

CAN CHARITIES USE ENTERPRISE PERFORMANCE MANAGEMENT SYSTEMS TO IMPROVE INFORMATION PROVISION?

Complete Research

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Abstract

Charities are often complex and networked, and face an increasingly demanding environment. Providing stakeholders with timely and adequate information on activities and impact is therefore challenging. Based on case studies of six UK charities, this paper finds that small/medium charities can use Enterprise Performance (EPM) systems to support providing such information, despite some challenges to their use of IT. There is an increasing awareness in charities of the importance of data, though technical aspects of data management are taxing for them. Compared to SMEs, charities share many of the challenges for IT-enhancement, but benefit from additional encouraging factors. EPM thinking, which is the ability to use an integrated and strategic approach to IT-support for EPM, is extant in charities' Leadership and Business Systems Thinking capabilities. Necessary capabilities related to IT sourcing are much weaker and need external support. The study identified two different approaches to data integration and business process modelling in EPM: the first focuses on standardising performance measures across activities and projects, the second on standardising reporting processes while allowing for diversity of measures. The use of BI is largely unsophisticated, though improving, and may need enhancing to address the increasingly complex internal and external need for information.

Keywords: Enterprise Performance Management, Charities, Information Technology, Capabilities.

1 Introduction

Charities, the focus of this study, are a sub-set of civil society. Also referred to as non-profit, voluntary or third sector, civil society is the term used for institutions that are neither statutory (public sector) nor profit maximising (Morris, 2000) and it occupies the space between the state, business and individuals (Clark et al., 2012, p.3). In the UK, there are approximately 187,000 charities, with an income in excess of £70bn (Charity Commission, 2013; OSCR, 2014), covering most areas of society's activities. Charities share five key characteristics: they are organised, private (as opposed to public, state or government run), non-profit-distributing, self-governing and voluntary (some degree of voluntary participation) (Salamon & Anheier, 1997). Being not driven by profit, they are regarded to be 'mission-driven' organisations instead.

Civil society is changing dramatically, with non-profit organisations taking over services previously managed by the state (local or central government). Bode (2006) shows a fundamental shift away from the post-war, highly organised 'welfare mix', to a much more confusing, even 'disorganised' situation, with increased short-term contracting of services by government authorities. Furthermore, charities often operate as international, national and local organisations through dispersed networks and partnerships. In this increasingly complex context, charities face difficulties in providing accurate, relevant and timely accounts of their activities and impact.

Charities need to provide such information to a wide range of stakeholders, for example funders, donors, regulators and beneficiaries, each often with specific requirements. Crawford et al. (2009) recommend that funders, regulators and charities should improve their dialogue and move towards providing the same documentation for all stakeholders. Such reporting traditionally focuses on numbers and financial information, but narrative reporting – linking figures to non-financial performance information – is increasingly important for charities (Connolly et al., 2009). However, attempts to combine narrative and statutory reporting have had limited success (Connolly and Dhanani, 2009).

The premise for this paper is that Information Technologies (IT) could support charities in addressing the combined challenges of providing diverse stakeholders with timely and adequate information, given the complex and networked nature of many charities. In particular, there may be potential to use Enterprise Performance Management (EPM) systems, because these enable the use of data from multiple, diverse sources and can support the analysis and presentation of this data in various formats in line with organisational needs. Using such systems might therefore better enable charities to provide the required information. This paper therefore aims to explore how UK charities can use IT in the shape of EPM systems to enhance the information provision to their stakeholders. Because of their pivotal role in this, the study is particularly interested in charity trustees.

The next section will provide brief background research on the information that charities need to provide to their main stakeholders, as well as the level of IT use in the sector. The background section also explains EPM systems and their theoretical capabilities in the context of charity information provision. The case study section that follows first provides an account of the research methodology, and goes on to analyse the data collected in six small/medium UK charities. The final section provides a discussion and brief conclusion.

2 Background

2.1 Information needs of UK charities and their trustees

Each UK charity has a governing board of trustees. Charity trustees are volunteers who are responsible for the strategic direction and the legal, financial, and operational health of their charity (Cornforth, 2001). Despite these responsibilities, trustees are not normally the executive of their organisation, but depend upon managers, employees and volunteers. Trustees are unpaid and may often be appointed for reasons other than good management abilities (Anthony and Young, 2003). Two main elements of the trustees responsibilities are fiduciary accountability, which is designed to ensure good governance and stewardship of assets, and managerial accountability, encompassing the organisation's impact on society as well as good financial management (Connolly and Dhanani, 2009; Crawford et al., 2009). The UK Charity Commission publishes the 'Good Governance: A Code for the Voluntary and Community sector' (Charity Commission, 2010) to help trustees understand their role.

Regulators require charities to report on both their financial and operational performance. UK organisations wishing to benefit from charitable registration need to follow the Statement of Recommended Practice (SORP) for charity financial reporting. Under the SORP, trustees are required to draw up financial statements and to publish an accompanying trustees' report which explains their charitable objectives and how these have been addressed in the year. Charity reporting now focuses on 'public benefit' as an aim, allocation of resources towards this aim and management of risk. Visibility of activities and outcomes has increased through the required narrative reporting.

External reporting is also driven by funders, such as donors, commissioners, grant-making agencies and the government. Unlike financial reporting, there is no standard way of reporting impact to external stakeholders. Charities not only need to demonstrate such impact but they also need to convince stakeholders that these impacts are – at least in part – the result of the charities' activities. The logic model (Poister, 2003) is designed to help organisations demonstrate worthwhile results and provide evidence that their activities are producing those results (e.g. Moxham and Boaden, 2007).

In addition to – and as a foundation for – external reporting, charities need to understand and internally report on their performance as well. Performance Management Systems (PMS) are 'concerned with

defining, controlling and managing both the achievement of outcomes or ends as well as the means used to achieve these results at a societal and organisational rather than individual level' (Broadbent and Laughlin, 2009, p.283). These themes are mirrored in non-profit literature, with emphasis put on the alignment of mission, strategy and objectives with performance measures (Sawhill and Williamson, 2001; Kaplan, 2001; Moxham and Boaden, 2007). The PMS framework set out by Ferreira and Otley (2009) shows the importance of setting the overall vision and mission, determining the key success factors, aligning strategy to performance measures and then reporting against planned measures. Information flows – and the systems on which they depend – underpin the setting of the vision, strategic planning and performance evaluation in this framework.

2.2 IT use in charities

While some charities make good use of IT, its strategic application is generally under-exploited (Hackler and Saxton, 2007; Zorn et al., 2011). Several sources indicate barriers and constraints for effective use of IT in charities. As with for-profit organisations, size of organisation is the strongest predictor for charity IT capacity (Clerkin and Grønberg, 2007). Other major factors, often related to size, are funding/budget, time, external pressures (e.g. to invest in particular technologies), hard to measure goals, staffing, training and access to expertise (Cortés and Rafter, 2007; Wolpert and Seley, 2007; Manzo and Pitkin, 2007). Manzo and Pitkin (2007) found that non-profit organisations, independent of their budget, share the same challenge of getting employees to successfully use IT tools to help them to do their work. Only when the organisation develops an 'IT capability' can the IT be used to achieve improvements in organisational outcomes (Mata et al., 1995). Though largely applied in for-profit organisations, this principle of building capabilities to improve performance is equally applicable in non-profit organisations (Arya and Lin, 2007). The push in charities to commercialisation and developments in social investment are encouraging trustees to focus on building resources, including IT systems and capabilities, to improve performance (Bagwell, 2012).

2.3 Enterprise Performance Management Systems

Enterprise Performance Management (EPM) broadly refers to the strategic management of performance at a corporate or enterprise level (Marr, 2008; Dresner, 2008). It is also known as Corporate Performance Management (CPM), Business Performance Management (BPM) or Strategic Performance Management (SPM). IT support is a key enabler for EPM and as such is usually explicit in its definitions (Frolick and Ariyachandra, 2006). At the same time, problems with the technical infrastructure are a major barrier for achieving EPM (Neely et al., 2008). EPM can be seen to have two main tasks: a) facilitating the creation of strategic goals, and b) supporting the subsequent management of the performance to those goals (Ariyachandra and Frolick, 2008). These tasks directly align EPM with the role of trustees as explored above: to a) scrutinise the charity's purpose and proposals for future planning, investment, and projects, and b) demonstrate the efficiency and effectiveness of their charity to the wider public through external reporting.

EPM aims to address problems created by fragmentation of performance management systems, i.e. having different systems for storing, reporting and analysing data for different business functions, locations and units (Neely et al., 2008). According to Dresner (2008) these problems are a result of organisations focusing IT investment on systems that support the efficient day-to-day operations, making it difficult to access and use data to support management decision-making. Relevant data is likely to be spread over multiple databases in different systems, in multiple formats, and even over multiple organisations. To address these problems, the IT for EPM combines two main functions: a) drawing data from disparate sources (including external ones); and b) using business intelligence (BI) tools, such as planning, forecasting, dashboards, scorecards, reporting and analysis, for analysing the data, presenting outcomes in user-friendly formats and providing scenarios for future planning. According to Melchert and Winter (2004), the IT behind EPM is the convergence of three well-adapted technologies, that before were used in isolation (see Figure 1).

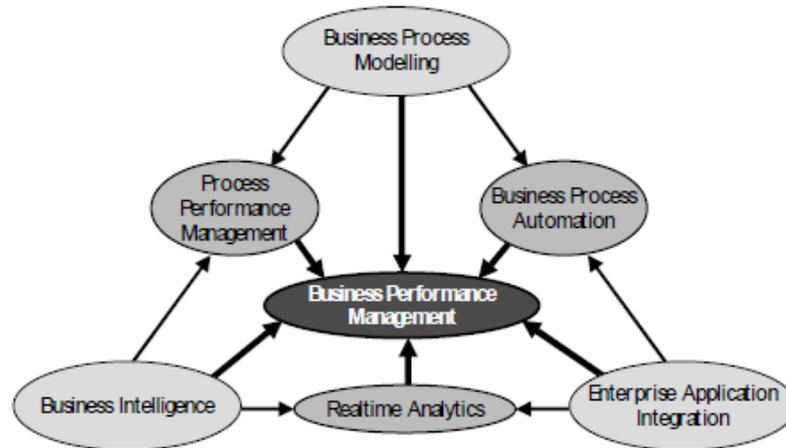


Figure 1. *Converging technologies for EPM, Merchert and Winter 2004, p.536.*

Figure 1 illustrates that IT support for EPM draws upon an integrated use of existing technologies, rather than necessarily requiring separate, ‘new’ software tools. Integration here does not mean using one big IT system, but rather the co-ordinated design and use of a range of systems. This notion is a key part of what this study labels ‘EPM thinking’: organisations using an integrated and strategic approach to performance management and IT, to drive the realisation of EPM. It highlights that EPM is not simply about putting IT systems in place, but that it also requires a specific mindset to materialise. It further implies that by using EPM thinking, EPM may be supported by IT systems that were not originally designed for it.

The DIKAR model (Ward and Peppard, 2002), Data – Information – Knowledge – Action – Result, can be used to show how data can ultimately be linked to organisational results. Figure 2 below applies the DIKAR model in the context of this study.

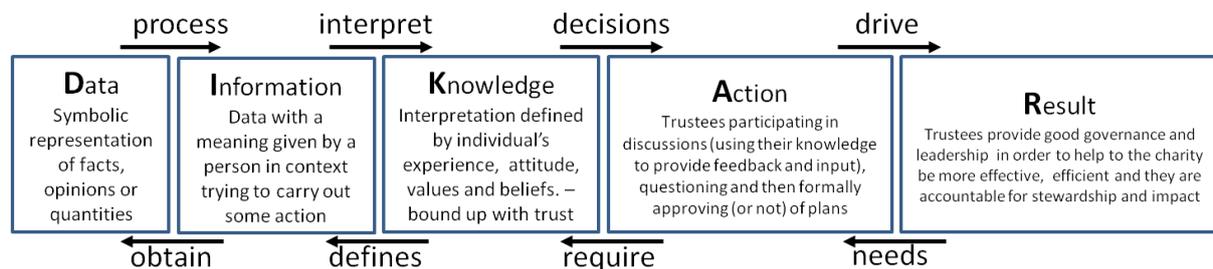


Figure 2. *DIKAR model (Ward and Peppard, 2002; Checkland and Scholes, 1990).*

Considering Figure 2 from right to left, result is defined in terms of the trustees’ fulfilling the purpose of their roles. These results are driven by the trustees’ actions, undertaken to achieve this purpose. Those actions are the outcomes of decisions that are based on knowledge. EPM systems can serve to help charities to provide trustees with the information that underpins this knowledge. To achieve this, EPM systems streamline and manage data, and process it into information, using analytical and visualisation tools. In relation to knowledge, EPM systems can have a role in supporting communication and access to information in relation to performance management. The focus of this paper is on the Data, Information, and Knowledge elements of DIKAR, be it in the context of Action and Results.

Academic literature (Lawrie et al., 2004; Viaene et al., 2009), as well as vendor success stories, provide some evidence of EPM being applied in not-for-profit organisations. They can benefit, for example, by analysing performance to make better resource allocation, characterising clients for more effective interventions, demonstrate outcomes to (potential) donors, and improve joined-up working between agencies (Limburg et al., 2012).

3 Case studies

3.1 Research method

The core methodology of this study is comparative case studies, an appropriate method in an emerging field where the context is important, and which lacks agreed theoretical frameworks to underpin hypotheses for testing. It is particularly suited to interdisciplinary research in such fields (Yin, 2009). Data for the case studies was collected through semi-structured interviews with trustees and staff of six English charities (see Table 1). The 27 interviews lasted on average 46 minutes and were recorded and transcribed for analysis. The interview questions were based on a literature review and discussions with umbrella and professional bodies in the charity field.

Alias:	Acorn	Bramble	Oak	Plane	Vine	Willow
Interviewees	CEO, Business/Executive Support manager, Network Manager, Programme Manager, Trustee	CEO, Treasurer, Trustee	CEO, Finance manager, External IT Consultant, Trustee (chairman)	CEO, Box office manager, Finance director, Trustee	CEO, Finance and IT manager, Operations manager, Trustee	CEO/founder, Equipment/materials manager, Finance Director, Logistics and Finance manager, Project manager, Supply chain manager, Trustee

Table 1 Overview of interviewees

The transcripts of the interviews were initially individually coded by the three researchers. Their findings were then compared to identify emerging themes, particularly those that were not highlighted by the literature review. The themes were then further cross-referred to identify convergence.

The case organisations, all small to medium-sized charities, were approached after discussions with UK charity umbrella bodies and a request through LinkedIn for interested charities to participate; most were personal contacts of the research team. The organisations were selected because they encapsulate some elements of EPM and reflect a range of characteristics broadly representative of the field (see Table 2 in the next section).

3.2 Six stories

Table 2 below provides an overview of key characteristics of each of the six case organisations. Following the table, each organisation is briefly introduced with a ‘story’ on what they do, their context and their use of EPM.

Alias	Acorn	Bramble	Oak	Plane	Vine	Willow
Sector	Social action/youth	Art/youth	Grant giving within an industry	Arts/theatre	Children	Disabled
Scope	National	International	National	Regional	International	International
Structure	Central head office with regional hubs	Works with theatre companies, schools and other organisations	Central head office serving UK	UK market town office	UK office working internationally with local networks (35 made up of 2,800 organisations)	UK head office, offices in Kenya, India, expanding into China, Nepal
Founded	2008	1988	Origins Early 1800s	Origins 1880s, current form 1990s	1996	1980s
Income	£400K	£350K	£1.4M	£4.8M	£2.5M	£2.8M
Income sources	Large donors, local founda-	Arts Council grant, fee in-	Investment and charita-	Trading through subsidiary (tick-	Churches, large donors, trusts and	Trading through subsid-

Alias	Acorn	Bramble	Oak	Plane	Vine	Willow
	tions, individuals, social enterprise	come (trading)	ble activities	et sales). Grants for projects	foundations, other NGOs, some governmental sources	iary social enterprise, donations, charitable activities
Reserves	£80K	£83K	£33M	£3.5M (building), free £470K	350K	£162K
Staff	11 + 5 interns	8 (2013)	13	68	50 in UK HQ	26
Volunteers	70	-	12	180	13,000 staff and volunteers worldwide in networks	-
Trading	Yes	Yes	No	Yes	No	Yes

Table 2. An overview of the six case organisations

Acorn

Acorn is a relatively young national charity run by and for young people. It is a lean organisation, doing “*too much with too little money, very cost-efficient*” (trustee). Acorn aims to transform the involvement of young people in charitable activities and wants to empower them to be active community members by promoting social action and volunteering. For this purpose, they run a growing network of regional branches that organise events, training and conferences, and they have national programmes that support the young people in their work with beneficiaries.

Acorn’s management is keen to enhance insights into performance and wants to be able to compare activities, projects and branches. They have driven several improvements to achieve this, for example a substantial IT investment, business process analysis, and streamlining of data collection. They received significant pro-bono support from consultants and IT suppliers.

Bramble

Bramble, a UK based charity with international partners, aims to unlock creative potential in young people by using technology and drama. It has been through turbulent times and its turnover has decreased substantially and staff numbers have strongly fluctuated. In an increasingly competitive funding world, efforts were made to diversify into commercial income streams, which are more under Bramble’s control than grant income. Reporting was tightened so that funding forecasts are now regularly monitored for probability of success. They now have “*sharper*” reporting with prior year comparisons and a monthly update of the funding situation projected into the future, recognising the “*different timescales, backwards and forwards*” (treasurer).

Bramble uses video reporting of an overseas project to demonstrate the impact of the overseas efforts on the work and the potential for work within the UK. The video allows the project managers to demonstrate how school children can collaborate easily and regularly across continents on a joint project. It underlines the networking nature of the way Bramble operates, how impact goes beyond the organisation (for instance through the schools involved in the network) and how effective supplying this sort of information to trustees can be.

Oak

Oak is small, but well-endowed and well-connected. The charity aims to provide assistance to people within their focus industry through four corner-stones: sheltered homes, a grants programme (regular and one-off), link building and fundraising/marketing. Originally they were mainly supporting the elderly, but recently their scope has changed to include to young people and they wish to significantly expand their reach: from 450 to 2000 people. While still giving money directly to beneficiaries, Oak also want to move to more partnership working with specialist providers in order to enhance effectiveness and efficiency.

The charity monitors and reports on targets for each of its cornerstones, such as occupancy rates and numbers of grantees. In order to support their revised strategy, Oak aims to invest in a CRM system to move away from cumbersome analysis of manual data. However, Oak have been held back by acute IT problems (including security breaches) and are currently working with an IT consultant to create a

stable IT infrastructure and good IT management processes. The desired strategic IT enhancements have been on hold, because: “*we need to walk before we run*” (CEO).

Plane

Plane operates a three-venue arts centre in an English market town, aiming to provide an artistic experience to the public, and to further the social and cultural welfare of the town and surrounding areas. It has created a trading subsidiary and successfully bid for refurbishment funds. Plane faces several challenges, including the state of arts funding, constraints on local authority spending, and the squeeze on discretionary spending by older people (their main audience).

Plane is already very efficient as a commercial theatre, but analysis of their results (financial and non-financial), combined with a detailed understanding of the national and local cultural and economic contexts, showed a need to diversify income streams and activities. Plane has used EPM thinking and an integrated system to analyse results and has based its strategic plan on this analysis. Its performance management system (consisting of their Box Office systems and financials plus forecasts) is simple but it is operational, effective and informs their strategy.

Vine

Vine is a faith-based charity, providing help to the worlds’ children. Its model assumes that dramatically more children can be reached by using existing local networks, particularly through churches and community organisations. By providing consultancy and support from a central hub in the UK, it has built 35 city-wide networks to enable local people to help children across 21 countries and is directly involved in the lives of 987,000 children worldwide. Measuring the success of networks is difficult and even harder to communicate in fundraising.

Vine has developed its own self-assessment-based impact measurement system to evaluate and monitor its work. This method uses a qualitative assessment of performance with a quantitative analysis of children reached. Vine’s consultants use this analysis to improve the networks for the following year and it is summarised into six key outcomes for donor communications. Vine uses performance management at a strategic level and plans to use IT for information exchange between networks (including trustees and possibly partners). The CEO is also aware of the limitations of IT: “*I don’t want to be driven by our systems. I want them to serve us because this is the heartbeat of the organisation. I don’t want us to have a mechanical heart*”.

Willow

Willow provides well-designed, tailored, cheap and easily assembled equipment for disabled people in the developing world. This is supported by training, advocacy, and developing standards and guidelines for the sector. Willow, therefore, sees collecting data for the sector as a whole as important.

A desire to be “*more accountable*” (project manager) and requests for “*shorter and sharper*” reports (finance director) is driving improved reporting. However, they need to collate data from forty-plus different projects, and face issues with the format of financial data when consolidating trading and charity accounts. This complexity makes it difficult to retain perspective on the diversity of activities, while trying to be succinct. External reporting, where some funders require separate audits, can also be onerous: “*You’re expected to be able to account for every single penny you spend, but, you know, expected to do it on a shoestring*” (finance director).

Willow recognises the need for an integrated, ideally real-time system. Their attempt to get a fundraising and relationship management system to integrate with their new account system failed however, largely due to incompetence/errors of the IT company involved, but also as a result of a lack of physical and financial resources.

3.3 Using DIKAR to investigate elements of EPM in the case studies

The previous sub-section shows that the case organisations have diverse aims and backgrounds, as well as needs for, and challenges, with performance management. However, they all have an increas-

ing IT competence and are ambitious in their use of IT, though their limited size (which limits internal IT competence) and budget leads to some problems and a need for external support.

In order to gain a more detailed understanding of how the charities use IT for EPM, Table 3 provides an overview of the key EPM elements across the case organisations. The rows in this table are based on combining elements of the DIKAR model with characteristics of EPM (see Figure 2) and interview analysis. The 'Data' element of the DIKAR has thus been split into three different elements, reflecting the needs and challenges related to EPM in the cases and theory: collection, storage and management, and integration. Information is shown through analytical (BI) and presentation software, while IT systems supporting sharing and communication reflect the Knowledge element. The final row captures 'EPM thinking' in the case organisations. The discussion of the DIKAR elements below looks at these IT elements, but also at additional aspects.

Data

All the case organisations demonstrate an awareness of the importance of data to support performance management and they are improving their IT support for this. Data is generally held in the functional systems (i.e. their embedded databases) and spreadsheets. The amount of data held in paper files is decreasing. Data management is explicitly recognised as an important task by Acorn, and Oak has had an increased awareness of it due to their security issues. Enhanced data capture is supported by embedding user-friendly systems into operational processes and creating more integrated solutions. Moving to standardisation of data collection enables easier comparisons over time and across projects.

The experiences of these charities confirm that, in comparison to for-profit organisation, they face more difficulties in establishing data requirements for reporting on outcomes and impact. Both qualitative and quantitative data are needed and collected. While standardisation of data is attractive, it is challenged in some charities because the nature of charitable work leads to different projects having very different characteristics. Charities with international networks face additional issues with data collection, linked to a lack of IT infrastructure overseas or the use of different systems, which in turn leads to delays and laborious manual processing. However, such charities also have innovative plans to address these issues, for example by using mobiles and iPads.

IT management, including storage, access, sharing and security, requires particular IT expertise and is thus challenging. IT expertise in several of the charities sits with one or two key people who do not have a specific IT background. Due their limited size and need for frugality, most of the case organisations identify a weakness in IT expertise. While there is a broad awareness of the importance of collecting data for internal management and external reporting, the appetite for investing resources in actively managing data is mixed.

Information

The research data shows a mixture of manual and automatic generation of information, largely in the shape of reports. Most case organisations use simple systems, such as Excel and Word to collate, summarise and analyse data. Some use embedded functionality in CRM and similar systems, or apply specialised analytical tools, particularly Google Analytics.

Reports generally include straightforward overviews and summaries of data with added narrative and contextual information, highlighting areas of special interest or explaining the background of figures. Such contextual information draws on data, particularly if a variety of sources, including external, is used, but it is also based on knowledge of those preparing reports. There is some use of dashboards (Acorn in particular), though Bramble abandoned their use of a traffic light system as it was seen to be too simplistic.

The key challenges that the charities face include having the right data available to produce timely information, accessing and pooling data from different sources, and limited capability to analyse data. Acorn has taken an organisation-wide approach, partly enabled by being a young organisation, Vine, in contrast, has created a separate stand-alone integrated system that collects, processes, and presents performance data.

DIKAR element	DIKAR EPM specified	Acorn	Bramble	Oak	Plane	Vine	Willow
Data	Data collection	Structured data collection in Salesforce CRM, Standardised measures. Phasing out manual data. Process mapping. Pragmatic about what data can be collected, not storing too much (personal) data. Using Surveys and external studies.	Data collection through accounting systems and project management (largely on Excel, Word, Access, web sites). Flexible standardised format for project management. Overseas project reported via video. Use of other qualitative data	Finance system and Outlook, also manual. Aiming to implement CRM and online forms.	Data collection through StageIt, against financial and non-financial KPIs. Access Dimensions for financial data.	Data collected from Sage financial systems and CRM. Impact measurement system - questionnaires in the field	Data from overseas emailed and hard to get timely. Data collected for wide range of performance measures (surveys). New accounts system for sales (orders + some relationship management)
	Data storage and management	Data mainly stored in access dimensions (financial accounting) and Salesforce. Data quality improved. Wider project on content/file management, inventory of files/data. A lot stored on Google Drive/Dropbox because server not accessible to all.	Data stored within above mentioned system. Dropbox and Google Drive.	Data on servers, but these were not fit for purpose and unsecure. New server. Member of staff being trained in IT management, including data management.	Data stored in Box Office system and Access Dimensions on organisation's server. Box Office System back up saved off-site daily.	Physical back-up of systems. Data is stored on main systems (Sage, CRM, Impact measurement).	Stored on office server once collated. Orders /sales/accounts system. Office network. Looking to streamline data collection/storage and overseas access. Constrained by physical infrastructure.
	Data integration	Some issues with comparable data, but improvement through Salesforce and standardisation. Want better integration between online and Salesforce.	Manual integration for specific reporting needs.	Manual integration for specific reporting needs.	System tailored to automated integration from Box Office to Access Dimensions. Reconciliations performed regularly. CEO report covers information from range of sources.	Manual integration for specific reporting needs	New accounts system for orders/sales/accounts/fulfilment. Other data, including monthly consolidated accounts manually collated. Separate project reports manually collated. CEO report separate.
Information	Data analysis and presentation	Excel. Under-use web analytics. Dashboards in Salesforce. Ambitions for using analytical software (Tableau and Qlikview mentioned).	Excel and Word (narrative). Video for overseas project. Google Analytics Traffic light system was used but abandoned as too simplistic.	Excel, Word processing.	Excel – including graphs, Word. Google Analytics for website.	Excel Spreadsheets. Impact measurement system.	Excel. Reporting within the sales/accounts system. Word for narrative, CEO's report and project case studies
Knowledge	Software for communication/sharing	Dropbox, Google Drive, email.	Google drive, Dropbox. Accounts stand alone as Macs and PCs incompatible – rest of office networked, Email.	Limited, some email; server (but not really working).	Shared files on organisation network accessible remotely. Email.	Plan to implement Sharepoint to share information across the network.	Shared files in office network, accessible remotely in UK. Email with overseas and internally. Planning collection/sharing systems.
EPM overall	EPM thinking	Implementing strategic performance management and keen to optimise use of IT.	High IT competence and strategic awareness; some analytics used but overall reporting not strategically integrated.	Are aware of IT need to support new strategy and performance management, but current IT basic.	Have simple integrated IT systems that support strategy-making.	Have a purpose-built impact measurement system and want to use IT to share information across large network.	Have struggled with recognised need for integration due to lack of resources and want to improve data collection from field and sector.

Table 3 Use of IT to support EPM-related DIKAR elements in the case organisations

Knowledge

Knowledge resides in the charity staff and trustees, who provide contextual background to the information and understand the meaning and implication of the information in the charity. The data reinforces the importance of the knowledge, skills, background, networks and attitude of the trustees, and particularly trust between them and charity managers. While reports are crucial, they are also seen as “...a conversation starter...” (Vine, operations manager). Bramble provides the idea of an “*informed conversation*” (CEO), with centre-stage given to the people involved in the decision-making processes: the trustees and charity managers. Challenges related to the knowledge element are particularly linked to the expertise and recruitment of trustees, as well as the level of trust between the board and the charity staff.

IT support for the knowledge element is an underdeveloped area. There is increasing use of simple cloud solutions (e.g. Google Drive and Dropbox) to provide access to information and data in addition to the use of office networks. Remote access, both nationally and internationally is an issue in some cases. Vine is planning to implement Sharepoint for sharing information across their networks. However, there is no evidence in the case organisations that IT tools are systematically used for sharing information and supporting communication between trustees and charity management. Reports are often provided in hardcopy or they are emailed

Action and Results

The case study organisations demonstrate that charities are investing in IT systems to improve their ability to report on performance. This is particularly driven by managers’ desire to improve internal performance management, but also benefits reporting to trustees and external stakeholders. The case organisations have developed, and are developing, IT systems that are building blocks for EPM. There is some EPM thinking already present in the case organisations, which enables the use of these IT systems to basic application of EPM, without the need for complex IT. The improved reporting, combined with knowledge and trust, supports enhanced planning and decision-making as well as external reporting, the latter being particularly important where related to funding.

4 Discussion

This paper finds that, despite challenges to their IT, small and medium-sized charities use a range of IT systems that can support EPM. These systems enable collection, storage, and management of relevant quantitative and qualitative data. They also encompass using software tools to analyse the data and present information in user-friendly ways, as well as some software tools to communicate and share information. All case organisations also have some ‘EPM thinking’ that increasingly drives the integrated use of these IT systems for enterprise performance management. This section will elaborate on three key elements: the level of IT use, EPM thinking capability, and approaches used to realising EPM.

4.1 IT challenges for small/medium charities

There is a well-established literature on the use of IT in small- and medium sized for-profits organisations (SMEs) that can inform the understanding of IT use in small/medium charities. Considering the case organisations did identify their size as posing challenges, it is worth comparing the experiences in the case studies with those of SMEs in general. In an early, seminal paper, Cragg and King (1993) investigated the evolution of information systems in small organisations. While these are all for-profit manufacturing firms, the encouraging and discouraging factors they found are remarkably applicable. There are some nuances, however, specific to the charitable nature of the case organisations, which are explored in Table 4 below.

Based on Table 4 it can be concluded that, compared to the SMEs in Cragg and King’s study, IT application in small/medium charities benefits from additional encouraging factors: increased competition for funding, increased need for risk management and strategic planning, stronger relevance of enhancing information processing due to the networked nature, support from umbrella bodies, and the potential to benefit from CSR activities from large corporates. The only additional discouraging factor is prioritisation of direct spending on charitable work over spending on overheads, though this was less of an issue in the case organisations than expected. This analysis confirms that there is a need in charities for using IT to support EPM that drives enhanced importance of IT use.

Cragg & King 1993	In the cases?	Charity specific
Factors Encouraging IT growth		
Relative advantage		
Improved information processing	Yes	Especially relevant because of working in networks and with overseas partners. Important for impact reporting.
Improved planning and control	Yes	In part driven by regulators and funders, e.g. risk management; strategic planning and risk management increasingly important in the sector due to funding pressures. This also depends on the specific focus of the charity.
Work improvements	Not a core aim	Due to being mission driven, staff and volunteers focus more on delivering impact to beneficiaries.
Other factors		
Competitive pressure	Yes	Competition is for funding.
Consultant support	Yes	Charities can benefit from CSR initiatives of large corporates, leading to pro-bono or discounted support.
Managerial enthusiasm	Yes	Awareness of potential IT benefit and importance of PM is growing in the sector, partly driven by umbrella bodies.
Factors Discouraging IT growth		
Education		
Lack of knowledge/ understanding of IS	No	As above: awareness of potential IT benefit is growing in the sector, partly driven by umbrella bodies.
Shortage of people with IT skills	Yes	Some ‘discounted’ access to IT skills through volunteering, otherwise no specific charity issues, except focus on charitable aims.
Influence of higher levels	Not directly	IT is generally looked upon favourably, likely as a result of IT becoming more ‘mainstream’ since Cragg & King’s study. However, the mission-driven nature does play a role, e.g.: “ <i>You are not producing cans of beans, you are touching people’s lives [...] It is not about systems</i> ” (Vine).
Managerial time		
Lack of time	Partly	Only as a result of prioritisation of mission over overheads.
Economic		
Inappropriate economic climate	Yes	Not specific to charities: while investment in IT could lead to cost-savings and increased effectiveness, the initial investment can be too large a burden in a tight funding climate.
Excessive cost	Yes	Potential issues with aversion from funders to paying for overheads: “ <i>You’re expected to be able to account for every single penny you spend, but, you know, expected to do it on a shoestring</i> ” (finance director, Willow). However, charities can be as pragmatic as any small organisation; Bramble, for example, has built sophisticated websites/platforms for beneficiaries, but for themselves uses simple cheap cloud solutions.
Firm too small	Yes	Not specific.
Technical		
Unstructured system	Yes	No specific charity issues. Problems occur due to lack of maintenance and lack of strategic overview.
Poor software support	Yes, mixed experiences	Some support available at a discount and through partnerships with IT firms. Possibly limited support with specific charity expertise.

Table 4 Encouraging and discouraging factors for IT growth (based on Cragg & King 1993)

4.2 EPM thinking

The background section introduced EPM thinking as an organisational capability to use an integrated and strategic approach to the IT-support for enterprise-wide performance management. In the case organisations this was reflected in the plans and actions related to performance management. As it is seen as a capability, it can be investigated through the broader lens of IT-related capabilities. Willcocks et al. (2007) propose nine core IS capabilities that, though more usually applied in large organisations, are meaningful in the context of smaller organisations too. Table 5 defines the nine capabilities and shows their application in the context of EPM as observed in the case organisations.

Capability	Definition	Application to EPM in small/medium charities
Leadership	Integrates the IS effort with business purpose and activity	Business purpose translates as achieving charitable aims and effective and efficient operations; EPM serves to support the achievement of aims and the ability to report on this. Integrated perspective on all IT, rather than looking at IT on a problem-solving basis. Appreciation of importance of IT systems for data collection and data management, as well as analysis. Consideration of the use of IT to support communication and knowledge management. Recognise role of IT in supporting intra-organisational networks and using external data. Driven by management as well as board of trustees.
Informed Buying	Manages the IS sourcing strategy to meet the needs of the business	Increasing use of cheaper, standard cloud-based IT. Some discounts offered for charities. Applies to support/consultancy services as much as for hardware/software. Role for umbrella bodies, network organisations, and IT consultancy firms if charity has limited buying knowledge.
Business Systems Thinking	Ensures that IS capabilities are envisioned in every business process	Standardisation of measurement and reporting across activities, supported with IT. Embedding of data collection in operational processes, for example through CRM systems.
Relationship Building	Gets the business constructively engaged in operational IS issues	Bottom-up through hiring of IT-savvy staff and through training.
Contract Facilitation	Ensures the success of existing contracts for external IT services	Linked to informed buying. Long-term partnerships with local/specialist IT firms.
Architecture Planning and Design	Creates the coherent blueprint for a technical platform that responds to present and future needs	Linked to leadership. Usually will require external support. Needs to take budget- and skill challenges into account. Requirements for effective impact reporting can provide a binding framework.
Vendor Development	Identifies the potential added value from IT service suppliers	Linked to informed buying. Long-term partnerships with local/specialist IT firms.
Contract Monitoring	Protects the business's contractual position, present and future	Linked to informed buying. Long-term partnerships with local/specialist IT firms.
Making Technology Work	Rapidly trouble-shoots problems which are being disowned by others across the technical supply chain	This is a clear challenge when there is a lack of internal IT skills, so may require some form of external support. Access to network of volunteers with IT skills useful.

Table 5. *Nine Core IS Capabilities (Willcocks et al 2007, p.128) applied to charities using EPM*

The analysis in Table 5 suggests that at the heart of EPM thinking is the Leadership capability, in particular having an understanding of the role of IT in the ability to report on the impact of the charity's activities. The case organisations suggest that this capability is developing in the sector. EPM thinking is then embedded through the Business Systems Thinking ability. Informed buying and capabilities relating to vendor relationships are likely to be challenging and needing external support.

4.3 EPM approaches

Charities appear to have two approaches routes for embedding EPM in their Business Systems Thinking. Both can be seen as using data integration to realise the integration of 'Business Process Modelling' and 'Enterprise Application Integration' (EAI) in the EPM technology model presented in Figure 1. In the first approach, the organisations use standard measurements for all projects and activities. In addition, data can also be gathered directly and automatically from operational processes, for example by using a relationship management system to capture characteristics of beneficiaries as well as actions, communications and outcomes. This approach is easier to apply for younger organisations, or those with a limited range of activities. It also fits with broader developments within the charity sector to standardise data collection and impact measurement, as this benefits the charity and also enhances coherence within the sector. While data will still be captured in different systems, it will be more easily integrated for analysis.

The second approach is to use post-hoc dedicated impact measurement systems that include collecting data in the field on outcomes and impacts, through a range of methods (e.g. surveys, videos). This approach is most suited to established organisations with a diverse range of activities. Data integration in this approach comes through systematically setting up and managing the appropriate data collection, so that the reporting processes are standardised. While this approach requires more effort in integrating the different data sources, it allows more differentiated impact reporting.

'Business Intelligence' from the same model is increasingly used, particularly in relation to understanding and communicating performance data. Reporting dominates, though planning and dashboards are used too. However, this is not done with sophisticated BI tools, rather through using analytical capabilities of applications such as CRM, and with Excel. With the growing complexity and increasing demands, as well as the enhancing ability to collect data from a range of sources, a move to more specialised BI tools will need to be considered.

4.4 Conclusion

The purpose of this paper was to explore the potential of EPM systems to support charities' information provision to their stakeholders, specifically looking at the role of IT. The case organisations demonstrate that there is both a need for, and some success in, using IT to support an integrated, strategic approach to performance reporting. As such there is some presence of EPM systems in small/medium UK charities, albeit low key and without using this terminology. Demonstrating two different approaches to data integration and business process modelling, charities primarily focus on integrating data from a range of sources. Their use of BI tools is limited, but growing. While facing many challenges, particularly due to their size, it was found that, compared to SMEs in general, charities have additional incentives for enhancing their IT, many of these linked to a growing need to provide information to a range of stakeholders. In order to be able to implement successful EPM, charities need to (further) develop their 'EPM thinking'. Key elements of this capability are 1) leadership that recognises the role of IT in enhancing impact reporting and supporting networking and, 2) the use of business systems thinking to embed supporting processes for streamlining data collection and reporting. Small/medium charities are likely to need external support for their sourcing and management of IT. In addition to umbrella and network organisations, large corporates and IT consultancies could contribute such support as part of their Corporate Social Responsibility (CSR) activities.

5 References

- Anthony, R.H. and Young, D.W. (2003). *Management Control in Nonprofit Organisations*. 7th edition. New York: McGraw-Hill.
- Arya B. and Lin, Z. (2007). Understanding Collaboration Outcomes From an Extended Resource-Based View Perspective: The Roles of Organizational Characteristics, Partner Attributes, and Network Structures. *Journal of Management*, 33, pp.697-723.
- Ariyachandra, T. and Frolick, M.N. (2008). Critical Success Factors in Business Performance Management - Striving for Success. *IS Management*, 25(2), 113-120.
- Bagwell, S. (2012). Social Investment, New Philanthropy Capital Briefing Paper. <http://www.thinknpc.org/publications/social-investment/> (accessed 17/10/12).
- Bode, I. (2006). Disorganized welfare mixes: voluntary agencies and new governance regimes in Western Europe. *Journal of European Social Policy*, 16 (4), pp.346-359.
- Broadbent, J. and Laughlin, R. (2009). Performance management systems: A conceptual model. *Management Accounting Research* Vol 20 (4), pp.283-295.
- Charity Commission (2010). Good Governance: A Code for the Voluntary and Community Sector. http://www.charity-commission.gov.uk/library/guidance/good_governance_full.pdf (accessed 5/09/2012)
- Charity Commission (2013). Sector facts and figures September 2013. <http://www.charitycommission.gov.uk/about-charities/sector-facts-and-figures/> (accessed 23/01/2014).
- Checkland, P. and L. Scholes (1990). *Soft systems methodology in action*. Chichester, GB: John Wiley & Sons.
- Clark, J., Kane, D., Wilding, K. and Bass, P. (2012). UK Civil Society Almanac. NCVO.
- Clerkin, R.M. and K.A. Grønbjerg (2007). Infrastructure and Activities: Relating IT to the Work of Nonprofit Organizations. In: Cortés, M. and Rafter, K.M. (eds) (2007). *Nonprofits & Technology: Emerging Research for Usable Knowledge*. Chicago: Lyceum, pp.3—20.
- Connolly, C. and Dhanani, A. (2009). Research Report 109: Narrative Reporting by UK Charities. London: Association of Chartered Certified Accountants.
- Connolly, C., Hyndman, N. and McMahon, D. (2009). Charity Accounting and Reporting: Taking Stock and Future Reform. Charity Commission (accessed 14/5/2012).
- Cortés, M. and Rafter, K.M. (2007). Introduction. In: Cortés, M. and Rafter, K.M. (eds) (2007). *Nonprofits & Technology: Emerging Research for Usable Knowledge*. Chicago: Lyceum, p. ix—xxi.
- Cragg, P. & King, M (1993). 'Small-Firm Computing: Motivators and Inhibitors'. *MIS Quarterly*, 17, 1, pp. 47-60.
- Crawford L., Dunne, T., Hannah, G. and Stevenson, L. (2009). An Exploration of Scottish Charities' Governance and Accountability. Edinburgh: Institute of Chartered Accountants in Scotland.
- Dresner, H. (2008), *The Performance Management Revolution; Business Results through Insight and Action*. New Jersey: John Wiley & Sons.
- Ferreira, A. and Otley, D. (2009). The design and use of performance management systems: An extended framework for analysis. *Management Accounting Research* Vol 20 (4), p.263-282.
- Frolick, M. N. and Ariyachandra, T.R. (2006). Business performance management: One truth. *Information Systems Management* 23 (1), pp.41-48.
- Hackler, D. and G. D. Saxton (2007). The Strategic Use of Information Technology by Nonprofit Organizations: Increasing Capacity and Untapped Potential. *Public Administration Review*, 67 (3), p.474—487.
- Kaplan, R. S. (2001). Strategic performance measurement and management in nonprofit organizations. *Nonprofit management and Leadership*, 11(3), pp.353-370..

- Lawrie, G., I. Cobbold and J. Marshall (2004). Corporate performance management system in a devolved UK governmental organisation. *International Journal of Productivity and Performance Management*, 53 (4), p.353—370.
- Limburg, D., Knowles, C. and McCulloch, M. (2012). Meeting the information needs of charity trustees: can enterprise performance management systems help? Paper presented at the 17th annual UKAIS conference, Oxford, March.
- Manzo, P. and Pitkin, B. (2007). Barriers to Information Technology Usage in the Nonprofit Sector. In: Cortés, M. and Rafter, K.M. (eds) (2007). *Nonprofits & Technology: Emerging Research for Usable Knowledge*. edited by. Chicago: Lyceum, pp.49—51.
- Marr, B. (2008). Strategic Performance Management in Government And Public Sector Organisations. Research Paper, API, sponsored by CIPFA and Actuate.
- Mata, F.J., W.L. Fuerst and J.B. Barney (1995). Information Technology and Sustained Competitive Advantage: A Resource-Based Analysis. *MIS Quarterly*, Vol. 19 (4), pp.487—505.
- Melchert, F. and Winter, R. (2004), The enabling role of information technology for business performance management. *IFIP International Conference on Decision Support Systems*, pp.535—546.
- Morris, S. (2000). Defining the non-profit sector: Some lessons from history. Civil Society Working Paper 3.
- Moxham, C. and Boaden, R. (2007). The impact of performance measurement in the voluntary sector, *International Journal of Operations & Production Management* 27 (8), pp.826—845.
- Neely, A., B. Yaghi and N. Youell (2008). *Enterprise Performance Management: The Global State of the Art*. Oracle and Cranfield School of Management.
- New Philantropy Capital (2014). Inspiring Impact, <http://inspiringimpact.org/about/partners/> (accessed 14/08/2014).
- OSCR - Office of the Scottish Charity Regulator <http://www.oscr.org.uk/> (accessed 23/01/2014).
- Poister, T.H. (2003). *Measuring Performance in Public and Nonprofit Organizations*. San Francisco, USA: Jossey Bass.
- Salamon, L. M., and Anheier, H. K. (1997). *Defining the Non-profit Sector: A Cross-national Analysis*. Manchester University Press, Manchester.
- Sawhill, J. and Williamson, D. (2001). Measuring what matters in nonprofits. *McKinsey Quarterly* (2). pp.98-107.
- Viaene S., De Hertogh S., Lutin L., Maandag A. Den, Hengst S., and Doeleman R. (2009). Intelligence-led policing at the Amsterdam-Amstelland police department: operationalized business intelligence with an enterprise ambition. *International journal of intelligent systems in accounting, finance & management*, 16, pp.279—292.
- Ward, J. and J. Peppard (2002). *Strategic Planning for Information Systems*. Chichester: John Wiley & Sons Ltd.
- Willcocks, L., P. Reynolds and D.F. Feeny (2007). Evolving IS capabilities to leverage the external it services market. *MIS Quarterly Executive*, 6 (3), pp.127—145.
- Wolpert, J. and Seley, J.E. (2007). The Use of Computer and Office Technology among New York City's Nonprofit Organization. In: Cortés, M. and Rafter, K.M. (eds) (2007). *Nonprofits & Technology: Emerging Research for Usable Knowledge*. Chicago: Lyceum, pp.21—32.
- Zorn, T.E., A.J. Flanagan and M.D. Shoham (2011). Institutional and Noninstitutional Influences on Information and Communication Technology Adoption and Use Among Nonprofit Organizations. *Human Communication Research*, Vol 37(1), pp.1—33.

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