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“HAVING SKIN IN THE GAME”: A VALUE TENSION STUDY OF AN INTER- AGENCY IT PROJECT

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“HAVING SKIN IN THE GAME”: A VALUE TENSION STUDY OF AN INTER- AGENCY IT PROJECT

Research Paper

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Abstract

This study seeks to better understand the challenges involved in early stage development of citizen-facing Joined-Up Government and the mitigating strategies used to address these issues. In-depth interviews were carried out with 11 members of a unique, cross-agency case, the SmartStart life event project, the first of a planned suite of life event services in New Zealand’s public sector. Three key underlying value tensions were identified as contributing to agency challenges: New Public Management versus Joined-Up Government, Immediate Needs versus Long Term Benefits, and Waterfall versus Agile development approaches. Participants successfully addressed these value tensions through three concurrent mitigating strategies: active stewardship, citizen centricity, and creation of reusable artefacts. A framework is proposed, based on the concept of a base isolator, to illustrate the dynamics between the underlying value tensions and mitigating strategies, which enable effective practice of Joined-Up Government. Understanding these value tensions and their relationship to the mitigating strategies has implications for both practitioners and researchers.

Keywords: Value Tensions, Joined-Up Government, Mitigating Strategies

1 Introduction

Inter-agency collaboration to deliver integrated citizen-oriented services is a key strategy for New Zealand’s (NZ’s) public sector (Department of Internal Affairs, 2016). This is part of a global trend whereby developed nations are striving towards citizen-oriented service delivery (Cassia & Magno, 2009) and employing digital strategies to drive inter-agency alignment and collaboration (Jaeger, 2003). In this emerging area of joined-up government (JUG), best practice on how to deliver a citizen-centred, connected public service is scarce. In particular, there is little understanding of how participating agencies and central agencies can facilitate delivery of JUG while maintaining existing services. This study seeks to contribute to this gap in knowledge. The guiding research question was, (a) What are the challenges and tensions involved in agency/sector collaboration in shared services delivery? and (b) How do individual agencies manage the tensions involved in delivering a cross-sector solution?

In order to answer the research questions, we employed a unique, revelatory case study (Yin, 2013), focusing on the experiences of participants from four agencies involved in SmartStart. SmartStart is the first of a planned suite of integrated life event services in NZ’s public sector (Department of Internal Affairs, 2016). It is motivated by an existing agency-centric system that was complex, time consuming and frustrating for citizens to navigate (Department of Internal Affairs, 2016), and aimed to provide integrated service delivery relating to the birth of a child in NZ. The project involved four agencies, the Department of Internal Affairs (DIA), Ministry of Health (MoH), Ministry of Social Development (MSD) and Inland Revenue (IR).

The study employed qualitative methods and the analytical lens of value tensions. Value tensions in IT projects arise when supporting of a value challenges the supporting of another value (Koschmann, Kuhn & Pfarrer, 2012; University of Washington, 2011). Value tensions have been noted to have a powerful

role in collaboration (John-Steiner, Weber & Minnis, 1998), particularly in the sense of exploring trade-offs (Kivlenience & Quelin, 2012; Hartoonian & Van Scooter, 2006). Understanding how value tensions operate in an inter-organisational, government setting is therefore valuable. Specifically, our analysis aims to identify the underlying value tensions involved in SmartStart, how these manifested as challenges to participants in this inter-agency project, and the working strategies participants used to address and mitigate these challenges. After summarising the background literature, the paper outlines the study method, then reports on findings and their implications.

2 Literature Review

The concept of Joined-Up Government (JUG) has developed momentum globally and is defined as governments that seek to achieve horizontal and vertical coordination in thinking and action (Karré, Van der Steen, & Van Twist, 2013; Pollitt, 2003). Previous to this were systems such as Old Public Administration (OPA) and New Public Management (NPM) (Denhardt & Denhardt, 2000). The focus of OPA was a support of hierarchies and centralised bureaucracies to underpin the structure and delivery of services. This led to a public service that was extremely rationally driven, entrenched in political theory, efficiency seeking and closed off from citizens (Denhardt & Denhardt, 2000).

NPM changed the public administration paradigm significantly. Many of these changes were based on the perceived superiority of private sector practices (Victorian State Services Commission, 2007) and led to a system underpinned by economic theory, a theory primarily focused in developing and regulating competition (McNulty, 1968), and agency theory, a theory focused in taking risks and efficiently organising human resources (Eisenhardt, 1989). NPM ultimately saw a system of government focused on unleashing market forces rather than citizen-centrality (Paagman et al., 2015). The New Public Service (NPS) administrative discipline began to prevail, together with Joined-Up Government (JUG) (Denhardt & Denhardt, 2000). A desire to serve citizens and contribute to society has been developed in the public sector under NPS, a system that views citizens as a key stakeholder in government and accordingly negotiates and brokers interests with them (Denhardt & Denhardt, 2000). Collaborative structures have been encouraged to ensure alignment with the values of NPS.

There are a number of motivations to JUG. The first of these is *improved quality of service*: delivery of JUG and shared services provides the opportunity for quality improvements in terms of how services are delivered, and the quality of outcomes as a result of the initiatives (Paagman et al., 2015). It is apparent that any perceived cost saving of Joined-Up initiatives may enable agencies to repurpose those funds elsewhere, further increasing the quality of outcomes for citizens (Paagman et al., 2015). Further, to deliver improved quality of service, it is important to have effective organisational systems in place in terms of stakeholder consultation in early stages of projects (Pollitt, 2003), and to ensure that information, staff and skills are freely shared in order to drive alignment and further Joined-Up Initiatives (Pollitt, 2003).

A third motivator is *improved efficiency*, underpinned by two other closely associated motivations: *standardised processes* and *consistent management information*. As standardised processes and consistent management information are achieved, improved efficiencies will result, thus exploring them, as a collection of motivations is important. Factors such as technology and effective shared services can drive efficiencies through removing redundant tasks, reduction in replication and through the more comprehensive management of collaboration across agencies (Blackman, Buick & O'Flynn, 2013; Paagman et al., 2015; Pollitt, 2003; Axelsson, Melin, & Lindgren, 2013). Further, through the standardisation of processes and an increase in the consistency of management information, a greater level of understanding can be achieved, particularly with regard to understanding shared objectives and outcomes (Blackman et al., 2013). This will accordingly drive a greater level of efficiency through an increase in clarity of interaction and shared objectives (Blackman et al., 2013).

The concepts of shared services and Infrastructure as a Service (IAAS) are often related in application. Shared services are driven by a desire to create inter-organisational synergies and enhanced service

quality through a reduction in duplication (Ulbrich, 2010). These objectives align closely with those of JUG and means in many instances of joining-up, shared services are part of the wider initiative. By combining these two concepts, an opportunity for greater integration is created through information and processes (Gil Garcia, 2012). This creates an environment for interagency collaborations to work effectively and efficiently through making process alignment simple and information sharing clear. By enabling agencies to collaborate over IAAS to deliver shared services, increased transparency can be achieved across agencies, as well as an increases in efficiency and cost savings (Walsh, McGregor-Lowndes & Newton, 2008), leading to a strong platform for effective practice in JUG.

A final motivating factor is *Improved Citizen Orientation*. Theoretically, given the creation of standardised processes, inter-agency collaboration will be aided to a point where focus can be transferred into the delivery of services with a strong citizen orientation (Paagman et al., 2015). Furthermore, by shifting to a mode of policymaking that focuses on outcomes and effectiveness that is supported by shared targets for collaborating agencies, the Joining-Up of Government can be aided. By orienting service offerings around citizens, increases satisfaction as well as cost savings have been shown, particularly in cases where agencies collaborate to deliver a shared service (Islam, 2007; Brooks, Henriksen, Janssen, Papazafeiropoulou & Trutnev, 2014).

There are a number of documented barriers to driving effective practice in delivering JUG. The first is *complexity of collaboration*, notably the complexity of accountability in collaborative arrangements. Not only can it be unclear who is accountable for particular tasks, but it can also influence results of the collaboration as stakeholder's skew results according to personal perceptions (Bryson, Crosby & Stone, 2015). Further, difficulties have been noted in identifying how to measure accountability in collaborative working arrangements (Hodges, 2012). A final source of collaborative complexity is found through a perceived loss of control and autonomy (Agranoff, 2006). This is particularly the case when examining the management of human resources, as there is a reluctance to collaborate on projects outside of core business practices (Agranoff, 2006). In order for this barrier to be effectively addressed, a full understanding of the issues involved, as well as the relevant mitigating strategies, is needed.

The second key barrier is *Lack of Information Technology (IT) integration*: IT sets the foundation for much of what JUG seeks to achieve, particularly in enabling inter-agency information sharing and collaboration. Improperly integrated IT systems, internally and across organisations, create a serious barrier to effective practice in JUG initiatives. IT is an important factor in aiding change efforts towards JUG in that it assists "the understanding of relationships between socio-technical elements of the technical systems and vertical and horizontal organisational network change issues (Wilson, Jackson & Ferguson, 2016, p2)." Moreover, IT represents a key capability of the public sector in the sense of increasing efficiencies, delivering speed and agility of outcomes, and can help imbed change across an enterprise (Klievink & Jannsen, 2009). By not adequately integrating IT infrastructure, the motivations to gain efficiency and speed for the delivery of outcomes will be hindered and may result in negative impacts in the same areas.

The third key barrier identified in studies is *Difficulty in standardisation of processes across agencies*: As standardisation of processes is a key motivation for JUG, this barrier can have a direct impact on the success of that motivation. This issue also relates to interagency transparency in terms of ambiguity of requirements, in particular requirements pertaining to information sharing and confidentiality (Higgs, Smith & Gould, 2003). Moreover, interagency collaboration with regard to standardising practices can prove challenging as practices can be very institutionalised and entrenched, making change initiatives difficult to successfully implement (Clark, 2002). Proactive and carefully structured change initiatives must be employed in order to address this barrier. Practices that are this entrenched often reflect legacy administrative processes and addressing this is important for effective practice of JUG.

A fourth barrier is *Misalignment of objectives between agencies*. This is one of the most important barriers to address in order to enable successful JUG initiatives. Research in this area is primarily targeted at understanding conflicting agency objectives and how these affect how collaborative tasks

are completed. A focus purely on departmental objectives may mean neglect of objectives required for success of joined-up initiatives (Clark, 2002; Davies, 2009; Blackman, Buick & O'Flynn 2013; O'Flynn, Buick, Blackman & Halligan, 2011). Further, agencies may exhibit competition, particularly through competing for funding from governmental budgets, and accordingly may be reluctant to disclose information that is critical to their organisation or give collaborating parties additional assistance (Blackman, Buick & O'Flynn, 2013).

In summary, the literature provides a good understanding of JUG motivations and benefits, and to a lesser extent, barriers to effective practice of JUG. However, as JUG is a relatively new concept, there is little research-based knowledge to guide the successful delivery of a JUG or All of Government (AoG) vision. Notably, there is a lack of research into how cross-agency participants actually experience and address the tensions involved in the delivery of JUG while carrying out business as usual. With increasing pressure on agencies to deliver outcomes and results with restricted budgets, understanding how the sector level entities can assist agencies in developing effective practices and address value tensions is of paramount importance.

This study employs value tensions as a lens to help address this gap. Value tensions arise when a set of values competes with another set of values held by another, or the same, party. For example, value tensions between individuals and groups may impact on groupware systems (Miller et al., 2007; Orlikowski, 1992). An emerging body of literature explores the role of values in relationship to e-government systems (e.g., Chadwick & May, 2003; Cordella & Bonina, 2012; Smith, 2010; Voida et al., 2014). For example, Smith (2010) identifies value tensions that impact on citizen trust in the delivery of e-services, while Voida et al. (2014) found differences in the enactment of key shared values (efficiency, access and education) by those involved in e-government systems. However, the role of value tensions has not been explored explicitly in relationship to the barriers and enabling practices surrounding JUG initiatives.

3 Study Setting and Method

The broad context for our study is the implementation of JUG in New Zealand. The concept of JUG was introduced in 2000 under the Fifth Labour Government (Maharey, 2000) and early JUG endeavours reported on by Ryan et al. (2008). In 2012, under the Fifth National Government, JUG developed momentum with The Better Public Services (BPS) reforms. These included the creation of ten key result areas in which multiple government departments were required to collaborate for outcomes addressing a variety of social, technical, structural and economic issues (New Zealand Government, 2014; State Services Commission, 2015). Result Area Ten, focused on creating more accessible digital government services (State Services Commission, 2016), provides the overarching context for this study.

Owing to the study's goal of generating understanding in an emerging area, this study employed a unique, revelatory case (Yin, 2013). SmartStart was the first in a series of integrated service initiatives that seeks to uphold the principles of result area ten in the BPS initiative (Department of Internal Affairs, 2016). The Primary goal of SmartStart was to enable citizens to easily access the public services around the life event of having a child (Department of Internal Affairs, 2016). The desired outcome of this project was to reduce the effort required by citizens to interact with public services organisations through the creation of a single source of integrated service delivery (Department of Internal Affairs, 2016). Life-event based systems are based around the recognition that citizens in a particular life situation (e.g. having a child, victim of crime) know the desired outcomes but not which specific public services they need. They aim to provide the user with knowledge required to determine which services and administrative procedures are needed to be solved" in a particular life-event situation (Vintar & Leben, 2002). SmartStart was in its early stages, with the full realisation of benefits and outcomes set for 2025 (Department of Internal Affairs, 2016). Given the scale of complexity, along with the new and

critical nature of this project in the wider ecosystem, the information reported from analysis justifies research as a single instance, as it constitutes a revelatory case, particularly in a NZ context (Yin, 2013).

A qualitative research process was used that entailed a set of eleven semi-structured interviews according to the interpretivist tradition. This research required an approach that enabled understanding of the real life experiences of public servants collaborating on the SmartStart life event project and the above facets of the approach support this goal. This made a qualitative method a natural fit as it is best suited to extracting of opinions or soft data (DiCicco- Bloom & Crabtree, 2006). Interpretivist research, accepts the fact that multiple realities exist, as a result of human perception (O'Leary, 2014), which meant that interview data could be analysed accordingly to understand why these differences exist (O'Leary, 2014). The use of semi-structured interviews enabled flexibility during the interview process (O'Leary, 2014). When an interesting perspective or experience arose, questions were altered to explore it in more depth. The interview protocol was developed as a result of being sensitised by the literature (Charmaz, 2014), which enabled questions to be targeted at developing data around specific concepts, such as, value tensions, system barriers and mitigating strategies. Participants ranged from career public servants (with 20+ years of service) to recent additions to the public service (<5 years). These topics were covered in depth across all interviews, with the average length of each being 45 minutes.

The research aimed to gain a variety of perspectives from participants involved in SmartStart (eight participants from four agencies). Three participants worked at the Department of Internal Affairs (DIA), one at the Ministry of Health (MoH), two at the Ministry of Social Development (MSD) and two at the Inland Revenue Department (IRD). Three further interviews were carried to elicit an all-of-government perspective; two from the Government CIOs office (an enterprise architect and a senior policy analyst), and one with a SmartStart steward. All eight were professional, non-political, public servants.

We used in depth, semi-structured interviews to draw out the perspectives of the agencies and sector level actors involved in the delivery of the SmartStart product. The interviews were audio recorded and transcribed verbatim. Analysis of the interview data was carried out in two rounds of coding. (While using no framework, we were sensitised by the reviewed literature.) Coding aimed to identify common and contrasting themes from each agency, and to draw comparisons to the all of government level. Two stages of coding were completed. In the first, we identified the challenges, barriers and mitigating strategies, as noted by the participants, using an inductive process with descriptive and thematic coding. In the second stage, we focused on identifying the underlying value tensions and their links with challenges and barriers. This involved a return to the literature to sensitise us to the structural themes underpinning the challenges and tensions being reported by participants. Our focus at this stage was to identify fundamental organizational and system level value tensions rather than personal value tensions. We did this by exploring the barriers noted and returning to the transcripts to better understand their context. Member checks and peer review were used to ensure methodological rigour.

Member checks were performed by asking participants to review the transcripts and check that they were consistent with their experiences on the project and recollection of the interviews. A further member check was conducted to discuss the emerging results with a subset of participants to ensure relevance of results and fit with their perspectives. The first author performed coding with the second acting as peer reviewer, reviewing transcripts, doing independent coding and reviewing codes. These measures ensured that the analysis was rigorous and that the findings were accurate and reasonable based on the interview data.

4 Results

The analysis identified three key value tensions that created issues in implementing JUG and three key mitigating strategies that participants used to address these value tensions. The value tensions were (1) New Public Management vs. Joined-Up Government, (2): Immediate Needs vs. Longer Term Benefits, and (3) Waterfall vs. Agile Project management. The mitigating strategies were (1) stewardship, (2) citizen centricity and (3) creation of reusable artefacts. These findings are discussed below in a research

model that summarises the findings. The model is based on the idea of a ‘base isolator’, which serves to minimise the damage from an earthquake by isolating a building from the ground (Science Learning Hub, 2016). The value tensions are analogous to the movement of faults that cause earthquakes, while the mitigating strategies work to isolate the overarching goal of effective practice of JUG from these shocks.

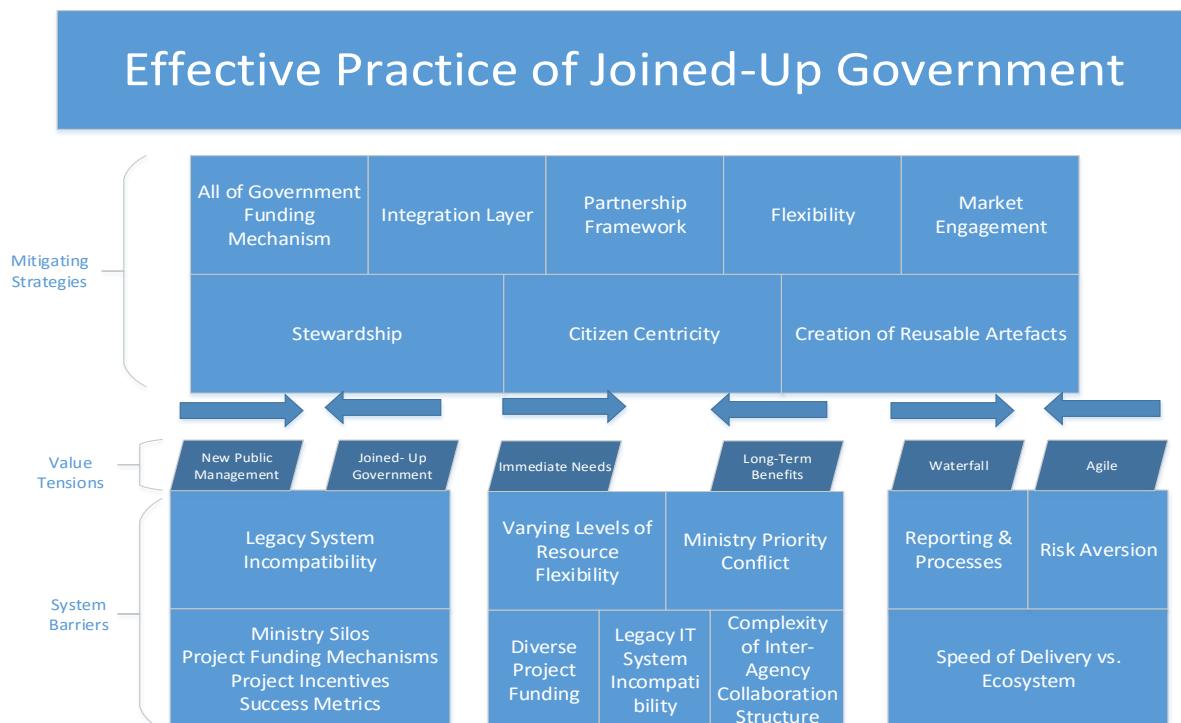


Figure 1. Research Framework

4.1 Value Tensions

4.1.1 New Public Management vs. Joined-Up Government

Participants reported issues arising from the value tension between the administrative disciplines of New Public Management (NPM) and Joined-Up Government (JUG). Under NPM, agencies had become radically decentralised, given large autonomy and organised policy initiatives around outputs rather than outcomes (Paagman et al., 2015). As one participant noted, taking part in SmartStart had impacted on this tradition by “*really challenging that core of us and, you know, you’re all pushing your own agendas and not understanding the impacts of doing so...*” (Participant [P] 1). Another noted that, “*Government agencies have been all about making things better for them, from a process perspective or a system perspective, as opposed to putting the client at the centre of it [which we are now working on with SmartStart]*” (P2). NPM values contrast strongly with the values of JUG such as, standardisation, citizen centricity and stewardship: Participants reported facing a truly transformational change in administrative discipline where things such as benefits ownership, agency values, incentives, project funding and accountabilities were all changing substantially. The value tension occurred because this transition has not been fully realised and resistance to change existed.

A physical manifestation of the NPM-JUG value tension was legacy IT system incompatibility that created a substantial system wide barrier to effective collaboration. The radically decentralised structure of NPM has resulted in a series of back office systems that continue to operate in isolation within agencies (Van Veenstra, Klievink, & Janssen, 2011). One participant noted, “*You have three or four legacy systems within one agency that do the same thing, which makes it difficult if then in five or ten years they are split up again*” (P6). This quote captures the uncertainty and reluctance (and/or inability)

of agencies to integrate legacy systems to create a common platform. The complexity of such integration combined with cost and administrative turmoil, amplifies the problematic nature of this barrier. The difficulty of committing to uncertain long-term initiatives was abundantly clear and accordingly represents a key barrier in the complexity of fully Joining-Up Government. Ultimately the uncertainty and complexity of incompatible legacy IT systems, has proved a barrier to effective JUG practice.

4.1.2 Immediate Needs vs. Longer Term Benefits

The second value tension, Immediate Needs versus Longer Term Benefits, was evidenced by a number of different issues. These included diverse sources of project funding, Ministry priorities, levels of flexibility and degrees of complexity of inter-agency collaboration structures. These themes combined to create an area of tensions in an inter-agency setting, as a balance of delivering day-to-day services and delivery of initiatives that were more strategic in nature, had to be struck. One participant noted, “*There’s been a lot of talk, but not a lot of action. I think agencies have [thought]...well, you’re launching this DIA that’s great. It’s probably the right thing to do. But you’re not going to tell us what our priority is on our work programme*” (P2). Another explained how the issue of immediate needs impacted on the nature of partnership in relationship to JUG: “*Partnership to me always seems to mean equal partners, [but] have we all got equal buy in?... We’ve all got different priorities*” (P10). Participants recognised that strategic priorities have the capacity to conflict between agencies. Accordingly, this meant that agencies have to prioritise work internally and in an AoG environment, which could prove challenging. This is especially the case for SmartStart, which was comparatively dwarfed by agency transformation programmes.

Funding in the public sector has always been a contentious issue whether that be from the perspective of the agencies budget allocation from the government or through the scrutiny of agency spending as a result of taxpayer funding (UK Parliament, 2016). On top of this, the way that projects are funded and incentivised reinforces these siloed priorities, as funding is allocated in isolation from other agencies rather than in an AoG manner. Ultimately, this results in a state where different agencies will be at different stages of transformation internally, resulting in varying levels of flexibility with regard to the AoG projects, such as SmartStart. One participant noted, “*The compromise is that sometimes they need to lead or fund a piece of work which will not benefit them and that’s sometimes a struggle to get that approved ... We’re going to be measured on our own performance and not on cross-agency performance*” (P6). This quote underscores both contrasting Ministry priorities and levels of flexibility of agencies operating in an AoG manner. Furthermore, the difficulties regarding the existing project funding and incentive mechanisms are highlighted. The participant noted a mind-set of siloedness along with problems relating to the existing funding mechanism; promoting cross-agency projects, but still allowing funding to be allocated according to benefits ownership. This has proven to be a barrier in instances where an agency’s contribution is important in the scheme of the wider project, however tangible benefits are unclear.

4.1.3 Waterfall vs. Agile Project Management

This value tension was noted by a number of participants as proving not only a challenging tension to overcome, but also as a source of frustration. Traditionally governments have used a strict waterfall style project management methodology due to its highly formalised style and process centric reporting (Nerur, Mahapatra & Mangalaraj, 2005). However, in the interest of delivering a product in a shorter period, with a citizen focus (Nerur et al., 2005), the SmartStart life event project team opted for a more agile approach using the Accelerate Methodology for Government (Department of Internal Affairs, 2016). Given the contrast in methodological values, a value tension appeared where process and reporting mechanisms of waterfall impacted the overall efficacy of the accelerate methodology. Moreover, this tension manifested in the form of a tension between the speed of delivery and the need for ecosystem consistency. Speed of delivery can be achieved through the Accelerate methodology, thus, in achieving that a compromise has to be struck in terms of what functionalities are critical to the minimum viable product and what can be added in later iterations. One participant evidenced this tension as, “*It hit a problem internally because we have quite a waterfall project management system in our PMO, and that was really problematic for them trying to do all the reporting our PMO required*

while they were trying to do it in a really fast and agile way" (P7). It is clear that this tension creates substantial uncertainty. In terms of the methodological value tension, running a project under an agile methodology whilst also trying to maintain conflicting waterfall values proves a constant tension for the project team. Furthermore, project members were abundantly aware of the limited service integration undertaken in its first iteration due to the constrained period and scale of the unresolved conceptual clarity. Managing this tension proved very challenging due to how ingrained it was in the operating environment.

Reporting and process burdens represented the central system-wide barrier underpinning this value tension. In some respects, this theme reflects an underlying motivation to both minimise risks, as well as reinforce a need to maintain audit trail. One participant noted, "*Government typically tries to minimise its risk. That is why we use the waterfall approach. So long as I've paid somebody to give me all my specifications and it's all nice and neatly bundled and then I've got to get my engineering team to deliver that, I'm okay, because I've delivered to the specification. The fact that nobody wants to use it is not my problem*" (P8). These ideas raised by the participants provide a vivid explanation of the nature of some of the reporting and processes that fuels risk aversion in the public sector. This ultimately creates a perceived barrier around the use of agile project management methodology, which places less importance on processes, instead focuses on the consumer (Nerur et al., 2005). Accordingly, frustration surrounding this paradoxical nature of this area was evident and overcoming of this barrier may prove time intensive.

4.2 Mitigating Strategies

4.2.1 Citizen Centricity

Citizen centricity was seen as helping to refocus the agencies involved, to deliver a product that would tightly meet user requirements. This was achieved on the project through the hosting of a number of market engagement sessions, enabling the project team to get direct input from high priority stakeholders, thus impacting decisions made in the design of the product. As one participant recalled, "*We're building (the SmartStart application), but also [we're] testing out the whole kind of life event concept and also really understanding what it is for our customers and our users; what really do they need?, and looking at solutions that's going to address those needs*" (P5). Participants emphasised the transformational nature of this change in the delivery of services to citizens, alluding to a style of government that is much more participatory. Testing initiatives with citizens and designing initiatives with the citizen at the centre of the decision making process was exhibited through the use of market engagement session, where the project team gathered requirements from users to deliver something that will be of high value. This reflects a will amongst participants to create meaningful change towards a more citizen centred public sector.

4.2.2 Stewardship

Effective stewardship was noted by a number of participants as being essential in getting projects of this nature underway. The State Services Commission (2016), defines the concept accordingly, "Agencies need to align their customer focus to deliver on collective priorities that will benefit New Zealand and New Zealanders. Sometime this will take collective effort, and a part of the shift is about being better at working together." This definition highlights a need to deliver collective priorities. In the delivery of these collective priorities resources may need to be allocated away from tasks that are expected to deliver tangible returns to individual agencies and thus a good steward of the system will need to consider this balance. One participant noted, "*You're quite often being asked to put your deliverables that you're being judged on to one side and deliver something that has little benefit for you to deliver because there aren't any incentives for being a good steward of the system as opposed to being a good manager within your agency*" (P7). Here the participant considers the delivery of a collective priority when tangible benefits can be hard to trace. In instances such as this, re-allocating ministry resources to deliver components of an AoG deliverable would prove challenging without the concept of stewardship to justify action.

Another participant noted the importance of flexibility as a feature of an ideal steward: “*I think that flexibility has to go hand in hand with a really clear understanding of what your roles and responsibilities as a steward of the system is*” (P7). Being able to deliver both the day-to-day tasks required for ministry service delivery as well as deliver tasks for integrated services initiatives such as SmartStart, requires a comprehensive understanding of how flexible resources can be.

4.2.3 Creation of reusable artefacts

The creation of reusable artefacts was referred to a number of times as a motivating factor in the delivery of SmartStart. Central to this theme is the idea of sharing and disseminating successful ideas and practices in order to drive the future success of the life event ecosystem. With SmartStart being the first to be launched the approach applied by many involved in the project has been experimental. Project staff have been open to new ideas and sought to test them in the interests of passing them on in the future: “[We’re] making sure that the SmartStart product is going to fit within this wider ecosystem, that what we’re developing can be reused by other life events” (P9). This quote illustrates how reusable artefacts were seen as ensuring the enduring capability of this solution. As the participant notes, they are aware of the wider context that this application will operate in and thus feel it is important to ensure ecosystem cohesiveness in the future. Cohesiveness will be further ensured by effective knowledge sharing with other life events, to facilitate the project successes being reused and pitfalls being avoided. Two examples of this mitigating strategy are the AoG funding mechanism, better public services seed funding, and an integration layer for legacy IT systems. Both of these artefacts were noted as integral to overcome of system barriers, which therefore makes their reuse in future life events central to the success of the life event ecosystem.

5 Discussion

Existing literature surrounding JUG lacks focus on the tensions of interagency IT project collaboration and means through which barriers to JUG are addressed in practice. We sought to address this gap by investigating the value tensions and associated system barriers experienced by the project team, as well as the mitigating strategies implemented. This was epitomised through comparison to Ryan et al (2008) that also studied the NZ instance of JUG. This paper noted a key challenge of inter-agency information sharing, which was not noted as a barrier in this study. Given the time gap between these two studies NZ government has creatively evolved to work around legislative sharing constraints. SmartStart was able to enable information sharing through primarily dealing in non-sensitive information and has planned for future sensitive information issues by opting for a consent based information-sharing model.

The NPM-JUG value tension underscores the complexity of effectively joining-up government. Given that the system-wide, transformational nature of joining-up government has as yet not to be fully realised, both AoG entities and agencies have to navigate uncertain operating environments. Ministry silos and incompatibility of legacy IT systems were two system-wide barriers were identified as drivers of NPM-JUG, confirming some of the existing literature in the JUG field, particularly the lack of IT support and misalignment of objectives between agencies. Lack of IT support has been suggested to create a potential for inefficiencies (Klievink & Jannsen, 2009), playing out in the current study through the RealMe identity authentication software across agencies. This was fuelled by the extent of legacy IT system separation within and across agencies. Within the literature, a misalignment of objectives between agencies is argued to prioritise departmental objectives over those required for the success of a joined-up initiative (see for example, Blackman, Buick & O’Flynn, 2013; O’Flynn, et al., 2011). In the present study, this was evident through the siloed funding mechanisms, success metrics and benefits ownership which place a higher value on projects that deliver a higher return to the siloed agency rather than the wider system or citizens.

Two major value tension mitigation strategies applied to the NPM-JUG value tension, were stewardship and citizen centricity. Stewardship was used highly effectively at the AoG level to prioritise and allocate resources in order to deliver a product in the desired time frame. Furthermore, the efficacy of the stewardship group governing the project was integral in the monitoring of progress across the partner agencies, as well as the garnering of opinions from various stakeholders. Stewardship intertwined

closely with citizen centricity, as the two concepts combined to encourage agencies not only to work with each other to achieve a result for the government itself, but also a positive outcome for citizens. This improved citizen orientation is a central motivation to the joining-up of government and was exemplified in this instance through the use of market engagement sessions, as well as the incorporation of stakeholder groups, such as Plunket and the College of Midwives.

Together, stewardship and citizen centricity were seen by participants as minimising the impact of the system barriers of ministry silos, particularly in addressing issues surrounding project incentives, benefits ownership and success metrics. Moreover, in overcoming legacy IT system incompatibility and conflicting agency values, the themes of stewardship and citizen centricity were evident from the participants of this research as central to the success of the project to this stage and at a higher level, the success of joined-up initiatives.

The immediate Needs-Longer Term Benefits value tension is the most well explored of the value tensions in the existing literature, particularly in the inter-agency setting. Due to the nature of interagency projects, ministry resources need to be balanced between such initiatives, which are critical to the citizen, and internal ministry priorities. Striking this balance has proved a challenge for many of the ministries involved. This was an interesting finding due to its parallel with the barrier to JUG of misalignment of objectives between agencies. This barrier was identified in the existing literature in the sense of a focus on the delivery of purely departmental objectives neglecting those which are required for the success of the joined-up initiative (Clark, 2002; Davies, 2009; Blackman, Buick & O'Flynn 2013; O'Flynn, Buick, Blackman & Halligan, 2011). Whilst this dynamic was present in this research, particularly through the large transformation programmes underway at a number of the agencies involved in the delivery (P11), this joined-up initiative is not failing. The concept of stewardship has been instrumental in ensuring that those system barriers can be overcome in the short- term, accordingly facilitating positive progress on the project. This is a key finding of this research in terms of understanding the governance strain for this project and understanding how to better support these initiatives going forward is crucial.

Citizen Centricity is a big feature of the NPS public administration discipline and has been a key feature of SmartStart too. This has been exhibited through market engagement session with citizens and incorporating a number of Non-Governmental Organizations (NGOs), such as Plunket and the college of midwives, into the stewardship group of the project. Importantly, this finding confirms the motivating factor of JUG, improved citizen orientation. What is an interesting extension of this idea is that it is not only a motivation, but also a facilitating factor of effective JUG practice. This finding has indicated that in future projects of this kind keeping a citizen centric focus, by engaging citizens around requirements, drives these initiatives, in the sense of delivering something that has high utility amongst citizens.

Furthermore, as the SmartStart life event project was the first of an ecosystem or portfolio of life events, creating reusable artefacts was an important motivation. This was an interesting finding given a key motivation of JUG comes through a reduction in cost, through reductions in duplication across agencies. This reduction in duplication was noted in two ways in the course of this research. Firstly, at the AoG level, projects that share similar aims in the delivery of services are being grouped in the interests of reducing the duplication. Furthermore an increase in integrated service delivery initiatives where possible represents a key focus of the current ICT strategy in action plan (Department of Internal Affairs, 2016). This finding indicates the importance of not only being able to create these reusable artefacts, but also to share these with projects of a similar scope in order to reduce duplication across government. Moreover, it underscores the importance of effective knowledge management in terms of documenting lessons learned, so as to ensure future projects do not duplicate learnings.

The Waterfall-Agile value tension was one that in some instances challenged the core of government processes. The reporting and legislative burdens of old bureaucratic style public services are not practical for agile projects, which meant that members of the project had to operate in two very different environments. Further system barriers included in this tension were, legacy IT system incompatibility,

project funding mechanisms, bureaucratic legacy processes and understanding the agency level authorising environment. Whist these system barriers represented a substantial challenge for the agencies involved in the completion of this project, commitment to the overall goals of the project meant that these system barriers were largely overcome. This finding indicates that achieving a fully JUG is a long-term goal that needs to be actively addressed, as well as the need to create systems within government to allow for the existence of agile project such as this.

This value tension further captures the idea of needing to deliver a product in order to start getting return on investment, contrasted against creating a product that is future proofed and integrated across future life events. *“It’s working with the tension of delivering something now and perhaps it won’t fit into the long term, if we have to redo it we’ll, change it”* (P9). The pressure of the December 2016 deadline was an interesting driver here as it was noted as a positive one, as it enabled the project team to prioritise tasks, thus only delivering those that are critical to the minimum viable product. Importantly meeting this deadline was only achievable through the adoption of the agile project management methodology. Neatly organizing tasks into sprints and partnering with external organizations, with an ability to prioritise functionalities for the delivery of a minimum viable product have all been credited, by the project team, as affordances of the use of this methodology. The use of agile means that continuous iteration of the product will keep it aligned with user requirements.

Key drivers of success here were stewardship and citizen centricity. Application of these concepts across the ministries involved in SmartStart has been instrumental in overcoming this value tension in the short-term. Long-term, achieving legacy system integration, stewardship based project funding mechanisms, incorporation of agile project management methodology into the AoG Enterprise Project Management Office (EPMO), and gaining a detailed level understanding of the agency’s authorising environment, should remain a priority. However, a key take away here is that an environment focused on citizen centricity and stewardship has the potential to create powerful motivation to change. Moreover, the intent of creating and sharing reusable artefacts, can further this motivation thus ensuring the robustness of these artefacts is paramount. Understanding how to more effectively support these types of projects going forward will be critical in driving effective practice in JUG.

6 Limitations, Implications, and Conclusion

There are a number of limitations to be considered in the context of this research. The JUG project case studied was in New Zealand, a country with a population of around 4.5 million, with no provincial governments and a system that places high value on citizen centred outcomes. Further, there was only one, early stage, project being analysed, so any generalisability will be limited to other early stage projects. In addition, the perspectives reported on are those of participants in a project that was focused on successful first steps. Nonetheless, we suggest that the study findings are of relevance to other settings in which JUG is being implemented, notably to countries with a similar emphasis on JUG and the delivery of citizen-centric services.

This research has implications for both practice and academia. For public sector practitioners, this research underscores the importance of governance at AoG level. There were a number of hindering mechanisms present in this research case, at the AoG level, thus a key course of action will be the introduction of an AoG governance portfolio. Involved in this portfolio, would further understand the implications of the governance principles of, Evaluate, Direct and Monitor (Australia/Standards New Zealand, 2010). Secondly, a formalised knowledge management and sharing mechanism should be considered. Given the nature of the objectives of SmartStart, particularly in the sense of the creation of reusable artefacts, documenting the lesson learned is of paramount importance. Documenting best practices will ensure enduring capability of future projects of this nature.

This research also has a number of contributions to the field of Information Systems and E-Government. First is the identification, exploration and application of value tensions in the area of inter-agency IT projects. The use of this lens in this research was a crucial element in the understanding of the dynamics of inter-agency IT projects. It enabled the analysis to consider the variety of relationships, motivations

and values held by different stakeholders in the delivery process. Further application of this lens would be useful in the confirmation of these findings or as a tool to make sense of other JUG IT endeavours.

A further contribution is in proposing relationships between value tensions and mitigating strategies in the delivery of JUG. The study proposes a framework for understanding value tensions and mitigating strategies in early-stage inter-agency IT projects of the NZ public sector. Further testing of these relationships, to confirm their existence, and application in different settings to examine those relationships, would be valuable. A final contribution is made in the field of E-Government. Scholl and Klischewski (2007) have noted the importance of research in the areas of integration and interoperability of both institutional requirements and technological standards. This paper has explored these areas through discussion of the strategic priorities of ministries, as well as insufficient legacy IT system integration. Finally in this study, effective stewardship was identified as a key enabler of JUG. Prior research has highlighted the importance of unofficial roles in delivering joined up outcomes (for example, Ryan et al. 2008, identified the role of guardian angel in delivery of joined-up outcomes in NZ). Future study is needed to examine nature of the role or roles involved in stewardship.

The concept of integrating services around life events not only has important ramifications for the nature of work in the New Zealand public sector, but also brings with it greater potential for citizen oriented service delivery (Department of Internal Affairs, 2016). Accordingly, finding new ways of enabling this process has great value in creating a more connected public service. This research sought to identify knowledge that will help AoG entities assist agencies in the delivery of such projects. This aim was achieved through the analysis of a unique, revelatory case, the SmartStart life event project. Accordingly, the research provided valuable insights, with a qualitative semi structured interview process, where members of the partner agencies involved shared their perspectives. The study uncovered three value tensions, NPM-JUG, Immediate Needs-Long-Term Benefits and Waterfall-Agile, and associated system barriers. Further, the study identified a set of mitigating strategies that were seen by participants as facilitating positive progress on this early-stage JUG project. Documenting and sharing knowledge of value tensions, associated barriers and mitigating strategies is of importance, particularly given the emerging importance of JUG projects, and in particular those in the life event ecosystem.

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