

# Information Systems Planning Problems in Not-for-Profit Organisations: The Case of Western Australia

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## ABSTRACT

Much has been written on Information Systems Planning in the for-profit organisations, but little is known about it in the Not-for-Profit sector, particularly in the Australian context. This paper has attempted to conceptualise the problem of Information Systems planning in the Not-for-Profit organisations. It provides insight into Information Systems Planning practices in Not-for-Profit-Organisations and the problems of current Information Systems Planning practices in Not-for-Profit-Organisations. The contribution of this paper is two folds, theoretically and for practitioners. Theoretically, it has provided a model that enables people to understand why or why not Not-for-Profit-Organisations do or do not conduct Information Systems Planning. Regarding practitioners, the factors identified in this study would help planners, managers and executives to understand the key areas and plan accordingly and for donors they would be able to understand where are their contributions needed the most and be able to follow up and ensure that their donations/contributions are utilised in the right areas hence increase Not-for-Profit-Organisations accountability with regards to planning for Information Systems.

*Keywords:* Information Systems (IS), Information Systems Planning (IS planning), Information Systems Planning Problems, Not-for-Profit Organisation (NfPO or NfP), Not-for-Profit Information Systems Planning

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## I . Introduction

Many different terms and definitions are used to describe Not-for-Profit Organisations (NfPOs or just NfPs), which can create confusion (Carey-Smith et al., 2007). Some examples of the terms used are 'the third sector', 'the voluntary sector', 'non-gov-

ernmental organisations' (NGOs), 'non-profit organisations' (NPOs), 'social economy', 'civil society', 'charitable organisations' and 'public organisations' (Braaksma et al., 2006; Carey-Smith et al., 2007; Lyons, 2001).

There is no universally agreed definition of a NfPO. The Australian Taxation Office (ATO) uses a defi-

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inition that was derived from the common law: ‘*an organisation that is not operating for the profit or gain of its individual members, whether these gains would have been direct or indirect. This applies both while the organisation is operating and when it winds up*’ (ATO, 2014, page 3). The ATO further stipulates that any profit made by the organisation has to be ‘re-injected’ into the organisation to carry out its purposes and not used for any other purpose. Key to this definition is that the distribution of any surplus is not to the benefit of anyone but the organisation.

The Australian Bureau of Statistics (ABS) adopted (with minor changes) the United Nations (UN) definition for the purpose of data collection and its other activities. Thus, the ABS defined NfPOs as ‘*legal or social entities, formed for the purpose of producing goods or services, and whose status does not permit them to be a source of income, profit or financial gain for the individuals or organisations that establish, control or finance them*’ (ABS, 2013, para. 8).

Lyons (2001) argued that there are three sectors in which organisations can be categorised: the for-profit sector, the government sector and the non-profit sector. Lyons (2001) defined the non-profit sector as:

*consisting of private organisations:*

1. *that are formed and sustained by groups of people (members) acting voluntarily and without seeking personal profit to provide benefits for themselves or for others,*
2. *that are democratically controlled and*
3. *where any material benefit gained by a member is proportionate to their use of the organisation. (p. 5)*

Broadly, this definition means that any organisation that is not part of the government or business sector belongs to the third sector.

The common element in these definitions is that the wealth or profit cannot be distributed to individual stakeholders or entities outside the organisation. However, they differ in the factors they define; for example, Lyons (2001) defines the issue of voluntary participation but neither the ATO nor the ABS included this factor in their definitions.

For the purpose of this research, the following definition is used: “*An organisation that is formed by a group of people or initiated by other organisations to achieve a common goal such as producing goods and/or providing services. The organisation should be self-governed or independently run (i.e., not run by the government) and making a profit should not be the principal objective. However, any profit generated by the organisation has to be reinvested into the organisation for the attainment of the organisation’s objectives instead of being distributed to the members of the organisations for individual benefits. Further, organisation membership and participation are not compulsory.*”

In many countries, NfPOs play an important role in society (Klemz et al., 2003). In Australia, NfPOs make a significant contribution to the economy. According to the ABS (2015), NfPOs contribute approximately \$57.7 billion of total gross domestic product (GDP) in 2012-13. NfPOs contribute not only economically, but also socially; some of their social contributions are visible within education, environmental preservation, health, sports, advocacy and arts-related activities. Additionally, Australia is among the countries with the highest number of volunteers with 3.6 million Australians or 19% of the Australian population aged at least 15 years working for an organisation or group as volunteers (ABS, 2016).

In conducting their activities, NfPOs use information systems (IS) - knowingly or unknowingly - by collecting and disseminating information, both

internally within their organisations and externally to stakeholders, such as the government and community (Asad and Le Dantec, 2015; Hackler and Saxton, 2007; McNutt and Boland, 1999; Sligo et al., 2017). Information enables NfPOs to conduct their day-to-day activities, which enables them to achieve their goals or mission. In order for organisation to achieve this, Rockart (1979) suggests that it is important for executives or those in managerial positions to define their information needs based on organisation's critical success factors. As this will ensure that the information systems will be producing information that would enable them to make decisions that would efficiently advance their courses.

However, studies of IS use and IS planning have been conducted almost entirely in the for-profit sector, not in the NfP sector. Importantly, NfPOs differ from the for-profit organisations (fPOs) in several ways.

1. Their purpose is not to generate profit or income for their owners. Profit-making is not the focus of NfPOs; instead, their focus is on delivering value to their stakeholders within available resources (Martello et al., 2016).
2. NfPOs are, on average, smaller than fPOs. Some are large and even multi-national, but the overwhelming majority are small. In Australia many NfPOs are similar in size to Small-to-Medium Enterprises (SMEs) or even Micro Enterprises. ABS (2002) defines an Australian SME as an organisation with 200 or fewer staff. A business with 100 employees would be medium-sized in Australia, but an NfPO with 100 employees (and/or volunteers) would be considered large.
3. Most NfPOs rely heavily on donations and government or private grants to fund their activities (although some sell products or services as a

way to raise funds). Many expend significant effort and resources in obtaining philanthropic donations and grants.

4. Perhaps consequently, most NfPOs do not have the budget to conduct activities that are outside of their core objectives (Klemz et al., 2003).
5. Many NfPOs rely heavily on volunteers rather than exclusively on paid employees.
6. Most NfPOs do not have the breadth of experience that exists among fPOs. fPOs have more resources and are comparatively well staffed (Merkel et al., 2007).
7. In Australia, all NfPOs must register with the Australian Charities and Not-for-profits Commission (ACNC). All NfPOs must submit an Annual Information Statement and an Annual Financial Report. For large NfPOs (over \$1M in revenue), the financial report must be audited. For medium-sized NfPOs (\$250K-\$1M in revenue), the report must be either reviewed or audited. Small NfPOs (under \$250K in revenue), the financial report does not have to be reviewed or audited. These requirements will most likely be different in other countries but may be similar.
8. Small-to-Medium sized (and even some large) NfPOs have similar characteristics to SMEs such as organisation size, limited financial resources, limited resources for IS activities (Cragg et al., 2011; Cragg et al., 2013; Lee et al., 2005) and lack of IS knowledge and/or technical IS skills (Isma'ili et al., 2016).

Because NfPOs have some similarities to SMEs, the findings of this study will be compared to the above mentioned SME characteristics to see if there are any similarities.

Despite the different objectives of fPOs and NfPOs,

NfPOs could also benefit from better designed and implemented IS (Arvidsson et al., 2014; Burrows, 2012; Lewis and Madon, 2004). Lewis and Madon (2004) pointed out that NfPOs had begun acknowledging the importance of information in improving their operations and activities. Venable and Bhattacharjya (2006) indicated that NfPO stakeholders found IS planning to be valuable in renewing their focus on improving services to the community using technology. Despite the improvement in awareness, the literature indicates that very few NfPOs conduct formal IS planning (Forster and Ruzanic, 2010; Hackler and Saxton, 2007; Klemz et al., 2003).

NfPOs often acknowledge that technology might help them to achieve their mission or objectives (Merkel et al., 2007). However, they often encounter *'problems achieving their technology goals because technology planning is often not an explicit part of their organisational practice'* (Merkel et al., 2007, p. 1). A number of studies (Forster et al., 2008; Forster and Ruzanic, 2010; Hackler and Saxton, 2007) reported that a majority of NfPOs do not undertake IS planning. In contrast, a study by Klemz et al. (2003) reported that a majority of surveyed NfPOs were undertaking IS planning. Another IS planning study in NfPOs by Martinsons and Hosley (1993) noted that a structured IS planning process can assist organisations to tackle two important challenges faced by NfPOs which are first to conduct IS planning with minimum dependence on outside consultants and second is get professionals to work as part of a management team in tackling critical issues for the organisation's success. Moreover, this literature is based almost entirely on research conducted within the United States of America (USA), which may not be applicable to Australia for various reasons, such as demographic and regulatory differences (Brady et al., 2011). Additionally, IS planning has been

researched mostly in fPOs (Klemz et al., 2003). Unfortunately, a thorough review of the existing literature by the researchers found hardly any empirical studies on IS planning for Australian NfPOs, which suggests that very few (or no) studies have been conducted in this area in Australia. IS planning is very important if organisations want to achieve success with IS/ICT (Yang et al., 2014). Additionally, most of the literature in the IS planning space is fairly old. Therefore, this research aimed to address the gap in research and understanding concerning IS planning in Not-for-Profit-Organisations, especially in Australia.

In line with the aim of this paper, the following question was formulated:

*What problems and/or dilemmas, if any, are faced by Australian NfPOs with regard to IS planning and its implementation and are those problems different from those in fPOs?*

To investigate this question, we employed a postal survey of NfPOs in Western Australia. The study focussed on NfPOs in the social services areas, rather than on arts, social or sports-oriented NfPOs.

The remainder of this paper is organised as follows. In section 2 (Conceptual Background) we look at the IS planning problems and the factors that affect IS activities in the NfPOs (Factors Affecting IS Activities in NfPOs). We then present the research methods used in conducting this study in the Research Method and Design section (section 3). The findings of this study are presented in section 4 (Findings). We then present a discussion on the findings in section 5 (Discussion) and end with suggestions for potential future research in section 6 (Future Research) and papers' contribution in section 7 (Conclusion).

## II. Conceptual Background

This paper is concerned with IS planning in the Not-for-Profit (NfP) sector, i.e., by NfP Organisations (NfPOs). There is rich literature on both IS planning and in the NfP sector, but little literature that addresses the combination of the two. This section is organised into two subsections. Subsection 2.1 gives an overview of the IS planning literature. Factors that affect IS activities in the NfPOs will be reviewed in Subsection 2.2.

### 2.1. IS Planning

Planning is important whenever there are objectives to be achieved. Through planning an organisation may be able to assess potential future scenarios, identify missing information, test their assumptions in a way that is not too costly to the organisation, estimate required resources, and work towards achieving their goals in a systematic manner (Mirchandani and Lederer, 2014). This research considers IS planning a process of selecting for implementation IS that are highly aligned with organisational strategy and enable organisations to accomplish their objectives (Lederer and Sethi, 1988).

IS planning is one of the top 10 IS problems facing organisations (Luftman and Ben-Zvi, 2010). Successful implementation of IS/ICT is hampered by (among other factors) insufficient IS planning (Sligo et al., 2017). Subsection 2.1.1 reviews the literature and classifies the studies according to their location and the size and type of organisation studied, in order to highlight the lack of studies of IS planning in the NfP sector.

#### 2.1.1. Summary of the IS Planning Literature

This subsection looks at the IS planning Literature

regardless of what location, size, or type of organisations were studied. Some organisations successfully implement IS/ICT but fail to realise the intended benefits of those implemented IS/ICT capabilities (Arvidsson et al., 2014). IS planning problems have been categorised differently by researchers. Some researchers have investigated IS planning problems in general (Flynn and Goleniewska, 1993; Luftman et al., 1999). Cerpa and Verner (1998), Pita et al. (2009) and Wilson (1989) categorised the problems into two groups: problems that are related to formulation and problems related to the implementation phases of IS planning. In contrast, Teo and Ang (2001) categorised IS problems into three planning phases—launching, development and implementation—arguing that the significance of problems might differ between planning phases. Moreover, Earl (1993) categorised potential problems into the methods, processes and implementation concerns. Lederer and Sethi (1988) categorised problems in terms of input, process and output problems. This study utilises Teo and Ang (2001)'s categorisation to study the IS planning problems in WA NfPOs because organisations could potentially be experiencing different problems in different planning phases (Teo and Ang, 2001). Thus this will help this study to identify if IS planning problems differ from one planning phase to another.

Below is a discussion of the most significant IS planning problems. It should be noted that the majority of the organisations used for studies covered in the discussion below were large organisations by the Australian Bureau of Statistics definition. The large organisation would have 200 or more staff, while small organisation would have less than 20 staff (ABS, 2002). As reported in the demographics section, the majority of the participating organisations were small in size. Additionally, it is important to note that most of the studies used in

the IS planning problems discussion below were conducted in the fPOs. This was partly due to the lack of empirical studies on IS planning in the NfPOs. Nevertheless, it helps to understand IS planning problems to organisations (in the absence of the same in NfPOs) and to find out if NfPOs do experience similar problems. A discussion on factors affecting NfPOs IS activities, in general, is presented in section 2.2.

In reviewing past studies related to IS planning, leadership/management-related problems were found to be the most commonly rated. Lack of commitment from top management, top management involvement, top management support and top management acceptance are the most significant problems facing IS planning (Byrd et al., 1995; Cerpa and Verner, 1998; Earl, 1993; Flynn and Goleniewska, 1993; Lederer and Sethi, 1992; Luftman et al., 1999; Pita et al., 2009). Poor intra-organisational relationships is another significant recurring IS planning problem. The most commonly reported poor intra-organisational relationships related to IS planning are between IS units and other units, and between IS executives and top management (Earl, 1993; Luftman et al., 1999). Resource constraints are also reported among the most common significant reasons for lack of IS planning and/or failure of IS planning (Byrd et al., 1995; Earl, 1993; Lederer and Sethi, 1992; Wilson, 1989). It was reported that organisations find it difficult to recruit qualified personnel to conduct IS planning (Lederer and Sethi, 1992; Teo and Ang, 2001; Wilson, 1989). Organisational politics is another important problem identified by a number of studies (Bush et al., 2009; Cerpa and Verner, 1998; Wilson, 1989). The budget limitation has also been reported as one of the IS planning problems (Pita et al., 2009) especially in the formulation phase of IS planning. Sufficient budget or availability of sufficient funds

is important for IS planning because, without financial resources, an organisation cannot make the necessary investment even if the investment would be helpful in meeting its objectives (Bush et al., 2009). Past studies indicate that the majority of organisations spend less than 10 per cent of their total budget on IS (Cerpa and Verner, 1998; Kannabiran et al., 2009; Premkumar and King, 1991; Teo and Ang, 2001).

*In summary, leadership/management-related problems appear to be the most common significant problems related to IS planning. However, overcoming leadership/management problems alone is unlikely to lead to universal success in IS planning (Premkumar and King, 1994). For IS planning to be successful, 'it is essential for knowledgeable, experienced, highly skilled and well-motivated staff to be involved and for them to be committed to the work' (Ward and Peppard, 2002, p. 127).*

The above literature reports primarily on large organisations in North America or Europe. It also reports primarily on research in for-profit organisations, not in NfPOs. <Table 1> below classifies each of the above papers according to the location, organisation size, and organisation type (NfPO vs for-profit, vs Government) of each study. Importantly, only one study focussed on Australian NfPOs (Pita et al., 2009). That study included both large and small-medium NfPOs, but also for-profit and government organisations, so it did not distinguish problems particular to NfPOs. Moreover, there was only one other study that considered NfPOs, but in the North American and European contexts, not Australia.

The question then remains whether the general literature on IS planning problems applies to the Australian NfPO context or not. Do the differences between NfPOs and for-profit organisations make a difference? Are they different in Australia? The

<Table 1> Location, Size, and Organisation Type of Studies in IS Planning Problems

Paper/Author	North America / Europe SME	AUS/ NZ SME	North America / Europe NfPO	Government/ Public Orgs	North America / Europe FP	AUS NfPO	AUS FP	Large North America / Europe	Large (AUS/ NZ)	Africa/ Asia
ABS (2002)		✓								
Arvidsson et al. (2014)					✓			✓		
Bush et al. (2009)	✓		✓		✓			✓		
Byrd et al. (1995)				✓				✓		
Cerpa and Verner (1998)							✓		✓	
Earl (1993)					✓			✓		
Flynn and Goleniewska (1993)				✓	✓			✓		
Kannabiran et al. (2009)										✓
Lederer and Sethi (1988)					✓			✓		
Lederer and Sethi (1992)					✓			✓		
Luftman and Ben-Zvi (2010)				✓	✓					
Luftman et al. (1999)					✓			✓		
Pita et al. (2009)		✓		✓		✓			✓	
Premkumar and King (1991)					✓			✓		
Premkumar and King, (1994)					✓			✓		
Sligo et al. (2017)									✓	
Teo and Ang (2001)										✓
Ward and Peppard (2002)					✓			✓		✓
Wilson (1989)					✓			✓		

next section discusses studies of factors affecting IS activities in NfPOs.

## 2.2. Factors Affecting IS Activities in NfPOs

The factors that affect the success of IS in NfPOs are the same as for most organisations. These include top management support, resource allocation, decision-making structure, management style, alignment of goals and knowledge of IT management (Sepahvand and Arefnezhad, 2013). A full consideration of these factors is beyond the scope of this paper, but the reader is referred to Sepahvand and

Arefnezhad, 2013. However, some factors are specific to NfPOs. This section discusses those factors identified as specific to NfPOs. However, most of the studies that identified them were not conducted in the Australian context, with its somewhat different culture (e.g., the highest rate of volunteerism in the world), its generally smaller size of the organisations, and its different regulatory environment. Subsections 2.2.1-2.2.8 discuss the IT in NfPO literature without regard to its location. Subsection 2.2.9 then analyses those studies

### 2.2.1. Staffing

NfPOs consistently experience full-time staff shortages (Berlinger and Te'eni, 1999; Fasano and Shapiro, 1991; Gombault et al., 2016; McNutt and Boland, 1999; Merkel et al., 2007; Schneider, 2003). NfPO staff are often overworked and tend to operate in a crisis-management mode, which in turn affects their ability to work on IS projects effectively (Fasano and Shapiro, 1991; Schneider, 2003). Similar sentiments were expressed by Otting (2007), who asserted that *'employees are asked to do more work with fewer resources, create miracles on a daily basis, and satisfy competing interests'* (p. 10). Staff in these organisations tend to focus more on activities that are directly related to the achievement of the organisation's mission (Burt and Taylor, 2000), for example, administering programmes and providing direct services to clients (Schneider, 2003).

### 2.2.2. Expertise

NfPOs generally have little or no IS expertise (Berlinger and Te'eni, 1999; Fasano and Shapiro, 1991; Geller et al., 2010; Goldkind, 2015; Le Dantec and Edwards, 2008; Saidel and Cour, 2003; Schneider, 2003). Light (2004) referred to a lack or shortage of expertise (i.e., effective leadership and ability to plan effectively) in NfPOs as a capacity deficit. Merkel et al. (2005) shared their experience, revealing that most of the NfPOs for which they have worked *'have some paid administrative staff'* and that none of them *'have a paid IT staff'* (p. 162). Additionally, NfPOs that lack IS expertise see IS and its related activities as an added burden to management. Therefore, they engage in minimal or no IS activities (Schneider, 2003). McNutt and Boland (1999) attributed a lack of expertise in IS to the lack of IS education and

experience of the staff.

### 2.2.3. Use of Volunteers

As stated earlier, Australia is among the countries with a high rate of volunteers. NfPOs often have scarce resources (i.e., staff shortages), which means they need to be effective in identifying and leveraging local resources such as volunteer efforts to achieve their goals (Hackler and Saxton, 2007; Merkel et al., 2007). Berlinger and Te'eni (1999) reported that the human resources required for developing and using computer applications are often fulfilled by volunteers from diverse backgrounds with differing levels of skills. Thus, NfPOs may not always be able to ensure that their workers have the necessary skills for IS activities (Zhang et al., 2010).

Further, the use of volunteers is reported to cause a lack of continuity on activities and/or projects. For example, some NfPOs develop a core set of volunteers responsible for IS planning and implementation, only to find those volunteers moving on to other interesting activities (Merkel et al., 2005). Thus, it is very difficult for an organisation to enjoy long-term viability if they depend on volunteer staff to meet mission-critical needs (Merkel et al., 2005). This could be felt even more since successful IS planning and implementation may involve a lengthy process (Sligo et al., 2017). Additionally, for IS plans to be effective they need to be constantly updated in line with changes in circumstances and practices (Marabelli and Galliers, 2017).

### 2.2.4. Funding and Financial Factors

NfPOs rarely have enough money for various activities such as IS (Fasano and Shapiro, 1991; Goldkind, 2015; Hackler and Saxton, 2007; Klemz et al., 2003;



McNutt and Boland, 1999; Saidel and Cour, 2003; Schneider, 2003). For example, Saidel and Cour (2003) reported that funding for IS projects was a constant problem for NfPOs: *'finding revenues for anything, including funds to support IT development, is always difficult ... Being a nonprofit, it was always an obstacle. Where are we going to get the money to do this?'* (p. 20). Thus, particularly small NfPOs *'operate on a shoestring budget derived from grants and donations'* (Fasano and Shapiro, 1991, p. 141). A contributing factor is a perception that IS activities are overheads rather than fundamental activities, and donors usually see overhead costs as detrimental to an organisation's objectives and a cost that needs to be kept at a minimal level (Maiers et al., 2005).

Financial factors have several implications for IS activities. The following are examples of the implications of financial factors for IS in NfPOs:

In general, funding is a key determinant ensuring that IS activities will be initiated and supported until they are completed (Fasano and Shapiro, 1991). Fasano and Shapiro (1991) reported that small NfPOs that attempted to computerise their operations faced a number of problems because of a lack of financial resources. The ability to utilise IS effectively is affected by financial difficulties. Hackler and Saxton (2007) found that *'less wealthy nonprofits are, in short, less likely to have the organizational capacity, or "IT savvy," that can facilitate the strategic utilization of information technology'* (p. 24).

For most NfPOs, the funding for most positions depends on donations and/or annual government grants (Onyx, 1993). As a result, *'there is very little security of tenure, with positions frequently disappearing, or reverting to part-time or casualised positions'* (Onyx, 1993, p. 2). Lack of job security or inability to ensure funding for IS positions puts NfPOs in a position that prevents them from being able to attract

people with the appropriate levels of skill (Collins, 2005; Zhang et al., 2010). NfPOs rely on donations for highly skilled external expertise (Le Dantec and Edwards, 2008). According to Fasano and Shapiro (1991), NfPOs *'can scarcely afford the sort of consulting that the rest of the public or profit-making organizational world takes for granted'* (p. 130). Financial factors have great implications for an organisation's ability to train its staff (Le Dantec and Edwards, 2008; Onyx, 1993; Saidel and Cour, 2003; Zhang et al., 2010). Fasano and Shapiro (1991) point out that there *'just isn't the money or the time to send people away for classes'* (p. 142).

#### 2.2.5. Budgeting and Priorities

It appears that IS activities are not given sufficiently high priority over other activities that are directly linked to the core of an NfPO organisation's mission (Merkel et al., 2005; Zarei et al., 2017). This was evidenced in a study by Saidel and Cour (2003) when a participant explained about a tough 'trade-off' between spending resources to provide more direct services to clients against providing more computer training for staff, the participant was quoted as saying, *'Now how does that affect the IT system? Well, we're not going to spend, we don't have a lot of extra dollars, so we're not going to spend a lot of money on computer training'* (p. 20). Additionally, Hackler and Saxton (2007) noted that a relatively low proportion of the budget for NfPOs (9 percent on average) is dedicated to IS and its related activities.

#### 2.2.6. Board Member Involvement

Past studies reveal that board-member involvement in IS activities plays an important role in increasing the chances of obtaining positive results

in IS projects (Berlinger and Te'eni, 1999; Hackler and Saxton, 2007). This usually depends on the board's awareness of the activity and its contribution to the organisation (Hackler and Saxton, 2007). Raman (2016) stated that leadership was instrumental in enabling an organization to adopt ICT. Berlinger and Te'eni (1999) noted that board-member involvement was key to the successful introduction of computers to one organisation. Similarly, Hackler and Saxton (2007) noted that there was a positive relationship between board involvement in approving long-term plans and the ability of an organisation to secure grants for IS activities. According to Hackler and Saxton (2007), the presence of the board in IS decision-making increases the importance of IS as a valuable contributor to the organisation's mission, which in turn improves the chances of an IS project's success. Galliers and Sutherland (2003) suggested that lack of board members and/or top management support may be due to lack of understanding of IS and its potential benefits, and in some instances, management's unwillingness to attempt to understand it.

### 2.2.7. Organisational Values: Culture and Resistance to Change

For IS to have a long-term effect, a powerful new vision will have to emerge and be embraced by an NfPO. The new vision should include implementing changes that are more radical. However, the visionary leadership that established these organisations and made them so effective when they were established may become a powerful obstacle to change (Burt and Taylor, 2003). Therefore, it could be argued that the introduction of IS that may change the way things are done in organisations may face strong resistance.

### 2.2.8. Lack of IS Planning

A lack of IS planning is noted to cause NfPOs to fail to realise how IS has become critical to them achieving their objectives. In a study of community-based NfPOs, Merkel et al. (2005) argued that failure to maintain the website due to lack of planning would force users of the website to find other means to meet their needs (p. 162). Additionally, the lack of IS planning denies organisations the opportunity to gain experience and/or enhance their expertise. Huysman, Fischer and Heng (1994) stated that the process of formulating a plan is important in gaining expertise in that organisations conducting the process accumulates experience and knowledge. Furthermore, a study conducted by Lee (2011) found that there is a positive relationship between experience and information system continuance.

### 2.2.9. Analysis of Location of Studies of IT in NfPOs

As with the studies of IS planning problems reviewed in subsection 2.1, studies of issues in IT in NfPOs were also primarily conducted in a North American or European context. Other studies mixed NfPOs (or government organisations) with for-profit organisations, so did not distinguish or compare their outcomes between sectors. Similar to <Table 1>, <Table 2> below provides an analysis of the location, organisation size, and organisation type (NfPO vs for-profit, vs Government). Importantly, <Table 1> shows that only one of the studies reported in subsection 2.2 included Australian NfPOs, but it also included large Australian organisations and SMEs from North American or Europe.

Based on the above literature, almost nothing can be said about issues in IT in Australian NfPOs. Again, the question remains, are the issues experienced different for Australian NfPOs than what is reported

<Table 2> Location, Size, and Organisation Type of Studies in IS Planning Problems (NfPO vs for-profit, vs Government)

Paper/Author	North America / Europe SME	AUS/ NZ SME	North America / Europe NfPO	Government/ Public Orgs	North America / Europe FP	AUS NfPO	AUS FP	Large North America / Europe	Large (AUS/ NZ)	Africa/ Asia
Berlinger and Te'eni (1999)	✓		✓							
Burt and Taylor (2000)	✓		✓					✓		
Burt and Taylor (2003)			✓					✓		
Collins (2005)			✓							
Fasano and Shapiro (1991)	✓		✓							
Geller et al. (2010)	✓		✓					✓		
Goldkind (2015)			✓							
Gombault et al. (2016)				✓	✓					
Hackler and Saxton (2007)	✓		✓							
Klenz et al. (2003)			✓							
Le Dantec and Edwards (2008)	✓		✓							
Maiers et al. (2005)										✓
Marabelli and Galliers (2017)					✓			✓		
Martinsons and Hosley (1993)										✓
McNutt and Boland (1999)	✓		✓							
Merkel et al. (2005)			✓							
Merkel et al. (2007)	✓		✓							
Onyx (1993)	✓					✓			✓	
Otting (2007)			✓							
Raman (2016)										✓
Saidel and Cour (2003)			✓					✓		
Schneider (2003)	✓		✓							
Sepahvand and Arefnezhad (2013)										✓
Sligo et al. (2017)									✓	
Zarei et al. (2017)										✓
Zhang et al. (2010)			✓							

in the literature? This background leads to the research question for this study repeated here.

*What problems and/or dilemmas, if any, are faced by Australian NfPOs with regard to IS planning and its implementation and are those problems different from those in fPOs?*

As stated in subsection 2.1.1., this study used Teo and Ang (2001)'s three phase IS planning categorisation to study the IS planning problems in WA NfPOs. The phases are planning, development and implementation. According to Teo and Ang (2001), organisations could potentially be experiencing different problems in different planning phases (Teo

and Ang, 2001). Thus by using three phase IS planning categorisation, the study would be able to find out if IS planning problems differ from one planning phase to another in the NfPOs.

The next section describes the research method and design used by this study to answer this question.

### III. Research Method and Design

This section describes the research design and its enactment to answer the above research question. As there is generally a lack of theory and of research concerning IS planning in the Australian NfPO context, the research is exploratory-descriptive in nature. As such, the need is to explore the context broadly based on what literature there is and develop an initial, descriptive understanding of relevant phenomena. Therefore, we decided to conduct a self-administered survey to gather data from a sufficiently large number of NfPOs and follow-up with interviews to determine general trends in IS planning problems they may experience that hinder their use of IS planning. The following subsections describe how the research was designed and enacted in more detail.

#### 3.1. Sampling

Sampling is the process of selecting a portion of the total population of interest (Burns, 2000). A population is the complete list of all the subjects of interest for a study (Donley, 2012). The opportunity sampling technique was used in selecting participants for reasons discussed below. Opportunity sampling (a.k.a. convenience sampling) is a non-random sampling technique in which the sampling elements are selected by means other than mathematical random proce-

dures (Neuman, 2006). The opportunity sampling technique is particularly useful when a researcher is facing one or more of the following constraints: financial restrictions, time limitations or lack of permission to engage with the potential participants (Burns, 2000). It can help the researcher gather useful data that would not have been possible to gather using probability sampling techniques. However, in some cases *'opportunity sampling may produce biased samples and therefore greater likelihood of error'* (Burns, 2000, p. 93). We briefly discuss bias further below.

This research used opportunity sampling because when this research was conducted, no list of all NfPOs in Australia or even in WA was available; therefore, it was not clear how many NfPOs there were or how to contact them. The figures available at the time were only estimates of the NfPOs Australia-wide (Gryst, 2010; Productivity Commission Report, 2010), which were impossible to substantiate. This made it impossible to determine the population size or to reliably select an unbiased sample. However, this sampling technique was deemed appropriate to achieve the objective of this research which was to explore IS planning in Not-for-Profit-Organisations in Australia.

Community Sector Services (CSS) in WA permitted the researchers to engage with its members. CSS was a NfPO and a peak body with access to many NfPOs in WA. One of its main activities was to provide ICT guidance to NfPOs in WA. Therefore, it was expected that NfPOs affiliated with CSS would best help the researchers to understand IS planning problems (Creswell, 2009), which would probably have been difficult had it been conducted differently. For these reasons, participants were drawn from provided lists of members of the WA NfPOs' peak bodies affiliated with the CSS.

The sample was therefore biased in a few important

(but largely unavoidable) ways. First, it was drawn only from WA rather than from across all of Australia. Second, it focussed on NfPOs that provide or otherwise work in the area of community sector services, such as housing, health, and disability services, and did not include NfPOs in other NfPO sectors, such as art or sport. Third, it included only those community sector service organisations that are members of various peak bodies in WA, therefore major national organisations and likely other WA NfPOs were excluded from the sample. As a result, generalising results of this study to other kinds of NfPOs and across Australia may be inappropriate. Although one can theorise that the results generalise, this study provides no evidence of that per se.

### 3.2. Data Collection

As stated earlier, this study used self-administered questionnaires and interviews for data collection. The benefit of combining these data collection methods is that they complement each other in such a way that the advantages of one method compensate for the disadvantages in the other. For example, self-administered questionnaires are known for having a low response rate in comparison with interviews, and detailed information gathered from interviews can be useful in the interpretation of self-administered questionnaires' results. Additionally, data collected by using the two methods were used for triangulation, which in turn helped to enhance the validity and reliability of the research (Burns, 2000). Burns (2000) defined triangulation as *'the use of two or more methods of data collection in the study'* (p. 419).

The benefits of combining questionnaire and interview methods made the use of questionnaires and interviews suitable for this research because this study

was exploratory-descriptive. The self-administered questionnaires assisted the researchers to explore the IS planning in the NfPOs while the interviews enabled researchers to have a deeper/better understanding of IS planning hence being able to describe the current state of IS planning in NfPOs.

### 3.3. Instrument Design

This section describe how the instruments used to collect data for this study were designed. As stated earlier, the study used both self-administered questionnaires and interview methods. Subsection 3.3.1 explained how self-administered questionnaires were designed while interview instrument is explained in subsection 3.3.2.

#### 3.3.1. Self-Administered Questionnaires

The questionnaires were prepared by the researchers from a combination of self-developed components and components modified from several instruments to meet the objectives of the research. The borrowed components were from instruments developed by Geller, Abramson and de Leon (2010), Pita et al. (2008) and Teo and Ang (2000). The use of components from instruments developed by well-established researchers not only assisted in improving the quality of the instrumentation but also helped reduce the amount of time required during the design stage.

The questionnaire was designed to cover multiple purposes, including those reported in this paper. As a consequence, the initial questionnaire design was somewhat lengthy, which concerned both the researchers and the CSS IT Research and Development Manager, which aligned with Kitchenham and Pfleeger (2003)'s assertion that participants do not

like to answer excessively long questionnaires. As stated earlier, the main objective of this research was to explore and describe the state of IS planning in NFPOs; therefore, face validity and content validity were deemed sufficient to measure validity. Face validity was achieved by a rigorous review process that was applied to the development of the questionnaires (survey instrument). Content validity was covered by the use of questions that were drawn from a large pool of items encompassing a broad range of topics in the field of IS and IS planning for NFPOs.

Reliability can be defined as the dependability or consistency of a research instrument (Leary, 2012; Neuman, 2006); thus, a reliable research instrument should yield similar results when used by other researchers under the same conditions (Rudestam and Newton, 2007). Almost all researchers aim for perfect reliability when developing their research instrument; however, as pointed out by Neuman (2006), this is rarely achieved. The best researchers can do is to make every effort to maximise instrument reliability (Leary, 2012). In the effort to maximise reliability, this researcher followed the steps suggested by Leary (2008):

1. Standardisation: standardise administration of the instrument.
2. Clarity: use easily understandable instructions and questions.
3. Minimal errors: seek to minimise errors in recording and coding data.

A thorough process to develop the questionnaire was employed. The questionnaires were reviewed several times by six different people, including well-respected academicians, IS personnel with NFPO experience and NFPO executive. The questionnaire was revised after each review.

Therefore, the questionnaire was separated into four questionnaires encompassing different areas, but with key questions in common. This made the questionnaires shorter, thereby encouraging an increased response rate. Each different questionnaire (labelled A through D) covered a different specialised area, but with core questions that were identical. Each respondent received one of the four questionnaires, which made it possible to compare responses (Sarantakos, 1998). The core topics included on all versions of the questionnaire covered demographic characteristics, mission achievement, whether participating organisations were doing IS planning and how well, their success in achieving their organisation's mission, and IS helpfulness in achieving the organisation's mission. Questionnaire A aimed to obtain an overview of IS use in NfPOs, Questionnaire B aimed to explore IS planning practices in NfPOs, Questionnaire C aimed to explore reasons for not doing IS planning and Questionnaire D aimed to explore problems faced by NfPOs in the planning and implementation phases of IS planning. 175 copies of each of the four questionnaires (A, B, C and D), totalling 700 questionnaires, were sent to all 700 NfPOs for whom contact information was provided by the peak bodies serviced by CSS.

### 3.3.2. Interviews

Semi-structured interviews were used because they enable researchers to gain insight into participants' perceptions, without limiting the participants to a set of predetermined questions. This allowed participants to discuss matters that the researcher did not consider before the interview, and allowed the researcher to ask additional questions. Interview questions formulated based on the questionnaire re-

sponses were used as a tool to help participants reflect on the IS planning problems faced by NfPOs (DeJonckheere et al., 2019).

### 3.4. Responses

This section reports on the responses to the research instruments employed in this study. Subsection 3.4.1 present self-administered questionnaires responses. Subsection 3.4.2 reports on the interview participants.

#### 3.4.1. Self-administered Questionnaires

Of the 700 questionnaires sent, 146 were returned. Twenty-two questionnaires were returned unanswered, and three were returned answered but were deemed unusable for the purpose of this research, leaving a total of 121 valid responses received. Reasons for non-response included the wrong address, the organisation was no longer at the specified address and the addressed staff were no longer working for the organisation. Subtracting the 25 unusable and/or unanswered questionnaires from the initial 700 distributed yields a sample size of 675 questionnaires.

Therefore, the response rate (from 675 questionnaires) for usable questionnaires was 17.93 per cent. This was a low response rate in comparison to an average of 36.5 for mailed questionnaires in the not for profit studies conducted between 1999 and 2017. Thus, the response rate should be taken into account when interpreting the findings. However, because this is an exploratory-descriptive study, we consider the response rate to be adequate to provide a general understanding (O'Brien and Castelloe, 2004) of IS planning in WA NfPOs.

#### 3.4.2. Interviews

Participants were interviewed from 10 organisations that also completed the self-administered questionnaire. Each organisation was represented by one participant. All the organisations were directly dealing with clients in some manner, except for one that was a peak body. The primary function of this peak body organisation was to represent other NfPOs.

### 3.5. Analysis Plan

Self-administered questionnaire's analysis was conducted using descriptive statistical methods and tools, including histograms, bar charts, measures of central tendency (mean, mode and median), and measures of variation (standard deviation) to summarise and describe the patterns in the data, i.e., the responses from respondents in the sample (Neuman, 2006).

The qualitative data analysis was conducted by following a process outlined by Taylor-Powell and Renner (2003). This process was used because it enabled the researcher to break down and understand the content before reaching any conclusion. The process included the following steps: getting to know the data, focusing on the analysis, categorising the information, identifying patterns and interpreting the data.

All interviews were digitally recorded as per the interviewees' agreement. The recorded interviews were listened to several times by the researcher, and then transcribed from the digital recordings into typed text. The transcripts were read and re-read before being copied into NVivo software for further analysis. In addition, the researcher wrote brief summaries from each transcript. Data were then organised by questions, which enabled the researcher to look across all respondents and their answers to identify con-

sistencies and differences.

Categorisation was undertaken using an open coding technique. Corbin and Strauss (1990) defined open coding as a process of breaking down, examining and categorising qualitative data. The typed data (transcripts) were examined line by line, and the concepts were then organised by recurring subject.

Categories identified from the previous step were re-examined to explore the relationships between categories (how one code relates to another) and make connections between them (Corbin and Strauss, 2008; Orlikowski, 1993). This process was conducted by going back and forth between categories and responding to the following questions: What are the key ideas expressed within the category? What are the similarities and differences in the way the participants responded to similar questions?

The final step in qualitative analysis concerns interpreting the data or findings to explain what it all means (Taylor-Powell and Renner, 2003). This process was conducted using a selective coding technique. Corbin and Strauss (1990) described selective coding as a process of systematically relating the main category to other categories, and refining categories that need further refinement. The aim of using selective coding was to identify categories that formed the core concept that had the power to elucidate most of the situations the researcher studied. This enabled the researcher to provide an explanation regarding the state of IS planning in NfPOs. <Table 3> present a summary of some of the measures that were taken to establish rigour in this study.

## IV. Findings

This section presents the findings from self-administered questionnaires and interviews that were

conducted in order to further understand and confirm the findings of the questionnaires. The section is organised as follow: self-administered questionnaire findings are presented in Subsection 4.1. The interview findings are presented in Subsection 4.2.

### 4.1. Self-Administered Questionnaire Findings

This subsection presents demographics of the organisations that participated in the self-administered questionnaires. It also presents findings regarding IS planning and IS planning problems in NfPOs.

#### 4.1.1. Demographics

Demographics presented in this study may enable the reader to determine if participants are representative sample of the population and make it possible for comparisons to be made with other similar studies such as comparison based on organisation size. Participating NfPOs were 146 (with 121 valid responses) affiliate members of CSS. Based on the ABS (2015) NfPO classification, the majority of the participating organisations were involved in providing social services, social and community development services, and housing services. Most of the NfPOs surveyed were quite small, with fewer than five full-time employees, as indicated by the median figure of 4 in <Table 4>. The average number of employees was higher (see <Table 4>) mainly because a small number of organisations had a large number of employees. This also applied to part-time and volunteer employees. 103 respondents stated their positions/roles in their respective organisations. They ranged from senior to operational positions (38 senior, 37 middle, and 28 operational levels).



<Table 3> Establishing Research Rigour

Criterion	How the criterion was addressed
Internal validity (Pattern matching)	<p>The self-administered questionnaires were based on the review of the empirical research concerning IS strategic planning and the management of NfPOs. The interview questions were guided by the findings from the self-administered questionnaire findings, but the researcher was also open to asking additional questions based on emerging concepts from the current interview goings and exploration from previous interviews and the literature. According to Yin (2009), matching between some of the existing concepts in the literature and the findings of exploratory study contribute to the internal validity of the study.</p> <p>Moreover, categories were identified and re-examined to explore the relationships between categories (how one code relates to another) from different stages of the study and make connections between them (Corbin and Strauss, 2008; Orlikowski, 1993). This process enabled the researcher to identify key ideas expressed within the category, then identify patterns and connection between categories.</p>
Reliability (Data triangulation)	Data collected by using two (or more) methods can be used for triangulation, which in turn could enhance the validity and reliability of the research (Burns, 2000). In this study, data were collected using questionnaires, interviews and document analyses, which were selected to enable the researcher to explore and describe IS planning in WA NfPOs.
(Trustworthiness)	This was addressed by digitally recording all the interviews, taking detailed notes, and cross checking with interviewee notes taken in the interviews.
External Validity (Scope for generalization of the study)	This was addressed through the use of multiple means for data collection in questionnaires, interviews and document analysis. Additionally, the interviews involved 10 personnel from 10 different organisations. Also, based on the ABS (2015) NfPO classification, the majority of the self-administered questionnaire/survey data used in this paper were collected in Western Australia from organisations classified as social services, social and community development services, and housing services organisations. Whereas the interview participants came from health-based, social services based and philanthropic voluntarism based organisations in Western Australia.
Face validity	This was achieved by a rigorous review process that was applied to the development of the questionnaires (survey instrument). The questionnaires were reviewed several times by six different people, including well-respected academicians, IS personnel with NfPO experience and NfPO executive. The researcher revised the questionnaire after each review.
Content validity	For the survey instrument, content validity was covered by the use of components drawn from the IS and IS planning literature. The use of components from instruments developed by well-established researchers not only helped reduce the amount of time required during the design stage, but also assisted in improving the quality of the instrumentation.

<Table 4> NfPOs' Employees

	Median (the middle observed value of the sample)	Mode (the most common answer)	Mean (the average value of the observed sample)
Full-time employees	4	0	30.16
Part-time employees	6	0	29.57
Volunteer employees	10	0	47.41

#### 4.1.2. IS Planning

In general, the respondents perceived that IS are helpful in achieving their organisation's mission/goals. Nearly all respondents (96%) indicated that IS was helpful or very helpful to their organisations in achieving their mission/goals.

When asked, "Does your organisation do IS planning?" more than half of the respondents (54%) indicated that IS planning was not conducted in their organisation. In addition to responding to a closed question, a number of respondents stated that they were not doing IS planning, through comments such as '*we don't do IS planning*' or '*no IS planning*'. According to the respondents' comments, in some of these organisations, IS investment is done on an *ad hoc* basis. For this reason, their IS investment tends to be reactive rather than planned, which was affirmed by the following comments from two respondents: our IS investment is '*needs based, more responsive and reactive than planned*' and '*when the equipment dies or is giving major problems, we pursue financial assistance to replace it*'.

Respondents were asked to indicate how successful IS planning had been in their organisations. The majority of those who claimed that their organisations were conducting IS planning were not convinced that the planning was very successful, with only 15% indicating that it was very successful.

#### 4.1.3. IS Planning Problems

IS planning problems in this study were divided into three phases, following Teo and Ang (2001): (1) reasons for not doing IS planning (failure to initiate or initiation), (2) IS planning problems (implementation). However, it is important to note that, even though the IS planning process was divided

into three phases in this study, in reality, these phases are related. Failure in one phase could have a negative influence on another (Teo and Ang, 2001).

The most significant problems relating to not conducting IS planning (Initiation Phase) were:

1. Our budget is too small to support IS planning (mean = 3.22).
2. We do not have anyone with sufficient expertise in IS planning (mean = 3.17).
3. An IS planning process takes too long (mean = 2.71).

Because lack of funds has been viewed as a constraint for IS planning (see Section 2.2.4), it came as no surprise that a small budget was rated as the most significant reason for not conducting IS planning. The second most significant problem, lack of expertise, was also consistent with several previous studies (Lederer and Sethi, 1992; Teo and Ang, 2001; Ward and Peppard, 2002; Wilson, 1989).

The following were the three most significant problems in the development phase:

1. We do not realistically assess the internal weaknesses of an IS in determining capabilities to carry out the recommended plan (mean = 3.45).
2. We do not consider and explicitly evaluate alternative IS plans in order to give top management a meaningful choice (mean = 3.36).
3. Our IS planning process is poorly coordinated or we lack coordination (mean = 3.30).

These findings contrasted with Teo and Ang (2001)'s study, in which the first two problems above were rated as only moderately significant. One possible reason for this disparity could be the lack of expertise in the NfP sector for IS-related activities

(Geller et al., 2010) or NfPOs' capacity deficit, as termed by Light (2004). Thus, it could be argued that NfPOs do not have the expertise to assess their internal IS weaknesses or to evaluate alternative IS plans.

In the implementation phase, respondents rated the following statements as the three most significant problems:

1. The IS plan we developed is not comprehensive (mean = 3.67).
2. We do not adjust the IS plan to reflect major environmental changes (mean = 3.33).
3. It is difficult to secure a management commitment to implementing IS plans (mean = 3.20).

The two most significant problems in the implementation phase could be associated with IS planning being conducted on an *ad hoc* basis i.e., only when a need arises, which may make it a very *ad hoc* process. This may limit organisations from conducting comprehensive analyses and planning and give them no time to adjust and/or reflect on environmental changes.

The third problem is consistent with the findings of several other studies (Earl, 1993; Flynn and Goleniewska, 1993; Lederer and Sethi, 1992; Luftman et al., 1999; Pita et al., 2009). A possible cause for this problem is a lack of understanding of IS and its potential benefits, and in some instances, management's unwillingness to attempt to understand it, as suggested by Galliers and Sutherland (2003). Under such circumstances, it will always be difficult to secure management commitment to IS plans.

## 4.2. Interview Findings

This section presents the interview findings. The

section starts by presenting the demographics of the participants then followed by IS planning problems.

### 4.2.1. Demographics

The interviews were conducted in 2013, and all participating organisations were based in Perth, Western Australia. As mentioned earlier, participants were interviewed from 10 organisations that also completed the self-administered questionnaire. Based on ACNC definition (stated in section 2), interviewees came from 7 small organisations, 2 medium sizes and 1 large organisation. Additionally, there were three types of organisation: health-based, social services based and philanthropic voluntarism based. Five organisations were health based, four organisations were social services and one organisation was a voluntarism organisation (ABS, 2015).

Five participants were in senior positions, three were in middle-level positions and the remaining two were in operational level positions (see <Appendix A>). All 10 participants had been working in their respective organisations for at least two years. This suggest that they were knowledgeable enough to provide correct information about their organisations. Additionally, all 10 participants were involved in one or all of the following: planning for IS, preparing applications for IS funds and acquiring IS devices (hardware and software). Therefore, they were well positioned (in comparison with other members of their organisations) to discuss IS and IS planning in their organisations.

### 4.2.2. IS Planning Problems

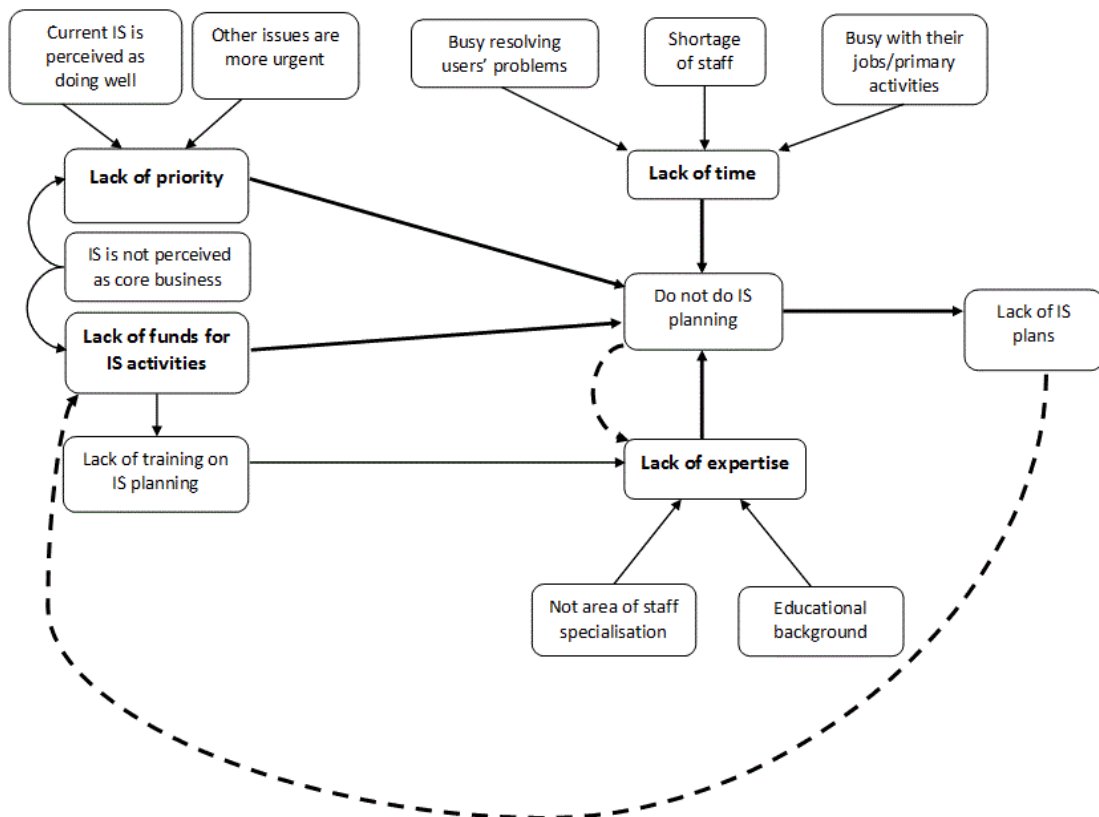
Several IS planning related problems were identified from the interviews, the problems were then grouped into five interrelated themes. A model was

then drawn to represent the problems based on how they were explained by the interviewees. <Figure 1> presents a model of problems in NfPOs IS planning based on the four formulated themes. The most commonly stated/mentioned problems by interviewees were: lack of expertise (8/10), lack of priority (7/10), and lack of funds and lack of time (both stated by six interviewees). According to the interviewees, they (their organisations) lack expertise in ICT because for most of their staff had no ICT/IS training background in formal learning.

First, <Figure 1> shows that the four themes (lack of time, priority, funds and expertise) all lead to the lack of an IS plan, which was identified as the main theme because it appears to be the focal point

of the other themes. Thus, in the model, the four themes' outcomes point towards this main theme.

<Figure 1> shows that the lack of funds for IS, in addition to having an influence on the main theme, could also have an effect on lack of expertise. This is because, if an organisation does not have money to fund IS planning training, its members will not be able to acquire the relevant skills or expertise. This will then have a negative effect on the IS planning process as stated by Ward and Peppard (2002) that for IS planning to be a success knowledgeable personnel should be part of the IS planning process. Additionally, the inability to acquire personnel with the relevant IS planning skills and expertise may cause the organisation not to conduct IS planning



<Figure 1> Integrated Model of Problems in NfPOs IS Planning

at all.

<Figure 1> also shows that the relationship between lack of expertise and lack of IS planning is a two-way relationship because the former could prevent an organisation from undertaking IS planning and the latter could prevent an organisation from gaining experience and/or more expertise, hence causing a vicious cycle. Thus, as noted by Huysman et al. (1994), there is so much that people and/or an organisation could learn through IS planning activities because *'the process of formulating a plan for information systems applications and implementing the plan is considered a process of learning for the organisation'* (p. 165). Therefore, it could be argued that by not doing any IS planning, NfPOs are missing out on the learning part that would/could have otherwise improved their know-how or expertise.

The figure also illustrates that two themes—lack of priority and lack of funds—are potentially influenced by the same factor (i.e., IS is not the core business). In terms of lack of funds, as discussed in section 2.2.4, 2.2.5 and explained by one participant, IS is not considered the core business by their main funding body (i.e., the government) and is therefore not included as part of their core funding (Maiers et al., 2005). In terms of priority, it was pointed out by some participants that, IS planning is not given high priority because IS is not considered the core business by NfPO members and/or NfPOs in general.

Moreover, the figure shows that there may be a vicious cycle between the lack of funds for IS activities and lack of IS plans. That is, on one hand, lack of funds for IS activities is causing organisations not to do IS planning and hence they (organisations) end up not having plans for IS. On the other hand, it is also possible that organisations that are not doing IS planning are missing funds for IS because

of the lack of plans. The argument here is that it is difficult if not impossible to apply for funds if one does not know why and/or for what one needs the funds.

## V. Discussion

When comparing (triangulation/cross analysis) findings from questionnaires and interviews, two IS planning problems that were found to be rated highly (and/or stated by most participants) on both sides (i.e., questionnaires and interviews) are lack of funds and lack of expertise. The finding that lack of funds was a problem for IS planning conforms to Geller et al. (2010)'s study, which also found that it was rated as the greatest problem facing IS in NfPOs. Lack of funds has also been reported in the SMEs (Cragg et al., 2011; Cragg et al., 2013), a plausible explanation could be that organisations with similar characteristics tend to have similar experiences. In comparison to fPO studies, these results were found to be in line with Pita et al. (2009)'s study, which reported lack of funds as the second most significant problem for the formulation phase of IS planning. This suggests that the money issue concerns not only NfPOs but also fPOs. However, Cerpa and Verner (1998) and Luftman et al. (1999) reported the problem to be of little concern, which may be an indication that this is more of a problem for NfPOs than it is for fPOs.

Similarly, as shown in <Appendix B>, the finding that lack of expertise is a problem for IS planning in NfPOs is consistent with that of Geller et al. (2010). In comparison to fPOs, lack of expertise with regards to IS planning in NfPOs is also in line with several past fPO studies (Byrd et al., 1995; Earl, 1993; Lederer and Sethi, 1992; Teo and Ang, 2001; Wilson, 1989).

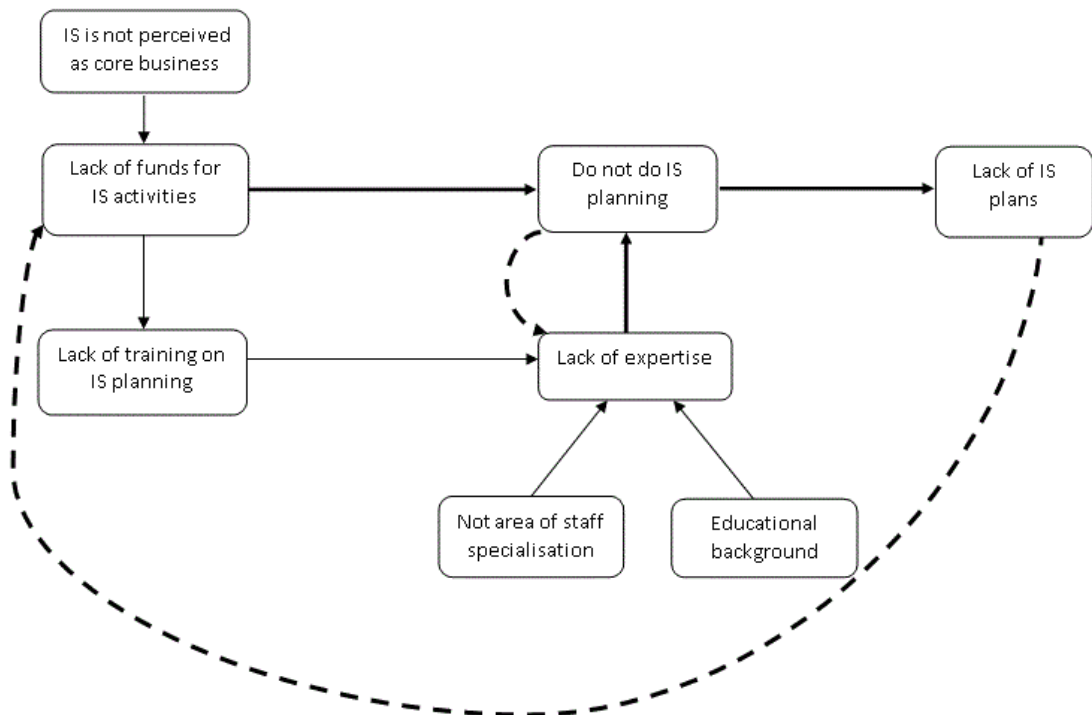
Moreover, this is similar to what has been reported on SMEs, that SMEs also lack IS/IT expertise (Isma'ili et al., 2016). This problem was third significance in the studies of Teo and Ang (2001) and Wilson (1989), and fourth in that of Lederer and Sethi (1992). However, Pita et al. (2009) did not rate a lack of expertise as one of the top significant problems. Pita et al. (2009) suggest that there are/were more qualified people in IS professions including planning, but this appeared not to be the case for NfPOs.

Furthermore, findings lack of IS plans/planning, expertise, funds and IS not a core business (not priority) are consistent with those findings of studies conducted in other countries discussed in section 2. Whereas findings lack of training on IS planning, educational background and IS is not area of staff specialisation did not appear in studies conducted in countries other than Australia. Reasons for the

difference were not studied in this research.

The model of the problems in NfPOs IS planning was revised following the cross-analysis of the results from questionnaires and interviews. Only themes that appeared in both results were included in the revised model (see <Figure 2>). Thus, the revised model has three themes: lack of funds, lack of expertise and lack of IS planning. The lack of IS planning remains the main theme while a lack of expertise and lack of funds are the main problems that prevent IS planning.

According to the analysis, it appears that NfPOs lack expertise in IS (including planning) because for the majority of staff (in participated organisations), IS is not their area of specialisation as a result they (many NfPO staff members) do not have an educational background in IS and IS was/is either not covered or not covered extensively in their studies.



<Figure 2> A revised Integrated Model of Problems in NfPOs IS Planning

In this study, it was noted that most of the staff had a training background in social work and comments indicated that the limitations of social-work training for IS are well known. Also, they (NfPOs staff) are unable to undertake IS training while on the job due to lack of funds. Additionally, they are missing out on acquiring/gaining the experience that could be gained as a result of conducting IS planning. Simply put, one cannot improve one's planning skills if one does not conduct planning.

Lack of funds appears to be caused by two main factors: 1) IS activities are not regarded as core business activities; thus, funders are unwilling to support them and 2) as noted earlier, it could be argued that organisations not doing IS planning are missing funds for IS because of the lack of plans. It is difficult, if not impossible, to apply for funds if one does not know why and/or for what one needs the funds.

As stated in the finding section, there appear to be two vicious cycles on IS planning in the NfPOs. One of the vicious cycles occurs between lack of expertise and lack of IS planning whereby, on one hand, organisations that do not have the expertise generally do not undertake IS planning. However, on the hand organisations that do not undertake IS planning are preventing themselves from gaining valuable IS planning experience.

The other vicious cycle is between lack of funds for IS related activities and lack of IS plans. That is organisations that do not have funds budgeted for IS activities are not able to perform IS planning. But, also at the same time organisations, donors may not be willing to give funds to organisations that do not have IS plans under the assumption that in the absence of blueprint (plan) on how (and where) the funds are going to be used, funds might be misutilised.

In summary, many NfPOs do not undertake IS

planning mainly due to lack of know-how and funds. The lack of IS planning may be limiting the benefits of ICT that could be enjoyed by NfPOs. To overcome this obstacle, it is necessary for NfPOs staff to undergo IS planning training (it is necessary for NfPOs staff to be educated on how to plan for IS) so that they could get the know-how and then plan for IS and seek for funds to implements there IS as per their needs. A well written IS plan may put an organisation in a better position to acquire funds for IS related activities. Even more important, IS planning will give NfPOs administrators opportunity to define information they would like to be produced by the information systems that would enable them to advance their organisations in their courses (Rockart, 1979).

## VI. Conclusion and Future Research

This paper contribution is two folds theoretically and for practitioners. Theoretically, it an empirical study that make an original contribution to IS planning in NfPOs through its development of a model for understanding the reasons behind NfPOs not conducting IS planning. It adds to IS planning literature by depicting a cyclic relationship between lack of IS plans and lack of funds for IS activities as well as a cyclic relationship between lack of expertise and organisations not undertaking IS planning. Practically, we believe that this will act as a wake-up call to practitioners i.e., for NfPOs need to plan for IS in order to be able to get funds; for donors/funders they can use this to convince NfPOs to undergo IS planning training so that they would be able to prepare good IS plans. Importantly, IS planning will give NfPOs opportunities to implement information systems that would produce information they need

to advance their organisations in their courses. However, much remains to be done because, as this is one of the most under-researched areas in the field of IS especially in the NfP sector.

In the future, an IS Planning framework for NfPOs should be formulated. Special training programs should also be formulated and/or introduced to assist NfPOs staff (especially IS staff and/or admin staff i.e., managerial level staff members/board members) to learn how to plan for IS by using the newly created framework.

Also, model presented in this report should be tested, confirmed and/or modified. Furthermore, in-depth research should be conducted to measure

the performance of NfPOs that undertake IS planning. This could be combined with a factor analysis study to determine the importance of IS planning to NfPOs. A study of this type should involve a broad range of NfPOs across Australia and possibly in other countries.

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<Appendix A> Participant Details

Participant	Area of assisting	Level			Position	Role
		Senior	Middle	Operational		
1	Health			✓	Communication officer	Organisation's IS liaison person
2	Social services	✓			Coordinator	Administered IS and acquired hardware and software
3	Health	✓			Executive officer	Ensured the availability of hardware and software to staff
4	Philanthropic and voluntarism		✓		Secretary	Administered IS
5	Health			✓	Executive Assistant to the CEO	Responsible for IS planning in the organisation
6	Health		✓		Information services manager	Managed IS
7	Social services	✓			CEO	Attended to IS-related matters
8	Social services	✓			Executive manager	Ensured the availability of hardware and software for staff
9	Social services	✓			Chairperson	Reviewed organisation's IS
10	Health		✓		A general manager of business	Managed facilities (including IS)
Total		5	3	2		

<Appendix B> Comparison between Factors Affecting IS Activities in this Study (Based on a Revised Model <Figure 2>) and Factors Identified in Previous Studies

Factor	This Study	Previous Studies
Staffing		Berlinger and Te'eni, 1999; Fasano and Shapiro, 1991; Gombault et al., 2016; McNutt and Boland, 1999; Merkel et al. 2007; Schneider, 2003
Expertise	✓	Berlinger and Te'eni, 1999; Fasano and Shapiro, 1991; Geller et al., 2010; Goldkind, 2015; Le Dantec and Edwards, 2008; Saidel and Cour, 2003; Schneider, 2003)
Use of volunteers		Berlinger and Te'eni, 1999; Hackler and Saxton, 2007; Merkel et al., 2007
Funding and financial factors	✓	Fasano and Shapiro, 1991; Goldkind, 2015; Hackler and Saxton, 2007; Klemz et al., 2003; McNutt and Boland, 1999; Saidel and Cour, 2003; Schneider, 2003; Zhang et al., 2010
Budgeting and Priorities	✓	Hackler and Saxton, 2007; Zarei and Ghapanchi, 2017; Maiers et al., 2005; Merkel et al., 2005
Board member involvement		Berlinger and Te'eni, 1999; Earl, 1993; Flynn and Goleniewska, 1993; Hackler and Saxton, 2007; Raman, 2016; Lederer and Sethi, 1992; Luftman et al., 1999; Pita et al., 2009
Organisational values: culture and resistance to change		Burt and Taylor, 2003
Lack of IS planning	✓	Lack of IS planning is preventing NfPOs achieving objectives (Merkel et al., 2005).
Lack of training	✓	

## ◆ About the Authors ◆

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Maka Siwale is a Lecturer in the School of Management at Curtin University, Australia. He has held academic positions in Information Systems in Tanzania and Australia. He has a PhD in Information Systems from Curtin University. His current research interests include IS/ICT in Not-for-Profit Organisations, Technology acceptance and usage, IS/ICT in tourism and social media/social networking.



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John Venable is Associate Professor and Discipline Lead, Business Information Systems in the School of Management at Curtin University, Perth, Western Australia. He has held academic positions in Information Systems and Computer Science in the USA, Denmark, New Zealand, and Australia.

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