Turning data into insight

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Abstract

Museums are broadening their missions and identities and have over the last 15 years or more been extending their public dimension - learning, social cohesion, diversity and public value are central to every museum's activities. Museums cannot function independently of the social context within which they exist. They are under increasing pressure to respond to public sector agencies for funding and to identify and provide visitor-orientated benefits that are not available elsewhere. Who are the audiences? Can the museum influence the external environment in which it sits (and if so - how)? What are the impacts of social change on the organisation? What aims does the museum want to meet and what outcomes are in fact achieved? Monitoring, performance and awareness of the external environment are crucial to successful management and planning.

In this paper I would like to consider what a management information system might look like by using National Museums Liverpool as a case study. I will explore both the external and internal environments of the museum and show how museums can strive towards becoming bold, outward looking organisations and embrace creativity in their leadership style.

Museums are broadening their missions and identities and have over the last 15 years been extending their public dimension. Learning, social inclusion and public value are central to every museum's activity. They cannot function independently within the social context in which they sit. Museums must keep up with world wide trends of globalisation, technology, consumerism, sustainability and climate change.

In many parts of the world, particularly in Europe and the United States value is being increasingly placed on the role of culture in society. Cultural and social regeneration are seen as fundamental drivers to improve quality of life and promote a better understanding of the societies in which we live. Museums play a central role in this cultural renaissance. This shift in emphasis has brought about changes in the way that museums are managed. It has led to a fierce competition to attract funding and real pressures for museums to provide evidence on how they can contribute to social cohesion and enhance public value.

Internal performance and external environment have become inextricably linked and museum leaders require sound management information to make choices and take key decisions. How do they get the necessary information to make these decisions? How can we ensure that the information is reliable and up to date? The challenge is to create strategic thinking that enables effective management for current and future performance. Eddie Short in his paper on creating intelligent enterprises, argues that "for many leaders the problem is, that no matter how skilled they are, they do not get the information and knowledge to take key decisions or worse still the information is out of date and unreliable" (Short, 2006, p.43).

I would like to argue that intelligent information helps give the museum a sense of purpose in all its decision making and

provides the confidence to be creative and adventurous in its visitor offer. No matter what the organisation, if you do not know the environment you are operating in, delivering strategy and long term planning can incur considerable risks.

- How can we plan exhibitions if we do not know what is in our collections?
- How can we attract funding if we do not know who to approach?
- How can we tell the public about us if we do not know who our visitors are?
- How do we attract those that do not visit, if we do not know what they need and want?
- How do we best develop our staff, if we are unaware of the most up to date development opportunities?

We need to know all these things for a number of reasons:

- To reach a diverse audience
- To attract funding
- To identify and breakdown barriers
- To understand visitors
- To lead a successful museum

In this paper, I will outline a major management information project that I am currently carrying out at National Museums Liverpool. I will explore how strategic information and environmental analysis can be drawn together in a tool that becomes aligned alongside the corporate planning process.

Using National Museums Liverpool as a case study, I intend to demonstrate that:

Museums need to manage their performance.

Museums need to manage their external environment.

Museums need the right tools to be bold, intelligent organisations.

Project background

It is out of this need for knowledge that my role as Research and Information Officer has evolved and an intelligence function has been established in the centre of the organisation.

Coming from a social and market research background, I have been in this job for almost two and half years now. My main responsibility is to support the director's representational work; to undertake research into strategy and policy matters and assist in the planning process; to respond to requests for information and consultations and to provide an external trend analysis.

Up to now, information has been gathered on an ad hoc basis and reports are prepared when necessary. A vast amount of data is collected across the organisation but it is not always readily available. There is currently no corporate standard for recording information and no clear process of where information is reported and how it is stored. The need for a solid knowledge base is becoming more and more imperative for National Museums Liverpool as it is continuously growing and taking on new and exciting challenges.

Let me put National Museums Liverpool and the city of Liverpool into context:

National Museums Liverpool, is made up of eight museums and galleries in and around Liverpool and was created as a national museum service in 1986 in recognition of the outstanding world wide multi-disciplinary collections that it holds - fine and decorative arts, archaeology and ethnology, natural and physical sciences, maritime, social and industrial history - reflecting Liverpool as an international port - a gateway to the world. As a national museum service it is funded by an annual grant in aid from central government which is subject to performance. It is the only national museum service based wholly outside London and as such National Museums Liverpool has a unique fourfold role:

Local - rooted in the local community of Liverpool and Merseyside

Regional - the largest museum service in the North of England

National - a national remit and responsibility

International - an international profile, as a UK national museum and the cultural flagship in the heart of one the world's most well known cities.

National Museums Liverpool's vision is to provide routes to discovery, awareness and learning for all, our vision is to be progressive and outward looking, exciting and inspiring people in ways that are inclusive yet challenging. We achieve our vision through our exhibitions, learning programmes, partnerships, research, archaeological fieldwork and the care and development of our collections and buildings.

It is the biggest cultural employer in the Northwest region of England with almost 600 staff employed this year. In the last year, NML attracted over 1.6 million visits - the highest figure in its history.

The next four years will see us undertake an ambitious capital works programme across the whole of our estate. Not one of our venues will remain untouched by a confident scheme that will display more of our collections in new and innovative ways. Our fundraising strategy will continue to support our capital development programme as we pursue all opportunities for maximising our income. Two new museums are also being developed: an International Slavery Museum and a new Museum of Liverpool - a city history museum - telling the history of the United Kingdom through the eyes of Liverpool.

A few words about the city. With a population of almost half a million people, Liverpool is home to many distinct communities, including those from Africa's west coast, Somalia and Yemen. Liverpool is also home to the oldest Chinese community in Europe. The city council estimates that there are around 4,000 refugees and asylum seekers in Liverpool representing over 70 nationalities of whom 600 are children.

It is a city that has some of the most deprived areas in England, unemployment is

twice as high as the national average and from the 1930s into the 1990s the population was declining. This was a particularly desperate time for Liverpool, and people were leaving the city.

But things are changing.

In 2008, Liverpool will become the European Capital of Culture. Since winning the award in 2003, Liverpool is demonstrating a strong economic revival. It is at last experiencing a rapid and visible regeneration, with the city's cultural renaissance underpinning a wider urban regeneration, and is giving the city new hope.

The decline in population has now halted and the latest estimate shows that the city's population has increased by almost 3,000 people - crucially these figures show that people are now moving back into the city reversing the trend. The regional economy is rising, the property market is booming - property prices have risen faster than in London and the United Kingdom as a whole over the last two years. Tourism is continuously increasing and for the first time the tourism industry has passed the 1billion mark per year.

The city's focus is on cultural regeneration, creating social cohesion, sustainable communities and delivering a legacy for the people of Liverpool. Cultural activity plays a major role and the city is investing 50 million euro into the city's art scene. As the largest cultural institution in the city, National Museums Liverpool plays a central role in helping to deliver a successful year and understanding the changing context of Liverpool as a world city and building on its legacy.

It is important that we understand the environment we work in so that we may respond not only to priorities set by the government but also to the city's regeneration agenda and wider development plans for the region.

On this exciting and challenging platform of rapid change, we need to make sure that alongside all these developments the organisation runs smoothly, that we can perform to our government targets and work towards the fulfilment of our vision and beliefs. Without the ability to build situational information into our planning, the organisation risks to run in isolation of the city's transforming infrastructure and could to lose out on funding opportunities for the development of the museum. Broadening our audiences is short of impossible without knowing who our visitors are and what makes them visit. Strategic intelligence about the economy, population, learning and skills and working with our key partners must inform our understanding of all our work.

Increasingly external consultations on the impact of culture land on the director's desk. We need to be much more active in putting together co-ordinated responses to make our plans, views and concerns heard and to develop a strong voice in the cultural community.

It is with this background that I have carried out a full management information audit and I am now working on a practical solution to deliver a Research and Intelligence Strategy.

The aims of the project are to
- to map all information gathering across the organisation
- to map external information sources and types of information necessary
- to identify long running trends, understand how NML compares to others and embed readiness for the future
- to come up with a system that can provide an intelligence and knowledge based context for planning and policy making
- to align this knowledge with the strategic planning process, and ultimately
- for NML to move away from its sometimes more reactive character to become responsive and proactive, especially in strategic planning.

Put simply, the aim is to understand the big picture - what's happening outside the museum, how does this impact on the museum's performance and how can the museum influence its environment?

Internal information and monitoring performance - what data do we need to collect?

The first phase of the project was to map all performance and progress data that is collected in the organisation. As a national museum service we need to measure ourselves against a series of key performance indicators that have been set by the government and that determine our annual grant. In addition to these indicators, there are a several other ways how the organisation can meaningfully measure its performance.

For each department the following questions were asked:

Who?   -   Who collects the information?
What?   -   The type of information
Why?   -   Why is it important?
Where?   -   Where is it reported?
When?   -   When and how often is it reported?
How?   -   The method of collecting the information

For every department a map was produced that outlined all the information that is collected and used for monitoring and information purposes. The same format was applied to each map to make sure that the findings were consistent and also to be able to easily identify gaps and trends in information provision.

Take visitor figures and visitor profiles as an example. This is probably the most straightforward example to show you how this mapping exercise worked.

Who?

The Research Office in the Marketing and Communications Department is responsible for collecting visitor figures and visitor profiling.

What?

Visitor figures - number of visits, repeat visits.

Visitor profiles - demographic breakdown, satisfaction, awareness and motivation.

Why?

We have forecast our visitor numbers to reach 2 million by 2010. In order to achieve this, it is crucial that we know how to make sense of the figures. Understanding why numbers are falling is just as important as to know why we are performing well. We currently have historical data for visitor numbers over the last 20 years. Over the last five years, visitor figures have exploded, and our mission and strong learning and exhibitions programmes have continued to maintain this momentum. We are now recording the highest visitor numbers in NML's history.

However, visitor figures do not tell the whole story. Not only do we need to know how many people are visiting - but we also need to know who they are and what motivates them to come. This knowledge underpins our audience development work. To help gather this critical information we carry out an annual Visitor Profiling Survey.

Where?

The data is reviewed and changing patterns are identified alongside historical data at a performance monitoring working group. The visitor figures are first approved before they are circulated to all staff, trustees and the central government department.

Visitor profiles are reviewed annually at this group and made available to all staff and reported to Trustees.

When?

Figures are reviewed at the performance

working group and reported to all staff on a monthly basis and sent to central government. A quarterly summary of figures is sent to the Board of Trustees and the breakdown of visitor profiles is distributed once a year.

How?

We collect our visitor figures via electronic counting systems installed at every museum entrance and in temporary exhibition areas. School and group visits are recorded separately. The Learning Division needs detailed information on the success of its educational programme and has recently put a strategy in place to attract more schools from deprived areas and schools from further a field.

Visitor profiles are collected in a quarterly visitor survey. It is the largest random sample survey that we carry out - helping to ensure reliability of findings. We have been carrying out this survey for just over three years now. Each year the findings will build on each other and we can start looking at trends in performance and behaviour, gaining insight into how successful our programme and audience development efforts are.

This exercise was carried out across all departments and once all the information was gathered, the information was grouped together and divided up in areas of performance, the measures of evaluation and the methodologies. The following table lists these areas and the key measures that NML

Area of Performance	Measures
Audience Development	Visitor figures
	Visitor profiles
	Learning outcomes
	Social impact - community consultation
	Diversity
Venue Assessment	Customer care standards
	Satisfaction levels
	Complaints and praises
	Visitor feedback
Communications and Public Relations	Brand awareness
	Marketing impact
	Press and media coverage
	Legacy and reputation
	Tourism - benchmarking
Fundraising	Donations
	Pledges
	Grants
Collections Management	Loans
	Research and scholarship
	Digitisation of the collection
	Conservation and maintenance
Operations	Efficiency gains in technology
	Efficiency gains in use of buildings
Governance	Corporate processes
	Risk Register
Workforce development	Diversity
	Training
	Retention
	Recruitment
Finance	Cost per visit
	Income and expenditure
	Savings
	Economic impact

uses to monitor its performance.

In addition to all performance related data shown here, there are further sources of information that help make up the bigger picture of what happens inside NML. Information updates are put together on a regular basis and reported to staff and trustees. These reports include information on exhibitions, learning programmes, community projects, museum partnerships, external representation and international activity. Information updates added to performance data round up the complete picture of what happens at NML.

Managing the external environment

Now that we have considered internal information gathering, we need to understand National Museums Liverpool's external context in conjunction with its performance. The internal framework on its own leaves a considerable gap in knowledge: what about developments in the city? Changes in government agendas? The state of the regional economy? Leisure trends? Social behaviour patterns? Changes in legislation? Stakeholder management?

What is a museum's external environment and what type of information do we need to collect? Can we influence any parts of it? The second stage of the mapping exercise followed a similar pattern looking at what, why, who, where and when but in a slightly different framework. Based on a review of national consultation documents and external information requests different types of information were identified. Taking into consideration the extent of the sources it became very clear that for many areas it is also important that we are aware not just of the immediate external environment but the also the wider remit within which NML operates and needs to respond to. The following table lists the main types of information that we collect at National Museums Liverpool and shows how far the awareness of each item currently reaches.

Finding out where this information comes from is key. There are many different sources of gathering external data:

- Government departments
- National Statistics Office
- Education services
- Community services
- Development agencies
- Cultural Bodies - for national research reports
- Local and national newspapers
- Tourism and marketing organisations
- Internet - for a more global outlook

Type of information	Remit
Benchmarking - visitor figures	local, regional, national
Demographic Comparison	local, regional, national
Government agendas	local, regional, national
Economic Review	local, regional, national
Regional Economic Strategies	local, regional
Cultural Sector Strategies	local, regional
Social trends	Local, regional, national
Tourism trends	local, regional, national
Regeneration evidence and impact	local, regional, national, international
Public value evidence and impact	local, regional, national, international
Economic impact of culture	local, regional, national, international
Diversity issues	local, regional, national
Media	local, regional, national, international
Community interests	local, regional
Museum trends - modernisation and change agendas	national, international
Culture and Heritage trends	national, international

- Free e-newsletters - globalmuseum.org, culture.info, the artsjournal.com
- Professional museum and heritage journals
- National Museum Associations
- International Museums Associations (e.g. ICOM)

To provide a quick and clear overview of the external environment we can then analyse this information by using the widely know management information technique PESTLE analysis.

- P - Political, what is the national political climate; how is the local government run?
- E - Economic - what is the economic impact of National Museums Liverpool
- S - Social - understanding social behaviour
- T - Technological - developments of new communication tools
- L - Legal forthcoming changes in legislation
- E - Environmental - can the organisation run more efficiently

This is a really useful exercise for the director and his team to carry out regularly in order to gain an overview of the key trends in the external environment that impact not only on the museum's planning but also on its day-to-day work.

Towards a research and intelligence strategy

Having briefly detailed the process of how National Museums Liverpool collects its internal information and how it carries out its situational analysis, the next stage is to implement a management information system that can deliver a Research and Intelligence Strategy.

The key attributes are to be:

- Consistent - in methodology
- Accurate - we need to rely on the information we gather
- Timely - we need up-to-date information
- Systematic - we need to consider the whole
- Accessible - the big picture is for everyone

The crucial thing is that information is gathered, analysed and reported consistently and systematically and that all information that comes together under the intelligence umbrella needs to sit right at the centre of the organisation and be available to all.

The research and intelligence strategy will bind together the broad elements that make up the internal and external with the aim to provide sound management information to the director and his team.

My role is to help build such framework and place it at the heart of the organisation. Information needs to be easily retrieved and disseminated across the organisation. I have tried to demonstrate to you how solid information management are fundamental to any museum. At National Museums Liverpool, intelligence research and strategic analysis are now being recognised as a central activity and as such a corporate function of the organisation.

This is already a big and important first step towards becoming an intelligent organisation. With buy-in from the director and the senior management team, the challenge left to overcome now is to come up with a practical solution that can bring gains not only in strategic planning but also in facilitating the process of gathering evidence and monitoring performance data.

A lot of what I have described here may be perceived as common sense and it is by no means a new management technique. You might also say that all this is very useful but in reality very time consuming and demanding a lot of resources. But the point I want to stress here is that it is not enough to dip into this type of information nonchalantly, but that sound management information will allow a museum to be outward looking, anticipate change and work proactively and not retrospectively.

We need to bridge the gap from delivering information and implementing it into all planning. I hope that this new function will be help to do just this. I therefore would like to finish by saying that we need to make sure

we don't forget to state the obvious and take it a bit further.

Data can indeed become insight and ultimately knowledge becomes the power to take action.

Reference

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Ms. Françoise McClafferty (née Phillips), Research and Information Officer in the Director's Office at National Museums Liverpool since June 2004. Her current role includes providing strategic external intelligence on cultural, economic and museum strategy and policy matters to the Director and Senior Management Team. In her role to support the Director's external representation, Ms. McClafferty co-ordinates the INTERCOM Committee (ICOM International Committee on Museum Management) and manages the website and listserv. After working as PR Assistant at the Musée National d'Histoire Naturelle in Luxembourg in 1999, Ms. McClafferty completed the Masters in Museums Studies at the University of Leicester. She joined National Museums Liverpool as Visitor Research Officer in the Marketing Department from 2000 until 2004 carrying out quantitative and qualitative research projects on demographic profiles, external trends and behaviour and attitudes to learning in museums. Her interests lie in strategic research in museums and she is an Associate Member of the Market Research Society and Secretary of the Visitor Studies Group UK.