2- Pamplona uses coloured smiley face symbols in order to facilitate communication of benchmarking indicators.

Ávila - A second good practice is that of the World Heritage site of Avila, Spain. The city is well known for the high level of conservation and their defining feature of a complete medieval wall and extension to include elements outside the walls.

At the regional level there is the Plan PAHIS developed by Patrimonio Histórico de Castilla y León. This plan is frequently updated and divides cultural heritage into thematic themes and has developed clear targets and programs. The programs are broken down into more than one hundred forty actions, projects, activities or initiatives - that are evaluated by more than *one hundred indicators* - measurements or evaluations, quantitative and qualitative (Plan PAHIS 2004, 2012, 2020). The actions have developed a monitoring and evaluation through indicators to undertake a continuous evaluation of these objectives of the plan. Each indicator is listed by theme then linked to objectives, programs and specific actions and are divided into basic and specific.

At the national level there is also coordination with the Spanish Federation of Municipalities and Provinces through their document Municipal Management of Historic-Cultural Heritage (FEMP, 2014). This document states that an important aspect is to established (within deadlines) an extensive list of indicators of the situation of cultural assets over time. The indicators include condition, risk factor, visitors and their variation over time as well as other factors, training, dissemination, etc. But it is still unclear as to how these larger plans are adapted vertically into the specific management at the municipal level.

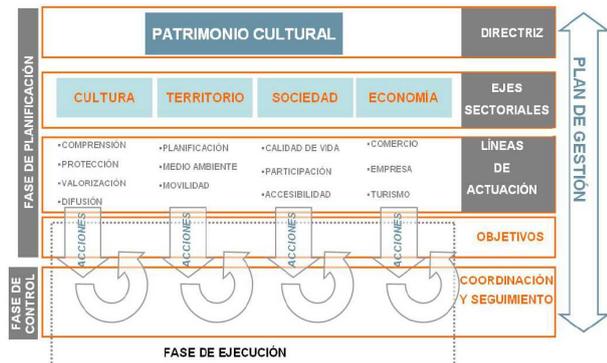


Figure 4- Table with sectors of culture connected to with lines of action, objectives and control phases and execution

Specifically in the management plan of Ávila indicators directly compare and rate progress to the criteria of the World Heritage nomination and officially listed cultural values. In their summary for management actions they list in Point 7 - Implementation and maintenance of monitoring tools for cultural heritage (conservation, management). The availability of this information, and systematically, through a monitoring mechanism (which may have varying degrees of scope and updating) can help optimize resources and offer a diagnosis and periodic evaluation effects of actions for improvement. It can also provide basic information for the preparation of periodic reports for evaluation of UNESCO's World Heritage cities, along with other indicators that may be part of the Global Monitoring System (Ávila, 2014). Their management plan directly lists in a summary table the sectorial objectives of four heritage themes: Cultural, Territory, Society, and Economy / Tourism. These are directly matched with lines of action and the objectives. Additional tables follow which then greatly expanded into more detail in each theme and action. What is unclear is the indicators aligned with each table and how benchmark monitoring over time will be associated with each action. It is also unclear how often the indicators are updated.

Valletta – The final case study is of Valletta, Malta as their fortifications are well known and the state has recently created their Draft National Strategy for the Cultural Heritage in 2012. This document clearly outlines 22 Strategic Objectives with a specific timeframe of 5 years. It contains macro and micro policy level objectives with a focus on improving cultural heritage management. These objectives are very approachable with brief descriptions and clear reasoning. They are followed by tables that list the objectives along with specific measures, the agency responsible for leading the process, key indicators and importantly a beginning time frame and ending time frame. Specifically mentioned is the Strategic Objective 3.8 which states: Increase coordination in the collection of statistical data relating to the cultural heritage. This objective aims at ensuring a clear understanding of cultural heritage indicators and trends through the timely collection of statistical data. This will result in the proper understanding of emerging issues and requirements. Moreover, it will allow improved planning of required innovation and development initiatives and strategy. Finally, there is a section that mentions implementing the strategy and recognises that without monitoring the indicators the objectives will not be met. Therefore they established a Committee of Guarantee and key agencies with individuals responsible. Again, as with the other good practice examples, it is difficult to understand how this is implemented at specific sites and if indicators are used at an individual site basis.

Care and Use of the Cultural Resource Preservation and conservation					
Strategic Objective	Measures	Indicators	Process led by	Other entities	Time-Frame Start End
Archive of conservation and restoration projects.	[4.1.1] Consultation with stakeholders	• Consultation report	SCH	HM MTCE MRRA UoM NA ...	2012 2013
	[4.1.2] Terms of Reference for submission of documentation	• Issue Terms of Reference			2014 2014

Figure 5 – image from action plan?

At the level of the city itself, Valletta has been involved in the European URBACT European exchange programme promoting sustainable development within the research project HerO – Heritage as Opportunity. In this framework Valletta has created the Valletta Action Plan – the Integrated Cultural Heritage Management Plan. They developed this plan to follow the principles of best practice on a national and international level. They specifically mention indicators and propose performance benchmarking. They mention the plan is vital to balance social development, vacancy rates and develop methodologies. Their Operational Guidelines mention performance based indicators to guarantee activation which previous plans do not contain and seek project based actions that have targeted definite results through clear objectives. They specifically mention they are moving away from the Master-planning concept with a more pro-active approach to planning and performance based action with an Action Plan (Valletta, 2013).

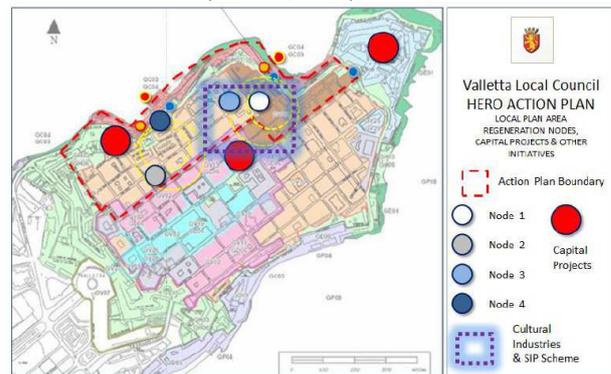


Figure – 6 the Valletta Action Plan contains GIS maps of the city that are easy to understand with specific capital projects.

5. CONCLUSIONS

5.1 Results

Documentation of tangible and measurable attributes and results is absolutely necessary for understanding why management is successful (or not) and for useful comparison against goals and objectives over time. The benefits of documenting attributes and indicators are not only for evaluation, but also identify limits and opportunities over time, prioritise conservation interventions and communicate with stakeholders. This research has identified a few indicators for cultural heritage places and these are *suggested* as a starting point in the annex. To return to the original questions posed at the beginning of this paper some preliminary answers will be attempted:

What indicators are important to improve management?

Those that will fulfil the goals and objectives for long term conservation while meeting the needs of the stakeholders. Basic indicators are absolutely necessary but must be reasonable and within the capacity of the management, staff and budget.

How is such information collected and measured?

Information should be collected by those close to the data sources and they should understand how individual actions contribute to overall success. But information must collated and analysed by the management.

When is this data collected over time? As often as reasonably possible balancing cost-benefit; some indicators require daily collection such as number of visitors others such as expenditures can be collected quarterly as this is in line with financial reporting.

What quality of indicator is good enough? Good enough to provide information upon which to act responsibly, but better if multi-dimensional – More dimensions are necessary if required to appropriately aligned with the goals and objectives.

Are there good examples of this in practice? There are numerous examples within cultural heritage at the territorial and site levels as presented. But countless other examples exist in museums and with environmental conservation efforts.

How can management of cultural heritage places be documented for improvement of conservation practice?

Through the use of proper indicators, decided and well designed in advance and collected over time that align with the goals and objectives can management be documented to improved and ensure long term conservation.

As Kotval (2002) states: One of the main reasons for evaluation is the public's need to tell whether it is getting value for its money. Indicators of successful economic development programs raise the confidence of both the local government and the private sector and encourage investment in the projects and programs of the community. The situation and needs of heritage are variable over time, as are the resources to address these needs. Therefore, for proper decision-making, prioritization and forecast performance and resource allocation, it is necessary to have a precise and updated state of each of cultural heritage assets. The availability of this information, and systematized through a monitoring mechanism (which may have different degrees of scope and updating) can help optimize resources and offer a diagnosis and periodic evaluation effects of actions for improvement. It can also provide basic information for the preparation of periodic reports evaluation of UNESCO's World Heritage sites, along with other indicators that may be part of the monitoring system of a management plan.

5.2 Findings

The findings from this research can be summarised as follows:

- International guidance is abundant in regard to documenting management practice at cultural heritage places; from general principles to good practice with practical applications – However implementation for such documentation at individual places is much less common.
- Additional examples of successful documentation of management practices exist in related fields including environmental protection, museums and musical events – These must and should be adapted to cultural heritage sites.
- Indicators to document good management are politically sensitive and thus limits transparency - While this is understandable it is essential documentation necessary to improve management and decision makers must be encouraged to share this documentation.
- There are many regional and local plans that call for indicators and management documentation – however this research suggests that many of these start well but over time the data collection is not often collected thus limiting usefulness and effectiveness.
- Excellent documentation of management for cultural heritage places exist at the national and territorial level but the individual site level documentation is less precise and the use of indicators is most often not followed - Connections between documentation at the macro and micro levels is often not coordinated.
- Communication of documentation management is in general presented in table form with alignments between objectives and indicators – Much more work must be done in innovative graphic methods to help in understanding.

5.3 Future Research

The objective of this research was to improve conservation management and then gather data to understand how some of these places are successful documenting their management. This is only just beginning to be accomplished and further research must be conducted. This paper represents only the first step in on-going research into management and economic models of self-sustainability for cultural heritage sites that include city fortifications. The research will continue further through a widening of the scope to include in-depth investigations at other city fortifications and limited research along other related lines of inquiry. Investigations, both primary and secondary, will also continue at selected sites in order to incorporate any good management practice that can be useful for the conservation of cultural heritage sites.

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APPENDIX

General Management								
Indicator	Multi-Dimension	Description	Responsible	Weight/multiplier	Category	Past	Current	Target
Personnel								
	# of people	employees			input			
	Skilled workers				output			
	Professionals	contracts			input			
	Consultants	contracts			input			
Safety								
Conservation / Projects								
Indicator	Multi-Dimension	Description			Type	Past	Current	Target
Projects								
	Conservation	Area of conservation			output			
	Dissemination	Number of activities			output			
	Documentation				output			
	Tours	Number/size			output			
Maintenance								
	Area, size				output			
Community involvement		Number of participants						
Articles	Academic newspaper, television				output			
Exhibitions	number				output			
Visitors								
Indicator	Multi-Dimension	Description			Type	Past	Current	Target
Site visitors								
	Time spent	quantifiable time			output			
	First time				output			
	Origin	Local / international			output			
Web visits	Unique visitors	First time visit			output			
	Repeat visitors	For changing exhibitions			output			
	Time spent	On line			output			
Financial								
Indicator	Multi-Dimension	Description			Type	Past	Current	Target
Revenue		Income						
	Central funding				input			
	Special project				input			
	Grants				input			
	WTP	Willingness to pay			input			
	Intrinsic contributions	Contributions without anything offered			input			
	Extrinsic contributions	Something offered in return – brochure, etc.			input			
Expenditures								
	Maintenance	Time / funding / area			output			
	Personnel				output			
	Contracts				output			
Income								

Figure 5- Table of possible / proposed indicators. It is important to understand what the indicator is measuring, that it have multiple dimensions (more detail) and whom is responsible. Also it is important to compare to past indicators and the target or objectives.