



Productivity, performance indicators and motivation:

A case study in the UK's non-profit cultural heritage sector

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Abstract

This research project explored performance indicators and motivation in the UK's non-profit cultural heritage sector, a sector that includes public sector and charitable organisations. This topic matters because a well-motivated workforce is better able to use resources efficiently and deliver an effective service. A mixed methods approach was used. Data was gathered from ten interviews, an online survey, and a practitioner workshop. The survey used questions from the Work Intrinsic and Extrinsic Motivational Scale informed by Self Determination Theory. Based on the 132 completed survey responses the workforce shows a nuanced pattern of motivation, with high levels of intrinsic self-determined motivation at the same time extrinsic factors were also important for paid employees. The report makes practical suggestions to increase the motivational power of performance indicators and describes how the KBAC Matrix can be used as a planning tool to build consensus and use resources more effectively. It also explores the limitations of traditional linear value chains for museums, archives and other non-profit cultural heritage organisations and presents the Value Loop as a more accurate representation of the value creation process.

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Executive Summary

<u>Topic</u>: The non-profit cultural heritage sector is made up of museums, archives, and other cultural organisations with historic collections. Performance indicators have the potential to play a role in focusing work, motivating the workforce, and making most effective use of resources, but there are not always used to their best advantage.

<u>Research Question</u>: What factors give performance indicators motivational power in the non-profit cultural heritage sector?

<u>Ethical approval</u>: The University of Hertfordshire granted approval for the research in December 2023. Protocol number BUS/SF/UH/06063.

<u>Method</u>: The study adopted a mixed method approach gathering data from interviews, an online survey, and a workshop with practitioners. Data was collected over four months between January and April 2024. Paid staff and volunteers were included in the sample to reflects the nature of the workforce in this sector.

- Ten semi-structured interviews were conducted with practitioners based in the southeast of England. The KBAC Matrix provided structure for the iterative inductive thematic analysis.
 KBAC stands for, knowledge, business, audiences, and collections, four core functions of all cultural heritage organisations.
- The online survey asked questions about the respondents and what they thought of
 performance indicators. It also used 12 questions from the Work Intrinsic and Extrinsic
 Motivational Scale, which is informed by Self Determination Theory. A statistical approach
 was used to analyse the 132 completed responses. This included comparisons with other
 data sets and correlation analysis.
- The research findings were shared with nine practitioners who attended an onsite workshop on 24th April 2024. They tested a number of planning activities, including ones that explored value chains.

Findings:

- This sector produces a range of outputs and outcomes. The interviewees identified 25 different products.
- There was considerable variation in the nature, number, and use of performance indicators in the interviewees' organisations. Between them the interviewees identified 62 different indicators. The closest thing to a common indicator was onsite visitors.
- There appears to be a tendency to use performance indicators to monitor activities related to the audience / users and the business of running the organisation more than activities related to collections and knowledge. The areas that are most heavily monitored are not necessarily the most important products.
- Most survey respondents (79%) strongly agreed or agreed that performance indicators were helpful tools in the non-profit cultural heritage sector and a similar number (76%) said they were personally motivated by data that showed progress towards a target.
- The survey showed high levels of intrinsic self-determined motivation. At the same time extrinsic factors were also important for paid employees. The levels in this sector may be different in some areas but the indication that individuals may be motivated by both intrinsic and extrinsic factors simultaneously, concurs with similar data collected from other sectors.

- There appeared to be a weak negative correlation between an individual's self-determined
 motivation and the degree to which they are motivated by progress towards a target.
 However, the survey did not provide enough evidence to draw firm conclusions about the
 relationship between motivational styles and attitudes towards performance indicators in
 this sector.
- Productivity in the non-profit cultural heritage sector is a complex concept. Museums, archives, and other organisations in the sector produce multiple outputs and outcomes.
 Some of the most important ones have no market value and are difficult to measure in a meaningful and unambiguous way. It is similarly challenging to quantify the inputs which, in addition to financial investment, include volunteer contributions, knowledge and the historic collections.
- Traditional linear value chains do not accurately describe how museum, archives and other non-profit cultural heritage organisations create value. This report introduces the Value Loop as a better model.

<u>Practical Implications:</u> The report suggests five ways to improve the motivational power of performance indicators in the non-profit cultural heritage sector.

- 1. Define and agree the desired outputs and outcomes. The KBAC Matrix can help identify, discuss, and make decisions about the priority products and create performance indicators to monitor them.
- 2. Communicate to ensure that the delivery team understand the aims and are aware of relevant performance indicators.
- 3. Involve the workforce in creating and setting performance indicators. This will help those with high intrinsic motivation to internalise the goals.
- 4. Use extrinsic motivational tools, for example recognising and celebrating success. High levels of intrinsic motivation in the workforce does not mean that is the only relevant type of motivation.
- 5. Use performance indicators that provide the right kind of information. The best indicator will depend on the purpose. The Value Loop can help identify the area(s) that needs attention which will help make the most of resources.

1. Introduction

To understand productivity, it is necessary to agree on what is being produced, the resources used and the value of both. For museums, archives, and other non-profit cultural heritage institutions this is not always clear. This document reports on a research project that explored performance indicators and motivation in this sector. It presents two tools designed to help practitioners make the most of their resources; the KBAC Matrix, an analytic and planning framework that helps to make the desired products more visible and to build consensus and the Value Loop, which shows how non-profit cultural heritage organisations create value.

The report starts by defining the non-profit cultural heritage sector. It provides context by reviewing key literature on productivity and the use of performance indicators in the sector before outlining relevant workplace motivational theory. The aim of the research was to improve our understanding performance indicators and investigate their potential as motivational tools in this sector. This study used a mixed methods approach and gathered data from ten interviews and an online survey. The survey used an existing set of questions informed by Self Determination Theory (Deci & Ryan, 2000), i.e. the Shorter Work Extrinsic Intrinsic Motivational Scale (Kotera et al, 2022). These were combined with questions related to the respondents' roles, demographics, and attitudes towards targets and performance indicators. In conclusion the report discusses the implications and potential application of the findings.

2. Background and Context

2.1 The Non-Profit Cultural Heritage Sector and Productivity

The non-profit cultural heritage sector encompasses, museums, archives, special collections, industrial heritage, historic houses, archaeological sites, and other heritage venues. These organisations span the public and third sectors and are united by three defining features, namely,

- 1. a commitment to the long-term stewardship of historic collections,
- 2. a public facing ethos and
- 3. a non-profit business model.

The care of heritage assets for the benefit of the public is a significant point of difference from other kinds of non-profit cultural organisations. It is the collections that distinguish organisations in this sector from others which are ostensibly similar, such as theatres, festivals, and some art galleries. These non-profit organisations are not isolated from the commercial world, many charge for services and have trading activities such as cafes and shops that generate income. The key difference from profit making organisations is that any financial surplus is reinvested to subsidises activities that are not commercially viable.

Within the non-profit cultural heritage sector, there is considerable variation between individual organisations in terms of size, governance, business models and organisational cultures. The sector includes one room village museums and large multi-site heritage organisations. Most have a hybrid business model with income from a range of sources, including, public funding, charitable grants, donations, and self-generated income. While some national and local authority organisations receive most of their operating costs from the public purse many charitable organisations receive none. The size and status of the workforce varies, with some organisations being run entirely by a small group

of volunteers while others, for example the National Trust, have thousands of paid employees. The nature of the collections varies and can influence how the organisation functions, for instance, an open-air museum featuring historic buildings on a large site is operationally and culturally different from a military archive focusing on the history of a specific regiment.

Recently the government has included the "creative industries", which includes museums, galleries and libraries, as one of the eight growth-driving sectors for its new Industrial Strategy (UK Government, 2024). According to the Green Paper, the creative industries in the UK are already "world-leading" and the sector is "expected to grow worldwide, creating further growth opportunities". Estimates from the Department of Culture, Media and Sports (2024) suggested that productivity in the creative industries is lower than the UK average in terms of both output per hour and output per job. Even though the industrial strategy is likely to focus primarily on competitive UK sectors, such as screen production and streaming services, it is interesting to also look at how the cultural heritage sector, might contribute to the governments growth agenda.

However, productivity, which is defined at the relationship between outputs and inputs is a problematic concept for non-profit organisations in general (Martin and Franklin, 2022). For the non-profit cultural heritage sector there are three main areas of difficulty.

First is the lack of clarity, or rather a lack of consensus, about what is being produced. There are multiple possible products from exhibitions and events to inspiration and social wellbeing. In the absence of the overarching objective of making a profit interested parties are free to prioritise the desired outputs and outcomes as they see fit. However, the dependence of these organisations on financial subsidy, in the form of public funding, grants and sponsorship, means that they must also respond to the funders' priorities, which can add another layer of complexity to decisions about organisational objectives.

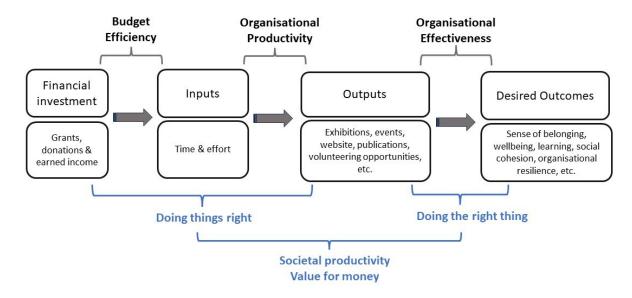
The second difficulty is how these products should be measured and whether monetary measures provide an adequate proxy. Money is an unambiguous and widely recognised unit of value, but it is one dimensional. There are advantages of rendering the value of what non-profit cultural heritage organisations produce into financial terms, not least because it enables comparisons to be made. However, for many products it is a clumsy and inadequate proxy of the sector's true value. The risk of what Martin and Riley (2023) describe as the "mismeasurement" of productivity is greater for non-profit organisations than for profit making ones. The subjective nature of other forms of value, such as social, aesthetic and symbolic, presents problems when judging success and when justifying funding decisions. This has resulted in the use of economic tools for converting non-financial value into financial value, for example, contingency valuation and willingness to pay (Throsby, 2003; Tohmo, 2004; Sagger, et al, 2021; Lawton, et al, 2022).

The third area of difficulty is in quantifying the inputs. Beyond the practical issues of gathering the data, the role of the volunteers and collections fit uncomfortably into current notions of productivity. In some models volunteers have been incorporated as free labour (Martin and Franklin, 2022) but this is an oversimplification. There is a spectrum of volunteer involvement none of which is entirely free labour. All volunteering requires planning and management. In some cases, the costs of organising and managing volunteers are less than the contribution made but, at the other end of the spectrum the benefits to the volunteers are greater than those received by the organisation and the individual volunteer is more of a consumer than a producer or input. Collections, which are at the heart of these organisations, also present issues for productivity calculations. The historic assets may be the most valuable assets of these organisations yet ethical protocols preventing their sale puts

them beyond price. They are assets that must be cared for in perpetuity. The overhead costs of heritage, to conserve and document the collections, can be burdensome.

One response to these challenges has been to explore different types of values, including public value (Moore and Kennedy, 2007) and wellbeing value (Falk, 2023) Expanding the notion of value is helpful however, no single definition of value can capture all the benefits created by non-profit heritage organisations. Another attempt to address productivity in this sector has been to create a framework that identifies the groups being impacted, i.e. ideas, people, business, environment, infrastructure, and places (King and Popov, 2020). Value chains have also been adapted to show both different types of value (Moore and Kennedy, 2007) and to make distinctions between different types of productivity, such as budget efficiency, organisational productivity and effectiveness (van Ark, et al, 2023). When illustrated as a value chain it is possible to identify the elements that create value and how these can be monitored to capture their different kinds of productivity (Figure 1).

Figure 1: A value chain for the non-profit cultural heritage sector adapted from the public sector value chain (van Ark et al, 2023).



2.2 Performance Indicators in the Non-Profit Cultural Heritage Sector

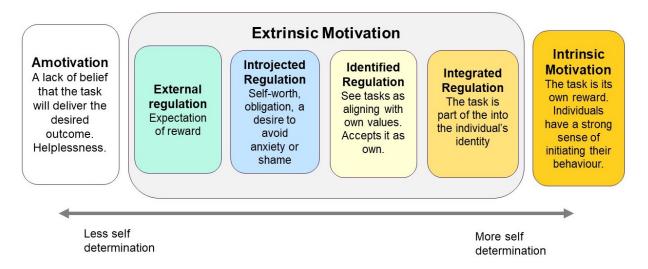
The use of performance indicators in the non-profit cultural heritage sector has been common, at least in the UK, since the 1990s when New Public Management's ideas of accountability and target-based efficiency encouraged their use in the public sector (Bogt et al 2010; Speklé and Verbeeten 2014; Verbeeten and Speklé, 2015). This background continues to focus attention on the use of performance indicators as evidence to demonstrate the responsible use of taxpayers' money and providing value for money. As important as this is, accountability is not the only function of performance indicators. In non-profit organisations performance indicators can be used for a range of purposes including, for example, to evaluate, to make improvements, to celebrate, and to motivate a workforce (Behn, 2003; Speklé and Verbeeten, 2014; Lewis, 2019). This study is primarily concerned with the motivational potential of performance indicators.

2.3 Workplace Motivation and Self Determination Theory

Motivation can have a significant impact in the workplace by influencing individual and organisational productivity and resilience. It is important to note that the nature of motivation is not the same for everyone (Mahmoud, et al 2021 and Breaugh, et al 2018). An improved understanding

of the motivational styles should help managers to use performance indicators as a motivational tool that can positively influence behaviour. This study draws on Self-Determination Theory because it is well established and grounded in empirical research, including in the non-profit environment (Deci and Ryan, 1985; Chen, 2014; Deci, et al 2017; Breaugh, et al 2018; Broeck, et al, 2021). Another attraction of Self-Determination Theory is the nuanced approach to motivation, seeing it as a spectrum rather than a simple binary option between intrinsic versus extrinsic. Self-Determination Theory sets out a continuum from intrinsic motivation to amotivation. Figure 2 below illustrates this spectrum and the six types of motivational styles.

Figure 2: Spectrum of Self Determination, adapted from Ryan and Deci (2000)



This literature on productivity, performance indicators and workplace motivation identified areas for exploration. Self-Determination Theory provides a theoretical basis for this study investigation into motivation in the non-profit cultural heritage sector.

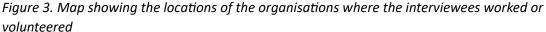
3. Methods and Results

3.1 Research Question and Approach

A mixed methods approach was used to address the central research question, i.e. What factors give performance indicators motivational power in the non-profit heritage sector? Data was collected over four months using semi-structured interviews, an online survey, and a sense checking workshop with practitioners. The population being examined was the workforce in the non-profit cultural heritage sector, including employees, freelancers, and volunteers. Volunteers were included because they are a significant part of the workforce. Figures for the whole sector are elusive but are likely to be in the tens of thousands (Mendoza, 2017 p. 60). Even after a dip in numbers following the Covid pandemic, volunteers are essential for many museums, archives, and other non-profit cultural heritage organisations. A convenience sampling approach was adopted for both the interviews and online survey. The qualitative data from the interviews was analysed using the KBAC Matrix, which provided structure for the thematic and iterative-inductive analysis (Babbie, 2016; Creamer and Francis, 2022). A statistical approach was used to make sense of the survey data including comparisons with other data sets and correlation analysis. More details on the methods used are given below and in the appendices.

3.2 Interview Method, Sample and the KBAC Matrix

The purpose of the interviews was to better understand how organisations in this sector used performance indicators. The interviewees were selected because of their involvement with and interest in the use of performance indicators. This meant that they were able to provide relevant empirical information. Their location in the southeast of England allowed for most of the hour-long interviews to take place face-to-face and just two were conducted online (Figure 3). All but one of the interviewees were paid employees. The organisations the interviewees were involved with reflected the variety of cultural heritage institutions. Seven interviewees were based in museums, two in archives and one worked for a multi-venue service. Six of the organisations were independent charities, three local authorities and one was a branch of a national museum. (Appendix A provides more details on the interviewees).





The interviews followed a set pattern and explored, current practice around performance indicators, productivity, the role of volunteers and motivation. The interviewees also shared information about their organisation's strategic priorities and current key performance indicators. (Appendix B gives details of the question sheet used for each of the interviews.)

The KBAC Matrix provided structure to the thematic analysis of the data collected through the interviews (Figure 4). It is inspired by the Balanced Scorecard (Kaplan and Norton 1992) and is based on the four key functions of all cultural heritage organisations, i.e., the creation and sharing of knowledge (K), the business of running the museum (B), serving audiences (A), and caring for collections (C). The KBAC Matrix was developed for museum practitioners as part of a piece of commissioned research as a planning tool to help organisations create of a balanced set of key performance indicators (Davies, 2023). In this research it was used an analytic framework. Three of the quadrants, Collections, Knowledge, and Business, are areas of activity the organisation

undertakes. The Audiences quadrant is about the consumers and focuses on who is visiting or using the services offered by the organisation.

Figure 4: The KBAC Matrix showing the four core areas of activity for all non-profit cultural heritage organisations

Collections

Managing the heritage assets. Acquisitions, cataloguing, conservation, etc.

Audiences

Users / visitors /
consumers. Who they are
& their experience of the
offer

Activities to create & share knowledge. Packaging it up for potential audiences.

Running the organisation, finances, workforce, venue, etc.

Knowledge

Business

3.3 Themes from the Interviews

Transcriptions of the audio recordings were made using Microsoft's transcribe feature. The transcripts were corrected manually and then analysed thematically. This was an iterative inductive process that took place over several months.

3.3.1 Products

When asked what the organised produced and what productivity meant for the organisation the interviewees sometimes struggled to give a simple response. They all identified multiple products, ranging between four and nine, and collectively they identified 25 unique products (see Figure 5 and Appendix C for the full list). The quotes below are examples of the interviewees thoughts.

"Gosh, that's a really difficult question ... it could be the number of visitors kind of people through the door. For me personally, I would say it's about the visitor experience... it's about, engagement in terms of the number of engagements, but also what we are doing to create those engagements."

Cathy De'Freitas, Ware Museum

"...our actual product is facilitating research, providing access to the collections and that might look like a researcher coming into the search you've been accessing it, or it might be an event where there's a display or something using the material to share to share it. I think that's what our actual product is rather [than], obviously not, the income generation."

Amanda House, Westminster Archives

In comparing the products identified by the interviewees there was some common ground, eight of the interviewees identified events and activities aimed at the public, seven identified, visitor experience and engagement, preserving the heritage assets for future generations and exhibitions and displays. More than half of the products identified were only mentioned by one or two of the interviewees. Whether this range reflects a lack of similarity across the whole sector or just among the ten interviewees is unclear.

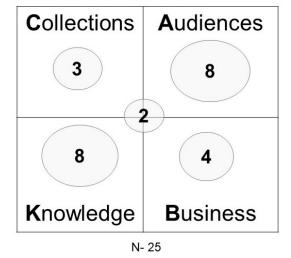
Figure 5 – Word cloud shoring the 25 products identified by the interviewees. Point size increased by 4 for each mention.



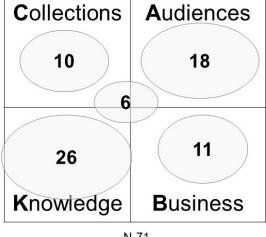
These 25 products were analysed using the KBAC matrix and Figure 6 below shows how products related to the creation and sharing of knowledge and audiences were most frequently mentioned. Products related to knowledge and audiences were more common and more frequently identified by the interviewees.

Figure 6: The 25 unique products identified by the interviewees and how frequently these products were identified by all ten interviewees classified using the KBAC Matrix

Interviewees identified 25 products.



The frequency these products were identified.



N-71

3.3.2 Performance Indicators

There was significant variation between the interviewees about the nature of performance indicators and how they used them. This lack of standardisation reflects previous studies (Poll, 2018) and while this variety of indicators may be an appropriate reflection of the diversity of the organisations and their operational models, it made comparison challenging. The number of indicators being monitored by the interviewees ranged from 2 to over 60. This appears to reflect different perceptions in the use of indicators and the difference between performance indicators and key performance indicators. There were differences in the nature of the performance indicators. In two cases the successful delivery of the activities identified in the forward plan were described as key performance indicators. These activities tended to be large one-off projects, for example, creation of an exhibition, where the regular monitoring of performance indicators was not seen as helpful. Most had an established practice of reporting on performance indicators to their senior managers or boards each month, but this was not universal. The reporting regime at a few of the interviewees' organisation relied much more on narrative reporting. One interviewee made a distinction between externally funded projects, which were monitored using performance indicators because the funders expected these, and "business as usual" where the use of performance indictors was very limited. The interviewees spoke about types of activities that were more frequently monitored using performance indicators. These appeared to be areas with clearly defined units, such as, visitors, school groups, money, and objects, as the quote below illustrates.

"... they do use quite a lot of KPI's in collections ... every month we sit down, we have a meeting that goes first of all, how many records have you processed? How many collection records are online? How many of them have a photograph? How many volunteers were active? How many new volunteers did you train? ..."

Jenny Cousins, The Food Museum

To analyse the indicators being used a list of unique indicators was created. This involved consolidating similar ones across the organisations and where an organisation had a suite of very similar indicators e.g. one organisation had 12 indicators for different kinds of volunteering. This

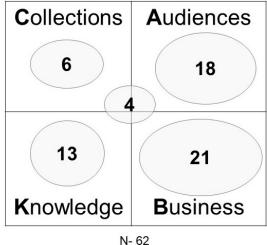
process resulted in a list of 62 indicators (Appendix D provides the full list), which was used to identify patterns of use. First, the indicators were compared to identify commonality between the interviewees. Second, they were plotted on a value chain to establish whether they were being used to monitor inputs, outputs, or outcomes. Finally, they were categorised using the KBAC Matrix to identify which areas of activity were being monitored with performance indicators.

In this sample, the closest thing to a common indicator was visitors in person or onsite users, which nine of the interviewees used. All ten of the interviewees tracked the number of people using their onsite facilities but one counted this as part of a compound indicator designed to capture onsite and online engagement. The second most common indicator used by the interviewees was retail income, normally sales from the shop and/or café. This was used by five of the interviewees' organisations. Most of the 62 indicators focus on activities towards the end of the value chain, i.e. outcomes and impact. This suggests that the primary purpose for using performance indicators was reporting rather than identifying issues or making improvements. There were a few exceptions to this where inputs were being monitored, for instance, grants awarded and volunteering hours.

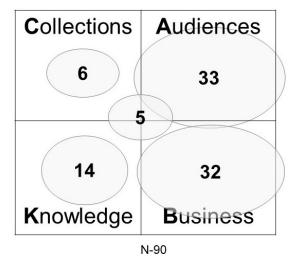
Using the KBAC Matrix the indicators were categorised into one of the four quadrants (Figure 7). The minority of indicators which did not fall neatly into one of these headings were classed as "Other" and in Figure X shown in the centre of the Matrix. Based on the evidence from these ten interviewees, there appears to be a mismatch between what is being produced and the performance indicators being used. Most products mentioned related to knowledge and audiences while most of performance indicators related to audiences and business activities.

Figure 7: The 62 performance indicators (PIs) being used by the ten interviewees and how often these were being used by the ten interviewees classified using the KBAC Matrix.

Interviewees shared 62 distinct PIs



The frequency these PIs were being used



3.3.3 Volunteers

All the interviewees' organisations involved volunteers. The degree to which volunteers were an essential part of running the organisation varied. Two interviewees said what without volunteers the organisation would be unable to function while for interviewees working in organisations with teams of paid staff volunteer involvement was seen as adding value to the core services. The roles done by volunteers varied and included, for example, welcoming visitors, processing collections, helping at

children's events, and maintaining the building. Several of the interviewees talked about offering placements, for instance, as part of the Duke of Edinburgh scheme and at least one offered supported volunteering opportunities for people with special needs. In some cases, clear distinctions were made between different types of volunteers, for example when volunteers were essential to opening the doors of the museum they were seen as part of the delivery team while volunteers on placements designed to develop their workplace skills were seen as a benefiting from a service delivered by the organisations. Most interviewees recognised that volunteers both contributed and benefited from their involvement. The benefits to the individual volunteers as illustrated in the quotes below, was widely recognised.

"... it reduces isolation and loneliness. It improves well-being. It gives sense of worth. It gives physical activity. It gives all the kind of well-being outputs...

Steve Miller, Norfolk County Council

The idea of volunteers as inputs in the value chain (Martin and Franklin, 2022) was not entirely endorsed by the interviewees. It was recognised that volunteers supported the organisation through their contributions, but they were not seen as free labour for two reasonsFirst, all volunteers, to a greater or lesser extent, involve costs for the organisation in the shape of planning, support and resources. Secondly, the interviewees pointed out the benefits to the volunteers and, in some cases, such as supported volunteering opportunities, their role was more one of a consumer than a producer. It is telling that three of the organisations identified delivering a volunteer programme as one of their products.

3.3.4 Motivation

The interviewees recognised motivation as a complex area as what motivated some people did not motivate others. Distinctions were made between the motivation of volunteers and of paid staff as well as between individuals. Several made distinctions between younger and older retired volunteers with the general perception that the social aspects of volunteering were particularly important for the older volunteers whereas the development of skills was seen as a more significant motivation for younger volunteers. The interviewee at a volunteer run railway museum identified three sources of volunteer motivation: interest in the topic, enjoyment of serving the public, and the satisfaction of working towards a shared goal. In the quote below he describes how different groups of people are primarily motivated by one of these or all of them in combination.

"The first one is a genuine interest in steam engines. They just loved the idea of steam engines and want to know how they work, and we have a lot of people who concentrate solely on that and that's all they ever do when they come here is they will work on steam engines... In addition to that, you've got the people who like dealing with the public ...Front of house type people and that's something they enjoy doing and it helps them. It gives them a purpose, gets them out of the house... then you've got the third group, I would say the people who just enjoyed being with other people having a shared goal. Which I would put myself in... And then you've got an overlap in the middle. Yeah, if you're doing a Venn diagram, it would be the middle group who fit all three sections..."

David Clayton, Mid-Suffolk Light Railway

In discussing the role performance indicators played in their own motivation the interviewees expressed a range of opinions. The quotes below show a spectrum of enthusiasm for their motivational power from someone very motivated by performance indicators to another, in a similar role, who did not.

"I find it very motivating, so me personally as the Director of this organisation, I find it very motivating to input the numbers and see everything turn green..."

Annie Davis, Museum of Cambridge

"...I suppose I am motivated by what the data is telling me...I like to know stuff in a factual way ..."

Stephanie Fuller, Ditching Museum of Art and Craft

"I wouldn't really say that's there I get my motivation from ... I think I get my motivation from the feedback I receive, whether that's from visitors, peers, colleagues within the organisation... targets are useful to sort of guide you in a particular direction, but I don't think anyone gets out of bed to go 'today we are going to get on our 150,000th visitor..."

Paul Kitching, Natural History Museum at Tring

Reflecting on what factors gave performance indicators motivational power one interviewee highlighted that some teams found them more useful than others. This seemed to be linked to the nature of the work being done and the ability to create meaningful quantitative measurements. It also appeared to be linked to how they were used. Setting unrealistic targets was seen as demotivating. Another talked about how performance indicators were useful in getting a team to work together and finding moments to celebrate.

"...I think these performance indicators are motivational because we celebrate success. So, when they're achieved, you know, it is a great feeling ..."

Daniel Williams, Buckinghamshire Archives

The motivational power of indicators also appeared to be related to how the indictors were set and the context in which they were used. Where the indicators had been defined externally, by a funder, a central management team or professional body, for instance, they were more likely to be seen as, at best, tangential in terms of motivating the team. This may have been due to the nature of the indicators and/or the lack of ownership of them by the delivery team. The funding context influenced the use and, to some extent, the perception of indicators as motivational tools. In organisations without a strong culture of using performance indicators there was a tendency to seen them as a necessary hurdle to be dealt with because they were part of the funder's requirements rather than as a useful management tool. The quote below is from an organisation without a strong culture of using performance indicators and suggests that a change in the museum's funding regime would result in greater use of indicators.

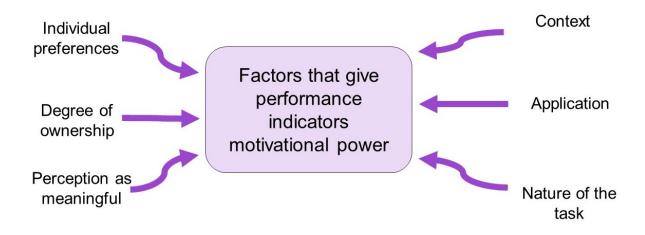
"...we've had a good ten years and, unless grant funding suddenly becomes very different for us, and comes through a different type of partnership or whatever, then probably KPI's, and all of that, will probably become much more important, because then we'll be having to prove the value of why we're here to new funders."

Ursula Corcoran, Soldiers of Oxfordshire

The attitudes of managers and the wider organisational culture were also factors in the perception of the motivational power of indicators. Where managers monitored indicators regularly and used them in discussions with the team, they were more likely to be seen as motivational. The reverse also appeared to be true.

The themes that emerged from the interviewees around the motivational power of performance indicators are summarised in Figure 8.

Figure 8: Six factors from the interviews that may influence the motivational power of performance indicators in the non-profit cultural heritage sector.



3.4 Survey Method and Sample

This study focused on motivation because individual motivational preferences appear to be significant and relevant regardless of the operation context or how indicators are used. An online survey was created to gather additional data on motivation and performance indicators following the interviews. The aim of the survey was threefold.

- 1. To identify the pattern of motivational styles in the non-profit cultural heritage sector workforce
- 2. To compare the pattern of motivational styles in the non-profit cultural heritage sector with other sectors
- 3. To examine whether there is a relationship between individual motivational style and attitudes towards performance indicators and targets

The survey used an established set of questions based on self-determination theory, namely the Work Extrinsic Intrinsic Motivational Scale (WEIMS) (Tremblay, et al 2009). Rather than use all 18 questions this survey followed the model of using 12 questions. This approach has been validated as the Shorter Work Intrinsic and Extrinsic Motivational Scale (SWIEMS) (Kotera, et al, 2022). In this

study one of the questions selected differed from those selected by Kotera et al. Instead of the question "For the satisfaction I experience when I am successful as doing difficult tasks", this survey selected another question used by the longer WEIMS, i.e. "Because I derive much pleasure from learning new things". This change was informed by the interview data, which highlighted the importance of learning as a factor in motivating the workforce. The online survey was open for 24 days between 14th March and 8th April 2024. It was promoted via social media. There were 152 responses in total, 20 of these were incomplete and were excluded from the analysis. The survey did not set out to be representative. Figure 9 below provides details on respondents.

Figure 9: Profile of the 132 respondents who completed the survey

Kind of organisation			
Museum	55%		
Archive	17%		
Gallery	5%		
Built heritage	2%		
Combination	17%		
Other	5%		

Gender	
Male	27%
Female	70%
Non-binary /	
third gender	2%
Prefer not to	
say	1%

Age bracket		
18-24	4%	
25-29	8%	
30-39	17%	
40-49	27%	
50-59	20%	
60-69	14%	
70-79	9%	
80+	1%	

Employment status		
	Paid	
er	nployee	79.5%
V	olunteer	19%
Fr	eelancer	1.5%

ecto	Length in the se
	Less than one
2%	year
12%	1-4 years
19%	5-9 years
35%	10-19 years
21%	20-29 years
11%	30+ years

Governance		
National	18%	
Local authority	44%	
Charity or trust	27%	
University	10%	
Other	2%	

Tasks mostly done			
Front of house	8%		
Collections	20%		
Public programme			
including learning	16%		
Administrative /			
managerial	21%		
A combination	29%		
Other	6%		

Location	
Across the UK	1%
England	89%
Northern Ireland	6%
Scotland	3%
Wales	1%

3.5 Survey Analysis and Findings

The 132 completed responses from the survey were analysed using Excel and following the analysis of previous studies using the Work Intrinsic and Extrinsic Motivational Scale and the shorter version (Kotera et al, 2023; Nietied and Toska, 2019; Heynes and Kerr, 2018 and Pearson et al, 2017). The findings and their implications are described below.

3.5.1 Performance indicators

There were three questions on performance indicators. The first asked whether their organisation used performance indictors and most (63%) responded positively but a significant minority (24%) did not know (Figure 10).

Figure 10: Responses to the question Q3.1 Does the organisation that you are involved with use performance indicators?

, - ,				
Response	Number	%		
Yes	83	63%		
No	17	13%		
Don't know	32	24%		
Total	132	100%		

The second question asked about the extent to which the respondents were personally motivated by data showing progress towards a target. A large majority (76%) of respondents either strongly agreed or agreed that they were (Figure 11). This suggests that performance indicators may well be useful tools in this sector.

Figure 11: Responses to the question Q3.2 To what extent do you agree that you personally are motivated by data that shows progress toward a target?

Response	Number	%
Strongly agree	28	21%
Somewhat agree	72	55%
Neither agree nor disagree	14	11%
Somewhat disagree	14	11%
Strongly disagree	4	3%
Total	132	100%

The third question asked about the helpfulness of performance indicators in this sector. The responses were similar to the previous question and a large majority (79%) either strongly agreed or agreed that they were helpful. It seems that the small minority (5%) who disagree do so strongly (Figure 12).

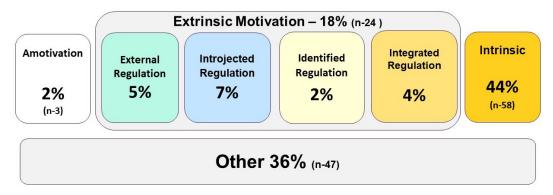
Figure 12: Response to the question Q3.3 To what extent do you agree that performance indicators are helpful tools in the non-profit cultural heritage sector?

Response	Number	%
Strongly agree	27	20%
Somewhat agree	78	59%
Neither agree nor disagree	21	16%
Somewhat disagree	0	0%
Strongly disagree	6	5%
Total	132	100%

3.5.2 Motivational style of respondents

The survey results showed that a large proportion of respondents had high levels of intrinsic motivation, and their responses also indicated that extrinsic motivations were also important. The common assumption that those working in non-profit organisations are motivated by intrinsic rather than extrinsic factors is an oversimplification (Chen, 2014) and this survey confirms a more nuanced pattern. Just because an individual loves their job does not mean that they are oblivious to extrinsic motivational factors, such as their salary or working conditions. People can have multiple kinds of motivation simultaneously. Figure 13 shows the survey respondents motivational preferences. A substantial minority (44%) showed a preference for intrinsic motivation and more than a third (36%) were classed as "Other" suggesting a mixed motivational style.

Figure 13: Individual preferences based on respondents highest mean score of the two questions related to each motivational style



N-132. Classified according to respondent's highest mean score of the two questions.

The sample included paid staff and volunteers which reflects the situation in the non-profit cultural heritage workforce. The responses were examined together as well as separating the paid and unpaid respondents. Figures 14 and 15 set out the mean of the two questions for all respondents, the paid staff, and the volunteers. Looking at the responses for all respondents shows the highest mean scores are for intrinsic motivation (5.88 and 5.85). The scores reduce across the spectrum with a small blip for introjected regulation, which is the motivation to act in a way that will avoid negative feelings, such as shame and disappointment. This suggests that the workforce tends to have a strong sense of duty and obligation and are likely to be conscientious workers. As expected, there are differences between paid staff and volunteers, but these are not as great as might have been expected. Volunteers showed only slightly higher intrinsic motivation than paid staff. There is a clear difference in their levels of amotivation, with volunteers reporting much lower levels. Presumably because it was easier for volunteers to stop when they felt unhappy with the situation.

Figure 14: These questions were asked using a Likert scale of 1-7 as set out by Tremblay et al (2009).

Motivational style	Survey Question (number in this survey)	Mean of all the 132 completed responses	Mean of 107 paid respondents only	Mean of 25 volunteers
Intrinsic	For the satisfaction I experience from taking on interesting challenges (Q4.7)	5.88	5.83	6.08
	Because I derive much pleasure from learning new things. (Q4.1) ¹	5.85	5.86	5.80
Integrated regulation	Because it has become a fundamental part of who I am. (Q4.3)	5.09	5.21	4.56
	Because it is part of the way in which I have chosen to live my life (Q4.8)	5.27	5.34	5.00
Identified regulation	Because I chose this type of work to attain my career goals (Q4.10)	4.64	5.02	3.04
	Because it is the type of work I have chosen to attain certain important objectives (Q4.5)	4.49	4.70	3.60
Introjected	Because I want to succeed at this job, if not I would be very ashamed of myself (Q4.2)	4.62	4.93	3.28
regulation	Because I want to be very good at this work, otherwise I would be very disappointed (Q4.11)	5.01	5.13	4.48
Futuinaia	For the income it provides me (Q4.4)	3.81	4.36	1.48
Extrinsic	Because it allows me to earn money (Q4.12)	4.17	4.85	1.24
Amotivation	don't know why, we are provided with unrealistic working conditions (Q4.6)	2.86	3.18	1.60
	I don't know, too much is expected of us (Q4.9)	2.90	3.21	1.52

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¹ This question is one of the 18 questions asked in the longer WEIMS. It replaces "For the satisfaction I experience when I am successful as doing difficult tasks" which was used by Kotera et al.

Figure 15: Radar diagrams illustrating the figures in the table above and highlighting the differences between paid and volunteer respondents this survey.



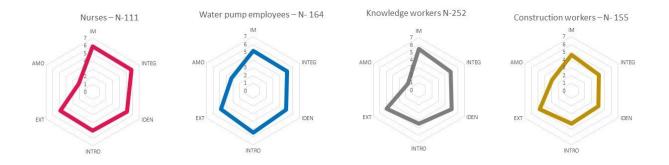
3.5.3 Comparison with other sectors

A comparison was made with four studies covering other sectors, nursing (US), water pump industry (South Africa), the knowledge sector (Albania) and construction (UK). These were chosen as comparators because they used the same question framework, SWEIMS or the longer WEIMS, and a 7-point Likert scale. The precise patterns of motivation are not simple to understand without additional information, but these figures provide hints of how the non-profit cultural heritage workforce compares to those in other sectors. Figures 16 and 17 show the volunteers in the nonprofit cultural heritage sector have the highest levels of intrinsic motivation (5.94). The combined figure for paid and volunteers was 5.86, which is high and similar to nurses (5.9). The combined nonprofit cultural heritage workforce indicated a lower level of extrinsic motivation than most of the comparator studies (3.99 and 4.6 for paid staff only). This suggests that those who are working in the sector are less motivated by external rewards, including pay, than workers in the other studies. The figures on amotivation are interesting. The figures for volunteers in the sector are very low (1.56) but those for paid staff are relatively high (3.19). Only the South African water pump workers had higher figures (3.28). This indicates that at least some of the respondents are feeling that their workloads are unrealistic. It is possible that this reflects the current difficult operating environment and pressure on public and charitable funding.

Table 16: Comparing the mean scores with those from other studies using the same source of questions

Motivational style	Nurses in USA (Pearson et al, 2017)	Water pump workers in South Africa. (Heyns & Kerr, 2018)	Knowledge workers in Albania (Nientied & Toska, 2019)	Construction workers in UK (Kotera et al, 2023)	This survey – all completed responses	This survey Paid employees & freelancers	Volunteers only
Form of survey	WEIMS	WEIMS	WEIMS	SWEIMS	SWEIMS	SWEIMS	SWEIMS
Number	N- 111	N -164	N -252	N -155	N -132	N- 107	N- 25
Intrinsic	5.9	5.17	5.52	4.66	5.86	5.85	5.94
Integrated regulation	5.8	5.07	4.89	4.13	5.18	5.28	4.78
Identified regulation	5.1	4.97	5.06	4.06	4.57	4.86	3.32
Introjected regulation	5	5.43	4.48	4.25	4.81	5.03	3.88
Extrinsic	4.9	4.82	4.95	4.77	3.99	4.60	1.36
Amotivation	2.1	3.28	1.72	2.9	2.88	3.19	1.56

Figure 17: Radar diagrams illustrating the figures in the table above and highlighting the range of workforce motivational styles in four other studies.



3.5.4 Correlation between motivation style and perception of performance indicators

Using Spearman's Rank Correlation the survey data was analysed to identify correlations between motivation styles and the questions about attitudes towards performance indicators, i.e.

- Q 3.2 To what extent do you agree that you personally are motivated by data that shows progress toward a target?
- Q3.3 To what extent do you agree that performance indicators are helpful tools in the non-profit cultural heritage sector?

The results of the analysis set out in Figures 18 and 19 below. IDEN and INTRO have a strongly significant negative correlation with Q3.2, while AMO has a significant positive correlation with Q3.3.

Figure 18: Correlation between motivational styles and Q3.2 "To what extent do you agree that you personally are motivated by data that shows progress toward a target"?

	Mean of Motivational Style		Q 3.2		
Mean o			p value		
IM	Intrinsic – the task itself	- 0.177	0.043		
INTEG	Integrated Regulation— part of individual identity	- 0.223	0.01		
IDEN	Identified Regulation - align with own values	- 0.263	0.002		
INTRO	Introjected Regulation - self-worth	- 0.275	0.001		
EXT	External regulation - expectation of reward	- 0.165	0.058		
AMO	Amotivation – hopelessness	0.127	0.147		

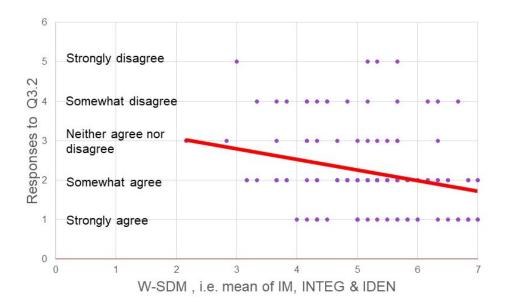
Figure 19: Correlation between motivational styles and Q3.3 "To what extent do you agree that performance indicators are helpful tools in the non-profit cultural heritage sector?"

	Mean of Motivational Style		Q 3.3		
Mean of			p value		
IM	Intrinsic – the task itself	- 0.138	0.115		
INTEG	Integrated Regulation— part of individual identity	- 0.155	0.076		
IDEN	Identified Regulation - align with own values	- 0.116	0.186		
INTRO	Introjected Regulation - self-worth	- 0.155	0.076		
EXT	External regulation - expectation of reward	- 0.147	0.093		
АМО	Amotivation – hopelessness	0.234	0.007		

The results were aggregated to produce to produce the Work Self Determined Motivation (W-SDM), i.e. the mean of the responses to the questions related to intrinsic motivation (IM), integrated motivation (INTEG) and identified motivation (IDEN). An interesting correlation was seen between the W-SDM and responses to Q3.2 "To what extent do you agree that you personally are motivated

by data that shows progress toward a target?". This is illustrated in Figure 20 below with the linear regression or "line of best fit". suggesting that the greater an individual's self-determined motivation, the less they say they are motivated by progress towards a target. However, the relationship is weak, and it one should not draw firm conclusions from this observation.

Figure 20: Graph showing a correlation between a self-determined style of motivation and motivation towards a target.



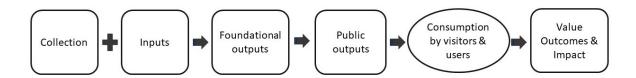
3.6 Practitioner Workshop

The final element of data collection and analysis was an onsite workshop which took place towards the end of the research project on 24th April 2024. The workshop was attended by nine people working in the heritage sector. Most of the practitioners were involved with museums, one worked in an archive, and another had a more general role in culture and community engagement. During the workshop the findings from the interviews and survey were presented and three exercises, based on the research, were piloted.

The first exercise used the 25 products identified by the interviewees, which had been printed onto cards. Working in small groups and thinking about a specific organisation the participants sorted these products into three categories, i.e. core products, nice to have, and not relevant. The patterns that emerged varied reflecting the range of products identified by the interviewees.

For the second exercise the participants were each given a value chain printed on a piece of paper and asked to write down what their organisation did at each stage. This followed on from an explanation of value chains and examples of what kinds of activities non-profit cultural heritage organisations did at each stage (Figure 21). The participants were asked to think about whether the pattern of activity matches the delivery of your organisation's core products.

Figure 21: The value chain used in the second exercise. Adapted from the work of Porter (1998), Moore & Kennedy (2007) and van Ark et al (2023).



The third activity looked at leading and lagging indicators. The participants were given and an envelope with examples and a blank form asking them to create some leading and lagging indicators for their organisation. This activity was particularly well received. For some the realisation that performance indicators have different purposes and can be designed to suit management requirements was a welcome insight.

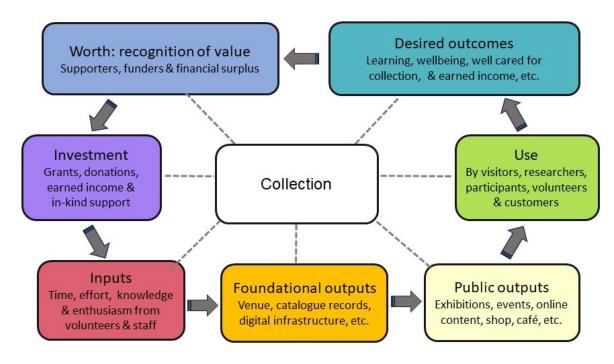
3.7 The Value Loop

This research offers a revised version of the linear value chain to provide a more accurate, and therefore more useful, depiction of how museums, archives, and other non-profit cultural heritage organisations create value. Value chains were conceived as a tool for commercial businesses (Porter, 1998) where the ultimate desired outcome, i.e. profit, is the end of a chain of activities. Profit is distributed to shareholders and owners and allows the business to continue to operate. However, non-profit organisations function in a different way. They exist because society believes them to be worthy of support, including financial subsidy and volunteer input. Adapting the idea of a "generosity loop" (Dennis et al, 2017) the traditional value chain can be bent into a loop to produce a a more appropriate model for this sector (Figure 22).

Collections are at the centre of the Value Loop because, as well as being a defining feature of the non-profit cultural heritage sector, they contribute to all stages of the value creation process. Outputs are divided into foundational (back of house) and public (front of house). Volunteers appear both as an input and as users to illustrate their dual roles. The co-creation of the desired outcomes by visitors and others is highlighted by the use stage. A beautiful and informative exhibition without visitors, for example, is an output that fails to produce the desired outcomes. The Value Loop allows for the different kinds of value created by these organisations, including, for example, social, learning and financial value. Given the hybrid nature of many operating models in this sector, the Value Loop also incorporates trading activities along with the activities that are not expected to create financial value. It shows how any financial surplus from ticket sales, shops, cafes, etc. is reinvested into the organisation. Paying for a product is one way to demonstrate its worth but it is not the only way. In non-profit organisations recognition of the value by the society in which they operate is a critical part of the value creation process. It reflects the dependent nature of these organisations. It means that donors and funders are willing to (re)invest. These organisations can only survive with the support of people and groups able to provide support through grants, donations, and volunteering. The Value Loop therefore adds the category of "worth" to the to the more familiar, inputs, outputs, outcomes and value.

The inability of museums, archives, and other heritage venues to generate enough financial income to survive without subsidy does not make non-profit organisations second-rate businesses. They are a different kind of entity. Making each stage of the value creation process visible and presenting it as a cycle of activities should help those working in the sector to identify where to focus their attention.

Figure 22: Value Loop showing how non-profit cultural heritage organisations create value



The Value Loop also helps to identify different types of productivity. Figure 23 shows four types of productivity: budget resilience, organisational productivity, organisational effectiveness, and societal productivity. Doing so helps to focus attention where it is most needed.

Figure 23: Value Loop for non-profit cultural heritage organisations showing four different forms of productivity

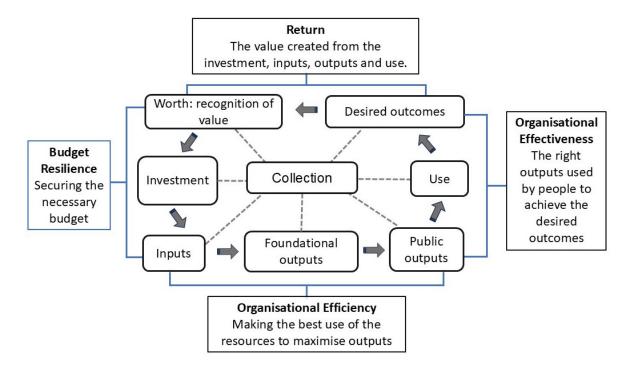


Figure 23 shows how the different types of productivity might be monitored using relevant performance indicators.

Figure 24: Types of productivity and potential performance indicators

Type of productivity	Performance indicators that might be relevant
Budget resilience:	 Ratio of donations per visitor
securing the necessary	Ratio of income per Friend
budget	 Ratio between grants applied for and grants awarded
	 Surplus generated (i.e. income less costs) generated by the shop, café, or other trading activity
Organisational efficiency:	Number of catalogue new catalogue records produced per
making the best use of	day
the resources to	 Number of items digitised per day
maximise outputs	• • •
maximise outputs	 % capacity at events (i.e. how many of the allocated spaces were filled)
	Cost per visitor
	 Ratio of number of visitors to an exhibition and the exhibition budget
Organisational effectiveness: Audience	 % of users who increased their understanding of the topic of the talk or exhibition
use of the right outputs	 % of users / visitors who enjoyed their experience
to achieve the desired	 Number of unique users accessing the online catalogue
outcomes	Spend per head in the shop / cafe
Return: producing the maximum desired value	% of residents (or other defined group) who feel a sense of belonging / sense of place
	 % of users and non-users from the catchment area who say they value the organisation
	Economic impact on community

3.8 Practical Implications

The practical implications of this research on increasing the productivity of museums, archives, and other non-profit heritage organisations may be summed up as follows.

- **1. Define and agree the desired outcomes**. Given the multiple possible outputs and outcomes combined with a wide range of interested parties this first step can be difficult. The KBAC Matrix can help by providing a structure for discussion and decision making.
- **2.** Communicate to ensure that the delivery team understand the aims and are aware of relevant performance indicators. The survey found that 24% did not know if their organisation used performance indicators, which seems like a missed opportunity.
- **3. Involve the workforce in creating and setting performance indicators.** The survey indicated that a large proportion of the workforce have high levels of self-determination motivation. Providing opportunities for the workforce to shape and internalise indicators is likely to increase ownership and make indicators more effective.
- **4.** Use extrinsic motivational tools, including recognising and celebrating success. High levels of intrinsic motivation in the workforce does not mean that is the only relevant type of

motivation. Individuals may be motivated by both intrinsic and extrinsic factors simultaneously.

5. Use performance indicators that provide the right kind of information. The best indicator will depend on the purpose. When making improvements leading indicators provide more helpful information than lagging indicators and enable changes to be made. Identify what kind of productivity needs improvement. The Value Loop's distinction between; budget resilience, organisational productivity, organisational effectiveness, and return and help focus attention to where it is most needed.

It is crucial to bear in mind that performance indicators and motivation are only two elements that contribute to productivity in this or any sector. Other factors such as leadership, skills, and the provision of adequate resources, are also relevant and may be more influential (Penney and Pendrill, 2022).

3.9 Limitations

While the research provided important insights, there are limitations which are mostly related to practical choices arising from the scope of this study. The research design meant that the interviews provided a snapshot of current practice in the southeast of England. Interviewees came from a range of organisations but were not a representative sample of the wide range of organisational types or operational models of cultural heritage organisations across the UK.

The lead researcher (Sue Davies) was sensitized to the issues and brought her existing knowledge of the sector to the interviews and the analytic process. This was an advantage, but it also introduced a degree of subjectivity, for example, in consolidating and classifying the indicators. It is possible that another researcher would have made different decisions. Similarly, the KBAC Matrix provided a helpful framework for the thematic analysis, but in borderline cases where the products and indicators did not fit neatly into the four quadrants another researcher might have classified them otherwise. The interpretation and synthesis of the findings with the literature is also not without assumptions and may reflect the bias of the lead researcher. However, despite these limitations, the interviews identified key issues and the survey elucidated the pattern of motivational styles of the workforce in this sector.

In collecting the survey data, the use an existing set of questions designed for paid employees was a compromise. Using questions from the Work Intrinsic Extrinsic Motivational Scale strengthened the construct validity of the survey. However, questions designed for a workforce consisting of paid and volunteers may have been more appropriate, and the empirical validity might have been improved by asking questions linked more closely to the themes identified in the interviews.

The number of questions in the survey were restricted to enable respondents to complete it within 10 -minutes. This was done because shorter surveys have better completion rates. However, it also meant that only two questions were asked on respondents' attitudes towards targets and performance indicators. Including more questions on this topic may have resulted in more conclusive correlation results.

The survey was open to anyone involved in the sector in the UK and there was variety in the sample, but it was not representative of the whole cultural heritage sector workforce. People working in Wales, Northern Ireland, and Scotland, for instance, were underrepresented and out of the 132 completed responses there were relatively few volunteers, only 25, and just two freelance employees.

The analysis repeated methods used in previous studies but the comparisons with the four previous surveys that used the 18 question WIEMS or the 12 question SWIEMS were not perfect. These were conducted in different years and geographical areas. It is difficult to know how significant these variables were.

4. Conclusion

In addressing the question - What factors give performance indicators motivational power in the non-profit heritage sector? - this research examined current practice and attitudes. By doing so it was able to make practical suggestions and offer new tools for those interested in making performance indicators more effective as motivational tools.

From the interviews it found that a wide range of indicators were being used and that most dealt with audiences and the business of running the organisation. Other areas of activity, specifically those around collections and knowledge were also monitored but with fewer indicators. The myriad potential desired outputs and outcomes produced by museums, archives and other non-profit cultural heritage sector organisations was evident from the interviews. This multiplicity contributes to ambiguity of purpose. Clarifying and, crucially, building agreement among all interested parties, about what the organisation should be producing will help improve productivity as resources can be targeted.

The KBAC Matrix can help by providing structure to planning discussions and decision making. The pattern and nature of the indicators being used suggest that those things that are easier to count get more attention. It was beyond the scope of this study to investigate how meaningful performance indicators might be created for the harder to monitor activities, such as inspiration, wellbeing and placemaking. In recent there has been renewed interest in developing methods to evaluate these harder to measure outcomes (McDowell, 2024 and Neelands and Garcia, 2023) and further research to assess existing tools could be worthwhile.

The survey filled a gap in the workplace motivation literature by using the Shorter Work Intrinsic and Extrinsic Motivational Scale (Kotera et al, 2022) in the non-profit cultural heritage sector. It found that the workforce in this sector appears to have high levels of intrinsic self-determination motivation. This knowledge can be used to apply effective management approaches. It suggests that involving the delivery team in creating indicators and agreeing targets may help to improve their motivational power as it will allow individuals to have greater ownership of the indicators. Like other research underpinned by Self Determination Theory this study found that individuals can have multiple types of motivation and that having high intrinsic motivation does not exclude other types of motivation. This means that extrinsic motivational factors such as workplace conditions and pay are also relevant, even when individuals have high levels of intrinsic motivation.

This study highlighted problems with the use of traditional linear value chains in this sector. The issue relates to the kind of value being produced and their non-profit nature, which mean that they operate in a fundamentally different way to commercial businesses. Museums, archives, and other heritage venues create subjective and difficult to quantity value. It has been described as social and individual wellbeing includes learning and intellectual nourishment (Falk, 2022). It includes a sense of belonging, pride in a place and the value of cultural diplomacy on the international stage. reputation, recognition value. These non-financial values are also reinvested into the organisation. They combine into something that is recognised as worthwhile. The Value Loop is offered as a more accurate model to show how museums, archives and other non-profit create value. By describing the whole process, it is a more useful tool than linear value chains.

Well-crafted performance indicators are just one tool that can help improve productivity in this sector. Other factors, such as leadership and resources, also contribute to the efficiency and effectiveness of museums, archives, and other non-profit organisations.

5. References

Babbie, E.R., (2016) The practice of social research. Fourteenth. Australia: Cengage Learning.

Behn, R.D. (2003) 'Why Measure Performance? Different Purposes Require Different Measures', Public Administration Review, 63(5), pp. 586–606.

Bogt, H. T., Budding, T., Groot, T., and Van Helden, J. (2010) 'Current NPM Research: Digging Deeper and Looking Further: Forward', Financial Accountability & Management, 26 (3) 241–45.

Breaugh, J., Ritz, A., & Alfes, K. (2018). 'Work motivation and public service motivation: disentangling varieties of motivation and job satisfaction', Public Management Review, 20(10), 1423–1443. https://doi-org.ezproxy.herts.ac.uk/10.1080/14719037.2017.1400580

Broeck, A. Van den, Howard, J.L., Van Vaerenbergh, Y., Leroy, H. and Gagné, M. (2021) 'Beyond intrinsic and extrinsic motivation: A meta-analysis on self-determination theory's multidimensional conceptualization of work motivation', Organizational Psychology Review, 11(3), pp. 240–273.

Chen, C-A., (2014) 'Non-profit Managers' Motivational Styles: A View Beyond the Intrinsic-Extrinsic Dichotomy', Non-profit and voluntary sector quarterly, 43(4), pp. 737–758.

Creamer, E.G. and Francis, T., (2022) Advancing grounded theory with mixed methods. Abingdon, Oxon; New York, NY; Routledge.

Davies, S.M. (2023) Data Driven Museums, SHARE Museums East, Norwich. https://mdse.org.uk/resource-library/data-driven-museums-2/

Deci, E. L., & Ryan, R. M. (1985). Intrinsic motivation and self-determination in human behavior. New York: Plenum.

Deci, E.L., Olafsen, A.H., and Ryan, R.M. (2017), 'Self-determination theory in work organizations: the state of a science', Annual Review of Organizational Psychology and Organizational Behavior, Vol. 4, pp. 19-43.

Dennis, M.K., Scanlon, E.T. and Sellon, A.M. (2017) "It's a generosity loop": Religious and spiritual motivations of volunteers who glean produce to reduce food insecurity', Journal of Religion & Spirituality in Social Work, 36(4), pp. 456–478.

Department for Culture, Media and Sport (2024), DCMS sectors economic estimates: Productivity 2022 (provisional), 28 March.

Falk, J. H., (2022) 'Making the Case for the Value of Museum Experiences', Museum Management and Curatorship, 37 (5): 455–70.

Jörden, N., Hampton, L., Alayande, A. (2024), Public Sector Productivity Review: Fifteen questions, Insights Paper No. 030, The Productivity Institute

Kaplan, R. S., and Norton, D.P. (1992) 'The Balanced Scorecard--Measures That Drive Performance', Harvard Business Review, 70 (1).

King, L. and Popov, D., (2020), Productivity and the Arts, Heritage and Museums Sectors. A report for DCMS, Frontier Economics Ltd. https://www.gov.uk/government/publications/productivity-and-the-arts-heritage-and-museums-sectors [Accessed: 1/7/2024].

Kotera, Y., Aledeh, M., Rushforth, A., Otoo, N., Colman, R. and Taylor, E. (2022) 'A Shorter Form of the Work Extrinsic and Intrinsic Motivation Scale: Construction and Factorial Validation', International Journal of Environmental Research and Public Health, 19(21), p. 13864.

Lawton, R. N., Fujiwara, D. and Hotop, U. (2022) 'The value of digital archive film history: willingness to pay for film online heritage archival access' (2022) Journal of Cultural Economics [Preprint].

Mahmoud, A.B., Fuxman, L., Mohr, I., Reisel, W.D. and Grigoriou, N. (2021) "We aren't your reincarnation!" workplace motivation across X, Y and Z generations', International Journal of Manpower, 42(1), pp. 193–209.

Martin, J., and Franklin, J. (2022) Fuller measures of output, input and productivity in the non-profit sector: a proof of concept. Working Paper No. 025, The Productivity Institute

Martin, J., and Riley, R. (2023) Productivity measurement: Reassessing the production function from micro to macro Working Paper No. 33, The Productivity Institute.

Mendoza, N. (2027) The Mendoza Review: an independent review of museums in England, Department for Digital, Culture, Media, and Sport,

London. https://www.gov.uk/government/publications/the-mendoza-review-an-independent-review-of-museums-in-england [Accessed 6/7/2024].

McDowell, E., (2024) How are UK Cities and Capitals of Culture evaluated?, Centre for Cultural Value, Leeds. How are UK Cities and Capitals of Culture evaluated? - CultureHive % [Accessed 6/7/2024].

Moore, M., and Kennedy, J.F. (2007) 'Recognising Public Value: The Challenge of Measuring Performance In Government', in J. Wanna (ed.). Australia: ANU E Press (A Passion for Policy), pp. 91–116.

Neelands, J. and Garcia, B. (2023) Evaluation for change. A guide to planning a mixed-methods framework for evaluation; Embedding a culture of learning, Centre for Cultural Value, Leeds. Evaluation for change: A guide to planning a mixed-methods framework for evaluation - CultureHive [Accessed: 6/7/2024].

Nientied, P. and Toska, M. (2019) 'Motivation of Knowledge Workers – the Case of Albania', Organizacija, 52(1), pp. 33–44.

Pearson, J.A., Mangold, K., Kosiorek, H.E., Montez, M., Smith, D.M. and Tyler, B.J., (2018) 'Registered nurse intent to promote physical activity for hospitalised liver transplant recipients', Journal of Nursing Management, 26(4), pp. 442–448.

Penney, K. and Pendrill, J. (2022) Strategic Productivity For the Leadership Team: Briefing Paper, The Productivity Institute.

Poll, R. (2018) 'Quality in Museums and Libraries: A Comparison of Indicators', Performance Measurement and Metrics, 19 (2).

Porter, M.E. (1998) Competitive Advantage: Creating and Sustaining Superior Performance. 2nd edn. Riverside: Free Press.

Ryan, R., and E. Deci. 2000. 'Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions', Contemporary Educational Psychology 25 (1): 54–67.

Sagger, H., Philips, J. and Haque, M. (2021) Valuing Culture and Heritage Capital: A framework towards informing decision making, Department for Digital, Culture, Media & Sport, London. https://assets.publishing.service.gov.uk/media/600b02c78fa8f5655299d204/GOV.UK - Framework Accessible v2.pdf [Accessed 6/3/2025].

Speklé, R. F., and Verbeeten, F.H.M. (2014) 'The Use of Performance Measurement Systems in the Public Sector: Effects on Performance', Management Accounting Research, 25 (2) 131–46.

Throsby, D. (2003) 'Determining the Value of Cultural Goods: How Much (or How Little) Does Contingent Valuation Tell Us?' Journal of Cultural Economics, 27: 275–85.

Tohmo, T. (2004) 'Economic Value of a Local Museum: Factors of Willingness-to-Pay'. The Journal of Socio-Economics, 33 (2): 229–40.

Tremblay, M. A., Blanchard, C. M., Taylor, S., Pelletier, L. G., & Villeneuve, M. (2009). 'Work Extrinsic and Intrinsic Motivation Scale: Its Value for Organisational Psychology Research'. Canadian Journal of Behavioural Science, 41(4): 213-236.

UK Government (2024), Invest 2035: The UK's Modern Industrial Strategy, October.

van Ark, B., Hoskins, J., and Jörden, N., (2023) Public Sector Productivity – managing the Baumol cost disease. Productivity Insights Paper No. 025, The Productivity Institute.

Verbeeten, F.H.M. and Speklé, R.F. (2015) 'Management Control, Results-Oriented Culture and Public Sector Performance: Empirical Evidence on New Public Management', Organization Studies, 36(7), pp. 953–978.

6. Appendices

Appendix A – List of interviewees

Institution	Governance	Collection	Who was	Date of interview
			interviewed	
Museum of	Charity	Local social	Annie Davis, Director	11/1/24
Cambridge		history		
Natural History	National	Natural history	Paul Kitching,	18/1/24
Museum, Tring	Museum		Director	
Ditchling Museum	Charity	Art	Steph Fuller, CEO	19/1/24
of Art and Craft				
Soldiers of	Charity	Military	Ursula Corcoran,	23/1/24
Oxfordshire			Museum Director	
Mid-Suffolk Light	Charity	Heritage	David Clayton,	25/1/24
Railway		railway	Secretary	
Food Museum	Charity	Open air.	Jenny Cousins,	26/1/24
		Buildings and	Director	
		agricultural		
		history.		
Ware Museum	CIO and	Local social	Cathy De'Freitas,	29/1/24
	charity	history	Museum Manager	
	(1181895)			
Norfolk County	Local	Multi venue	Steve Miller, Director	29/1/24 (online)
Council	Authority	service	of Culture and	
		including ten	Heritage	
		museums and a		
		county records		
		office.		
Westminster City	Local	Archives	Amanda House,	1/2/24 (online)
Archives	Authority		Senior Archivist	
Buckinghamshire	Local	Archives	Daniel Williams,	7/2/24
Archives	Authority		County and Diocesan	
			Archivist	

Appendix B – Questions used in the interviews

This table was used for all the semi-structured interviews with museum and archive personnel. The exact questions asked varied depending on the responses of the participants. Those in **bold** were the key questions.

Area to be explored	Possible questions
Introductions and	Do you have any queries for me about the research?
consent forms	
Current practice around performance indicators	 How do you currently monitor progress towards the museum's aims? What is successful about the current use of PIs? What is difficult or could be better? Apart from KPIs how do you tell if the organisation is doing well? If you haven't already, can you share your KPIs with me? How are the performance indicators set? How is performance data used? Is there agreement in the teams over the use of performance indicators? How is the behaviour of managers and delivery team influenced by performance indicators? How is the information shared with the wider team? Who is most interested in monitoring progress, e.g. director, trustees, staff?
Productivity	Productivity means the value of output produced per unit of input. In for profit organisations that is measured in financial terms. This is a problematic area for museums / archives etc. • What does productivity mean for this organisation? • What does this organisation produce? • Do you think that all museums / archives etc produce the same things? • What outputs and outcomes indicate success?
Volunteers	 How much of the museum's activities are done by volunteers? Could the museum run without volunteers? Can you express volunteer input as a % of the workforce?
Motivation	 Are you someone who finds targets and performance data motivating? How effective are performance indicators in motivating the people who work here? What makes the staff and volunteers work in a focused and productive way? Are there differences between the motivation of paid staff and volunteers?
Wrap up, next steps and thanks	 Is there anything else you think I should know about how you monitor productivity or motivate the team? Do you have any questions for me before we wrap up?

Appendix C – List of products identified by the interviewees

This is a summary of the responses from the interviewees when asked "What does this organisation produce?". They are listed in the order of frequency.

	Product of the museum or archive	Number of interviewees who mentioned this	KBAC classification (number)
1	Events and activities for the public	8	K (1)
2	Exhibitions and displays	7	K (2)
3	Visitor experience / engagement	7	A (1)
4	Heritage assets preserved for future generations	6	C (1)
5	Research visits and facilitating research	4	K (3)
6	Income for the organisation / online sales / organisational wellbeing	4	B (1)
7	Public space / the building	3	B (2)
8	Partnerships / coproduced projects	3	O (1)
9	Volunteer programme / volunteer placements	3	O (1)
10	Knowledge	3	K (4)
11	Intangible heritage e.g. preservation of traditional craft skills	2	C (2)
12	Enjoyment for visitors / users	2	A (2)
13	Wellbeing for visitors / users	2	A (3)
14	Sense of community / civic pride / social cohesion	2	A (4)
15	Place making. Helping to raise awareness of a city or area that people might visit.	2	A (5)
16	Economic impact, i.e. financial benefits for the local area.	2	B (3)
17	Reputational value	2	B (4)
18	Digital resources	1	K (5)
19	Social media outputs	1	K (6)
20	Scientific capital	1	K (7)
21	Stories about the heritage. Intangible oral traditions.	1	K (8)
22	New catalogue entries	1	C (3)
23	Education / lifelong learning for its own sake	1	A (6)
24	Something bigger than us that is worth investing in	1	A (7)
25	Inspiration for visitors / users	1	A (8)

Appendix D – Performance indicators used by the interviewees

This list was constructed to identify the kinds of indicators being used. It is a consolidated list created from the data provided by the interviewees and some indicators that were similar have been amalgamated.

No.	Performance Indicator	Number of	КВАС
		interviewees using	classification
		this indicator	(number)
1	In person visitors	9	A (1)
2	Retail income, i.e. shop, and or café	5	B (1)
3	Visitor or user feedback	3	A (2)
4	Attendees at learning events (divided into schools,		
	informal learning, talks, children, and adults, etc.)	3	A (3)
5	Income from renting space, e.g. storage space and		
	private hires	3	B (2)
6	Philanthropic income, i.e. donations. Sponsorship,		
	donations, trusts, and foundations	2	B (3)
7	Increase in number of Friends, i.e. people paying for		
	membership	2	B (4)
8	Volunteering hours (subdivisions into supported and		
	unsupported, onsite, online, by specific project, etc.)	2	B (5)
9	Grants awarded	2	B (6)
10	Visitor surveys completed	2	A (4)
11	Research enquiries	2	A (5)
12	Engagements with the archive service	2	A (6)
13	Formal learning visits (divided by school, pre-school,		
	university, etc.)	2	A (7)
14	External events attended, e.g. county shows or career		
	fairs	2	K (1)
15	Matching delivery against the forward plan, i.e.		
	achieving the identified projects/activities	2	O (1)
16	Visitor programming satisfaction	1	A (8)
17	Visitor demographics - who	1	A (9)
18	Aggregate of online reviews	1	A (10)
19	Donations per visitor	1	B (7)
20	Spend per head	1	B (8)
21	Gift aid take up	1	B (9)
22	Press coverage	1	B (10)
23	Digital reach. Website visitors.	1	A (11)
24	Ticket sales	1	B (11)
25	% of Art fund visitors, i.e. free entry	1	B (12)
26	Hours open to the public	1	K (2)
27	Number of retail transactions	1	B (13)
28	Gift Aid transactions	1	B (14)
29	Gift Aid total value (from Gift Aid Audit)	1	B (15)
30	Attendance at onsite private events - (estimated)	1	A (12)
31	Private onsite events - number of events	1	K (3)
32	Funding applications - submitted to trusts and		
	foundations	1	B (16)

33	Exhibitions	1	K (4)
34	Records digitised	1	C (1)
35	Outreach (offsite) talks	1	K (5)
36	Objects photographed	1	C (2)
37	Collaborative projects, e.g. joint exhibition	1	K (6)
38	Mentoring and advice	1	B (17)
39	Museum-led sessions booked	1	K (7)
40	Schools' loans box bookings	1	A (13)
41	Reminiscence box loans	1	A (14)
42	Activity sessions (divided into family & ones aimed at		
	adults)	1	K (8)
43	Individual volunteers (subdivided into, onsite, online		
	and by project).	1	B (18)
44	Individual supported volunteers	1	K (9)
45	New volunteers	1	B (19)
46	Internships & work experience (various subdivisions)	1	K (10)
47	Research interactions (sub divided - in person, phone		
	& email)	1	K (11)
48	Routine enquiries	1	B (20)
49	Bookings (to use the search room)	1	A (15)
50	Items retrieved for researchers / users	1	K (12)
51	Compliments (sub divided - in person, phone & email)	1	A (16)
52	Onsite public events	1	K (13)
53	Number of collections	1	C (3)
54	New accessions	1	C (4)
55	Amount of the collection that has been catalogued	1	C (5)
56	Amount of the collection that has been digitised	1	C (6)
57	Website views	1	A (17)
58	Number of people accessing online catalogue	1	A (18)
59	Balanced budget	1	B (21)
60	Appraisals and goal setting	1	O (2)
61	Impact measurement	1	O (3)
62	Allotment plots in use & vacant	1	O (4)

Appendix E – Survey questions

The survey was delivered online using Qualtrics. After an explanation of the project and details of ethical approval from the University of Hertfordshire the following questions were asked.

Please	you are happy to proceed confirm that you have read the study information and give your consent to participating in the by answering "Yes".
\bigcirc	Yes
\bigcirc	No
Respoi	onfirming eligibility indents must be 18 or over and be involved, as a volunteer, paid employee or freelancer, in the offit cultural heritage sector, that is in a museum, archive, special collection, gallery or other e venue in the UK. Please confirm that you are eligible by answering "Yes".
\bigcirc	Yes
\bigcirc	No
volunte	nis first set of questions is about you and the context in which you are working or eering. What kind of organisation are you currently involved with? If you are involved in more ne, please answer for the one you spend most time with.
\bigcirc	A museum, including open air and working museums
\bigcirc	An archive or special collection
\bigcirc	An art and/or craft gallery
\bigcirc	Built heritage, including historic houses and industrial heritage
service	My role covers a combination of these, e.g. part of a multi venue organisation or a support
\bigcirc	Other
Q2.2 H	ow long have you worked or volunteered in the cultural heritage sector?
\bigcirc	Less than one year (1)
\bigcirc	1-4 years (2)
\bigcirc	5-9 years (3)
\bigcirc	10-19 years (4)
\bigcirc	20-29 years (5)
\bigcirc	30+ years (6)

roles, p	please answer for the one you spend most time doing.
\bigcirc	Paid employee
\bigcirc	Volunteer
\bigcirc	Freelancer
\bigcirc	Other
-	ow is the organisation you are involved with set up? If you are involved in more than one pick the one you spend most time with.
\bigcirc	A national institution funded by central government
\bigcirc	Local authority funded by a council
\bigcirc	An independent charity or trust
\bigcirc	University
\bigcirc	Other
Q2.5 W	/here do you work?
\bigcirc	England
\bigcirc	Scotland
\bigcirc	Wales
\bigcirc	Northern Ireland
\bigcirc	Across the UK
\bigcirc	Other
Q2.6 W	hich of these options best describes the tasks you do?
\bigcirc	Mostly front of house, e.g. on the front desk, in the galleries and shop
\bigcirc	Mostly working with the collections, e.g. cataloguing, curating and conservation
\bigcirc	Mostly focused on the public programme, e.g. exhibitions, events and projects
\bigcirc	Mostly administrative or managerial, e.g. running the venue, managing a team and raising funds
\bigcirc	A combination of these activities
\bigcirc	Other

Q2.3 Which of these options best describes your role in the organisation? If you have multiple

Q2.7 V	Which age bracket applies to you?
\bigcirc	18-24
\bigcirc	25-29
\bigcirc	30-39
\bigcirc	40-49
\bigcirc	50-59
\bigcirc	60-69
\bigcirc	70-79
\bigcirc	80+
Q2.8 V	What is your gender?
\bigcirc	Male
\bigcirc	Female
\bigcirc	Non-binary / third gender
\bigcirc	Prefer not to say
\bigcirc	Other
(KPIs),	This set of questions about performance indicators, including key performance indicators that is data used to monitor efficiency and effectiveness. Does the organisation that you volved with use performance indicators?
\bigcirc	Yes
\bigcirc	No
\bigcirc	Don't know
	o what extent do you agree that you personally are motivated by data that shows progress d a target?
\bigcirc	Strongly agree
\bigcirc	Somewhat agree
\bigcirc	Neither agree nor disagree
\bigcirc	Somewhat disagree
	Strongly disagree

		extent do you ge sector?	agree that p	erformance indic	ators are he	lpful tools in	the non-profit				
Os	trongl	y agree									
Os	Somewhat agree										
O N	Neither agree nor disagree										
Os	Somewhat disagree										
O s	Strongly disagree										
for paid or respond Using the	emplo as you e scale	yees. If you a I see fit. e below, pleas	re a volunte	tivation. They use er, please don't be what extent the vork because I de	e put off by o	questions abo	out income just o the reasons				
things.	.	,	,				3				
Does n corresp at all 1	ond	2	3	Corresponds moderately 4	5	6	Corresponds exactly 7				
0		0	0	0	0	0	0				
reasons v	why yo		tly involved	ate to what exten in your work beca		-					
correspo at all				Corresponds moderately			Corresponds exactly				
1		2	3	4	5	6	7				
0		\circ	0	0	\circ	\circ	0				
	why y		•	ate to what exten in your work beca		-					
Does n				Corresponds			Corresponds				
				moderately		6	exactly				
1		2	3	4	5		7				
\circ		\circ	\bigcirc	\circ	\bigcirc	\circ	\circ				

reasons why you are presently involved in your work for the income it provides me.										
Does not correspond at all			Corresponds moderately			Corresponds exactly				
1	2	3	4	5	6	7				
\circ	0	\circ	\circ	\circ	\circ	\circ				
Q4.5 Using the scale below, please indicate to what extent the statement corresponds to the reasons why you are presently involved in your work Because it is the type of work I have chosen to attain certain important objectives.										
Does not										
correspond			Corresponds			Corresponds				
at all			moderately		6	exactly				
1	2	3	4	5	В	7				
\bigcirc	0	\circ	\circ	\circ	\circ	\bigcirc				
_	ou are preser	ntly involved	cate to what exter in your work I do Corresponds moderately 4		-					
\circ	0	\circ	\circ	\circ	\circ	\circ				
Q4.7 Using the scale below, please indicate to what extent the statement corresponds to the reasons why you are presently involved in your work for the satisfaction I experience from taking on interesting challenges.										
Does not										
correspond			Corresponds			Corresponds				
at all			moderately		6	exactly				
1	2	3	4	5	U	7				
0	0	0	0	0	0	0				

_	ou are presen	•	ite to what exten n your work beca		•						
Does not correspond at all 1	2	3	Corresponds moderately 4	5	6	Corresponds exactly 7					
\circ	0	0 0 0 0									
_	Q4.9 Using the scale below, please indicate to what extent the statement corresponds to the reasons why you are presently involved in your work I don't know, too much is expected of us.										
Does not correspond at all 1	2	3	Corresponds moderately 4	5	6	Corresponds exactly 7					
\circ	0	\circ	\circ	\circ	\circ	\circ					
_	ou are presen	-	cate to what exte n your work beca		-						
Does not correspond at all 1	2	3	Corresponds moderately 4	5	6	Corresponds exactly 7					
\circ	0	0	0	\circ	0	\circ					
_	ou are presen	tly involved i	cate to what exte n your work beca		_						
Does not correspond at all 1	2	3	Corresponds moderately 4	5	6	Corresponds exactly 7					

\bigcirc	0		\bigcirc	\bigcirc

Q4.12 Using the scale below, please indicate to what extent the statement corresponds to the reasons why you are presently involved in your work

	Does not correspond at all 1 (1)	2 (2)	3 (3)	Corresponds moderately 4 (4)	5 (8)	6 (5)	Corresponds exactly 7 (6)
Because it allows me to earn money (1)	0	0	0	0	0	0	0