Diagnosing and Designing Process Stability and Adaptability at Transpower New Zealand Limited using the Process Warrant of Fitness and the Viable Process Model.

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Abstract

This research developed an evaluative model and tool incorporating principles and practices of the Work Systems Method (WSM) and Viable System Model (VSM) to assess the viability of processes at Transpower NZ Limited, a New Zealand State Owned Enterprise. The assessment tool looks for opportunities to sustain process identity, as well as identifying the potential for enhanced planning, control, and coordination of the work, and preserving connections to the outside world, including suppliers, customers, and regulators. Eight employees took part in interviews to reveal Transpower's collective process requirements. These requirements became a key input into the assessment tool, called the Process Warrant of Fitness (WOF). The tool was tested on a range of Transpower processes, successfully identifying viability enhancement opportunities. The assessment tool was then tested on two non-Transpower processes to gauge its applicability outside of Transpower. To lower the barriers to adoption of the tool, an end to end user participation format, called the Viable Process Model (VPM) was also developed, further drawing on WSM and VSM principles. The VPM guides the user to identify processes to assess, apply the assessment tool, and undertake post-assessment activities. While each workplace may appear to have its own unique process viability challenges, the assessment tool and user participation format showed potential as a universal pathway to process viability, having identified opportunities in the organisations that had its processes assessed.

List of Acronyms

CI	Continuous Improvement
LSS	Lean Six Sigma
TPNZ	Transpower New Zealand Limited
VPM	Viable Process Model
VSM	Viable System Model
WOF	Warrant of Fitness
WSM	Work System Method

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Chapter One - Introduction

1.1 Background

According to Alter (2008), a work system "is a system in which human participants and/or machines perform processes and activities using information, technology, and other resources to produce specific products and/or services for specific internal or external customers". Examples of work systems provided by the author include 1. Value Chains: work systems whose participants operate across an organisation; 2. Supply Chains: inter-organisational work systems that create, monitor, and fulfil orders; 3. Projects: work systems that cease to exist once the products and services are produced for customers; and 4. E-Commerce web-sites: web interfaces that enable customers to match their requirements to product offerings and then undertake the purchase.

A process is a set of interrelated tasks that provides a specific result for their internal and external customers (Sharp and McDermott, 2001). Madison (2005) defines processes in three ways. Firstly, as a group of activities leading to an output or result; secondly as a means to get work done; and thirdly as a mechanism to create and deliver customer value. There are several quality methodologies used to improve processes. A popular methodology is Six Sigma, which contains a set of concrete deliverables (McAdam, Antony, Kumar, and Hazlett, 2014). A tool within the Six Sigma toolbox which helps illustrate the broad perspectives of a process is the SIPOC diagram (Jacobson and Johnson, 2006), by listing the suppliers of necessary materials; inputs to the process, outputs of the process, and the customers of the process, and the process steps themselves (see example in Figure 1.1).

Suppliers	Inputs	Process	Outputs	Customers
- Final customer - Equipment and software supplier	- Geometric or graphical models - Specifications - Pre-printing equipment and software	Pre-printing	- Structural design	- Printing area of Production Department
- Pre-printing Department - Raw materials suppliers - Equipment supplier	- Structural design - Tints - Cardboards - Printing equipment	Printing	- Printed cardboards	- Cutting and creasing area of Production Department
- Printing area of Production Department - Pre-printing Department - Equipment, tool and material suppliers	- Printed cardboards - Structural design - Cutting and creasing equipment and tools - Special glue	Finishing	- Finished product	- Shipping area / Logistics Department
- Shipping area / Logistics Department	- Finished product - Order packaging	Shipment	- Finished product shipped to the final customer	- Final customer

Figure 1.1: SIPOC diagram for the production process of packages in compact cardboard, taken from Marques and Requeijo (2009)

The Viable System Model (VSM) is a theory and methodology that, according to Schwaninger, Pe´rez, and Ambroz (2004) is used by academics and consultants to diagnose and design social systems for viability. Golnam, Regev, and Wegmann (2011) posit that the viability of a system is a function of the balance between its stability and adaptability. The social systems referred to by Schwaninger et al include organisations of all sizes (Weckenmann, Akkasoglu, & Werner, 2015) and nations (Medina, 2006). A major weakness of the VSM is that it does not have an accessible user participation format, which in the words of Whittaker (2003), in Burgess and Wake (2012), leaves it 'scandalously undervalued'. Furthermore, due to its generalist nature, its language is not precise enough for the immediate application to work systems and processes. The purpose of this research was to design, develop, and test an accessible 'tool' or variant of the VSM that is more appropriate to the process level.

This research sought to understand whether there was an opportunity to apply VSM principles at a process level by embedding its management functions into processes. The embedded management functions would theoretically serve to sustain the individual process identity, as well as providing for the planning, controlling, and coordination of the work, and preserving connections to the outside world, including suppliers, customers, and regulators. Collectively, these embedded functions would promote process stability and adaptability, with the goal of optimising process outcomes. Other measurable benefits also emerged from the research as a result of applying VSM principles to processes.

It was envisioned that the first group of beneficiaries of the tool will be process participants, including practitioners and process owners, who would like to diagnose and design their processes. As a result of this diagnosis and design, it is envisioned that internal mechanisms would be built into the processes to provide process stability, that is, that they consistently achieve their purpose; and adaptability, that the process is in regular contact with, and adapting to, its environment. It was the hypothesis of the research that these internal mechanisms for stability and adaptability will borrow heavily from the VSM systems 1. Operations, 2. Coordination; 3. Control; 3* Audit; 4. Planning; and 5. Identity; as well as the relationships between the processes VSM systems and the relationships with the process and its Environment. The second group of beneficiaries will be academics, who can build on the VSM concepts through the improved user participation format and wider application potential.

1.2 Scope and Boundaries of the Research

The scope of this research was the development and testing of the envisioned tool to processes within work systems. Limiting the scope to processes rather than the wider work

systems enabled the precise tailoring of the user participation format and language. Furthermore, the development and testing of the assessment tool was limited to processes within Transpower New Zealand Limited, a State-Owned-Enterprise that owns and operates New Zealand's National Electricity Grid, headquartered in Wellington, New Zealand. The tool was subsequently tested at Nelmac Limited, a Nelson City Council owned asset and environmental organisation, based in Nelson, New Zealand; and Switch Lighting Limited, a privately-owned designer and manufacturer of premium LED lighting solutions, also based in Nelson. The purpose of testing the assessment tool at Nelmac and Switch was to gauge its applicability outside of Transpower.

Specifically excluded from the research scope were applications of the envisioned tool to the diagnosis and design of entire work systems or organisations. The uniqueness of the tool is that it was developed specifically for processes within work systems and the language tailored specifically for this environment. Also excluded from the scope, except where specifically stated, is any expectation of general applicability of the tool to organisations outside of the three organisations listed above.

1.3 Importance of the Research

Given that the Viable System Model is widely seen as effective and yet underutilised, and that the apparent cause of this underutilisation is its inaccessibility (Burgess and Wake, 2012), benefits would be derived by improving the user participation format of the VSM principles. These benefits could be realised in two stages:

1. Process viability, or in other words, stability and adaptability. The VSM appeared to possess the key principles, if not the user participation format and appropriate language, that would assist in the diagnosis and design of processes for stability and adaptability. Providing a more accessible user participation format would make the underlying principles easier to apply, leading to process improvements and process viability. Making the VSM principles available at the process level also means that a user can start applying the VSM principles anywhere in the organisation, regardless of the users status or position.

2. It is envisioned that by providing an improved user participation format, the VSM principles will be made accessible to a larger audience than the academics and consultants that currently use the model. Once this expanded audience became comfortable with the principles applied at a process level, additional research could be undertaken to redevelop the user participation format to apply at the work system and even organisational levels. Thus, the second major benefit of the research is that it starts the VSM journey away from

its current label, attributable to Whittaker (2003), in Burgess and Wake (2012), of 'scandalously undervalued'.

1.4 Research Problem, Aim, Questions, and Objectives

1.4.1 The Research Problem

Most process improvement literature is a variation of Deming's Plan-Do-Study-Act (PDSA) cycle whereby an improvement is planned and implemented, the results studied, and the plan refined, and the cycle repeated in an iterative fashion (Donnelly and Kirk, 2015). This suggests that Plan, Do, Study and Act is a sort of management function, external to the process itself. Whilst the VSM appears to enable systems to maintain their identity, as well as planning, controlling, and coordination of the work, and preserving connections to the outside world, including suppliers, customers, and regulators, the same benefits have not been easily transferable to processes. Embedding these VSM functions into processes would promote process stability and adaptability, maximising process outcomes, and leverage its autonomous self-correcting functionality. An additional benefit of the research will be to lower the barriers to understanding the VSM.

1.4.2 Research Aim

The aim of this project is to develop a tool and intuitive user participation format that can be used by a wide range of users, not limited to consultants and academics, to assess processes for viability, without requiring any specialist knowledge of the VSM or any other related models. The tool will highlight potential strengths and weaknesses of individual processes and provide a user participation format to firstly assist the user in the prioritisation of processes for assessment; secondly to assist in the execution of the process assessments; and thirdly to direct the approach to developing and following up on findings.

1.4.3 Research Questions

This research sought to answer the following questions in the target organisations:

1. Is there a need for a tool that diagnoses and designs stability and adaptability into processes at Transpower?
2. Can a tool be developed to diagnose and design stability and adaptability into processes at Transpower?
3. Can the VSM be made more accessible via an improved user participation format to the point that users don't need to understand the VSM to enjoy the benefits of the model?
4. If the tool proves to be effective in Transpower, can it be validated in other organisational settings?

1.4.4 Research Objectives

In order to address these questions, this research aimed to:

1. Identify complementary concepts from existing business and academic models including the Viable System Model and Work System Method.
2. Gather a comprehensive set of Transpower process assessment criteria by interviewing process subject matter experts from different levels and areas of the organisation.
3. Prototype a process assessment tool structure and populate with the specific Transpower process checks.
4. Test/validate the tool on Transpower and non-Transpower processes.
5. Develop the user participation format, adding further concepts from business and academic models including the Work System Method and Viable System Model.

1.5 Limitations of the Study

The key limitation of the study was the time and physical resource constraints placed on the researcher to plan and undertake the interviews and observe and reflect on the findings, including building, validating, and refining the assessment tool and user participation format. For this reason, self-imposed limitations were placed on the research, including the number of organisations in which the research would take place, and within each organisation, the number of people that would be interviewed at each research stage. It is expected that this study will lay groundwork for further research later.

1.6 Structure of the Thesis

The rest of the thesis is organised as follows.

Chapter Two, the Literature Review, begins with a summary of the evolution of quality management, from quality inspection through to total quality management. The chapter will then review of the existing literature in the areas of the processes, the Viable System Model, the Work System Method. It will summarise the most important aspects of the literature and summarise the major contributions to existing knowledge.

Chapter Three, Methodology, starts by explaining the ontological and epistemological perspectives considered for the research. It then describes and evaluates the research design methodology, explains the approach taken, including the mixed methods and action research strategy, presents the ethical considerations, and finally, discusses the data collection, including the approach taken with initial and follow up interviews.

Chapter Four, Development of the Theoretical Model, looks at the need for the assessment tool and user participation format, the context into which it would be used, and presents the conceptual model that helped to define the concept, which is the opportunity to combine the value of the Viable System Model with the value and ease of use of the Work System Method. The chapter finishes off with a detailed account of the work undertaken to develop and test the tool, the development of the overall user participation format, and the final touches to incorporate further aspects of the Viable System Model and Work System Method.

Chapter Five, Results, looks in detail at the results of the initial interviews which were conducted within Transpower to uncover the requirements for the assessment tool. The chapter then looks at the results and findings of the follow up interviews, including the assessment tool scores, the patterns around pass-fails, the checks that were deemed least important and most important by the interviewees and the 'Aha' moments that came out of the recording and analysis of the results. It then looks at the VSM Report Card and VPM user participation format developed as part of this project.

Chapter Six, Discussion, interprets the results to reach the major conclusions of the thesis. The chapter discusses what is new and significant from the work and interprets the results to reach the main conclusions of the thesis. It will then discuss the implications of the research and highlight the conclusions that the researcher thinks most important within the context of the Transpower environment and the tool and model's ability to be used in other organisational environments.

Chapter Seven, Conclusion, will summarise and conclude what the most important results in the research, and explains how these outcomes achieved the aim and objective of the study. The previously stated limitations of the study will then be revisited and recommendations for future research provided.

Chapter Two - Literature Review

2.1 Introduction

This chapter covers the key literature relating to the research problem. It starts with an evolution of the quality management from the advent of mass production to the present-day focus on high quality results and societal outcomes (2.2). The key literature regarding the narrower topics of workings with processes (2.3) the Viable System Model and Work System Method (2.4), the strengths, weaknesses and opportunities for these models (2.5). The chapter then identifies the research gap, which is the need for a tool or tools that will lower the barrier to adoption of the principles and practices to increase the viability of processes (2.6), summarises the major contributions in the models being evaluated (2.7), and ends with some final thoughts on the research gap and what work has been done to date in this area (2.8).

2.2 The Evolution of Quality Management

Prior to mass production, the quality of a product could be attributed to a specific person, and because of this, fraud or insufficient quality was accomplished through laws and craft honour (Womack, Jones, and Roos, 1991). With mass production, and the requisite division of labour that it required, this person specific attribution was no longer possible. According to Weckenmann, Akkasoglu, and Werner (2015), this led to the introduction of quality inspections to filter out non-conforming products. Due to the high-cost of these inspections, and the waste and rework the approach abided, the authors then posit that a paradigm shift took place, starting in 1940, moving from product quality to process quality. With process quality the focus was on looking for and eliminating the source of product non-conformance, in the manufacturing process itself. To do this, quality tools such as statistical process control and five whys root cause analysis were applied.

Weckenmann, Akkasoglu, and Werner (2015) contend that the 1960's saw a second shift, from process quality to quality assurance. With quality assurance, potential risks within the process were identified, and interventions put in place to avoid them in the first place. Quality assurance implies respect of standards, procedures and work instructions to achieve effectiveness for the customer (Ishikawa, 1985 in Chiarini, 2012). This started an emphasis on quality from the customers point of view. This customer focus is, according to Mohammad, Mann, Grigg & Wagner (2011) how organisations determine their customers' needs and expectations, build relationships with them, and uses customer information to innovate. The spotlight was largely focussed on the value-creating processes, neglecting the non-value creating processes and tasks inside the organisation.

The third shift, according to Weckenmann, Akkasoglu, and Werner (2015), was from quality assurance to system quality. This shift came about, say Weckenmann et al, due to the interdependencies with internal and external suppliers and teams, stronger involvement from customers, and a need for advanced planning activities. An example of the shift is the standards and certifications such as ISO 9001 (see Figure 2.1) which is driven by both internal motivations such as organisational improvement, and external motivations such as promotional and marketing issues and customer pressures (Sampaio, Saraiva, and Rodrigues, 2009).

Figure 2.1: Model of a process-based quality management system (Taken from Weckenmann, Akkasoglu, & Werner, 2015)

The final shift, in the 1990's, was from quality assurance to total quality management (Weckenmann, Akkasoglu, and Werner, 2015). Total quality management recognises the systemic relationship between leadership, employees, processes, customer satisfaction, and business results and the thinking behind it can be found in the likes of Business Excellence and European Foundation for Quality Management Models, a view shared by Mohammad, Mann, Grigg and Wagner (2011). Total quality management focuses on the organisations desire to delivery high quality results rather than simply to deal with market pressures. TQM is management philosophy that aims to change corporate culture to one of proactivity and openness (Dahlgaard and Dahlgaard-Park, 2006), and also includes a major focus on society-related results.

2.3 Working with Processes

The benefits of understanding processes include diagnosing root causes for known process problems; finding unknown weaknesses and bottlenecks; understanding the relationships between processes; creating standard processes for supply chain interactions; converging multiple parallel processes into enterprise wide standard processes; generating functional requirements for automation, including into Information Technology applications; and understanding the current state of processes for baselining and improvement (Verner, 2004). According to the author, to understand a process it is important to understand the detailed attributes, which could include: roles and responsibilities in the process; tools used in the process; data consumed and produced; touch time and total time in undertaking the activity; the work activities in the activity; the business rules governing the activity; and the source of information for process discovery. In addition to these standard attributes, the author states that custom attributes may also exist, including geographical, automation, and cost factors.

Process improvement, according to Madison (2005) can be seen through four lenses: frustration, time, cost, and quality. Diagnosing and reducing frustration is beneficial from the perspective of the participants of the process and the author suggests that a reduction in participant frustration leads to increases in quality. As well as this, going through the process of reducing frustration increases visibility of problems, and people begin to engage with the process and offer improvement ideas. The second lens, time, is a critical component of both customer satisfaction and the reduction of costs. Time comprises of inspections, processing, waiting, rework, moving, and setup. The third lens, cost, is important according to the author, because once you can calculate the cost of the process in its current state, the financial returns of redesign can be quantified, cost analysis then provides information on the mostly costly steps in the process, and having a handle on the costs enables activity-based costing to identify the true profitability of each process. The fourth lens, Quality, is generally seen by customers as the most important criteria (Madison, 2005). When activities are not done right first time, the cost to the organisation can be large. The ideal solution, according to Madison, is to build processes that produce quality without the need for product or service inspections.

Madison (2005) offers 38 principles for process design broken into five groups. Group one focuses on work structure and includes principles such as “Design the process around value-adding activities”; “Ensure a continuous flow of the main sequence”; “Reduce waiting, moving, and rework time”; and “Build quality in to reduce inspection and rework”. Group two focuses on information flow and includes principles such as “Bring downstream information upstream”; and “Share all relevant information”. Group three focuses on design guides and includes principles such as “Involve as few people as possible in performing a process”; “Redesign

the process first and then automate it"; "Eliminate bottlenecks", and "Standardise processes". Group four focuses on organising people and includes principles such as "Use co-located or networked teams for complex issues"; and "Form work cells for special cases or exceptions". Group five focuses on general guidance and has the single principle of "Employ mass customisation".

A challenge with processes is managing them after they have been implemented so that they remain stable and adaptable. This is especially important in changeable environments and when process compliance is not actively enforced. According to Antony, Bhuller, Kumar, Mendibil, and Montgomery (2012), improvement efforts will be in vain if measures are not adopted to sustain the improvements. The authors refer to the Six Sigma's 'Control Phase' activities, which include the establishment of measures to standardise, monitor and integrate the changes. The authors suggest a control plan as a way of maintaining the improvements. This is backed up by Antony (2008) who states that post implementation audits and or control plans should be put in place to monitor ongoing performance.

Many business improvement methodologies exist to facilitate work system improvement and control. Tickle, Adebanjo, Mann, and Ojadi (2015) provide examples such as Business Excellence, Plan-Do-Check-Act, Six Sigma, and Total Quality Management. Other methodologies include Lean, and Lean Six Sigma, the latter being a hybrid of Lean and Six Sigma. According to Kim (2010) and Chiarini (2012) Six Sigma was developed by Motorola in the mid 1980's to improve its production processes, and the company then moved the approach onto all of its processes, claiming savings of over $1.5 billion US dollars over five years and winning the company the Malcolm Baldrige award. Chiarini goes on to say that the approach was further popularised by General Electric, having been evangelised by its then CEO Jack Welch. According to the author, Six Sigma focuses on reducing process variation to within the tolerated zone, being 3.4 defects per million defect opportunities (Arnheiter and Maleyeff, 2005).

Lean finds its origins within the Toyota Production System (Chiarini and Vagnoni, 2015), and focuses on producing what is required, when it is required, with the minimum amount of materials, equipment, labour and space (Al-Haddad and Kotnour, 2018). As with Six Sigma at Motorola, Lean originated within manufacturing processes, and then moved out to other areas of the Toyota organisation (Chiarini, 2012). The name lean was used by a researcher named John Krafcik to describe the Toyota Production System, and the lean term was popularised in the book 'The Machine That Changed the World' (Samuel, Found, Williams, 2015). According to Abdulmaleka and Rajgopalb (2006) lean techniques include value stream

mapping, cellular manufacturing, total productive maintenance, single minute exchange of dies, and production smoothing.

For the avoidance of doubt, the aim of this project is not to develop a tool to compete with process improvement methodologies such as Lean and/or Six Sigma, which define, measure, analyse, implement and control processes, but rather to develop an assessment tool that complements such methodologies by highlighting process weaknesses to assist in the diagnosis and design of existing and new processes. It is entirely possible that over time the assessment tool and the associated user participation format will evolve to the point where it can prescribe the use of models such as Six Sigma to fix specific problems requiring defect and variation reduction and lean for cycle time reduction.

2.4 Systems Tools and Models

2.4.1 Viable System Model

As described by Pickering (2002), the Viable System Model was developed by Stafford Beer, founder of the management cybernetics field, and the author of ten books, which Beer himself described as “ten pints of beer”. Pickering explains that Beer felt the success or failure of a business was in large part based on their ability to deal with their environment, which he saw as an “exceedingly complex system”, and that the trick to managing the organisations environments was to first understand it, and second to have the structures in place to respond appropriately to it. This response, according to the authors, would typically take the form of changes to inputs in real time; reconfiguring internally to change the outputs; and monitoring the new responses received from the environment.

Hildbrand and Bodhanya (2015) state that in order to undertake a viable system diagnosis, a VSM of the system, in this case the work system, needs to be generated first, and then this model compared to the generic VSM. The basic structure of VSM is that of the Operation (O), the Environment (E), and the Metasystem (M), as shown in the VSM diagram in Figure 2.2.

Figure 2.2: The components the VSM – Hoverstadt & Bowling (2005) taken from Hildbrand and Bodhanya (2015)

The Operations (O) System 1

- System 1 (Operations) performs the basic work, or the primary activities of the system in focus (Alqirem 2009). Azadeh, Darivandi, and Fathi (2011) call System 1 the 'implementation' function and say that it is concerned with carrying out the tasks directly related to the organisations purpose. For this research, each Operation represents a process to be modified with the application of the envisioned tool, with the concept of Operations in organisations being replaced with the concept of processes in work systems.

The Management (M) Systems 2-5

- System 2 (Co-ordination) resolves conflicts between the multiple System 1 Operations (Alqirem, 2009). Azadeh et al expand on this by saying that System 2 consists of rules and regulations to ensure the individual operations in System 1 do not get in each other's way. Examples of System 2 activities, provided by Schwaninger and Scheef (2016) include information systems, schedules, and standards of behaviour.

- System 3 (Control) is the internal regulation, optimisation and synergy of the system in focus. This would be exhibited through the management of resources and management intervention (Alqirem 2009). According to Azadeh et al has overall responsibility for the running of the organisation, including System 1 and the organisations services management such as human resources. It also has a reporting role to System 5.

- 3* (Audit) according to Azadeh et al, acts on targets identified by System 3, to ensure the rules and regulations specified by System 2 are being adhered to by System 1. The information provided by these audits provides System 3 ongoing intelligence on the state of System 1. Other examples of System 3* activity, provided by Schwaninger and Scheef

(2016) and Walker (2017) include ad-hoc monitoring, management by walking around, social activities, and information communication.

- System 4 (Planning) is the connection to the outside world and ensures that the whole-system can survive in a changing environment. It looks for threats and opportunities and looks at future planning, projections, and forecasts (Alqirem 2009). According to Jackson (2003) in Azadeh et al, System 4 takes information from System 3 and the total environment to make decisions. According to the authors, typical organisational functions would include strategic and corporate planning, marketing, research and development, and public relations.

- System 5 (Identity) is the ultimate authority for the system and sets the system in focuses direction, policy, strategy, and goals. In other words, its identity, ethos, and purpose (Alqirem 2009). Schwaninger and Scheef (2016) say that the System 5 establishes an equilibrium between the systems current and future orientation and its internal and external orientation.

The Environment (E)

- The VSM's Environment is the outside world directly relevant to the System in Focus. It is important that there is a clear understanding, mostly through System 4, but also System 1, of the external environment and how the System in Focus interacts with it. It is this intelligence that enables the system to cope with change (Alqirem 2009). As Golnam, Regev, and Wegmann (2011) put it, a system that does not interact with its environment will collapse. Interaction with the systems environment is therefore required for viability.

Schwaninger and Scheef (2016) list the relationships that operate between the systems. These include Relationship Systems 1-3: vertical channel; Relationship Systems 1-2-3: attenuation of complexity; and Relationship Systems 3-4: System 3 and System 4 homeostat.

The VSM aspect of the research seeks to provide practitioners the ability to arrange the management functions (Systems 2-5) and the operations (System 1) according to the principles of the VSM, as well as to establish formal connections between the modified process and the outside world (Environment). For clarity, the outside world includes suppliers, customers, competitors, and regulators. The reason for arranging the Systems 2-5 and the formal connections with the outside world is that generally the management of processes is entirely separate to the process itself, undertaken by supervisors or managers. This may

result in a lower level of attention than that required to ensure the viability of the processes. Given the potential value and at the same time its lack of an accessible user format, it is proposed that a second, more user-friendly model, from Professor Emeritus Steven Alter, called the Work System Method, be introduced to the study, and this will be introduced in 2.4.2.

Umpleby (2007) posits that the VSM requires structures, procedures, and decisions in each part of the organisation to deal with the local variety, or in other words local complexity. In the VSM, a system must have requisite variety, or in other words must have the capacity to effectively respond to a wide range of situations (Rios, 2012). Whilst authors such as Burgess and Wake (2012) cite the general applicability of the VSM, they and others bemoan the lack of an accessible user participation format, which in the words of Whittaker (2003), cited in Burgess and Wake (2012), leaves the VSM 'scandalously undervalued'. For this reason, the VSM has not enjoyed the recognition it deserves.

2.4.2 Work System Method

The Work System Method was developed by Professor Emeritus Steven Alter to bridge a gap between business and information technology (IT), and explicitly set out to provide an organised method and vocabulary for thinking and communicating about work systems (Alter, 2006). Alter specifically believed that IT professionals were given too much power to decide how work systems operate by giving them too much say in the design of the computer systems. Truex, Lakew, Alter, and Sarkar (2012) describe the Work System Method as a methodology for analysing work systems in which humans and/or machines undertake processes and activities using information, technology and other resources to produce products and services for internal and external customers. According to Alter (2012) the methodology provides "a static view of a work systems form, function, and context in terms of nine elements that are part of even a basic understanding of a work system". An important outcome of the Work System Method approach then is that the outputs will help the IT professionals better understand the work system and the work systems IT requirements.

The WSM has a simple three-step analysis approach, providing an entry point into the method. The three steps are 1. Find a work system that has a problem, opportunity or issue of interest (SP); 2. Analyse that work system to identify possibilities for improvement (AP); and 3. Make and justify recommendations (RJ). Templates and guidance, including prompts and questions to be answered are provided for each step. An example of a template is the Work System Snapshot, which leads users through the process of identifying and describing each of the elements of the work system. The WSM provides 25 questions for the user to

answer throughout the application of each of the three main implementation steps (SP, AP, and RJ). Explicit guidance is provided to users as they navigate the WSM. Example questions are as follows:

SP1: Identify the work system that is being analysed.
SP3: Identify factors that lead to the problems and opportunities.
AP1: Who are the customers and what are their concerns related to the work system?
AP3: How good are the work practices inside the work system?

RJ1: What are the recommended changes to the work system?
RJ5: How well do the recommended changes address the original problems and opportunities?

The Work Systems Method also provides useful guidelines. For instance, Truex, Lakew, Alter, and Sarkar (2012) refer to guidance around choosing a work system to analyse by suggesting the user identifies the smallest work system that exhibits the problems, issues or opportunities that led to the analysis; and that the person performing the analysis describes and evaluates the work system in whatever rigor and depth is appropriate for the process.

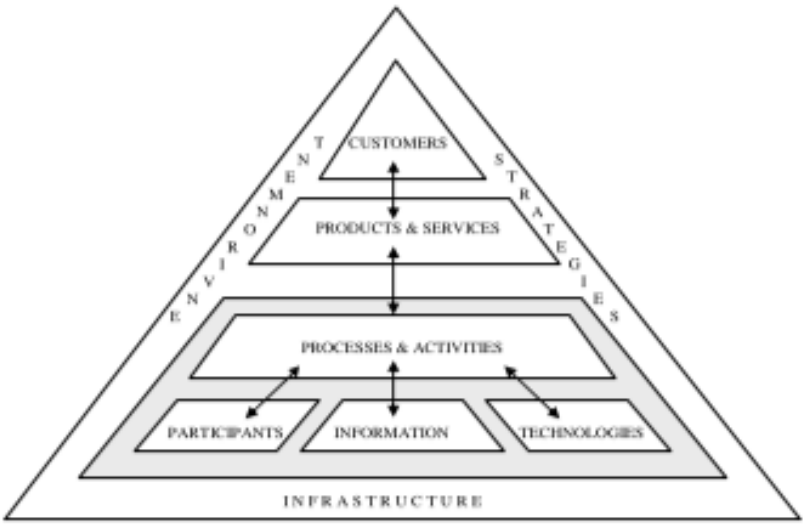

Figure 2.3: Work System Framework (Alter 2012)

The WSM is neatly summarised in the Work System Framework shown in Figure 2.3. The pyramid shows the nine elements of a work system, and the relationships between each element, which Peterson (2008) describe as the characteristics of any work system design. As Alter (2012) states, even agreeing the identity and scope of the nine elements can remove elementary confusions about the work system. An additional WSM concept, not shown on the

pyramid, called ‘Work System as a Whole’, and discussed by Alter (2012), has been included as an additional WSM element for this research.

2.5 Strengths and Weaknesses of the Existing Approaches and Systems Models

Table 2.1: Strengths and Weaknesses of each model/methodology discussed.

Model	Strengths	Weaknesses/Interesting
Viable System Model (VSM)	▪ VSM principles including the concepts around Systems 1-5 and Environment. ▪ The relationships that operate between the systems.	▪ Confusing User Participation Format. ▪ Hard to visualise ▪ Scary terminology. ▪ Only used by a handful of consultants and academics.
Work System Method (WSM)	▪ Accessible User Participation Format. ▪ Clear terminology. ▪ Easy to use pathways and templates	▪ Designed for a specific context (Work Systems and IT).
Tools such as Lean and Six Sigma	▪ Well structured. ▪ Designed for processes.	▪ Does not embed management functions into processes. ▪ Can be costly to implement and maintain. ▪ Designed as end to end process improvement methodologies rather than as assessment tools.
Opportunities for new tools and models	▪ Incorporate the VSM principles including the concepts around Systems 1-5 and Environment. ▪ Provide an accessible user participation format. ▪ Use clear terminology. ▪ Design specifically for processes. ▪ Arrange management principles around processes.	▪ Not attempting to create another process improvement. methodology like Six Sigma. ▪ Test in multiple organisations.

Model	Strengths	Weaknesses/Interesting
	▪ Enable cost effective implementation and maintenance. ▪ Provide accessibility of VSM beyond consultants and academics.	

2.6 Research Gap

No attempts to arrange the VSM functions (Systems 1-5) around processes have been found, nor have any attempts to increase the VSMs accessibility via a redesigned user participation format, or to combine the VSM and the WSM. Current process literature presents tools such as Lean and Six Sigma and/or its variants as having strengths in terms of its user participation model, including Six Sigma's DMAIC process improvement framework, but also high costs of entry in terms of training and accrediting participants on the methodology, and that it requires a relatively large investment by organisations wishing to adopt and maintain the approach.

Therefore, the research gap lies in firstly developing and testing a tool to diagnose processes for viability, including a VSM report card, and secondly in developing a user participation format to guide the user through the process from identifying and prioritizing processes for assessment, assessing a process or group of processes, and then developing recommendations and follow up checks. It is envisaged that a well-designed user participation format will minimise the barriers to adoption, requiring only a modest investment from organisations to use and maintain the approach.

2.7 Summary of the Most Important Aspects of the Literature

Schwaninger, Pe´rez, and Ambroz (2004) position Stafford Beers VSM as a theory and methodology to diagnose and design any social system. Schwaninger and Scheef (2016) state that the VSM is the only theory that claims to possess a generic and comprehensive approach to organisational viability and that this claim has not been refuted. Espejo and Kuropatwa (2011) looked at the barriers to the adoption of the VSM and determined that the language was "cryptic", and that the concepts were "hard to visualise" and "scary". Whittaker (2003), cited in Burgess and Wake, state that lack of an accessible user participation format leaves the VSM 'scandalously undervalued'. Table 2.2 summarises the major contributions of selected authors on the VSM, WSM and Lean and Six Sigma:

Table 2.2: Major contributions of selected authors

Author	Major Contribution
Schwaninger, Pe'rez, and Ambroz (2004)	Stafford Beers VSM provides a theory and methodology to diagnose and design any social system for viability.
Schwaninger and Scheef (2016)	Found that claims that the VSM is a generic and comprehensive approach to organisational viability have not been disproved.
Espejo and Kuropatwa (2011)	The barriers to VSM adoption include its cryptic language, and concepts that are scary and hard to visualize.
Burgess and Wake (2012)	A lack of an accessible user participation format leaves the VSM 'scandalously undervalued'.
Alter (2006)	WSM set out to provide an organized method and vocabulary for thinking and communicating about systems.
Pepper and Spedding (2010)	Lean and Six Sigma structures concepts and philosophical ideas into a usable process improvement methodology.

2.8 Literature Review Conclusion

Most of the text on the VSM focuses on the applications at a work system view or higher. One research paper, by Azadeh, Darivandi, and Fathi (2011) looked at the application of the VSM's Law of Requisite Variety to a purchasing process. Their findings concluded that the process benefited from the development and application of control perimeters and they recommended organisational changes to decentralise the process. Their research problem on the VSM was focussed on the specific issue of requisite variety; they were not operating at what would be considered the process/procedure level; and it in no way solved the problem of developing a user participation format for their work that would make the VSM more accessible to lay people.

Chapter Three - Methodology

3.1 Introduction

This chapter starts with an explanation of the prevailing research paradigm for the project, and the logic used to arrive at the ontological position of constructivism and the epistemology position of interpretivism (3.2). The chapter then discusses quantitative and qualitative research, as well as the mixed methods research approach which combines the two (3.3). It then details the Mixed Methods approach, and the Action Research strategy whereby the data collection can include the problem diagnosis and the solution development (3.4), the ethical considerations (3.5), the data collection approach (3.6), the questionnaire construction, pretesting, delivery, and follow up interviews (3.7) and finishes with a conclusion for the methodology chapter (3.8).

3.2 Research Paradigm

According to Rawnsley (1998) “ontology refers to claims regarding the nature and structure of being”, or in other words, beliefs about reality. There are two ontological positions – objectivism and constructivism. Objectivism is, according to Bryman (2016), the position that social phenomena confront us as facts that are beyond our influence. In an organisational context, Bryman says that the organisation has a reality external to the individuals within it, and that the organisation is a constraining force on those individuals. Bryman then suggests that constructivism takes the opposing view, that individuals within the organisation, act on, and influence its external reality, and that the ontological position of the researcher will therefore influence the way in which they conduct their social research. The ways in which the researcher could influence the research include how their questions are formulated, and how their research is performed. This research undertook qualitative research to understand how the individual processes within the organisations being studied may be affected by the recommendations coming out of the process assessment tool. Qualitative research is aligned with the constructivist ontological position.

Rawnsley (1998) states that epistemology is concerned with “the origin and structure of knowledge”, and that it is divided into positivism and interpretivism. According to Bryman (2016), positivism is the epistemological position that the methods of the natural sciences (physics, chemistry, geology, biology) can be applied to the study of social reality. The contrasting view, according to Bryman, is that of interpretivism. Gray (2013) says that interpretivism asserts that the laws of science and social reality are different, and for this reason, require a different approach to that taken by positivism. According to Gray,

interpretivism is closely aligned with constructivist ontological position. Therefore, the epistemology position taken by the researcher is interpretivism.

3.3 Research Design Strategy

Gray (2013) suggests that the researcher will need to decide whether they wish to measure and generalise a larger population, in which case they will undertake quantitative research; or pursue what is termed 'thick descriptions' of a smaller population via qualitative data. Bryman (2016) offers several distinctions between quantitative and qualitative research, summarised in the Table 3.1:

Table 3.1: Properties of quantitative and qualitative research

Quantitative Research	**Qualitative Research**
Numbers/quantity	Words/quality
The point of view of the researcher	Point of view of the participant
Tends towards a deductive orientation, testing theories	Tends towards an inductive, generation of theory
Positivist epistemological orientation	Interpretivist epistemological orientation
Objectivist ontological orientation	Constructionist ontological orientation

Gray (2013) and Bryman (2016) describe a third research option called mixed methods research. The term mixed methods refer to the use of quantitative and qualitative research in a single project. Bryman posits that the use of mixed methods has been increasing in popularity and acceptance since the 1980's. According to the author, mixed methods research has four common basic designs: 1. Convergent Parallel; 2. Exploratory Sequential; 3. Explanatory Sequential; and 4. Embedded. The basic designs differ in the sequence of the research. For instance, with the convergent parallel, the quantitative and qualitative data is collected at the same time and then compared or merged. In exploratory sequential design either the quantitative and qualitative data is collected and acts as preparation for the other.

3.4 Mixed Methods and Action Research

The mixed method research approach was selected as the most appropriate method for this research. The rationale for the mixed methods research approach was that a qualitative study would be used to derive inferences which will then be tested using quantitative research. It is likely that the qualitative aspect will explore the 'how' and 'what' of the issue and the quantitative aspect will seek to explain the relationships and validate the findings, or in this case, the efficacy of the process assessment tool. As per the mixed methods options provided in Figure 3.1, a variation of Sequential Exploratory Design was pursued, whereby the

qualitative research is undertaken first, potentially in multiple stages, and then followed up with quantitative research to further validate the findings. Bryman (2016) states that following qualitative research up with quantitative research provides the opportunity to test the scope and generalisability of the qualitative findings. This design approach is ideal for the examination of new phenomena where little is known about the area under study (Creswell and Plano Clark, 2007 in Larkin, Begley and Devan, 2014).

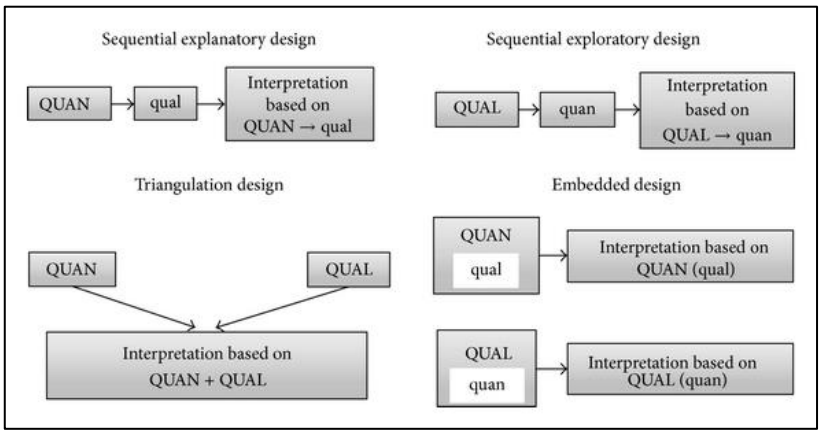

Figure 3.1. Mixed Methods Approaches (Creswell and Clark, 2007).

The selected approach also encompassed action research for the development of the assessment tool (stages one, two, three), and later the development of the VPM (stage four), where, according to Bryman (2016) the data collection can include the problem diagnosis and the solution development. Bryman also states that in action research, the investigator is part of the field of study and action research can involve the gathering of quantitative and qualitative data. The ability of action research to accommodate both quantitative and qualitative data suggests that the approach is consistent with mixed methods research. Action research occurs in an iterative process of planning, action, observation, and reflection (Zuber-Skerritt, 2001), as shown in Figure 3.2. Zuber-Skerritt suggest that the action research process includes looking for confirming or disconfirming evidence, by applying learnings in new situations.

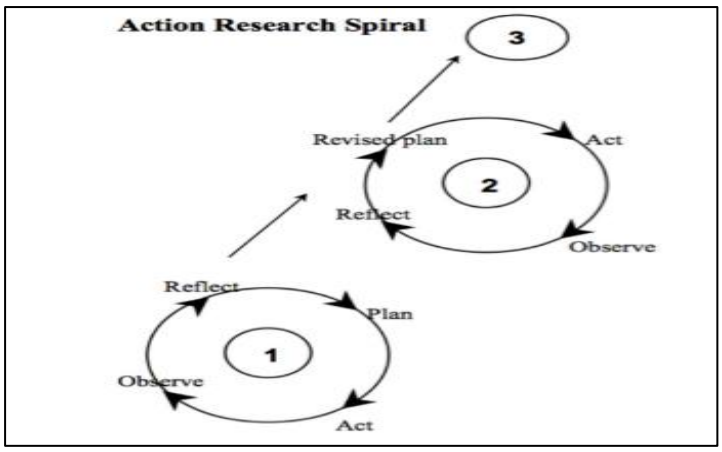

Figure 3.2 – The Action Research Spiral (Zuber-Skerritt, 2001)

As can be seen in Figure 3.2, action research is undertaken in an iterative fashion - planning, then acting, then observing the results, reflecting on these results, and then repeating the cycle with a refined plan. According to Brydon-Miller, Greenwood and Maguire (2003) action research goes beyond the idea that theory can inform practice by generating theory through practice. McNiff and Whitehead (2009) provide several steps in action research, which they say can lead to the generation of living theories of practice, as follows:

1. Clarify the research issue and how and why it will improve practice.
2. Gather information to show the situation as it was, using various data gathering techniques.
3. Act to improve the situation by learning and then applying the learning to the situation.
4. Monitor the action, and monitor the situation as it develops.
5. Generate evidence from the data.
6. Come to certain conclusions and subject these conclusions to the scrutiny of others for feedback.
7. Articulate the significance of the learnings.
8. Modify the ideas and practice considering these learnings.

This research is based on case studies within three target organisations: Transpower NZ Limited, Nelmac Limited, and Switch Lighting Limited. For each organisation, one or more process case studies were identified. Adhering to appropriate ethical processes and approvals, the research took place in a staged action research approach following the ‘Plan, Act, Observe, Reflect’ cycle proposed by Zuber-Skerritt (2001). Each action research step of Planning, Acting, Observing, Reflecting, from Zuber-Skerritt (2001), was used at least once in each of the four action research stages of this project. The four stages are:

1. Development of the conceptual model
2. Gather the qualitative data and develop the assessment tool
3. Validate the tool by applying it to processes
4. Extend the user participation format and build in additional features

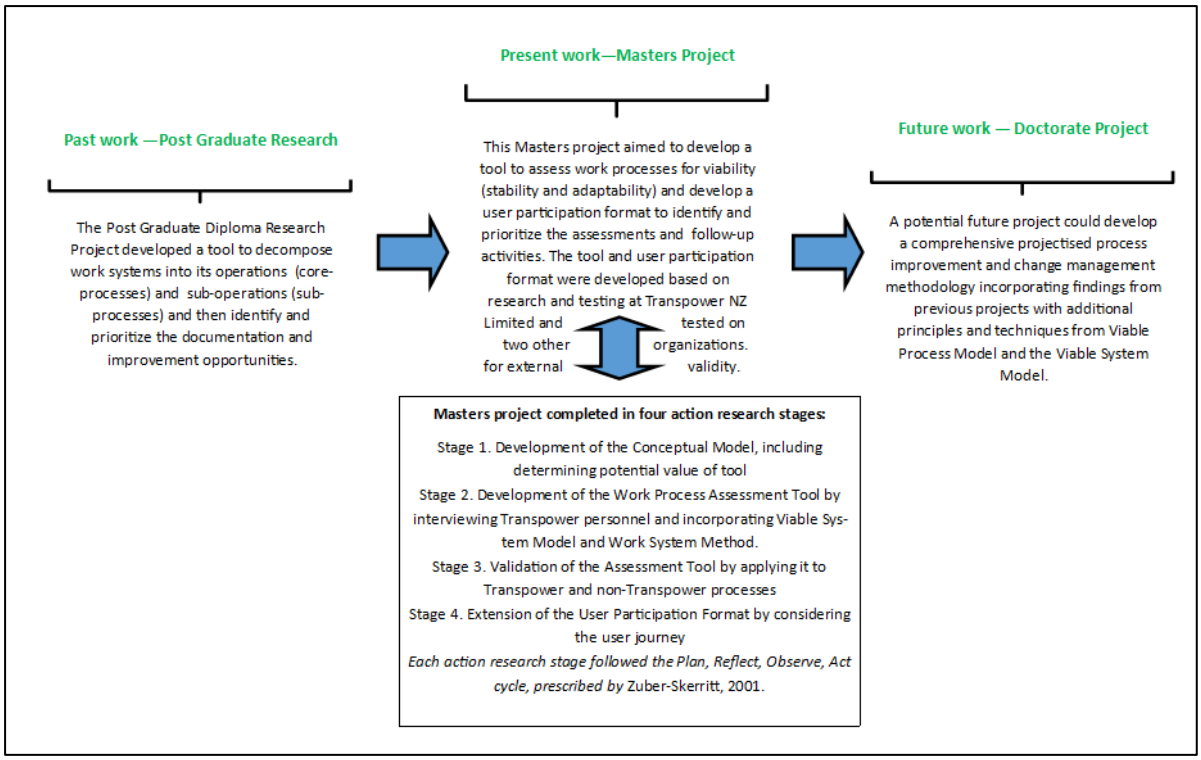

Figure 3.3 – The Project Research Journey

Figure 3.3 demonstrates the research journey, from the previously completed Post Graduate project; this project in its four stages; and the potential future work that could be done as part of doctorial research. The fours action research stages of the current project will be explored further as follows:

1. Action Research Stage One – Development of the Conceptual Model of the Tool

The stage one action research was entirely qualitative. The assessment tool being developed is a logical progression from the Post Graduate research project that developed an approach to breaking a work system down into its work systems into processes and procedures, and then identify the document sub-operational gaps and priorities, and then identify process improvement gaps and priorities. The outputs of the Post Graduate project did not provide any guidance to the user on what constituted a viable process and did not utilise the Viable System Models or Work System Method principles.

In developing the conceptual model for the master's project, two existing academic models were identified as having potential for incorporating into the assessment tool, being the Viable System Model and the Work System Method. With this in mind, the outline of the assessment tool was mocked up with dummy questions. The purpose of the mock up was to validate the potential for the tool with a small number of Transpower employees. The mock-up also enabled the ideation of key Viable System Model and the Work System Method elements into the tool. The Research Proposal was then completed.

2. Action Research Stage Two – Development of the Process Assessment Tool

The stage two research was also entirely qualitative, including activities such as a. developing the questionnaire; b. selecting interviewees; c. conducting interviews; and d. building the process assessment tool.

a. The purpose of the questionnaire was to provide a mechanism to confirm the credentials of each interviewee, to document their understanding of processes in general, to learn about their work area, to get them to identify, describe and rate a work process on a scale of 0 to 10, and to get each interviewee to suggest what is currently working well about the process and what needs to be improved. Rating scales are used to extract more information than would be obtained from a yes/no or right/wrong dichotomy (Lineacre, 2002). Finally, each interviewee was then asked about a process they had improved and how they went about it. The questionnaire was designed both for use on Transpower employees and external interviewees.

b. The Transpower interviewee selection criteria ensured a mix of senior managers, team leaders, and non-managers from across the organisation. Three of the eight Transpower interviewees come from an electrical engineering background - the company's core business competency - and the remaining five from financial, strategic and analytical disciplines, with an even distribution of managers and non-managers. Each interviewee was asked to identify a process that they could answer detailed process questions on (the case studies). It was acknowledged that different relationships could exist between the interviewee and their chosen process. For instance, the interviewee may be a process owner and/or a customer of and/or a supplier to and/or a participant or stakeholder of the process.

Table 3.2: Transpower Interviewees

Role	**Area of Transpower**	**Management status**	**Process**
Acting Financial Controller	Finance	Senior Manager	Annual Accounts Process
Auckland Strategy Manager	Organisational Strategy	Senior Manager	Project Investigations Process
Power Systems Manager	Real-time Operations	Senior Manager	Test Plan Process
Project Support Manager	Project Support	Mid-Level Manager	Purchase Order Process
Customer Solutions Analyst	Customer Solutions	Non-Manager	Customer Billing Process
Senior Business Analyst	Procurement and Supply	Non-Manager	Tender Issue Process
Investigations Project Manager	Grid Works Planning	Non-Manager	Engineering Consultant Procurement Process
Senior Lines Engineer	Tactical Engineering	Non-Manager	Business Case Approvals Process – Volumetric

Table 3.3: Non-Transpower Interviewees

Role	**Organisation**	**Management status**	**Process**
CEO	Nelmac New Zealand Limited	Senior Manager	Recruitment process
Managing Director	Switch Lighting Limited	Owner/Senior Manager	Sales order process

c. The interviewees were asked to choose a process in advance that would be discussed in the interview. As stated above, no direction was provided to the interviewee on what relationship their chosen process should have to them. Interviewees were given the opportunity to bring related process management documentation to the interview as they saw fit. Two non-Transpower interviewees were also interviewed, though their responses were not used in the development of the process assessment tool. Each process interview

took one hour, the formalities such as ethics and privacy were covered, and then the interview questions were asked. The interviewees were emailed their documented responses immediately after the interview and asked to check and validate the recorded responses and confirm by email that the responses were recorded accurately. Only the validated responses were used for the research.

d. The data collected in the interviews was analysed in detail and the results of the analysis used to produce the process assessment checks which replaced the dummy checks in the mocked-up assessment tool. The checks were grouped into the Work System Method groupings and analysed for potential relationships to the Viable System Model principles. Mapping the VSM relationships provided confidence that the VSM Report Card based on the assessment tool questions could be successfully developed. These findings will be further explored in stage four.

3. Action Research Stage Three – Validation of the Assessment Tool

Action Research Stage Three was the quantitative stage of the project. Follow-up interviews were run with the interviewees from Stage One, this time using the assessment tool, consisting of 74 checks in ten Work System Method groupings. The interviewees were told in advance that the tool would be used to assess the process that had been discussed in the initial interviews. Each interview involved bringing the interviewee up to date on the progress of the project, and the provision of a detailed description of the assessment tool. The assessment check start time was recorded. The process assessment was then run, by doing each process check, with the follow-up question ‘is this important for your process?’. The combination of each assessment check and follow-up question of whether that was important for their process determined whether each check earned a pass or a fail. The finish time of the assessment was then recorded.

Because the assessment tool was built in Microsoft Excel, the results of the assessments, including the ten results groupings and the overall rating were available immediately. The final rating for the process was compared with the self-evaluation provided by the interviewee in the initial interview. The total time taken to conduct the assessment was calculated and the interviewees asked a number of follow-up questions, including whether the time taken for the process assessment felt appropriate. On average the check took around 30 minutes which the interviewees all felt was a good use of their time.

According to Bryman (2016), case studies need to consider the external validity, or generalisability, of the research. Bryman poses the question “how can a single case possibly

be representative so that it might yield findings that can be applied more generally to other cases?". The answer, according to Bryman, is that they cannot, and that case study researchers do not claim, like quantitative researchers do, that they can generalise their findings to other cases or populations. To understand the potential for the generalisability of the research, multiple case studies in three organisations were chosen for the research. The research was undertaken at Transpower initially, and then at the two non-Transpower organisations. The findings from the quantitative data collection have been used to draw conclusions about the validity of the tool, as well as its potential applicability in other organisational settings.

This approach, called comparative design in Bryman, entails studying two or more contrasting cases using comparable methods, carried out at within the same timeframe. For this project, the comparisons were provided by running two external process assessment checks to compare the Transpower results. The comparative design approach, according to Eisenhardt 1989; Yin 2009 in Bryman (2016), improves theory building by better positioning the researcher to "establish circumstances in which a theory will or will not hold". A criticism of the comparative design approach, highlighted in Bryman, is the risk that the researcher will pay less attention to the context of the case study and more attention to the potential contrasts between the cases. This risk is acknowledged and will be managed. Furthermore, as stated previously in the proposal, the quantitative data collection in Stage Three of the research provided the mechanism to draw conclusions about the generalisability of qualitative findings to other cases, which will be discussed later.

4. Action Research Stage Four – Extension of the User Participation Format

Action Research Stage Four was also entirely qualitative - the fourth plan, act, observe, and reflect iteration of the research. Stage Four involved two parts:

Firstly, considering both the basic pass/fail assessment information that the user would require to understand the strengths and weakness of each process and what needed to be done to fix and retest them, and the VSM report card which would provide the user with additional information that could be used to rethink the management, operational and environmental functions within each process individually, and the groups of processes that make up each work system.

Secondly, Stage Four considered the user and how they would interact with the assessment tool, especially where multiple processes would require assessments. It would be unlikely that they would have just one process to assess. For this reason, the user participation format

was extended to include a methodology to list and structure the processes, determine the priority and sequence of the full assessment checks, undertake the assessments, review the results, and determine the sequence and priority of follow-up actions.

3.5 Ethical Considerations

According to Diener and Crandall (1979) in Bryman (2016), ethics principles in social research revolve around four areas, described as follows:

1. Whether there is harm to participants. According to the authors, harm can take the form of physical harm; harm to participants development; loss of self-esteem; stress; and inducing subjects to perform reprehensible acts.
2. Whether there is a lack of informed consent. The authors state that the bulk of the discussion around informed consent focuses on whether participants where provided with enough information to decide for themselves whether they want to participate in the study.
3. Whether there is an invasion of privacy. This centres around the collection and use of information that participants may consider to be personal. This would influence the questions that may be asked and how the results are published.
4. Whether deception involved. According to the authors, deception is where the researcher represents their work as something that it is not.

In examining the Massey Screening Questionnaire to Determine the Approval Procedure, which covers Risk of Harm; Informed and Voluntary Consent; Privacy/Confidentiality; Deception; Conflict of Interest; Compensation to Participants; and Procedural, the researcher answered ‘No’ to the forms questions and carefully managed the research to ensure that the highest ethical standards were achieved. The research proceeded as approval was provided by the project supervisor and confirmed by Massey (see Appendix 4). The interviewees were given an assurance that they could provide free and frank responses as their confidentiality was assured, plus they were provided with transcripts of the discussions and were able to remove any responses they were uncomfortable with.

3.6 Data Collection

The data collection for this project consists of qualitative data collection in action research stages one and two, quantitative data collection in action research Stage Three, and further qualitative research in action research Stage Four. The qualitative data collection will consist of the following steps, from Bryman (2016):

Table 3.4: Qualitative Research Approach for Development of Assessment Tool Checks

Bryman's Step (Qualitative)	**As Applied in this Research**
1. General research questions	The initial interview questions were developed, refined, and checked with project supervisor.
2. Selection of relevant sites and subjects	The interviewees were identified and invited to participate. At this early stage they were informed of their rights as per the ethics requirements.
3. Collection of relevant data	The initial interviews were run, and the responses documented. With the interviewees consent (nine of 10 agreed), a Dictaphone recorded the session. The documented responses were provided to the interviewee after the interview for validation and the validated version used for the research.
4. Interpretation of data	The responses were analysed by breaking them down into individual ideas and grouping the ideas under the work system method elements (customer, product and service, work practice etc.)
5. Conceptual and theoretical work	The grouped ideas were converted into the process assessment tool checks (74 checks in ten groups)
6. Tighter specification of the research question(s)	A full review of the research questions was undertaken, and the checks were linked to the Work System Method and Viable System Model.
7. Collection of further data	The research moved to the quantitative data collection before coming back to this stage to complete the VPM user participation format.
8. Writing up findings/conclusions	The findings were written up.

The quantitative data collection will consist of the following steps, from Bryman (2016):

Table 3.5: Quantitative Research for Validating the assessment checks - Steps from Bryman (2016):

Bryman's Step (Quantitative)	**As Applied in this Research**
1. Theory	At this point the theory is that the tool developed based on the initial action research could be used measure the viability, defined as stability and adaptability) of processes at

Bryman's Step (Quantitative)	**As Applied in this Research**
	Transpower New Zealand Limited. The results were input into Microsoft Excel, and the responses populated various tables for analysis.
2. Hypothesis	The hypothesis was that the tool could be used to determine the quality of the processes being tested, and that processes deemed to be of good quality as per the tool, would produce good outputs and outcomes.
3. Research design	The research design involved the development of the process assessment tool that had a series of checks grouped into ten work system elements based on the Work System Method.
4. Devise measures of concepts	The concepts are broken into ten groups and the quality of the processes would gain an overall rating and a rating for each grouping.
5. Select research site(s)	The same three research sites were identified for the follow up quantitative research. These are the primary research site of Transpower NZ Limited and the secondary research sites of Nelmac and Switch Lighting.
6. Select research subjects/respondents	It was decided that the interviewees from the qualitative research would be re-interviewed for the quantitative research, and the process discussed in the initial interviews would be diagnosed for viability. A major benefit of this approach is that each respondent had been asked to rate their process on a scale of 0-10, 0 being not good at all, and 10 being completely good.
7. Administer research instruments/collect data	1:1 interviews were conducted with each of the original interviewees, and the process discussed at each initial interview was tested.
8. Process data	The spreadsheet has been designed to take the responses for each process assessment and automatically update various tables for the subsequent analysis. An example of the analysis was to compare the overall assessment rating to the original self-rating provided by the interviewee.
9. Analyse data	There are number of conclusions that can be drawn from the data that will be discussed later.

Bryman's Step (Quantitative)	As Applied in this Research
10. Findings/conclusions	The high-level findings were that the interviewees felt that the tool had a great deal of value and for the most part the ratings accurately reflected the quality of the process. Some aberrations did appear which have been discussed later.
Write up findings/conclusions	The findings have been written up in the findings chapter.

3.7 Questionnaires

3.7.1 Questionnaire Construction

Bryman (2016) suggests that interview questions could include introducing questions, follow-up questions, probing questions, specifying questions, direct questions, indirect questions, structuring questions, silence, and interpreting questions. For future iterations of the tool, the use of a group interviews, including focus groups, will be considered, particularly, as Bryman suggests that group interviews and focus groups are useful if there is a need to explore specific themes in detail, there are time and/or financial issues, or if the future research would benefit in observing how individuals discuss the issues as a member of a group.

To enable the development of appropriate initial interview questions, an assessment tool proof of concept was developed, grouping 50 dummy checks into the Work System Method work system elements including Customers, Products and Services, and Work Practices. The prototype helped with the design of the interview questions by providing insights into the kind of data required to populate it with real checks. Prototyping enabled conversations to be carried out earlier in the project to confirm the value of the tool before too much time and effort had been committed; enabled discussions that led to the pass/fail approach; and enabled the identification and qualification of interview subjects for the research project. The questions used for the initial interviews were as follows:

Section One Questions – Existing Processes

- What, in your opinion, are the attributes of a process (as opposed to a work practice or activity)?
- What percentage of your work area is formalised into processes? Is that an appropriate percentage for your work area? Discuss.
- What is the name of one formalised process from your current role?
- Please describe this process in detail.

- On a scale of 0-10, 0 (not at all) to 10 (completely), how good is this process?
- What are the positive attributes of this process - why did you give it a score of >0?
- What additional attributes would take to get this process to a 10?

The following additional question about process improvement was developed and asked in the interviews but the responses were not included in the assessment tool checks:

Section Two Questions – Process Improvement

- Can you tell me about a process in your current role that you have tried to formalise, improve, or design from scratch? What steps did you take? If you have never tried to formalise, improve, or design a process from scratch, what steps do you think you might take?

3.7.2 Pre-testing of the Questionnaire

Two of the eight initial Transpower interviews were then booked with the intention that if the questions needed to be refined, it would only affect two interviews. As it turned out, only one question needed to be refined, changing from “What, in your opinion, are the attributes of a good process” to “What, in your opinion, are the attributes of a process” removing the potentially subjective word ‘good’. The questionnaires were therefore tweaked, and questions used for all interviews.

3.7.3 Questionnaire Delivery

Each interview was completed on a one to one basis, for the period of one hour. To stay within the allotted timeframe each question was assigned an estimated duration which was communicated to the interviewee at the start of the question. Silence from the interviewer was used to indicate to the interviewee that a more detailed was required. The responses were documented in the interviews on a Microsoft Word document which was emailed to the interviewee afterwards for validation. A Dictaphone was also used to record the conversations if consent was provided. All eight Transpower interviews included verbal confirmation of the ethics questions which were also emailed to the interviewees.

3.7.4 Questionnaire Results

The main purpose of the initial Transpower interviews was to gather Transpower specific process findings that could be interpreted and turned into process checks. The initial Transpower interview responses were documented, and once validated by the interviewees post interview, transferred into a single spreadsheet and the key ideas extracted from each

interviewee's response. For instance, one of the responses to a question "What, in your opinion, are the attributes of a process?" was "has to be clearly documented – there are lots of process in the business that aren't documented". Therefore, the key idea was "documented". Another response to the same question from a different interviewee was that "documentation need to be accessible and easy to find" so the key ideas were "documentation accessibility" and "documentation easy to find". These key ideas were collated, consolidated and used to develop the real assessment tool checks.

3.7.5 Follow-up Interviews

Whilst the initial interviews gathered the raw material that would be used to develop the Transpower specific process assessment checks, the purpose of the follow-up interviews was to test the assessment tool developed based on the initial interview responses, back onto the processes discussed in the initial interview. Again, each interview was completed on a one to one basis, for the period of one hour, using the same interviewees. The interviewee was reminded of their responses in the initial interviews, how the collective Transpower responses were used to develop the assessment checks, and how the information in those interviews will be used in the current interviews. The ethics and related privacy issues were reconfirmed. The interviewee was then reminded of the process they brought to the initial interview.

The results of each process assessment were input into an Excel spreadsheet. The start and finish time of the assessment was also recorded so that the interviewee could comment at the end of the interview on the appropriateness of the time taken to run the check. The interviewee was then given the results for their process, and the findings discussed, including the assessed strengths and weaknesses of their process, based on the ratings for each group of checks and the overall rating. The interviewees were asked at this point if there were any known issues with their process that had not been picked up by the assessment. In no cases did anyone identify known issues with their process that were not picked up by the assessment.

The completed 74-point assessment was then emailed to the interviewee to validate their responses and to complete two post-interview tasks. For the first post-interview task each interviewee was asked to 'vote' for their top 15 checks out of the 74, and the second task they were asked to do was to look at their response to the 'is this important for your process' for each of the 74 checks, except this time to answer it for processes in general. The first envisaged use for the top 15 checks were to create a set of abbreviated assessment tool to assist and prioritising and sequencing of the full assessments. Other potential uses for the top 15 checks included potentially giving some assessment checks higher weighting than

others; potentially making those 15 checks non-self-passable meaning the user would not be able to say that that check is not important for their process; and potentially requiring evidence to support the responses for those 15 of the 74 checks. The final top 15 was arrived at by analysing all of the individual responses and choosing those with the most ‘votes’.

3.8 Conclusion

The methodology used to undertake this project involved Mixed Methods, developing the conceptual model using qualitative research, prototyping, interviewing subjects and building the process assessment tool and then testing the conceptual model using quantitative research by applying the tool to the same processes and comparing the self-rating with the assessment rating was the favoured approach for this project. The use of the action research approach enhanced the outcomes by repeated cycles of act, observe, reflect and revise cycle to maximise the incorporation of external feedback into the next stage of the project. This iterative approach was achieved by gathering ideas from Transpower employees and incorporating these ideas with existing models such as the Viable System Model and the Work System Method to build the tool and user participation format. The Transpower interviewees were carefully selected to gain a representative cross-section of employees from different levels and areas of the organisation and the results externally validated to test the use of the tool in non-Transpower environments.

Chapter Four - Development of The Theoretical Model

4.1 Introduction

This chapter starts with an introduction to Transpower New Zealand Limited, New Zealand's National Grid (4.2). The chapter then introduces the projects conceptual model, being the development of a tool that provides process viability, that is stability and adaptability, advice with an accessible user participation format (4.3). The chapter then details the concept of the user participation format, and particularly how this is a major weakness of the Viable System Model (4.4). It then goes on to introduce the concept of the motor vehicle Warrant of Fitness (WOF), and the use of the WOF analogy for the process assessment tool (4.5). The chapter then discusses the approach taken to develop the assessment checks (4.6), explains how the WOF tool checks were applied to a selection of Transpower processes (4.7), how the tool was externally validated (4.8), the Viable System Model contributions, including the resulting VSM Report Card, (4.9) the development of the user participation format, called the Viable Process Model (VPM) (4.10), the Work System Method contributions, particularly relating to the VPM user participation format (4.11), and the chapter conclusion (4.12).

4.2 Transpower Context

Transpower New Zealand Limited's 2016/17 annual report states "We keep New Zealand connected: our people plan, build and operate the high voltage electricity transmission system that powers our country and our lives". It goes on to say "Our two roles as grid owner and real-time system operator are interdependent – both are essential for the power system to operate successfully. While we are most widely known for transmitting electricity, our role is much broader than this. We have a responsibility to help New Zealand meet its changing energy needs in a safe, affordable and reliable way, while supporting an evolving consumer landscape".

Transpower is a complex business with hundreds, if not thousands of processes that are run daily, weekly, monthly, or annually that keep the organisation running and the 'lights on' in New Zealand. The small sample of process that have been used in this project are:

- Year-end statutory accounts process
- Engineering consultant procurement process
- Customer billing process
- Purchase order process
- Test plan process
- Business case approvals process

- Central tendering process
- Project investigations process

Many of these processes involve a myriad of people to run, people from both Transpower and external participants including customers and suppliers. In many Transpower processes, including in the examples above, Transpower staff are not only accountable to their own managers, they are also accountable to regulators such as the Commerce Commission and the Electricity Authority, and they are also kept in check by electricity user/consumer groups such as the Major Electricity Users Group and the Electricity Retailers Association; by the Crown, its sole shareholder and by extension the board of directors; and by its customers, many of whom are large influential corporates in their own right, such as Meridian Ltd, Vector Ltd, and Powerco Ltd. To make the process situation more complicated, Transpower's processes are highly interdependent, so a weakness in one process could have significant consequences on other downstream processes. The flipside is that fixing some of these upstream processes can also provide significant benefits, including lower costs, improved network reliability, and contented stakeholders.

4.3 Conceptual Model

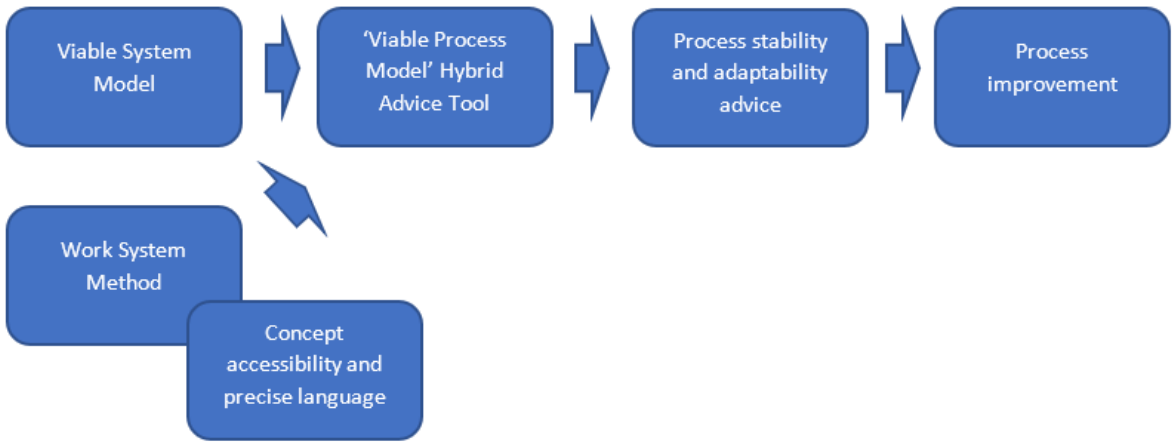

Figure 4.1 – Research Project Conceptual Model

The literature review identified that whilst the application of the VSM to an organisation can lead to increased stability and adaptability, its inaccessible user participation format and imprecise and confusing terminology has hindered its adoption. The literature review also identified that the WSM has an accessible user participation format and clear and precise work system terminology. Therefore, to begin addressing the VSMs concept accessibility problem, a VSM flavoured process assessment tool and user participation format has been

envisioned, combining its principles with the WSM user participation format, for the purpose of diagnosing and designing processes for stability and adaptability. The conceptual model (Figure 4.1) illustrates the VSM/WSM combination, leading to the assessment tool which will provide structure and advice on how to achieve stability and adaptability, which it is proposed will lead to process performance improvement. The assessment tool content has been created by engaging with eight Transpower employees from various levels of management and non-management and different functional areas, making the initial version as specifically developed for Transpower. The assessment tool has then been validated in two organisations with no links to Transpower to test the potential for external applicability.

4.4 User Participation Formats

As stated previously, a major weakness of the VSM is that it does not have an accessible user participation format, which in the words of Whittaker (2003), in Burgess and Wake, leaves it 'scandalously undervalued'. Furthermore, due to its generalist nature, its language is not precise enough for the immediate application to work systems and processes. Therefore, the user participation format and language precision have been identified as the two key areas that will allow the process assessment tool to extend its usefulness beyond consultants and academics. The WSM provides an excellent example of a simple but effective user participation format, with the key principles being transferable to the process assessment tool and the encompassing user participation format. Whilst is was not possible to demonstrate the application of every one of these components into the project, a number of WSM components have been identified as most useful to the assessment tool and user participation format, as provided in Table 4.1:

Table 4.1 – User Participation Format components from the Work System Method

Page # Alter (2012)	**User Participation Format concept**	**Learning principles for the process assessment tool and user participation format**
23	Three levels: Define System & Problems (SP); Analysis & Possibilities (AP); and Recommendations & Justifications (RJ)	Provide users with an obvious and simple front door to the model. Build everything around a few foundation concepts or steps that can be returned to easily.
24-26	SP, AP and RJ analysis questions	Provide clear questions to lead the user through the journey and link them back to the foundation concepts or steps.

Page # Alter (2012)	**User Participation Format concept**	**Learning principles for the process assessment tool and user participation format**
22	Use of checklists, templates and diagrams	Provide checklists, templates, and diagrams to lead the user through the journey and link them back to the foundation concepts or steps.
15	Well explained concepts that are directly related to work systems	Unless there is a good reason to do otherwise, only provide detail to user's when they can act on it. Or in simple turns, no fluff.
37-47	Provide clear definitions of the central elements of the model, in this case Customers, Products and Services, Work practices, Participants, Information, Technology, Infrastructure, Environment, Strategies	Don't leave it to the user's imagination as to what the key elements mean and what they do not mean.
58	Detailed guidance for problems (possibilities for change) relating to each element	Don't just help the user identify problems (possibilities for change), also give them the tools they need to deal with those problems.
60	Performance indicators for each element	Provide examples of what good and not good looks like.
61-63	Work system strategies	Provide strategies of improvement. i.e. the WSM suggests strategies like +/- automation, +/- outsourcing, +/- division of labour etc.
64	Work system risk factors and stumbling blocks	Provide a list of risk factors and potential stumbling blocks and ideas on how to manage and mitigate them.
66-71	Work system principles	Where possible, provide principles (fundamental truths that serves as a foundation) to assist in a chain of reasoning.

Page # Alter (2012)	User Participation Format concept	Learning principles for the process assessment tool and user participation format
72-79	Improvement tables for AP1-10 questions	Develop tables that can be linked back to specific guidance.
83-87	Tips on how to justify recommendations	Provide tips on how to justify specific recommendations.
89-102	Work System Life Cycle	Develop an implementation lifecycle so that lessons and learnings from earlier attempts can be incorporated into later attempts.
103-114	Examples illustrating the WSM	Provide users with examples or case studies to help them understand how they can get the most out of the effort.
213	Well defined and carefully used terminology	Ensure that the terminology is clear, ideally in clear-cut language and any jargon is clearly defined and used carefully.

4.5 Process Assessment Tool - Warrant of Fitness Analogy

According to the New Zealand Transport Agency website https://www.nzta.govt.nz/vehicles/warrants-and-certificates/warrant-of-fitness/, a Warrant of Fitness (WOF) is an official New Zealand document certifying that a light motor vehicle has passed an inspection of safety and roadworthiness. The contents of the check-sheet used to undertake the motor vehicle WOF are relatively static, covering items such as tyre and brake condition, lights, seat-belts, steering and suspension. The motor vehicle warrant of fitness is issued by local providers who are authorised to perform the test, which gives the vehicle owner and drivers a level of comfort that the vehicle they are driving meets agreed safety and roadworthiness standards, and if something goes wrong with that vehicle, one of the first things the police and insurance would check is whether the vehicle had a current WOF.

In choosing the name for this projects process assessment tool, the term Warrant of Fitness was a good fit given the widely understood nature and purpose of the motor-vehicle Warrant of Fitness and the value of the analogy to quickly convey the purpose of the tool in evaluating processes. Prior to using this analogy, a lengthy explanation was required to communicate the project and the tool that was being developed. Once the analogy was adopted, the audience simply needed to be told that the tool is a Process Warrant of Fitness, and little to

no further explanation was required, as practically all New Zealanders are familiar with the motor vehicle WOF concept. It is intended that, like the motor vehicle WOF, the WOF will be repeated on the process periodically.

4.6 Development of the Process Checks

The prototype of the Process WOF Tool with mock process checks had been developed in Stage One of the action research, and the real process checks developed and populated into the prototype in Stage Two. The development approach for the process checks has been detailed in the methodology chapter, suffice to say that the process checks would be developed from interviews with Transpower employees from different levels and areas of the organisation, and infused with VSM principles. The checks would be then grouped into one of the following WSM categories: Process as a Whole; Customer; Products & Services; Work Practices; Participants; Information; Technologies; Infrastructure; Environment; Strategies.

Because not every check will be relevant to every process, each yes/no response had a follow-up question, “Is this important for your process?”, making the following response combinations possible:

- Yes/Yes – This would result in a pass for that check
- Yes/No – This would result in a pass for that check
- No/Yes – This would result in a fail for that check
- No/No – This would result in a pass for that check

4.7 Applying the Process WOF at Transpower

Given that the tool was developed for Transpower, it was important that the initial application be limited to Transpower employees and processes. Eight interviews were run, using the same interviewees as the initial Transpower interviews. Each interview took one hour. Each interviewee was brought up to date on the project progress and was provided with an overview of the WOF tool and how the rest of the interview would be run. Using the interviewees chosen process introduced in their initial interview, the interviewee was read each of the 74 checks, and for each asked to respond with a yes or a no. After each of the 74 checks they were asked whether that check was important for that process. It is this combination of yes’s and no’s, as discussed in 4.6, that determined whether each check was a pass or a fail. If they made any comments of merit these were also recorded. The time taken to get through the 74 checks was noted and the interviewee was asked at the end of the WOF check whether they felt that was an appropriate amount of time. All did.

The tool also included two additional columns for data collection. The first of the additional columns asked whether, regardless of their response for their process, they felt the check was important for most/all processes. The second additional column asked the interviewee to identify their top 15 of the 74 checks for most/all processes. Due to the limited amount of time in each interview, the populated WOF check was provided to each interviewee for their review and to complete the last two columns. The results of each interview were centralised into one spreadsheet to simplify the analysis.

The data collected enabled the following analysis:

- The results for each check
- The important/not important checks for the processes in question
- The important/not important checks for most/all processes
- The top 15 process checks
- The pass/fails for each check and process
- The pass/fails % for each check and process
- A summary of “Pass” “Fail” and “Self-Pass” for each process check

These relevant results will be discussed in the Results chapter, and the data tables available in Appendix 3. Using the most ‘voted for’ top 15 checks, an abbreviated Process WOF has also been developed, and this abbreviated version will be used for various purposes which will be discussed later.

4.8 Testing the Process WOF External Applicability

As the tool has been designed specifically for Transpower, the purpose of conducting external interviews was to test the tool outside of Transpower and draw conclusions about its general applicability as per Bryman (2016). The interview format was identical to that used for the Transpower processes. Even though the tool was designed for Transpower using input from Transpower employees and on Transpower processes, it was important to start drawing some conclusions about the general applicability of the tool to other work environments. The ideal would be that the tool could be used in all organisational environments. Failing this, the next best outcome would be that the tool could be easily customised to specific organisations, organisational environments, and even individual processes. de Mast and Lokkerbol (2012) provide examples where the Six Sigma approach has been customised, either by adding additional techniques, or by de-emphasizing standard techniques to make the approach more powerful for environments such as supply chain management and healthcare. A similar approach to customisation could be developed in future versions of the WOF and VPM.

4.9 Viable System Model Contributions

One of the core strengths of the VSM is its ability to enhance the design and diagnosis of social systems to improve their ability to effectively respond to complexity, therefore achieving stability and adaptability. And as also discussed previously, the VSMs weakness is its user participation format. Therefore, an additional feature that has been identified in the action research has been the identification of the relationships between the WOF checks and the VSM principles. In many cases the WOF checks were readily mappable to the VSM principles and in others small refinements to the wordings or intent was required. The mapping enabled the development of a VSM 'Report Card' which provides a VSM rating of between 0-100% in each of the areas of Environment, Operations, Coordination, Control, Audit, Planning, Identity, and Intra-Viable System Relationships. The following section provides an explanation of each VSM rating area; the questions relating to that VSM rating area; and brief guidance on what could be done in that VSM rating area if the score is lower than required. The guidance is purposely brief for this project, and more detailed VSM guidance will be noted as a potential outcome for a future iteration of the WOF and VPM.

4.10 Development of the Viable Process Model Guidance

Whilst the Process WOF was developed to work as a standalone tool, a priority for this project was to build user participation format, using learnings from the WSM, that helps make the VSM principles available to non-consultants and non-academics. Based on the observations and learnings from stages one to three of the action research, it became apparent that users of the WOF would benefit from a roadmap to guide the end to end WOF assessment process, especially if they have multiple processes to assess with potentially multiple potential challenges in their processes. Therefore, whilst the WOF has been VSM enabled through the content and structure of the process checks, the VSM analysis best sits as a feature in the VPM, and this feature will take the shape of a self-named VSM Report Card, to be introduced in 4.11.

In discussing the overall VPM approach with interviewees, who are representative of potential Transpower users, ideas were generated on what the roadmap aspect of the user participation format could look like. From these discussions, work was undertaken to develop the roadmap with an easy to remember acronym to assist these users, in the same vain as Lean Six Sigma's DMAIC.

4.11 Work System Method Contributions

As detailed previously, one of the strengths of the WSM is that its accessible user participation format. The critical WSM elements that have been incorporated into the WOF and/or VPM are:

1. **The Work System Method Groupings.** One of the foundations of the VPM is the adoption of the WSM groupings for the Process WOF. The groupings, from Alter (2012) are Process as a Whole, Customers, Products and Services, Work Practices, Participants, Information, Technologies, Environment, Infrastructure, and Strategies. The groupings played an integral role in assisting the design of the WOF, in enabling the categorisation of checks into meaningful groups, and in expanding the understanding of the role each of the groupings plays in work system and process analysis and design.

2. **The concept of the three levels of analysis.** Alter (2012) has organised the WSM into level one steps (AP, SP, RJ), level two questions (SP1-SP5, AP1-AP10, RJ1-RJ10), and the level three checklists and templates. Alters intention behind the three levels is that the level one is relatively superficial, level two allows the user to go beyond the superficial, and level three allows the user the level of detail to consider each question in depth. Applying this thinking to the VPM, level one would be the 15-point abbreviated WOF check which would enable the user to get a relatively superficial assessment of the process; level two would the full 74 point WOF check to enable the user to go beyond the superficial and into the detail; and level three would be checklists and templates which would provide detailed guidance on the types of evidence that would be expected for each of the checks. It should be noted that the level three checklists and templates have not been developed for this project but have been noted as a potential outcome for a future iteration of the WOF and VPM.

3. **Clear terminology.** Alter (2012) explains that one person's jargon may be another's standard vocabulary. Given that an important goal of the Process WOF and the VPM is its accessibility to non-academics and non-consultants, a clear and unambiguous vocabulary is important. For this reason, it is crucial that the terminology is clearly defined and used carefully. In the interim, the terminology will be based on the VSM and WSM, with additional vocabulary being borrowed from Lean Six Sigma, Total Quality Management etc. Over time, the WOF and VPM may develop its own unique terminology, but only if this increases the accessibility of the tool to non-academics and non-consultants.

4.12 Conclusion

Transpower is a complex business, with hundreds if not thousands of processes, many run daily. This project took a small sample of the processes via a range of managers and non-managers associated with that sample of processes and developed a tool to assess each processes stability and adaptability. The project aimed to combine these Transpower employees process insights with principles from the VSM and the WSM to develop a tool and user participation format to assist users in improving the stability and adaptability of their processes and improve the accessibility of the VSM beyond a handful of consultants and academics. To do this, the first step was to build a process assessment tool, which was named the Process Warrant of Fitness, leveraging New Zealand's motor vehicle warrant of fitness analogy. The resulting process WOF has 74 checks in 10 groupings, and about half of the checks have a direct linkage to the VSM principles. Once the WOF check was developed and tested, the WOF Report and the VSM Report Card was developed, and finally, an end to end user participation format was developed to assist users in the application of the WOF checks for multiple processes.

Chapter Five – Results

5.1 Introduction

This chapter starts by revisiting the research questions around the need for a tool to diagnose and design stability and adaptability into processes within Transpower, whether the tool can be developed, whether the VSM principles can be made more accessible, and whether the tool will work outside of Transpower (5.2). It then summarises the activity within the four action research stages that sought to answer those research questions (5.3) The chapter then presents the 74 WOF checks (5.4), the application of the WOF checks at Transpower with results and the external validation (5.5), the development and outputs of the VSM Report Card (5.6), and the development and outputs from the VPM (5.7). The chapter then concludes (5.8).

5.2 Research Questions Revisited

As stated in Chapter One, this research sought to answer the following questions:

1. Is there a need for a tool that diagnoses and designs stability and adaptability into processes at Transpower?
2. Can a tool be developed to diagnose and design stability and adaptability into processes at Transpower?
3. Can the VSM be made more accessible via an improved user participation format to the point that users don't need to understand the VSM to enjoy the benefits of the model?
4. If the tool works at Transpower, can it be made to work in other organisational settings?

As the project was undertaken using action research, the research questions results have been answered via the action research stages they were addressed in via 5.3.1 to 5.3.4 below.

5.3 Summary of the Four Action Research Stages and the Results

The research project was undertaken in four action research cycles.

5.3.1 Action Research Stage One

The first action research cycle involved working on an idea identified in the authors Post Graduate Research Project which had developed a tool to decompose work systems into operations and sub-operations to enable documentation and process improvement. Following this work an opportunity emerged itself to develop a tool to assess processes, potentially using principles from the VSM and elsewhere. The first action research stage resulted in the review of secondary data on the VSM, work systems and processes, and the current methods available to improve work systems and processes. From this research a conceptual model

emerged of a check-list that could be applied to processes within work systems, which would incorporate principles from the VSM and the WSM. A prototype process check-list was developed, with dummy checks. In developing the prototype checklist, and talking to potential users of the checklist, the question regarding whether there was a need for a tool to diagnose and design stability and adaptability into processes at Transpower was answered with a definite yes.

5.3.2 Action Research Stage Two

The second action research stage involved the development of a questionnaire and the interview of eight Transpower NZ Limited employees, undertaken in the context of processes within the organisation. Because the questionnaire targeted employees of Transpower only, at this stage it is assumed that any outputs used to develop the process assessment tool would be Transpower centric. Some of the more interesting insights about processes from these interviews are provided below:

- While most interviewees thought that a process should be documented, one interviewee didn't think this was the case.
- One interviewee's chosen process runs once a year, taking about six months from start to finish. Because of the scale of the single cycle of the process, and the consequences of mistakes, it had many more controls than most of the other processes which potentially ran multiple cycles per day.
- This large process, when explained in the interview, had 42 quite significant steps, with some substantial sub-processes.
- Some processes relied heavily on IT systems and others had no IT reliance.
- Some processes had dynamic requirements based on certain factors. For example, the process to follow for one procurement activity can be quite different to the process to follow for the same item of a different value.
- All interviewees had a good basic understanding of how to undertake process improvement.
- One interviewee made an insightful comment that the best process improvements are ones that result in less process.
- For some processes it was difficult to determine who the customer of the process was.
- One interviewee made the comment that if an entire process operated within the team it was less likely to be documented.
- Some processes triggers were very predictable, for instance a certain event triggers a certain process. For other processes the triggers were less obvious.

- There seems to be processes that worked just well enough that people are hesitant to tinker with them because of the risk of breaking it completely.
- One respondent commented that if you don't know who the customer is, you would have to wonder whether the process is required at all.

This action research stage answered the first aspect of question two, about whether a tool could be developed. The interview responses were analysed, and 428 key ideas extracted, which were turned into themes, then open questions, and then finally into the 74 process assessment checks. There was also discussion with the interviewees that led to additional tool features. For instance, it became obvious that each process was unique and not all of the 74 WOF checks would be applicable to all processes. A solution was found whereby each check would be followed up by a second question, 'is this important for this process?'. The second aspect of research question two, whether the assessment check could diagnose and design stability and adaptability into processes at Transpower will be addressed in Action Research Stage Three.

5.3.3 Action Research Stage Three

The third action research stage entailed the testing of the WOF check on the same eight Transpower interviewees processes discussed in Action Research Stage Two, and then testing the external validity on two external processes. It was important to undertake the follow-up research with the same Transpower interviewees, as they had given a self-rating of the process in the initial interview which made the later quantitative comparison possible. It is this stage of the action research that yielded the quantifiable results that illustrated the value of the project. For this reason, section 5.4 has been dedicated to the results of Action Research Stage Three. Action Research Stage Three answered the second aspect of research question two, about whether a tool could be built to diagnose and design stability and adaptability into processes at Transpower. The tool was built and tested, with good results, and the interviewee feedback on the WOF check tool was resoundingly positive. The external interview participants showed similarly positive results to those achieved at Transpower, addressing research question four about external validity.

5.3.4 Action Research Stage Four

The fourth stage of the action research entailed the development of the VPM to provide a roadmap from the identification, prioritisation, and sequencing of processes to be assessed using the WOF tool; through the application of the WOF tool to the sequence of processes; the development of recommendations and follow ups to track the progress of the recommendations; and finally, the scheduling of future WOF's. It was at this stage the

contributions of the VSM and WSM were checked and the final refinements made. Action Research Stage Four addressed question three, determining whether the VSM, which has been traditionally seen as scary and confusing, could be made more accessible via an improved user participation format to the point that users don't need to understand the VSM to enjoy the benefits of the model. Given that the WOF checks certainly represent the key principles of a VSM, and the VSM Report Card can provide a VSM measure of processes, the answer to question three is that the VSM report card concept has more than delivered on the project requirements, and that even without understanding the workings behind the VSM Report Card, users can apply the principles of the VSM.

5.4 Results from Development of the WOF Checks

The 74 WOF checks, grouped by WSM groupings, and showing the literature support for that check, and the Transpower respondee or respondees that input into that check are shown in Table 5.1:

Table 5.1 Process Warrant of Fitness Checks

WOF Ref	**Process as a whole**	**Literature Support where available**	**Transpower Respondee (R#) Support**
1.01	Does the process have an appropriate and understandable name?	Leopold, Eid-Sabbagh, Mindling, Azevedo, and Baiao (2013)	R7, R8
1.02	Is the purpose of the process widely accepted and understood?	Sharp and McDermott (2001)	R4, R8
1.03	Has the process coverage (what the process applies to/does not apply to) been defined?	Sharp and McDermott (2001)	R1, R4, R7, R8
1.04	Have the relationships and interdependencies with other processes been defined?	Kohlbacher and Reijers (2012)	R1, R2, R3, R5, R8
1.05	Does the process have a single accountable owner?	Kohlbacher and Reijers (2012)	R1, R4
1.06	Has the method to change the process, including change signoffs, been defined?	Hammer (2015)	R1, R2, R4, R5, R7, R8

WOF Ref	Process as a whole	Literature Support where available	Transpower Respondee (R#) Support
1.07	Has the accountability and responsibility for coordinating the end to end process operation been defined?	Hammer (2015)	R1, R2, R3, R4, R5, R7
	Customer		
2.01	Have the internal and/or external customers of the process outputs been defined?	Kohlbacher and Reijers (2012)	R4, R7, R8
2.02	Have customers been asked for their opinions, needs, and wants, including service levels?	Lam and Mayer (2014)	R5, R7
2.03	Is customer service training provided to process participants?	Dhar (2014)	R5
2.04	Have the ways in which customers influence and/or participate in the process been defined?	Alter (2008)	R7
2.05	Have checks been done on customers understanding of the process?		R7
2.06	Has the customer trigger for the process been defined and communicated to the customer?		R5
2.07	Have pre-process checks been defined to enable confirmation to the customer that their needs can be met?		R1, R7
2.08	Are customers provided with progress reports once the process has been started?		R1, R5, R8
	Products and Services		
3.01	Has a method for forecasting and resourcing for future product/service demand been defined?	Biazzo and Bernardi (2003)	R4

WOF Ref	Process as a whole	Literature Support where available	Transpower Respondee (R#) Support
3.02	Has a method for understanding individual customer product/service preferences been developed?	Lam and Mayer (2014)	R1, R4, R7
3.03	Has a method for incorporating individual customer preferences into the products/services been developed?	Kohlbacher and Reijers (2012)	R1, R4, R7
3.04	Has a method for checking customer acceptance of the end products or services been defined?	Pendokhare and Quazi (2015)	R1, R4, R5, R6
3.05	Has a method for dealing with customer feedback, including product and service suggestions, been defined?	Ahmad, Muzaffar, Shahzad, Malik (2018)	R5
	Work Practices		
4.01	Has the process been documented?	Keyte and Locher (2004)	R1, R2, R3, R4, R5
4.02	Is the documentation regularly reviewed and updated when required?	Hammer (2015)	R1, R2, R3, R4, R5
4.03	Is compliance with process steps managed in real-time?	Hammer (2015)	R8
4.04	Is the method of checking process compliance defined?		R8
4.05	Is training provided to participants that undertake the process?		R4, R6
4.06	Does training cover soft skills?		R3
4.07	Is the process documentation and collateral easy to find?		R1, R4
4.08	Have the process inputs been defined?	Hammer (2015)	R1, R3, R4, R8
4.09	Have the input procurement processes been defined?	Hammer (2015)	R1, R3, R7
4.10	Do providers of inputs, including external suppliers, receive performance feedback?		R3

WOF Ref	Process as a whole	Literature Support where available	Transpower Respondee (R#) Support
4.11	Are the procurement processes for external suppliers transparent and fair?		R1, R3, R7
4.12	Has the trigger for the process been defined and communicated to those working in the process?		R4
4.13	Have all processes triggered by this process been defined?	Kohlbacher and Reijers (2012)	R5
4.14	Is efficiency measured in the process?	Hammer (2015)	R3, R4, R5, R6, R7, R8
4.15	Have quality outcomes for the process been defined?	Biazzo and Bernardi (2003)	R3
4.16	Are quality checks that align with the defined quality outcomes undertaken?	Biazzo and Bernardi (2003)	R3
4.17	Are controls in place to reduce, eliminate or manage process failures?	Hung and Sung (2011)	R1, R2
4.18	Are audits or assurance in place to measure process compliance?	Panagiotakopoulosa, P., Espinosa, A., & Walker, J. (2016)	R1, R2, R3, R5, R6, R8
4.19	Does the process have defined and used feedback loops?	Biazzo and Bernardi (2003)	R1, R2
4.20	Have the internal or external approval points (if any) been defined?	Hung and Sung (2011)	R3, R8
	Participants		
5.01	Has the single point of accountability process owner's needs been captured and reflected in the process?	Assudani and Kloppenborg (2010)	R1
5.02	Do all relevant managers understand and support the process?	Kohlbacher and Reijers (2012)	R5, R8
5.03	Have the stakeholder's needs been captured and reflected in the process?	Assudani and Kloppenborg (2010)	R6, R7, R8

WOF Ref	Process as a whole	Literature Support where available	Transpower Respondee (R#) Support
5.04	Does each step of the process have a clearly articulated owner?		R1, R2, R3, R4, R5, R7, R8
5.05	Is someone accountable for ensuring participants stay within the boundaries of the process?	Panagiotakopoulosa, P., Espinosa, A., & Walker, J. (2016)	R1, R2, R4, R5, R7, R8
5.06	Can a sufficient number of people currently manage the end to end process?		R5
5.07	Is there an onboarding process for new process participants?		R4
5.08	Do process participants receive ongoing support and skills refreshers?		R4
5.09	Are systems in place to ensure follow through on audit or assurance recommendations?		R1
5.10	Are systems in place to record participants feedback and track resulting action?		R1, R8
	Information		
6.01	Have the in-process communication requirements been defined?		R1, R5
6.02	Have service level agreements for customers been agreed?	Biazzo and Bernardi (2003)	R4
6.02b	Are sufficient steps taken to meet service levels agreements?	Biazzo and Bernardi (2003)	R4
6.03	Are customers' requirements reflected in KPIs and reporting?		R4
6.04	Are in-process measures defined and tracked?	Hammer (2015)	R4, R5, R8
6.05	Are process workloads managed and prioritised, including at peak times?	Aldor-Noiman, Feigin, and Mandelbaum (2009)	R5

WOF Ref	Process as a whole	Literature Support where available	Transpower Respondee (R#) Support
6.06	Has process performance been benchmarked against similar peer processes?	Hammer (2015)	R8
6.07	Does historical process performance data exist?	Kohlbacher and Reijers (2012)	R1, R2, R3, R4, R5, R7
6.08	Is the historical performance data used to improve future performance?	Biazzo and Bernardi (2003)	R1, R2, R3, R4, R5, R7
	Technologies		
7.01	Is the process documentation version controlled?	Hernad and Gaya (2013)	R1, R2
7.02	Are the documents produced as part of the process stored in a document management system?	Hernad and Gaya (2013)	R1, R5, R8
7.03	Is IT systems training provided to process participants?		R4, R6
7.04	Are the relevant system security restrictions/permissions appropriate for the process?		R5, R7
7.05	Does the process use a workflow tool?	Chung, Cheung, Machin (2008)	R1, R4, R5, R6, R7, R8
7.06	Is all important data relating to the process backed up?		R5
7.07	Is the system data quality checked?		R5, R7
	Infrastructure		
8.01	Are organisational standards and policies applied as intended in the process?		R8
8.02	Are appropriate checks made to ensure that the tools, templates and checklists used in the process are up to date?		R3, R7, R8
8.03	Have the inputs from organisational teams such as IT, HR, Finance been defined?		VSM SPECIFIC

WOF Ref	Process as a whole	Literature Support where available	Transpower Respondee (R#) Support
	Environment		
9.01	Is the processes environment monitored for opportunities and threats?	Panagiotakopoulosa, Espinosa, and Walker (2016).	R1
9.02	Does the process meet external regulatory requirements?		R1, R2, R3
9.03	Are the risks created by the operation of the process recorded, monitored and accepted/avoided/transferred?	Hammer (2015)	R4
	Strategies		
10.01	Is the process influenced and/or directed by organisational policies?	Hammer (2015)	R1, R3, R4
10.02	Is the process influenced and/or directed by organisational goals and/or strategies?	Hammer (2015)	R5, R8

5.5 Applying the WOF Check at Transpower

5.5.1 Rating and responses

The quantitative aspect of the mixed method research focuses on the comparison between the interviewees self-rating of the process recorded in the initial interview and the 74-Point WOF check result for the same process assessed in the follow-up interview. These comparisons are shown in Table 5.2 below. In five out of the eight Transpower comparisons the scores are within +/- 12%. This suggests tool has some predictive ability for process quality. Three of the processes however had comparison score gaps of between 24% and 45%, meaning that the respondees in these cases self-rated at between 4/10 and 6/10 and the WOF scores came out at between 77% and 95%. There are at least three potential explanations for this.

Table 5.2 – Self-Rating vs Process Warrant of Fitness ratings (Transpower Processes)

	Self-Rating	WOF rating	Gap
Respondee 1 Process	70%	77%	-7%
Respondee 2 Process	90%	86%	4%
Respondee 3 Process	60%	61%	-1%
Respondee 4 Process	70%	58%	12%
Respondee 5 Process	60%	84%	-24%
Respondee 6 Process	70%	73%	-3%
Respondee 7 Process	40%	77%	-37%
Respondee 8 Process	50%	95%	-45%

A first potential explanation is that having a high WOF check score is a necessary but not sufficient condition for process viability. This means that having a process that scores well in the Process WOF is a necessary condition for process viability, but by itself it is not sufficient for process viability. The necessary but not sufficient hypothesis is supported by the fact that in no cases the preceding self-rating was higher than the proceeding WOF rating. If the self-rating came out at say 8/10 and the WOF check at say 40%, then it could suggest that processes can work well in the absence of the conditions set forth as contributing to process viability. There are factors such as the phenomenon of work as imagined vs work as done (Nemeth, 2006), which identifies the gap between what is designed to happen in a given activity – ‘work as imagined’, and the realities of how workers actually engage with the work – ‘work as done’, which could at least partially explain the gap in two of the process scores.

A second potential explanation is that each of the 74 WOF checks relies on the respondees knowledge and judgement, firstly in the self-rating, and then again in answering each of the checks, as well as the follow up question as to whether the check is important. The solution would be to ensure that the respondees have an appropriate understanding of the process, i.e. they are subject matter experts; that clarity is provided on what constitutes a pass or fail for any particular check; that respondees are asked to provide evidence that the process meets certain standards before a pass is given; and that ‘self-passing’ a check by saying that the check is not important for their process is done appropriately. Another potential solution to this problem that emerged in the action research is to run the WOF check multiple times on a single process, with different stakeholders. This will be discussed further in 5.4.4

A third potential explanation is that the process WOF weights every check equally. Depending on the process, some checks would be more important than others, and this could easily skew the results. For instance, for many processes defining customer requirements would be

critical, but in some failure to have the defined customer requirements may have a minimal impact on outcomes. This has been partially dealt with by allowing the respondees to self-pass themselves by answering the follow-up question as not important, however, the current approach is binary, either ‘it is important’ or ‘it is not important’. This could be improved for future iterations of the tool by either increasing the weightings for some of the more important checks, for instance the top 15 identified earlier, or by changing the question about whether the check is important or not for each check, to asking the respondee to rate on a scale of 1-10 how important is the check is for that process. The latter approach could slow the WOF checks down considerably, but the revised approach could be tested, and a decision made as to whether there was a net benefit to doing so.

And it could be a combination of these three explanations and more. Clearly, each of these factors could be addressed, but the question would be whether the benefits of adding many additional layers of complexity to the tool, and the resulting additional effort for users, would provide a sufficient return on that complexity and effort. The issues can certainly be highlighted in a VPM user guide, should this be created, users could decide what action to take on a case by case basis. Some of the partial solutions could be trialled, like giving some WOF checks higher weightings; requiring evidence on some checks but not others; and allowing self-passing on some checks but not others. These are opportunities for future research. For now, being aware of these factors will need to suffice.

Table 5.3 – 74-point WOF check rating vs 15-point WOF check rating (Transpower processes)

	74 Point WOF (Average)	15 Point WOF (Average)	Difference
Respondee 1 Process	77%	73%	-4%
Respondee 2 Process	86%	87%	0%
Respondee 3 Process	61%	73%	13%
Respondee 4 Process	58%	67%	9%
Respondee 5 Process	84%	73%	-10%
Respondee 6 Process	73%	67%	-6%
Respondee 7 Process	77%	80%	3%
Respondee 8 Process	95%	87%	-8%

As discussed previously, an abbreviated WOF checklist, featuring the top-15 WOF checks as ‘voted’ by the Transpower interviewees, has been created to fulfil a number of functions, including abbreviated WOF checks to assist and prioritising and sequencing of the full WOF assessments; enabling experimentation with variable weightings on the 74-point WOF check; trialling making those 15 checks non self-passable; and potentially trialling making the provision of evidence to support the responses for those 15 of the 74 checks.

It was therefore important to check the relationship between the 15-point check WOF score and the 74-point check WOF score to ensure the former can act as a reasonable proxy for the latter, including for the WOF prioritisation and sequencing. As can be seen in Table 5.3 above, there is a clear relationship between the 74-point WOF check rating and the 15-point WOF rating. This provides sufficient confidence that if the 15-point checks were run over a set of processes, the results would be accurate enough to make informed decisions on the WOF prioritisation and sequencing if multiple processes were up for a WOF assessment and an order needed to be determined before the full 74-point WOF checks were undertaken.

5.5.2 74-Point WOF Ratings

Table 5.4 – WOF Check Ratings for each grouping

	WOF Check (Average Rating for Each Grouping)										
Process	1. Work Process as a Whole	2. Customer	3. Products / Services	4. Work Practices	5. Participants	6. Information	7. Technologies	8. Infrastructure	9. Environment	10. Strategies	Overall
Respondee 1 Process	100%	75%	60%	85%	70%	44%	86%	100%	100%	50%	77%
Respondee 2 Process	100%	75%	100%	90%	90%	44%	100%	100%	100%	100%	86%
Respondee 3 Process	57%	100%	100%	50%	50%	22%	86%	33%	67%	100%	61%
Respondee 4 Process	57%	63%	40%	55%	50%	67%	86%	0%	100%	50%	58%
Respondee 5 Process	29%	88%	100%	80%	80%	100%	100%	100%	100%	100%	84%
Respondee 6 Process	71%	88%	20%	75%	80%	56%	86%	100%	67%	100%	73%
Respondee 7 Process	71%	63%	100%	70%	90%	78%	86%	67%	67%	100%	77%
Respondee 8 Process	86%	88%	100%	100%	100%	78%	100%	100%	100%	100%	95%
Min Score	29%	63%	20%	50%	50%	22%	86%	0%	67%	50%	58%
Max Score	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	95%
Avg Score	71%	80%	78%	76%	76%	61%	91%	75%	88%	88%	76%

At the end of the full 74-point WOF check, the results will be provided with a % rating for each of the ten groupings, and then an overall rating for the process as shown in Table 5.4 above. The grouped ratings will quickly communicate the strengths and weaknesses of the individual processes, and the results can be combined with the ratings of other processes in the work systems to identify work system level strengths and weaknesses. The groupings will also improve reporting by communicating to users the multiple elements that make up each process, and over time a body of knowledge of interventions can be developed for each grouping.

An additional graphic that can easily be produced for individual process ratings and/or group WOF rating results is the Radar chart as shown in Figure 5.1 below:

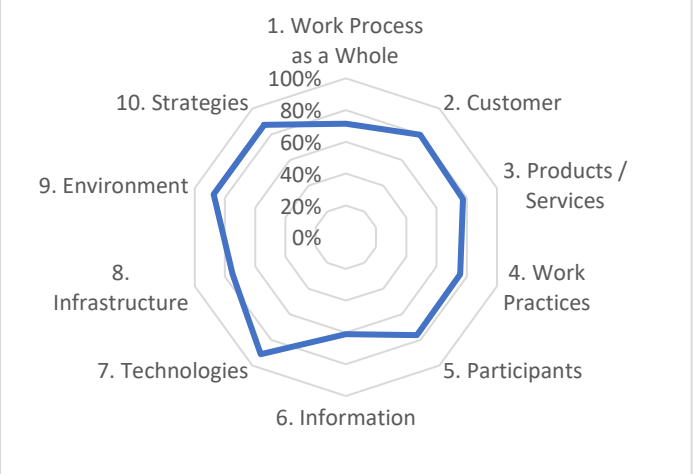

Figure 5.1 Average WOF Score by Grouping for the Eight Transpower Processes

The grouped rating will also provide ready-made data for reporting. For instance, when reporting to management, the user can make a statement such as:

> *Ten processes have been evaluated using the Process Warrant of Fitness. We continue to show good results in the areas of Customer, and Work Practices, but more focus need to be placed on the Information, Technologies and Participants process areas. For the latter, a new training programme has been developed, and we would expect to see a dramatic increase in the results in this area when the WOF rechecks are undertaken in three months' time.*

The VPM sets out the default approach to prioritising and sequencing processes for both the initial assessments and for addressing aspects of the process that may need to be fixed. For the latter, there are many alternatives, including attending to each failed check in the order that they appear, or an alternative strategy would be to set an initial Minimum Score for each grouping and then anything below that level would get priority attention. For instance, if the initial threshold for the ratings is 50%, this would automatically draw the user's eye to certain scores in Table 5.3. The user would simply go to the relevant WOF to find out which checks failed and start the process to determine the reasons for the failures. The user could apply root cause analysis tools and techniques such as 5 whys and cause and effect diagrams analysis. Fonseca, Lima, and Silva (2015) list cause and effect diagrams as one of the Basic Quality Tools and 5 Whys as one of the Advanced Quality Tools. For instance, the authors suggest that cause and effect diagrams are useful for identifying possible causes and sorting those ideas into useful categories.

Whichever order the failed checks are addressed, it is the intention of the WOF check and VPM approach that once the failed checks are addressed, the WOF would be re-run, much as it is for the motor vehicle WOF check, and then once the WOF has been passed, the process is 'road-ready' for the period of time decided by the organisation. It is likely that a recheck would be programmed for a default period of one year, but this would depend on the criticality of the process, the amount of time it would take for the process to 'degrade', and the resources available to undertake the checks and follow-up work. In any case, just like the car in a motor-vehicle WOF, the process will need to be kept in a good and well-maintained condition between WOF checks.

5.5.3 Self-Rating and Evaluation

For the research, each interviewee was asked in their initial interview to firstly provide a self-rating of the process on a scale of 0-10, and an evaluation of the process's strengths and weaknesses. The self-rating was later compared to the WOF rating in the second interview to test the relationship between the two. The self-rating and self-evaluation of the process was only intended to be used for the research process, however the approach will become a permanent feature of the WOF in future versions of the tool. The self-rating and self-evaluation immediately prior to the WOF check are good warm-up questions, they stimulate the interviewees thinking about the process, they create a record of the link between the interviewee's opinion on how well the process is working, and issues uncovered in the WOF check, and they may even identify issues that the WOF questions would not have picked up. It has also provided useful to ask participants what is currently working well and not working well with the process prior to the start of the WOF check.

5.5.4 Multiple Ratings for a Single Process

There is a potential to undertake multiple WOF checks on a single process in future versions of the tool. In this approach, multiple stakeholders would be identified for the process, and each stakeholder undertake the WOF assessment. This could help uncover areas of self-interest or different lens that different stakeholders look through that may uncover insights and responses that may not be evidenced undertaking the WOF check on a single stakeholder. Neilson and Couto (2004) suggest that the process owner should ensure that the process is operating for what is best for the overall running of the process, rather than for functions or operations within the process. Having these multiple viewpoints will increase the potential for this to occur.

The challenges with this approach would include firstly identifying under which conditions multiple stakeholders should be used for a single process, and secondly, how to identify the

appropriate stakeholders. In identifying the conditions in which multiple stakeholders should be used for a single process within Transpower, the question might be whether the extra effort would be an efficient use of resources, and this would be determined by understanding the potential improvement in WOF outcomes. According to McElroy and Mills (2003) in Assudani and Kloppenburg (2010), stakeholder management is the continuing development of relationships with stakeholders for project success. In this context, the more important the process, the more likely that multiple stakeholders should be involved via the WOF process.

In identifying the potential process stakeholders that could be involved in the WOF assessment activity, guidance can be taken from Alter (2006), who lists potential work system stakeholders as customers, participants, managers, and anyone else directly or indirectly affected by the work systems products and services or operations. Milosevic (2003) in Assudani and Kloppenburg (2010) suggest identifying and prioritising stakeholders using brainstorming, and Bourne (2006) in Assudani et al suggest identifying or analysing stakeholders based on their circle of influence. Beringer, Jonas, and Kock (2012) state that the interests of all legitimate stakeholders are of intrinsic value. The solution here then would be that a range of stakeholders should be brainstormed for each process requiring a WOF assessment, and then the stakeholders would be prioritised and selected based on their interest and legitimacy to the process.

5.5.5 Results from Switch and Nelmac Follow-up 'WOF Checks'

There were no discernible differences between the use or results of the WOF tool in Transpower and in the two external organisations, Switch Lighting and Nelmac, that indicated the tool would be less impactful outside of Transpower. Whilst only one WOF assessment was undertaken at Nelmac and one at Switch Lighting, versus eight at Transpower, the interviewees at both external organisations felt that the tools findings accurately highlighted the problems and opportunities in the process and that undertaking the WOF assessment on their process was a good use of their time.

After running the WOF assessments, some of the areas that may have been expected to be less relevant at Nelmac and Switch Lighting, for instance whether the process meets external regulatory requirements, turned out to be equally relevant. Transpower is a highly regulated organisation, and therefore subject to significant regulatory forces, however as shown in both the Nelmac and Switch Lighting cases, these organisations are also subject to regulatory forces, including health and safety, governance, and employment legislation. And for the processes that are not subject to these forces, the respondees simply confirms that the check is not relevant for their process and it becomes an automatic self-pass.

When discussing Lean, Holtskog (2013) makes the point that adopting tools that have worked in other organisations is not guarantee of success, and for these tools to work, local adaptation must occur. The author suggests that this relationship between success and local adaptation can be attributed to the presence of commonly understood goals and engaged leadership. Without extensive testing and validation in multiple organisations, environments and cultures, it is not possible to claim any sort of universal applicability of the WOF tool and VPM to organisations, environments and cultures. What can be said is that the process used to develop the WOF from scratch for Transpower worked well, with principles that align with the VSM, the WSM, and accepted process management and process improvement methodologies such as Lean Six Sigma.

Notwithstanding the fact that it appears that the WOF and VPM may be generally applicable to organisations other than Transpower, it is entirely feasible that an adaptation process could be developed to ensure the WOF check can meet the needs of each specific target organisation. Santiano (2016) makes the point that each organisation can take quality concepts and principles and develop a quality system that is as unique as they are. Whilst the current version of the WOF tool has been developed to work at Transpower specifically, an approach to customising the WOF check for specific environments will be strongly considered for any future iterations of the tool. This will be discussed further in Chapter Six.

5.6 The VSM Report Card

As well as the standard WOF assessment pass/fails, users will also get report card showing how well the process adheres to the principles of the Viable System Model. The report card will display ratings for VSM elements of Environment; System One (Operations); System Two (Coordination); System Three (Control); System Four (Planning); System Five (Identity). The report card has been developed by mapping the WOF checks to the VSM principles. A pass on a check that has been mapped to the VSM Report Card will increase the score for that VSM area and a fail will lower the score for that VSM area. The makeup of the VSM Report Card is as follows:

ENVIRONMENT

Viable System Model - Environment

The VSM's Environment is the outside world directly relevant to the 'System in Focus', or in context of this research, the 'Process in Focus'. The systems understanding occurs predominantly through System Four (Planning), but System One (Operations) also acts as an intelligence gathering mechanism, taking signals from the Environment based on its System in Focus specific interactions. It is this combined intelligence that enables the system to cope

with change (Alqirem 2009). According Golnam, Regev, and Wegmann (2011), a system must interact intelligently with its environment to remain viable.

WOF Questions Mapped to VSM Environment:

WOF# 2.01 Have the internal and/or external customers of the process outputs been defined?

WOF# 2.02 Have customers been asked for their opinions, needs, and wants, including service levels?

WOF# 5.03 Have the stakeholder's needs been captured and reflected in the process?

Viable Process Model VSM Rating for Environment

The results of WOF questions above will automatically produce a VSM rating for Environment. To improve the Environment rating would therefore require any fails in these checks to be remedied and rechecked to pass. The goal would be to encourage activities that increase understanding and engagement with the process's Environment.

SYSTEM ONE (OPERATIONS)

Viable System Model – System One

As discussed earlier, System One (Operations) performs the primary activities of the System in Focus (Alqirem 2009). Azadeh, Darivandi, and Fathi (2011) call System One (Operations) the 'Implementation' function, which carries out the tasks directly related to the organisations purpose, or in other words, its raison d'etre. For this project, the VPM equivalent of the System One (Operations) is the actual core functions in the work system that perform the process tasks. The WSM equivalent would be the 'Work Practices'.

WOF Questions Mapped to VSM System One:

WOF# 5.04 Does each step of the process have a clearly articulated owner?

WOF# 5.06 Can a sufficient number of people currently manage the end to end process?

WOF# 5.07 Is there an onboarding process for new process participants?

WOF# 5.08 Do process participants receive ongoing support and skills refreshers?

Viable Process Model VSM Rating for System One

The results of WOF questions above will automatically produce a VSM rating for System One (Operations). To improve the System One (Operations) rating would therefore require any fails in these checks to be remedied and rechecked to pass. It is about local management, skills and competency, and having enough resource to do the work.

SYSTEM TWO (COORDINATION)

Viable System Model – System Two

System Two (Coordination) resolves conflicts between the multiple System One (Operations) (Alqirem, 2009). Azadeh et al expand on this by saying that System Two (Coordination) consists of rules and regulations to ensure the individual operations in System One (Operations) do not get in each other's way. Examples of System Two (Coordination) activities, provided by Schwaninger and Scheef (2016) include information systems, schedules, and standards of behaviour.

WOF Questions Mapped to VSM System Two

WOF# 3.01 Has a method for forecasting and resourcing for future product/service demand been defined?

WOF# 4.03 Is compliance with process steps managed in real-time?

WOF# 6.05 Are process workloads managed and prioritised, including at peak times?

WOF# 7.03 Is IT systems training provided to process participants?

WOF# 8.02 Are appropriate checks made to ensure that the tools, templates and checklists used in the process are up to date?

WOF# 8.03 Have the inputs from organisational teams such as IT, HR, Finance been defined?

Viable Process Model VSM Rating for System Two

The results of WOF questions above will automatically produce a VSM rating for System Two (Coordination). To improve the System Two (Coordination) rating would therefore require any fails in these checks to be remedied and rechecked to pass. It is about understanding the demand for the products and services, having enough resource to cope with peaks in different operations, ensuring compliance with processes, ensuring the process local management, skills and competency, and having enough resource to do the work.

SYSTEM THREE (CONTROL)

Viable System Model – System Three (Control)

System Three (Control) is the internal regulation, optimisation and synergy of the System in Focus. This would be exhibited through the management of resources and management intervention (Alqirem 2009). According to Azadeh et al has overall responsibility for the running of the organisation, including System One (Operations) and the organisations services management such as human resources. It also has a reporting role to System Five (Identity).

WOF Questions Mapped to VSM System Three (Control)

WOF# 4.14 Is efficiency measured in the process?

WOF# 4.16 Are quality checks that align with the defined quality outcomes undertaken?

Viable Process Model VSM Rating for System Three (Control)

The results of WOF questions above will automatically produce a VSM rating for System Three (Control). To improve the System Three (Control) rating would therefore require any fails in these checks to be remedied and rechecked to pass. It is about managing the process to ensure that the planned objectives are achieved.

SYSTEM 3* (AUDIT)

Viable System Model – System Three* (Audit)

System Three* (Audit) according to Azadeh et al, acts on targets identified by System Three (Control), to ensure the rules and regulations specified by System Two (Coordination) are being adhered to by System One (Operations). The information provided by these audits provides System Three (Control) ongoing intelligence on the state of System One (Operations). Other examples of System Three* (Audit) activity, provided by Schwaninger and Scheef (2016) and Walker (2017) include ad-hoc monitoring, management by walking around, social activities, and information communication.

WOF Questions Mapped to VSM System Three* (Audit)

WOF# 4.04 Is the method of checking process compliance defined?

WOF# 4.18 Are audits or assurance in place to measure process compliance?

WOF# 5.09 Are systems in place to ensure follow through on audit or assurance recommendations?

WOF# 6.04 Are in-process measures defined and tracked?

Viable Process Model VSM Rating for System Three* (Audit)

The results of WOF questions above will automatically produce a VSM rating for System Three* (Audit). To improve the System Three* (Audit) rating would therefore require any fails in these checks to be remedied and rechecked to pass. It is about ensuring that there is a method to ensure compliance, both in real-time and after the fact, that these compliance methods are followed, and that recommendations arising from the compliance checks are follow-through, and important measures defined and tracked.

SYSTEM FOUR (PLANNING)

Viable System Model – System Four (Planning)

System Four (Planning) is the connection to the outside world and ensures that the whole-system can survive in a changing environment. It looks for threats and opportunities and looks at future planning, projections, and forecasts (Alqirem 2009). According to Jackson (2003) in Azadeh et al, System 4 takes information from System Three (Control) and the total environment to make decisions. According to the authors, typical organisational functions would include strategic and corporate planning, marketing, research and development, and public relations.

WOF Questions Mapped to VSM System Four (Planning)

WOF# 4.10 Do providers of inputs, including external suppliers, receive performance feedback?

WOF# 3.02 Has a method for understanding individual customer product/service preferences been developed?

WOF# 3.05 Has a method for dealing with customer feedback, including product and service suggestions, been defined?

WOF# 5.10 Are systems in place to record participants feedback and track resulting action?

WOF# 6.03 Are customers' requirements reflected in KPIs and reporting?

WOF# 6.06 Has process performance been benchmarked against similar peer processes?

WOF# 8.01 Are organisational standards and policies applied as intended in the process?

WOF # 9.01 Is the processes environment monitored for opportunities and threats?

WOF# 9.02 Does the process meet external regulatory requirements?

WOF# 9.03 Are the risks created by the operation of the process recorded, monitored and accepted/avoided/transferred?

Viable Process Model VSM Rating for System Four (Planning)

The results of WOF questions above will automatically produce a VSM rating for System Four (Planning). To improve the System Four (Planning) rating would therefore require any fails in these checks to be remedied and rechecked to pass. It is about planning for success, management to reduce the risk of failure, dealing with the external environment and reporting back to the identity function and the other VSM systems on what is going on in the outside and then (the future).

SYSTEM FIVE (IDENTITY)

Viable System Model – System Five (Identity)

System Five (Identity) is the ultimate authority for the system and sets the System in Focuses direction, policy, strategy, and goals. In other words, its identity, ethos, and purpose (Alqirem 2009). Schwaninger and Scheef (2016) say that the System Five (Identity) establishes an equilibrium between the systems current and future orientation and its internal and external orientation.

WOF Questions Mapped to VSM System Five (Identity)

WOF# 1.05 Does the process have a single accountable owner?

WOF# 4.15 Have quality outcomes for the process been defined?

WOF# 5.01 Has the single point of accountability process owner's needs been captured and reflected in the process?

WOF# 10.01 Is the process influenced and/or directed by organisational policies?

WOF# 10.02 Is the process influenced and/or directed by organisational goals and/or strategies?

Viable Process Model VSM Rating for System Five (Identity)

The results of WOF questions above will automatically produce a VSM rating for System Five (Identity). To improve the System Five (Identity) rating would therefore require any fails in these checks to be remedied and rechecked to pass. It is about having a clear sense of what the process should be producing, including the quality, and ensuring that organisational goals, policies etc are clearly articulated to the other systems, usually via System Four (Planning).

INTRA-VIABLE SYSTEM RELATIONSHIPS

Schwaninger and Scheef (2016) list of relationship that operate between the systems. These include Relationship Systems 1-3: vertical channel; Relationship Systems 1-2-3: attenuation of complexity; Relationship Systems Three-Four: System Three and System Four homeostat. According to Panagiotakopoulosa, Espinosa, & Walker (2016), the VSM is a holistic model involving five subsystems and their intricate subsystems (One-Five).

WOF Questions Mapped to Intra-Viable System Relationships

WOF# 4.19 Does the process have defined and used feedback loops?

WOF# 6.01 Have the in-process communication requirements been defined?

The results of WOF questions above will automatically produce a VSM rating for Relationship. To improve the Intra-Viable System Relationships rating would therefore require any fails in

these checks to be remedied and rechecked to pass. It is about ensuring the process in in constant communication with the other systems and that it is enabling learning throughout these systems. Learning, along with self-regulation, adaptation, and evolution are all requirements for viable systems (Arif, 2016).

A rudimentary VSM Report Card has been developed. Figure 5.2 shows an example of a VSM Report Card resulting from one of the Transpower Process WOF checks.

Process Name: Transpower Process

VSM Area	VSM Area Coverage	VSM Rating
System 1	Is the 'implementation' function, which carries out the tasks directly related to the work processes purpose.	75%
System 2	Ensures rules and regulations are in place to ensure the individual operations in System 1 do not get in each other's way.	67%
System 3	Overseas the internal regulation, optimisation and synergy of the work process.	50%
System 3*	Ensures the rules and regulations specified by System 2 are being adhered to by System 1.	50%
System 4	Establishes and maintains connection to the outside world and ensures that the whole-system can survive in a changing environment.	64%
System 5	Is the ultimate authority for the system and sets the system in focuses direction, policy, strategy, and goals.	75%
(E)nvironment	The outside world directly relevant to the System in Focus	100%
(R)elationships	The relationships that operate between the systems	50%
Overall VSM Rating		67%

Figure 5.2 VSM Report Card Example

The report card in Figure 5.2 shows that the VSM strength rating for Environment is 100% so no further VSM action is required for that area. The other areas are between 50% and 75%, requiring some VSM action. Whilst the typical findings and or recommendations that may have resulted from a VSM intervention could be:

- Increase actionable direction of the process owner (S5)
- Improve communication between the process owner, those that plan the process operations and those that execute them (S5 and S4 and S3)
- Assure and enforce the agreed process (S3, S3*)
- Coordinate the process activities (S1, S2)
- Improve the mechanisms to understand the Environment (Environment)
- Improve communications between systems (Algedonic)

To improve the VSM rating that the Report Card has highlighted, the user would simply identify the failed WOF checks relating to that rating, fix the process in that area, rerun the WOF check, and if the checks change from a fail to a pass, the VSM strength rating will improve accordingly.

5.7 Results from the Viable Process Model Development

After confirming the need for an extended user participation format, which has been called the Viable Process Model (VPM). The acronym V.I.A.B.L.E. was devised to help users visualise the VPM roadmap:

V – Select Valuable work system

I – Itemise processes

A – Run Abbreviated WOFs

B - Determine Business priorities

L – Launch full WOFs and WSM/VSM checks in priority order

E - Execute remedial plans in priority order

The V.I.A.B.L.E. process would generally be run in the prescribed sequence, one after another, in what Todtling, Hegedic & Stefanic (2017) would refer to as the waterfall approach. As part of the V.I.A.B.L.E. Process Model, step (L), the VSM Report Card was developed to assist the user to interpret the VSM results of the WOF test. The Report Card would provide a percentage rating for Systems 1-5, 3* (Audit), Environment, and Relationships.

The detail of each of these steps in the V.I.A.B.L.E. method are as follows:

V – Select Valuable Work System

In this step, the work system being analysed would be identified, and if not already, named. In many cases the 'valuable' work system that needs the work would be obvious, however in larger, more complex organisations, there may be multiple work processes and work systems that require improvement, and it may be appropriate that top management choose 'which, and what order' the work processes and systems will be analysed. This is consistent with Hung and Sung (2011) who state that for Lean Six Sigma projects, top management should choose the problems to be solved, based on customer feedback, and the company strategy and mission.

I – Itemise Processes and VPM Team.

In this step, the work system being analysed should be broken down into processes to have WOF assessments undertaken. For larger scale efforts that require projectisation, it would be at this stage that a project sponsor and a project owner might be identified. It may also be beneficial to appoint team members, identify the project stakeholders, clarify and validate

goals, and agree timeframes and resources. To communicate the planned work, a visualisation of the process breakdown may assist, and could also act as the structure for a potential process WOF library, should this be required later.

OR

Go straight to ‘L - Launch full WOFs and apply WSM/VSM principles, in priority order’ if you know exactly what the priority one process is.

A – Run Abbreviated WOFs

In this step, the 15-point abbreviated WOF assessment enables a first pass of many processes. Whilst this will assist with prioritisation and sequencing in the V.I.A.B.L.E.’s step B - it could also provide an early warning system for major cross process deficiencies that may need to be improved before it is even worth carrying on with the WOF assessments. For instance, if no processes have a single accountable owner, then this may need to be addressed before further WOF assessments are contemplated. Also, depending on the level of knowledge required on each process at this stage, it could be beneficial to collect evidence on some or all checks. So, for instance, for the question ‘has the process been documented?’, the WOF assessor could ask to see the documentation, and for the question ‘does the process have a single accountable owner?’, the WOF assessor could record who the single accountable owner is, and even seek evidence that the nominated person is undertaking the appropriate activities for a single accountable owner. Work could also be done with the project sponsor, project owner, business owner, key stakeholders etc. to determine whether that single accountable owner makes sense for that process.

B - Determine Business Priorities and Level of WOF Assessment

In this step, the findings from the abbreviated WOFs would be used to determine the priorities, sequencing, and depth of the full 74-point WOF checks. The priorities, sequencing, and depth should generally be agreed with key stakeholders including the process owner/s, as well as the WOF project owner and sponsor if they exist. The factors that could be considered in the prioritisation and sequencing are the relative difficulty of undertaking each WOF, the relative importance of the process, the relative frequency of outputs or problems. This Difficulty, Importance, Frequency (DIF) analysis is a useful method to determine priorities, helping to decide between nice to know and need to know, often used in skills training (Buckley and Caple, 1990) but could be equally useful in prioritising process improvements. It may be appropriate at this stage to develop a project plan, if that has not already been started, to keep the project on track and enable progress reporting.

L – Launch full WOFs and Apply WSM/VSM Principles, In Priority Order

In this step, the processes would have the full 74-point WOF checks applied in the sequence determined in 'B – Determine Business Priorities' step. The full 74-point WOF check will uncover potential strengths and weaknesses in the process, as grouped in the ten WSM groupings. At the end of each full WOF check each respondent could be asked if there were any known process issues that were not picked up in the WOF check. These would also be recorded and if they are pertinent to just that process, and not covered by the WOF checks, they could be recorded as a process specific WOF check for future rechecks. At this stage the findings could then be analysed, quick win areas like identifying the single accountable owner etc addressed, and the WSM and VVSM principles applied if appropriate. The application of the WSM and VSM principles to specific processes that are being assessed with the WOF tool are discussed in the following sections.

E - Execute Remedial Plans in Priority Order

In this step, the work findings from the WOF checks and VPM process would be used to develop the recommended remedial plans, and to remain consistent with the WSM, it would also be beneficial to provide justifications for those recommendations (Alter, 2012). The recommendations would be submitted to stakeholders for approval. Once the approval was received resources and timeframes would be allocated to each action and the individual or team responsible for the improvements would also track and report on progress. It may also be appropriate for lessons learned type feedback loops within this process. Sheard (2003) recommends periodic or phase-based lessons learned rather than waiting until the end of the project. And of course, the V.I.A.B.L.E. process itself could be subjected to WOF assessments to ensure that it remains stable and adaptable.

5.8 Conclusion

The research sought to answer four questions: the need for the tool to diagnose and design stability and adaptability into processes within Transpower; whether the tool can be built; whether the VSM principles can be made more accessible to non-consultants and non-academics; and whether the tool will work outside of Transpower. These questions were addressed systematically by walking through the four action research stages of the project. Firstly, the research confirmed that there is a need for such a tool; then that the tool can be built; then that the VSM can be made more accessible to non-consultants and non-academics; and finally, that the tool shows that it can work outside of Transpower. The validation of the tool consisted of quantitively comparing process self-ratings prior to the tool being built against the WOF tool ratings for the same processes after the tool was built. In

most cases the results showed a strong relationship, and potential explanations were provided where they did not. The action research approach uncovered innovations that will be pursued in later versions of the tool and VPM, including an adaptation process to ensure the tool and user participation format can work in other organisations, environments and cultures.

Chapter Six - Discussion

6.1 Introduction

This chapter starts by showing how the idea for the project emerged from an early post-graduate project involve the structuring of work systems for documentation and improvement (6.2) and it then discusses what is new and significant about this work, including the fact that it provides an end to end solution from identifying work systems for assessment; breaking the work system into processes; prioritising and evaluating the processes for stability and adaptability; and developing action plans for remedying any gaps (6.3). The chapter then discusses how the results can be applied to specific problems, with an example (6.4), and the chapter ends with a discussion on important project conclusions (6.5) how the results demonstrate the outcome of the research (6.6) and the chapter conclusion (6.7).

6.2 Comparison of Results to Earlier Work

As discussed earlier, the WOF tool is a progression from the student's Post Graduate Research Project that developed the VS12 tool to break a work system down into its operations (work systems), and sub-operations (processes), effectively creating a process documentation library structure. The VS12 tool then guide the user to identify documentation gaps, prioritise the removal of those gaps, and then identify and prioritise process improvement. Rather than provide guidance on the elements of a 'good' process, the VS12 tool was designed to guide the user through the documentation and process improvement process without providing any way of determining what constituted a good or viable process. The Post Graduate VS12 research project did not incorporate models such as the VSM or the WSM and did not align itself with any improvement models such as Lean Six Sigma.

The Process WOF and VPM have been developed to meet an unmet need. However, there are some obvious synergies with the VS12 tool, for instance, the VS12 provides an approach to decomposing work systems into a process library structure, and the VPM could use that process library structure to prioritise and sequence the order of the abbreviated WOF checks. The VS12 also provides some guidance on undertaking process documentation and prioritising process improvements, which could be incorporated into the VPM. The risk of doing so could be that it could over complicate the VPM's accessible user participation format. Further synergies between the VS12 tool and the WOF and VPM could be investigated in future versions of the WOF and VPM.

6.3 New and Significant Work

From a potential user perspective, the Process WOF and the accompanying VPM provide an end to end process to identify processes in a selected work system; prioritise and sequence the approach to evaluating the processes; undertake the checks in priority order; and execute remedial plans, including using the VSM and WSM principles; all whilst feeding the learnings back into the approach. Whilst the tool has been developed specifically for the Transpower NZ Limited work environment, early indications are that the tool has widespread applicability and a simple approach could be developed, based on the action research approach taken for this project, to further adapt the WOF and VPM for specific organisational, environmental, or even specific process requirements if the need arose.

From an academic perspective, no previous attempts had been found to combine the two disparate academic models (WSM, VSM), nor has any evidence been found that the VSM principles had been used at a process level, including a participative approach to create a tool that can measure the stability and adaptability of processes in a work environment, in this case Transpower. The research to date points to the WOF increasing the stability and adaptability of processes and the VPM facilitating improved accessibility of the VSM principles at a process level. It portends to future opportunities to develop the WOF tool and VPM to also work at a Work System level and above.

6.4 Applying the Results to Solve a Specific Problem

The intended application of the WOF tool and VPM would be if a work system or process owner or subject matter expert was dissatisfied with the performance of the work system or process (or group of processes) but didn't have the skills or insights to diagnose why the work system, process or processes were underperforming. All the user would do is follow the V.I.A.B.L.E. roadmap.

V – Select Valuable work system and VPM team.
I – Itemise processes
A – Run Abbreviated WOF assessments
B - Determine Business priorities and level of WOF assessment
L – Launch full WOFs and apply WSM/VSM principles, in priority order
E - Execute remedial plans in priority order

V) Once they have completed V they should have a good idea of the work system they are going to be working on, why, and who should be involved.

I) Once they have completed I they should have a full breakdown of their work system into its component processes.

A) Once they have completed A they should have a sense of where the problems and opportunities are for each process.

B) Once they have completed B they should have interpreted the findings and developed a WOF assessment plan.

L) Once they have completed L they should have launched one or more full WOF assessments and be working on the remedial plans.

E) Once they have completed E they should have executed one or more remedial plans in priority order.

This is a relatively straightforward set of instructions, and the WOF tool itself is also very easy to use. The checks are all in plain English, and the checks are written in a way that provide strong clues on how to move a fail to a pass. For instance, if the WOF check fails the documentation question because the process isn't documented, to move it to a pass the user simply needs to document the process. Whilst this does leave some room for interpretation, in many cases the user will know what is required to document a process appropriately. If the process fails the WOF check because the documentation isn't easy to find, the user simply needs to put the documentation somewhere where it is easy to find and tell people where it is. If the process fails because it doesn't have any measures, to move it to a pass then the user will need to develop some process measures. If the process fails because customers of the process are not defined, the user simply needs to look for downstream handoff points for the products or services, find out who the outputs or outcomes are being handed off to, and they are probably the customers. And if the user isn't quite ready to engage with the VSM Report Card, they don't need to, they can just fix the process areas that have fails in them and they will have a viable process without even understanding that means.

6.5 Important Conclusions Answering the Research Questions

It is hard to envision a process or a collection of processes, aka a work system, that would not benefit from a tool and roadmap that is both easy to use and effective.

As stated in Chapter One, this research sought to answer the following questions:
Is there a need for a tool that diagnoses and designs stability and adaptability into processes at Transpower? The answer is yes. The need for the tool was validated on a number of occasions, firstly at the prototyping stage, before the significant investment of the researcher and the interviews time was committed, then again at the initial interviews when the purpose of the interview was explained and the data collected, again when the tool was developed and tested on the same interviewees, and then again when explaining, and in some cases, providing demonstrations of the tool to associates.

Can a tool be built to diagnose and design stability and adaptability into processes at Transpower? The tool has been built by interviewing Transpower subject matter experts and combining those findings with existing academic models including the WSM and VSM. The process worked extremely well, with a diverse representation of subject matter experts providing research material which was analysed and turned into 74 process checks, with academic rigour from the VSM and the WSM.

Can the Viable System Model be made more accessible via an improved user participation format to the point that users don't need to understand the VSM to enjoy the benefits of the model? About half of the checks have a direct link to the VSM principles and these have been mapped into the VSM Report Card. The user therefore gets two sets of scores. The first is the WOF results which provide the assessor with scores for each of the ten WOF groupings, and the overall WOF score. These scores are calculated by dividing the number of passes for each group by the total number of checks for each group, and then adding all these for the overall score. The second score is the VSM Report Card score. The VSM Report Card looks at all relevant WOF checks, which is about 50% of those checks, and it groups the checks based on their mapping to the VSM elements built into the VSM Report Card. These scores are calculated by dividing the number of passes for each of the mapped WOF checks by the total number of checks for each that VSM element, and then adds all these for the overall VSM score. Essentially this approach provides the user with access to the VSM principles and they don't have to understand them.

If the tool works at Transpower, can it be made to work in other organisational settings? The tool was tested outside of Transpower and no discernible differences surfaced. Because of the extremely small sample of external tests, it cannot be said for certain whether the tool will work in every single organisational setting, but it can be said that nothing to date has shown that it wouldn't. Furthermore, the action research approach taken at Transpower could easily be repeated to develop a methodology to adapt the WOF assessment tool to new

organisations, and tweaks can be made to the existing WOF tool to customise it to specific organisation or even specific process needs, with little effort. The learnings from each new adaptation effort can then be fed back into the knowledge base to eventually develop a universal WOF check or to perfect the adaptation process.

6.6 Workability and Outcome of Research

On a qualitative basis the results have been extremely positive regarding the workability of the outcome of the research, and the quantitative results have not refuted these outcomes. Given the small sample sizes involved, future work could be done to validate the tool, but given that the tool is based on real-life data from subject matter experts, and combined with academic models and principles that have stood the test of time, the results to date, along with the feedback that has been received on the WOF tool and VPM provide confidence to proceed, firstly by continuing to apply the tool in the environment that it was designed for, being Transpower NZ Ltd; secondly by seeking expert advice on the commercialisation of the WOF tool and VPM; and thirdly investigating the potential to extend the research into Doctoral work. Keep an eye out for www.viableprocessmodel.com for progress.

6.7 Conclusion

The Process WOF and VPM emerged from a work done by the student in the Post Graduate Research Project, and through ideas and innovations that emerged through the action research stages of this master's project. The tool and VPM roadmap provide users with an end to end solution for identifying processes in work systems, through to evaluating each of the processes for stability and adaptability and developing action plans for remedying any weaknesses or gaps. Examples of the application of the WOF and VPM were provided demonstrating how the approach and tool could be used both within Transpower, for which the research was based, and in other organisations, starting with Nelmac Limited and Switch Lighting Limited.

Chapter Seven - Conclusion

7.1 Introduction

This chapter starts by verifying the outcomes against the research objectives, which included identifying complimentary concepts from existing business and academic models, gathering a comprehensive set of Transpower process assessment criteria, prototyping an assessment tool structure and populating that structure with Transpower process checks, and finally testing the tool on Transpower and non-Transpower processes and explaining how these outcomes were achieved (7.2). The chapter goes on to discuss the limitations of the study, which include the lack of secondary data on similar approaches regarding the VSM; the lack of secondary data on combining the VSM with another model; the fact that no previous attempts have been found applying the VSM at the process level; and the lack of time and physical resource and the requirement to limit the scope of the research in some areas (7.3). The chapter then discusses the methodological learnings, including the benefits of using of the action research (positive) and the lack of time and resource to explore every opportunity (negative) (7.4), the recommendations for further research, which included more testing of the tool; and modifying the approach to allow for multiple perspectives of the same process (7.5).

7.2 Outcomes Achieved Against the Research Objectives

The first research objective was *"Identify complimentary concepts from existing business and academic models including the Viable System Model and Work System Method".*

The Viable System Model, Work System Method integrated well to develop the Process WOF and the VPM user participation format. The VSM provided the systems thinking aspects of both the WOF and VPM, the WSM provided the process groupings for the WOF assessment tool and influenced the User Participation Format for the WOF and VPM. A further model, the D.M.A.I.C. roadmap acronym within Lean Six Sigma, inspired the VPMs V.I.A.B.L.E. acronym which was the basis for the User Participation Format.

The second research objective was *"Gather a comprehensive set of Transpower process assessment criteria by interviewing process subject matter experts from different levels and areas of the organisation".*

A key part of the action research was to interview a range of stakeholders at Transpower to determine a set of process assessment checks. The approach worked extremely well, particularly having selected a range of senior managers, mid-level managers, and non-managers from different parts of organisation. Whilst no individual interviewee came close to

providing a full set of potential criteria for the process assessment checks, combining the eight responses did produce a comprehensive set of material with plenty of overlapping ideas.

The third research objective was *"Prototype a process assessment tool structure and populate with the specific Transpower process checks".*

This objective had two aspects, firstly to build a prototype with mock process checks, and then secondly to populate the prototype with real process checks once they were developed. Developing the prototype was a crucial step in providing confidence in the concept and for being able to envisage the requirements for the later research steps, including the development of the WOF checks and the VPM and clarifying how further VSM, WSM, and even some Lean Six Sigma principles could be incorporated into the WOF and VPM.

The fourth research objective was *"Test the tool on Transpower and non-Transpower processes".*

The testing was undertaken with the interviewees whose input into the research helped determine the Transpower specific WOF assessment items. Being able to test the WOF tool on these employees had a number of benefits, including that they already understood the intent of the research; they had already signalled their enthusiasm for the project and their availability for future research testing; and they had provided self-ratings of their chosen process in the initial interview, enabling the quantitative aspect of the mixed methods research, being the comparison between their self-rating and the WOF assessment score.

The fifth research objective was *"Develop the user participation format, adding further concepts from business and academic models including the Work System Method and Viable System Model".*

The development of the VPM's user participation format helped to firstly illustrate how the WOF tool could be used to evaluate multiple processes in work systems, and as a home for the VSM, WSM principles and practices that did not, or in the case of future innovations, would not neatly fit into the WOF tool. Having the VPM enabled the WOF assessment tool to remain simple and clean. Whilst the WOF assessment itself should stay relatively static, there is room for extensive innovation in the VPM model, especially around the assessment of entire work systems worth of processes; how these assessments should be approached, prioritised, sequenced; and how the resulting work requirements can be managed and maintained.

7.3 Limitations of the Study Revisited

Limitations of the study revisited: *Time and physical resource constraints placed on the researcher to plan and undertake the interviews, and observe and reflect on the findings, including building, validating, and refining the tool.*

This is undoubtedly a challenge for every researcher, but it is worth stating that with more time and resources, more interviews could have been undertaken, more leads followed up, and more time put into the VPM to make the VSM concepts more accessible. In saying this, sufficient progress was made that will undoubtedly lead to more insights and more breakthroughs, and one day this researcher may well be standing proudly on the shoulders of the giants, including the late Professor Stafford Beer (Viable System Model), Professor Emeritus Steven Alter (Work System Method) and Professor Nigel Grigg (Group Leader/Professor of Quality Systems, and this researchers Project Supervisor).

7.4 Methodological Learnings

The interviewees were chosen based on their positions in the organisations (senior manager, mid-level manager, and non-manager) and the area of the organisation they work in. One of the observations that came out of the action research was the risk of variation in WOF responses for the same process based on the respondees relationship to the process being checked. For instance, if the process owner was responding to a WOF assessment they may provide different answers for the same process that a participant of the process might provide. If there was more time, it would have been useful to repeat the entire interview process with another eight Transpower employees, and this time choose the interviews based on their relationships to the processes and compare the outcomes against the first group. This may have included interviewing multiple people from different stakeholder perspectives about a single process.

More testing on the VSM mapping to the WOF questions would have been beneficial had the time been available. As it was, the mapping was done based on the academic literature descriptions of the VSM for social systems, and these descriptions were interpreted for processes. Whilst the VSM Report Card proves that the relationships between the VSM and processes exist, and the tool has been developed to make the VSM accessible to more than a small handful of consultants and academics, as was the goal, the strength of the relationship mapping for each check could be enhanced and quantitatively validated.

The final learning is around what could be discussed in this research versus what could be developed and verified. Most of the tools and ideas that were introduced in the project were built and work well. However, in some instances tools and ideas were discussed and left for future iterations of the work as it was not possible to pursue every tool and idea.

Most learnings were positive, for instance the use of the self-rating question. One of the questions in the initial interview asked the interviewee what they knew about process improvement and went into a bit of detail. The responses were not used, but the discussion was interesting, and it was a nice way to wrap up the interview and learn about the interviewees experience with process improvement. Finally, there were many learnings that came out of the action research that made the project more exciting, enjoyable, dynamic, and successful. Discussions with interviewees led to insights like the pass/fail dilemma, and the resulting solution, being the second question, ‘is this important for your process’.

7.5 Recommendations for Further Research

This final section considers knowledge gaps and research aims for future research on this topic. Treating the current versions of the Process WOF and VPM, the opportunities for further research are:

Recommendation One: Extend the testing and validation of WOF checks to ensure that they measure as closely as possible the enablers of process stability and adaptability. This research involved ten interviewees at three organisations. It would be useful to undertake further research at a wide range of organisations and organisational environments. From this improved understanding of the general applicability of the WOF check and the VPM, and depending on the outcomes, could result in additional research on an adaptation methodology in order to adapt the WOF and VPM for different organisations, organisational environments, and even individual processes.

Recommendation Two: Research and experimentation with the WOF weightings. In the current iteration of the tool, each check has an equal weighting except if the respondee states that the check is not important for their process, at which point the weighting goes to zero. Some ideas have already been considered, including changing the follow up question from ‘is this check important for your process’, to something like, ‘on a scale of 1-10 how important is this check for your process’. That would need to be asked 74 times per WOF check. Another option would be that management, either at the work system or process level, rather than individual WOF respondees for each process decide on the relative weightings of each check,

and those weightings could be applied to all processes within the scope of that WOF assessment.

Recommendation Three: Investigate a modification of the approach to allow for multiple stakeholders to provide their perspectives of the same process. For the research, each process had only one WOF assessment, and the WOF responses were provided by a single stakeholder. A potentially valuable approach would be to provide the mechanisms and guidance in the VPM to identify and prioritise a range of stakeholders who could then assess the process individually, with the results then collated, or the stakeholders could undertake the WOF assessment in a group setting and debate and agree a single response for each check. The benefits would need to outweigh the additional time and resources to undertake this approach and this could only be achieved by quantifying both the benefits and the costs of that approach.

Final thoughts on the future research include the need for more work on the user participation format, and particularly the development of a full set of templates and checklists for the VPM. It would also be valuable to determine whether the WOF check could have a place in the Lean Six Sigma toolkit, and if so at which stages would the WOF be run, for instance firstly in the Measure stage which is the point in the Lean Six Sigma project that the customer and process requirements are identified, and then potentially doing the WOF recheck in the Control stage which is the point that the control plan is executed to maintain the improvements.

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Appendices

Appendix 1: Initial Questionnaires and Responses – Transpower and External

Transpower Interview 1 for Master's Research

Respondee 1 (R1) - 11 May 2018

Thank you for agreeing to participate in my research. Your time is very much appreciated. Please feel free to ask for a break at any time of required.

Just a bit of housekeeping, I am required to inform you of your rights with respect to the content of the interview.

You have the right to decline to participate or to withdraw from participation without penalty of any kind and without having to provide reasons

Acknowledged

Your responses in the research will be anonymised in data analysis and reporting

Acknowledged

You will be provided with the final transcripts of any information provided by you and you have the right to withdraw identifiable information you have provided prior to the collection of the data collection.

Acknowledged

I will be taking notes today, but I would appreciate the opportunity to record the interview to ensure I don't miss anything important, is this ok?

Agreed

What is your job title? (1 minute)

Level 3 Manager – SO Power Systems Group Manager

What are your roles and responsibilities? (5 minutes)

- Group provide the engineering knowledge and support for a number of key applications driving the power system and electricity market. Ensure that the model reflects assets in field and if people are bringing new assets onto grid ensure they meet the obligations of code.
- Have a compliance and risk team which ensures test plans and things that are submitted are fit for purpose and won't jeopardise system when testing.
- Look at where assets aren't performing to code, perform a service to recommend whether participant should be breached or any other repercussions.
- Get involved in risk, where we run annual business continuity exercises and ensure planning is up to date.
- Maintain the operational risk bowtie. Have one bowtie and ensure that control owners are continually assessing effectiveness of controls.
- Also have leadership type duties, business planning, performance planning, staff development, strategic leadership. Reporting and budgets.

What, in your opinion, are the attributes of a work process (as opposed to a work practice or activity)? (15 minutes)

- Has to be clearly documented – there are lots of process in the business that aren't documented
- Accessible and easy to find
- Articulate inputs, and the outcomes of the process
- Should identify who is responsible for undertaking any particular process step
- Clear on documenting assumptions or business rules around these process steps as well
- In an ideal business it would be a standard format that everyone can understand so documents would have the same look and feel
- Need to be living and have good feedback loops and regular reviews, including reviewing the environment that it operates in.
- The process needs a clear owner. When you have joint ownership, things can get a bit messy.
- There are seldom standalone processes, so need to understand relationships between processes including inputs and outputs between the processes.
- In the operations area, process is critical, so lots of rigour, lots of process work-flowed.
- We do quite a bit of process audit, or bring in external auditors as well.
- We have an obligation to EA to do at least five process audits per year.
- A lot of review times for processes are based on risk. If it is a critical control that the process is guiding, we would review that more than something that was less critical to that operation.
- The auditing to some extent is a service provided to the Electricity Authority (EA), so this provides transparency that we are following good process and some is

demonstrating that when an audit produces recommendation that we follow through on it.
- Auditing is quite a powerful tool in selling our value to the EA. So, we target some of our audits on what is a hot topic, so for instance conflicts of interest – because we recently merged a couple of areas of the business and EA was concerned about how we would maintain impartially and avoid conflict of interest.

What percentage of your work area is formalised into work processes? Is that an appropriate percentage for your work area? Why? Discuss (5 minutes)

Gut feel for area I look after at the moment – 70% our BAU tasks. Other 30% is project work or initiatives which might be coming up with process. How to deliver some of the projects is not structured like it might be in other areas. You get a problem statement and you just go.

I think it is an appropriate %. Operations is much more regimented, process driven, and documented. One of the key things down there. They have a process, they follow through, it's kind of living. In grid, processes are a big thing when developed but they tend to fall away pretty quickly.

What is the name of one formalised work process from your current role? (1 minute)

Test plan process – if an asset owner out there is modifying or maintaining a piece of their plant and they need to retest it to demonstrate they are abiding by the electricity code.

Please describe this process in detail (20 minutes)

- Background driven by the code
- Requirement that before someone undertakes a test on grid that could impact security of power system it's all agreed upfront so we understand what is going to happen, that's it's not going to impact the grid, will get the results
- There is a controlled doc that explains process from woe to go
- Matt is the owner of the process and is delivered by compliance and risk team
- It is initiated by asset owner
- They complete a template for a test plan – when, what, their assessment of risk
- It is submitted via an email address to Transpower
- Our engineers will pick up document and they would contact submitter and confirm next steps
- Our engineer will ensure that they understand the test plan and what it is trying to articulate
- If unclear they would go back to asset owner – might be iterative

- Would take info and perform engineering assessment using a power system simulator (TSAT) and VSAT, and Power Factory which is a general power modelling tool
- Depending on what the testing is might use one or more of these applications
- Would do assessment of the reserve requirements procurement in advance of the test
- Once happy feedback that can proceed, would have a signed test document, signed on behalf of SO by one of the compliance engineers, also confirmed by one of the senior managers
- Would go back to the asset owner and they would be locked and ready to go
- Closer to time would fall into another process, there may be come grid conditions parameters that may need to be met before the test can be run
- If couldn't get test to work/risk to great, would loop back to the asset owner but might give suggestions on how they could get it to work, i.e. change step loads from 50 MW to 40MW etc.
- We try to be proactive rather than saying no try again, we try and offer out expertise.
- There is an audit process. It could be selected as one of those five. It is not stipulated that these will necessarily be audited.
- The control document that captures this process has a review cycle that is work-flowed.
- The workflow used is on SharePoint.
- There are information libraries (structured databases) for the outputs of this process.
- There is potential that the asset owner is required to save documentation here as well
- The standardisation of the process is to put them into controlled documents
- The current output could be a little bit loose, maybe we could formalise the approval a little bit more –
- Have put in a reasonable amount of work we in getting good SharePoint sites setup
- Engineer assessment etc were stored on people's local drives and have now setup a centralised drive and folder structure so hopefully going forward, people will be able to find assessment etc, even if individuals have left the business.
- Documentation management is not something Transpower does very well – we have definitely tried to tighten that up downstairs.

On a scale of 0-10, 0 (not at all) to 10 (completely), how good is this process? (3 minutes)

7 /10

What are the positive attributes of this process - why did you give it a score of >0? (10 minutes)

- Enduring process – has been around for a long time – therefore well-defined and being through lots of reviews
- Is controlled in that it has reviews to keep it relevant and current
- We've had very few issues with actual testing on the grid

Nb: we don't know what would happen to the grid if we didn't run this process. But if we didn't I think we would expose the power system to undue risks and would be able to schedule reserves to cover that testing. So, part of the process actually prompts other process (reserves purchase).

What additional attributes would take to get this process to a 10? (10 minutes)

- Had identified could tidy up the approval process and notification to asset owner
- Approved one last week that was pretty loose, just a vague email – if more formal could look at workflow, put test plan into it, could see who has read and approved it. At the moment we might have a series of emails flying out there.
- Emails loose way of approving. Could be structured emails and saved.

If time, can you tell me about a work process in your current role that you have tried to formalise, improve, or design from scratch? What steps did you take? (20 minutes) If you have never tried to formalise, improve, or design a work process from scratch, what steps do you think you might take?

Use the example of >75% projects into FMIS

- Identify whether we need a process – will it add value?
- Has to be done with key stakeholders – so they need to be identified
- Can be done by thinking about the process inputs and systems/tools
- Who is going to need to undertake particular tasks in the process
- Once all agreed that process would be valuable and agreed who will be involved
- Like the approach where you sketch out the first attempt (prototype process and start agreeing with stakeholders)
- Once in a good state, it is about capturing who is doing it, when they are doing it, maybe ask the why again, what they might need to do that step, the rules associated with doing that step, and the assumptions
- The inputs and outputs of each step
- Then start the field trial to actually undertake process and review how it goes
- To finish off, once happy with it working, I would put it into a controlled documented or do as it is on the project framework as a Hub site
- Get the key stakeholders to sign off/endorse it
- Educate business, including users that the process exists
- Roll out training as required and put the feedback loops in so that it remains fit for purpose and environment has changed i.e. restructures so the right people
- In an ideal world a new process should be audited in the first 12 months – an external pair of eyes might pick up something that some much closer might have missed

- Would love to get to the point where there was a one-stop shop to access all of the processes – all same look and feel, you could find out inputs and outputs, tools and so on associated.
- We see it all the time with simple stuff, so when IST rolled out whitelisting, shut down power system for days because IST didn't understand the impacts on the power system software.

Thank you for your participation.

I will be spending the next few months analysing the interview results and planning the next steps for my project. My plan is to develop a tool to validate work processes, so the input you have provided today will be crucial to my projects success.

Would you like to receive an update on my progress later in the year? Would you consider taking part in an additional interview, a survey, or both once the tool has been developed? Yes.

End of Transpower Interview 1 for Masters Research

Transpower Interview 2 for Masters Research

Respondee 2 (R2) - 23 May 2018

Thank you for agreeing to participate in my research. Your time is very much appreciated. Please feel free to ask for a break at any time of required.

Just a bit of housekeeping, I am required to inform you of your rights with respect to the content of the interview.

You have the right to decline to participate or to withdraw from participation without penalty of any kind and without having to provide reasons

Acknowledged

Your responses in the research will be anonymised in data analysis and reporting

Acknowledged

You will be provided with the final transcripts of any information provided by you and you have the right to withdraw identifiable information you have provided prior to the collection of the data collection.

Acknowledged

I will be taking notes today, but I would appreciate the opportunity to record the interview to ensure I don't miss anything important, is this ok?

Agreed

What is your job title? (1 minute)

Acting Financial Controller

What are your roles and responsibilities? (5 minutes)

Looking after finance team which includes all finance functions excluding budgeting and management reporting – have got systems team, accounts payable, accounts receivable and billing, payroll, treasury settlements and reporting, taxation for Transpower group, statutory financial reporting, accounting for fixed assets and projects and all bank payments

What, in your opinion, are the attributes of a work process (as opposed to a work practice or activity)? (15 minutes)

- Usually more than one party involved
- Would need a bit of planning on what each party is going to do by when, and if there are any pre-processes – hard and soft deadlines
- Ensuring everyone understands whole process and their part in it
- Unless you know true meaning of what process is supposed to be doing so they understand the end goal
- Important to have some check in points to ensure everything is progressing as you think – no point in waiting to the end to find out everyone isn't on the same page
- If it involves lots of people involved on the same document, having good version control is very important – i.e. on a financial statement
- When process is finished – getting people together – what went well, what didn't, and trying to refine it for next time.

What percentage of your work area is formalised into work processes? Is that an appropriate percentage for your work area? Why? Discuss (5 minutes)

Very heavily on processes – over 80-90%

Yes

Needs to have – because a large part of the finance team is transactional processes needs structured rigid processes to ensure we do it the same way each time. Also, the processes get internally audited.

They get Deloittes to do internal audit looks at processes – certain standing items they look at each time. Look at processes and sampling i.e. for accounts they look at who does each

step, controls – how do you know when it's gone right and wrong – lots of systems checks and segregation of duties in finance is something they are big on.

What is the name of one formalised work process from your current role? (1 minute)

Year-end statutory accounts

Please describe this process in detail (20 minutes)

- Happens once a year 30 June
- Process starts back in May and ends in mid-august
- Starts with finance team coming up with timetable – important because more than one person involved in coming up with statutory accounts
- Timeline lays out the different issues they we need to think about for y/e and what potentially we are going to do about those
- One of the big issues this year is asbestos
- Starts with hard deadlines
- When do we need to send to finance committee and CEO
- What is the latest we can give to auditors to give them time to review and find errors
- And then build a series of soft deadlines to give enough time to deliver hard deadlines
- Looking at what processes need to happen first to do subsequent processes
- And then assign processes
- Make sure everyone knows that their part is and make sure everyone thinks that is doable
- Some pre-work before we start doing accounts – i.e. look at unresolved accounts issues
- Make sure everything is well documented so we can show things to auditors as soon as they ask
- There is a lot of key files that need to be prepared in advance
- Feeding into financial statements there are a lot of work papers
- Looking at all these documents I would look at what we did last year – is there any changes i.e. is there anything additional we need to disclose (or remove) due to changes required either from changes to accounting standards or from Transpower refining how we present data
- Check if anything has happened to the Transpower's underlying data – e.g. are there a whole lot of accounts that have been setup in the maintenance area which would necessitate a change in the template
- Because it is such a tight deadline the auditors do their checks in two stages.
- First visit they look at the first 11 months of the year (in June), and they would also look at a lot of the key processes that finance, and check if there has been a change in personnel in year, any changes in systems
- They would do a bit of sampling – spot checking
- In second visit in July they don't look at processes, they just look at what has happened to the numbers in the last month.
- Start populating statutory accounts on 1st July with all the pre-work that we have ready to go and we answer auditor questions

- Usually have a net profit figure in two days, CEO and CFO like to know this after a couple of days, quite a tight process, that's why we like to do a lot of pre-work
- More often than not that profit doesn't change after – if the process has been done properly
- The actual population of accounts is usually done by 2-3 people so people can work on different things at the same time
- Andrew will then look at the overall process and everything looking good
- Would also send stuff to auditors and CFO at the same time and weigh any feedback that happens there
- Because the review goes to auditors and CFO at the same time, version control if extremely important
- Once all the working papers are done they are fed into one big excel workbook
- Because it's a tight timeframe and people feeding back stuff all the time we need very good version control so we number each version with each change and the date
- Once we get to a set number of changes we would release the new version – so log of who he has given it to is very important
- Also built in error checks tab in front of spreadsheet because spreadsheet is long and so many moving parts
- Before it gets sent to audit and finance committee we need to get it in the nice version for website and printing
- Series of checks on the website/hardcopy version
- Ultimate deadline is when board signs off statutory accounts in mid-august
- Grunt work done by committees
- Audit and finance committee (three member of board) in two stages. For the meeting in May finance would put up a paper on key accounts issues and proposed treatment and then finance would put up a paper for August to discuss final treatment.
- Transpower has access to the audit and finance committee – talk a lot about areas requiring judgment i.e. Have we got enough understanding of the asbestos problem to make a provision in accounts.
- Meet in mid-August, audit and finance committee members would go through in detail financial statements and ask management questions
- They then recommend to board that the statements should be signed by appropriate member/s of board
- Same day the accounts are published to NZX and shareholder (government) and put on website

On a scale of 0-10, 0 (not at all) to 10 (completely), how good is this process? (3 minutes)

9 /10

What are the positive attributes of this process - why did you give it a score of >0? (10 minutes)

Because it's a process we do every year and every year we review and see what we can make better – so over the years we have it well honed

It helps that Andrew has done the process for the last 13 years

One three occasions someone else has come in and run the process and Andrew didn't need to be heavily involved, he set out the structure out and then the person followed the steps and good result.

Had a couple of big changes over the years. First big change was when Transpower moved to a completely new set of accounting standards. Before 2010 NZ had a simple set of standards, then there was a big move to get consistency across the world so most of the world changed to follow the standards issued by the international accounting standards board – so there was a big process in 2010 to convert over to the international reporting standards which required a complete overhaul of reporting and disclosures. Andrew worked on this full time for a year including going to courses, writing analysis which got peer reviewed by PwC.

Another big change was a few years later – we looked at the process again once the new 2010 process was embedded, to review that new process and streamline and look at the value and readability of the information.

What additional attributes would take to get this process to a 10? (10 minutes)

Can't think of anything big that would change it – reluctant to give it a 10 though

If time, can you tell me about a work process in your current role that you have tried to formalise, improve, or design from scratch? What steps did you take? (20 minutes) If you have never tried to formalise, improve, or design a work process from scratch, what steps do you think you might take?

System based – had a problem with a contractor timesheet issue at Transpower. What was happened is that contractors were submitting invoice and working on various projects – simple process is that they submit invoice listing what projects they were working on. Problem was where people work in IST where they work on say 5-10 different projects and in theory they are supposed to list those 5-10 projects on invoice, so as a workaround we

were looking at their internal timesheet and manually splitting invoice across the different process

- Identified as a manual process prone to mistakes
- Decided to make a more system-based approach
- Identified who the people that are affected this problem (is it all contractors or just a group of contractors)
- Looked at all the different touch points in the process
- Asked myself 'how could I design a process that works for people that just worked on one project and also for people that work on multiple projects?'
- Conscious it would need to be automated and easy to follow
- If not easy to follow would be easy to go back to the manual process
- Would need to be something people couldn't get wrong (poka-yoke)
- Used one or two people to use as a pilot group
- Another key part of the process was documenting how the process was going to work
- Have lots of training in the new process
- While the process was new, Andrew designed quite a few check points to make sure that the process was working, and where it wasn't working was an indicator that more training would be required
- Once core amount of training done, process would be embedded, and then when new processes start they can just get the process from existing contractors (process becomes self-sustaining)
- Don't provide training now, pretty embedded.

Thank you for your participation.

I will be spending the next few months analysing the interview results and planning the next steps for my project. My plan is to develop a tool to validate work processes, so the input you have provided today will be crucial to my project's success.

Would you like to receive an update on my progress later in the year? Would you consider taking part in an additional interview, a survey, or both once the tool has been developed? Yes.

End of Transpower Interview 2 for Masters Research

Transpower Interview 3 for Masters Research

Respondee 3 (R3) – 09/05/2018

Thank you for agreeing to participate in my research. Your time is very much appreciated. Please feel free to ask for a break at any time of required.

Just a bit of housekeeping, I am required to inform you of your rights with respect to the content of the interview.

You have the right to decline to participate or to withdraw from participation without penalty of any kind and without having to provide reasons

Acknowledged

Your responses in the research will be anonymised in data analysis and reporting

Acknowledged

You will be provided with the final transcripts of any information provided by you and you have the right to withdraw identifiable information you have provided prior to the collection of the data collection.

Acknowledged

I will be taking notes today, but I would appreciate the opportunity to record the interview to ensure I don't miss anything important, is this ok?

Agreed

What is your job title? (1 minute)

Investigations Project Manager

What are your roles and responsibilities? (5 minutes)

- Manage projects from an initial stage up to delivery business case including options analysis and concept design
- Procuring consultant services
- Environmental inspections
- Running workshops for risk analysis
- Writing and approval of business cases for capital projects

What, in your opinion, are the attributes of a work process (as opposed to a work practice or activity)? (15 minutes)

- Would have some defined inputs, some sort of standardised action you do with inputs, and a specification or template of what you expect as an out of the process
- In that middle bit, the standardisation, that's what is documented in process descriptions, maps and the roles and responsibilities of the people involved in it
- Inputs, in this case would be documents, or data, or specifications – in terms of example process – procurement, the inputs would be requirements, a scope of works, standard terms of Transpower, timeframe, budget and that goes into the big process, which then goes through an appropriate process with an output being a signed Statement of Works and a purchase order
- Sitting behind process is company policy, regulations, rules etc which you are relying on procurement to tell you what they are
- I don't think it has to be documented to be defined as a work process by the way. They could just be done all the time and they'd still be a work process
- Its complexity, the number of inputs, not necessarily that more inputs means more complexity
- You might find that another attribute is its interdependency with other processes
- Also, how well its documented – what kind of artefacts you have to support the process, what kind of templates you've got
- Another would be to do with oversight – assurance. Some processes happen because they happen, other processes need to be checked, approved. So, in procurement process things above a certain dollar figure you'd need something with Delegated Financial Authority, below that you just document what procurement process you have gone through.
- There might be something about how formal the process is – at one end might be quite informal at other end highly specified about exactly how the process should be done for different types of inputs. So, under 50k you can choose whichever consultant you like and document that in a memo, above 50k there is a whole level of extra process involved, tender process, tender for services, long timeframes, assess tenders. The only requirement at the lower level is that you have written it down somewhere, and why.
- There's a process owner – in the procurement process the process owner would be the procurement tea, so they want us to get best value out of suppliers and that we meet our obligations of govt procurement requirements, so they own that process, so if there are changes, they have sign off on how its changed.

What percentage of your work area is formalised into work processes? Is that an appropriate percentage for your work area? Why? Discuss (5 minutes)

60% - yes, I think it would be easier to think you have a higher percentage. A big part of job is soft skills, running meetings, interacting with people. Would be hard to proceduralise. Only stuff that has regulatory requirements, approvals or whatever. The least process you can get away with and still meet regulatory requirements etc the better. Ensure avoid conflicts of interest, meet government procurement rules, make it efficient and fair. Without process everyone would run different types of tenders, etc. the process helps to even out lumps and resource requirements.

What is the name of one formalised work process from your current role? (1 minute)

Engineering Consultant procurement

Please describe this process in detail (20 minutes)

- Start with a requirement for engineering consulting services which is usually doc in a scope of works from Project Engineer
- Depending on scope can either go down tender path or sole sourcing based on which resource is available and most quality
- Prefer to sole source to panel but if they can't do it can sole source outside panel
- Tendering process is most complex – needs a request for service – sets out information requirements, timeframes, scope of work, type of contract – fixed price, time and materials or target price
- Consultants get four to five weeks to respond
- Receive all tenders and assess based on criteria
- Right at start you need to write a procurement plan, says who will assess tender, criteria etc and that will be approved by DFA – by people with preapproved DFA.
- So, with procurement plan, which set out assessment, you should first assess non-price criteria, experience, schedule submitted, past experience with consultant/ people, can put your own criteria – then evaluate price stuff in isolate
- Review prices of tender submissions, get a set of scores, it should be the tender submission that get the highest score gets the work.
- Spreadsheet first then document into report which recommends finding and that is signed off by the person that signed off procurement plan. You can then go through final stage of pricing, finalising details, both parties sign that off and that is the contract that we will be working to, then do purchase orders and that is the start of the work.
- Interrelated purchase order process

- For lower value, still do a procurement plan (<50k) DFA sits with investigation pm so they can sign off their won procurement plan. And can skip all the tender process and sole source. Still do a statement of works and a purchase order.
- If skills can't be met by panel members, similar process, get a quote from potential supplier and they come back with some sort of pricing/rates, put that into a general services agreement and then SoW needs to signed off by right DFA holder.
- There is a range of other processes which sit behind that process.
- There is also a five-yearly process to determine who the panel members will be. Done by different people and Investigation Project Manager doesn't get much exposure to that process.
- Do surveys of consultant performance – someone is meant to come to Andrew about how the consultant performed and that inputs into the relationship discussions. Nothing for non-panel members. Not documented, no records kept – anything like that.

On a scale of 0-10, 0 (not at all) to 10 (completely), how good is this process? (3 minutes)

6 /10

What are the positive attributes of this process - why did you give it a score of >0? (10 minutes)

- There is a set of templates for contract conditions
- There is a panel of preferred consultants
- Templates for approvals, assessment process so not reinventing wheel each time so good efficiency gains there
- Another positive is that with panel member you can manage resources because you can see what is going out to them
- Because it quite standardised consultants know what to expect meaning more efficient for them to get responses back to you – timewise
- That's the key thing, because some standardisation you get some efficiency and other people know what to expect, common language about what stage of the process you are at, people know what is needed at that stage etc.

What additional attributes would take to get this process to a 10? (10 minutes)

- Probably a little bit too much complexity in some stages
- i.e. spreadsheet with lots of numbers and some suspicion about how reliable it is in giving good outcomes
- Similarly, you've got one or two too many signatures in process: signature to start process (procurement plan), to choose who use, SoW, Purchase Order could be reduced

- When looking at overall process, other than being a bit heavy with signoffs, it's pretty standard. GSA is helpful for non-panel, not much help suggesting who to use when not a panel member. Someone could do a terrible job and because we don't record that they could potentially be hired again and the survey results are adhoc and project managers don't see the scores and overall results for each engineering
- Takes 13 weeks from decide tender needed until getting contract out.

To get to a full 10 wouldn't have all that process – would have some sort of joint venture or partnership that would remove need for all the documentation and signoffs but realistically with regulations and rules that would be possible. But if it was that would make it a perfect 10.

If time, can you tell me about a work process in your current role that you have tried to formalise, improve, or design from scratch? What steps did you take? (20 minutes) If you have never tried to formalise, improve, or design a work process from scratch, what steps do you think you might take?

Cost control improvement. Looking at process around BCA and trying to improve that.

- Started by trying to document the current process in process map. Decisions, steps etc
- Identify from map and discussion where the inefficiencies or parts of process is not documented, not clear or whatever
- Next steps were to document the ideal/improved process to remove inefficiencies
- Took all the improved maps to stakeholders to discuss and get input and feedback then
- Then set out assurance including some performance targets i.e. one week for signoffs
- Then you have to implement that, training, changes to system, plus ongoing support and training for people that use that process – not done, needs to happen. Updating all the artefacts included in that.
- Also reviewing reporting comes out of process, how long to get approvals etc, who is looking at the reports, make sure that matches what the requirements of the business are.
- After going through implementation – trying to measure the actual improvements - time taken, quality of information on BCA's, reduction in exceptions – check that process is working and if not repeat the improvement process.
- Probably the thing that is taking the longest is the consultation phase. Everyone involved has different drivers and requirements and sometimes competing and need to try and resolve those conflicts which isn't always easy.

Thank you for your participation.

I will be spending the next few months analysing the interview results and planning the next steps for my project. My plan is to develop a tool to validate work processes, so the input you have provided today will be crucial to my projects success.

Would you like to receive an update on my progress later in the year? Would you consider taking part in an additional interview, a survey, or both once the tool has been developed? Yes.

End of Transpower Interview 3 for Masters Research

Transpower Interview 4 for Masters Research

Respondee 4 (R4) - 8 May 2018

Thank you for agreeing to participate in my research. Your time is very much appreciated. Please feel free to ask for a break at any time of required.

Just a bit of housekeeping, I am required to inform you of your rights with respect to the content of the interview.

You have the right to decline to participate or to withdraw from participation without penalty of any kind and without having to provide reasons

Acknowledged

Your responses in the research will be anonymised in data analysis and reporting

Acknowledged

You will be provided with the final transcripts of any information provided by you and you have the right to withdraw identifiable information you have provided prior to the collection of the data collection.

Acknowledged

I will be taking notes today, but I would appreciate the opportunity to record the interview to ensure I don't miss anything important, is this ok?

Agreed

What is your job title? (1 minute)

Project Support and Services Manager

What are your roles and responsibilities? (5 minutes)

- Head up a project support team include admins and controllers
- They provide hands on admin and support to Transpower project managers in the field
- Business owner for the Project Server – Tipu

What, in your opinion, are the attributes of a work process (as opposed to a work practice or activity)? (15 minutes)

- Repeatable activity
- Measurable with regards to performance indicators
- Usually has an input and creates something as part of that process
- Will either move that out as an output to somewhere else in the organisation or out of the organisation as a product or a service
- Needs to have a defined customer (if you don't have a defined customer it needs to be debated as to whether the process is required)
- Defined requirements by the customer with regards to a set of quality criteria – could be turnaround times, quality of product or whatever you are creating – a set of acceptance criteria for the customer – need to be built into KPIs for measuring the process – which ultimately will enable you to make improvements
- A process isn't something that just happens, it needs to be documented – including procedural documentation for training
- Needs to be clear roles and accountabilities around process
- Depending on required integrity of process needs to be some sort of governance – when talking about governance means oversights – are KPIs being met, are people being trained correctly – gently tapping people back in line if they aren't working within the boundaries of the process – ultimately process fails if it isn't being followed.
- Process can be manual or can be systemised, it can be machine led (machine led can be in a production plant, manufacturing environment, i.e. process can be determined by the machines.
- May have multiple inputs and may also have multiple outputs and therefore multiple customers
- And fundamentally for a process to be successful it needs to be stable for a period of time (stability doesn't mean not changing, ultimately goal is to continually improve processes, but if you are constantly changing before you have even given processes time to settle and embed, I don't believe you will ever be able to gain the benefits of process management and improvement). Analogy invent a propeller for plane and before flying plan decide to invent a jet engine and then a rocket, if continue to do that will never get off the ground and fly.

What percentage of your work area is formalised into work processes? Is that an appropriate percentage for your work area? Why? Discuss (5 minutes)

Two questions there

First - what % is process based on definition given – most if not all of it. As a service delivery function, we are taking things from project managers, working on them, and then providing back to project manager.

Second, do our process meet those criteria and 30-40% or maybe even less meet that criteria.

What is the name of one formalised work process from your current role? (1 minute)

Purchase order process – relatively simple but quite important.

Please describe this process in detail (20 minutes)

- Overall purpose of process is to enable service providers to get paid by Transpower and therefore do work for us
- The process starts when a pm accepts a service providers proposal for the work to be done
- At that point to award the contract a purchase order is required
- The pm will provide an administrator with details about the purchase order, who the Service Provider is, how much it if for, what it is for, when they expect purchase order to be complete and that information is handed to administrator usually by email and the administrator will enter the info into Transpower's information management system, FMIS, a purchase order is entered into the system and a number of generated and provided to the pm, who then provides it to the sp.
- That in itself is probably a contained process because you the move on to the invoicing process which is separate, and then finally there is a purchase order close out process.
- Whether you would look at those three processes as an end to end process or as three separate processes? For ease of definition keep them as three because they have different inputs, they have different outputs, and their customers can vary across those three processes as well.
- There are defined customer requirements i.e. turnaround time as specified by the project manager, contractual requirements (Service Provider will not undertake work unless they have a purchase order)
- Therefore, specific system requirements that are defined by our finance department i.e.
- There is procedural based documentation that outlines how to raise a purchase order
- Obviously, the customers are defined
- However, there is no agreed service levels which are critical components to a good process
- There is no reporting because there are no service level agreements in place
- And there is no governance (not necessarily a group, even just any level of oversight). This is reflective of an organisation as a whole.
- There are also rules that are defined by finance around how we manage purchase orders but as there is no metrics and governance to enforce those rules on the whole

they are ignored which leaves the company open to risk. But how much risk is unknown. When there are issues, say for instance when a Project Manager steps out of certain prescribed boundaries, then the proverbial can hit the fan. i.e. pm in palmy steps outside the DFA boundaries, ultimately there is no document, clear documentation, that explain to him why he couldn't, he had seen other Project Manager's doing it, not doing it would have been detrimental to the delivery of his project and associated costs, which is what we are measured on and it is drummed into him by senior manager about how important it is to deliver projects, the pm did what he felt was right, yet we know it was not and the shit hit the fan, for him, his manager, and his managers manager. Process didn't come into it and again I think that speaks volumes about the organisation. There was no review about how the systems and processes allowed this to happen, if this is such a critical process. Everything we do in this organisation is people led and it was the people that were involved that were dealt with but there is nothing that has been put in place that would prevent this from happening again at a system and process level. And that is what good process is for. To prevent this type of thing from happening. I can understand from the CFO's perspective that line managers need to be held accountable when their staff step out of line but if our systems allow people to step out of line that's not a managerial problem, that's an organisational, cultural problem.

On a scale of 0-10, 0 (not at all) to 10 (completely), how good is this process? (3 minutes)

7 /10 in a beauty contest – ultimately it works, Service Providers get paid.

What are the positive attributes of this process - why did you give it a score of >0? (10 minutes)

- That it's a well-defined process – people know about it, understand it
- The majority of the process is systemised, which minimises the chance of variation and enables you to embed certain requirements
- It works – it creates a tangle output that is required – people want it.
- There is a very minimal failure rate but I could tell you exactly what that failure rate is – feeds into the -3
- It has a clearly and understood customer
- Customer has clearly defined their requirements
- Also, all process workers understand the process, understand the customer requirements, and know how to manage the process

What additional attributes would take to get this process to a 10? (10 minutes)

- We have four administrators with slightly different approaches
- No Service Level Agreement's
- It is not completely documented
- There are no measures in place because there are no SLA's

- Because no SLAs and measures, there is no governance and with no governance, improvement is piecemeal.
- Goes back to point about failure rates – I know they are not huge, but I don't know exactly what that number is, and I should the process owner – and that creates another question, am I actually the process owner, just because it is my staff that use that process, am I the owner of it, and I would say no, to be honest, because it is a process that is used by a number of people across the business and finance, who you would say are the logical process owners for it, believe they own the policy, but not the process, and I don't know how you own one without the other. All care no responsibility. You could say that the policy sets a number of quality requirements that need to be incorporated into the process, but something as widespread across the organisation needs to be centrally owned.
- Ownership falls under that governance thing. You use the word around here and people's arseholes tighten. But it can be very light touch, as simple as someone picking up a report and making decisions based on the outcomes of the report. It doesn't have to be 8 people meeting and poring over the information, and ownership is part of governance. Ownership should be ensuring when KPIs being met, understanding when not, looking for improvements, people are trained, people understand it.

If time, can you tell me about a work process in your current role that you have tried to formalise, improve, or design from scratch? What steps did you take? (20 minutes) If you have never tried to formalise, improve, or design a work process from scratch, what steps do you think you might take?

Will talk about a collection of processes, easier than talking about a single process.

Processes around controller framework.

- We sat down with one customer and defined their requirements
- And we scaled it which helped to define a set of service levels.
- Then presented end-product back to that customer and his peers, who in theory he was acting on behalf of when defining requirements
- We then took those requirements and as a group then mapped out the process.
- We worked through how we'd manage the process
- We put KPIs and reporting in place
- And then we also put governance in place
- Got signoff on solution from the customers
- What we didn't do was start to document in processes within the controller framework in detail
- That was going to be the next stage
- Assumed if customer was giving you requirements, it is actually something they want. You should never assume that.
- Probably failed to test, to ask why, what are you going to with it, what does this product enable you to do. Need to be an informed service provider. Didn't challenge.
- Has been handed over to someone else who will do something different with the team.

Thank you for your participation.

I will be spending the next few months analysing the interview results and planning the next steps for my project. My plan is to develop a tool to validate work processes, so the input you have provided today will be crucial to my projects success.

Would you like to receive an update on my progress later in the year? Would you consider taking part in an additional interview, a survey, or both once the tool has been developed? Yes

End of Transpower Interview 4 for Masters Research

Transpower Interview 5 for Masters Research

Respondee 5 (R5) – 30/04/2018

Thank you for agreeing to participate in my research. Your time is very much appreciated. Please feel free to ask for a break at any time of required.

Just a bit of housekeeping, I am required to inform (remind) you of your rights with respect to the content of the interview.

You have the right to decline to participate or to withdraw from participation without penalty of any kind and without having to provide reasons

Acknowledged

Your responses in the research will be anonymised in data analysis and reporting

Acknowledged

You will be provided with the final transcripts of any information provided by you and you have the right to withdraw identifiable information you have provided prior to the collection of the data collection.

Acknowledged

I will be taking notes today, but I would appreciate the opportunity to record the interview to ensure I don't miss anything important, is this ok?

Agreed

What is your job title? (1 minute)

Customer Solutions Analyst

What are your roles and responsibilities? (5 minutes)

- Primarily support customer solutions managers
- Analyse customer information received from Customer Solutions Managers and analyse and report – particularly projects
- Transmission pricing – assist pricing team – particularly in
- Customer secure website
- Also look after admin area in hub
- Any customer content on volt
- Customer surveys
- Manage CRM system

What, in your opinion, are the attributes of a formalised work process? (15 minutes)

- Documented
- Involves several teams and accountability is important
- Need to be able to monitor and control the deliverables
- Process evolves over several years
- Measurable
- Tracked
- Timeframes, workload, who does what in the process
- Having process helps to keep the activity within budget (i.e. HLR budget, to ensure we are not overspending on HLR's over the year) tracking High Level Response cost is part of process
- Gives timecode (no timecode no work)
- Which CSMs have the most that come in
- Helps plan how times can be reduced
- Use previous data (from say CRM) to estimate timeframes for future demand or to provide feedback to suppliers to process to manage customers' expectations
- Part of the process is to feedback to managers on performance outcomes, which may assist with dealing with customer complaints
- May assist with performance management of individuals, including the potential need for an increase in customer focus on their part
- If don't deliver on customer process we are keeping the customer informed
- Evidence of past approaches and of why they didn't work

What percentage of your work area is formalised into work processes? Is that an appropriate percentage for your work area? Why? Discuss (5 minutes)

~30%

- A lot are activity based and within that may be more formalised work processes – especially where interface with other areas
- Less likely to formalise work process is 100% is within own team
- Still may have notes on how to do stuff – more of a how to rather than how the process needs to happen. Some is more to assist with onboarding new people. You are writing down how you do it so much more relaxed about content. Higher level of formality where interface with other teams.

- Do get asked for formal documentation from external teams.

What is the name of one formalised work process from your current role? (1 minute)

- How we do billing

Please describe this process in detail (20 minutes)

- Triggered by annual TPM published in November of each year which hits CCM
- Pricing team start the process
- Charges are set throughout the year but individual charges can change
- Information for changes can come from multiple parts of the organisation (pricing, grid projects, Customer Solutions Managers, customers, CMS (contracts expiring), regulatory i.e., RFR and WACC updates
- Trigger is pricing, or if not coming from pricing, pricing will check, confirm, calculate or whatever and sign off on the change,
- Some changes may trigger a contract change i.e. moving Risk Free Rate date from July to April
- Letter sent to customer if change in pricing for next billing round and beyond
- Customer team and pricing team act as a form of internal assurance to each other to ensure that the right steps have been taken, i.e. letter to customer, contract updated etc.
- Once customers team who initiated changes satisfied that the charges have been updated correctly in CCM, the revenue team extract them, changes into a different format, send extract back to customer and pricing to check, and then once confirmed, revenue team update their system which populates invoice content for month.
- Revenue team keeps all relevant information for audit purposes.
- Invoices sent, and are either paid or queried
- Queries come back to customer team or pricing depending on which type of query.
- Process then may trigger other processes including updating grid charges schedule on the customer secure website and may involve an update to the CRM
- Potential process addition is to update the new pricing information in the contracts section of the CRM. Original intention was to move billing to CRM system, met with resistance so now update information in two places. Potential for data mismatches.
- CCM system is degrading, all sorts of error.

On a scale of 0-10, 0 (not at all) to 10 (completely), how good is this process? (3 minutes)

6 /10

What are the positive attributes of this process - why did you give it a score of >0? (10 minutes)

- Right people are involved in process and accountabilities are very clear
- Quite a lean process in terms of people reviewing, so can turnaround very quickly, i.e. less than hour a month in standard non-TPM change month
- Quite easy to get a single view of all the data that Carolyn needs to deal with in a month
- Secure system, not many people with fingers in pie (no-one knows it even exists) so little to no chance of changes being made to data without Carolyn's knowledge
- If something happens to system crashes, there will always be a copy of the months before extract as a worst-case scenario i.e. good data fall-back positions.
- The annual charge changes can be bulk uploaded quickly, used to take over a month

What additional attributes would take to get this process to a 10? (10 minutes)

- Cutting out repetitive steps in process – moving data from Zemindar, to spreadsheet, which gets manipulated, then sent and manipulated etc. lots of rooms for error. Especially at the revenue teams end very manual and if something cut and paste wrong it relies on someone with a keen eye to pick up on that.
- Process could be done largely between pricing and revenue team cutting out the customer solution team. Customer team would be more of a trigger than managing billing data.
- New system for pricing which if all information could be help in one system would increase traceability of charges and changes could do complete audit within one system and would provide security of historical content i.e. lots of spreadsheets for calculating charges.
- Current system doesn't allow for relatively simple data extracts like finding out how much money is outstanding with CIC's and NICs.
- Current documentation is more of a how to guide from Carolyn's perspective
- Memos from pricing to customer team are documented so that's good
- Two people in Transpower can do process, one with confidence, the other could probably bang his way through it with help from pricing and if he found the how to guide.
- If new manager wanted to know how billing operates it wouldn't be something she would find easily.

Interesting points

- Due to the state of the process/process documentation not sure it could be explained to someone easily without confusing them.

- Potentially the lack of a clear process could result in a system change that doesn't capture the potential for improvements in the process.
- People are potentially hesitant to tinker with process because of the amount of revenue involved (i.e. 100% of Transpower's income comes through this process)
- In the past, no one with mandate/influence understands the process enough to push for process change.

If time, can you tell me about a work process in your current role that you have tried to formalise, improve, or design from scratch? What steps did you take? (20 minutes) If you have never tried to formalise, improve, or design a work process from scratch, what steps do you think you might take?

Documented plenty of stuff. Part of trying to formalise contracts process. Showed what was involved in the end to end process for different contract types.

1. Identified main steps of process
2. Identified incoming stuff at each stage
3. Identified different parties at each step (who fed into each step)
4. Identified deliverables at each stage
5. Identified deliverables performance from customers point of view including how well we were performing that piece of work

Thank you for your participation.

I will be spending the next few months analysing the interview results and planning the next steps for my project. My plan is to develop a tool to validate work processes, so the input you have provided today will be crucial to my projects success.

Would you like to receive an update on my progress later in the year? Would you consider taking part in an additional interview, a survey, or both once the tool has been developed? Yes

End of Transpower Interview 5 for Masters Research

Transpower Interview 6 for Masters Research

Respondee 6 (R6) 2nd May 2018

Thank you for agreeing to participate in my research. Your time is very much appreciated. Please feel free to ask for a break at any time of required.

Just a bit of housekeeping, I am required to inform you of your rights with respect to the content of the interview.

You have the right to decline to participate or to withdraw from participation without penalty of any kind and without having to provide reasons

Acknowledged

Your responses in the research will be anonymised in data analysis and reporting

Acknowledged

You will be provided with the final transcripts of any information provided by you and you have the right to withdraw identifiable information you have provided prior to the collection of the data collection.

Acknowledged

I will be taking notes today, but I would appreciate the opportunity to record the interview to ensure I don't miss anything important, is this ok?

Agreed

What is your job title? (1 minute)

Auckland Development Manager

What are your roles and responsibilities? (5 minutes)

- Lead a kickass team to develop a strategy for Auckland's network into the future based on maintenance, future developments, political pressures.
- Team looks at a range of innovations in technologies
- Responsible for ensuring customer projects in Auckland are managed appropriately and problems and opportunities identified early.

What, in your opinion, are the attributes of a work process (as opposed to a work practice or activity)? (15 minutes)

A process for Rebecca is a tool that ensures consistency across a number of activities – so you would be able to cut into the activities and people would have a consistent way of working through them. Would be done in a consistent way – which would also be the most efficient way of doing the work.

- Written down
- People would know about it
- People would be actually doing it
- Process or parts of process need to be seen as of value (needs to make sense to person using the process) otherwise they would be resistant i.e. Rebecca recently got her passport renewed – parts thought were stupid, but probably valuable to people processing.
- Needs to do what it is supposed to do - process articulates outcome/s or output that is expected.

What percentage of your work area would you describe as work processes (as opposed to a work practice or activity)? Is that an appropriate percentage for your work area? Why? Discuss (5 minutes)

Rebecca own work – process very low ~5% – 95% practice

Her team – 50%/50%

i.e. following investigation-delivery framework

Both appropriate levels

What is the name of one formalised work process from your current role? (1 minute)

Investigation process

Please describe this process in detail (20 minutes)

- There is a documented way of doing process that is very comprehensive
- Numerous parties are part of process
- All parties should know
- 50% probably follow it
- It is meant to be flexible but people that do follow it follow it to the letter
- Designed for most complicated projects i.e. following to the letter
- Numerous, parts, people, timeframes,
- Purpose is to get consistency about how we investigations solutions to Transpower projects
- Outcome is a comprehensive handover to delivery phase to enable them to delivery project to time, cost, quality

On a scale of 0-10, 0 (not at all) to 10 (completely), how good is this process? (3 minutes)

7 /10

What are the positive attributes of this process - why did you give it a score of >0? (10 minutes)

- All the things on the list
- Well researched
- Written down
- Followed

What additional attributes would take to get this process to a 10? (10 minutes)

- Explanations on why each part is important and where it adds value
- The nature of the process presentation implies things happen in a linear and therefore people may not feel empowered to think about other ways i.e. do things in parallel to get the most optimal outcome for the particular investigation
- So still doing the process but maybe not highlighting to people that they could be working on future steps while they are waiting for something to happen.
- It doesn't create a sense of urgency to get through the process (discussed)
- Discussed upstream/downstream and how upstream should pass things downstream as early as possible to allow them to carry on with process
- Might be some things that could be automated in the process i.e. business cases

If time, can you tell me about a work process in your current role that you have tried to formalise, improve, or design from scratch? What steps did you take? (20 minutes) If you have never tried to formalise, improve, or design a work process from scratch, what steps do you think you might take?

Access and Occupation Schedule process

- Worked out who touched the process (inputs into process)
- Worked out who customers of process (internal and external)
- Worked out desired outputs and outcomes
- Got someone to process map
- Got stakeholders to review
- Identified pain-points
- Lots of arguments about process owners
- Checked that people in process understood their roles and why it was important
- Improved process
- Got someone to work on automating process
- Was implemented with reasonable success
- Then designated owner tried to own process back after 6 months because person that did it left
- Refused to take it back
- Assumed that process owner continued doing it.

Thank you for your participation.

I will be spending the next few months analysing the interview results and planning the next steps for my project. My plan is to develop a tool to validate work processes, so the input you have provided today will be crucial to my projects success.

Would you like to receive an update on my progress later in the year? Would you consider taking part in an additional interview, a survey, or both once the tool has been developed? Yes

End of Transpower Interview 6 for Masters Research

Transpower Interview 7 for Masters Research

Respondee 7 (R7) 10 May 2018

Thank you for agreeing to participate in my research. Your time is very much appreciated. Please feel free to ask for a break at any time of required.

Just a bit of housekeeping, I am required to inform you of your rights with respect to the content of the interview.

You have the right to decline to participate or to withdraw from participation without penalty of any kind and without having to provide reasons

Acknowledged

Your responses in the research will be anonymised in data analysis and reporting

Acknowledged

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Acknowledged

I will be taking notes today, but I would appreciate the opportunity to record the interview to ensure I don't miss anything important, is this ok?

Interview not recorded as per personal preference.

What is your job title? (1 minute)

Senior Business Analyst - Procurement

What are your roles and responsibilities? (5 minutes)

- System improvement initiatives
- Analytical support- particularly to category managers
- System admin for Transpower's Contract Management System (CMS)

What, in your opinion, are the attributes of a work process (as opposed to a work practice or activity)? (15 minutes)

- Systemising a task or series of tasks
- Definitely an element having something that is repeatable by different individuals but get high degree of consistency of output for the organisation
- In an organisation essential that there are certain elements need input from wide range of people throughout organisation – so process helps clarifies where touchpoints through organisation to get something done
- If practice is the habits, the process is a something that has been determined at an organisational or at least a group level
- How as opposed to what
- Doesn't have to be documented, often they are, but could potentially communicated verbally from person to person
- A key attribute of a good work process is that it is clearly communicated to stakeholders in some shape or form
- Rather than documented, it could be embedded in some sort of work system, i.e. workflow

What percentage of your work area is formalised into work processes? Is that an appropriate percentage for your work area? Why? Discuss (5 minutes)

- Not very much – with system administration for CMS come in and inherited some problems due to lack of a good process and process clarity so something I am working on at the moment is what a better process would be. So really, right in the middle of figuring out what a good process would be. Goal is to systemise so could be handed over to anybody. IT system not in a good state with data integrity because didn't have good work processes.
- Other parts of role are more open or fluid. Goal is to move into a more systemised approach. In prototyping stage. At the moment have a good little team and talk to people and that's how we get things done.
- For procurement specialists, probably 70-80% would be the ideal state, probably much lower at moment. For instance, new procurement specialist didn't feel he got a proper handover.
- Potentially more process there but not good process so not following it.
- In an optimal state might only still be 25%

What is the name of one formalised work process from your current role? (1 minute)

Process for Transpower to issue tenders out to market (any tenders is Transpower is issuing through the central Tenders team) i.e. panels for Engineering Consultant – higher value Service Provider work etc. open tenders for banking services etc. anything that is going out to the open market.

Please describe this process in detail (20 minutes)

- Easiest to talk about it through the lifecycle of a tender
- Tender specialist providing a service to internal customer (someone that needs to buy something) and people interested in doing work with Transpower
- Starts by trying to do a forward plan of their own work to get visibility of what is coming up
- At moment not very well linked in to other systems in Transpower
- Need to go around talking to people about what they are looking to tender
- When Project Manager ready to go to market they will go to tender team with documents they want to go to market
- They will let Tenders team who it should go to
- To prepare, Project Manager will have various documents (templates)
- Support to complete templates provided by another group
- Tender specialist will do a sanity checking on documents before release. Not experts but can check document completed etc. They will escalate if anything doesn't look right
- In review, an interesting question is what is the role of the Tenders team – they are not there to be experts – but can pick up obvious errors or omissions
- Will release the tender out through the chosen channel
- There are a few different channels they can use
- And they are a central contact point for supplier queries. They receive those queries and forward to right person and arrange for a reply to be sent back
- While the tender is open they can be making sure right preparation in place for evaluation i.e. Conflict of Interest declarations from evaluators
- Tender closes, the tender specialists downloads all the submissions and make them available through a restricted file area to the evaluators
- If there are any clarification questions the tender specialists can be the point of contact, arrange interviews for shortlist of candidates
- They are not in the evaluation team, and their next involvement can be where the evaluation team has been where the evaluation team is ready to go to next step
- Once ERR approved sited tender specialist will send outcome notification to suppliers
- Best to wait until signed contract before sending the notification to unsuccessful to suppliers
- Can run debriefs with suppliers, tender specialists do not run debriefs. Debriefs are opportunity for suppliers to provide feedback to Transpower process.
- And then once the debriefed has been offered and held, signals the end of the process for that tender.

Mentioned that the tender specialists have taken quite different approaches to their engagement with suppliers in past. Needs a good customer service to supplier whilst maintaining neutrality.

On a scale of 0-10, 0 (not at all) to 10 (completely), how good is this process? (3 minutes)

4 /10

What are the positive attributes of this process - why did you give it a score of >0? (10 minutes)

- I think the key elements/touchpoints are understood
- Already improving – have got new people in who are taking a fresh look and are escalating things and raising issues with managers and that's helpful – two new people that are excellent and willing to do things differently and they are pushing to get clarity.
- They are creating checklists and building a body of knowledge of how they are going to do stuff and agreeing it between them

What additional attributes would take to get this process to a 10? (10 minutes)

- Drilling down to next level of detail not clarified and worked through and too much variability due to different individuals completing process
- Handover documentation for new staff didn't go into any of the nuances – was in people's heads
- Key to this will be clarifying the roles scope and accountabilities and already had some good discussions about the role scope and accountability.
- Identified role should have a gatekeeper on quality (obvious errors and omissions including dates that don't confirm with minimum tendering times etc.) role and working with different customers and stakeholders and determining what they need.
- Potential to position the team and then selling the team services

If time, can you tell me about a work process in your current role that you have tried to formalise, improve, or design from scratch? What steps did you take? (20 minutes) If you have never tried to formalise, improve, or design a work process from scratch, what steps do you think you might take?

System level administrator for CMS. About 800 active users -and 30 super users who are responsible for editing contract information in system. Ongoing problems with data integrity in system – missing documents, records with no documents attached and so on

- The first thing was to get head around the existing process
- And just do it for a little bit
- Observe queries that we were getting from users
- Observe those trends
- Really trying to get out there and talk to user – so if someone emails a problem, go and visit them and learn directly from people, and about frustrations with systems and system administrators
- i.e. noticed lots of contracts in system marked as active that were well passed the review date – might be good reasons – like system asked for a hard date – so people had to complete even though contract was evergreen
- So, have been on an end-user engagement process on the last few weeks, offered info sessions and one on one sessions including training
- Within superuser group, a few that use it a lot and very adept. Others not as adept and don't have the same abilities
- Found there were issues with permissions so not all people were able to do things that it was assumed they were able to do – so logging in with different permissions we saw what they saw and gained a much better appreciation for their user experience
- There are access issues that are making things difficult for people like providing access to documents
- The system setup i.e. reminder emails caused a lot of complaints from project managers
- Have just started a brand-new reminder system
- Established super users number one priority is the access issue - so gives us a clear pain point to focus on
- Aim for this figure what best way to get things done, systemise it, document it, and then be able to easily articulate to people what we are doing
- And quite keen, suggested to manager that we might want to set some targets – corporate systems only as good as data that you put into it – so if you don't have clear targets in mind you can chase data integrity. Provided snapshot of integrity to manager and suggested some targets for certain numbers say reduce by 50% or get to 0 in six months.

Used journey mapping – provided email

Won't have a system that will work for everybody but looked at a system and tried to improve it for most people. 100% is not goal and would not want to overprescribe and need flexibility if exceptions come.

Thank you for your participation.

I will be spending the next few months analysing the interview results and planning the next steps for my project. My plan is to develop a tool to validate work processes, so the input you have provided today will be crucial to my projects success.

Would you like to receive an update on my progress later in the year? Would you consider taking part in an additional interview, a survey, or both once the tool has been developed? Yes.

End of Transpower Interview 7 for Masters Research

Transpower Interview 8 for Masters Research

Respondee 8 (R8) - 31/05/2018

Thank you for agreeing to participate in my research. Your time is very much appreciated. Please feel free to ask for a break at any time of required.

Just a bit of housekeeping, I am required to inform you of your rights with respect to the content of the interview.

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Acknowledged

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Acknowledged

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Acknowledged

I will be taking notes today, but I would appreciate the opportunity to record the interview to ensure I don't miss anything important, is this ok?

Agreed

What is your job title? (1 minute)

Senior Engineer Lines

What are your roles and responsibilities? (5 minutes)

- General these is looking at future work required on grid
- Looking at risk, asset types, condition data
- Writing business cases to get work approved
- Looking at expenditure forecasts for next 15 years

What, in your opinion, are the attributes of a work process (as opposed to a work practice or activity)? (15 minutes)

- Want to understand what you are trying to achieve by doing work process
- Want to understand time frames for whole thing and different bits
- Want to know who is involved, inside work process and who it is being done for
- Who does what – responsibilities and accountabilities in process
- Inputs into process at start and throughout
- The way the information/work/sub components of task and how they link together
- How they feed into each other – how the processes are linked to other processes or outcomes
- How well have you been doing it – is it effective?
- Are people following the process or doing something different – does it matter
- You can talk about flows in different ways – you can talk about hold points
- What tools you use
- How it aligns with your wider strategy or goals
- Depending on the process you might want to understand how people are doing each of the steps – at a procedure level – for some things you might want to be prescriptive and others you can let them do it however they like.
- How do people feel about the process – do they like it or not like it
- Relationships between people in the process
- How it gets changed – is there a process to change the process
- Is there stuff that needs to follow that process and other stuff that people can change?
- Maybe on the effectiveness thing how you might measure that over time – process metrics or something.
- Related to the problems, you could also have opportunities – like continuous improvement, people might not only see problems but also opportunities
- Maybe like the scope of what the process applies to – if you are using it for one thing can it be applied to other things, or adapted
- And you would have those components on the inside of the process and then others outside the process. Say for example AMPS system. Was driven by assets and forecasting, but then you could look at the opportunities between that tool and other things, so what opportunities could it create for outage scheduling or packaging of work. How changing the process outputs might help someone else with their work. May create new possibilities (and new problems of course).
- How other people are doing similar things – like benchmarking

What percentage of your work area is formalised into work processes? Is that an appropriate percentage for your work area? Why? Discuss (5 minutes)

- Doesn't feel like there is not enough
- Area relies more on standards and policies rather than having documented processes
- Have processes like decision framework, but not super prescriptive – doesn't feel like a process – feels like it is more detailed than it needs to be because the inputs are so varied and diverse. New decision framework is not driving different behaviours.
- Often when you do do process it is done by people that don't work in the process. Can be overly prescriptive about things that really need to be decided by the people using the process.

What is the name of one formalised work process from your current role? (1 minute)

Business case approval steps – Volumetric projects

Please describe this process in detail (20 minutes)

- Process results in a business case being approved and processed in the system ready for people to deliver the work
- I guess part of the process is documented and part overlapping with the decision framework
- When preparing volumetric business cases for lines stuff at least we'd get common data i.e. CA data
- Then we'd look at the scopes of work for past financial year
- Look at scopes for current and future financial years
- We would scope the work that is not already scoped, that is needed
- Depending on the size of the portfolio of the project, we'd write a business case using some of the templates (two potential templates)
- If writing one of the big business cases we'd probably grab one of the last years business cases and update for this year work
- Would populate the workbook and word document
- Once happy with the content, send it round for review to programme manager and to the portfolio owner
- Take any comments, update it, and then normally once we are at that point, we'd probably need to print out a hardcopy to go into the approval chain
- Collect signatures from programme manager, portfolio owner, Fiona, GMs, or Alex, and then Alison depending on DFA requirement
- Sometimes might send to Steve for checking, other times might setup meeting with GMs to talk through issues before signing.
- During that process you might get more questions.
- We also ensure that the business case and FMIS match in terms dollars, deliverables and device positions
- Then send approved business case to BC processing

If using business case lite, the process for calculating IDC, CPI etc involves getting the details right up-front. The spreadsheet doesn't draw numbers directly from FMIS.

That part of the process involves people putting things down/picking them up more.

On a scale of 0-10, 0 (not at all) to 10 (completely), how good is this process? (3 minutes)

5 /10 – in my mind there are elements that are way worse

What are the positive attributes of this process - why did you give it a score of >0? (10 minutes)

- Gets stuff done – into pipeline
- Good to make sure we are getting stuff out the door
- Good that there are templates for people to use
- Good there is a template for big and for small BC's
- There is a step that ensures that the data in system matches what you are writing in the approvals document
- Good that we can copy paste from last year's business cases
- Using last year's BC's new people can pick up document and start being productive, they don't need to understand the full narrative to start with
- Maybe over time it's good that the General Managers are familiar with the types of work they are approving

What additional attributes would take to get this process to a 10? (10 minutes)

- Sometimes templates break between iterations
- I think the need to pick it up again, particularly if you are doing smaller BC's, increases likelihood you will forget things, longer to restart etc
- Sending around a paper copy isn't ideal
- Not knowing where things are in approval chain unless you chase/follow-up with the EAs and things.
- Probably an increase of approvals required before deadlines – so lots more work for people to do in certain periods

- Not a fan of once size fits all approval process for all volumetric – some urgent and responsive work and then some is less urgent, but all requires approval up to two years ahead of time, asking for more information than can be reasonably provided.
- Using the wrong tools for the job i.e. putting device positions in FMIS and then using that as the way to communicate device positions to the business.

Can you tell me about a work process in your current role that you have tried to formalise, improve, or design from scratch? What steps did you take? (20 minutes) If you have never tried to formalise, improve, or design a work process from scratch, what steps do you think you might take?

- Figure out what process or outcome I am thinking about
- Find out who is involved in the process
- Who is affected by the inputs or outputs or the doing of it
- Would catch up with some of the key users and understand what is happening
- Catch-up with some of the key stakeholders and owners – understand how they see things, what working, what's not, are they getting what they need- any ideas (would do that with the people are using it as well)
- Ask the people involved if they see value in formalising/writing up the process
- Right back at start, find out if a process already existed
- Probably do mock-up a process – overview picture and ask people involved to come and talk about it, provide feedback on it
- When it was in a state that people agreed it was a good process – something we should work with, write it up and put it somewhere where people could find it
- Figure out some sort of change management plan so people know it's there and how it works
- Set up some sort of feedback loop so people could see how's it's going and set up some sort of evaluation check after it has been used for a while

Thank you for your participation.

I will be spending the next few months analysing the interview results and planning the next steps for my project. My plan is to develop a tool to validate work processes, so the input you have provided today will be crucial to my projects success.

Would you like to receive an update on my progress later in the year? Would you consider taking part in an additional interview, a survey, or both once the tool has been developed? Yes

End of Transpower Interview 8 for Masters Research

External Interview 1 for Masters Research

External Respondee 1 – 25 May 2018

Thank you for agreeing to participate in my research. Your time is very much appreciated. Please feel free to ask for a break at any time of required.

Just a bit of housekeeping, I am required to inform you of your rights with respect to the content of the interview.

You have the right to decline to participate or to withdraw from participation without penalty of any kind and without having to provide reasons

Acknowledged

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Acknowledged

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Acknowledged

I will be taking notes today, but I would appreciate the opportunity to record the interview to ensure I don't miss anything important, is this ok?

Agreed

What is your job title? (1 minute)

CEO Nelmac Limited

What are your roles and responsibilities? (5 minutes)

- Strategic planning
- Reporting to board
- Leadership of SLT
- All operations of company
- Profitability, safety, quality etc
- Answerable to board
- Headcount ~280 headcount (perm ~230)

What, in your opinion, are the attributes of a work process (as opposed to a work practice or activity)? (15 minutes)

- In our safety space we have 'work as imagined' – sitting down and working out the safest most efficient way of delivering a task; then we also have 'work is done' – the way it is undertaken by people with all the vagaries of being done by actual reality
- There is always going to be a gap between process as written and process as done. A good as written process would understand this and work to get as close as possible to the work as done, understanding the vagaries and variability of humans and the environment (time pressures, weather, inputs, traffic, condition of asset etc) of the demands of doing the work.
- Succinct, Descriptive, Memorable, Achievable
- Certain amount of standardisation where applicable (not rigid so a robot could do it)
- Clear expectations around do's and don'ts
- Identifies key risks of derailing process and outcome
- If process doesn't allow them to deliver the outcome people will shortcut the process
- Process socialised (so not dreamt up)
- Ability to receive ongoing feedback - ability to learn
- I think we have made process needlessly complicated – almost needs to be graphical in its delivery – short, sharp, succinct, clear in educating you on what you need to do, and how lessons are incorporated
- Thinking about how the audience thinks and learns and tailoring the collateral to their learning styles i.e. kinaesthetic
- The people are trying to get to an outcome and you are giving them inputs that they don't necessarily understand and they haven't learned or can't be arsed.
- You almost need to road test it. Quite often we create perverse outcomes – some processes make absolutely sense when doing it on a computer and but without living the process – there is that gap between creating processes and undertaking the process.
- Lee mentioned a guy that goes out with workers and learns how it is done and how it could be improved (company out of Christchurch called Kinetics – did it in electricity space).
- It's got to be helpful – the user must be engaged to want to use the process – lots of companies have great processes that no-one uses. Mentioned Simon Sinek. People need to understand the why. If you can't answer the why of developing – and the people don't understand that why, you failed.

What percentage of your work area is formalised into work processes? Is that an appropriate percentage for your work area? Why? Discuss (5 minutes)

- Just about all of it
- If you think about standard operating procedures, it depends from what angle too. Some is from regulatory, some from safety, some from business compliance, I wouldn't say its all right, but you think it is all mapped.
- A process system for Lee (what he was looking for) was a centralised searchable sops so you name what you need and you'd be able to find a process for that.
- And it's a central source of truth for people

What is the name of one formalised work process from your current role? (1 minute)

End to end recruitment process

Please describe this process in detail (20 minutes)

- Proof and development of position description
- Approval to recruit a position
- Market the position externally, internally, poaching or whatever
- Identification of the candidates
- Shortlisting of candidates
- Interviewing the candidates
- Identify the preferred candidate
- Reference checking
- Criminal checking, drug and alcohol testing
- Approval to offer to the person (all about the remuneration package and terms)
- Determine what the position/person will require to do job (car, PPE etc)
- Determine required systems computer, email, access to systems, tablet, and systems they need to interact with i.e. accounting
- Send out contract and offer
- Then get candidate acceptance and signing
- Then start the onboarding process
- Aiming for 40 days end to end recruitment process (current average is 51)
- Then there is induction and onboarding

Looking at getting ELMO – important on how to engage with new employees. We think ELMO will streamline and automate, but also create an attractive perception for new staff.

Use workflow around dispatch, acceptance, completion and closure of certain jobs.

Also use Vworks (Sam Morgan business)

On a scale of 0-10, 0 (not at all) to 10 (completely), how good is this process? (3 minutes)

4 /10

What are the positive attributes of this process - why did you give it a score of >0? (10 minutes)

Because it prompts and requires most of the elements to completed

It ticks all the boxes in terms of compliance, information required, and approvals

There is a measure - KPI of 40 days (though currently 51 days)

Need to be careful of market dependant KPI's i.e. KPI's that were developed at a point in time that doesn't adjust for changing conditions.

What additional attributes would take to get this process to a 10? (10 minutes)

- At moment it is just compliance
- Becomes far more user friendly
- Quite onerous and lots of tasks for internal users
- Don't know what it is like for people being recruited
- Don't want the process to turn people off (internal and applicants)
- There is a war for talent - needs to be easy and slick
- Need to be able to understand where is the lag/s in the process
- If we take too long people will be gone
- Confident that they can get to the root cause of the problem

Risk rating

1. What do we need to do?
2. What can we not do?
3. And what will make the boat go faster?

Lee thinks some of the best process thinking in the country now is in the health and safety space

Used to measure everything in the H&S space and now they are putting an appropriate level of focus on the high impact (death and serious injury) and less on lower injury activities. Should still measure the smaller stuff.

Mentioned work as imagined/work as done – there is a certain amount of variability – assuming people following process – for auditor – need to engineer out the possibility of blaming people. But if people maliciously shortcut the process, that's different.

If time, can you tell me about a work process in your current role that you have tried to formalise, improve, or design from scratch? What steps did you take? (20 minutes) If you have never tried to formalise, improve, or design a work process from scratch, what steps do you think you might take?

- Whenever designing process certain amount of historical knowledge, you are bringing to the process. You pretty much know a lot about the process already.
- You find subject matter experts because you need people that have done it – workshop it – who is in the workshop is important – if you don't have that internally go out and find it
- It more about how you facilitate workshop (or just a meeting)
- Work out 3-4 outcomes/principles you need to address
- Might be scope, dollars, environmental
- Brainstorm a whole lot of stuff
- Define draft process from those rules
- Go out and road-test i.e. user acceptance training
- Gets people used to the process and see if it is any good
- Trying to work out key outcomes, and inputs
- Put rules in to narrow down key principles
- Process design is iterative so could take 3-4 goes to nail it. I don't believe you can get process done first time

Tools

- Bluesheets – strategic selling tool
- Define opportunities – i.e. Lee knows his best opportunities are in cities with populations of <70k
- Put the reduced number of opportunities into strategic selling process
- Go and talk to people and then potentially reduce opportunities further
- Then work out who the key people are on who is going to do it

Thank you for your participation.

I will be spending the next few months analysing the interview results and planning the next steps for my project. My plan is to develop a tool to validate work processes, so the input you have provided today will be crucial to my projects success.

- Define system that has problems
- Identify the improvement possibilities
- Make recommendations and justifications (i.e. business case)

Would you like to receive an update on my progress later in the year? Would you consider taking part in an additional interview, a survey, or both once the tool has been developed? Yes

End of External Interview 1 for Masters Research

External Interview 2 for Masters Research

External Interviewee 2 - 25 May 2018

Thank you for agreeing to participate in my research. Your time is very much appreciated. Please feel free to ask for a break at any time of required.

Just a bit of housekeeping, I am required to inform you of your rights with respect to the content of the interview.

You have the right to decline to participate or to withdraw from participation without penalty of any kind and without having to provide reasons

Acknowledged

Your responses in the research will be anonymised in data analysis and reporting

Acknowledged

You will be provided with the final transcripts of any information provided by you and you have the right to withdraw identifiable information you have provided prior to the collection of the data collection.

Acknowledged

I will be taking notes today, but I would appreciate the opportunity to record the interview to ensure I don't miss anything important, is this ok?

Agreed

What is your job title? (1 minute)

Managing Director – Switch Lighting (27 on payroll)

What are your roles and responsibilities? (5 minutes)

- Overall strategy
- Responsible for the culture of organisation
- General systems and process overviews – setting direction
- Big part to play in sales and marketing in general – a lot of customer head office relationships
- Set product pricing/margins

What, in your opinion, are the attributes of a work process (as opposed to a work practice or activity)? (15 minutes)

- It must be a process that is simple, and concise, and has to have repeatability
- Expect that the environment is organised
- Needs to go through the whole system – look in system has all the product information including part numbers, suppliers, location, which product does it belong to, tells you when you need to order more of it – when I walk around I want to know what needs ordering
- There are people that own particular aspects
- Needs everyone to understand upstream and downstream effects so when they make a decision they know who it will impact
- We should never have a stock out situation – would include audit with our suppliers, regular communications so if they are out of stock we can plan appropriately
- Needs to be communication through the whole chain

What percentage of your work area is formalised into work processes? Is that an appropriate percentage for your work area? Why? Discuss (5 minutes)

- Have some process in all aspects of the business
- Would have the most process around inventory as it is the biggest part of the business
- Have an inventory management system
- Processes probably not very well documented
- We have a workflow for managing sales orders (receiving an order from a customer through to 'is the product available and if not, how is it ordered'). Big process around this because that was where we were getting mistakes.
- Had issues with wrong products being made due to input errors
- Have a somewhat paper-based system – have processes to double check now but mistakes still happen
- Happens generally because people are busy, so they do a quick scan

- An area where there is little process is in product development
- Extremely non-process driven

- Are some procedures – quite a few documents – but even if they are filled out nothing will happen for them because there isn't one person responsible for managing that process
- Low process because of the personality/mindset not process driven, filling out paperwork is a pain in the arse – to even have a place to meet was deemed a waste of time, money and resource.
- People like that can't see things in advance, but in hindsight they see the value

What is the name of one formalised work process from your current role? (1 minute)

Sales order process

Please describe this process in detail (20 minutes)

- Everyone that places an order needs an account with credit check
- Starts with all orders received in email
- Goes to sales inbox
- Person opens email and print order, move email into dealt with folder, take printout and type the line items into system

Several things can happen:

- If stock available they will complete order in system which takes order out of stock which creates picking and packing slip – attach those to customer purchase and goes into tray
- Dispatch clerk picks up the items and they have to write down how many of each they have taken on pick list
- They then have to sign and date it
- They will pack it in an appropriate box with packing slip
- Will go to shipping window on shipping system – click on order
- It will put address and they choose delivery option
- Print shipping label – and put it in the courier tray
- Courier picks up
- They will still have picking list and original order – they stamp with date
- That goes into completed tray
- That paperwork gets collected – goes into a historical file

If not in stock different process

On a scale of 0-10, 0 (not at all) to 10 (completely), how good is this process? (3 minutes)

Originally said 7 /10 then dropped rating to 5/10

What are the positive attributes of this process - why did you give it a score of >0? (10 minutes)

- It is quite efficient as far as a workflow
- The fundamentals are good

What additional attributes would take to get this process to a 10? (10 minutes)

- Hasn't been fine-tuned – doesn't have bin location – relies on locations in people head
- A lot of efficiency to be gained
- It is tailored around the inventory system which also constrains the process
- Can be prone to human error
- Needs software to integrate with customers software
- Pricing/quantities updated automatically
- Then only would need to print packing slip and shipping label

If time, can you tell me about a work process in your current role that you have tried to formalise, improve, or design from scratch? What steps did you take? (20 minutes) If you have never tried to formalise, improve, or design a work process from scratch, what steps do you think you might take?

Backstory – had a person managing sales orders – thought he was doing a good job until he went on holiday – Ged got a half hour handover and on Geds first day standing in email inbox was full and not all orders were completed in system. Lots of things were in the guy's head.

- Gerard called a meeting and talked about it.
- Used a mind-map type process and then put it into a flowchart
- Socialised the process with the internal stakeholders
- Tested the process map and did some tweaks
- Developed the trays, stamps, all sorts of stuff like, started to move things in inbox so that you could see that it was being processes, put notes into system

- That process is still being used today – there has been some minor tweaks – so when products are being back ordered, instead of putting them in a tray she puts it on a board on the wall and people can see it.
- Didn't take much, just needed someone to work through it.
- Still using the 'Unleashed' software, but using it better, putting statuses on orders so they can be tracked through to resolution
- A big thing that wasn't happening was that the shipments tab wasn't being used, so product was getting shipped, but it wasn't being depleted in the system, so it was impossible to trust the stock levels
- The guy that was doing it was very protective of his area and wasn't happy about his area being changed. Lasted about 8 months and then left.

Thank you for your participation.

I will be spending the next few months analysing the interview results and planning the next steps for my project. My plan is to develop a tool to validate work processes, so the input you have provided today will be crucial to my projects success.

Would you like to receive an update on my progress later in the year? Would you consider taking part in an additional interview, a survey, or both once the tool has been developed? Yes.

End of External Interview 2 for Masters Research

Appendix 2: WOF Assessments – Transpower and External

#	WOF CHECK FOR YOUR PROCESS Process name and estimated cycles per year: **Test Plan Process** Respondee # **1 (Transpower)**	Process check	Is this important for your process?	Pass / Fail	Group Summary
1. Work Process as a Whole					
1.01	Does the process have an appropriate and understandable name?	Yes	Yes	Pass	
1.02	Is the purpose of the process widely accepted and understood?	Yes	Yes	Pass	
1.03	Has the process coverage (what the process applies to/does not apply to) been defined?	Yes	Yes	Pass	
1.04	Have the relationships and interdependencies with other processes been defined?	Yes	Yes	Pass	
1.05	Does the process have a single accountable owner?	Yes	Yes	Pass	7
1.06	Has the method to change the process, including change signoffs, been defined?	Yes	Yes	Pass	0
1.07	Has the accountability and responsibility for coordinating the end to end process operation been defined?	Yes	Yes	Pass	100%
2. Customer					
2.01	Have the internal and/or external customers of the process outputs been defined?	Yes	Yes	Pass	
2.02	Have customers been asked for their opinions, needs, and wants, including service levels?	No	Yes	Fail	
2.03	Is customer service training provided to process participants?	No	No	Pass	
2.04	Have the ways in which customers influence and/or participate in the process been defined?	Yes	Yes	Pass	
2.05	Have checks been done on customers understanding of the process?	No	Yes	Fail	
2.06	Has the customer trigger for the process been defined and communicated to the customer?	Yes	Yes	Pass	6
2.07	Have pre-process checks been defined to enable confirmation to the customer that their needs can be met?	No	No	Pass	2
2.08	Are customers provided with progress reports once the process has been started?	No	No	Pass	75%
3. Products/Services					
3.01	Has a method for forecasting and resourcing for future product/service demand been defined?	No	Yes	Fail	
3.02	Has a method for understanding individual customer product/service preferences been developed?	No	No	Pass	
3.03	Has a method for incorporating individual customer preferences into the products/services been developed?	No	No	Pass	3
3.04	Has a method for checking customer acceptance of the end products or services been defined?	No	Yes	Fail	2
3.05	Has a method for dealing with customer feedback, including product and service suggestions, been defined?	Yes	Yes	Pass	60%
4. Work Practices					
4.01	Has the process been documented?	Yes	Yes	Pass	
4.02	Is the documentation regularly reviewed and updated when required?	Yes	Yes	Pass	
4.03	Is compliance with process steps managed in real-time?	Yes	Yes	Pass	
4.04	Is the method of checking process compliance defined?	Yes	Yes	Pass	
4.05	Is training provided to participants that undertake the process?	No	Yes	Fail	
4.06	Does training cover soft skills?	No	No	Pass	
4.07	Is the process documentation and collateral easy to find?	Yes	Yes	Pass	
4.08	Have the process inputs been defined?	Yes	Yes	Pass	
4.09	Have the input procurement processes been defined?	No	No	Pass	
4.1	Do providers of inputs, including external suppliers, receive performance feedback?	No	Yes	Fail	
4.11	Are the procurement processes for external suppliers transparent and fair?	No	No	Pass	
4.12	Has the trigger for the process been defined and communicated to those working in the process?	Yes	Yes	Pass	
4.13	Have all processes triggered by this process been defined?	Yes	Yes	Pass	
4.14	Is efficiency measured in the process?	No	No	Pass	
4.15	Have quality outcomes for the process been defined?	Yes	Yes	Pass	
4.16	Are quality checks that align with the defined quality outcomes undertaken?	Yes	Yes	Pass	
4.17	Are controls in place to reduce, eliminate or manage process failures?	Yes	Yes	Pass	
4.18	Are audits or assurance in place to measure process compliance?	Yes	Yes	Pass	17
4.19	Does the process have defined and used feedback loops?	No	Yes	Fail	3
4.20	Have the internal or external approval points (if any) been defined?	Yes	Yes	Pass	85%
5. Participants					
5.01	Has the single point of accountability process owner's needs been captured and reflected in the process?	Yes	No	Pass	
5.02	Do all relevant managers understand and support the process?	Yes	Yes	Pass	
5.03	Have the stakeholders needs been captured and reflected in the process?	Yes	Yes	Pass	
5.04	Does each step of the process have a clearly articulated owner?	Yes	Yes	Pass	
5.05	Is someone accountable for ensuring participants stay within the boundaries of the process?	Yes	Yes	Pass	
5.06	Can a sufficient number of people currently manage the end to end process?	Yes	Yes	Pass	
5.07	Is there an onboarding process for new process participants?	No	Yes	Fail	
5.08	Do process participants receive ongoing support and skills refreshers?	No	Yes	Fail	7
5.09	Are systems in place to ensure follow through on audit or assurance recommendations?	Yes	Yes	Pass	3
5.10	Are systems in place to record participants feedback and track resulting action?	No	Yes	Fail	70%
6. Information					
6.01	Have the in-process communication requirements been defined?	Yes	Yes	Pass	
6.02	Have service level agreements for customers been agreed?	No	Yes	Fail	
6.02b	Are sufficient steps taken to meet service levels agreements?	No	No	Pass	
6.03	Are customers requirements reflected in KPIs and reporting?	No	Yes	Fail	
6.04	Are in-process measures defined and tracked?	No	Yes	Fail	
6.05	Are process workloads managed and prioritised, including at peak times?	Yes	Yes	Pass	
6.06	Has process performance been benchmarked against similar peer processes?	No	Yes	Fail	4
6.07	Does historical process performance data exist?	No	Yes	Fail	5
6.08	Is the historical performance data used to improve future performance?	No	No	Pass	44%
7. Technologies					
7.01	Is the process documentation version controlled?	Yes	Yes	Pass	
7.02	Are the documents produced as part of the process stored in a document management system?	Yes	Yes	Pass	
7.03	Is IT systems training provided to process participants?	No	No	Pass	
7.04	Are the relevant system security restrictions/permissions appropriate for the process?	Yes	Yes	Pass	
7.05	Does the process use a workflow tool?	No	Yes	Fail	6
7.06	Is all important data relating to the process backed up?	Yes	Yes	Pass	1
7.07	Is the system data quality checked?	Yes	Yes	Pass	86%
8. Infrastructure					
8.01	Are organisational standards and policies applied as intended in the process?	Yes	Yes	Pass	3
8.02	Are appropriate checks made to ensure that the tools, templates and checklists used in the process are up to date?	Yes	Yes	Pass	0
8.03	Have the inputs from organisational teams such as IT, HR, Finance been defined?	No	No	Pass	100%
9. Environment					
9.01	Is the processes environment monitored for opportunities and threats?	No	No	Pass	3
9.02	Does the process meet external regulatory requirements?	Yes	Yes	Pass	0
9.03	Are the risks created by the operation of the process recorded, monitored and accepted/avoided/transferred?	Yes	Yes	Pass	100%
10. Strategies					
10.01	Is the process influenced and/or directed by organisational policies?	No	Yes	Fail	1
10.02	Is the process influenced and/or directed by organisational goals and/or strategies?	Yes	Yes	Pass	1
					50%

#	WOF CHECK FOR YOUR PROCESS Process name and estimated cycles per year: **Year-End Statutory Accounts Process** Respondee # 2 (Transpower)	Process check	Is this important for your process?	Pass / Fail	Group Summary
1. Work Process as a Whole					
1.01	Does the process have an appropriate and understandable name?	Yes	Yes	Pass	
1.02	Is the purpose of the process widely accepted and understood?	Yes	Yes	Pass	
1.03	Has the process coverage (what the process applies to/does not apply to) been defined?	Yes	Yes	Pass	
1.04	Have the relationships and interdependencies with other processes been defined?	Yes	Yes	Pass	
1.05	Does the process have a single accountable owner?	Yes	Yes	Pass	7
1.06	Has the method to change the process, including change signoffs, been defined?	Yes	Yes	Pass	0
1.07	Has the accountability and responsibility for coordinating the end to end process operation been defined?	Yes	Yes	Pass	100%
2. Customer					
2.01	Have the internal and/or external customers of the process outputs been defined?	Yes	Yes	Pass	
2.02	Have customers been asked for their opinions, needs, and wants, including service levels?	No	Yes	Fail	
2.03	Is customer service training provided to process participants?	No	No	Pass	
2.04	Have the ways in which customers influence and/or participate in the process been defined?	No	Yes	Fail	
2.05	Have checks been done on customers understanding of the process?	Yes	Yes	Pass	
2.06	Has the customer trigger for the process been defined and communicated to the customer?	No	No	Pass	6
2.07	Have pre-process checks been defined to enable confirmation to the customer that their needs can be met?	Yes	Yes	Pass	2
2.08	Are customers provided with progress reports once the process has been started?	Yes	Yes	Pass	75%
3. Products/Services					
3.01	Has a method for forecasting and resourcing for future product/service demand been defined?	No	No	Pass	
3.02	Has a method for understanding individual customer product/service preferences been developed?	Yes	Yes	Pass	
3.03	Has a method for incorporating individual customer preferences into the products/services been developed?	Yes	Yes	Pass	5
3.04	Has a method for checking customer acceptance of the end products or services been defined?	Yes	Yes	Pass	0
3.05	Has a method for dealing with customer feedback, including product and service suggestions, been defined?	Yes	Yes	Pass	100%
4. Work Practices					
4.01	Has the process been documented?	Yes	Yes	Pass	
4.02	Is the documentation regularly reviewed and updated when required?	Yes	Yes	Pass	
4.03	Is compliance with process steps managed in real-time?	Yes	Yes	Pass	
4.04	Is the method of checking process compliance defined?	Yes	Yes	Pass	
4.05	Is training provided to participants that undertake the process?	Yes	Yes	Pass	
4.06	Does training cover soft skills?	No	Yes	Fail	
4.07	Is the process documentation and collateral easy to find?	Yes	Yes	Pass	
4.08	Have the process inputs been defined?	Yes	Yes	Pass	
4.09	Have the input procurement processes been defined?	Yes	Yes	Pass	
4.1	Do providers of inputs, including external suppliers, receive performance feedback?	Yes	Yes	Pass	
4.11	Are the procurement processes for external suppliers transparent and fair?	Yes	Yes	Pass	
4.12	Has the trigger for the process been defined and communicated to those working in the process?	Yes	Yes	Pass	
4.13	Have all processes triggered by this process been defined?	Yes	Yes	Pass	
4.14	Is efficiency measured in the process?	No	Yes	Fail	
4.15	Have quality outcomes for the process been defined?	Yes	Yes	Pass	
4.16	Are quality checks that align with the defined quality outcomes undertaken?	Yes	Yes	Pass	
4.17	Are controls in place to reduce, eliminate or manage process failures?	Yes	Yes	Pass	
4.18	Are audits or assurance in place to measure process compliance?	Yes	Yes	Pass	18
4.19	Does the process have defined and used feedback loops?	Yes	Yes	Pass	2
4.20	Have the internal or external approval points (if any) been defined?	Yes	Yes	Pass	90%
5. Participants					
5.01	Has the single point of accountability process owner's needs been captured and reflected in the process?	Yes	Yes	Pass	
5.02	Do all relevant managers understand and support the process?	Yes	Yes	Pass	
5.03	Have the stakeholders needs been captured and reflected in the process?	Yes	Yes	Pass	
5.04	Does each step of the process have a clearly articulated owner?	Yes	Yes	Pass	
5.05	Is someone accountable for ensuring participants stay within the boundaries of the process?	Yes	Yes	Pass	
5.06	Can a sufficient number of people currently manage the end to end process?	Yes	Yes	Pass	
5.07	Is there an onboarding process for new process participants?	Yes	Yes	Pass	
5.08	Do process participants receive ongoing support and skills refreshers?	No	Yes	Fail	9
5.09	Are systems in place to ensure follow through on audit or assurance recommendations?	Yes	Yes	Pass	1
5.10	Are systems in place to record participants feedback and track resulting action?	Yes	Yes	Pass	90%
6. Information					
6.01	Have the in-process communication requirements been defined?	Yes	Yes	Pass	
6.02	Have service level agreements for customers been agreed?	No	Yes	Fail	
6.02b	Are sufficient steps taken to meet service levels agreements?	No	Yes	Fail	
6.03	Are customers requirements reflected in KPIs and reporting?	No	No	Pass	
6.04	Are in-process measures defined and tracked?	Yes	Yes	Pass	
6.05	Are process workloads managed and prioritised, including at peak times?	Yes	Yes	Pass	
6.06	Has process performance been benchmarked against similar peer processes?	No	Yes	Fail	4
6.07	Does historical process performance data exist?	No	Yes	Fail	5
6.08	Is the historical performance data used to improve future performance?	No	Yes	Fail	44%
7. Technologies					
7.01	Is the process documentation version controlled?	Yes	Yes	Pass	
7.02	Are the documents produced as part of the process stored in a document management system?	Yes	Yes	Pass	
7.03	Is IT systems training provided to process participants?	Yes	Yes	Pass	
7.04	Are the relevant system security restrictions/permissions appropriate for the process?	Yes	Yes	Pass	
7.05	Does the process use a workflow tool?	No	No	Pass	7
7.06	Is all important data relating to the process backed up?	Yes	Yes	Pass	0
7.07	Is the system data quality checked?	Yes	Yes	Pass	100%
8. Infrastructure					
8.01	Are organisational standards and policies applied as intended in the process?	Yes	Yes	Pass	3
8.02	Are appropriate checks made to ensure that the tools, templates and checklists used in the process are up to date?	Yes	Yes	Pass	0
8.03	Have the inputs from organisational teams such as IT, HR, Finance been defined?	Yes	Yes	Pass	100%
9. Environment					
9.01	Is the processes environment monitored for opportunities and threats?	Yes	Yes	Pass	3
9.02	Does the process meet external regulatory requirements?	Yes	Yes	Pass	0
9.03	Are the risks created by the operation of the process recorded, monitored and accepted/avoided/transferred?	No	No	Pass	100%
10. Strategies					
10.01	Is the process influenced and/or directed by organisational policies?	Yes	Yes	Pass	2
10.02	Is the process influenced and/or directed by organisational goals and/or strategies?	Yes	Yes	Pass	0
					100%

#	WOF CHECK FOR YOUR PROCESS Process name and estimated cycles per year: **Engineering Consultant Procurement Process** Respondee # 3 (Transpower)	Process check	Is this important for your process?	Pass / Fail	Group Summary
1. Work Process as a Whole					
1.01	Does the process have an appropriate and understandable name?	Yes	Yes	Pass	
1.02	Is the purpose of the process widely accepted and understood?	Yes	Yes	Pass	
1.03	Has the process coverage (what the process applies to/does not apply to) been defined?	No	Yes	Fail	
1.04	Have the relationships and interdependencies with other processes been defined?	No	Yes	Fail	
1.05	Does the process have a single accountable owner?	No	No	Pass	4
1.06	Has the method to change the process, including change signoffs, been defined?	No	Yes	Fail	3
1.07	Has the accountability and responsibility for coordinating the end to end process operation been defined?	Yes	Yes	Pass	57%
2. Customer					
2.01	Have the internal and/or external customers of the process outputs been defined?	Yes	Yes	Pass	
2.02	Have customers been asked for their opinions, needs, and wants, including service levels?	Yes	Yes	Pass	
2.03	Is customer service training provided to process participants?	No	No	Pass	
2.04	Have the ways in which customers influence and/or participate in the process been defined?	Yes	Yes	Pass	
2.05	Have checks been done on customers understanding of the process?	Yes	Yes	Pass	
2.06	Has the customer trigger for the process been defined and communicated to the customer?	Yes	Yes	Pass	8
2.07	Have pre-process checks been defined to enable confirmation to the customer that their needs can be met?	No	No	Pass	0
2.08	Are customers provided with progress reports once the process has been started?	Yes	Yes	Pass	100%
3. Products/Services					
3.01	Has a method for forecasting and resourcing for future product/service demand been defined?	Yes	Yes	Pass	
3.02	Has a method for understanding individual customer product/service preferences been developed?	Yes	Yes	Pass	
3.03	Has a method for incorporating individual customer preferences into the products/services been developed?	Yes	Yes	Pass	5
3.04	Has a method for checking customer acceptance of the end products or services been defined?	Yes	Yes	Pass	0
3.05	Has a method for dealing with customer feedback, including product and service suggestions, been defined?	Yes	Yes	Pass	100%
4. Work Practices					
4.01	Has the process been documented?	Yes	Yes	Pass	
4.02	Is the documentation regularly reviewed and updated when required?	No	Yes	Fail	
4.03	Is compliance with process steps managed in real-time?	No	No	Pass	
4.04	Is the method of checking process compliance defined?	No	Yes	Fail	
4.05	Is training provided to participants that undertake the process?	No	Yes	Fail	
4.06	Does training cover soft skills?	No	Yes	Fail	
4.07	Is the process documentation and collateral easy to find?	Yes	Yes	Pass	
4.08	Have the process inputs been defined?	No	Yes	Fail	
4.09	Have the input procurement processes been defined?	Yes	Yes	Pass	
4.1	Do providers of inputs, including external suppliers, receive performance feedback?	No	Yes	Fail	
4.11	Are the procurement processes for external suppliers transparent and fair?	Yes	Yes	Pass	
4.12	Has the trigger for the process been defined and communicated to those working in the process?	Yes	Yes	Pass	
4.13	Have all processes triggered by this process been defined?	Yes	Yes	Pass	
4.14	Is efficiency measured in the process?	No	No	Pass	
4.15	Have quality outcomes for the process been defined?	No	Yes	Fail	
4.16	Are quality checks that align with the defined quality outcomes undertaken?	No	Yes	Fail	
4.17	Are controls in place to reduce, eliminate or manage process failures?	No	Yes	Fail	
4.18	Are audits or assurance in place to measure process compliance?	No	Yes	Fail	10
4.19	Does the process have defined and used feedback loops?	Yes	Yes	Pass	10
4.20	Have the internal or external approval points (if any) been defined?	Yes	Yes	Pass	50%
5. Participants					
5.01	Has the single point of accountability process owner's needs been captured and reflected in the process?	No	Yes	Fail	
5.02	Do all relevant managers understand and support the process?	Yes	Yes	Pass	
5.03	Have the stakeholders needs been captured and reflected in the process?	Yes	Yes	Pass	
5.04	Does each step of the process have a clearly articulated owner?	No	No	Pass	
5.05	Is someone accountable for ensuring participants stay within the boundaries of the process?	Yes	Yes	Pass	
5.06	Can a sufficient number of people currently manage the end to end process?	Yes	Yes	Pass	
5.07	Is there an onboarding process for new process participants?	No	Yes	Fail	
5.08	Do process participants receive ongoing support and skills refreshers?	No	Yes	Fail	5
5.09	Are systems in place to ensure follow through on audit or assurance recommendations?	No	Yes	Fail	5
5.10	Are systems in place to record participants feedback and track resulting action?	No	Yes	Fail	50%
6. Information					
6.01	Have the in-process communication requirements been defined?	No	Yes	Fail	
6.02	Have service level agreements for customers been agreed?	No	Yes	Fail	
6.02b	Are sufficient steps taken to meet service levels agreements?	No	Yes	Fail	
6.03	Are customers requirements reflected in KPIs and reporting?	No	Yes	Fail	
6.04	Are in-process measures defined and tracked?	No	Yes	Fail	
6.05	Are process workloads managed and prioritised, including at peak times?	No	Yes	Fail	
6.06	Has process performance been benchmarked against similar peer processes?	No	Yes	Fail	2
6.07	Does historical process performance data exist?	No	No	Pass	7
6.08	Is the historical performance data used to improve future performance?	No	No	Pass	22%
7. Technologies					
7.01	Is the process documentation version controlled?	No	Yes	Fail	
7.02	Are the documents produced as part of the process stored in a document management system?	Yes	Yes	Pass	
7.03	Is IT systems training provided to process participants?	No	No	Pass	
7.04	Are the relevant system security restrictions/permissions appropriate for the process?	Yes	Yes	Pass	
7.05	Does the process use a workflow tool?	No	No	Pass	6
7.06	Is all important data relating to the process backed up?	Yes	Yes	Pass	1
7.07	Is the system data quality checked?	Yes	Yes	Pass	86%
8. Infrastructure					
8.01	Are organisational standards and policies applied as intended in the process?	Yes	Yes	Pass	1
8.02	Are appropriate checks made to ensure that the tools, templates and checklists used in the process are up to date?	No	Yes	Fail	2
8.03	Have the inputs from organisational teams such as IT, HR, Finance been defined?	No	Yes	Fail	33%
9. Environment					
9.01	Is the processes environment monitored for opportunities and threats?	No	Yes	Fail	2
9.02	Does the process meet external regulatory requirements?	Yes	Yes	Pass	1
9.03	Are the risks created by the operation of the process recorded, monitored and accepted/avoided/transferred?	No	No	Pass	67%
10. Strategies					
10.01	Is the process influenced and/or directed by organisational policies?	Yes	Yes	Pass	2
10.02	Is the process influenced and/or directed by organisational goals and/or strategies?	Yes	Yes	Pass	0
					100%

#	WOF CHECK FOR YOUR PROCESS Process name and estimated cycles per year: **Purchase Order Process** Respondee # 4 (Transpower)	Process check	Is this important for your process?	Pass / Fail	P/F %
1. Work Process as a Whole					
1.01	Does the process have an appropriate and understandable name?	Yes	No	Pass	
1.02	Is the purpose of the process widely accepted and understood?	Yes	Yes	Pass	
1.03	Has the process coverage (what the process applies to/does not apply to) been defined?	Yes	Yes	Pass	
1.04	Have the relationships and interdependencies with other processes been defined?	No	Yes	Fail	
1.05	Does the process have a single accountable owner?	No	Yes	Fail	4
1.06	Has the method to change the process, including change signoffs, been defined?	No	Yes	Fail	3
1.07	Has the accountability and responsibility for coordinating the end to end process operation been defined?	Yes	Yes	Pass	57%
2. Customer					
2.01	Have the internal and/or external customers of the process outputs been defined?	Yes	Yes	Pass	
2.02	Have customers been asked for their opinions, needs, and wants, including service levels?	Yes	Yes	Pass	
2.03	Is customer service training provided to process participants?	No	Yes	Fail	
2.04	Have the ways in which customers influence and/or participate in the process been defined?	Yes	Yes	Pass	
2.05	Have checks been done on customers understanding of the process?	No	Yes	Fail	
2.06	Has the customer trigger for the process been defined and communicated to the customer?	No	Yes	Fail	5
2.07	Have pre-process checks been defined to enable confirmation to the customer that their needs can be met?	Yes	Yes	Pass	3
2.08	Are customers provided with progress reports once the process has been started?	Yes	Yes	Pass	63%
3. Products/Services					
3.01	Has a method for forecasting and resourcing for future product/service demand been defined?	No	Yes	Fail	
3.02	Has a method for understanding individual customer product/service preferences been developed?	No	No	Pass	
3.03	Has a method for incorporating individual customer preferences into the products/services been developed?	No	No	Pass	2
3.04	Has a method for checking customer acceptance of the end products or services been defined?	No	Yes	Fail	3
3.05	Has a method for dealing with customer feedback, including product and service suggestions, been defined?	No	Yes	Fail	40%
4. Work Practices					
4.01	Has the process been documented?	Yes	Yes	Pass	
4.02	Is the documentation regularly reviewed and updated when required?	Yes	Yes	Pass	
4.03	Is compliance with process steps managed in real-time?	No	Yes	Fail	
4.04	Is the method of checking process compliance defined?	No	Yes	Fail	
4.05	Is training provided to participants that undertake the process?	Yes	Yes	Pass	
4.06	Does training cover soft skills?	No	No	Pass	
4.07	Is the process documentation and collateral easy to find?	No	Yes	Fail	
4.08	Have the process inputs been defined?	Yes	Yes	Pass	
4.09	Have the input procurement processes been defined?	Yes	Yes	Pass	
4.1	Do providers of inputs, including external suppliers, receive performance feedback?	No	Yes	Fail	
4.11	Are the procurement processes for external suppliers transparent and fair?	No	No	Pass	
4.12	Has the trigger for the process been defined and communicated to those working in the process?	Yes	Yes	Pass	
4.13	Have all processes triggered by this process been defined?	No	Yes	Fail	
4.14	Is efficiency measured in the process?	No	Yes	Fail	
4.15	Have quality outcomes for the process been defined?	Yes	Yes	Pass	
4.16	Are quality checks that align with the defined quality outcomes undertaken?	Yes	Yes	Pass	
4.17	Are controls in place to reduce, eliminate or manage process failures?	No	Yes	Fail	
4.18	Are audits or assurance in place to measure process compliance?	No	Yes	Fail	11
4.19	Does the process have defined and used feedback loops?	No	Yes	Fail	9
4.20	Have the internal or external approval points (if any) been defined?	Yes	Yes	Pass	55%
5. Participants					
5.01	Has the single point of accountability process owner's needs been captured and reflected in the process?	No	No	Pass	
5.02	Do all relevant managers understand and support the process?	No	Yes	Fail	
5.03	Have the stakeholders needs been captured and reflected in the process?	Yes	Yes	Pass	
5.04	Does each step of the process have a clearly articulated owner?	Yes	Yes	Pass	
5.05	Is someone accountable for ensuring participants stay within the boundaries of the process?	Yes	Yes	Pass	
5.06	Can a sufficient number of people currently manage the end to end process?	No	Yes	Fail	
5.07	Is there an onboarding process for new process participants?	Yes	Yes	Pass	
5.08	Do process participants receive ongoing support and skills refreshers?	No	Yes	Fail	5
5.09	Are systems in place to ensure follow through on audit or assurance recommendations?	No	Yes	Fail	5
5.10	Are systems in place to record participants feedback and track resulting action?	No	Yes	Fail	50%
6. Information					
6.01	Have the in-process communication requirements been defined?	No	Yes	Fail	
6.02	Have service level agreements for customers been agreed?	Yes	Yes	Pass	
6.02b	Are sufficient steps taken to meet service levels agreements?	Yes	Yes	Pass	
6.03	Are customers requirements reflected in KPIs and reporting?	Yes	Yes	Pass	
6.04	Are in-process measures defined and tracked?	Yes	Yes	Pass	
6.05	Are process workloads managed and prioritised, including at peak times?	No	Yes	Fail	
6.06	Has process performance been benchmarked against similar peer processes?	No	Yes	Fail	6
6.07	Does historical process performance data exist?	Yes	Yes	Pass	3
6.08	Is the historical performance data used to improve future performance?	Yes	Yes	Pass	67%
7. Technologies					
7.01	Is the process documentation version controlled?	Yes	Yes	Pass	
7.02	Are the documents produced as part of the process stored in a document management system?	Yes	Yes	Pass	
7.03	Is IT systems training provided to process participants?	Yes	Yes	Pass	
7.04	Are the relevant system security restrictions/permissions appropriate for the process?	Yes	Yes	Pass	
7.05	Does the process use a workflow tool?	Yes	Yes	Pass	6
7.06	Is all important data relating to the process backed up?	Yes	Yes	Pass	1
7.07	Is the system data quality checked?	No	Yes	Fail	86%
8. Infrastructure					
8.01	Are organisational standards and policies applied as intended in the process?	No	Yes	Fail	0
8.02	Are appropriate checks made to ensure that the tools, templates and checklists used in the process are up to date?	No	Yes	Fail	3
8.03	Have the inputs from organisational teams such as IT, HR, Finance been defined?	No	Yes	Fail	0%
9. Environment					
9.01	Is the processes environment monitored for opportunities and threats?	No	No	Pass	3
9.02	Does the process meet external regulatory requirements?	Yes	Yes	Pass	0
9.03	Are the risks created by the operation of the process recorded, monitored and accepted/avoided/transferred?	No	No	Pass	100%
10. Strategies					
10.01	Is the process influenced and/or directed by organisational policies?	Yes	Yes	Pass	1
10.02	Is the process influenced and/or directed by organisational goals and/or strategies?	No	Yes	Fail	1
					50%

#	WOF CHECK FOR YOUR PROCESS Process name and estimated cycles per year: **Customer Billing Process** Respondee # 5 (Transpower)	Process check	Is this important for your process?	Pass / Fail	Group Summary
1. Work Process as a Whole					
1.01	Does the process have an appropriate and understandable name?	Yes	Yes	Pass	
1.02	Is the purpose of the process widely accepted and understood?	Yes	Yes	Pass	
1.03	Has the process coverage (what the process applies to/does not apply to) been defined?	No	Yes	Fail	
1.04	Have the relationships and interdependencies with other processes been defined?	No	Yes	Fail	
1.05	Does the process have a single accountable owner?	No	Yes	Fail	2
1.06	Has the method to change the process, including change signoffs, been defined?	No	Yes	Fail	5
1.07	Has the accountability and responsibility for coordinating the end to end process operation been defined?	No	Yes	Fail	29%
2. Customer					
2.01	Have the internal and/or external customers of the process outputs been defined?	Yes	Yes	Pass	
2.02	Have customers been asked for their opinions, needs, and wants, including service levels?	No	Yes	Fail	
2.03	Is customer service training provided to process participants?	No	No	Pass	
2.04	Have the ways in which customers influence and/or participate in the process been defined?	Yes	Yes	Pass	
2.05	Have checks been done on customers understanding of the process?	No	No	Pass	
2.06	Has the customer trigger for the process been defined and communicated to the customer?	Yes	Yes	Pass	7
2.07	Have pre-process checks been defined to enable confirmation to the customer that their needs can be met?	Yes	Yes	Pass	1
2.08	Are customers provided with progress reports once the process has been started?	Yes	Yes	Pass	88%
3. Products/Services					
3.01	Has a method for forecasting and resourcing for future product/service demand been defined?	Yes	Yes	Pass	
3.02	Has a method for understanding individual customer product/service preferences been developed?	Yes	Yes	Pass	
3.03	Has a method for incorporating individual customer preferences into the products/services been developed?	Yes	Yes	Pass	5
3.04	Has a method for checking customer acceptance of the end products or services been defined?	Yes	Yes	Pass	0
3.05	Has a method for dealing with customer feedback, including product and service suggestions, been defined?	Yes	Yes	Pass	100%
4. Work Practices					
4.01	Has the process been documented?	No	Yes	Fail	
4.02	Is the documentation regularly reviewed and updated when required?	No	Yes	Fail	
4.03	Is compliance with process steps managed in real-time?	Yes	Yes	Pass	
4.04	Is the method of checking process compliance defined?	Yes	Yes	Pass	
4.05	Is training provided to participants that undertake the process?	Yes	Yes	Pass	
4.06	Does training cover soft skills?	Yes	Yes	Pass	
4.07	Is the process documentation and collateral easy to find?	No	Yes	Fail	
4.08	Have the process inputs been defined?	Yes	Yes	Pass	
4.09	Have the input procurement processes been defined?	No	No	Pass	
4.1	Do providers of inputs, including external suppliers, receive performance feedback?	Yes	Yes	Pass	
4.11	Are the procurement processes for external suppliers transparent and fair?	No	No	Pass	
4.12	Has the trigger for the process been defined and communicated to those working in the process?	Yes	Yes	Pass	
4.13	Have all processes triggered by this process been defined?	No	No	Pass	
4.14	Is efficiency measured in the process?	No	Yes	Fail	
4.15	Have quality outcomes for the process been defined?	Yes	Yes	Pass	
4.16	Are quality checks that align with the defined quality outcomes undertaken?	Yes	Yes	Pass	
4.17	Are controls in place to reduce, eliminate or manage process failures?	Yes	Yes	Pass	
4.18	Are audits or assurance in place to measure process compliance?	Yes	Yes	Pass	16
4.19	Does the process have defined and used feedback loops?	Yes	Yes	Pass	4
4.20	Have the internal or external approval points (if any) been defined?	Yes	Yes	Pass	80%
5. Participants					
5.01	Has the single point of accountability process owner's needs been captured and reflected in the process?	No	Yes	Fail	
5.02	Do all relevant managers understand and support the process?	Yes	Yes	Pass	
5.03	Have the stakeholders needs been captured and reflected in the process?	Yes	Yes	Pass	
5.04	Does each step of the process have a clearly articulated owner?	Yes	Yes	Pass	
5.05	Is someone accountable for ensuring participants stay within the boundaries of the process?	No	Yes	Fail	
5.06	Can a sufficient number of people currently manage the end to end process?	Yes	Yes	Pass	
5.07	Is there an onboarding process for new process participants?	Yes	Yes	Pass	
5.08	Do process participants receive ongoing support and skills refreshers?	No	No	Pass	8
5.09	Are systems in place to ensure follow through on audit or assurance recommendations?	Yes	Yes	Pass	2
5.10	Are systems in place to record participants feedback and track resulting action?	No	No	Pass	80%
6. Information					
6.01	Have the in-process communication requirements been defined?	Yes	Yes	Pass	
6.02	Have service level agreements for customers been agreed?	Yes	Yes	Pass	
6.02b	Are sufficient steps taken to meet service levels agreements?	Yes	Yes	Pass	
6.03	Are customers requirements reflected in KPIs and reporting?	Yes	Yes	Pass	
6.04	Are in-process measures defined and tracked?	Yes	Yes	Pass	
6.05	Are process workloads managed and prioritised, including at peak times?	Yes	Yes	Pass	
6.06	Has process performance been benchmarked against similar peer processes?	No	No	Pass	9
6.07	Does historical process performance data exist?	No	No	Pass	0
6.08	Is the historical performance data used to improve future performance?	No	No	Pass	100%
7. Technologies					
7.01	Is the process documentation version controlled?	No	No	Pass	
7.02	Are the documents produced as part of the process stored in a document management system?	Yes	Yes	Pass	
7.03	Is IT systems training provided to process participants?	Yes	Yes	Pass	
7.04	Are the relevant system security restrictions/permissions appropriate for the process?	Yes	Yes	Pass	
7.05	Does the process use a workflow tool?	No	No	Pass	7
7.06	Is all important data relating to the process backed up?	Yes	Yes	Pass	0
7.07	Is the system data quality checked?	Yes	Yes	Pass	100%
8. Infrastructure					
8.01	Are organisational standards and policies applied as intended in the process?	Yes	Yes	Pass	3
8.02	Are appropriate checks made to ensure that the tools, templates and checklists used in the process are up to date?	No	No	Pass	0
8.03	Have the inputs from organisational teams such as IT, HR, Finance been defined?	Yes	Yes	Pass	100%
9. Environment					
9.01	Is the processes environment monitored for opportunities and threats?	Yes	Yes	Pass	3
9.02	Does the process meet external regulatory requirements?	Yes	Yes	Pass	0
9.03	Are the risks created by the operation of the process recorded, monitored and accepted/avoided/transferred?	Yes	Yes	Pass	100%
10. Strategies					
10.01	Is the process influenced and/or directed by organisational policies?	Yes	Yes	Pass	2
10.02	Is the process influenced and/or directed by organisational goals and/or strategies?	No	No	Pass	0
					100%

#	WOF CHECK FOR YOUR PROCESS Process name and estimated cycles per year: **Investigations Process** Respondee # 6 (Transpower)	Process check	Is this important for your process?	Pass / Fail	Group Summary
1. Work Process as a Whole					
1.01	Does the process have an appropriate and understandable name?	Yes	Yes	Pass	
1.02	Is the purpose of the process widely accepted and understood?	Yes	Yes	Pass	
1.03	Has the process coverage (what the process applies to/does not apply to) been defined?	Yes	Yes	Pass	
1.04	Have the relationships and interdependencies with other processes been defined?	Yes	Yes	Pass	
1.05	Does the process have a single accountable owner?	No	Yes	Fail	5
1.06	Has the method to change the process, including change signoffs, been defined?	No	Yes	Fail	2
1.07	Has the accountability and responsibility for coordinating the end to end process operation been defined?	Yes	Yes	Pass	71%
2. Customer					
2.01	Have the internal and/or external customers of the process outputs been defined?	Yes	Yes	Pass	
2.02	Have customers been asked for their opinions, needs, and wants, including service levels?		Yes	Pass	
2.03	Is customer service training provided to process participants?	No	No	Pass	
2.04	Have the ways in which customers influence and/or participate in the process been defined?	No	No	Pass	
2.05	Have checks been done on customers understanding of the process?	No	No	Pass	
2.06	Has the customer trigger for the process been defined and communicated to the customer?	Yes	Yes	Pass	7
2.07	Have pre-process checks been defined to enable confirmation to the customer that their needs can be met?	Yes	Yes	Pass	1
2.08	Are customers provided with progress reports once the process has been started?	No	Yes	Fail	88%
3. Products/Services					
3.01	Has a method for forecasting and resourcing for future product/service demand been defined?	No	Yes	Fail	
3.02	Has a method for understanding individual customer product/service preferences been developed?	No	Yes	Fail	
3.03	Has a method for incorporating individual customer preferences into the products/services been developed?	Yes	Yes	Pass	1
3.04	Has a method for checking customer acceptance of the end products or services been defined?	No	Yes	Fail	4
3.05	Has a method for dealing with customer feedback, including product and service suggestions, been defined?	No	Yes	Fail	20%
4. Work Practices					
4.01	Has the process been documented?	Yes	Yes	Pass	
4.02	Is the documentation regularly reviewed and updated when required?		Yes	Pass	
4.03	Is compliance with process steps managed in real-time?	No		Pass	
4.04	Is the method of checking process compliance defined?	No		Pass	
4.05	Is training provided to participants that undertake the process?	Yes	Yes	Pass	
4.06	Does training cover soft skills?	No	Yes	Fail	
4.07	Is the process documentation and collateral easy to find?	Yes	Yes	Pass	
4.08	Have the process inputs been defined?		Yes	Pass	
4.09	Have the input procurement processes been defined?		Yes	Pass	
4.1	Do providers of inputs, including external suppliers, receive performance feedback?		Yes	Pass	
4.11	Are the procurement processes for external suppliers transparent and fair?		Yes	Pass	
4.12	Has the trigger for the process been defined and communicated to those working in the process?	No	Yes	Fail	
4.13	Have all processes triggered by this process been defined?	No	Yes	Fail	
4.14	Is efficiency measured in the process?	No	Yes	Fail	
4.15	Have quality outcomes for the process been defined?	No	Yes	Fail	
4.16	Are quality checks that align with the defined quality outcomes undertaken?		Yes	Pass	
4.17	Are controls in place to reduce, eliminate or manage process failures?		Yes	Pass	
4.18	Are audits or assurance in place to measure process compliance?		Yes	Pass	15
4.19	Does the process have defined and used feedback loops?		Yes	Pass	5
4.20	Have the internal or external approval points (if any) been defined?	Yes	Yes	Pass	75%
5. Participants					
5.01	Has the single point of accountability process owner's needs been captured and reflected in the process?		Yes	Pass	
5.02	Do all relevant managers understand and support the process?	Yes	Yes	Pass	
5.03	Have the stakeholders needs been captured and reflected in the process?	Yes	Yes	Pass	
5.04	Does each step of the process have a clearly articulated owner?	Yes	Yes	Pass	
5.05	Is someone accountable for ensuring participants stay within the boundaries of the process?	No	Yes	Fail	
5.06	Can a sufficient number of people currently manage the end to end process?	Yes	Yes	Pass	
5.07	Is there an onboarding process for new process participants?	Yes	Yes	Pass	
5.08	Do process participants receive ongoing support and skills refreshers?	No	Yes	Fail	8
5.09	Are systems in place to ensure follow through on audit or assurance recommendations?		Yes	Pass	2
5.10	Are systems in place to record participants feedback and track resulting action?		Yes	Pass	80%
6. Information					
6.01	Have the in-process communication requirements been defined?		Yes	Pass	
6.02	Have service level agreements for customers been agreed?	No	Yes	Fail	
6.02b	Are sufficient steps taken to meet service levels agreements?	No	Yes	Fail	
6.03	Are customers requirements reflected in KPIs and reporting?	No	Yes	Fail	
6.04	Are in-process measures defined and tracked?	Yes	Yes	Pass	
6.05	Are process workloads managed and prioritised, including at peak times?	No	Yes	Fail	
6.06	Has process performance been benchmarked against similar peer processes?			Pass	5
6.07	Does historical process performance data exist?		Yes	Pass	4
6.08	Is the historical performance data used to improve future performance?		Yes	Pass	56%
7. Technologies					
7.01	Is the process documentation version controlled?	Yes	Yes	Pass	
7.02	Are the documents produced as part of the process stored in a document management system?	Yes	Yes	Pass	
7.03	Is IT systems training provided to process participants?	No	Yes	Fail	
7.04	Are the relevant system security restrictions/permissions appropriate for the process?		Yes	Pass	
7.05	Does the process use a workflow tool?	No	No	Pass	6
7.06	Is all important data relating to the process backed up?	Yes	Yes	Pass	1
7.07	Is the system data quality checked?		Yes	Pass	86%
8. Infrastructure					
8.01	Are organisational standards and policies applied as intended in the process?		Yes	Pass	3
8.02	Are appropriate checks made to ensure that the tools, templates and checklists used in the process are up to date?		Yes	Pass	0
8.03	Have the inputs from organisational teams such as IT, HR, Finance been defined?			Pass	100%
9. Environment					
9.01	Is the processes environment monitored for opportunities and threats?	No	Yes	Fail	2
9.02	Does the process meet external regulatory requirements?		Yes	Pass	1
9.03	Are the risks created by the operation of the process recorded, monitored and accepted/avoided/transferred?	Yes	Yes	Pass	67%
10. Strategies					
10.01	Is the process influenced and/or directed by organisational policies?	Yes	Yes	Pass	2
10.02	Is the process influenced and/or directed by organisational goals and/or strategies?	Yes	Yes	Pass	0
					100%

#	WOF CHECK FOR YOUR PROCESS Process name and estimated cycles per year: **CMS System Administration Process** Respondee # 7 (Transpower)	Process check	Is this important for your process?	Pass / Fail	Group Summary
	Compiled and analsed interview repsonses, grouped them into WSM groupings, and turned them into checks. Each check has two required repsonses, 1. the check, and 2, is that importa				
1. Work Process as a Whole					
1.01	Does the process have an appropriate and understandable name?	Yes	Yes	Pass	
1.02	Is the purpose of the process widely accepted and understood?	No	Yes	Fail	
1.03	Has the process coverage (what the process applies to/does not apply to) been defined?	Yes	Yes	Pass	
1.04	Have the relationships and interdependencies with other processes been defined?	Yes	Yes	Pass	
1.05	Does the process have a single accountable owner?	Yes	Yes	Pass	5
1.06	Has the method to change the process, including change signoffs, been defined?	No	Yes	Fail	2
1.07	Has the accountability and responsibility for coordinating the end to end process operation been defined?	Yes	Yes	Pass	71%
2. Customer					
2.01	Have the internal and/or external customers of the process outputs been defined?	Yes	Yes	Pass	
2.02	Have customers been asked for their opinions, needs, and wants, including service levels?	No	Yes	Fail	
2.03	Is customer service training provided to process participants?	Yes	Yes	Pass	
2.04	Have the ways in which customers influence and/or participate in the process been defined?	Yes	Yes	Pass	
2.05	Have checks been done on customers understanding of the process?	No	Yes	Fail	
2.06	Has the customer trigger for the process been defined and communicated to the customer?	Yes	Yes	Pass	5
2.07	Have pre-process checks been defined to enable confirmation to the customer that their needs can be met?	No	Yes	Fail	3
2.08	Are customers provided with progress reports once the process has been started?	Yes	Yes	Pass	63%
3. Products/Services					
3.01	Has a method for forecasting and resourcing for future product/service demand been defined?	Yes	Yes	Pass	
3.02	Has a method for understanding individual customer product/service preferences been developed?	Yes	Yes	Pass	
3.03	Has a method for incorporating individual customer preferences into the products/services been developed?	Yes	Yes	Pass	5
3.04	Has a method for checking customer acceptance of the end products or services been defined?	No	No	Pass	0
3.05	Has a method for dealing with customer feedback, including product and service suggestions, been defined?	No	No	Pass	100%
4. Work Practices					
4.01	Has the process been documented?	Yes	Yes	Pass	
4.02	Is the documentation regularly reviewed and updated when required?	Yes	Yes	Pass	
4.03	Is compliance with process steps managed in real-time?	No	No	Pass	
4.04	Is the method of checking process compliance defined?	No	Yes	Fail	
4.05	Is training provided to participants that undertake the process?	Yes	Yes	Pass	
4.06	Does training cover soft skills?	No	Yes	Fail	
4.07	Is the process documentation and collateral easy to find?	Yes	Yes	Pass	
4.08	Have the process inputs been defined?	Yes	Yes	Pass	
4.09	Have the input procurement processes been defined?	No	No	Pass	
4.1	Do providers of inputs, including external suppliers, receive performance feedback?	No	No	Pass	
4.11	Are the procurement processes for external suppliers transparent and fair?	No	No	Pass	
4.12	Has the trigger for the process been defined and communicated to those working in the process?	Yes	Yes	Pass	
4.13	Have all processes triggered by this process been defined?			Pass	
4.14	Is efficiency measured in the process?	No	Yes	Fail	
4.15	Have quality outcomes for the process been defined?	No	Yes	Fail	
4.16	Are quality checks that align with the defined quality outcomes undertaken?	No	Yes	Fail	
4.17	Are controls in place to reduce, eliminate or manage process failures?	Yes	Yes	Pass	
4.18	Are audits or assurance in place to measure process compliance?	No	Yes	Fail	14
4.19	Does the process have defined and used feedback loops?	Yes	Yes	Pass	6
4.20	Have the internal or external approval points (if any) been defined?	No	No	Pass	70%
5. Participants					
5.01	Has the single point of accountability process owner's needs been captured and reflected in the process?	Yes	Yes	Pass	
5.02	Do all relevant managers understand and support the process?	Yes	Yes	Pass	
5.03	Have the stakeholders needs been captured and reflected in the process?	Yes	Yes	Pass	
5.04	Does each step of the process have a clearly articulated owner?	Yes	Yes	Pass	
5.05	Is someone accountable for ensuring participants stay within the boundaries of the process?	Yes	Yes	Pass	
5.06	Can a sufficient number of people currently manage the end to end process?	No	Yes	Fail	
5.07	Is there an onboarding process for new process participants?	Yes	Yes	Pass	
5.08	Do process participants receive ongoing support and skills refreshers?	Yes	Yes	Pass	9
5.09	Are systems in place to ensure follow through on audit or assurance recommendations?	Yes	Yes	Pass	1
5.10	Are systems in place to record participants feedback and track resulting action?	Yes	Yes	Pass	90%
6. Information					
6.01	Have the in-process communication requirements been defined?	Yes	Yes	Pass	
6.02	Have service level agreements for customers been agreed?	Yes	Yes	Pass	
6.02b	Are sufficient steps taken to meet service levels agreements?	Yes	Yes	Pass	
6.03	Are customers requirements reflected in KPIs and reporting?	No	Yes	Fail	
6.04	Are in-process measures defined and tracked?	No	No	Pass	
6.05	Are process workloads managed and prioritised, including at peak times?	Yes	Yes	Pass	
6.06	Has process performance been benchmarked against similar peer processes?	No	No	Pass	7
6.07	Does historical process performance data exist?	No	Yes	Fail	2
6.08	Is the historical performance data used to improve future performance?			Pass	78%
7. Technologies					
7.01	Is the process documentation version controlled?	Yes	Yes	Pass	
7.02	Are the documents produced as part of the process stored in a document management system?	No	Yes	Fail	
7.03	Is IT systems training provided to process participants?	Yes	Yes	Pass	
7.04	Are the relevant system security restrictions/permissions appropriate for the process?	Yes	Yes	Pass	
7.05	Does the process use a workflow tool?	No	No	Pass	6
7.06	Is all important data relating to the process backed up?	Yes	Yes	Pass	1
7.07	Is the system data quality checked?	Yes	Yes	Pass	86%
8. Infrastructure					
8.01	Are organisational standards and policies applied as intended in the process?	Yes	Yes	Pass	2
8.02	Are appropriate checks made to ensure that the tools, templates and checklists used in the process are up to date?	Yes	Yes	Pass	1
8.03	Have the inputs from organisational teams such as IT, HR, Finance been defined?	No	Yes	Fail	67%
9. Environment					
9.01	Is the processes environment monitored for opportunities and threats?	Yes	Yes	Pass	2
9.02	Does the process meet external regulatory requirements?	Yes	Yes	Pass	1
9.03	Are the risks created by the operation of the process recorded, monitored and accepted/avoided/transferred?	No	Yes	Fail	67%
10. Strategies					
10.01	Is the process influenced and/or directed by organisational policies?	Yes	Yes	Pass	2
10.02	Is the process influenced and/or directed by organisational goals and/or strategies?	Yes	Yes	Pass	0
					100%

#	WOF CHECK FOR YOUR PROCESS Process name and estimated cycles per year: Volumetric Business Case Development Process Respondee # 8 (Transpower)	Process check	Is this important for your process?	Pass / Fail	Group Summary
1. Work Process as a Whole					
1.01	Does the process have an appropriate and understandable name?	Yes	No	Pass	
1.02	Is the purpose of the process widely accepted and understood?	Yes	Yes	Pass	
1.03	Has the process coverage (what the process applies to/does not apply to) been defined?	Yes	Yes	Pass	
1.04	Have the relationships and interdependencies with other processes been defined?	Yes	Yes	Pass	
1.05	Does the process have a single accountable owner?	No	Yes	Fail	6
1.06	Has the method to change the process, including change signoffs, been defined?	Yes	Yes	Pass	1
1.07	Has the accountability and responsibility for coordinating the end to end process operation been defined?	Yes	Yes	Pass	86%
2. Customer					
2.01	Have the internal and/or external customers of the process outputs been defined?	Yes	Yes	Pass	
2.02	Have customers been asked for their opinions, needs, and wants, including service levels?	Yes	Yes	Pass	
2.03	Is customer service training provided to process participants?	No	No	Pass	
2.04	Have the ways in which customers influence and/or participate in the process been defined?	Yes	Yes	Pass	
2.05	Have checks been done on customers understanding of the process?	No	Yes	Fail	
2.06	Has the customer trigger for the process been defined and communicated to the customer?	Yes	Yes	Pass	7
2.07	Have pre-process checks been defined to enable confirmation to the customer that their needs can be met?	No	No	Pass	1
2.08	Are customers provided with progress reports once the process has been started?	Yes	Yes	Pass	88%
3. Products/Services					
3.01	Has a method for forecasting and resourcing for future product/service demand been defined?	No	No	Pass	
3.02	Has a method for understanding individual customer product/service preferences been developed?	Yes	Yes	Pass	
3.03	Has a method for incorporating individual customer preferences into the products/services been developed?	Yes	Yes	Pass	5
3.04	Has a method for checking customer acceptance of the end products or services been defined?	Yes	Yes	Pass	0
3.05	Has a method for dealing with customer feedback, including product and service suggestions, been defined?	Yes	Yes	Pass	100%
4. Work Practices					
4.01	Has the process been documented?	Yes	Yes	Pass	
4.02	Is the documentation regularly reviewed and updated when required?	Yes	Yes	Pass	
4.03	Is compliance with process steps managed in real-time?	Yes	Yes	Pass	
4.04	Is the method of checking process compliance defined?	No	No	Pass	
4.05	Is training provided to participants that undertake the process?	Yes	Yes	Pass	
4.06	Does training cover soft skills?	Yes	Yes	Pass	
4.07	Is the process documentation and collateral easy to find?	No	No	Pass	
4.08	Have the process inputs been defined?	Yes	Yes	Pass	
4.09	Have the input procurement processes been defined?	Yes	Yes	Pass	
4.1	Do providers of inputs, including external suppliers, receive performance feedback?	Yes	Yes	Pass	
4.11	Are the procurement processes for external suppliers transparent and fair?	Yes	Yes	Pass	
4.12	Has the trigger for the process been defined and communicated to those working in the process?	Yes	Yes	Pass	
4.13	Have all processes triggered by this process been defined?	Yes	Yes	Pass	
4.14	Is efficiency measured in the process?	No	No	Pass	
4.15	Have quality outcomes for the process been defined?	Yes	Yes	Pass	
4.16	Are quality checks that align with the defined quality outcomes undertaken?	Yes	Yes	Pass	
4.17	Are controls in place to reduce, eliminate or manage process failures?	Yes	Yes	Pass	
4.18	Are audits or assurance in place to measure process compliance?	No	No	Pass	20
4.19	Does the process have defined and used feedback loops?	No	No	Pass	0
4.20	Have the internal or external approval points (if any) been defined?	Yes	Yes	Pass	100%
5. Participants					
5.01	Has the single point of accountability process owner's needs been captured and reflected in the process?	Yes	Yes	Pass	
5.02	Do all relevant managers understand and support the process?	Yes	Yes	Pass	
5.03	Have the stakeholders needs been captured and reflected in the process?	Yes	Yes	Pass	
5.04	Does each step of the process have a clearly articulated owner?	Yes	Yes	Pass	
5.05	Is someone accountable for ensuring participants stay within the boundaries of the process?	No	No	Pass	
5.06	Can a sufficient number of people currently manage the end to end process?	Yes	Yes	Pass	
5.07	Is there an onboarding process for new process participants?	Yes	Yes	Pass	
5.08	Do process participants receive ongoing support and skills refreshers?	No	No	Pass	10
5.09	Are systems in place to ensure follow through on audit or assurance recommendations?	No	No	Pass	0
5.10	Are systems in place to record participants feedback and track resulting action?	No	No	Pass	100%
6. Information					
6.01	Have the in-process communication requirements been defined?	Yes	Yes	Pass	
6.02	Have service level agreements for customers been agreed?	No	Yes	Fail	
6.02b	Are sufficient steps taken to meet service levels agreements?	Yes	Yes	Pass	
6.03	Are customers requirements reflected in KPIs and reporting?	No	Yes	Fail	
6.04	Are in-process measures defined and tracked?	No	No	Pass	
6.05	Are process workloads managed and prioritised, including at peak times?	Yes	Yes	Pass	
6.06	Has process performance been benchmarked against similar peer processes?	No	No	Pass	7
6.07	Does historical process performance data exist?	Yes	Yes	Pass	2
6.08	Is the historical performance data used to improve future performance?	Yes	Yes	Pass	78%
7. Technologies					
7.01	Is the process documentation version controlled?	No	No	Pass	
7.02	Are the documents produced as part of the process stored in a document management system?	Yes	Yes	Pass	
7.03	Is IT systems training provided to process participants?	No	No	Pass	
7.04	Are the relevant system security restrictions/permissions appropriate for the process?	No	No	Pass	
7.05	Does the process use a workflow tool?	No	No	Pass	7
7.06	Is all important data relating to the process backed up?	Yes	Yes	Pass	0
7.07	Is the system data quality checked?	Yes	Yes	Pass	100%
8. Infrastructure					
8.01	Are organisational standards and policies applied as intended in the process?	Yes	Yes	Pass	3
8.02	Are appropriate checks made to ensure that the tools, templates and checklists used in the process are up to date?	Yes	Yes	Pass	0
8.03	Have the inputs from organisational teams such as IT, HR, Finance been defined?	Yes	Yes	Pass	100%
9. Environment					
9.01	Is the processes environment monitored for opportunities and threats?	Yes	Yes	Pass	3
9.02	Does the process meet external regulatory requirements?	Yes	Yes	Pass	0
9.03	Are the risks created by the operation of the process recorded, monitored and accepted/avoided/transferred?	No	No	Pass	100%
10. Strategies					
10.01	Is the process influenced and/or directed by organisational policies?	Yes	Yes	Pass	2
10.02	Is the process influenced and/or directed by organisational goals and/or strategies?	Yes	Yes	Pass	0
					100%

#	WOF CHECK FOR YOUR PROCESS Process name and estimated cycles per year: **End to End Recruitment Process** Respondee # 9 **(External)**	Process check	Is this important for your process?	Pass / Fail	Group Summary
1. Work Process as a Whole					
1.01	Does the process have an appropriate and understandable name?	Yes	Yes	Pass	
1.02	Is the purpose of the process widely accepted and understood?	Yes	Yes	Pass	
1.03	Has the process coverage (what the process applies to/does not apply to) been defined?	Yes	Yes	Pass	
1.04	Have the relationships and interdependencies with other processes been defined?	Yes	Yes	Pass	
1.05	Does the process have a single accountable owner?	Yes	Yes	Pass	7
1.06	Has the method to change the process, including change signoffs, been defined?	Yes	Yes	Pass	0
1.07	Has the accountability and responsibility for coordinating the end to end process operation been defined?	Yes	Yes	Pass	100%
2. Customer					
2.01	Have the internal and/or external customers of the process outputs been defined?	Yes	Yes	Pass	
2.02	Have customers been asked for their opinions, needs, and wants, including service levels?	No	Yes	Fail	
2.03	Is customer service training provided to process participants?	No	Yes	Fail	
2.04	Have the ways in which customers influence and/or participate in the process been defined?	Yes	Yes	Pass	
2.05	Have checks been done on customers understanding of the process?	No	Yes	Fail	
2.06	Has the customer trigger for the process been defined and communicated to the customer?	Yes	Yes	Pass	5
2.07	Have pre-process checks been defined to enable confirmation to the customer that their needs can be met?	Yes	Yes	Pass	3
2.08	Are customers provided with progress reports once the process has been started?	Yes	Yes	Pass	63%
3. Products/Services					
3.01	Has a method for forecasting and resourcing for future product/service demand been defined?	No	Yes	Fail	
3.02	Has a method for understanding individual customer product/service preferences been developed?	Yes	Yes	Pass	
3.03	Has a method for incorporating individual customer preferences into the products/services been developed?	Yes	Yes	Pass	4
3.04	Has a method for checking customer acceptance of the end products or services been defined?	Yes	Yes	Pass	1
3.05	Has a method for dealing with customer feedback, including product and service suggestions, been defined?	Yes	Yes	Pass	80%
4. Work Practices					
4.01	Has the process been documented?	Yes	Yes	Pass	
4.02	Is the documentation regularly reviewed and updated when required?	Yes	Yes	Pass	
4.03	Is compliance with process steps managed in real-time?	Yes	Yes	Pass	
4.04	Is the method of checking process compliance defined?	Yes	Yes	Pass	
4.05	Is training provided to participants that undertake the process?	Yes	Yes	Pass	
4.06	Does training cover soft skills?	Yes	Yes	Pass	
4.07	Is the process documentation and collateral easy to find?	Yes	Yes	Pass	
4.08	Have the process inputs been defined?	Yes	Yes	Pass	
4.09	Have the input procurement processes been defined?	Yes	Yes	Pass	
4.1	Do providers of inputs, including external suppliers, receive performance feedback?	Yes	Yes	Pass	
4.11	Are the procurement processes for external suppliers transparent and fair?	Yes	Yes	Pass	
4.12	Has the trigger for the process been defined and communicated to those working in the process?	Yes	Yes	Pass	
4.13	Have all processes triggered by this process been defined?	No	Yes	Fail	
4.14	Is efficiency measured in the process?	Yes	Yes	Pass	
4.15	Have quality outcomes for the process been defined?	Yes	Yes	Pass	
4.16	Are quality checks that align with the defined quality outcomes undertaken?	Yes	Yes	Pass	
4.17	Are controls in place to reduce, eliminate or manage process failures?	No	Yes	Fail	
4.18	Are audits or assurance in place to measure process compliance?	Yes	Yes	Pass	18
4.19	Does the process have defined and used feedback loops?	Yes	Yes	Pass	2
4.20	Have the internal or external approval points (if any) been defined?	Yes	Yes	Pass	90%
5. Participants					
5.01	Has the single point of accountability process owner's needs been captured and reflected in the process?	Yes	Yes	Pass	
5.02	Do all relevant managers understand and support the process?	No	Yes	Fail	
5.03	Have the stakeholders needs been captured and reflected in the process?	No	Yes	Fail	
5.04	Does each step of the process have a clearly articulated owner?	Yes	Yes	Pass	
5.05	Is someone accountable for ensuring participants stay within the boundaries of the process?	Yes	Yes	Pass	
5.06	Can a sufficient number of people currently manage the end to end process?	Yes	Yes	Pass	
5.07	Is there an onboarding process for new process participants?	Yes	Yes	Pass	
5.08	Do process participants receive ongoing support and skills refreshers?	Yes	Yes	Pass	8
5.09	Are systems in place to ensure follow through on audit or assurance recommendations?	Yes	Yes	Pass	2
5.10	Are systems in place to record participants feedback and track resulting action?	Yes	Yes	Pass	80%
6. Information					
6.01	Have the in-process communication requirements been defined?	Yes	Yes	Pass	
6.02	Have service level agreements for customers been agreed?	No	Yes	Fail	
6.02b	Are sufficient steps taken to meet service levels agreements?	No	Yes	Fail	
6.03	Are customers requirements reflected in KPIs and reporting?	Yes	Yes	Pass	
6.04	Are in-process measures defined and tracked?	Yes	Yes	Pass	
6.05	Are process workloads managed and prioritised, including at peak times?	No	Yes	Fail	
6.06	Has process performance been benchmarked against similar peer processes?	Yes	Yes	Pass	6
6.07	Does historical process performance data exist?	Yes	Yes	Pass	3
6.08	Is the historical performance data used to improve future performance?	Yes	Yes	Pass	67%
7. Technologies					
7.01	Is the process documentation version controlled?	Yes	Yes	Pass	
7.02	Are the documents produced as part of the process stored in a document management system?	Yes	Yes	Pass	
7.03	Is IT systems training provided to process participants?	Yes	Yes	Pass	
7.04	Are the relevant system security restrictions/permissions appropriate for the process?	Yes	Yes	Pass	
7.05	Does the process use a workflow tool?	Yes	Yes	Pass	6
7.06	Is all important data relating to the process backed up?	Yes	Yes	Pass	1
7.07	Is the system data quality checked?	No	Yes	Fail	86%
8. Infrastructure					
8.01	Are organisational standards and policies applied as intended in the process?	Yes	Yes	Pass	3
8.02	Are appropriate checks made to ensure that the tools, templates and checklists used in the process are up to date?	Yes	Yes	Pass	0
8.03	Have the inputs from organisational teams such as IT, HR, Finance been defined?	Yes	Yes	Pass	100%
9. Environment					
9.01	Is the processes environment monitored for opportunities and threats?	Yes	Yes	Pass	3
9.02	Does the process meet external regulatory requirements?	Yes	Yes	Pass	0
9.03	Are the risks created by the operation of the process recorded, monitored and accepted/avoided/transferred?	Yes	Yes	Pass	100%
10. Strategies					
10.01	Is the process influenced and/or directed by organisational policies?	Yes	Yes	Pass	2
10.02	Is the process influenced and/or directed by organisational goals and/or strategies?	Yes	Yes	Pass	0
					100%

Appendix 3: WOF Data Tables

#	WOF CHECK SUMMARY FOR ALL RESPONDANTS PROCESSES R1 - R10	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	Total Yes	Total No
Data collected: The responses to the process check yes/no regardless of whether the check is deemed important to the process in question. What could be interesting here is looking at any questions that have either a majority of yes's or a majority of no's and doing the same with the 'importance to process' question. So if one of the checks has a majority of No's , and in the importance to question and important to all processes has No's, it could be questioned as to whether it is a valid check. If this were the case, I would need to justify keeping the question in. It could be that the people answering the question just dont understand the importance. Or it could be important for the WSM or VSM.													
1. Work Process as a Whole													
1.01	Does the process have an appropriate and understandable name?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10	0
1.02	Is the purpose of the process widely accepted and understood?	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	9	1
1.03	Has the process coverage (what the process applies to/does not apply to) been defined?	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	8	2
1.04	Have the relationships and interdependencies with other processes been defined?	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	7	3
1.05	Does the process have a single accountable owner?	Yes	Yes	No	No	No	No	Yes	No	Yes	Yes	5	5
1.06	Has the method to change the process, including change signoffs, been defined?	Yes	Yes	No	No	No	No	No	Yes	Yes	No	4	6
1.07	Has the accountability and responsibility for coordinating the end to end process operation been defined?	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	9	1
2. Customer													
2.01	Have the internal and/or external customers of the process outputs been defined?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10	0
2.02	Have customers been asked for their opinions, needs, and wants, including service levels?	No	No	Yes	Yes	No		No	Yes	No	Yes	4	5
2.03	Is customer service training provided to process participants?	No	No	No	No	No	No	Yes	No	No	Yes	2	8
2.04	Have the ways in which customers influence and/or participate in the process been defined?	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	8	2
2.05	Have checks been done on customers understanding of the process?	No	Yes	Yes	No	No	No	No	No	No	No	2	8
2.06	Has the customer trigger for the process been defined and communicated to the customer?	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	8	2
2.07	Have pre-process checks been defined to enable confirmation to the customer that their needs can be met?	No	Yes	No	Yes	Yes	Yes	No	No	Yes	Yes	6	4
2.08	Are customers provided with progress reports once the process has been started?	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	8	2
3. Products/Services													
3.01	Has a method for forecasting and resourcing for future product/service demand been defined?	No	No	Yes	No	Yes	No	Yes	No	No	Yes	4	6
3.02	Has a method for understanding individual customer product/service preferences been developed?	No	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	7	3
3.03	Has a method for incorporating individual customer preferences into the products/services been developed?	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	8	2
3.04	Has a method for checking customer acceptance of the end products or services been defined?	No	Yes	Yes	No	Yes	No	No	Yes	Yes	Yes	6	4
3.05	Has a method for dealing with customer feedback, including product and service suggestions, been defined?	Yes	Yes	Yes	No	Yes	No	No	Yes	Yes	No	6	4
4. Work Practices													
4.01	Has the process been documented?	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	9	1
4.02	Is the documentation regularly reviewed and updated when required?	Yes	Yes	No	Yes	No		Yes	Yes	Yes	Yes	7	2
4.03	Is compliance with process steps managed in real-time?	Yes	Yes	No	No	Yes	No	No	Yes	Yes	Yes	6	4
4.04	Is the method of checking process compliance defined?	Yes	Yes	No	No	Yes	No	No	No	Yes	No	4	6
4.05	Is training provided to participants that undertake the process?	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	8	2
4.06	Does training cover soft skills?	No	No	No	No	Yes	No	No	Yes	Yes	No	3	7
4.07	Is the process documentation and collateral easy to find?	Yes	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes	7	3
4.08	Have the process inputs been defined?	Yes	Yes	No	Yes	Yes		Yes	Yes	Yes	Yes	8	1
4.09	Have the input procurement processes been defined?	No	Yes	Yes	Yes	No		No	Yes	Yes	No	5	4
4.10	Do providers of inputs, including external suppliers, receive performance feedback?	No	Yes	No	No	Yes		No	Yes	Yes	No	4	5
4.11	Are the procurement processes for external suppliers transparent and fair?	No	Yes	Yes	No	No		No	Yes	Yes	Yes	5	4
4.12	Has the trigger for the process been defined and communicated to those working in the process?	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	9	1
4.13	Have all processes triggered by this process been defined?	Yes	Yes	Yes	No	No	No		Yes	No	Yes	5	4
4.14	Is efficiency measured in the process?	No	No	No	No	No	No	No	No	Yes	No	1	9
4.15	Have quality outcomes for the process been defined?	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes	Yes	7	3
4.16	Are quality checks that align with the defined quality outcomes undertaken?	Yes	Yes	No	Yes	Yes		No	Yes	Yes	Yes	7	2
4.17	Are controls in place to reduce, eliminate or manage process failures?	Yes	Yes	No	No	Yes		Yes	Yes	No	Yes	6	3
4.18	Are audits or assurance in place to measure process compliance?	Yes	Yes	No	No	Yes		No	No	Yes	No	4	5
4.19	Does the process have defined and used feedback loops?	No	Yes	Yes	No	Yes		Yes	No	Yes	No	5	4
4.20	Have the internal or external approval points (if any) been defined?	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	9	1
5. Participants													
5.01	Has the single point of accountability process owner's needs been captured and reflected in the process?	Yes	Yes	No	No	No		Yes	Yes	Yes	Yes	6	3
5.02	Do all relevant managers understand and support the process?	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes	8	2
5.03	Have the stakeholders needs been captured and reflected in the process?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	9	1
5.04	Does each step of the process have a clearly articulated owner?	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	9	1
5.05	Is someone accountable for ensuring participants stay within the boundaries of the process?	Yes	Yes	Yes	Yes	No	No	Yes	No	Yes	Yes	7	3
5.06	Can a sufficient number of people currently manage the end to end process?	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No	7	3
5.07	Is there an onboarding process for new process participants?	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No	7	3
5.08	Do process participants receive ongoing support and skills refreshers?	No	No	No	No	No	No	Yes	No	Yes	Yes	3	7
5.09	Are systems in place to ensure follow through on audit or assurance recommendations?	Yes	Yes	No	No	Yes		Yes	No	Yes	No	5	4
5.10	Are systems in place to record participants feedback and track resulting action?	No	Yes	No	No	No		Yes	No	Yes	No	3	6
6. Information													
6.01	Have the in-process communication requirements been defined?	Yes	Yes	No	No	Yes		Yes	Yes	Yes	Yes	7	2
6.02	Have service level agreements for customers been agreed?	No	No	No	Yes	Yes	No	Yes	No	No	Yes	4	6
6.02b	Are sufficient steps taken to meet service levels agreements?	No	No	No	Yes	Yes	No	Yes	Yes	No	Yes	5	5
6.03	Are customers requirements reflected in KPIs and reporting?	No	No	No	Yes	Yes	No	No	No	Yes	Yes	4	6
6.04	Are in-process measures defined and tracked?	No	Yes	No	Yes	Yes	Yes	No	No	Yes	No	5	5
6.05	Are process workloads managed and prioritised, including at peak times?	Yes	Yes	No	No	Yes	No	Yes	Yes	No	Yes	6	4
6.06	Has process performance been benchmarked against similar peer processes?	No	No	No	No	No		No	No	Yes	No	1	8
6.07	Does historical process performance data exist?	No	No	No	Yes	No		No	Yes	Yes	Yes	4	5
6.08	Is the historical performance data used to improve future performance?	No	No	No	Yes	No			Yes	Yes	No	3	5
7. Technologies													
7.01	Is the process documentation version controlled?	Yes	Yes	No	Yes	No	Yes	Yes	No	Yes	Yes	7	3
7.02	Are the documents produced as part of the process stored in a document management system?	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	9	1
7.03	Is IT systems training provided to process participants?	No	Yes	No	Yes	Yes	No	Yes	No	Yes	Yes	6	4
7.04	Are the relevant system security restrictions/permissions appropriate for the process?	Yes	Yes	Yes	Yes	Yes		Yes	No	Yes	Yes	8	1
7.05	Does the process use a workflow tool?	No	No	No	Yes	No	No	No	No	Yes	No	2	8
7.06	Is all important data relating to the process backed up?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10	0
7.07	Is the system data quality checked?	Yes	Yes	Yes	No	Yes		Yes	Yes	No	No	6	3
												0	0
8. Infrastructure												0	0
8.01	Are organisational standards and policies applied as intended in the process?	Yes	Yes	Yes	No	Yes		Yes	Yes	Yes	No	7	2
8.02	Are appropriate checks made to ensure that the tools, templates and checklists used in the process are up to date?	Yes	Yes	No	No	No		Yes	Yes	Yes	No	5	4
8.03	Have the inputs from organisational teams such as IT, HR, Finance been defined?	No	Yes	No	No	Yes		No	Yes	Yes	Yes	5	4
9. Environment													
9.01	Is the processes environment monitored for opportunities and threats?	No	Yes	No	No	Yes	No	Yes	Yes	Yes	No	5	5
9.02	Does the process meet external regulatory requirements?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	9	0
9.03	Are the risks created by the operation of the process recorded, monitored and accepted/avoided/transferred?	Yes	No	No	No	Yes	Yes	No	No	Yes	Yes	5	5
10. Strategies													
10.01	Is the process influenced and/or directed by organisational policies?	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	9	1
10.02	Is the process influenced and/or directed by organisational goals and/or strategies?	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	8	2

#	RESPONSES TO 'IS THIS IMPORTANT FOR YOUR PROCESS'	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	Total Yes	Total No	% No
Data collected: See Process Check tab narrative														
1. Work Process as a Whole														
1.01	Does the process have an appropriate and understandable name?	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	8	2	20%
1.02	Is the purpose of the process widely accepted and understood?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10	0	0%
1.03	Has the process coverage (what the process applies to/does not apply to) been defined?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10	0	0%
1.04	Have the relationships and interdependencies with other processes been defined?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10	0	0%
1.05	Does the process have a single accountable owner?	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	9	1	10%
1.06	Has the method to change the process, including change signoffs, been defined?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10	0	0%
1.07	Has the accountability and responsibility for coordinating the end to end process operation been defined?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10	0	0%
2. Customer														
2.01	Have the internal and/or external customers of the process outputs been defined?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10	0	0%
2.02	Have customers been asked for their opinions, needs, and wants, including service levels?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10	0	0%
2.03	Is customer service training provided to process participants?	No	No	No	Yes	No	No	Yes	No	Yes	Yes	4	6	60%
2.04	Have the ways in which customers influence and/or participate in the process been defined?	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	9	1	10%
2.05	Have checks been done on customers understanding of the process?	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	8	2	20%
2.06	Has the customer trigger for the process been defined and communicated to the customer?	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	9	1	10%
2.07	Have pre-process checks been defined to enable confirmation to the customer that their needs can be met?	No	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes	7	3	30%
2.08	Are customers provided with progress reports once the process has been started?	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	9	1	10%
3. Products/Services														
3.01	Has a method for forecasting and resourcing for future product/service demand been defined?	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	8	2	20%
3.02	Has a method for understanding individual customer product/service preferences been developed?	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	8	2	20%
3.03	Has a method for incorporating individual customer preferences into the products/services been developed?	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	8	2	20%
3.04	Has a method for checking customer acceptance of the end products or services been defined?	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	9	1	10%
3.05	Has a method for dealing with customer feedback, including product and service suggestions, been defined?	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No	8	2	20%
4. Work Practices														
4.01	Has the process been documented?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10	0	0%
4.02	Is the documentation regularly reviewed and updated when required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10	0	0%
4.03	Is compliance with process steps managed in real-time?	Yes	Yes	No	Yes	Yes		No	Yes	Yes	Yes	7	2	22%
4.04	Is the method of checking process compliance defined?	Yes	Yes	Yes	Yes	Yes		Yes	No	Yes	Yes	8	1	11%
4.05	Is training provided to participants that undertake the process?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10	0	0%
4.06	Does training cover soft skills?	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	8	2	20%
4.07	Is the process documentation and collateral easy to find?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	9	1	10%
4.08	Have the process inputs been defined?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10	0	0%
4.09	Have the input procurement processes been defined?	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	7	3	30%
4.10	Do providers of inputs, including external suppliers, receive performance feedback?	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No	8	2	20%
4.11	Are the procurement processes for external suppliers transparent and fair?	No	Yes	Yes	No	No	Yes	No	Yes	Yes	No	5	5	50%
4.12	Has the trigger for the process been defined and communicated to those working in the process?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10	0	0%
4.13	Have all processes triggered by this process been defined?	Yes	Yes	Yes	Yes	No	Yes		Yes	Yes	Yes	8	1	11%
4.14	Is efficiency measured in the process?	No	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes	7	3	30%
4.15	Have quality outcomes for the process been defined?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10	0	0%
4.16	Are quality checks that align with the defined quality outcomes undertaken?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10	0	0%
4.17	Are controls in place to reduce, eliminate or manage process failures?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10	0	0%
4.18	Are audits or assurance in place to measure process compliance?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	9	1	10%
4.19	Does the process have defined and used feedback loops?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	9	1	10%
4.20	Have the internal or external approval points (if any) been defined?	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	9	1	10%
5. Participants														
5.01	Has the single point of accountability process owner's needs been captured and reflected in the process?	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	8	2	20%
5.02	Do all relevant managers understand and support the process?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10	0	0%
5.03	Have the stakeholders needs been captured and reflected in the process?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10	0	0%
5.04	Does each step of the process have a clearly articulated owner?	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	9	1	10%
5.05	Is someone accountable for ensuring participants stay within the boundaries of the process?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	9	1	10%
5.06	Can a sufficient number of people currently manage the end to end process?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10	0	0%
5.07	Is there an onboarding process for new process participants?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10	0	0%
5.08	Do process participants receive ongoing support and skills refreshers?	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes	8	2	20%
5.09	Are systems in place to ensure follow through on audit or assurance recommendations?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	9	1	10%
5.10	Are systems in place to record participants feedback and track resulting action?	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes	8	2	20%
6. Information														
6.01	Have the in-process communication requirements been defined?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10	0	0%
6.02	Have service level agreements for customers been agreed?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10	0	0%
6.02b	Are sufficient steps taken to meet service levels agreements?	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	9	1	10%
6.03	Are customers requirements reflected in KPIs and reporting?	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	9	1	10%
6.04	Are in-process measures defined and tracked?	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	8	2	20%
6.05	Are process workloads managed and prioritised, including at peak times?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10	0	0%
6.06	Has process performance been benchmarked against similar peer processes?	Yes	Yes	Yes	Yes	No		No	No	Yes	Yes	6	3	33%
6.07	Does historical process performance data exist?	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	8	2	20%
6.08	Is the historical performance data used to improve future performance?	No	Yes	No	Yes	No	Yes		Yes	Yes	Yes	6	3	33%
7. Technologies														
7.01	Is the process documentation version controlled?	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes	8	2	20%
7.02	Are the documents produced as part of the process stored in a document management system?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10	0	0%
7.03	Is IT systems training provided to process participants?	No	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes	7	3	30%
7.04	Are the relevant system security restrictions/permissions appropriate for the process?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	9	1	10%
7.05	Does the process use a workflow tool?	Yes	No	No	Yes	No	No	No	No	Yes	No	3	7	70%
7.06	Is all important data relating to the process backed up?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10	0	0%
7.07	Is the system data quality checked?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10	0	0%
8. Infrastructure														
8.01	Are organisational standards and policies applied as intended in the process?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10	0	0%
8.02	Are appropriate checks made to ensure that the tools, templates and checklists used in the process are up to date?	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	9	1	10%
8.03	Have the inputs from organisational teams such as IT, HR, Finance been defined?	No	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	8	1	11%
9. Environment														
9.01	Is the processes environment monitored for opportunities and threats?	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	8	2	20%
9.02	Does the process meet external regulatory requirements?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10	0	0%
9.03	Are the risks created by the operation of the process recorded, monitored and accepted/avoided/transferred?	Yes	No	No	No	Yes	Yes	Yes	No	Yes	Yes	6	4	40%
10. Strategies														
10.01	Is the process influenced and/or directed by organisational policies?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10	0	0%
10.02	Is the process influenced and/or directed by organisational goals and/or strategies?	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	9	1	10%

#	WOF CHECK FOR YOUR PROCESS - Is this important for most/all processes?	R1	R2	R3	R4	R5	R6	R7	R8	Total Yes	Total No
	Data collected: See Process Check tab narrative										
1. Work Process as a Whole											
1.01	Does the process have an appropriate and understandable name?	Yes	Yes	Yes	Yes	Yes		Yes	No	6	1
1.02	Is the purpose of the process widely accepted and understood?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
1.03	Has the process coverage (what the process applies to/does not apply to) been defined?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
1.04	Have the relationships and interdependencies with other processes been defined?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
1.05	Does the process have a single accountable owner?	Yes	Yes	No	Yes	No		No	No	3	4
1.06	Has the method to change the process, including change signoffs, been defined?	Yes	Yes	Yes	Yes	No		No	Yes	5	2
1.07	Has the accountability and responsibility for coordinating the end to end process operation been defined?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
2. Customer											
2.01	Have the internal and/or external customers of the process outputs been defined?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
2.02	Have customers been asked for their opinions, needs, and wants, including service levels?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
2.03	Is customer service training provided to process participants?	No	Yes	No	Yes	No		No	No	2	5
2.04	Have the ways in which customers influence and/or participate in the process been defined?	Yes	Yes	Yes	Yes	Yes		No	No	5	2
2.05	Have checks been done on customers understanding of the process?	Yes	Yes	Yes	Yes	Yes		Yes	No	6	1
2.06	Has the customer trigger for the process been defined and communicated to the customer?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
2.07	Have pre-process checks been defined to enable confirmation to the customer that their needs can be met?	No	Yes	No	Yes	Yes		Yes	No	4	3
2.08	Are customers provided with progress reports once the process has been started?	Yes	Yes	Yes	Yes	No		Yes	No	5	2
3. Products/Services											
3.01	Has a method for forecasting and resourcing for future product/service demand been defined?	Yes	Yes	Yes	Yes	No		No	Yes	5	2
3.02	Has a method for understanding individual customer product/service preferences been developed?	Yes	Yes	Yes	Yes	Yes		No	No	5	2
3.03	Has a method for incorporating individual customer preferences into the products/services been developed?	Yes	Yes	Yes	Yes	No		No	No	4	3
3.04	Has a method for checking customer acceptance of the end products or services been defined?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
3.05	Has a method for dealing with customer feedback, including product and service suggestions, been defined?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
4. Work Practices											
4.01	Has the process been documented?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
4.02	Is the documentation regularly reviewed and updated when required?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
4.03	Is compliance with process steps managed in real-time?	Yes	Yes	No	Yes	No		No	No	3	4
4.04	Is the method of checking process compliance defined?	Yes	Yes	Yes	Yes	Yes		No	Yes	6	1
4.05	Is training provided to participants that undertake the process?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
4.06	Does training cover soft skills?	No	Yes	Yes	Yes	No		Yes	No	4	3
4.07	Is the process documentation and collateral easy to find?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
4.08	Have the process inputs been defined?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
4.09	Have the input procurement processes been defined?	Yes	Yes	Yes	Yes	No		Yes	No	5	2
4.10	Do providers of inputs, including external suppliers, receive performance feedback?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
4.11	Are the procurement processes for external suppliers transparent and fair?	Yes	Yes	No	Yes	Yes		Yes	No	5	2
4.12	Has the trigger for the process been defined and communicated to those working in the process?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
4.13	Have all processes triggered by this process been defined?	Yes	Yes	Yes	Yes	Yes		No	Yes	6	1
4.14	Is efficiency measured in the process?	Yes	Yes	Yes	Yes	Yes		No	Yes	6	1
4.15	Have quality outcomes for the process been defined?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
4.16	Are quality checks that align with the defined quality outcomes undertaken?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
4.17	Are controls in place to reduce, eliminate or manage process failures?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
4.18	Are audits or assurance in place to measure process compliance?	Yes	Yes	Yes	Yes	Yes		No	No	5	2
4.19	Does the process have defined and used feedback loops?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
4.20	Have the internal or external approval points (if any) been defined?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
5. Participants											
5.01	Has the single point of accountability process owner's needs been captured and reflected in the process?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
5.02	Do all relevant managers understand and support the process?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
5.03	Have the stakeholders needs been captured and reflected in the process?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
5.04	Does each step of the process have a clearly articulated owner?	Yes	Yes	No	Yes	Yes		Yes	No	5	2
5.05	Is someone accountable for ensuring participants stay within the boundaries of the process?	Yes	Yes	Yes	Yes	No		No	No	4	3
5.06	Can a sufficient number of people currently manage the end to end process?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
5.07	Is there an onboarding process for new process participants?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
5.08	Do process participants receive ongoing support and skills refreshers?	Yes	Yes	Yes	Yes	No		Yes	Yes	6	1
5.09	Are systems in place to ensure follow through on audit or assurance recommendations?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
5.10	Are systems in place to record participants feedback and track resulting action?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
6. Information											
6.01	Have the in-process communication requirements been defined?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
6.02	Have service level agreements for customers been agreed?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
6.02b	Are sufficient steps taken to meet service levels agreements?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
6.03	Are customers requirements reflected in KPIs and reporting?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
6.04	Are in-process measures defined and tracked?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
6.05	Are process workloads managed and prioritised, including at peak times?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
6.06	Has process performance been benchmarked against similar peer processes?	Yes	Yes	Yes	Yes	No		No	No	4	3
6.07	Does historical process performance data exist?	Yes	Yes	No	Yes	No		No	No	3	4
6.08	Is the historical performance data used to improve future performance?	Yes	Yes	No	Yes	No		Yes	No	4	3
7. Technologies											
7.01	Is the process documentation version controlled?	Yes	Yes	Yes	Yes	No		Yes	Yes	6	1
7.02	Are the documents produced as part of the process stored in a document management system?	Yes	Yes	Yes	Yes	No		Yes	Yes	6	1
7.03	Is IT systems training provided to process participants?	Yes	Yes	No	Yes	Yes		Yes	No	5	2
7.04	Are the relevant system security restrictions/permissions appropriate for the process?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
7.05	Does the process use a workflow tool?	Yes	Yes	No	Yes	No		No	No	3	4
7.06	Is all important data relating to the process backed up?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
7.07	Is the system data quality checked?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
8. Infrastructure											
8.01	Are organisational standards and policies applied as intended in the process?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
8.02	Are appropriate checks made to ensure that the tools, templates and checklists used in the process are up to date?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
8.03	Have the inputs from organisational teams such as IT, HR, Finance been defined?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
9. Environment											
9.01	Is the processes environment monitored for opportunities and threats?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
9.02	Does the process meet external regulatory requirements?	Yes	Yes	Yes	Yes	Yes		Yes	No	6	1
9.03	Are the risks created by the operation of the process recorded, monitored and accepted/avoided/transferred?	Yes	Yes	No	Yes	Yes		No	Yes	5	2
10. Strategies											
10.01	Is the process influenced and/or directed by organisational policies?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0
10.02	Is the process influenced and/or directed by organisational goals and/or strategies?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	7	0

Pass Fail % for each grouping	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	Average	Min	Max
1. Work Process as a Whole	100%	100%	57%	57%	29%	71%	71%	86%	100%	86%	76%	29%	100%
2. Customer	75%	75%	100%	63%	88%	88%	63%	88%	63%	88%	79%	63%	100%
3. Products/Services	60%	100%	100%	40%	100%	20%	100%	100%	80%	100%	80%	20%	100%
4. Work Practices	85%	90%	50%	55%	80%	75%	70%	100%	90%	70%	77%	50%	100%
5. Participants	70%	90%	50%	50%	80%	80%	90%	100%	80%	60%	75%	50%	100%
6. Information	44%	44%	22%	67%	100%	56%	78%	78%	67%	67%	62%	22%	100%
7. Technologies	86%	100%	86%	86%	100%	86%	86%	100%	86%	86%	90%	86%	100%
8. Infrastructure	100%	100%	33%	0%	100%	100%	67%	100%	100%	33%	73%	0%	100%
9. Environment	100%	100%	67%	100%	100%	67%	67%	100%	100%	67%	87%	67%	100%
10. Strategies	50%	100%	100%	50%	100%	100%	100%	100%	100%	100%	90%	50%	100%
	77%	86%	61%	58%	84%	73%	77%	95%	84%	74%	78%		

#	WOF CHECK - Pass / Fail Summary	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	Total Pass	Total Fail
Data collected: The responses to the process check will show the number of fails (out of 8) for each of the checks. Since the respondee self-nominates checks as fails by saying the the process did not meet the check criteria and that the check is important for the process, the fails are true failures. A check with a high failure rate would arguably be a more valuable check than one with a low failure rate (a low failure would be caused either by an important check that had a high pass rate, or any check where the respondee didnt think it was important to their process)													
1. Work Process as a Whole													
1.01	Does the process have an appropriate and understandable name?	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	10	0
1.02	Is the purpose of the process widely accepted and understood?	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	9	1
1.03	Has the process coverage (what the process applies to/does not apply to) been defined?	Pass	Pass	Fail	Pass	Fail	Pass	Pass	Pass	Pass	Pass	8	2
1.04	Have the relationships and interdependencies with other processes been defined?	Pass	Pass	Fail	Fail	Fail	Pass	Pass	Pass	Pass	Pass	7	3
1.05	Does the process have a single accountable owner?	Pass	Pass	Pass	Fail	Fail	Fail	Pass	Fail	Pass	Pass	6	4
1.06	Has the method to change the process, including change signoffs, been defined?	Pass	Pass	Fail	Fail	Fail	Fail	Fail	Pass	Pass	Fail	4	6
1.07	Has the accountability and responsibility for coordinating the end to end process operation been defined?	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass	9	1
2. Customer													
2.01	Have the internal and/or external customers of the process outputs been defined?	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	10	0
2.02	Have customers been asked for their opinions, needs, and wants, including service levels?	Fail	Fail	Pass	Pass	Fail	Pass	Fail	Pass	Fail	Pass	5	5
2.03	Is customer service training provided to process participants?	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Fail	Pass	8	2
2.04	Have the ways in which customers influence and/or participate in the process been defined?	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	9	1
2.05	Have checks been done on customers understanding of the process?	Fail	Pass	Pass	Fail	Pass	Pass	Fail	Fail	Fail	Fail	4	6
2.06	Has the customer trigger for the process been defined and communicated to the customer?	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Pass	9	1
2.07	Have pre-process checks been defined to enable confirmation to the customer that their needs can be met?	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	9	1
2.08	Are customers provided with progress reports once the process has been started?	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	9	1
3. Products/Services													
3.01	Has a method for forecasting and resourcing for future product/service demand been defined?	Fail	Pass	Pass	Fail	Pass	Fail	Pass	Pass	Fail	Pass	6	4
3.02	Has a method for understanding individual customer product/service preferences been developed?	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	9	1
3.03	Has a method for incorporating individual customer preferences into the products/services been developed?	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	10	0
3.04	Has a method for checking customer acceptance of the end products or services been defined?	Fail	Pass	Pass	Fail	Pass	Fail	Pass	Pass	Pass	Pass	7	3
3.05	Has a method for dealing with customer feedback, including product and service suggestions, been defined?	Pass	Pass	Pass	Fail	Pass	Fail	Pass	Pass	Pass	Pass	8	2
4. Work Practices													
4.01	Has the process been documented?	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass	9	1
4.02	Is the documentation regularly reviewed and updated when required?	Pass	Pass	Fail	Pass	Fail	Pass	Pass	Pass	Pass	Pass	8	2
4.03	Is compliance with process steps managed in real-time?	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Pass	9	1
4.04	Is the method of checking process compliance defined?	Pass	Pass	Fail	Fail	Pass	Pass	Fail	Pass	Pass	Fail	6	4
4.05	Is training provided to participants that undertake the process?	Fail	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Pass	8	2
4.06	Does training cover soft skills?	Pass	Fail	Fail	Pass	Pass	Fail	Fail	Pass	Pass	Fail	5	5
4.07	Is the process documentation and collateral easy to find?	Pass	Pass	Pass	Fail	Fail	Pass	Pass	Pass	Pass	Pass	8	2
4.08	Have the process inputs been defined?	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Pass	9	1
4.09	Have the input procurement processes been defined?	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail	9	1
4.10	Do providers of inputs, including external suppliers, receive performance feedback?	Fail	Pass	Fail	Fail	Pass	Pass	Pass	Pass	Pass	Pass	7	3
4.11	Are the procurement processes for external suppliers transparent and fair?	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	10	0
4.12	Has the trigger for the process been defined and communicated to those working in the process?	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	9	1
4.13	Have all processes triggered by this process been defined?	Pass	Pass	Pass	Fail	Pass	Fail	Pass	Pass	Fail	Pass	7	3
4.14	Is efficiency measured in the process?	Pass	Fail	Pass	Fail	Fail	Fail	Fail	Pass	Pass	Fail	4	6
4.15	Have quality outcomes for the process been defined?	Pass	Pass	Fail	Pass	Pass	Fail	Fail	Pass	Pass	Pass	7	3
4.16	Are quality checks that align with the defined quality outcomes undertaken?	Pass	Pass	Fail	Pass	Pass	Pass	Fail	Pass	Pass	Pass	8	2
4.17	Are controls in place to reduce, eliminate or manage process failures?	Pass	Pass	Fail	Fail	Pass	Pass	Pass	Pass	Fail	Pass	7	3
4.18	Are audits or assurance in place to measure process compliance?	Pass	Pass	Fail	Fail	Pass	Pass	Fail	Pass	Pass	Fail	6	4
4.19	Does the process have defined and used feedback loops?	Fail	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Fail	7	3
4.20	Have the internal or external approval points (if any) been defined?	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	10	0
5. Participants													
5.01	Has the single point of accountability process owner's needs been captured and reflected in the process?	Pass	Pass	Fail	Pass	Fail	Pass	Pass	Pass	Pass	Pass	8	2
5.02	Do all relevant managers understand and support the process?	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Fail	Pass	8	2
5.03	Have the stakeholders needs been captured and reflected in the process?	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Pass	9	1
5.04	Does each step of the process have a clearly articulated owner?	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	10	0
5.05	Is someone accountable for ensuring participants stay within the boundaries of the process?	Pass	Pass	Pass	Pass	Fail	Fail	Pass	Pass	Pass	Pass	8	2
5.06	Can a sufficient number of people currently manage the end to end process?	Pass	Pass	Pass	Fail	Pass	Pass	Fail	Pass	Pass	Fail	7	3
5.07	Is there an onboarding process for new process participants?	Fail	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Fail	7	3
5.08	Do process participants receive ongoing support and skills refreshers?	Fail	Fail	Fail	Fail	Pass	Fail	Pass	Pass	Pass	Pass	5	5
5.09	Are systems in place to ensure follow through on audit or assurance recommendations?	Pass	Pass	Fail	Fail	Pass	Pass	Pass	Pass	Pass	Fail	7	3
5.10	Are systems in place to record participants feedback and track resulting action?	Fail	Pass	Fail	Fail	Pass	Pass	Pass	Pass	Pass	Fail	6	4
6. Information													
6.01	Have the in-process communication requirements been defined?	Pass	Pass	Fail	Fail	Pass	Pass	Pass	Pass	Pass	Pass	8	2
6.02	Have service level agreements for customers been agreed?	Fail	Fail	Fail	Pass	Pass	Fail	Pass	Fail	Fail	Pass	4	6
6.02b	Are sufficient steps taken to meet service levels agreements?	Pass	Fail	Fail	Pass	Pass	Fail	Pass	Pass	Fail	Pass	6	4
6.03	Are customers requirements reflected in KPIs and reporting?	Fail	Pass	Fail	Pass	Pass	Fail	Fail	Fail	Pass	Pass	5	5
6.04	Are in-process measures defined and tracked?	Fail	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Fail	7	3
6.05	Are process workloads managed and prioritised, including at peak times?	Pass	Pass	Fail	Fail	Pass	Fail	Pass	Pass	Fail	Pass	6	4
6.06	Has process performance been benchmarked against similar peer processes?	Fail	Fail	Fail	Fail	Pass	Pass	Pass	Pass	Pass	Fail	5	5
6.07	Does historical process performance data exist?	Fail	Fail	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	7	3
6.08	Is the historical performance data used to improve future performance?	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail	8	2
7. Technologies													
7.01	Is the process documentation version controlled?	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Pass	9	1
7.02	Are the documents produced as part of the process stored in a document management system?	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	9	1
7.03	Is IT systems training provided to process participants?	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	9	1
7.04	Are the relevant system security restrictions/permissions appropriate for the process?	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	10	0
7.05	Does the process use a workflow tool?	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	9	1
7.06	Is all important data relating to the process backed up?	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	10	0
7.07	Is the system data quality checked?	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Fail	Fail	7	3
8. Infrastructure													
8.01	Are organisational standards and policies applied as intended in the process?	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Fail	8	2
8.02	Are appropriate checks made to ensure that the tools, templates and checklists used in the process are up to date?	Pass	Pass	Fail	Fail	Pass	Pass	Pass	Pass	Pass	Fail	7	3
8.03	Have the inputs from organisational teams such as IT, HR, Finance been defined?	Pass	Pass	Fail	Fail	Pass	Pass	Fail	Pass	Pass	Pass	7	3
9. Environment													
9.01	Is the processes environment monitored for opportunities and threats?	Pass	Pass	Fail	Pass	Pass	Fail	Pass	Pass	Pass	Fail	7	3
9.02	Does the process meet external regulatory requirements?	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	10	0
9.03	Are the risks created by the operation of the process recorded, monitored and accepted/avoided/transferred?	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	9	1
10. Strategies													
10.01	Is the process influenced and/or directed by organisational policies?	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	9	1
10.02	Is the process influenced and/or directed by organisational goals and/or strategies?	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Pass	9	1
	Count Pass	57	64	45	43	62	54	57	70				
	Count Fail	17	10	29	31	12	20	17	4				
		77%	86%	61%	58%	84%	73%	77%	95%				

#	WOF CHECK FOR YOUR PROCESS - Votes for the top 15 checks	R1	R2	R3	R4	R5	R6	R7	R8	Total Yes
	Data collected: The responses to the process check will be the top 15-20 checks for each of the interviewees. The results were collated and the checks with the most votes got into the top 15.									
1. Work Process as a Whole										
1.01	Does the process have an appropriate and understandable name?	Yes								1
1.02	**Is the purpose of the process widely accepted and understood?**	Yes	Yes		Yes	Yes		Yes	Yes	4
1.03	Has the process coverage (what the process applies to/does not apply to) been defined?	Yes				Yes				1
1.04	Have the relationships and interdependencies with other processes been defined?	Yes			Yes				Yes	2
1.05	**Does the process have a single accountable owner?**	Yes	Yes		Yes					1
1.06	Has the method to change the process, including change signoffs, been defined?	Yes							Yes	1
1.07	**Has the accountability and responsibility for coordinating the end to end process operation been defined?**	Yes		Yes				Yes		1
2. Customer										
2.01	**Have the internal and/or external customers of the process outputs been defined?**		Yes	Yes	Yes	Yes		Yes	Yes	4
2.02	**Have customers been asked for their opinions, needs, and wants, including service levels?**	Yes		Yes		Yes			Yes	2
2.03	Is customer service training provided to process participants?									0
2.04	Have the ways in which customers influence and/or participate in the process been defined?									0
2.05	Have checks been done on customers understanding of the process?		Yes							0
2.06	Has the customer trigger for the process been defined and communicated to the customer?			Yes						0
2.07	Have pre-process checks been defined to enable confirmation to the customer that their needs can be met?									0
2.08	Are customers provided with progress reports once the process has been started?									0
3. Products/Services										
3.01	Has a method for forecasting and resourcing for future product/service demand been defined?									0
3.02	Has a method for understanding individual customer product/service preferences been developed?									0
3.03	Has a method for incorporating individual customer preferences into the products/services been developed?									0
3.04	**Has a method for checking customer acceptance of the end products or services been defined?**		Yes	Yes	Yes	Yes			Yes	3
3.05	Has a method for dealing with customer feedback, including product and service suggestions, been defined?				Yes			Yes		2
4. Work Practices										
4.01	**Has the process been documented?**	Yes	Yes	Yes	Yes	Yes				2
4.02	Is the documentation regularly reviewed and updated when required?	Yes						Yes	Yes	2
4.03	Is compliance with process steps managed in real-time?									0
4.04	Is the method of checking process compliance defined?			Yes						0
4.05	**Is training provided to participants that undertake the process?**	Yes			Yes	Yes		Yes	Yes	4
4.06	Does training cover soft skills?									0
4.07	Is the process documentation and collateral easy to find?				Yes				Yes	2
4.08	Have the process inputs been defined?	Yes			Yes					1
4.09	Have the input procurement processes been defined?									0
4.10	Do providers of inputs, including external suppliers, receive performance feedback?									0
4.11	Are the procurement processes for external suppliers transparent and fair?									0
4.12	**Has the trigger for the process been defined and communicated to those working in the process?**	Yes			Yes			Yes	Yes	3
4.13	Have all processes triggered by this process been defined?				Yes					1
4.14	Is efficiency measured in the process?									0
4.15	**Have quality outcomes for the process been defined?**	Yes	Yes	Yes	Yes					1
4.16	Are quality checks that align with the defined quality outcomes undertaken?					Yes				1
4.17	**Are controls in place to reduce, eliminate or manage process failures?**	Yes	Yes	Yes	Yes			Yes		2
4.18	Are audits or assurance in place to measure process compliance?	Yes								0
4.19	Does the process have defined and used feedback loops?		Yes							0
4.20	Have the internal or external approval points (if any) been defined?			Yes				Yes	Yes	2
5. Participants										
5.01	Has the single point of accountability process owner's needs been captured and reflected in the process?			Yes						0
5.02	Do all relevant managers understand and support the process?				Yes	Yes				2
5.03	Have the stakeholders needs been captured and reflected in the process?					Yes		Yes	Yes	3
5.04	**Does each step of the process have a clearly articulated owner?**	Yes	Yes			Yes				1
5.05	Is someone accountable for ensuring participants stay within the boundaries of the process?		Yes							0
5.06	Can a sufficient number of people currently manage the end to end process?							Yes	Yes	2
5.07	Is there an onboarding process for new process participants?	Yes						Yes		1
5.08	Do process participants receive ongoing support and skills refreshers?									0
5.09	Are systems in place to ensure follow through on audit or assurance recommendations?			Yes						0
5.10	Are systems in place to record participants feedback and track resulting action?	Yes						Yes		1
6. Information										
6.01	Have the in-process communication requirements been defined?					Yes			Yes	2
6.02	**Have service level agreements for customers been agreed?**		Yes	Yes	Yes	Yes				2
6.02b	Are sufficient steps taken to meet service levels agreements?				Yes			Yes		2
6.03	Are customers requirements reflected in KPIs and reporting?			Yes	Yes					1
6.04	Are in-process measures defined and tracked?								Yes	1
6.05	Are process workloads managed and prioritised, including at peak times?							Yes		1
6.06	Has process performance been benchmarked against similar peer processes?		Yes							0
6.07	Does historical process performance data exist?									0
6.08	Is the historical performance data used to improve future performance?									0
7. Technologies										
7.01	Is the process documentation version controlled?			Yes	Yes					1
7.02	Are the documents produced as part of the process stored in a document management system?		Yes							0
7.03	Is IT systems training provided to process participants?				Yes					1
7.04	Are the relevant system security restrictions/permissions appropriate for the process?					Yes		Yes		2
7.05	Does the process use a workflow tool?		Yes							0
7.06	Is all important data relating to the process backed up?							Yes	Yes	2
7.07	Is the system data quality checked?				Yes			Yes		2
8. Infrastructure										
8.01	**Are organisational standards and policies applied as intended in the process?**			Yes		Yes		Yes	Yes	3
8.02	Are appropriate checks made to ensure that the tools, templates and checklists used in the process are up to date?		Yes							0
8.03	Have the inputs from organisational teams such as IT, HR, Finance been defined?									0
9. Environment										
9.01	Is the processes environment monitored for opportunities and threats?		Yes			Yes				1
9.02	Does the process meet external regulatory requirements?	Yes		Yes						0
9.03	Are the risks created by the operation of the process recorded, monitored and accepted/avoided/transferred?								Yes	1
10. Strategies										
10.01	Is the process influenced and/or directed by organisational policies?			Yes	Yes					1
10.02	**Is the process influenced and/or directed by organisational goals and/or strategies?**		Yes	Yes	Yes			Yes	Yes	3

	Top 15 checks as voted by Transpower Respondees
1	Is the purpose of the process widely accepted and understood?
2	Does the process have a single accountable owner?
3	Has the accountability and responsibility for coordinating the end to end process operation been defined?
4	Have the internal and/or external customers of the process outputs been defined?
5	Have customers been asked for their opinions, needs, and wants, including service levels?
6	Has a method for checking customer acceptance of the end products or services been defined?
7	Has the process been documented?
8	Is training provided to participants that undertake the process?
9	Has the trigger for the process been defined and communicated to those working in the process?
10	Have quality outcomes for the process been defined?
11	Are controls in place to reduce, eliminate or manage process failures?
12	Does each step of the process have a clearly articulated owner?
13	Have service level agreements for customers been agreed?
14	Are organisational standards and policies applied as intended in the process?
15	Is the process influenced and/or directed by organisational goals and/or strategies?

Appendix 4: Massey University Human Ethics Committee Low Risk Notification

Human Ethics Notification - 4000019250
1 message

humanethics@massey.ac.nz <humanethics@massey.ac.nz> Mon, May 21, 2018 at 9:37 AM
To: A.Lindsay@massey.ac.nz, Greg.Lemaire.1@uni.massey.ac.nz, N.Grigg@massey.ac.nz
Cc: M.E.Thomas@massey.ac.nz

HoU Review Group

Ethics Notification Number: 4000019250
Title: Ethics application for Masters Thesis topic "Diagnosing and designing work process stability and adaptability using the Viable Process Model".

Thank you for your notification which you have assessed as Low Risk.

Your project has been recorded in our system which is reported in the Annual Report of the Massey University Human Ethics Committee.

The low risk notification for this project is valid for a maximum of three years.

Please note that travel undertaken by students must be approved by the supervisor and the relevant Pro Vice-Chancellor and be in accordance with the Policy and Procedures for Course-Related Student Travel Overseas. In addition, the supervisor must advise the University's Insurance Officer.

A reminder to include the following statement on all public documents:

"This project has been evaluated by peer review and judged to be low risk. Consequently it has not been reviewed by one of the University's Human Ethics Committees. The researcher(s) named in this document are responsible for the ethical conduct of this research.
If you have any concerns about the conduct of this research that you want to raise with someone other than the researcher(s), please contact Associate Professor Tracy Riley, Acting Director (Research Ethics), email humanethics@massey.ac.nz. "

Please note that if a sponsoring organisation, funding authority or a journal in which you wish to publish require evidence of committee approval (with an approval number), you will have to complete the application form again answering yes to the publication question to provide more information to go before one of the University's Human Ethics Committees. You should also note that such an approval can only be provided prior to the commencement of the research.

You are reminded that staff researchers and supervisors are fully responsible for ensuring that the information in the low risk notification has met the requirements and guidelines for submission of a low risk notification.

If you wish to print an official copy of this letter, please login to the RIMS system, and under the Reporting section, View Reports you will find a link to run the LR Report.

Yours sincerely

Associate Professor Tracy Riley, Dean Research
Acting Director (Research Ethics)