

THE ROLE OF CHANGE MANAGEMENT IN SUCCESSFULLY
IMPLEMENTING A RETAIL ENTERPRISE RESOURCE PLANNING SOLUTION

Research Report
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Declaration of Own Work

The researcher declares that the following research study is entirely his own work.

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The researcher would like to thank the management and employees of Pick 'n Pay Retailers Limited for supporting and participating in the research study.

Executive Summary

The focus of this research study questions what is the role of change management in successfully implementing a retail Enterprise Resource Planning (ERP) solution; a modular and integrated software solution to run large businesses. The problem statement argues that a successful retail ERP implementation requires effective and comprehensive change management. The subject of the study is Pick 'n Pay Retailers Limited, trading in South Africa. It began the implementation of SAP in December 2005 and it's now officially coming to an end. This is an opportune time to research the change management employed in this project, given Pick 'n Pay is the biggest South African retailer and one of the biggest global SAP Retail projects to date.

The literature on the subject of change management appears to follow consistent messages and approaches. It recommends transformational not transactional leadership, participative not directive change models and an emphasis on managing the cultural and learning impacts of change. The change approach employed at Pick 'n Pay was not consistent with the literature and yet the project is considered an SAP case study for project success. The researcher wanted to research why it was considered a success and what is the ideal approach to conduct change in a retail environment. The importance of the study could effectively reveal a change approach more useful and relevant to the retail industry and offer opportunities for more research in this industry.

The research population consisted of Pick 'n Pay headquarter and store employees in Cape Town, South Africa. Stratified sampling was employed based on the business functions that used SAP, with respondents being employees with Pick 'n Pay for at least five years. The research methodology was based on a mix of quantitative and qualitative research. The quantitative method used a questionnaire as the primary data gathering tool. Statistical analysis to establish the inter-departmental outliers was conducted utilizing a non-parametric method, the Kruskal-Wallis test, which appears ideal when data can be ranked which has no clear numerical interpretation; such as when assessing attitudes or perceptions. The qualitative research was conducted using semi-structured interviews with management within the sample population.

The aim of the research was to prove the problem statement. With the research problem established, the following research objectives formed the focus of the research study:

1. To investigate the role of leadership in change management in Retail ERP projects.
2. To identify change management methods available to Retail ERP projects.
3. To identify current perceptions and understandings of the effect Pick 'n Pay's ERP implementation had on organisational culture and organisational learning.

The limitations to the study was focusing on only one retailer, in one geographic region inside one country, and one type of employee; a headquarter and store employee working on SAP. Subsequently, no SAP users in the store environment could be included in the study, owing to the time required to get union approval and HR participation in undertaking an in-store study.

The results disproved the problem statement, according to the literature on change management. The Pick 'n Pay SAP implementation could effectively be characterized as directive or prescribed change from management, where employees were more a spectator to a 'top down' change process than a contributor toward defining it in a 'bottom up' process. Transactional leadership appeared to effectively work, provided enough transformational leadership was peppered into the change approach in terms of compelling communication, visible and engaging executive sponsorship and ample training.

It appeared to be a hybrid change model, where 'mavericks' were supported to encourage the organization to follow suit, in a form of idealized influence; this in turn helped fuel bureaucratic hierarchical status and ambition silencing employee concerns of cultural and learning impacts. The communication appeared to bring a vision for change and yet implicitly designed to overcome resistance to change. In summary, a change model that seemed to discourage resistance, encourage participation and yet favoured 'change by decree'.

The conclusions, given the limited validity and generalisability of the study, argue that directive change can be an effective change approach in the retail industry and that the literature doesn't appear adequate in suggesting a change model suitable for the retail industry. This industry is characterized more by an operations-focused employee, with a predisposition for taking orders and not accustomed to engaging at the emotional level defined by personal preferences. In such conditions, a directive and instructive change model appears more suitable for this industry.

The recommendations are that Pick 'n Pay continues with its change approach. For future projects the communication should explicitly state: the change approach to employees, explain project risk, do more to inspire change and openly discuss change in job roles. It should re-engage Information Systems, supporting their organizational direction and place in Pick 'n Pay; and Buying needs to transition faster in their acceptance of SAP especially as a business-enabler for improved commercial performance. It is also recommended that Pick 'n Pay survey store employees and conduct further research in the other South African regions.

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List of Acronyms

ERP:	Enterprise Resource Planning
ES:	Executive Sponsor
SMART:	Simple, Measureable, Attainable, Realistic, Timely
PnP:	Pick 'n Pay Retailers Limited
SAP:	Systems Applications and Products
Steercom:	Steering Committee

1. BACKGROUND AND PROBLEM STATEMENT

1.1 Topic

The role of Change Management in successfully implementing a Retail ERP solution.

1.2 Introduction

This study will research the subject of change management in the South African retail industry and how to effect change in such an industry when implementing an ERP (Enterprise Resource Planning) solution such as SAP (Systems, Applications and Products). The research will focus on South Africa's largest retailer, Pick 'n Pay (PnP) which in addition has been one of the biggest ever SAP Retail implementations globally. Given the pace of the retail industry, its employee profile, the culture and leadership styles, the research seeks to understand how best to effect change in retail organisations such as Pick 'n Pay.

1.3 Problem in Context

Pick 'n Pay is one of South Africa's oldest, largest and most respected retailers with a Southern African turnover of R49.9 billion rand, with a store network of 782 corporate and franchise stores. To enable the business processing of such a large organisation, PnP relies on an extensive information technology and system environment. The PnP Board realised there was a need for change as it appeared the technology wasn't capable of keeping up with the Business' requirements.

In November 2005 UCS Solutions won their case for PnP to buy SAP as a packaged ERP solution. As part of this decision, PnP Leadership recognised that Organisational Change will help if they made a 'buy' decision which the Chief Executive Officer considered as a means to introduce best practice to drive organisational change and organizational learning.

The SAP Project was planned based on a phased approach starting December 2005 and finishing in August 2010.

A Change Management stream, led by IBM (International Business Machines Corporation), was set up within the SAP project, however was within weeks disbanded by the project team and replaced with a more stream-lined approach to change. This appeared to be a group decision

which was approved by the Steering Committee (Steercom). The Executive Sponsor (ES) who was a part of the Steercom took on the role of change manager.

The organisational culture at PnP could be characterised as a large bureaucracy with its identity largely defined by the store culture. Coupled with the speed of retail and its focus on operations, company culture and indeed the leadership style, tends to focus on getting the job done and less on the emotions and opinions of employees or colleagues.

With that, instead of following a structured and formalised change management method, the Steercom sanctioned an approach largely centred on committed visible leadership, significant training and communication. It was considered a practical approach that intended to demonstrate strong leadership, keep all stakeholders informed, with strong employee engagement and participation.

Buying is a critical function and influential stakeholder at PnP which resisted change; arguably still to this day, likely owing to the fear of losing power in supply chain and commercial decisions. Its influence and resistance created project risk that had to be mitigated; effectively by appeasement. Finance also resisted change but relented over time. Subsequently, the restructuring of Buying is an open point that to date remains in a planning phase despite its sizeable impact on the rest of the business.

To better manage the project budget, the Steercom agreed to change the project team make up after Phase 1 to include more PnP managers to act as change managers; this not only reduced costs but also brought more middle managers onboard, as it required participation and put more accountability on PnP and less on UCS.

The focus has shifted over the past year from technology management to business optimisation and transformation; the innovation necessary to develop especially the supply chain. With the shift in focus, the questions surrounding organisational structure, job roles and skill-sets are re-emerging, especially in the Buying function, which weren't explicitly addressed in the change management activities of the SAP implementation.

The implementation of an ERP requires significant risk management, especially with respect to business continuity not being affected. The decision to implement was, in some instances, a one to one mapping of functionality from the legacy system to SAP – notably where resistance to change was highest, such as Buying. Where there were gaps, they would be met in an

optimisation phase. This helped reduce the pressure in the blueprint phase of the project but didn't explicitly re-design processes, job roles, skills-sets or change the culture.

In summary, the system has been implemented but organisational change may still need to be comprehensively addressed in some functions.

1.4 Problem Review

In reviewing the Problem in Context, the following themes have emerged:

- The role of executive sponsorship and leadership in change management.
- Project management and change management coordination and integration.
- The discipline of change management; the approaches and models used to effect change.
- How communication can support the change process; its attributes, methods and tactics
- The effect of change management on the organisation; its structure, culture and how it learns.

It is arguable that the greatest contributor to overall change management success is leadership demonstrating capable executive sponsorship. The ES appeared to be active and visible throughout the project. She built a sponsorship coalition, she managed resistance according to her leadership style and lastly, she endeavoured to continually communicate directly with employees.

It appears for years the strong trading culture at PnP had shaped the strategy. The introduction of SAP with its centralisation principles has arguably created a paradigm conflict where centralisation and decentralisation forces are at work; tugging the organisation, its structures, procedures, systems and ultimately culture in different directions.

Under such conditions, when planning the project, it seems the Steercom attempted to follow known practises in implementing large ERP solutions as well as gauging PnP's appetite for change; by separating the technical implementation of SAP from the optimisation phase of people, processes and systems. It meant that SAP could be implemented without directly confronting the organisational structure, organisational culture and learning aspects of implementing an ERP.

A change management approach that tells employees what is expected of them, which could also broadly describe the PnP leadership style, implies that change at PnP was prescriptive. Despite

this, employees are not in fear of losing their jobs in the face of apparent change, as PnP doesn't fire people for poor performance, yet not too concerned though with learning new processes or systems, owing to a culture of bureaucracy. A question at this juncture could then be asked, is the apathy to change greater than their fear of change? If so, then the need for a comprehensive approach to change management may be unfounded; meaning, the employees wouldn't necessarily fight the change nor wholeheartedly support it. This implies prescriptive change under such conditions may be a plausible approach to change at PnP.

It's striking though that what is emerging is a business that may find itself further than expected from the strategy. It has a new ERP that is intended to integrate process, people and systems on standardised business practises. What may be the case is that a new system has been implemented without arguably the required levels of process re-engineering, organisational restructuring of job roles and hierarchies in certain functions, culture change activities and business model revision attendant with implementing SAP.

The implications of this are plausibly reduced benefits for PnP in having implemented SAP. This implies also that organisational structures may be prone to inertia that only an ERP project could have changed. The assumption that organisational change would happen subsequent to the technical implementation may be less likely now as there might be little reason for most employees to change. They would likely see it as being of scant benefit to them; they wouldn't lose their jobs but would probably lose power, and they would be expected to learn or un-learn. The incentive to not change may therefore be greater than to change at all.

This doesn't hold true for all employees though, for as in any bureaucratic organisation, growing position power and status is more important than the skills one possesses. Given the proper incentives, many employees may change for this simple reason alone; the perceived loss of power if they don't change would encourage them to change.

To be successful in implementing a Retail ERP solution it appears leadership is key, choice of a change management method is in turn largely contingent on the organisational culture and how the organisation reacts to change and responds to learning. In the PnP context, perhaps the project management was a success; but could the same be said for the change management? Given the culture of PnP, the retail industry, the leadership style and organisational type, perhaps the effective and comprehensive change management approaches available simply don't apply or are not needed to ensure successful implementation of a Retail ERP.

1.5 Significance of the Study

This research intends to refine existing knowledge of the area of change management in ERP projects in the Retail Industry. The Pick 'n Pay SAP project was considered a case study in a successful SAP implementation; the change approach in Pick 'n Pay was not based on existing and tried methods but was a hybrid approach borrowing from a number of theoretical models. It reveals that the Retail industry may be suited to a certain type of change management method.

The practical implications of choosing a change management approach suited to retail is time, budget and resource saving for future retail ERP projects. Positing a change management method suitable for retail extends also to sparing the organisational culture the negative impacts that some approaches may inflict which could damage worker productivity and company performance.

Suggestions for future research would be to evaluate ERP project change management methods across companies in retail, with a multi-country scope.

1.6 Problem Statement

Successful Retail ERP projects require effective and comprehensive Change Management.

1.7 Research Objectives

The three objectives below reflect the strategic intent of the research to contribute to the body of knowledge surrounding change management, with focus on Retail ERP projects, thereby attempting to answer the Problem Statement.

1. To investigate the role of leadership in change management in Retail ERP projects.
2. To identify change management methods available to Retail ERP projects.
3. To identify current perceptions and understandings of the effect Pick 'n Pay's ERP implementation had on organisational culture and organisational learning.

The following reflection on the objectives, using SMART concepts, summarise what information is needed and how the researcher will attempt to obtain it.

Objective 1 intends to investigate what are the specific change management roles, tasks and capabilities of leadership in the areas of executive sponsorship, project management, change management, communication and organisational management in Retail ERP projects. It will

qualitatively measure the effectiveness of the required capabilities and tasks of leadership by way of interviews with selected individuals. It will also quantitatively measure employee attitudes and perceptions of the effectiveness of leadership's perceived ability to execute.

Objective 2 intends to identify the many change management models, approaches and theories on change management that could be used as a suitable method for Retail ERP projects. It will qualitatively measure the effectiveness of the change management method selected by Pick 'n Pay by way of interviews with selected individuals. It will also quantitatively measure employee attitudes and perceptions of the effectiveness of the change management method to effect change.

Objective 3 will attempt to identify what impact the SAP Retail implementation had on the organisational culture and learning of Pick 'n Pay. How specifically did this implementation effect company culture and its influence on organisational learning. It will qualitatively measure the impact of the SAP Retail project on the organisation by way of interviews with selected individuals. It will also quantitatively measure employee attitudes and perceptions of the impact on organisational culture and learning.

1.8 Methodology

The research will be based on a mix of qualitative and quantitative data collection methods. The sample population will only include: Pick 'n Pay in the Western Cape region and Cape Town Head Office and stores, employees that have been working for the company since 2005 and who are SAP users. As the sub-populations vary per business function, the researcher will sample each sub-population independently, thereby employing stratified sampling. Within each stratum, which represents a business function, a judgement sample will be applied which will seek to find a representative part of the stratum that are SAP users.

1.9 Overview of the Report

This report starts with the Problem in Context which provides a contextual review of how change management featured in the PnP SAP project. The Problem Review develops on the Problem in Context by reflecting on the five themes uncovered. The Problem Statement follows and is a testable statement that states change management is required for successful Retail ERP implementations. The research objectives, using SMART concepts, reflect on the strategic intent

of the research, with focus on: the leadership necessary for change management, the change methods and how these methods are understood to influence employee attitudes and perceptions in organisational culture and learning.

The Research Analysis follows in an attempt to exploit the models and interrogate the research problem to unravel further complexity. This continues in the Literature Review which offers a broader perspective on the themes and the latest research in the field of change management.

The Research Design and Methodology brings a full exposition of what the researcher has done in terms of demonstrating the theory of the research approach and secondly, the practical application of the research. For this report, the Problem Statement and research objectives allow for a mixed approach where both qualitative and quantitative research methods are utilised.

The five themes are revealed as early as the Brainstorming (Appendix: A) and Mind Map (Appendix: B) exercises to develop the Problem in Context and persist as consistent themes throughout all the chapters of the report down to the Questionnaire (Appendix: D); in an attempt to go beyond the obvious, analyse the levels of complexity of the research problem and remain on message.

The Results and Discussion follows and is divided into three areas: an overview of the results of the research objectives and themes, inter-departmental outliers analysing departmental differences (Appendix E) and finally, relationships between pivotal subjects e.g. resistance before and after the project or the relationship between directive change and organisational learning.

The Conclusion and Recommendations follow from the Results and Discussion, with focus on answering the Problem Statement, by way of analysing the results and interpreting them through the literature.

Learning and Reflection closes the research study.

1.10 Summary

If prescriptive change by 'management decree' is sufficient in a retail organisation such as PnP, it is arguable that the change management approach selected by the Steercom was sufficient and that there was less need to be concerned with the questions surrounding organisational structure, culture and learning. The converse may also be true though; where perhaps unrecognised or latent organisational structure issues may still exist and are revealing themselves now or are on

the horizon which could discount the apparent success of the PnP SAP implementation or future projects bringing significant change. These strategic issues will be further analysed and reflected upon in the Problem Analysis through the five themes identified.

2. PROBLEM ANALYSIS

2.1 Introduction

The Problem Review reflected and brought context to the PnP leadership's approach to change management when implementing an ERP in a retail environment. It reviewed the change approach at PnP and reflected if the ends justified the means and what if any, has been the impact of the change approach on the organisation. The Problem Analysis will reflect further on the issues, their complexity and relationships, thereby unravelling the below themes by way of applicable models and theory.

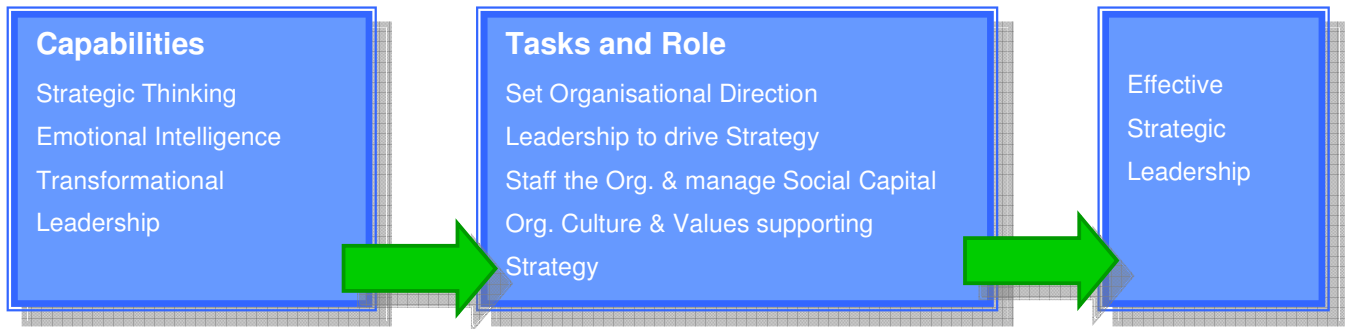
In Chapter 1, the following themes emerged:

- The role of executive sponsorship and leadership in change management
- Project management and change management coordination and integration
- The discipline of change management; the approaches and models used to effect change
- How communication can support the change process; its attributes, methods and tactics
- The effect of change management on the organisation; its structure, culture and how it learns

2.2 The role of executive sponsorship and leadership in change management

An executive sponsor is expected to demonstrate strategic leadership in leading both the organisation and projects as below (Figure 1) in Amos (2006).

Figure 1: Abridged Capabilities and Tasks of Strategic Leadership (Amos, 2006)



Goleman (1999) considers emotional intelligence ‘the ability to manage ourselves as well as the ability to manage relationships’. It requires the competencies of self-awareness, self-regulation, motivation, empathy and social skills. Goleman considers an effective leader ‘one who can have a range of behaviours and the wisdom to select the right type of leadership style for any business situation’.

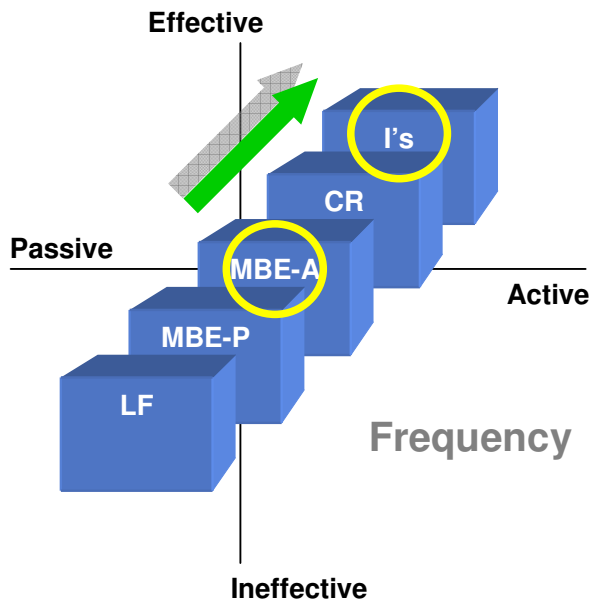
The ES considers herself a naturally authoritative leader however through ‘self-regulation’; the ES regularly chose to be more of a democratic leader. The authoritative character doesn’t lend themselves well to empathy or social skills yet these are instrumental traits in times of change. The ES appeared to effectively select the right type of leadership style especially when confronting resistance to change; sometimes a ‘come with me’ approach has to be substituted by a ‘what do you think?’ approach. This was most notable in the resistance of Buying to the SAP project, where very influential but less senior managers challenged the SAP project. The ES chose to build buy-in as opposed to demand compliance. Choosing not to wield position power despite opposition, demonstrated the ES’s advanced emotional intelligence.

Her type of leadership style is considered transactional leadership however she chose to regularly display transformational leadership. The ES is a leader that prefers to practise ‘management by exception active’ (MBE-A) (Bass and Avolio, 1994) however she also demonstrated what Bass and Avolio called the four I’s. The emphasis was on Idealised Influence, displaying high standards, moral conduct and being consistent; and Inspirational Motivation, communicating a persuasive, clear and concise vision that builds excitement and team spirit.

The transformational element of her leadership style appeared to coalesce with the Steercom’s change management approach; the change was directive but with a strong communication component. The change approach didn’t arguably focus on Individualised Consideration or Intellectual Stimulation as the change approach ‘instructed’ change to all and ‘told’ not ‘sold’ the change. Under those conditions, the personal needs of individuals were not the priority, neither was there a need for intellectual discourse on the change approach as it was already decided by

the Steercom. The effect this had on organisational learning and employee buy-in to the change needs investigation.

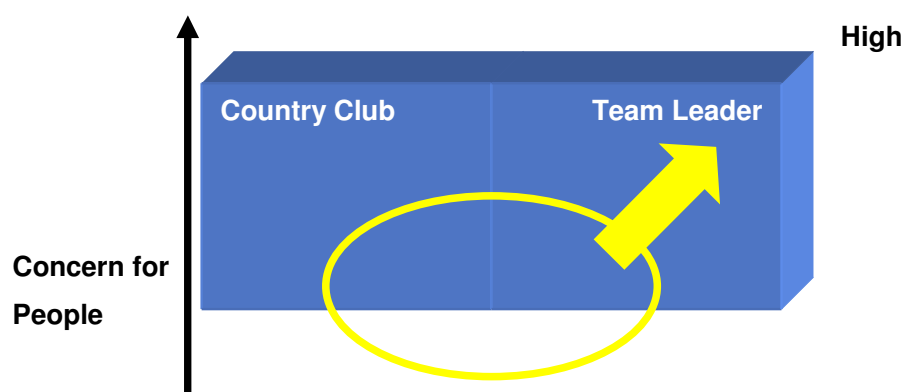
Figure 2: Bass and Avolio: Full Range Leadership Development Theory (Amos, 2006)

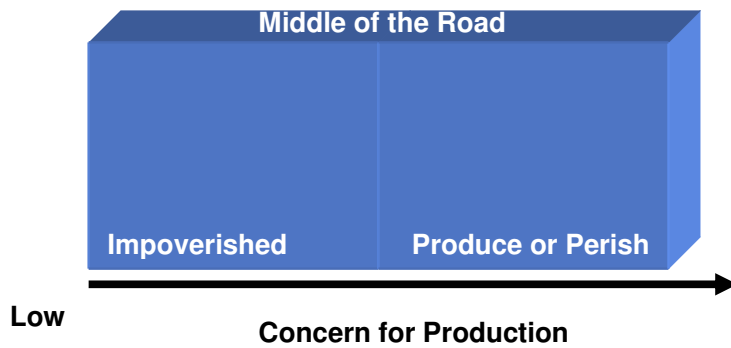


Applying the Blake Mouton Grid (1985) in (Figure 3) PnP leadership may find themselves in the 'middle of the road'. This means that leadership has to balance and compromise company goals and employee needs; especially in a very unionised business such as retail. The compromise however results in neither production nor people's needs being fully met. This leadership style can be overlaid by a paternalistic style, where leaders prescribe and guide. Management uses this style to praise and support employees but discourage challenges to their thinking. This may explain why the change approach was prescribed to the business by the Steercom and why the ES demonstrated only certain traits of Bass and Avolio (1994) four I's.

It's arguable if this leadership style is suitable for the PnP organisation, despite its apparent effectiveness; however that is still to be determined.

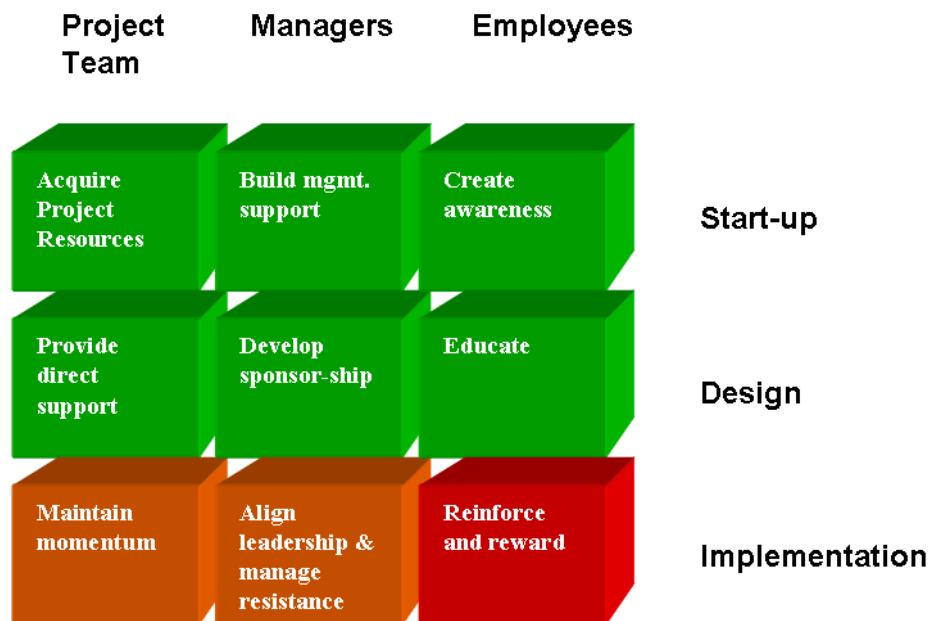
Figure 3: Adapted Blake and Mouton Leadership Grid (1985)





In terms of the executive sponsor’s role at PnP, Figure 4 (Prosci Survey, 2009: 44) below depicts a model for sponsor responsibilities.

Figure 4: Adapted Sponsor Responsibilities Model (Prosci Survey, 2009)



It appears that the ES was effective in supporting the project team as a sponsor and with respect to employees, creating awareness and educating them. What has not appeared as effective is the SAP project overcoming explicit and latent middle management resistance to change. Caruth, Middlebrook & Rachel (1995) suggested that to overcome change one has to: create the proper attitude, flood the organisation with communication about the change, leaders must set a good example, solicit opinions from employees and then reward acceptance. Having already reflected on the leadership style, soliciting the opinions of employees and rewarding compliance is not a common practise at PnP but yet is considered important in overcoming resistance. Indeed one

could consider that this may be part of the reason for possible latent middle management resistance at PnP.

Another perspective on why the Steercom and the SAP project encountered various levels of resistance to change was based on what they decided to change and what to keep the same. By appeasing those who were both influential and opposed to change e.g. Buying, their resistance to change diminished, allowing for the project to proceed smoothly. This however may only delay resistance.

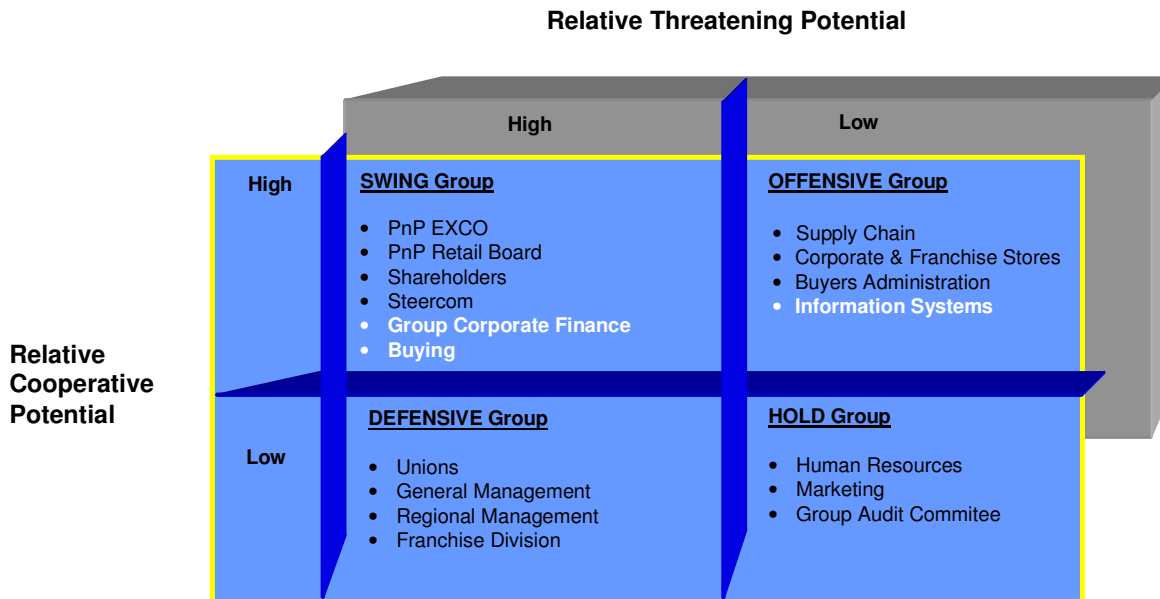
Kotter and Schlesinger (1979) in Table 1 offer strategies for overcoming resistance to change. The Buying function were dealt with differently to that of other business functions. Appeasing them meant following a strategy of **negotiation and agreement** that arguably compromised the design of the system, speed of implementation and maintenance costs. The other functions were largely given little option but to change as they had neither sizeable influence nor power. It's arguable therefore that resistance to change may still exist and could be expressing itself in the business.

Table 1: Adapted from Kotter and Schlesinger: Strategies to overcome Resistance to Change (1979)

Negotiation and agreement	A person or group will 'lose' something as a result of the change	Helps avoid major resistance	Can be expensive; can cause others to seek similar 'deals'
Manipulation and co-optation	Other methods do not work or are too expensive	Can be quick and inexpensive	Can create future problems if people sense manipulation

Below is a stakeholder analysis applying Freeman's (1984) Stakeholder Strategy Matrix, analysing the stakeholders as of today.

Figure 5: Adapted from Freeman's Stakeholder Strategy Matrix (1984)



A perceived sentiment is that PnP culture appears to display disinterest in learning and relying on experience and status to drive behaviour and decision-making. As this wasn't explicitly addressed in the SAP project where processes would be re-designed, a new system now faces old process thinking. Attempting to change this after SAP has been implemented appears to be entrenching resistance to change especially in the Buying function; with this resistance spreading across the organisation, plausibly led by the influence of Buying. As Buying is integral to many of the processes in PnP, their cooperative or conversely their threatening potential appears instrumental in changing the organisation. It appears that Buying is also the function with the most influential middle managers resisting change, with that influence permeating other business functions.

Buying could be identified by Freeman (1984) as 'Swing' stakeholders, and the strategy should 'seek to change or influence the rules of the game that govern stakeholder interactions'. Changing the rules of the game may require the Steercom to target their change management efforts primarily on Buying, as this function appears to hold the key to employee behaviour and overall operational execution cascading down and across the organisational hierarchy. This may partly explain the inertia of embracing change in PnP thus far.

For now, the approach the Steercom appears to be following to control Buying's resistance is that of containment. Continuing to entrench SAP in the organisation and circumventing the Buying function. This strategy may draw those in Buying who are motivated by status to follow the company direction, stranding those who refuse to change. Those who remain will be expected at some point to change. This tactic is akin to 'siege warfare', essentially starving the enemy and outliving their resistance.

This apparent path of least resistance in the case of Buying and yet a much stronger hand directed at Finance for example reveals the Steercom’s contingent approach to managing stakeholders, but perhaps is as importantly, recognising the importance of managing risk in the project; not attempting too much organisational, process and system change.

A question therefore emerges, is organisational change less forthcoming owing to employee’s resistance to change, or apathy to change, or was it intended by the executive sponsor and leadership in an attempt to keep the project risk low?. What are the consequences of this approach to the organisation remains unclear.

2.3 Project management and change management coordination and integration

The below ‘Spectrum of Change’ (OU, 2005) could help establish what type of change a SAP project brings. Indeed, the source of change doesn’t come from invention, competitive advantage is the focus of change and the type of change is based on a project process. With that, one could categorise the change SAP brings to a business as an Incremental Innovation, despite the radical change perceptions of a SAP project in some quarters.

Table 2: Adapted Spectrum of Change (OU, 2005)








	Pick ‘n Pay	
	<u>Incremental Innovation</u>	Radical Innovation
Types of change	Project Process	Learning / Experimental
Difference to existing situation	Medium	Large
Frequency of change	Frequent / regular	Infrequent / Discontinuous
Source of change	Customer information	Invention
Management and control	Normal planning & budgeting	Loose, if any, control
Level of risk	Some risk	High risk
Focus of change	Competitive Adv. in market	New market breakthrough
Critical organisation quality	Team based project mgmt.	Team based leadership

Having established that a SAP project is indeed an innovation, albeit an incremental one, Rothwell (1992) developed the below model to identify the characteristics of an innovation. The characteristic that is most applicable with change management is arguably the role of management investing in human capital. It is the tasks of integrating the project learning back into

the organisation, developing the attitudes and behaviour of the organisation, addressing organisational learning and employee participation.

According to Rothwell's (1992) model, innovation requires the growth in human capital; however the SAP project didn't appear to have a stream that adequately met this requirement. The result may therefore be a well implemented project, judging by the other characteristics of the model, but without the necessary investment in people to sustain the change introduced by the project; arguably too much project management and not enough change management.

Table 3: Adapted Rothwell Interactive Model of Innovation (1992)

Characteristic	PnP
Good internal and external communication	
Treating innovation as a corporate-wide task	
Sound Project Management controls and procedures	
Efficiency in development and high quality production	
Strong market orientation	
Presence of Product Champions and Technology Gatekeepers	
High Quality Management; investing in human capital	



Concern Area



Appears suitably met

If there wasn't enough change management conducted in the project owing to risk management, then we should attempt to understand the risk.

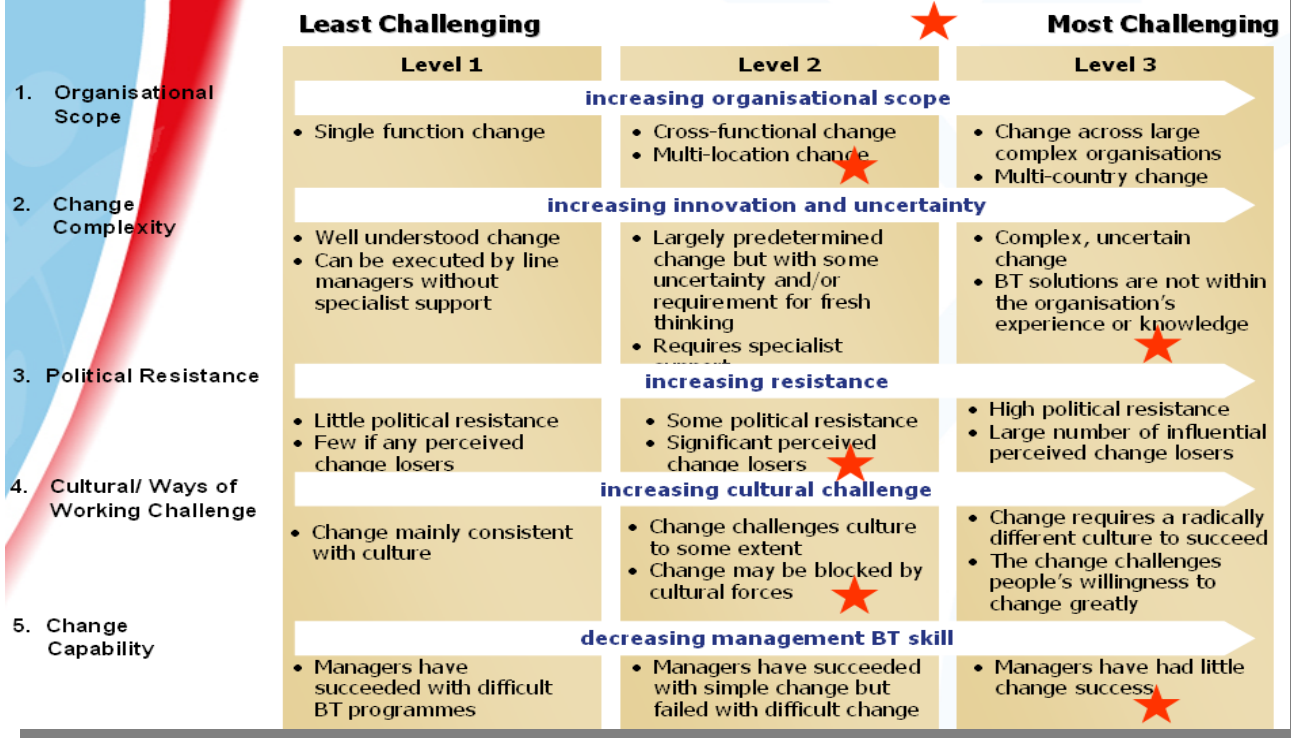
Below is the original 'change challenge assessment' of IBM Business Consulting Services before the PnP SAP Project started.

Figure 6: IBM Business Consulting Services Risk Assessment of the PnP SAP Project

Initial Change Challenge Assessment: Medium to High

BR evaluation 10/02/05

Source: IBM BCS









With 'change complexity' and 'change capability' being the most challenging, with the other dimensions close behind, it reveals why the Steercom assessed the risk too high to attempt both a SAP technical implementation and a business re-engineering exercise overlaid with cultural change. The company didn't appear ready to undergo organisational change where its cultural identity and structure would be changed along with its processes and systems. This resulted in the Steercom choosing a project implementation that focused on project and less on change management deliverables.

Another perspective though toward this choice may have been the resistance from business functions such as Buying, which added serious political challenges to already strained organisational change concerns. Whether assessing risk through the lens of the organisation's ability to change or the expected resistance to change, implies leaving most of the organisational elements out of the project.

Table 4 is a summary of the Steercom's approach to managing the technological change in the project. It reveals a well managed technical project but one which arguably didn't confront or avoided the organisational structure, culture, learning and political elements. By doing so, it achieved the primary project management objectives of budget, quality, scope and timelines at the

arguable expense of organisational change if one is not convinced of the magnitude of the risks. If indeed it could be established that the risks were too high, then the change management approach within the project may have been the correct path to take.

Table 4: Abridged Technological Change Management Checklist (OU, 2005)

PnP	DO's	Manager's must:
	1	Get enthusiasts to lead, maybe manage, technological change
	2	Always 'sell' new systems, methods and IT. People need to be persuaded to change by having the benefits explained
	3	Carefully identify staff whose jobs are affected by a change
	DON'Ts	Manager's must avoid:
	1	Assuming others will see the change benefits; staff will need persuasion
	2	Changing methods of work and the work environment together. Wherever possible, let the environment change later and gradually
	3	Political battling over technology

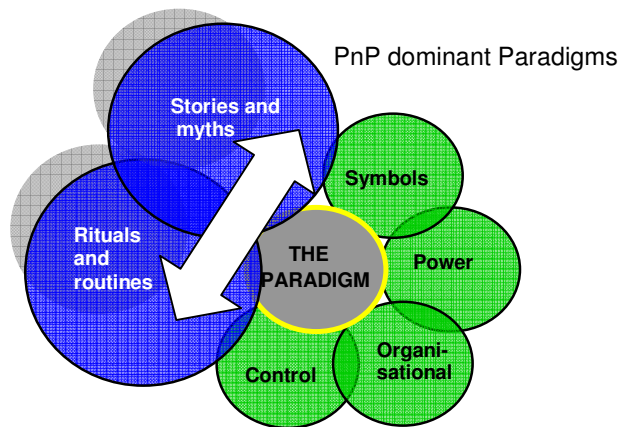
The Steercom argued an approach that reduced risk – whether organisational or political risk - by not directly changing the organisation and processes along with the system, as the organisation wasn't ready for so much change. This approach arguably allowed for an apparently very successful project; however success measured by project management criteria, not change management criteria. The organisational change to structure, culture and learning may still be needed and the impact of not adequately addressing it is unknown.

It appears therefore that apart from SAP training, cursory job description revision and project schedule communication, little in the way of change management activities were introduced, integrated and coordinated within the project. If anything, the concerns of change management were dealt with in parallel with the project in an attempt to address change management separately.

2.4 The discipline of change management; the approaches and models used to effect change

Considering the 'Four Frame Model' of Bolman and Deal (1997), PnP is arguably designated within the Symbolic Frame; and the natural metaphor for the Symbolic Frame is culture. The PnP culture is arguably saturated by a Raymond Ackerman myth that evokes the Chairman's work ethos of ritual and routine (Johnson, 1987), wrapped within the decades old war stories of the Chairman and how he conducted himself in the business world. The culture therefore serves to create order, clarity and predictability however these entrenched characteristics may also prove hard to change.

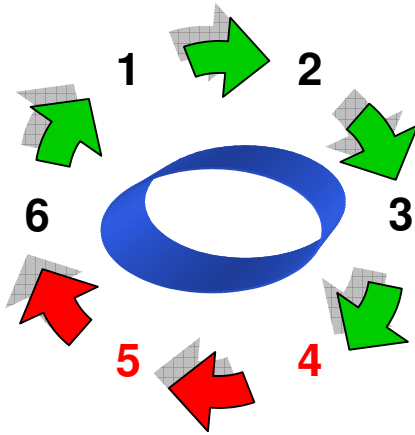
Figure 7: Adapted from Johnson, Cultural Web (1987)



Hendry and Hope (1994) argued that there are two ways to go about culture change; a rational argument or an emotive response. The PnP change approach appeared to follow a rational argument, which may have been a lost opportunity as the company paradigm (Johnson, 1987) is arguably better influenced by an emotive response, where change is sold through compelling communication and symbolic actions. Another perspective may be that as appealing as it sounds, PnP management may have preferred to follow a rational argument as it perhaps wisely perceived the complexity and risk of a SAP implementation, one which shouldn't be 'sold' but rather thoroughly explained.

Understanding the context of PnP may help reveal the choice of change approaches and strategies. The Change Management method applied at PnP aligns loosely with Figure 8: Kotter's Model for Change (1995), that being: **1.** establish a sense of urgency, **2.** create a guiding coalition, **3.** develop a vision and strategy, **4.** manage cultural issues, **5.** manage the transition and **6.** sustain momentum.

Figure 8: Adapted Kotter's Model for Change (1995)



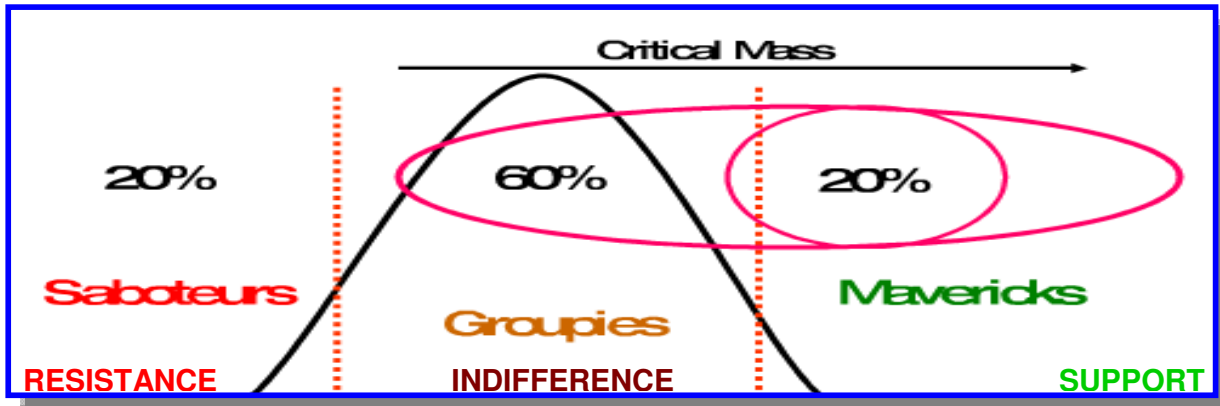
It appears the change management activities were more weighted on the first half of Kotter's (1995) model up to and including the development of a vision and strategy. The emphasis therefore appeared on establishing a sense of urgency at Board and senior management level, which quickly allowed the Steercom to create a strong guiding coalition. The vision and strategy for a desired end-state, seemed to talk more though toward management and less so to rank and file employees; thereby diluting the understanding of what SAP may mean in terms of changing policies, structures, systems and procedures that one would expect to be fully understood to facilitate implementation.

Indeed, this continued into managing the cultural issues, which appears to not have been explicitly addressed at all. The momentum is arguably sustained, however to what degree employee commitment and understanding of what they're implementing is being 'burned in' to the organisation is unclear as much of the change was directive; not a participative process of learning and experience for the employees to 'own' the changes SAP brings.

Bridges (2006) believes that when employees hear a change message they respond in three possible ways: indifference, resistance or support. They argue your change strategy should not be designed under the assumption that all employees will resist change. How people respond will categorise them in three possible groups: saboteurs, groupies, and mavericks. Figure 9: depicts how the group's distribution falls within a bell curve, with approximately 20% apiece on either side of the curve as saboteurs and mavericks.

It is suggested to focus the change strategy on the mavericks and use their determination to win over the groupies comprising 60% of the employees. It is argued that 10% of the saboteurs will resist but can be won over, and the remaining 10% should leave the organisation; similar to Jack Welch's assertion 'fire the bottom 10%'. This is arguably a rational approach to change and accepts that there will be casualties in accepting change.

Figure 9: Change Dynamics: Saboteurs, Groupies & Mavericks. Bridges Consulting (2006)



It appears that this change strategy was unwittingly employed by the PnP Steercom. The change message was directed toward the maverick managers of PnP in an attempt to build critical mass around which the groupies would gravitate. This left many in the Buying, Finance and Information System functions exposed who weren't actively embracing the change SAP brought. By strongly supporting the mavericks to be successful, the Steercom generated success and this in turn attracted most of the groupies looking to increase their own influence, which appears to have played perfectly into the organisational culture of PnP; chasing status and advancement in the hierarchy. This 'chase' arguably fulfilled the last step of Kotter's (1995) Change Model to 'sustain momentum', but at the expense of brushing over 'managing the cultural issues' and the 'organisational transition' to SAP.

In an attempt to head off any resistance to change and to follow a practical hands-on approach to finding equivalents to managing the cultural issues and transition; the Steercom change strategy aligned closely with Caruth *et al.* (1995) in their model to overcome resistance. The model suggests that the organisational leader must: create the proper attitude, flood the organisation with communication about the change, leaders must set a good example, solicit opinions from employees and then reward acceptance. Arguably, apart from the last two points, the Steercom attempted to follow this change approach.

One could therefore argue that the Steercom followed a combination of approaches and models; underpinned by a change strategy based on Bridge's (2006) Dynamics of Change, a change method loosely based on Kotter's (1995) Model for Change and Caruth *et al.* (1995) Model to Overcome Resistance. The assumptions to this change approach were arguably: employees largely apathetic to change, employee acceptance of management's authority, and lastly,








employee hierarchical or bureaucratic ambition silencing the cultural issues. An approach that seemed to discourage resistance, encourage participation and yet favoured 'change by decree'.

In summary, prescriptive methods to change - though at times effective - appear at odds to an organisation that takes pride in its culture, where one could argue a participative method to change may have been more suitable.

2.5 How communication can support the change process; its attributes, methods and tactics

The communication tended to follow a rational approach to change, as arguably did the change strategy. Armenakis, Harris and Field (1999) proposed 'Seven Influence Strategies' as communication messages in a change management process, which tends to also follow a rational approach.

Table 5: Armenakis *et al.* Seven Influence Strategies (1999)

	Influence Strategies	PnP
1	Persuasive communication	
2	Participation by those affected	
3	Alignment of HR management practises	
4	Symbolic Actions	
5	Diffusion Programs	
6	Management of internal and external communications	
7	Formalisation practises	

This communication strategy is based on the assumption that organisations will move through stages of 'readiness, adoption and institutionalisation of change when organisational members recognise that the change is appropriate, beneficial and supported' (Armenakis *et al.* 1999).

The communication was arguably one-way communication, not a dialogue between management and employees; similar to the change strategy. Table 5 gives insight into the process of Armenakis *et al.* (1999) and what was arguably missing in the SAP project communication. It is revealing that employee participation, alignment of Human Resources across the organisation and ultimately the formalisation of practises have arguably not been adequately addressed. These process steps would portray the two-way nature of communication and influence strategies which could have






supported the SAP project communication; provided that management wanted employee participation in - and the formalising of - change.

It is arguable though, communication based on dialogue could have attracted undue attention from the Unions and signalled a message of organisational change; which appeared not to be the intention as the directive change arguably steered clear from structure, culture and learning.

This model therefore attempts to communicate as well as influence employees, thereby aligning with the change management approach of the Steercom which relies heavily on communication as an approach to change and the role of leadership in PnP to decree change. The influence strategies in Table 5 reveal also that PnP did appear to deliver persuasive communication of management's intent to introduce change, bring the communication to a wide audience and make use of an array of tools to deliver a compelling message; albeit a one-sided message.

Apart from the considerable SAP Project communication, the actual communication message also requires analysis. Armenakis, Harris and Mossholder (1993) suggested that certain messages are stressed in how to create readiness for organisational change. Table 6 reveals how the communication arguably fell short of delivering key messages of change owing to management's directive approach to change.

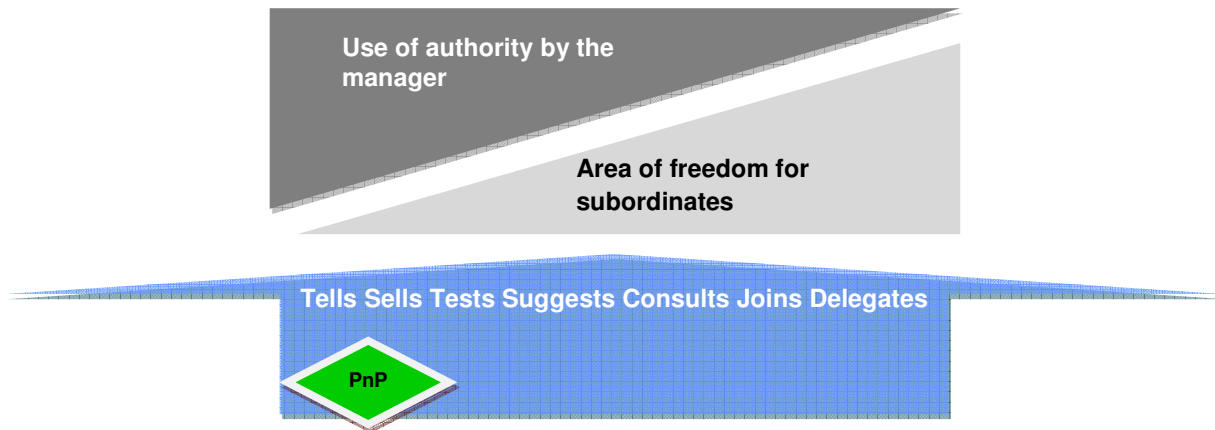
Table 6: Armenakis *et al.* Creating Readiness for Organisational Change (1993)

Strategies to convey messages should stress:	PnP
Need for change (discrepancy)	
Highlight the organisation's ability to make the change (efficacy)	
Appropriateness of the change – does it suit our business?	
Principal support for the change – do the leaders support it?	
Value of the change (valence) - how will I personally benefit?	

The communication appeared to inadequately get employees to recognise that the change was appropriate, beneficial and supported as the change method chose not to illicit employee opinion. This may imply that employees may still not understand why SAP was implemented, if it brought any benefit to their work or themselves and if their fellow colleagues and supervisors were in support of the change. It appears the communication focused too much on what would change as opposed to why.

This points to a communication method that reinforced the perception that it was management's vision that was being communicated and that the reasons for change were not expected to be understood but rather accepted by the employees. To illustrate this type of communication alongside the change approach, applying the Tannenbaum and Schmidt Continuum (1973) gives the impression PnP uses the authority of the manager to 'tell' the vision and change approach.

Figure 10: Adapted Tannenbaum and Schmidt Continuum (1973)



The communication did appear one-sided yet compelling in its vision for change. It is arguable though, this type of communication may be more effective than a two-way dialogue in retail.

2.6 The effect of change management on the organisation; its structure, culture and how it learns

PnP is a diverse organization and so it's unsurprising that it has layers or pockets of different organizational sub-cultures. The organizational culture of PnP appears to broadly be a Role Culture (Handy, 1985); one where hierarchy and structure dominate. The 'glue' however that has kept these apparent incompatibilities in check between the sub-cultures such as Buying and Finance has been the charismatic leadership of Raymond Ackerman. His magnetism has drawn the ranks together and has so far maintained a common focus. With his standing down as Chairman in March 2010, the cultural identity of PnP is likely to change; as will its future business principles, such as centralisation, which is a key SAP driver.

Volberda (1992) mentions some of the organisational characteristics affected by change; 'the organisational form (functional, divisional), hierarchical levels (many, few), planning and control systems, job specialisation, training and education programs, degree of centralisation, delegation

and participation'. In the SAP project, the change approach of the Steercom did not appear to attempt changing organisational structures, apart from some minor changes, despite implementing an ERP. Such system implementations are as much about re-engineering processes as organisational characteristics though.

'The largest barrier to 'change' is not changes to technologies and work processes but changes involving people' (Appelbaum et al. 1998). It appears that for companies to reach a higher level of performance after the change, the vision of the organisation, its leadership, culture and learning processes are essential to be in congruence. This appears to suggest that organisational change cannot occur without addressing the structure, culture and learning dimensions of an organisation.

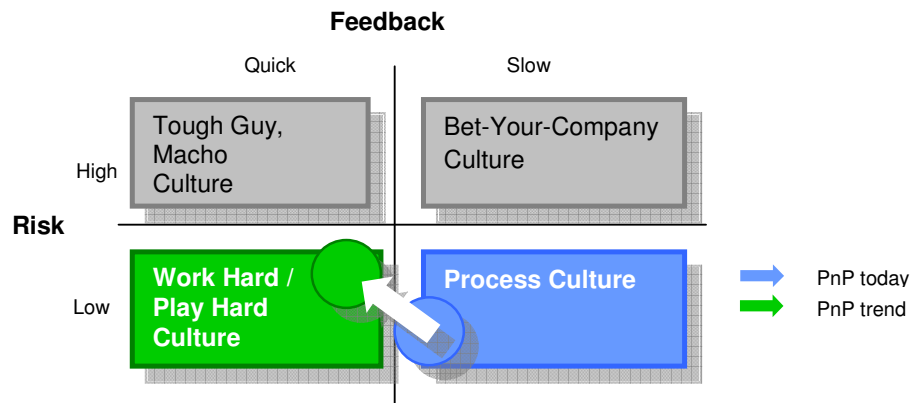
To determine the need for change at PnP, the 'Cycle-0 Phase' performed a change readiness assessment with one of its goals being to illuminate how people use technology in their job. This outcome should highlight 'the extent to which people in the organisation are ready to adopt and use the new technology and will determine the magnitude of the change needed' (Trahan and Burke, 1996). Considering the PnP leadership style, the guiding coalition of senior management and the culture of the organisation, it's possible that the PnP change readiness assessment was an assessments of management's own willingness to change, more than that of the employee's willingness.

The extent to which a given technology promotes or impedes change will depend on how managers succeed at optimising the relationship between the social (people) and technical systems of an organisation (Beekin, 1989). Under those conditions where change is decided on one's behalf, one could consider it plausible the relationship between PnP employees and SAP is far from optimised and that perhaps the system may be impeding change more than promoting change.

In terms of management practises and organisational culture, Volberda (1992) identified some rules governing the organisation's beliefs and values. PnP could and may still be considered conservative, its leadership approach prescriptive as opposed to participative. PnP has many unwritten rules such as the role of position power or years of service superseding merit or qualifications, not unlike a bureaucracy displaying a process culture (Figure 11. Deal and Kennedy, 1982). Indeed these characteristics may have defined its roots, but the future of retail appears to be changing. PnP will be expected to become more agile to compete in a retail industry demanding more risk-taking to make a profit and with more operational speed to survive; hence

management's support to implement a business-enabler such as SAP; the consequence being a likely impact on culture.

Figure 11: Adapted from Deal and Kennedy, Corporate Culture (1982)



PnP's external orientation is similar to most retailers, which is mostly short term thinking owing to the pace of the industry. Given this type of organisation, management would be expected to 'determine how the organisation will resist change and either increase the driving forces or decrease the resisting forces' (Appelbaum, 1998). It appears that the ES and the PnP Board chose to increase the driving forces and expected little resistance, which up to now, appeared as the right decision to technically implement SAP; but what of the business optimisation phase and how resistance to change may reappear?.

As posited in the Problem Review, is there an apathy to change that is greater than the fear of change amongst PnP employees? If so, then the need for a comprehensive approach to change management may not be required as there is little effect of the change effort on the organisation. If there is a latent fear for change within PnP, especially within middle management, then the effect of change on the overall organisation may be higher. Considering change requires such a strong people element, it has to rely on mid-level and front line management initiative (Katzenbach, 1996) to take on the leadership role to implement the changes. It appears that this is not happening at PnP with one of the contributors arguably being an apparent organisational barrier to learning, most notable at the middle management level.

When people have the right attitudes and commitment, learning automatically follows (Argyris, 1991). At PnP, hierarchical status, position power and years of service are considered more important than learning new skills. Learning or admitting to the need for further training at middle management level appears to be frowned upon. If middle managers are expected and needed to help the organisation change and learn, they too must surely learn. Appelbaum (1998) argues that

instead of being rewarded for moving up the hierarchy, people are rewarded for improving their skills. The opposite is practised at PnP which therefore tends to drive behaviour counter to the goals of organisational change when implementing an ERP.

Rummler (1996) argues that you have to first develop behavioural objectives before deploying training instructions. At PnP, managers and employees were trained on the new system but were given little if any comprehensive guidance on how their behaviour may need to change; the principles and assumptions surrounding their processes.

As PnP appears somewhat immature in its ability to learn, it's arguably why its learning mode is based on a single-loop (Argyris, 1991). This is where organisations detect and correct errors based on existing norms and values; and the learning mechanism is entrenched in previous experience. This relates to PnP valuing past experience over learning new experiences. PnP became successful based on particular business practises and they appear to resist learning; which in concert could fuel an Icarus Paradox (Miller, 1990) in the company.

That may mean PnP is not learning as fast as its competition, despite the implementation of SAP, and may soon fall victim to the very business practises that made them successful. Under this assumption, double-loop learning - which will question the standards and values underpinning organisational processes - which is required in a SAP project, do not appear to be prevalent enough at PnP and yet could be essential for its future growth.

2.7 Summary

With little apparent behavioural change, a middle management culture slow to learn, a system arguably implemented without adequate employee consultation, a readiness for change seemingly decided on their behalf, a leadership style that 'tells' not 'sells' and the departure of Raymond Ackerman auguring a cultural schism where business principles are in flux; appears to suggest the implementation of SAP has perhaps affected the organisational structure, culture and learning characteristics and may continue do so going forward.

Further insight and reflection will be brought to bare, in a wider context, on the themes raised in the Problem Analysis by way of the Literature Review.

3. LITERATURE REVIEW

3.1 Introduction

The literature review attempts to define and build a conceptual foundation for the research question. The purpose of a literature review is to offer insight to the reader what literature was considered in formulating the arguments and perspectives in understanding the research question and the resulting research objectives. The type of review in this research was one of a theory review where its scope encompassed mostly journals, Open University MBA study material and management research websites, where the works of authorities on the research subject were referenced.

Below, the major themes are revisited, followed by the literature review per theme:

- The role of executive sponsorship and leadership in change management
- Project management and change management coordination and integration
- The discipline of change management; the approaches and models used to effect change
- How communication can support the change process; its attributes, methods and tactics
- The effect of change management on the organisation; its structure, culture and how it learns

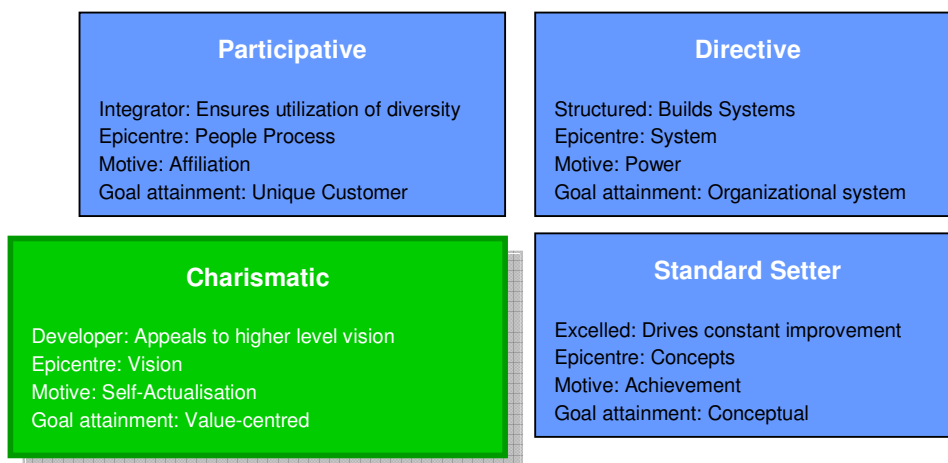
3.2 The role of executive sponsorship and leadership in change management

Nadler and Tushman (1990) believe that charismatic leaders are important as they provide vision, direction and energy; requiring transformational leadership. In agreement, Beatty, Lee & Gloria (1992) consider transactional leaders see 'technological change needing primarily technical solving problems, with little attention to people problem solving'. They also believe that 'the transactional manager lacks the skills required to influence employees exhibiting resistance to change'.

Following this, Van Buren and Werner (1996) stated that the resistance of middle managers first line supervisors is frequently identified as a major implementation barrier. Supporting this link between resistance to change and leadership style, Beatty *et al.* (1992) believe that a transformational leader is needed especially when there is a resistance to change. Both Van Buren and Werner (1996) and Beatty *et al.* (1992) agree that resistance to change must be met with transformational leadership.

Palmer, Jansen & Coetzee (2007) believe leadership development is trending currently toward leaders enhancing personal attributes such as self-motivation, self-management, self-reliance and self-actualisation. This is in line with Nadler and Tushman (1990) calling for charismatic and transformational leadership illustrated by the Four Core Leadership Styles of Schneider (2007).

Figure 12: Four Core Leadership Styles (Adapted from Bill and Kristine Schneider, 2007)



If the leadership is transactional and there is significant middle management resistance then its implied in the literature that organisational change cannot occur. The literature argues that leaders should endeavour to be transformational and charismatic, especially in times of organisational change, to create a vision that will influence employees toward the change goals.

3.3 Project management and change management coordination and integration

It can be argued that with the sizeable pace of organisational re-engineering and the organisational changes attendant with such activities, has made project management tools and practises integral to organisational change programs. The growth of change based projects ‘has made “management of projects” a common phrase, rather than a slogan in today’s business environment’ (Partington, 1996; Smith and Dodds, 1997).

The traditional project management approach is based on a closed system perspective of organizations. However, some organizations are still adhering to this approach, even in today’s organizational open system environment (Yasin, Czuchry and Wafa, 2002); perhaps explaining the relatively high rate of project failures. In the context of organizational change, ‘project and change initiatives must be approached based on a well-designed and multifaceted strategy, which not only adhere to time and budgetary constraints, but seeks achieving a competitive organizational advantage’ (Dietrich and Lehtonen, 2005).

Toward this end, a broader organizational effectiveness-oriented strategy is required. Such strategy call on project managers to ‘utilize their technical competences, in planning for and controlling activities, with their leadership, communication, and other human resources management skills’ (Smith and Dodds, 1997; Zimmerer and Yasin, 1998).

Developing the open system environment argument as opposed to the traditional closed environment, the following models of Slevin and Pinto (1986) compared to Baker, Murphy and Fisher (1988) consider the authors’ common Key Success Factors (KSF’s) of what they consider project success criteria:

Table 7: Slevin and Pinto’s model compared to Baker *et al.*: KSF’s for Project Success

Slevin and Pinto KSF’s	Baker et al. KSF’s
Project Mission	Project Team Goal Commitment
Project Schedule / Plans	Planning and Control Techniques
Monitoring & Feedback	Project Team Capability
Top Management Support	Funding to Completion

Goodman and Griffith (1991) however created an implementation framework that considered five critical processes that drive four measures of implementation success. It is revealing that from a project management perspective only, the models of Slevin and Pinto (1986) compared to Baker *et al.* (1988) can give a project good marks in rating project success.

It is though when one reconsiders project success from the organisational and human perspective through the model of Goodman and Griffith (1991) that most criteria may be poorly delivered owing to the missing or deficient human resource focus required expected from a project in their framework.

Table 8: Adapted from Goodman and Griffith Implementation Framework (1991)

Critical Process	Implementation Success Criteria
Socialisation	Knowledge
Commitment	Behaviour Utilisation
Reward Allocation	Attitudes
Feedback / Re-design	Normative Consensus
Diffusion	

The models and literature present different perspectives on what constitutes a successful implementations and how arguably one integrates the key success factors in project and change management.

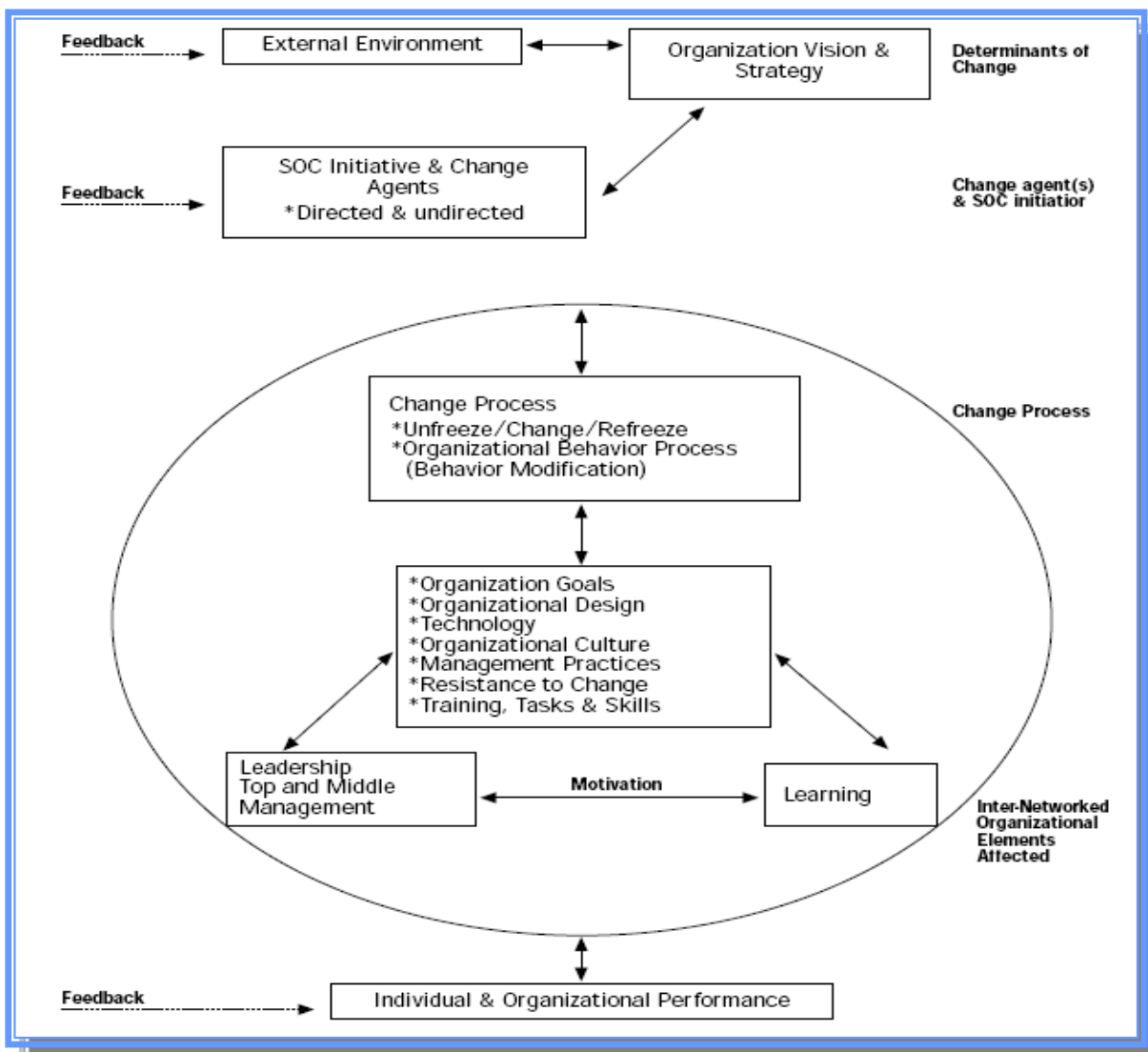
The literature appears to support the notion that project management can no longer be evaluated on traditional measures alone but also on such divergent activities as communication and human resource management; predicated on the organizational open system environment (Yasin *et al.*, 2002) which runs counter to the traditional project management approach in closed system environments.

3.4 The discipline of change management; the approaches and models used to effect change

The approach taken by various authors appear to follow different strategies to effect change, some focusing on the process, the emotional or on the rational realisation for change. Kotter (1995) starts his model with appealing to a sense of urgency that appears to be more process focused than Judson (1991), who suggests starting with analysing and planning for change; a more rational beginning. Denning (2007) argues for an emotional approach to change followed by rational arguments. None of the authors appear to agree on the starting point for initiating change.

Both Burke and Litwin's (1992) 'Causal model of organisational change' and Robbins (1993) 'Model of planned organisational change' are models for change that were combined as below:

Figure 13: Adapted Change Model from Burke and Litwin (1992) and Robbins (1993)



The model attempts to represent the best of organisational change theory while still remaining practical; however it still relies on a largely rational approach to change which has been rejected by Denning (2007), a case in point is that the change process starts with 'unfreeze, change and refreeze', which appears akin to Lewin's (1947) change approach sixty years earlier. Kanter (1992) criticised this approach as 'static, linear and mechanistic'.

It suggests the link argued by Prentice and Tell (2001) that organisational learning is heavily interdependent with organisational culture. The model also argues the importance of leadership and middle management in influencing organisational change and its role in resistance to change. Unlike Van Buren and Werner (1996) and Beatty *et al.* (1992) that agree that resistance to change must be met with transformational leadership, this model doesn't prescribe a leadership style, despite the many authors in recent years such as Denning (2007) who argue that transformational leadership is a prerequisite.

Eminent authors such as Burke and Litwin (1992) and their 'Causal model of organisational change' and Robbins (1993) 'Model of planned organisational change' suggest the points to be addressed in the change process but not exactly how to change.

3.5 How communication can support the change process; its attributes, methods and tactics

Denning (2007) disagrees with logical/rational communication messages, arguing that you need to 'elicit desire for a different state of affairs' as the most important part of communication; 'if listeners are to own the change idea, they have to discover it in the form of a story'. Denning believes that reasons come after stimulating a desire to change.

Following this, Denning (2007) argued that the traditional approach of change management is very linear and rational, that being: define the problem, analyse the problem and recommend the solution. He argues that leaders must inspire enthusiasm for change by getting their attention, stimulating desire and reinforcing with reasons.

Davenport and Beck (2000) from their study noticed that messages that evoked emotion and were personalised, were twice as successful to get attention. The model suggests that the message must be personalised, evoke an emotional response, comes from a trustworthy source and is concise. Both authors therefore agree that emotions must be addressed first followed by reasons.

Larkin and Larkin (1994) argue that 'while senior leaders might command change, employees will look to immediate supervisors for clues about the change and how they may influence employees based on their own attitudes'. This suggests that despite strong sponsorship and change management emotional messages, the middle management level still has a powerful role in communicating change to employees and in addition enlisting either their support or resistance to change.

The previous authors all tend to argue the monologic approach to communication as opposed to the dialogic (Jabri, Adrian and Boje, 2008); stressing the achievement of consensus and utilising rhetoric to do so. So despite Denning (2007) encouraging change agents to enthuse the audience, his approach is still arguably a monologue of pre-determined change. There appears to be two schools of thought then; relying on communication to be an instrument of change for pre-determined change, or giving people a voice in the change process by way of dialogue, as argued by Jabri *et al.*, (2008).

It appears that the authors and the literature tends to overwhelmingly argue that the communication message is a call for organisational change however the tendency is assuming that the 'audience is a mere spectator to the change, rather than a witness to it' (Jabri *et al.*, 2008).

3.6 The effect of change management on the organisation; its structure, culture and how it learns

Introducing an ERP into an organisation implies switching from a functional to a process orientation, due to the fact that software modules cut across traditional department lines (Gunson and de Blasis, 2002). This in agreement with Volberda (1992) that an ERP implementation is as much about re-engineering processes as organisational characteristics. The effect on structure is likely then a move from a regional or functional model to a process organisational model.

In this respect Soh *et al.* (2002) offers a model of 'misalignments in ERP implementation' based on four structural properties of ERP. The argument goes that 'in the quest for integration of business units, a process orientation, greater flexibility, and standardised solutions; creates tension with opposite organisational forces demanding differentiation, a functional orientation, stability and regional specific e.g. regional over national solutions'. Soh *et al.* (2002) would therefore argue that despite the process orientation that ERP's bring, organisational forces may resist the change.

Williams and Edge (1996) argue that it's required that a business manages the cultural aspects of ERP systems, as an ERP could be considered 'Social Shaping Technology' (SST). Ciborra and Lanzarra (1990) consider SST as 'the social setting of an organisation that defines technology and vice versa'. The implication of this is that the introduction of an ERP to an organisation results in the critical activities of an organisation are increasingly enabled by the ERP; therefore organisational cultures tend to assume the characters of 'technology cultures' i.e. cultures who are primarily mediated by technology (Weick, 1995). Weick believes this can have serious consequences to organisational 'sense-making' – forcing people trying to make sense of what is going on.

If there is a loss or confusion of meaning in the organisation owing to the ERP implementation, and meaning is considered central to culture, then there could be an 'impact in the cognitive and normative diversity within an organisation, the attribution of meaning, which could introduce integration as well as fragmentation, unity as well as diversity' (Martin, 2002) into the organisation.

To ensure transfer of learning in organisations, Prentice and Tell (2001) identified in their studies a range of activities in two dimensions to capture learning referred to as a 'Learning Landscape'.

1. The first dimension analysed Individual, Team or Organisational levels.
2. The second dimension analysed the type of learning process based on Experience Accumulation, Knowledge Articulation and Knowledge Codification.

The authors argue this approach representing the learning process adds value for two reasons; it links the high level activities designed to support organisational learning with lower level activities carried out informally by individuals. Secondly, it can formally codify an individual's learning and insights for the organisation, which could easily go unrecorded.

The argument against this approach not highlighted by Prentice and Tell (2001) is that organisational learning is heavily dependent on organisational culture. If there is a blame culture and perhaps negative events occurred in the project, individuals may want to limit discussion to protect their reputations, thereby inhibiting organisational learning.

The consequences may be that organisational structure and culture could be fractured or consolidated by the introduction of an ERP; and the type of culture in the organisation shares a symbiotic relationship with the level and quality of organisational learning coming out of the project.

3.7 Summary

The authors appeared polarised in how to communicate change and if the change method should be based on rational or emotive arguments. They all appeared to consider transformational leadership a necessity to change management despite following a 'traditional' approach to 'project managing' change that tends to emphasise budget and timelines over human resource concerns. The literature appears to argue that the effect of change is capable of hindering or renewing organisational culture and learning; with some authors highlighting that culture and learning should be considered mutually inclusive.

4. RESEARCH DESIGN AND METHODOLOGY

4.1 Introduction

This chapter covers the tools and methods of research to meet the information requirements needed to make sound decisions. It discusses the research approach, the sample, the data types, data collection and analysis, reliability, validity and generalisability. It pays particular attention to ethics and ensuring confidentiality.

4.2 Research Approach

Research methodologies can follow two main approaches, quantitative and qualitative analysis. This study will tend to focus more on quantitative analysis, but supported by qualitative analysis to explore the attitudes and perceptions of employees.

4.2.1 The quantitative research approach

When applying quantitative methods, a number of data collection methods are possible, such as questionnaires, surveys and checklists to provide numerical data for precise research. Quantitative research involves the collection of primary data from a large number of individual units, with the intention of projecting the results to a wider population (Martins, 1996); implying that the quantitative approach describes, infers and resolves problems using numbers (Coldwell and Herbst, 2004). This collection method therefore is systematic, with pre-defined procedures to analyse data. The problem one can encounter with only quantitative research is its inability to measure attitudes and perceptions and can therefore fail to provide full context to the research.

This research will rely on a questionnaire to be completed by the sample population to gather data on each theme that has been uncovered and analysed throughout the study. The sample size and sample sub-groups (refer to paragraph 4.5 'sample size') are displayed using descriptive statistics i.e. quantitatively summarising the data set in a table and pie-chart. In addition inferential statistics will be used in an attempt to reach conclusions that extend beyond the immediate data alone. In this study, the researcher would try to determine what the Western Cape sample population might think, or to make judgments of the probability that the attitudes and perceptions of the Western Cape may be generalised to the remainder of the company and or to other South African retailers.

4.2.2 The qualitative research approach

They are research methods relying on non-mathematical means to analyse information (Coldwell *et al.*, 2004). Considering the process of research is intended to investigate and interrogate both the measurable and non-measurable information gathered in a research study, qualitative methods are employed to investigate and interpret behaviour, motivation, culture and other important non-tangible elements, such as in this study with its focus areas of attitudes, perceptions, leadership styles, communication, learning, shared values, motivation and culture.

Subjective interpretation of events plays an important role in this approach, using methods such as participant observation and in depth interviews for example. The results of such an approach tend to be more time inefficient and less open to generalisation than those of the quantitative approaches and the 'findings are not subjected to formal quantification or quantitative analysis' (Coldwell *et al.*, 2004).

The qualitative research will focus on personal interviews to gather information for qualitative analysis (refer to paragraph 4.5 'sample size'). Coupled with this, descriptive statistics will help in this study to reduce sizeable volumes of data, establishing what change methods may work in retail and why, given the context of the organization, the leadership and how culture influences change approaches. Again, inferential statistics will be used to support inferential statements about the sample population that the data may represent.

Data Triangulation (Denzin, 2006) will be utilised for validation of the research data by cross examining the results from the quantitative and qualitative analysis; this is intended to increase both the validity and credibility of the results. A key example would be researching the attitudes and perceptions of Buying; will both research methods produce the same or similar result?

4.3 Sample Approach

The population is the group of people, items or units that is being investigated. A census is obtained by collecting information about each member of the population, where a sample is obtained by collecting information from only selected members of the population (Coldwell *et al.*, 2004).

Pick 'n Pay's organisational structure is organised by business functions and geographic regions. The sample population will only include: Pick 'n Pay in the Western Cape region who work in the Cape Town Head Office and stores, employees that have been working for the company since 2005 and who are SAP users.

As the sub-populations vary per business function, it appears advantageous to sample each sub-population independently, thereby employing stratified sampling. Within each stratum, which represents a business function, a judgement sample will be applied which will seek to find a representative part of the stratum that are SAP users.

4.4 Sample Population

The choice of population is owing to the limited resources available in travel budget and time of the researcher to widen the sample population to include all regions. The researcher also resides in Cape Town and is a SAP Consultant at PnP, allowing for easy access to the sample population. Considering the SAP project was conceived and implemented from the Cape Town HQ in 2005 and that all business functions are represented in Cape Town, the research population of approximately 1200 people is arguably sufficiently representative and has the benefit of respondents being present throughout the project lifecycle. It is from this research population that the sample will be drawn. It is required that they are SAP users as they would then have experienced the change firsthand, to transition them from their legacy applications to SAP.

Owing to their roles as SAP users, the population represents computer literate individuals who mostly occupy clerical or middle management roles. This has two consequences, the population does not measure the Union employees who are mostly shelf-packers, cleaners and the like and also doesn't focus on senior management either. Despite the population largely representing the middle management and specialist layer of the hierarchy and who will largely participate in the questionnaire, personal interviews will also be conducted with senior managers (see paragraph 4.5) to garner further insights into the change management approach.

4.5 Sample Size

Figure 14: Total Sample Population

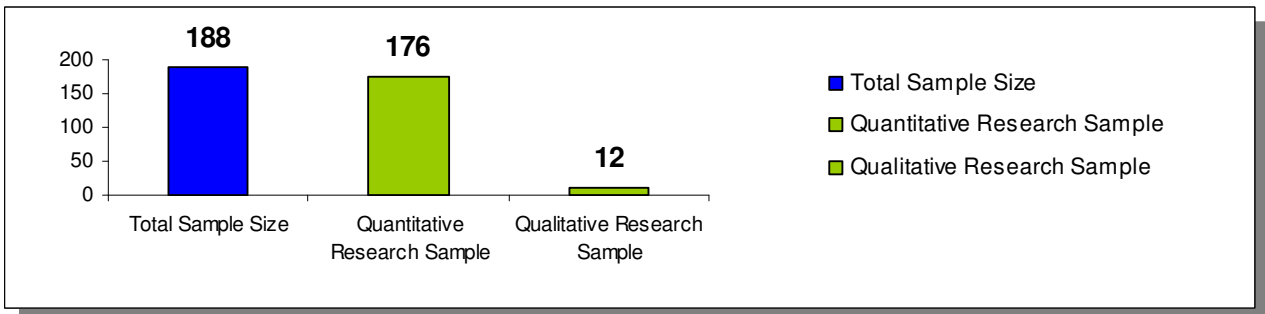
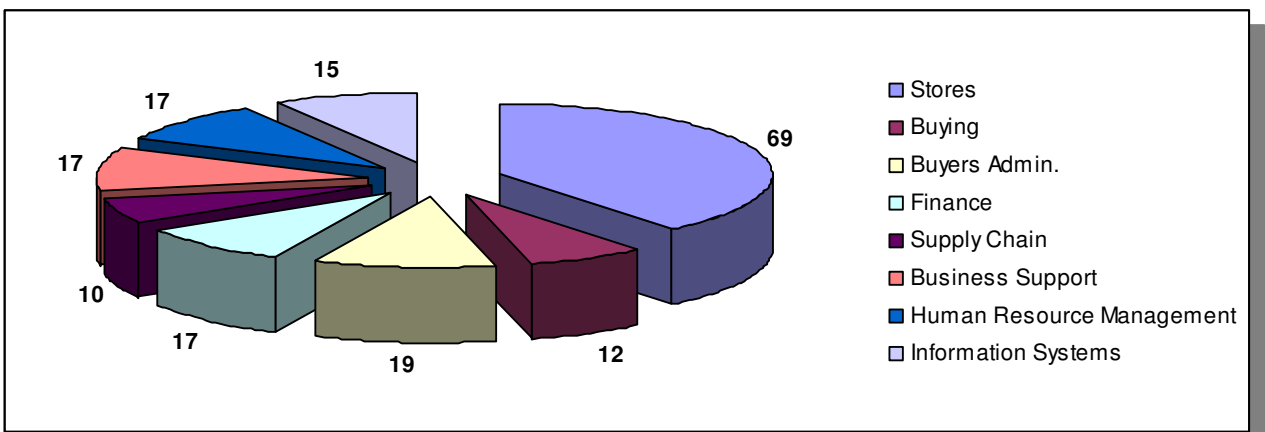


Figure 15: Quantitative Survey Sample Pie-Chart



The quantitative approach intends to conduct the research by way of a questionnaire (Appendix D) on the business functions using SAP, including the store users from:

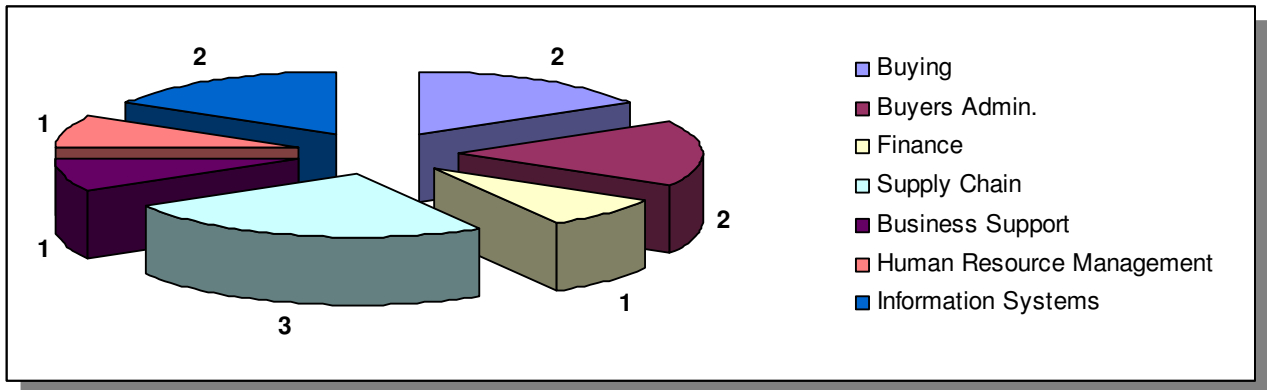
Corporate: Table View and Tokai

Franchise: Family Circle Centre in Table View and Family Plumstead

Table 9: Quantitative Survey Sample by Business Function

Function	Sample count
Stores	69
Buying	12
Buyers Admin.	19
Finance	17
Supply Chain	10
Business Support	17
Human Resource Management	17
Information Systems	15
TOTAL SAMPLE SIZE	176

Figure 16: Qualitative Survey Sample Pie Chart



The qualitative research sample comprises of twelve individuals who were chosen because they are senior or middle managers in their respective departments. They will be taken through the questionnaire (Appendix D) and asked to give their opinion on each theme and question in a semi-structured interview. They are not included in the quantitative analysis (Appendix E) however they will be expected to bring insight and context to the researcher of the prevailing management attitudes and perspectives uncovered in the quantitative analysis.

Table 10: Qualitative Survey Sample by Business Function

Function	Sample count
Buying	2
Buyers Admin.	2
Finance	1
Supply Chain	2
Business Support	1
Human Resource Management	1
Information Systems	3
TOTAL SAMPLE SIZE	12

4.6 Limitations and Delimitations

This research project intends to understand the role of change management in implementing Retail ERP projects.

Owing to time constraints, with the final study to be submitted by 3 May 2010, the study has been limited to one company, Pick 'n Pay Retailers, trading in South Africa. This has further been limited to the Western Cape region, HQ organisation and stores, further limiting the research. This means the research findings is limited to one company and geographic region and can't be considered representative of all of Pick 'n Pay, or indeed all Retail ERP implementations in South Africa and/or globally; despite being the biggest SAP Retail implementation globally to date.

The choice of Pick 'n Pay narrowed the scope to one company in the South African Retail industry. With the recent high profile implementation of SAP at Pick 'n Pay, the research scope was delimited to focusing on the change management of ERP projects in Retail. In terms of ERP, the focus would therefore be on SAP.

The research project as a result did not focus on change management in all regions of the Pick 'n Pay organisation, in all types of ERP projects, in all industries and beyond South Africa.

4.7 Data Types

All quantitative data is based upon qualitative judgments; and all qualitative data can be described and manipulated numerically (Trochim, 2006).

The two data types used in this research are: nominal scale or categorical data, where the research observations will clustered or grouped together; categorising as opposed to ranking. For example, the attitude to learning in different levels within an organisational hierarchy.

The main data collected (Appendix D: Questions 1-31) is based on a Likert Scale with a four point scale (strongly agree, agree, disagree, strongly disagree). As part of the forced choice method, the 'neutral' option is not offered, forcing the respondent to make a decision for or against a statement in the questionnaire. In general, Likert Data can be treated as ordinal data, which implies performing data evaluation and analysis with descriptive techniques as well as non-parametric methods.

4.8 Data Gathering Approach

There are various data collection techniques that can be used for a research study for example: questionnaires, surveys, checklists, interviews, documentation review, observation, focus groups, and case studies (Coldwell *et al.*, 2004).

The research will be based on a mix of qualitative and quantitative data collection methods. In the qualitative method the researcher will conduct semi-structured interviews based on a judgement sample, in an attempt to verify the quantitative findings and to synthesise the information further. The quantitative method will use a survey in the form of a questionnaire.

The relationship between the questionnaire, the research themes, the research objectives and Problem Statement have been carefully constructed by the researcher in an attempt to seamlessly unravel the research (Figure 17).

To ensure a high response rate of completing the questionnaires, the Managing Director of the Western Cape will gather all Heads of Department in a meeting and request that the researcher is given their full cooperation in his capacity as an MBA student conducting independent research.

To increase respondent participation, the researcher will primarily give physical copies of the questionnaire directly to the respondents in their department meetings so that they feel obligated to complete it and also not to be troubled with printing it out themselves. Thereafter, the physical copies will be handed to the Heads of Department who will be the researcher's point of contact in picking up the completed questionnaires. In some cases, email will be used. This personal approach was recommended by a Master's student who recently employed the same technique very effectively at Pick 'n Pay.

4.8.1 Data Gathering Tools

- The questionnaire design is based exactly on the five themes that emerged from the Problem in Context, as illustrated in the Mind Map ([Appendix: B](#)).
- Please refer to [Appendix: C](#) which is the Cover Letter requesting the respondent's participation.
- The quantitative method will use a survey in the form of a questionnaire ([Appendix: D](#)).
- The qualitative method will employ semi-structured interviews.

4.9 Data Analysis Techniques

The data analysis phase usually involves data preparation where the researcher will clean and organise the data for analysis. Descriptive statistics follow where the data is described, and is then followed by inferential statistics where hypothesis and models are tested against the research objectives (Trochim, 2006).

4.9.1 Descriptive Statistics

Descriptive statistics provide a broad overview of the data set. Based on the nature of the data, it is recommended to summarise each question with the median and mode to describe the central tendency of the population per question. Further, the visualisation of the responses per question in bar charts presents a clear indication of the overall distribution of agreement and disagreements.

4.9.2 Kruskal-Wallis Test

As part of the inferential techniques, it is essential to examine the inter-departmental differences by comparing the median (of each question) between the various departments. By using the Kruskal-Wallis test, departmental outliers can be determined. The Kruskal-Wallis test is a non-parametric test similar to the one-way anova but applied on ranked data where normality assumptions do not apply.

In this study, the Kruskal-Wallis test is applied for testing equality of departments. With the rejections of the null hypothesis of equal departmental medians, significantly different response patterns from the rest of the population/departments can be determined.

4.9.3 Kruskal-Wallis Test Theory

The Kruskal-Wallis null hypothesis assumes equality between departments;

$$H_0: \mu_1 = \mu_2 = \dots = \mu_k$$

1= Buying, 2=Buying Admin., 3=....
 μ_i =Median for i/j/k department

With the rejection of the null hypothesis the H_1 applies which signifies differences between the departmental response pattern:

$$H_1: \mu_i \neq \mu_j$$

Test Statistic:
$$H = \frac{12}{n(n+1)} \sum_{i=1}^k \frac{R_i^2}{n_i} - 3(n+1)$$

H=Kruskal-Wallis test variable

n=Number of Respondents

n_i =Number of respondents per department

R_i =Sum of Ranks for the i-th department

Significance Level: α set to 0.05.

If the value of the Kruskal-Wallis test variable H is greater than the chi-square table value (with $k-1$ degree of freedom), then the null hypothesis will be rejected which determines significant differences between the departmental response patterns.

4.10 Internal Validity

The research will attempt internal validity by measuring the sample group's response. It will attempt to determine if the Pick 'n Pay Retail ERP Project could be considered successful in terms of the role of leadership, the change management method adopted at Pick 'n Pay and the impact on culture and learning. The internal validity will be reduced though, as only one business region constitutes the sample population. The test-retest reliability technique will not be used as not all respondents who complete the questionnaire will be interviewed.

4.11 External Validity and Generalisability

The research may be limited in use as the external validity of the research results may not be generalised to respondents outside of the sample owing to only research being conducted at one company and in one geographic region. The research could be generalised in so far as SAP implementations all follow common project methods and retailers arguably share common traits. Therefore the delimitation of the research and the limitation of the study to one company with SAP as the ERP could be seen as undermining the external validity and generalisability.

4.12 Reliability

Data that one collects must be reliable in order to make accurate conclusions from the applicable data. Data reliability is concerned with ideas such as the consistency of the data collected; the precision with which it was collected as well as the repeatability of the data collection method. Data is therefore considered reliable if the same results can be gained by different researchers asking the same questions to the same group of people. Data reliability is therefore concerned with: the consistency of the data collected, the precision with which it is collected and the repeatability of the data collection method (Trochim, 2006).

All respondents for the quantitative analysis will be given the same questionnaire to complete and will be measured using the same method, to reduce measurement bias. The characteristics of the

sample will be across gender, race, ethnicity, socioeconomic status and geographic locations within the Western Cape.

4.13 Sample Bias

Sample bias exists in the research as the selection only considers SAP users who have worked for the company five years or longer, and only in the Western Cape who work in the headquarter and stores, thereby excluding other employees.

As the Western Cape was the pilot region for the first store rollouts, it was subject to project teething problems and learning curve effects that may have influenced their confidence in SAP, which may reflect in the respondent's feedback. This implies that other regions that were implemented later, that benefitted from the significant challenges faced in the Western Cape, would likely be less critical of SAP.

4.14 Sample Error

In an attempt to control the size of the sample error, the largest possible random sample has been taken from the population in each stratum.

4.15 Ethics and Confidentiality

'Ethics is made up of norms or standards of behaviour that guide moral choices about our behaviour and our relationships with others. The goal of ethics in research is to ensure that no one is harmed or suffers adverse consequences from research activities' (Cooper & Schindler, 2001:112).

Miles and Huberman (1994) list several issues that researchers should consider when analyzing data, that being: informed consent (do participants have full knowledge of what is involved?), harm and risk (Can the study hurt participants?), honesty and trust (Is the researcher being truthful in presenting data?), privacy, confidentiality, and anonymity (will the study interfere too much into group behaviour?), intervention and advocacy (What should researchers do if participants display harmful or illegal behaviour?).

Based on this theoretical guidance the researcher has signed a non-disclosure agreement to keep Pick 'n Pay information secure, including the discussions held in face-to-face interviews. The

physical questionnaires will be filled out anonymously by the respondents and kept in a secure location by the researcher. The same confidentiality measures will apply if the completed questionnaire is emailed back to the researcher. The researcher is particularly sensitive to the possible concern surrounding demographic profiles as a way to deduce the respondent's identity. This will be mitigated by not comparing functions by job profile if there's only one person in the role and also not to allow anyone to view individual responses.

4.16 Summary

The research design and methodology has been given critical attention from the researcher to ensure the highest quality results and to reduce or eliminate bias or errors where possible. Owing to only being able to survey one geographic region of one company will reduce generalisability of the findings; however it is hoped that given the size of the SAP implementation and the retailer, the findings will still bring significant value in answering the Problem Statement.

5. RESULTS AND DISCUSSION

5.1 Introduction

The research objectives are the focus of the results and discussion. The research aims to establish what change management methods, leadership styles, communication approaches, cultural and learning dynamics to consider in successfully implementing an ERP in the Retail industry. This section of the research report will discuss the results per objective, draw findings in the literature review and attempt to interpret the results in a logical and insightful manner.

As a revisit of the research sample in the research population, it includes, geographically, Pick 'n Pay in the Western Cape region who work in the Cape Town headquarters, and demographically, employees from all socio-economic backgrounds that have been working for the company since 2005 and who are SAP users.

A questionnaire (Appendix D) was used as the primary data gathering tool to survey the sample by quantitative methods. The results per department and themes are found in Appendix E, which have been tested and proven with the Kruskal-Wallis test to establish the inter-departmental outliers.

The research objectives are re-stated below:

1. To investigate the role of leadership in change management in Retail ERP projects.
2. To identify change management methods available to Retail ERP projects.
3. To identify current perceptions and understandings of the effect Pick 'n Pay's ERP implementation had on organisational culture and organisational learning.

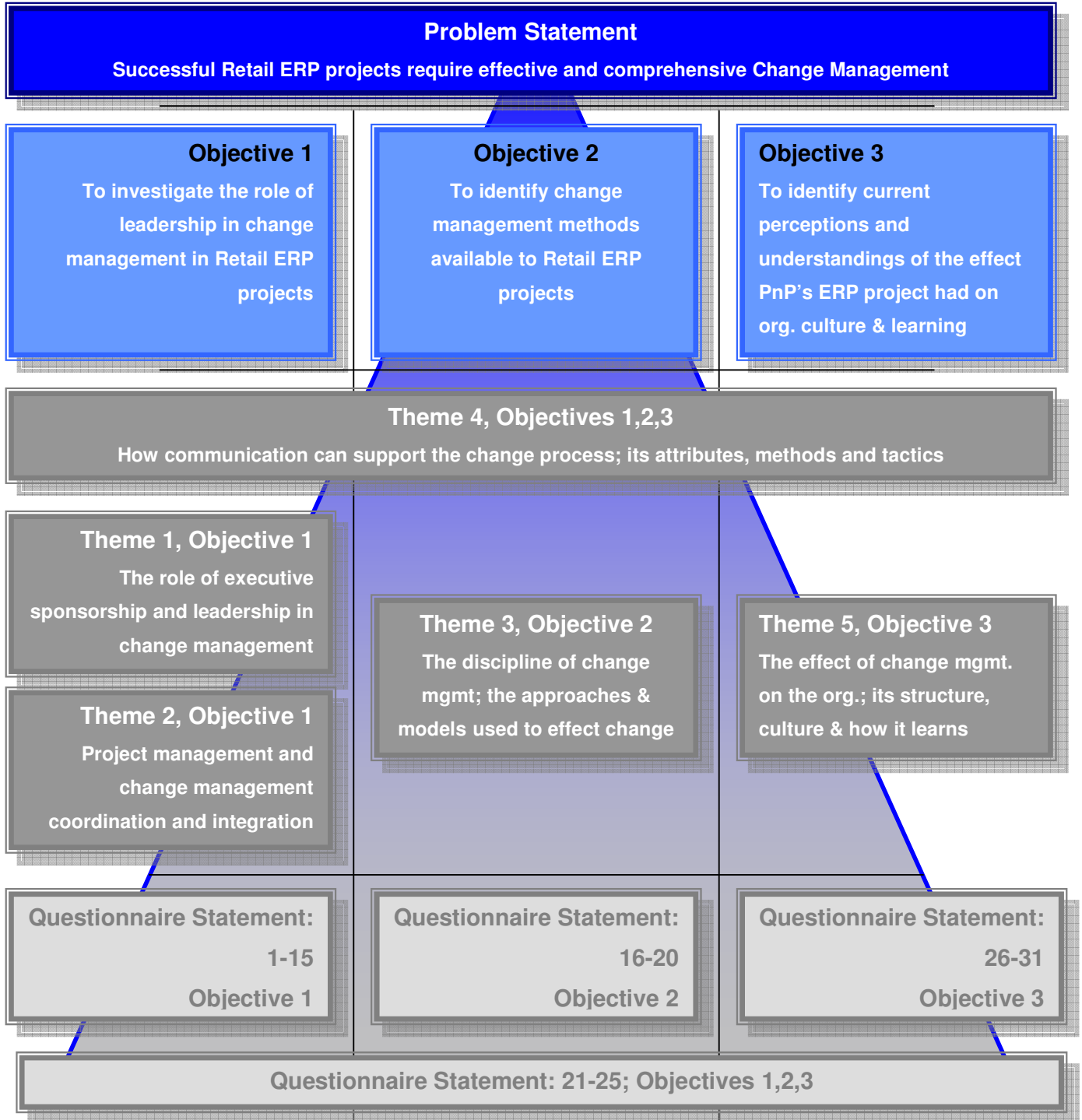
The objectives in this chapter are interpreted in three stages:

- Overview and analysis per objective and contributing theme
- Inter-departmental outliers
- Relationships

Before continuing with the results and discussion; the researcher has endeavoured throughout the research to reveal a clear and logical golden thread that links the Problem Statement, Research Objectives, Research Themes and Data Gathering Tool.

Figure 17 attempts to illustrate this by way of a pyramid; which cascades down from the Problem Statement. Given the context of Figure 17, the data analysis per research objective and theme follows.

Figure 17: Research Pyramid: Problem Statement, Objectives, Research Themes and Tools



The response rate was as follows:

Table 11: Response Rate

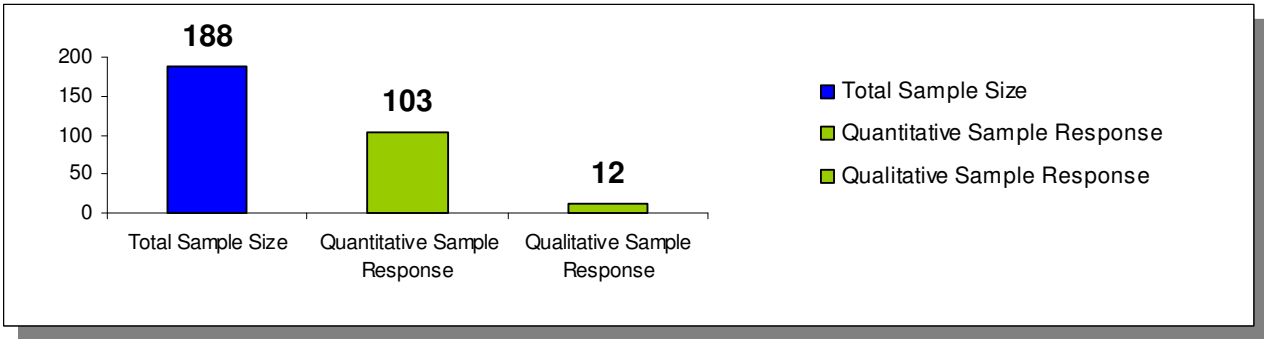


Table 12: Response Rate and Percentages

Function	Response
Total Sample Size	188
Quantitative Sample Response	103
Qualitative Sample Response	12

Response as % of Sample Size	61%
-------------------------------------	------------

Unfortunately, none of the 69 identified potential respondents representing the four stores selected could take part in the study – owing to Union approvals and HR in-store participation requiring too much time given the research timelines - and were therefore excluded.

Apart from four of the fifteen respondents from Information Systems which did not respond in the quantitative research, all the remaining identified respondents from the other business functions took part in the study. If one excluded stores, the response rate actually rises to 96%.

All twelve identified respondents for the qualitative analysis took part in semi-structured interviews; they were not included in the below findings as they are senior and middle managers who aren't SAP users but offered their insights and perceptions of the project to the researcher, from the management perspective.

5.2 Objective 1: To investigate the role of leadership in change management in Retail ERP projects

AGREE

DISAGREE

5.2.1 The need for change

The respondents overwhelmingly understood that there was a need for change and that a sense of urgency surrounded the implementation of SAP.

Figure 18: The urgency to change

Pick 'n Pay had an urgency to change to a package like SAP if it expected to compete as a company

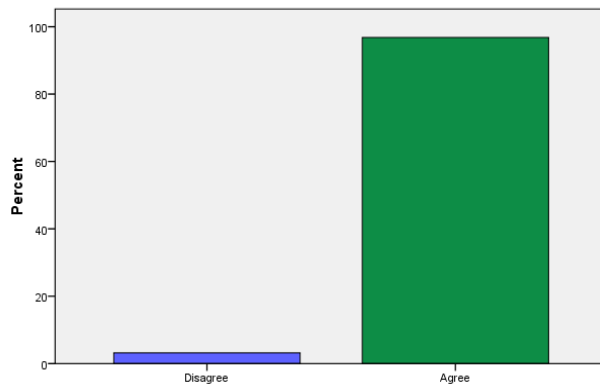
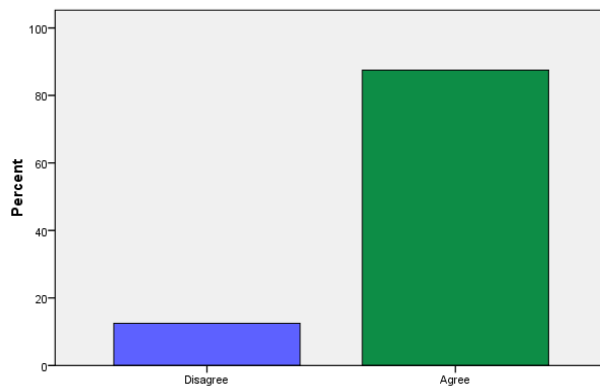


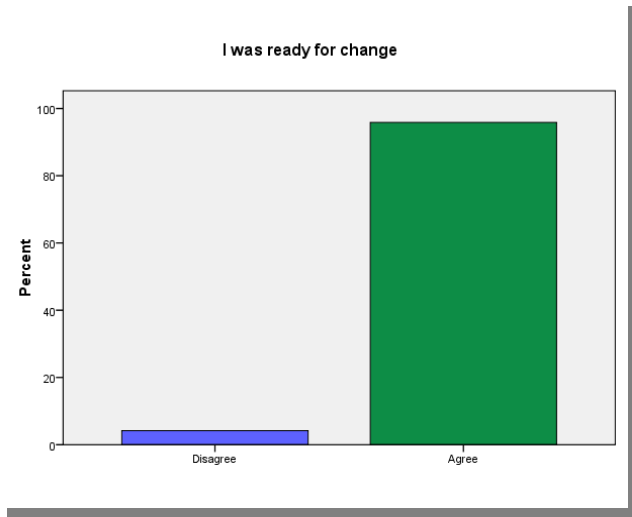
Figure 19: Explaining the need for change

Management explained the need for change to the employees



The respondents showed a high personal readiness for change. This is in contrast to the 'Change Challenge Assessment' of IBM (Figure 6) which considered the employee's ability to change as low and was not confident the employee's were ready for excessive change.

Figure 20: Personal readiness for change



Despite a personal readiness for change and a sense of urgency to change, there was sizeable resistance to change at the outset of the project. In addition a high perception that management was not prepared for the possible impact of the project on company culture.

Figure 21: Resistance before the project start

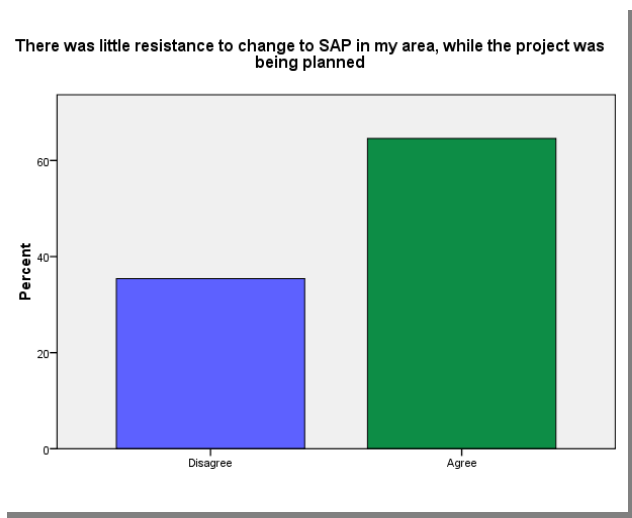
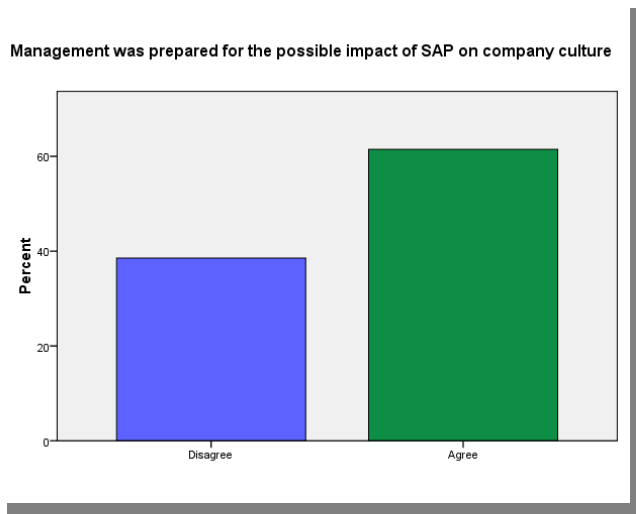


Figure 22: Management preparations for cultural impacts

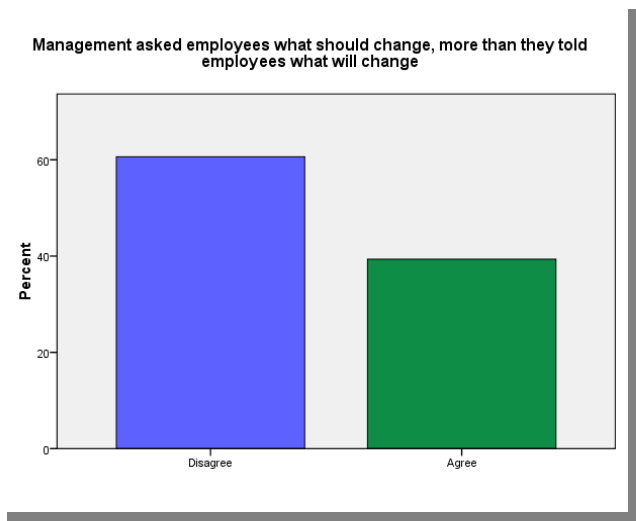


The need for change was therefore understood and despite sizeable resistance, the personal readiness for change existed and made itself amenable to the process of change.

5.2.2 The role of executive sponsorship and leadership in change management

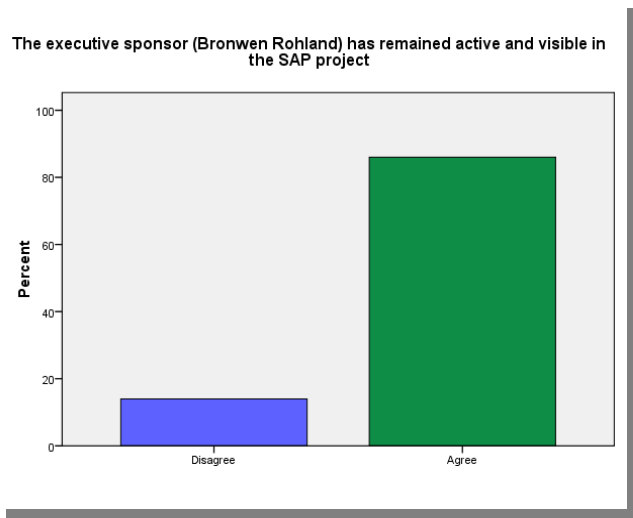
A large majority of the respondents perceived the SAP project as prescribed or directive change on the part of management; which indeed was confirmed as management's intention to approach the change.

Figure 23: Directive change



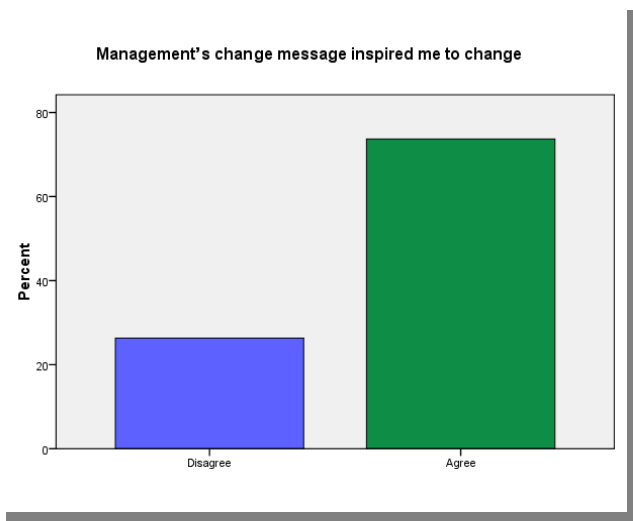
The Executive Sponsor was perceived as active and visible throughout the SAP project, which the literature has confirmed is considered a key driver for successful projects.

Figure 24: The executive sponsor performance



Given that the change method and communication was designed to be logical and prescribed, it is surprising how many respondents considered the change message as inspired change.

Figure 25: The level of inspired change



With directive change and an instructive leadership style at PnP, it is revealing that the majority of the respondents felt management was willing to compromise with differing opinions. In addition, if those differing opinions resulted in resistance, management was largely perceived as not using position power to force their prescribed agenda.

Figure 26: The level of perceived compromise

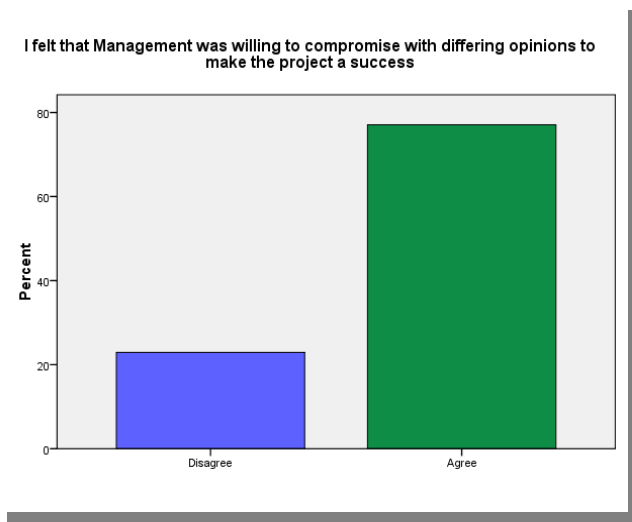
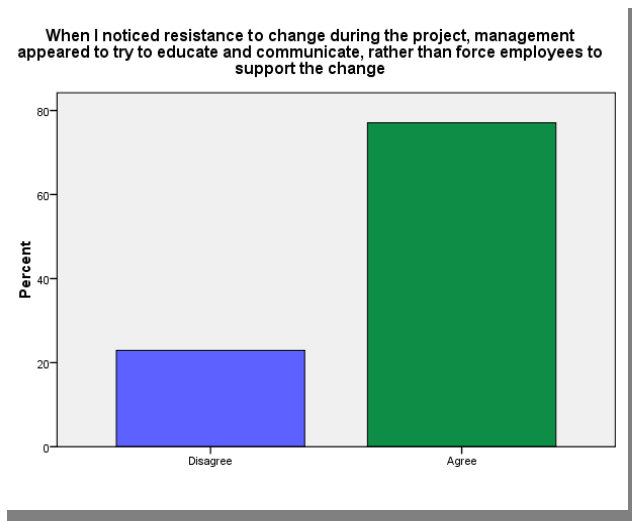


Figure 27: The perception of position power in directive change



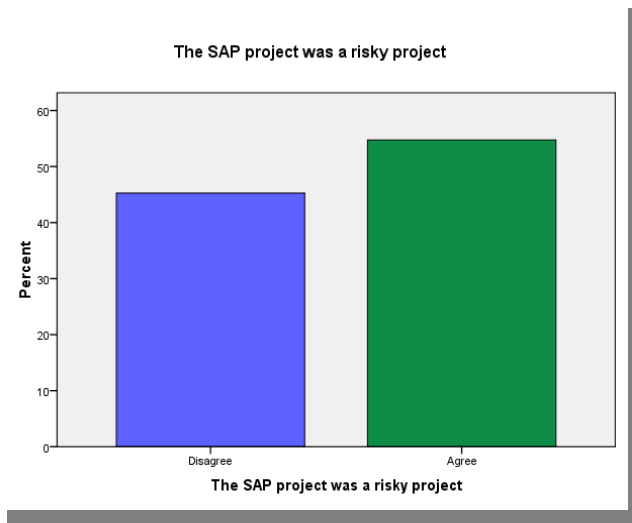
An explicit decision to prescribe change but nonetheless not use position power exhibited management’s grasp of transformational leadership to balance the traditional transactional style common at PnP.

5.2.3 Project management and change management coordination and integration

The respondents were split in their perception of the risk of the SAP project (see point 5.7.3 for more analysis). This could be interpreted in two ways. Management intentionally down-played the risk so as not to arouse too much concern for organisational change. Another interpretation was that the change communication did not effectively explain the risk. The mixed appreciation of risk

didn't appear to have an organisational impact though, as it didn't reduce the personal readiness of most respondents to accept change or foment more resistance to change.

Figure 28: The understanding of project risk



The project communication and change communication worked effectively overall in managing user's expectations of what they'd be expecting from SAP. A key requirement in managing change. This, along with a well implemented project resulted in the respondents overwhelmingly confirming that SAP met or surpassed their expectations; despite the initial resistance to the project.

Figure 29: User expectations of SAP

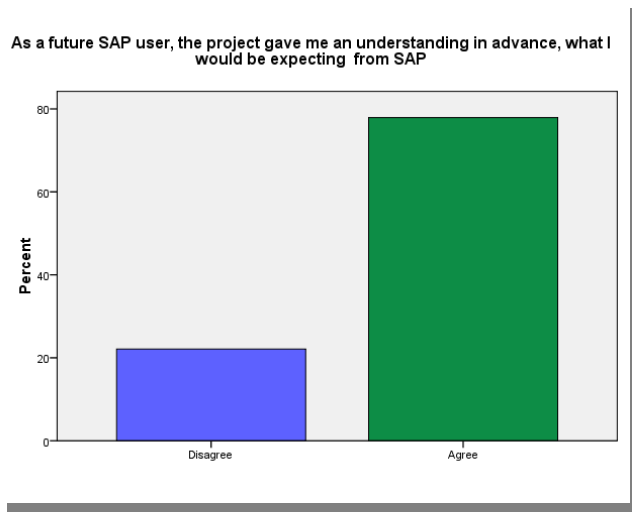
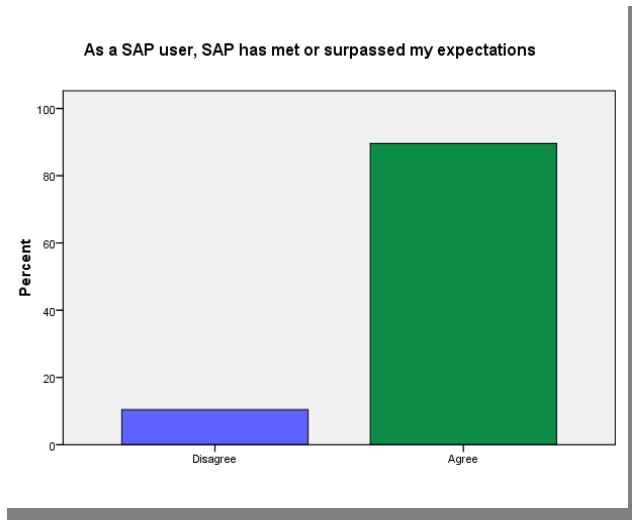


Figure 30: The user satisfaction level of SAP



There was an overall sense that the SAP project contributed to the growth of human capital by increasing the learning of the organisation, beyond the project organisation. The increase in learning and high satisfaction of SAP contributed to SAP being perceived as successfully changing the way people work.

Figure 31: The perception of project knowledge sharing

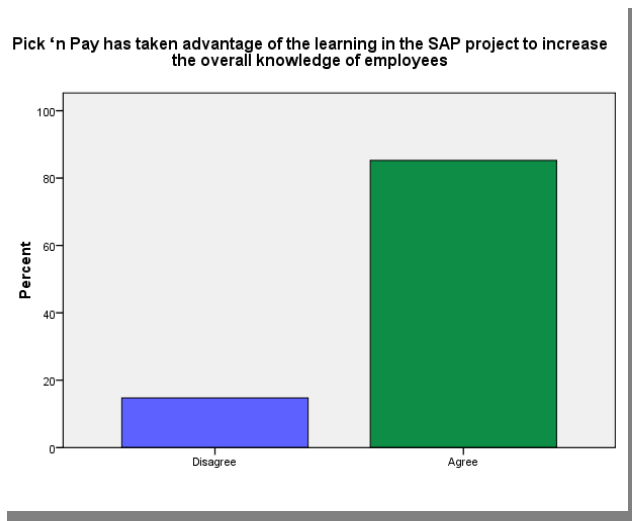
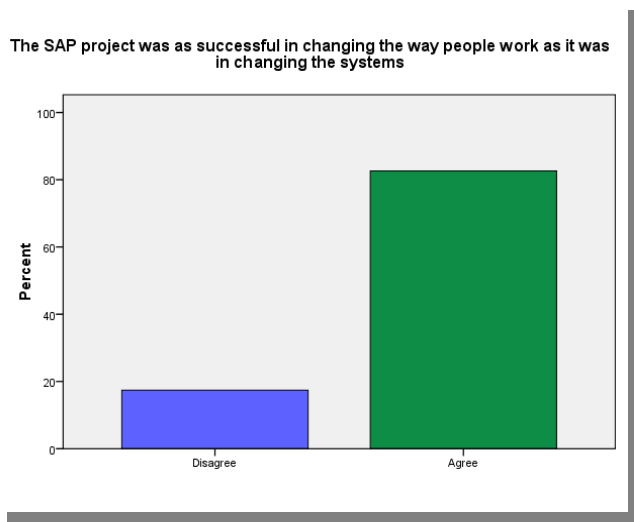


Figure 32: The perception of system and organisational change



The results indicate that the project management and change management integration and coordination were perceived as successful.

5.3 Objective 2: To identify change management methods available to Retail ERP projects

The sense of urgency and need to change was clear to the respondents. Despite some quarters not agreeing that management appeared united in implementing SAP, most believed that management was united. The literature argues that this is crucial when undertaking change management; indeed this continued with management perceived to have developed a compelling vision and strategy for change.

Figure 33: The perception of a management guiding coalition

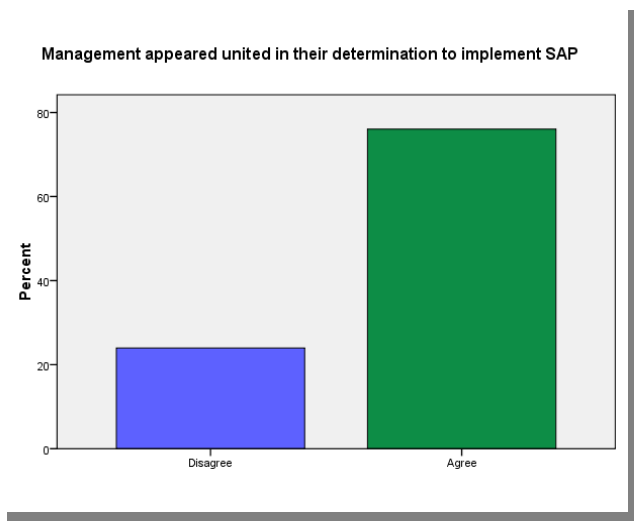
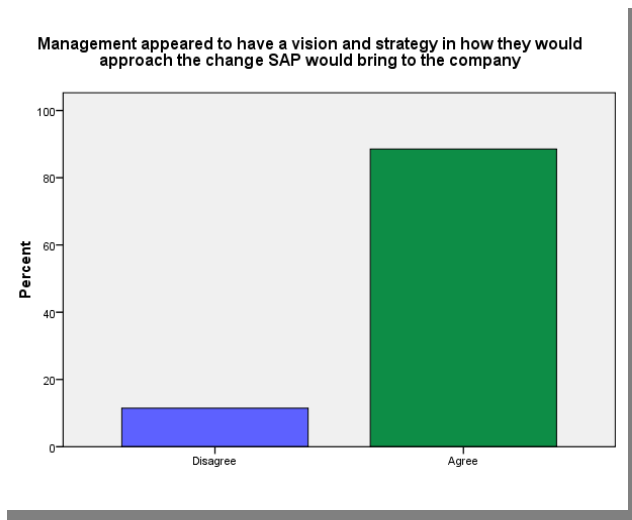
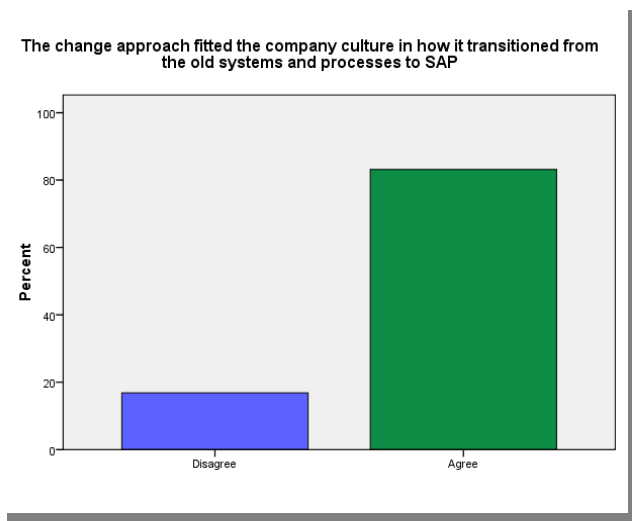


Figure 34: The perception of a change vision and strategy



Managing the cultural issues were perceived as adequately met, with the vast majority of the respondents believing the change approach, though directive, fitted the company culture. The change approach also appeared to be perceived as the right approach to manage the transition to SAP as the respondents underwent the change process from old to new systems and processes.

Figure 35: The change approach fit to company culture

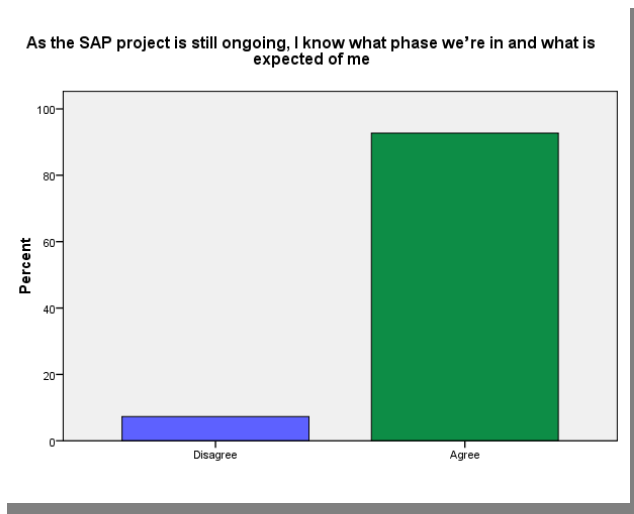


This culminated in the respondents believing that momentum has been sustained in the project as they know which phase of the project they're currently in; meaning communication is still considered effective.

Figure 36: The success of the change approach to manage the transition



Figure 37: Understanding the current SAP project phase



The change method of directive change, strong communication and visible executive sponsorship appeared to be the correct change method for PnP.

5.4 Objective 3: To identify current perceptions and understandings of the effect Pick 'n Pay's ERP implementation had on organisational culture and organisational learning

The majority of employees believe that SAP has directly changed what they do; recognizing the impact SAP has made on their job roles. This in turn has resulted in almost all respondents acknowledging they have new, and globally marketable, skills owing to their SAP training.

Figure 38: The perception of SAP in role change

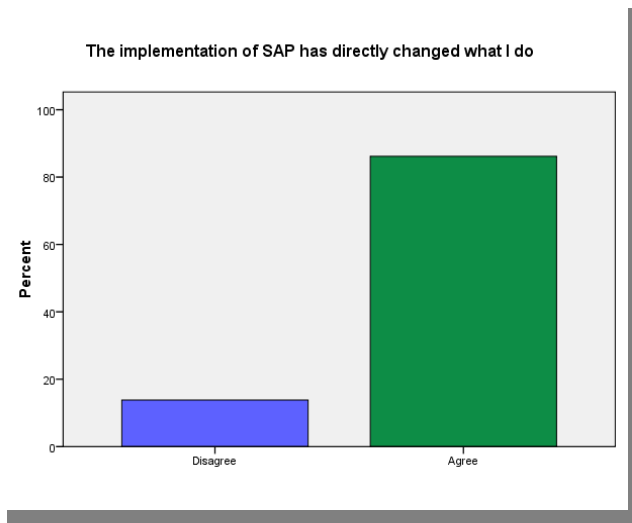
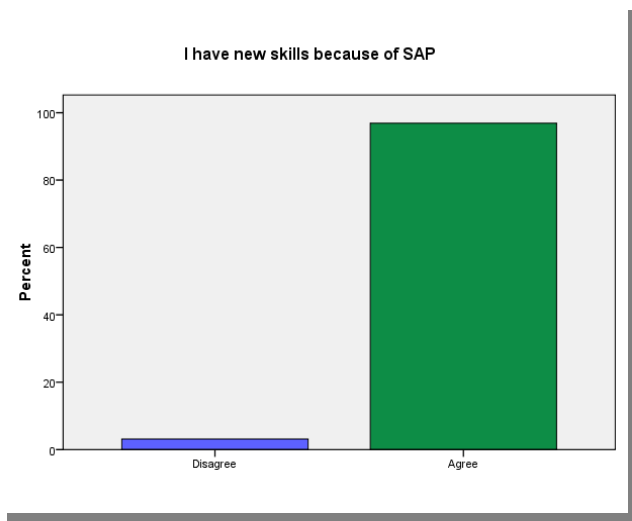
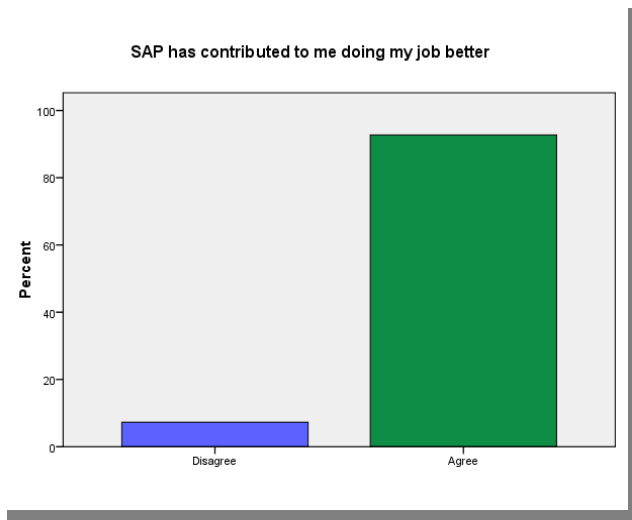


Figure 39: The SAP contribution to new skill development



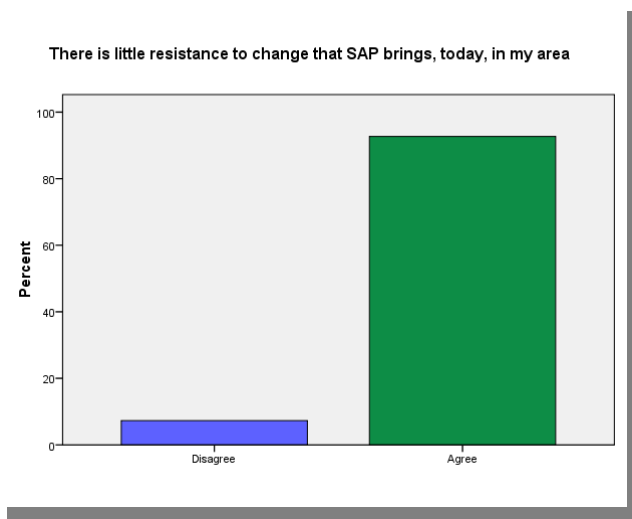
With new skills and a change in what respondents do in their jobs, they have overwhelmingly confirmed that SAP has contributed to them doing their job better.

Figure 40: The SAP contribution to better job performance



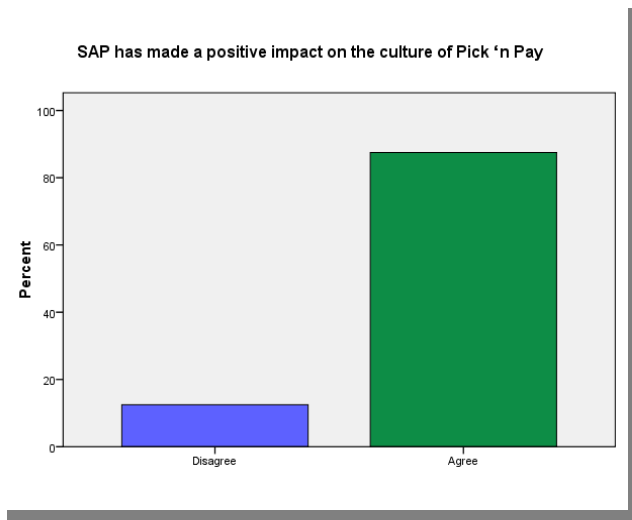
With positive skills development and a perception that their job roles have changed for the better may have contributed to the reduction in resistance to SAP today.

Figure 41: The level of resistance to SAP today



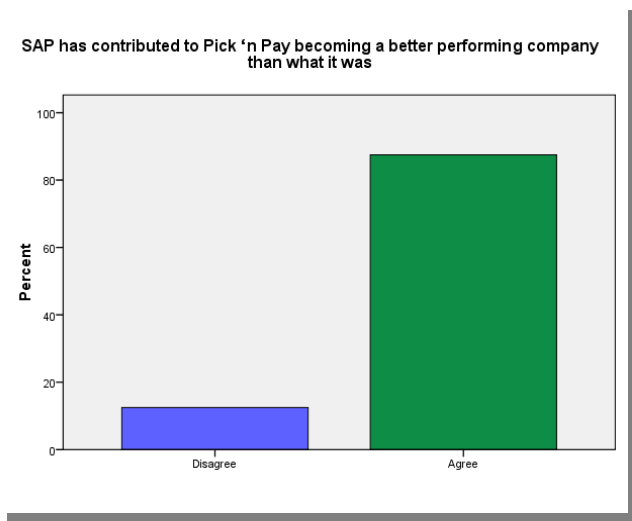
Why resistance has declined may largely be due to the change method that focused on the mavericks (Bridges, 2006). Management proved the capability of SAP in the hands of key managers who were visible, respected and successful. Over time, SAP was no longer perceived as a system to be resisted but rather accepted as part of the business.

Figure 42: The impact of SAP on company culture



The results show that SAP has significantly contributed to and not detracted from the company culture. This was a key concern, given the culture in PnP is considered one of its organizational strengths. The perception that SAP has enhanced the culture indicates that SAP is now part of 'the way we do things around here'.

Figure 43: The contribution of SAP to company performance



The perception that SAP is contributing to company performance highlights not only the organisational but the commercial impact that SAP has made on PnP; indeed that is ultimately why SAP was implemented and is a significant indicator that SAP was considered the right decision.

5.5 How communication can support the change process; its attributes, methods and tactics

The literature argues that personalized and emotional communication will illicit the best results from the intended audience. The respondents were split in their perception of receiving personal communication. Considering the change was prescribed, there appeared little in the way of personalized communication but rather mass communication.

Figure 44: The perception of personalised change communication

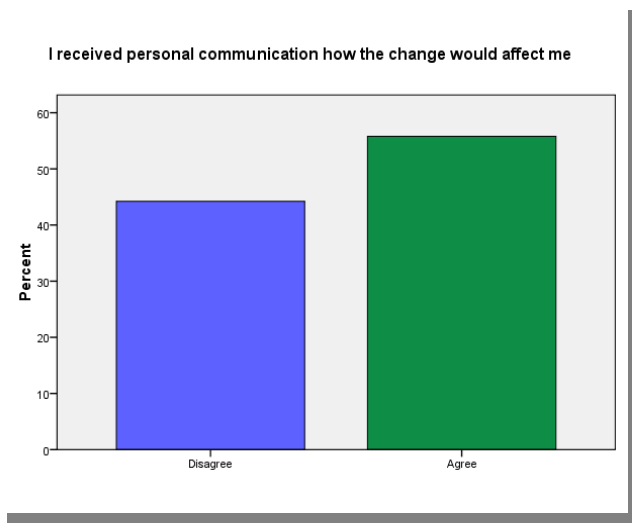
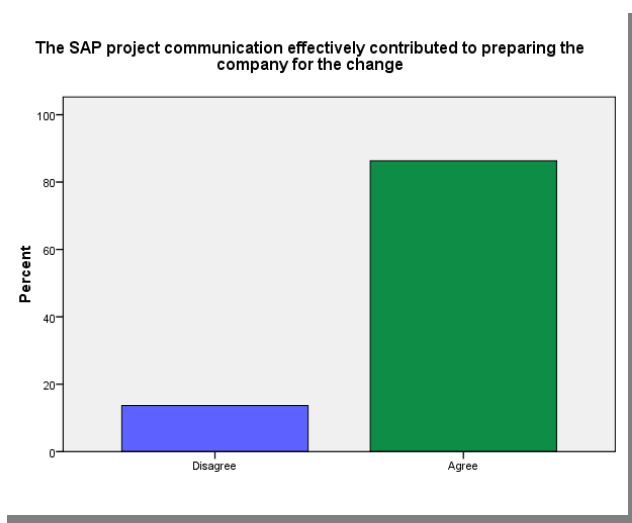


Figure 45: The contribution of the communication to organisational change



Given it was non-personalised communication, the communication was nonetheless considered as effective in contributing to organisational change; despite the communication being part of a directive change approach.

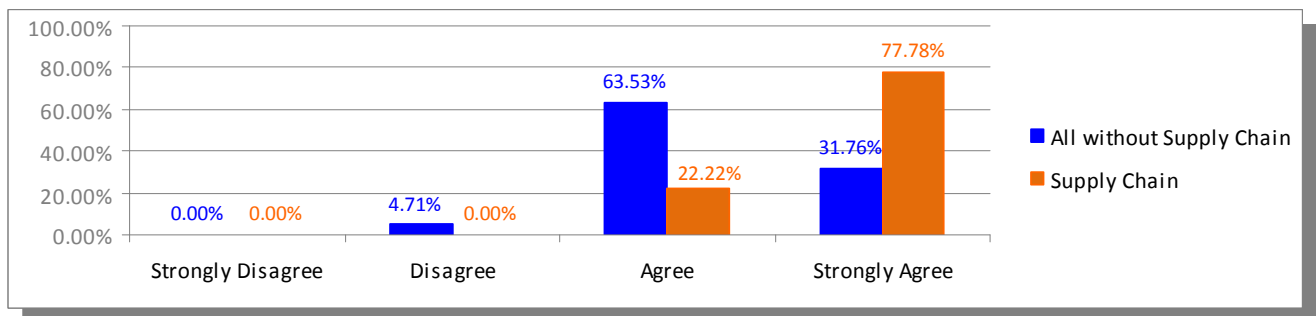
5.6 Inter-departmental Outliers

Please refer to Appendix E: Overview per Department and Themes

5.6.1 Personal readiness for change

The respondents in Supply Chain were largely Demand Planners; they expressed a higher than average readiness for change compared to the rest of the sample. As Demand Planning was a new department created out of the SAP project, their readiness for change and anticipation for new opportunities was high.

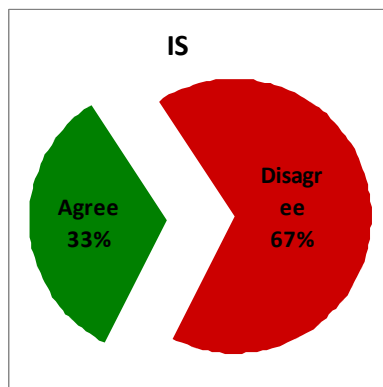
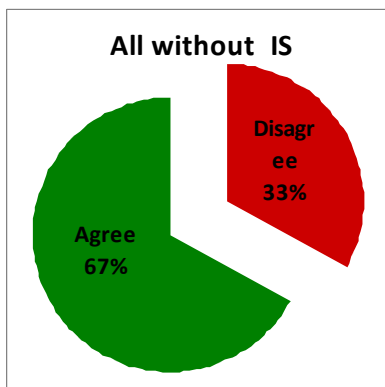
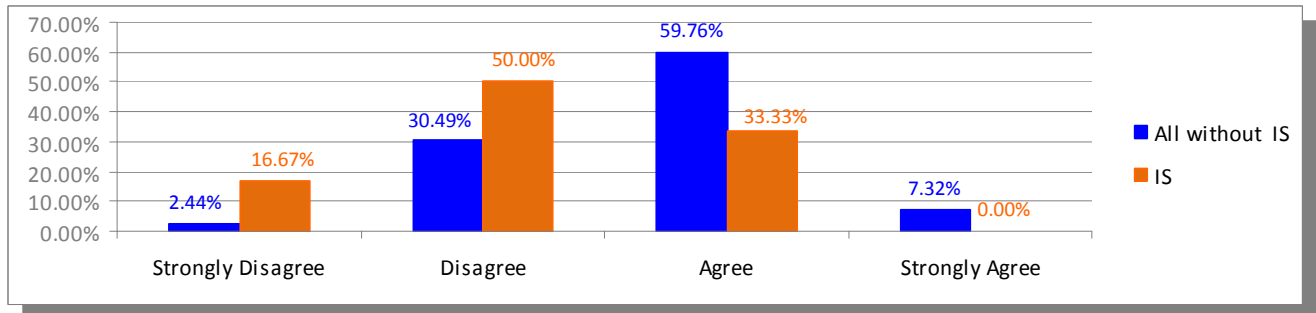
Figure 46: Outlier - Personal readiness for change



5.6.2 Management's perceived preparation for project cultural impacts

IS (Information Systems) was notably critical of management's perceived preparation to manage the cultural impacts on the business. This may reveal a perception in IS that the change management and project management were not sufficiently coordinated; in addition the sentiment that the SAP project was more a technical implementation than a project allied with a comprehensive business transformation program.

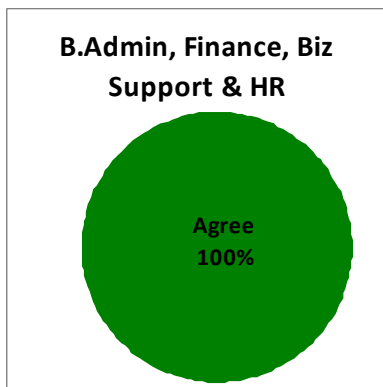
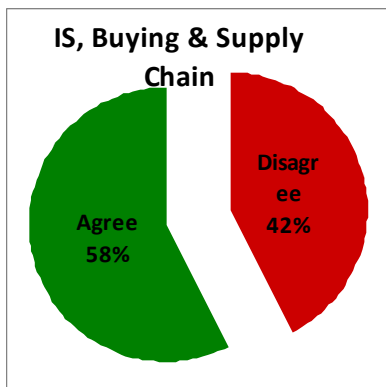
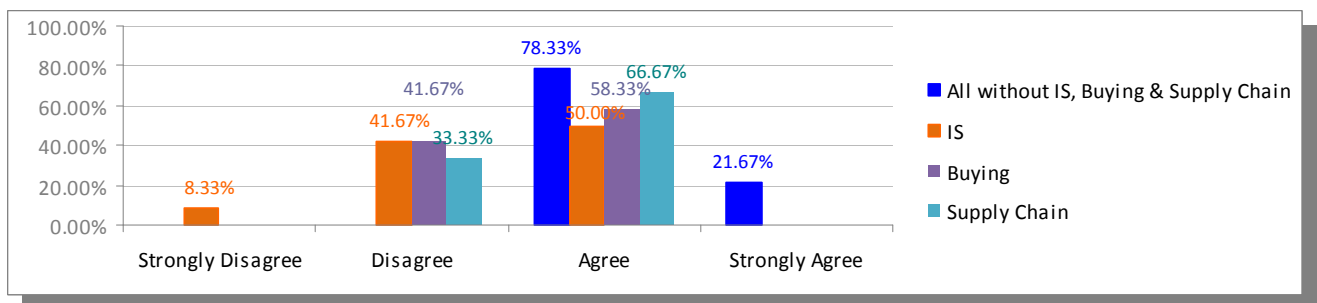
Figure 47: Outlier - Preparation for project cultural impacts



5.6.3 Project knowledge management dissemination to the overall organisation

IS, Buying and Supply Chain were effectively a coalition of those departments expressing dissatisfaction with the level of perceived knowledge contribution from the project to the overall organisation. Considering they are arguably far more an operations-focused group, their requirements for effective knowledge management and learning is far higher than the support functions that expressed satisfaction with learning. It reveals that more project knowledge i.e. SAP and business best practise is required in these departments with additional focus on training and business process improvement / optimisation.

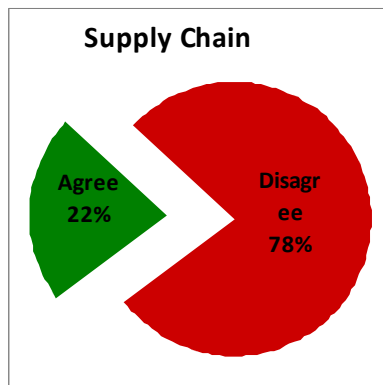
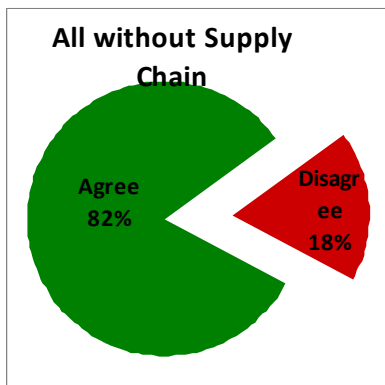
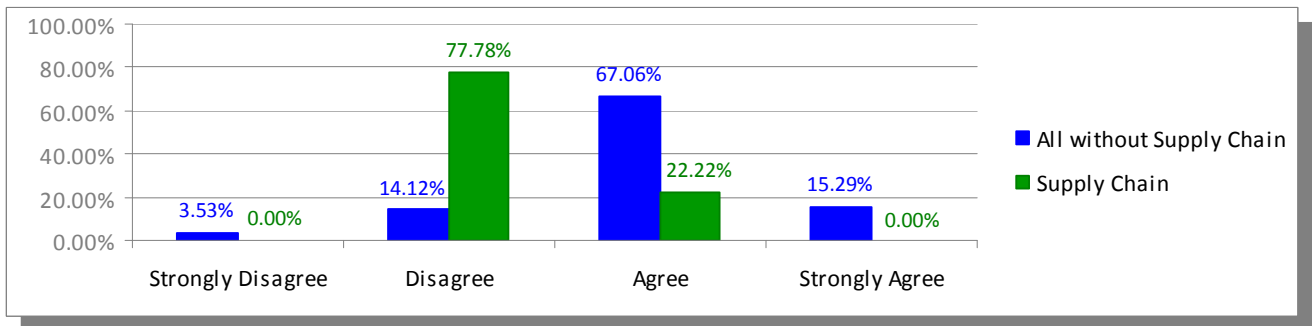
Figure 48: Outlier - Project knowledge management dissemination



5.6.4 Management's perceived unity

Supply Chain appeared to perceive management as not being united, with 78% of the sample response not convinced management was united in their determination to implement SAP. It is arguably owing to the subsequent perceived intransigence of management across the organisation, with managers displaying differing levels of support and understanding – especially Buying, that this department is not confident management understands the role of Demand Management in SAP.

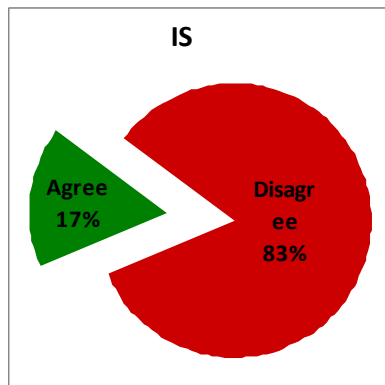
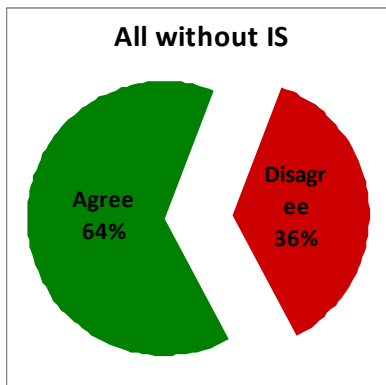
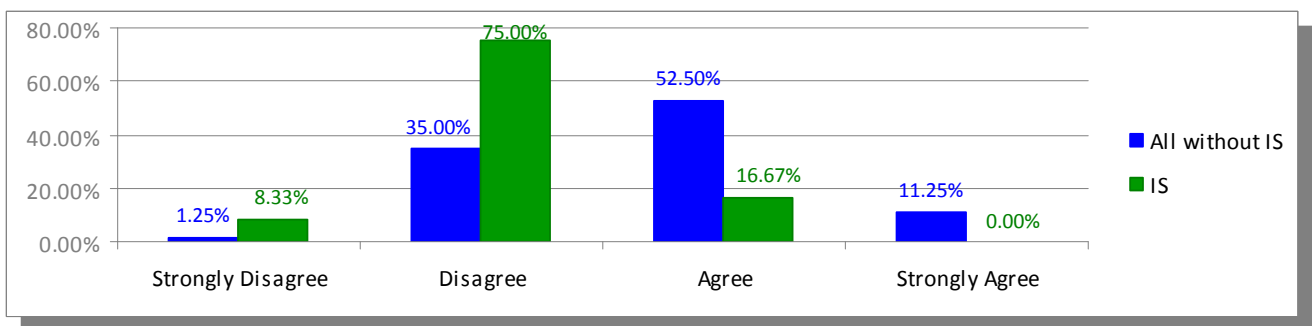
Figure 49: Outlier - Management's perceived unity



5.6.4 Receiving personal communication explaining the change impact

A significant outlier was that 83% of the IS sample did not feel they received personal communication explaining the change impact of SAP. One argument is that many in Information Systems were excluded from the SAP implementation and to this day are divided by SAP and non-SAP groups; the non-SAP groups effectively relegated to supporting legacy systems and awaiting an uncertain future. Considering the entire IS sample are SAP staff, the 83% suggests that this separation, implied or explicit, has affected the overall sentiment in IS about the communication.

Figure 50: Outlier - Personal communication

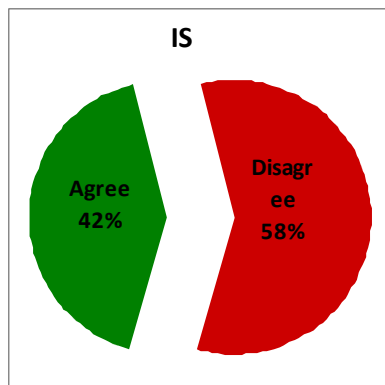
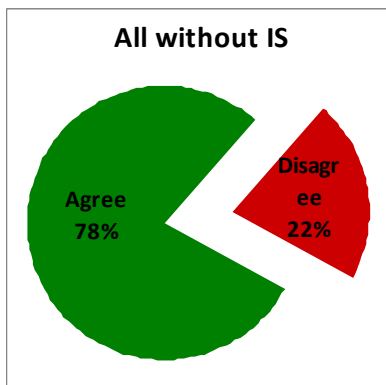
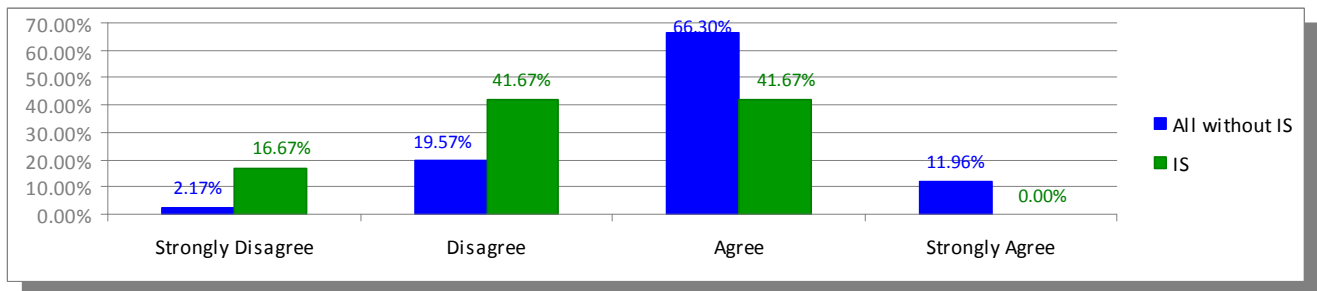


5.6.5 The communication explaining the business reasons for change

Despite 19,6% of respondents disagreeing that the business reasons for change were explained, it is revealing that the IS result is split on this statement. Considering IS is a support function to the business, and largely the organisation that implemented SAP, their dissatisfaction in understanding the business case for change is a concern.

This may indicate IS does not feel sufficiently informed about the business reasons for projects and may not be treated as an equal stakeholder in organisational change, despite the compelling literature arguing the central role of information systems in modern business. The IS response to this statement may be the root cause of the recurring dissatisfaction of IS to the other statements; a perceived disenfranchisement of IS from the rest of the organisation.

Figure 51: Outlier - Explaining the need for change

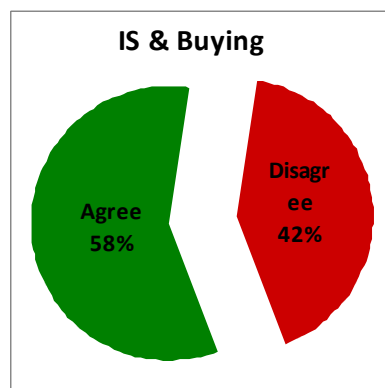
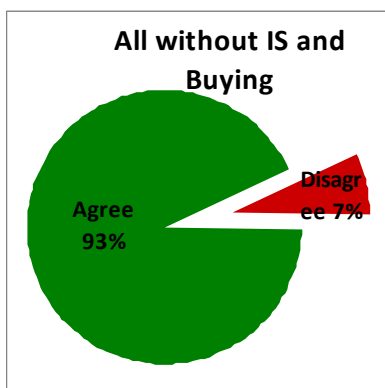
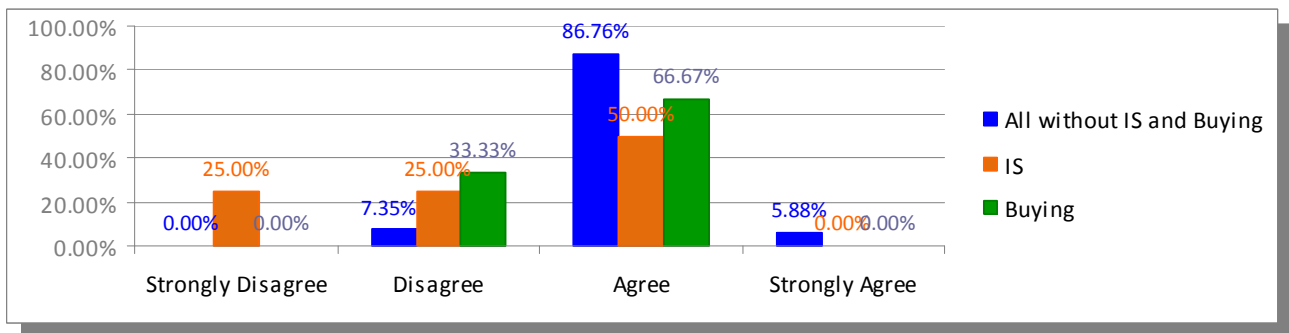


5.6.6 The communication explaining the individual transition to SAP

IS and Buying were two departments that weren't entirely satisfied with the explanation of how they would transition to SAP. Significantly, 33% of Buying disagreed with this statement. This implies that those respondents felt they were given a system with little understanding how they were supposed to change in their roles. Considering Buying is such a critical function and a sizable effort was made to educate them and support them, this result appears to reflect Buying's misunderstanding in the transition or resistance to change before and during the project.

IS again displayed a high disagreement with the statements surrounding communication, with 50% of the respondents disagreeing that they were given adequate communication surrounding their future in a SAP environment.

Figure 52: Outlier - Explaining the individual transition to SAP

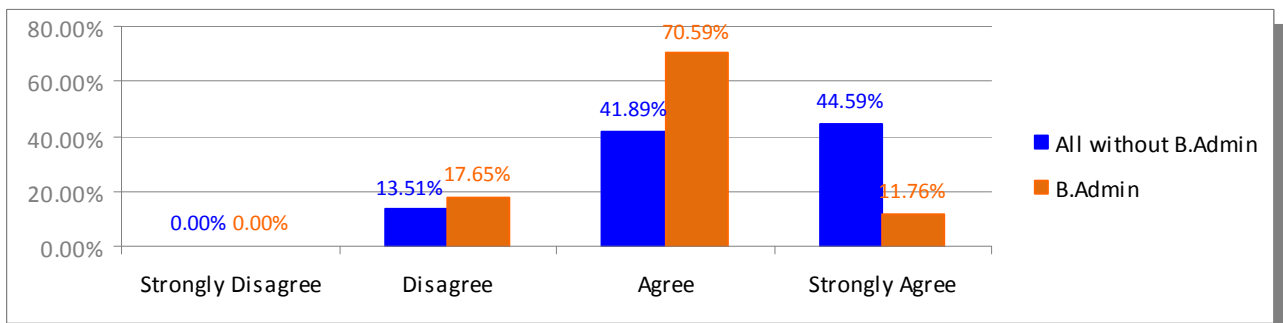


5.6.7 The perceived change SAP has made on job roles

Buyer's Administration, as its name implies, works alongside Buying. It is revealing that they are an outlier with respect to change in job roles. An argument may be that considering Buying continues to display higher than average levels of resistance to change, dissatisfaction with the level of support they received transitioning to SAP and the perceived benefit of SAP to the company, Buyer's Administration may by default feel that their role hasn't changed, as Buying has not displayed significant change either.

Considering SAP standard recommends moving a lot of the present tasks that Buyer's Administration perform over to Buying, and that Buyer's Administration doesn't feel a change in their job roles, indicates that SAP standard was not adequately implemented in Buying; which is in fact the case. When Buying undergoes further change, this indicator for Buyer's Administration is expected to sharply change too.

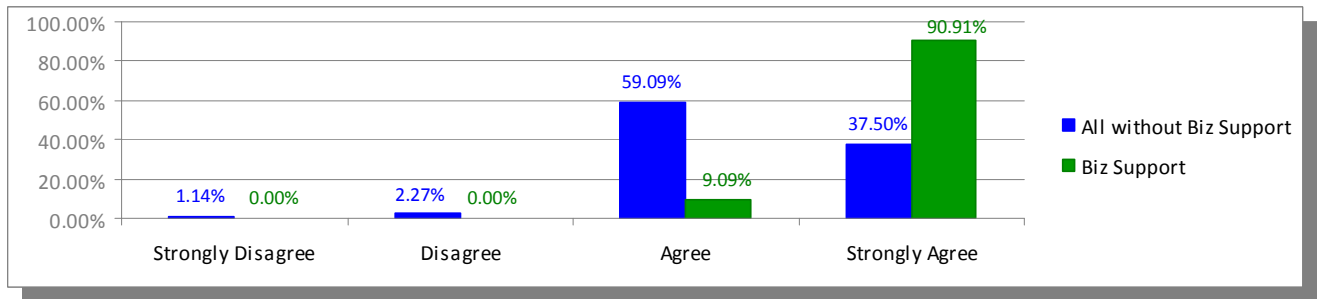
Figure 53: Outlier - The perception of SAP in role change



5.6.8 The perception of having acquired new skills

Business Support is effectively the organisation that supports the rest of the SAP user groups in SAP transactions, programs, business processes and PnP best practise. They are the ‘super users’ of SAP within the business; not surprisingly they are in strong agreement that they have acquired new skills in this project.

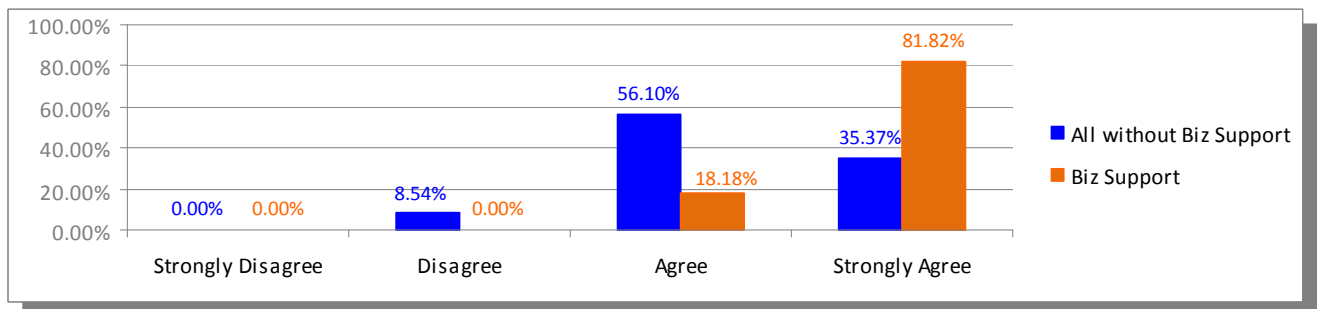
Figure 54: Outlier - The SAP contribution to new skill development



5.6.9 The perceived contribution of SAP to job improvement

Business Support has displayed a higher than average perception that their job has improved, which goes hand in hand with having acquired new skills. A case in point of possible causality between skills development and job satisfaction.

Figure 55: Outlier - The SAP contribution to better job performance

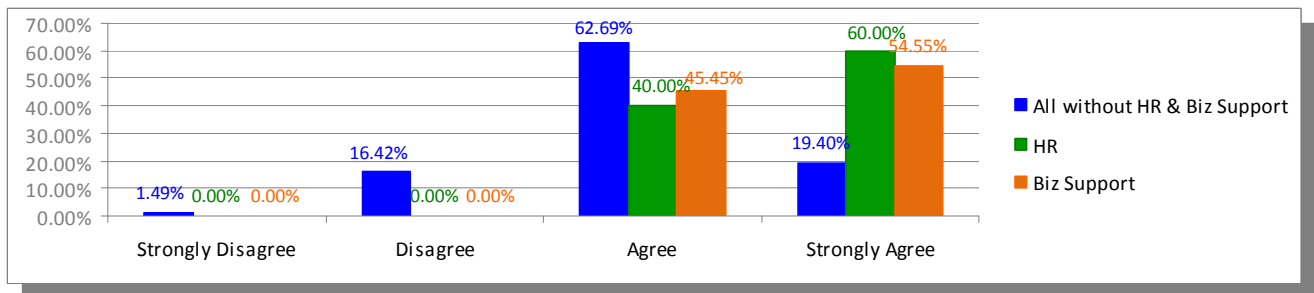


5.6.10 The perceived contribution of SAP to company culture

The high marks attributed to SAP by Human Resources Management (HRM) in contributing to company culture may be likely owing to their distance to the operational impact of SAP on the business and their own use of SAP in a non-operational role; this may apply less so to Business Support. Arguably, the further removed from operations a department finds itself, the more the perceived contribution of SAP appears to increase.

Another perspective may be that owing to HRM's close relationship to employees, their response reflects the overall sentiment of the SAP users. Nonetheless the perceived contribution of SAP to company culture is very high amongst all respondents.

Figure 56: Outlier - The impact of SAP on company culture



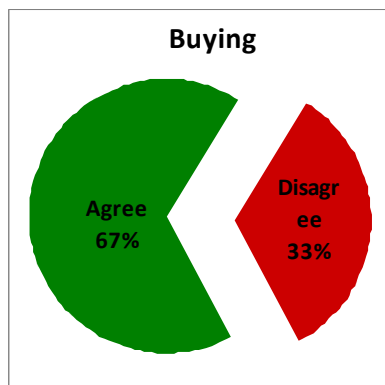
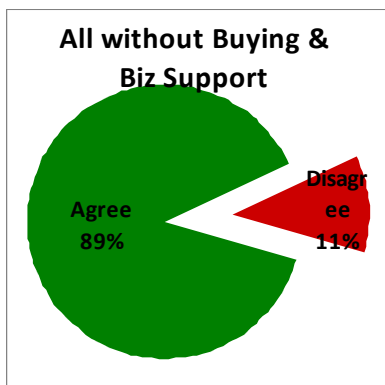
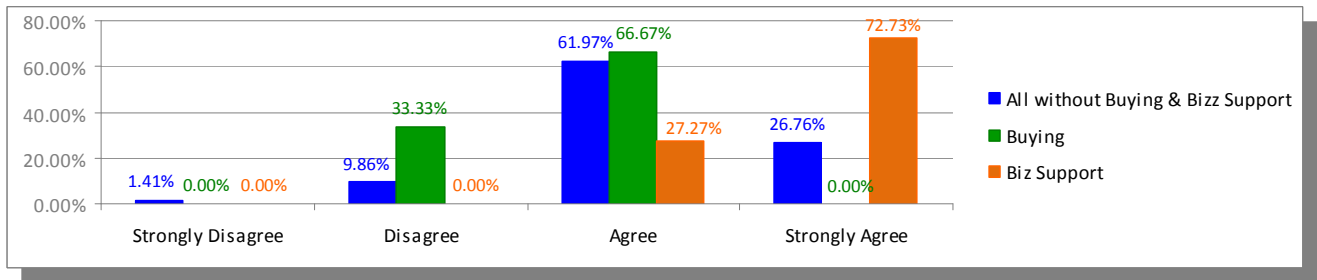
5.6.11 The perceived contribution of SAP to improved company performance

A significant and telling outlier repeatedly perceived by the researcher in the semi-structured interviews and proved using statistical methods is that 33% of Buying disagrees SAP has made a positive contribution to company performance. This is a clear inter-departmental outlier as indicated in Figure 57 below; and is an example of triangulation in the research, in which Buying managers confirmed this sentiment in the interviews.

This result proves that Buying has not yet fully progressed as far as the other functions in accepting SAP as a business-enabler that can improve company performance, despite it arguably being the most important function in PnP and markedly influencing all the other functions in the business.

It is revealing that Business Support, which is the department with the most SAP knowledge outside of IS, is 100% in agreement of the SAP contribution to improved company performance.

Figure 57: Outlier - The contribution of SAP to company performance

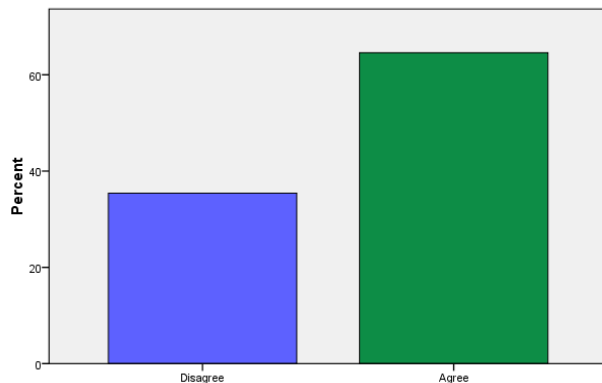


5.7 Relationships

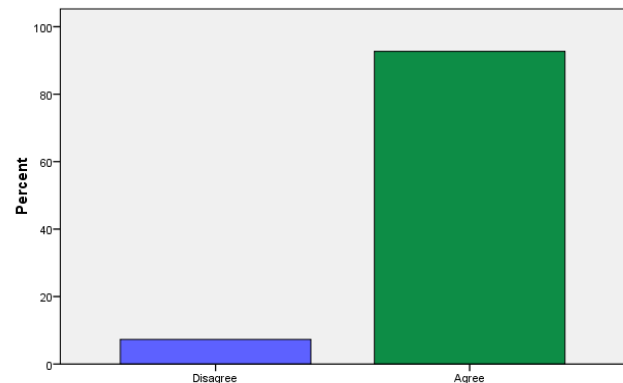
5.7.1 Resistance to change before and after the project

Resistance has reduced dramatically from before the project to the present day; indicating that there is no significant latent resistance to change among all respondents. This suggests that the implementation approach appeared appropriate and that plans for further SAP-related projects should not encounter significant resistance.

There was little resistance to change to SAP in my area, while the project was being planned



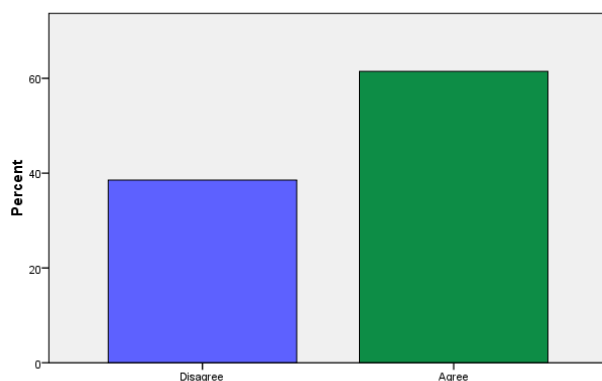
There is little resistance to change that SAP brings, today, in my area



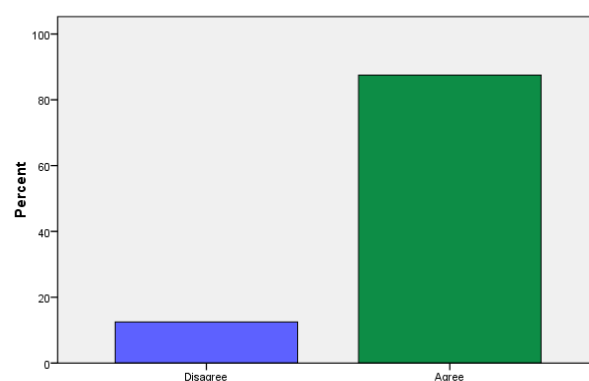
5.7.2 Managing the cultural issues

Management didn't appear adequately prepared to manage possible cultural issues, however there was little negative effect of SAP on company culture; thereby not requiring management's intervention. This does however reveal that management must do more in subsequent SAP / technology projects to prepare for possible cultural impacts i.e. be it a question of cultural 'fit' or cultural sensitivity.

Management was prepared for the possible impact of SAP on company culture

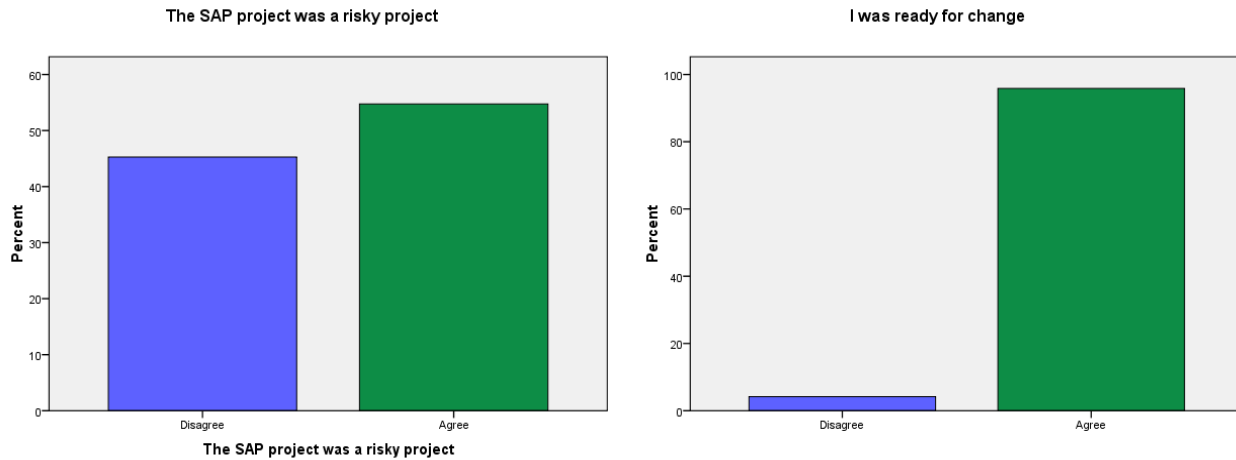


SAP has made a positive impact on the culture of Pick 'n Pay



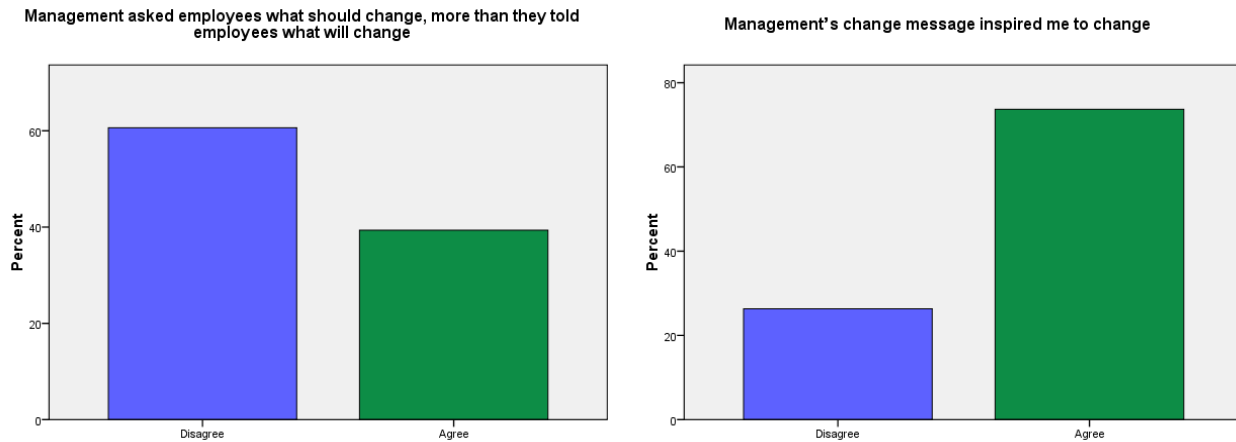
5.7.3 The relationship between perceiving risk and personal readiness for change

The risk associated with the SAP project was not clearly understood by the respondents, with close to half disagreeing that a SAP project is inherently risky. Despite the misunderstanding surrounding the risk, there was a significant personal readiness for change in the organisation. This indicates that the risk appetite for change amongst respondents may have been higher than assessed at the start of the project by management and that this should encourage management to not overly shelter the organisation from the effects of organisational change in future projects.



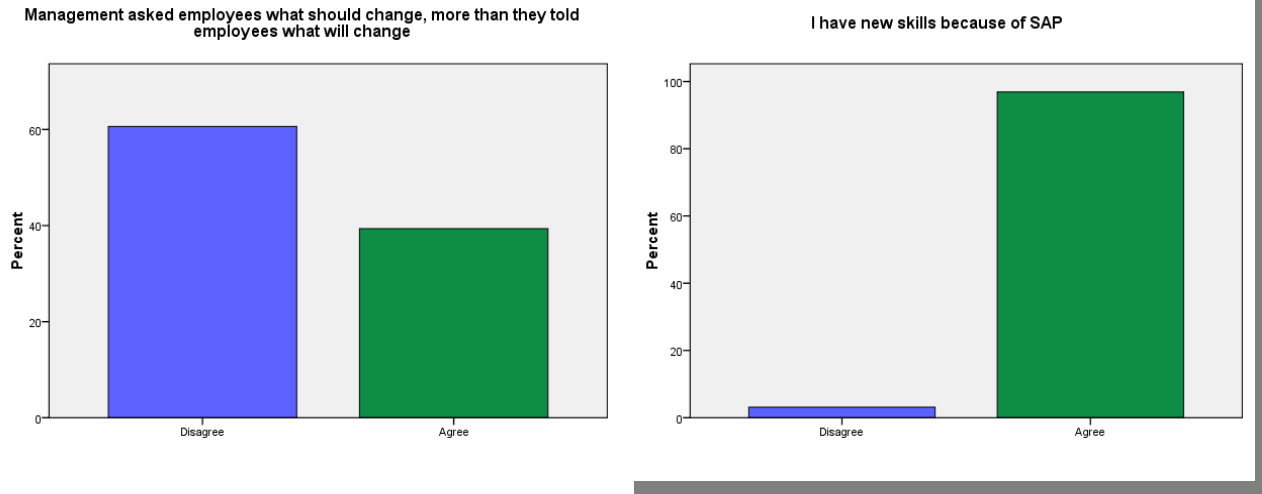
5.7.4 The relationship between directive change and inspired change

Directive change can still appear to inspire people to change. This appears to indicate the role of communication in inspiring change, to rally the employees to change despite telling them what will change. Its applicability arguably extends beyond circumstances where there is urgency to change, to change in general.



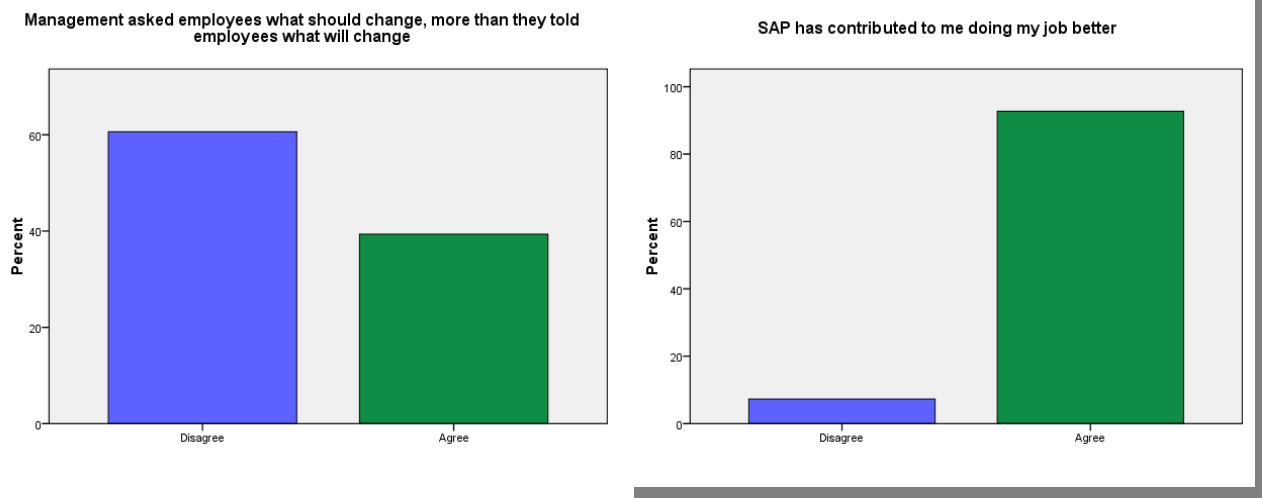
5.7.5 The relationship between directive change and learning new skills

The results would suggest that directive change doesn't inhibit organisational learning. The literature suggested a strong link between organisational culture and learning. Considering the minimal cultural impact of the SAP project, there was no detrimental impact on the organisation's ability to learn.



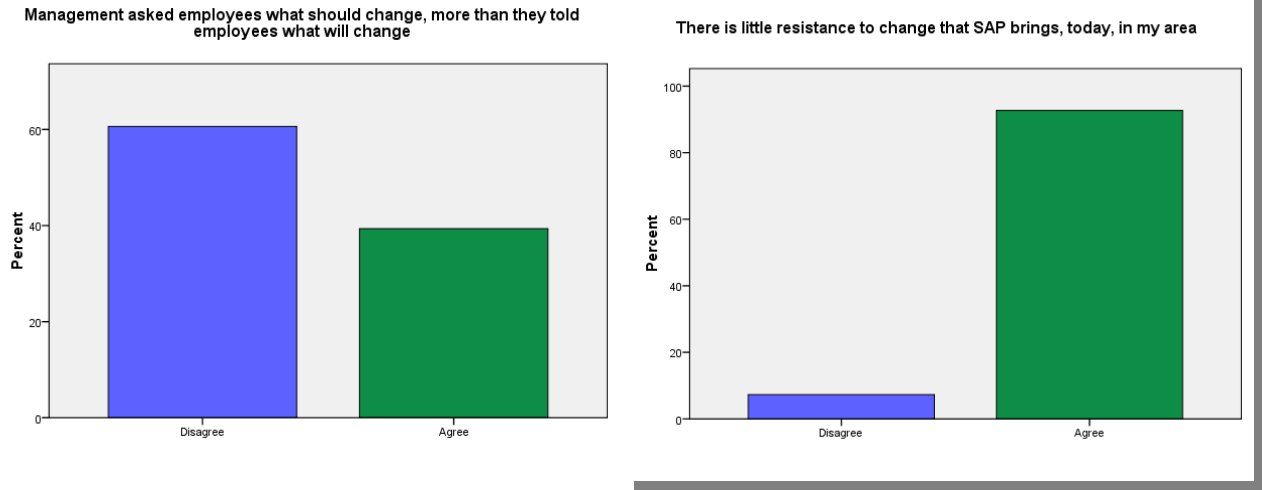
5.7.6 The relationship between directive change and job performance

The respondents perceived a significant improvement in job performance in a climate where change was prescribed. This reveals that participation and inclusion of retail employees involved in change doesn't necessarily mean improved job performance over those where change was prescribed to them.



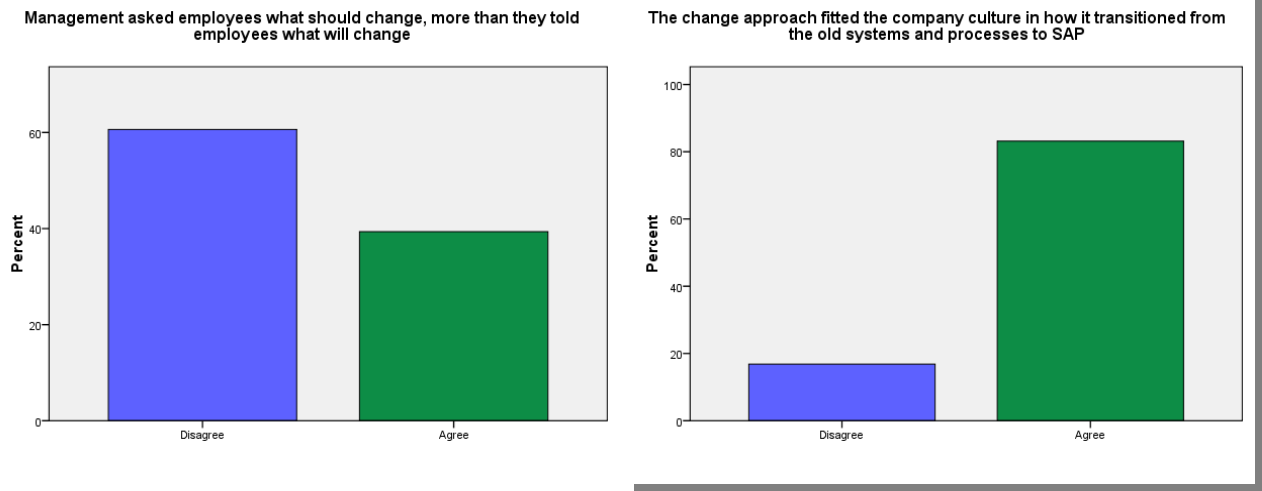
5.7.7 The relationship between directive change and future potential resistance

The change approach didn't appear to foment resistance or increase to the levels seen before the project. Indeed with the significant reduction in resistance to change, the management approach to change appeared to be the correct one to manage resistance downward.



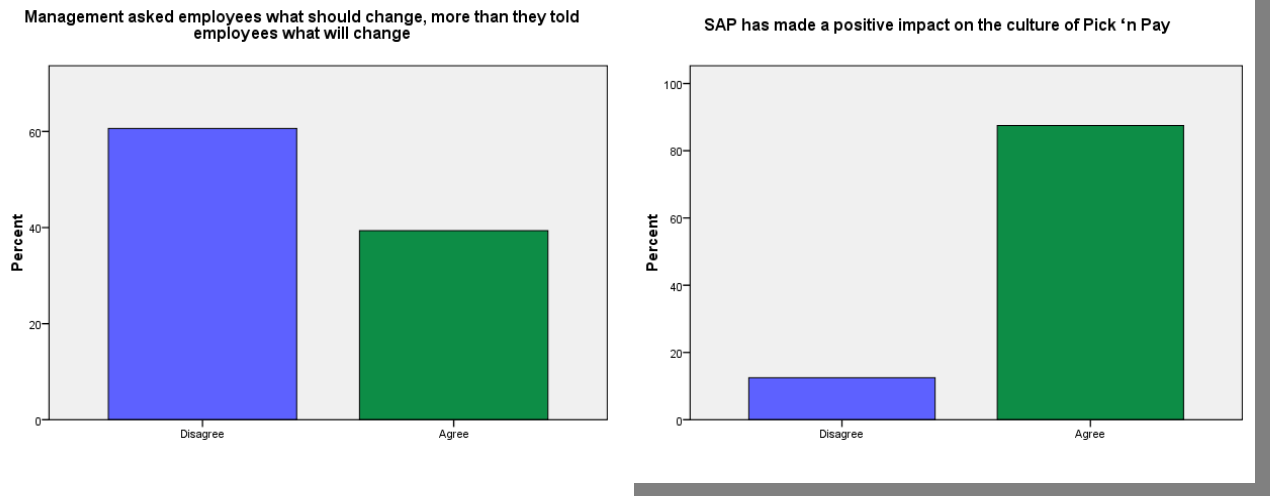
5.7.8 The relationship between directive change and the 'fit' to company culture

Despite the respondents acknowledging that the change was prescribed, a significant proportion agreed that the change approach fitted the company culture.



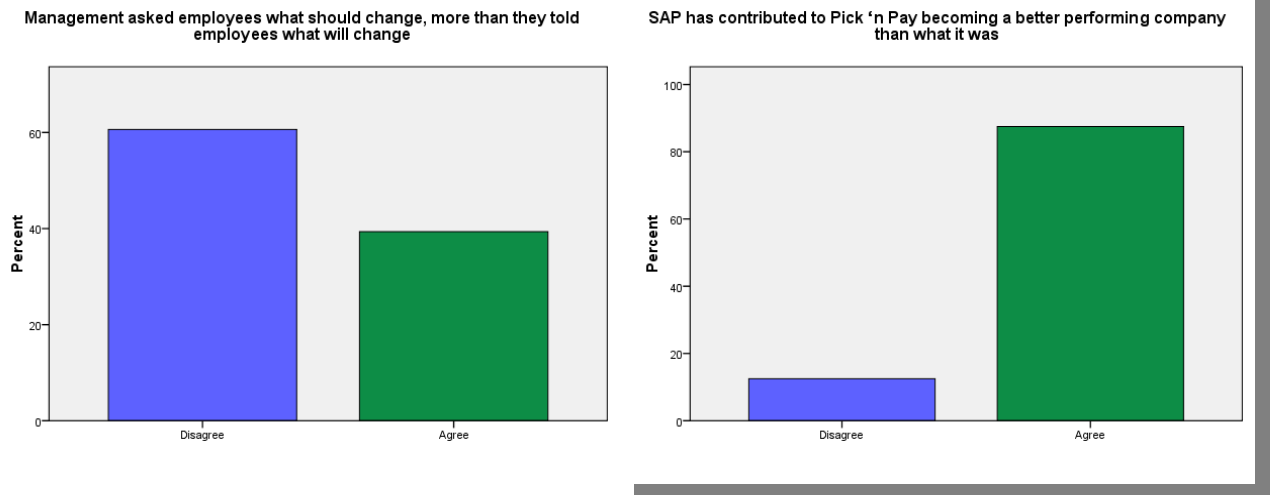
5.7.9 The relationship between directive change and the impact on company culture

Indeed, as seen below, there appeared to be no sizeable impact of the change approach on company culture; suggesting that this approach to change fits this company.



5.7.10 The relationship between directive change and perceived company performance

It could be implied that the change prescribed to the organisation contributed to it becoming a better performing company than what it was; that management's decision to change and how it approached change, was the right course of action for this company.



5.8 Summary

The directive change approach appeared to adequately fit the company. It brought certainty to the task of change and complimented an environment where practical tasks supersede theoretical arguments; where logic dominates emotion. It reveals that retail employees may sometimes disagree with the 'means' but not the 'ends' of change and understand that change is necessary and largely requires a top-down approach in PnP.

6. CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This section is the outcome of the research study and attempts to draw both practical and theoretical recommendations and conclusions. The focus is the problem statement. The issues of validity and generalisability are raised in how the research may contribute to the body of knowledge of change management. The implications of the findings consider the opportunities for further research by both PnP and other researchers in retail-specific change management models and methods, as the strategic implications appear to disprove both the problem statement and most change management literature.

6.2 Conclusion

The external validity of the research may be limited in use to be generalised to respondents outside of the sample owing to only research being conducted at one company and in one geographic region. This is not to detract from the stature of PnP being the largest retailer in South Africa having implemented globally one of the biggest SAP Retail projects. The results are therefore applicable to other large retailers in South Africa, especially retail headquarter / corporate environments, in that they share common traits in employee profiles, leadership styles, operational and commercial drivers.

It appears that PnP is part of a unique industry that doesn't conform to most of the literature surrounding change management. The executive sponsor is a self-confessed transactional leader who appears to have effectively managed change despite the literature unanimously arguing that a transformational leader is required to lead successful change. This demonstrates the argument that emotional intelligence must be used by management to bring to bear the right leadership style

contingent to the situation. In this case, the executive sponsor and Steercom appeared to have made the right leadership decisions for PnP; utilizing transformational leadership where appropriate, yet erring toward transactional leadership in leading change by way of prescribing change.

The researcher was expecting significantly more post-project resistance, more departmental differences in how the respondents perceived the impact on learning, culture and company performance, and more dissatisfaction with management's directive change approach. The researcher was not expecting the recurring dissatisfaction of IS in particular with respect to the overall change communication and knowledge sharing.

The results have therefore largely disproved the problem statement that successful Retail ERP projects requires effective and comprehensive change management, as defined in the literature. The results instead have suggested that a logical and practical approach that prescribes change is an essential element in effecting change in the retail industry. In addition, the combination of visible executive sponsorship, compelling communication and emphasis on training appear to give the change approach sufficient substance to be successful in retail.

The results do appear to argue that in many cases the respondents weren't necessarily unified in their approval of the 'means' of change, but unified in the 'ends' of change. This appears to indicate that the respondents approved of the result of the SAP project but not necessarily in how the change was conducted. This may suggest that either PnP or perhaps retail employees in general are prone to simply follow orders and accept the will of management or that they may be apathetic to the effects of change on themselves or the organization as a whole, provided their personal benefits and status are not affected.

The implication of the research is that change management in retail can be successfully conducted using directive change that is largely based on transactional leadership. This implies that the literature does not appear to adequately offer change methods that apply to retail and that retailers should not blindly follow current literature that would argue an approach to change that may be at odds with their businesses.

The strategic ramification of the research, given its limited external validity and generalisability, is that there could be an opportunity for a change method to be developed specifically for the retail industry that would appear markedly different to the current literature on change management.

6.3 Recommendations

The change approach appeared successful in implementing SAP. The consensus of the respondents in approving the change method, the leadership style, the communication and the management of culture and learning; all suggest that PnP should continue with their approach to change management in future projects.

The results do however indicate areas of concern that doesn't necessarily challenge the change approach but appear to offer opportunities for improvement. Below are the recommendations to further improve the change approach adopted by PnP:

- Continue to follow a directive approach to change.
- Explicitly communicate the change approach; this may reduce the perception amongst employees that management is not willing to compromise or is prone to use position power to force change.
- Proactively manage the overall resistance to change during the planning phase of projects; this suggests room for more employee participation in the change process, without affecting the outcome or chosen change model.
- Better prepare for potential cultural impacts of projects and not assume that 'management decree' is sufficient in convincing employees that management is prepared for change.
- Do more to inspire change in Information Systems, Demand Planning and Buying; considering the role of compelling communication is central to the PnP approach to change, there is an opportunity to further personalise and emotionally connect with employees to support change.
- Significantly improve the communication to employees surrounding project risk; in so far as to make clear management's appreciation of the risk and need for change.
- Be more confident in discussing the change in job roles, job descriptions and how change will personally affect employees – union concerns aside. Employees

exhibited a high personal readiness for change before the project started, suggesting that they are more open to change than previously assumed.

- Re-engage Information Systems in how SAP will further affect them in terms of organisational change. IS appears unclear what its role is in the business and what's planned for the organisation. IS requires a higher participative change approach.
- Re-engage Buying in how SAP can commercially support them and how they need to fully transition in their job roles. Buying requires a prescriptive approach to further change, with less negotiation and more SAP standardisation.
- It is strongly recommended that PnP conducts further research in its store environment as the employees in stores are a different employee profile to those in headquarters in terms of education levels, race, unionisation and working conditions.
- It also recommended that the remaining geographic regions in South Africa where PnP is trading is surveyed, as they may offer a different perspective given that SAP was implemented in those regions after the Western Cape.

6.4 Summary

The problem statement was largely disproved based on the findings which disagreed with current literature, most particularly in the areas of leadership type, change method and communication. Despite concerns about external validity and generalisability, the findings appear significantly removed from the literature to suggest that the strategic implications call for a retail-specific change management model.

7. LEARNING AND REFLECTION

This research study has been a wonderful opportunity to gain critical insight into a subject that I have been fascinated with throughout my career and MBA; how do you successfully implement change? It appeared as the hidden characteristic between good and great leaders and something I wished to understand and perhaps effectively use in my own role as a leader one day.

The research process is in itself a learning experience; I include in this the challenges in getting respondent participation in questionnaires. I learnt how to follow a research approach to business. This is significant as it appears central to problem-solving strategic business issues; a skill that I believe many leaders don't possess.

If I had to do it again, with more time and resources available, I would have focused the research study more on how directive change can be used effectively in other industries when implementing an ERP. The research has therefore uncovered more research opportunities where I would like to understand if directive change is successful elsewhere e.g. the military. Directive change doesn't appear as the darling of current literature but yet it appears to have its place in some industries and more than just in times of crises.

In terms of retailers, they are known to be good at the operations of retail but not good thinkers in the strategy of retail; this arguably holds true in how they manage and deal with organizational change.

It is argued amongst retailers that change management must be hands-on and not a 'theoretical exercise'. Strategies are less potent than good tactical plans that are simple and actionable. Following this it appears the literature, especially surrounding leadership could be criticized by the industry for tending to argue for the ideals of leadership as opposed to the practical requirements of retail to get things done. This couldn't be more relevant in South Africa, where education levels, attitude, motivational levels, social and financial well-being appear to be at the low end for most people working in the retail industry. Apathy and indifference is arguably perceived by most shoppers as they walk through the stores of big-box retailers in South Africa; a marked difference compared to the retailers in the U.S.A.

The results therefore appear almost logical, that directive change is the prescription for employees who just want to do their jobs and have 'checked out' years ago. This unfortunately is at the expense of the company 'satisficing' along the status quo.

The bridge that retail leaders need to cross to become world-class will require more than just the obvious, more than just repeating the usual tired strategies. It will require, in this researcher's opinion, a strategic leadership who brings charisma and participative change without losing sight of the operational and practical levers that make retailers successful; a sublime dance between strategy and contingency.

REFERENCES

- Amos, T. 2006. 'Strategic Leadership: key driver of strategy implementation'. In: Louw, L. and Venter, P. 2006. eds. *Strategic Management: Winning in the Southern African Workplace*. Cape Town: Oxford University Press. 351-391.
- Armenakis, A.A., Harris, S.G. & Field, H.S. 1999. 'Making change permanent: a model for institutionalising change interventions', *Research in Organisational Change and Development*, 12: 97-128.
- Armenakis, A.A., Harris, S.G. & Mossholder, K.W. 1993. 'Creating Readiness for Organisational Change', *Human Relations*, 46.
- Baker, B.N., Murphy, D.C. & Fisher, D. 1988. 'Factors affecting project success'. In: D.I. Cleland and W.R. King. *Project Management Handbook*. New York: Wiley.
- Beatty, C., Lee, A. & Gloria, L. 1992. 'Leadership among middle managers – an exploration in the context of technological change', *Human Relations*, 45: 957-990.
- Blake, R., and Mouton, J. 1985. *The Managerial Grid III: The Key to Leadership Excellence*. Houston: Gulf Publishing.
- Bolman, L. and Deal, T. 1997. *Reframing Organisations*. San Francisco: Jossey-Bass Publishers.
- Bridges Business Consulting. 2006. 'Strategy implementation: we got the people factor wrong. How to lead your saboteurs, groupies, double agents and mavericks', *Human Resource Management International Digest*, 14 (6) 34-37.
- Burke, W. and Litwin, G.H. 1992. 'A causal model of organisational performance and change', *Journal of Management*, 18: 523-45.
- Caruth, D., Middlebrook, B. & Rachel, F. 1995. 'Overcoming resistance to change', *SAM Advanced Management Journal*, 50: 23-27.

- Ciborra, C.U., and Lanzara, G.F. 1990. 'Designing dynamic artifacts: computer systems as formative contexts', In: Gagliardi, P. eds. *Symbols and Artifacts: Views of the Corporate Landscape*. Berlin. 147-169.
- Coldwell, D. and Herbst, F. 2004. *Business Research*. Cape Town: Juta.
- Cooper, D.R. and Schindler, P.S. 2001. *Business Research Methods*. 7th ed. New York: McGraw-Hill.
- Deal, T. E. and Kennedy, A. A. 1982. *Corporate Cultures: The Rites and Rituals of Corporate Life*. Harmondsworth: Penguin Books.
- Denning, S. 2007. *The Secret Language of Leadership, How Leaders Inspire Action Through Narrative*. Jossey-Bass Publishers, 1.
- Denzin, N. 2006. *Sociological Methods: A Sourcebook*. 5th ed. Aldine Transaction.
- Dietrich, P. and Lehtonen, P. 2005. 'Successful management of strategic intentions through multiple projects – reflections from empirical study', *International Journal of Project Management*, 23: 386-91.
- Freeman, R.E. 1984. *Strategic Management: A Stakeholder Approach*. Pitman Publishing: Boston.
- Goodman, P. S. and Griffith, T. L. 1991. 'A process approach to the implementation of new technology', *Journal of Engineering and Technology Management*, 8: 261-285.
- Gunson, J., and de Blasis, J.P. 2002. 'Implementing ERP in multinational companies: their effects on the organization and individuals at work'. Available from: http://hev.info.unige.ch/researchers_publications/2002.07.pdf.> [Accessed 10 February 2010]
- Handy, C.B. 1985. *Understanding Organizations*. 3rd ed. Harmondsworth: Penguin Books.
- Hendry, J. and Hope, V. 1994. 'Cultural change and competitive performance', *European Management Journal*, 12.

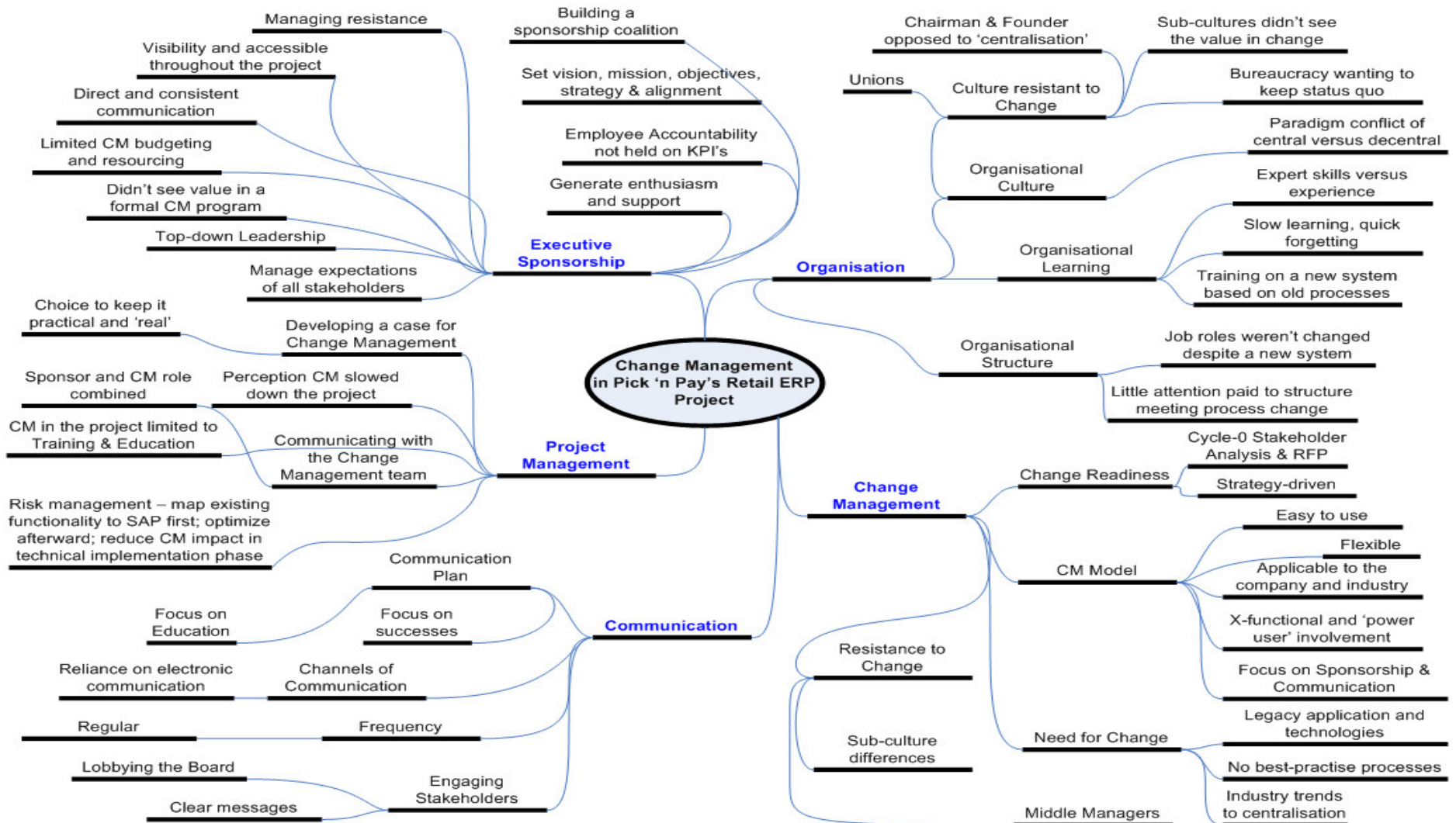
- Jabri M., Adrian, A. & Boje. D. 2008. 'Reconsidering the role of conversations in change communication', *Journal of Organisational Change*. 21: 667-685.
- Johnson, G. 1987. *Strategic Change and the Management Process*. Oxford: Blackwell.
- Judson, A. 1991. *Changing Behaviour in Organisations: Minimizing Resistance to Change*. Basil Blackwell: MA.
- Kanter, R.M., Stein, B.A. & Jick, T.T. 1992. *The Challenge of Organizational Change*. Free Press: New York.
- Kotter, J.P. 1995. 'Leading change: Why transformation efforts fail', *Harvard Business Review*, 73: 59-67.
- Lewin, K. 1947. 'Frontiers in group dynamics: concept, method, and reality in social science; social equilibria and social change', *Human Relations*, 1: 3-41.
- Martin, J. 2002. *Organizational Culture. Mapping the Terrain*. Sage Publications: London.
- Miller, D. 1990. *The Icarus Paradox: how exceptional companies bring about their own downfall*. New York: Harper Business.
- Miles, M. B. and Huberman, A. M. 1994. *Qualitative Data Analysis*. Sage: California.
- Nadler, D.A., and Tushman, M.L. 1990. 'Beyond the charismatic leader: leadership and organisational change', *California Management Review*, 32: 77-97.
- Open University. Faculty of Technology. 2005. *Managing Technical Projects: study guide for MBA T840*. Milton-Keynes: Open University.
- Palmer, P.N., Jansen, C.A. & Coetzee, M. 2007. 'Perceptions of South African manager's emotional intelligence: a preliminary investigation', *South African Business Review*, 10.
- Partington, D. 1996. 'The project management of organizational change', *International Journal of Project Management*, 14: 13-21.

- Prentice, A. and Tell, F. 2001. 'Inter-project learning: processes and outcomes of knowledge codification in project-based firms', *Research Policy*, 1373-95.
- PROSCI. 2009. *Best Practices in Change Management. PROSCI. 2009 Edition.*
- Schneider, B and Schneider, K. 2007. *Why good management ideas fail: the neglected power of organisational culture.* Management forum series 2006 – 2007. Available from: <<http://www.refresher.com/Ineglected.html>> [Accessed 9 February 2010]
- Slevin, D. P. and Pinto, J. K. 1986. 'The project implementation profile: new tool for project managers', *Project Management*, 17: 57-70.
- Smith, B. and Dodds, B. 1997. 'Developing managers in the project-oriented organization', *Journal of European Industrial Training*, 21: 165-70.
- Soh, Ch., Sia, S.K., Boh, W.F. & Tang, M. 2002. 'Misalignments in ERP implementation: a dialectic perspective', *International Journal of Human Computer Interaction*, 16: 81-100.
- Tannenbaum, R. and Schmidt, W. H. 1973. 'How to choose a leadership pattern', *Harvard Business*. 162-75.
- Trochim, W.M.K. 2006. *Research Methods Knowledge Base.* Available from: <<http://www.socialresearchmethods.net/kb/index.php>> [Accessed 24 February 2010]
- Van Buren, M.E. and Werner, J.M. 1996. 'High performance work systems', *Business and Economic Review*, 43:15-23.
- Weick, K.E. 1995. *Sensemaking in Organizations.* Sage Publications: CA.
- Williams, R., and Edge, D. 1996. 'The social shaping of technology', *Research Policy*, 25: 865-99.
- Yasin, M.M., Czuchry, A.J. & Wafa, M.A. 2002. 'Project management practices: then and now', *Thunderbird International Business Review*, 44: 253-62.
- Zimmerer, T.W. and Yasin, M.M. 1998. 'A leadership profile of American managers', *Project Management Journal*, 29: 31-38.

Appendix A: Brainstorm List

Change Management
Change Management Planning
Change Management Methods
Need for Change
Change Readiness
Resistance to Change
Leadership
Leadership Types
Executive Sponsorship
Stakeholders
Organisational Culture
Organisational Sub-cultures
Organisational Structure
Organisational Learning
Organisational Behaviour
Organisational Performance
Training
Skills
Paradigms
Emotions
Strategy
Knowledge Management
Key Performance Indicators
Communication
Project Management
Budgets
Resources
Enterprise Resource Planning (ERP) Implementation
SAP (Systems Applications and Products)
Employee Engagement and Participation
Bureaucracy
Company Politics
Process Management
Technology Management
Supply Chain Management
Risk Management
Innovation
Best Practise
Retail
Pick 'n Pay
South Africa

Appendix B: Problem in Context Mind Map



Appendix C: Questionnaire Cover Letter



Pick 'n Pay SAP Project Change Management Survey

March 2010

Hello,

I am a student close to completing my Masters in Business Administration (MBA); I also work in the Demand Planning team. To complete my degree, I need to submit a research project; I have chosen the Pick 'n Pay SAP project and the role of Change Management.

You have been selected to kindly participate in this survey. The results will help me understand the role of Change Management in successfully implementing SAP in a large Retailer. The results will be presented to your management. It shouldn't take more than 10 minutes to complete and none of your colleagues or management will see your response.

Please do not write your name on the questionnaire in order to protect your anonymity. All responses will be kept strictly confidential.

Yours sincerely,

Luke Hanning

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lhanning@pnp.co.za

Appendix D: Questionnaire

Instructions

Read each statement carefully and mark with an **X** one option which best represents your view.

Options:

Strongly disagree

Disagree

Agree

Strongly agree

		STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
1.	Pick 'n Pay had an urgency to change to a package like SAP if it expected to compete as a company				
2.	Management explained the need for change to the employees				
3.	I was ready for change				
4.	There was little resistance to change to SAP in my area, while the project was being planned				
5.	Management was prepared for the possible impact of SAP on company culture				

		STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
6.	Management asked employees what should change, more than they told employees what will change				
7.	The executive sponsor (Bronwen Rohland) has remained active and visible in the SAP project				
8.	Management's change message inspired me to change				
9.	I felt that Management was willing to compromise with differing opinions to make the project a success				
10.	When I noticed resistance to change during the project, management appeared to try to educate and communicate, rather than force employees to support the change				

		STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE

		STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
11	The SAP project was a risky project				
12	As a future SAP user, the project gave me an understanding in advance, what I would be expecting from SAP				
13	As a SAP user, SAP has met or surpassed my expectations				
14	Pick `n Pay has taken advantage of the learning in the SAP project to increase the overall knowledge of employees				
15	The SAP project was as successful in changing the way people work as it was in changing the systems				

		STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
16	Management appeared united in their determination to implement SAP				
17	Management appeared to have a vision and strategy in how they would approach the change SAP would bring to the company				
18	The change approach fitted the company culture in how it transitioned from the old systems and processes to SAP				
19	The Management approach to change was successful in managing the transition to SAP				
20	As the SAP project is still ongoing, I know what phase we're in and what is expected of me				

		STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
21	I received personal communication how the change would affect me				
22	The communication explained the business reasons why the change was happening				
23	The communication was honest				
24	The communication message informed me what was changing in my role as I transitioned to SAP				
25	The SAP project communication effectively contributed to preparing the company for the change				

		STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
26	The implementation of SAP has directly changed what I do				
27	I have new skills because of SAP				
28	SAP has contributed to me doing my job better				
29	There is little resistance to change that SAP brings, today, in my area				
30	SAP has made a positive impact on the culture of Pick 'n Pay				
31	SAP has contributed to Pick 'n Pay becoming a better performing company than what it was				

ANYTHING ELSE YOU WOULD LIKE TO ADD?:

Your demographics

This information is confidential. Do not write your name on this questionnaire.

1. GENDER:

- Male
- Female

2. AGE:

3. RACE:

- Black
- Coloured
- White
- Indian
- Prefer not to answer

4. YEARS WITH CURRENT ORGANISATION

5. OCCUPATIONAL LEVEL:

Job Grade (e.g. D2)

Job Level (e.g. Manager)

6. FUNCTION/DEPARTMENT:

- Stores
- Buying
- Buyers Admin.
- Finance
- Information Systems
- Supply Chain
- Human Resources
- Business Support
- Other.....

7. EDUCATION LEVEL:

- Less than Matric
- Matric
- Diploma
- Degree
- Post graduate degree

Appendix E: Overview per Department and Themes

Tested & Proven with the Kruskal Wallis Test

		The need for change																				All		Notable Departmental Outliers												
		B.Admin				Biz Support				Buying				Finance				HR				IS				Supply Chain						Abnormal Pattern				
		N				N				N				N				N				N				N				Median	Mode					
1='Strongly Disagree'		Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Median	Mode	
2='Disagree'																																				
3='Agree'																																				
4='Strongly Agree'																																				
1	Pick 'n Pay had an urgency to change to a package like SAP if it expected to compete as a company	17	0	3	3	10	1	3	3	12	0	3	3	17	1	3	3	15	0	4	4	14	0	4	3 ^a	9	0	3	3	3	3	No significant difference between the departments in terms of their answer pattern				
2	Management explained the need for change to the employees	17	0	3	3	11	0	3	3	12	0	3	3	18	0	3	3	15	0	3	3	14	0	3	3	9	0	3	3	3	3	Significant difference between Stores and the rest of the departments in terms of their answer pattern				
3	I was ready for change	17	0	3	3	11	0	4	4	12	0	3	3	18	0	3	3	15	0	3	3	14	0	3	3	9	0	4	4	3	3	Significant difference between Supply Chain and the rest of the departments in terms of their answer pattern				
4	There was little resistance to change to SAP in my area, while the project was being planned	17	0	3	3	11	0	3	2 ^a	12	0	3	2 ^a	18	0	3	3	15	0	3	3	14	0	3	2	9	0	3	3	3	3	No significant difference between the departments in terms of their answer pattern				
5	Management was prepared for the possible impact of SAP on company culture	17	0	3	3	11	0	2	2	12	0	3	2 ^a	18	0	3	3	15	0	3	3	14	0	2	2	9	0	2	2	3	3	Significant difference between IS and the rest of the departments in terms of their answer pattern				

		The role of leadership in change management																				All														
		B.Admin				Biz Support				Buying				Finance				HR				IS				Supply Chain										
		N				N				N				N				N				N				N				Median	Mode					
1='Strongly Disagree'		Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Median	Mode	
2='Disagree'																																				
3='Agree'																																				
4='Strongly Agree'																																				
6	Management asked employees what should change, more than they told employees what will change	17	0	2	2	11	0	2	2	12	0	2	2	16	2	3	2	15	0	2	2 ^a	14	0	2	2	9	0	2	2	2	2	No significant difference between the departments in terms of their answer pattern				
7	The executive sponsor (Bronwen Rohland) has remained active and visible in the SAP project	17	0	3	3	11	0	3	3	12	0	3	3	16	2	3	3	15	0	3	3	14	0	3	3	8	1	3	3	3	3	No significant difference between the departments in terms of their answer pattern				
8	Management's change message inspired me to change	17	0	3	3	11	0	3	3	12	0	3	2 ^a	17	1	3	3	15	0	3	3	14	0	3	2	9	0	3	3	3	3	No significant difference between the departments in terms of their answer pattern				
9	I felt that Management was willing to compromise with differing opinions to make the project a success	17	0	3	3	11	0	3	3	12	0	3	3	18	0	3	3	15	0	3	3	14	0	3	3	9	0	3	3	3	3	No significant difference between the departments in terms of their answer pattern				
10	When I noticed resistance to change during the project, management appeared to try to educate and communicate, rather than force employees to support the change	17	0	3	3	11	0	3	3	12	0	3	3	18	0	3	3	15	0	3	3	14	0	2	2	9	0	3	3	3	3	No significant difference between the departments in terms of their answer pattern				

		Project and change management integration and coordination																																										
		B.Admin				Biz Support				Buying				Finance				HR				IS				Supply Chain				All														
		N				N				N				N				N				N				N																		
1='Strongly Disagree' 2='Disagree' 3='Agree' 4='Strongly Agree'		Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Median	Mode					
11	The SAP project was a risky project	17	0	2	2 ^a	11	0	3	3	12	0	2	2	17	1	2	2	15	0	3	3	14	0	3	3	9	0	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	No significant difference between the departments in terms of their answer pattern
12	As a future SAP user, the project gave me an understanding in advance, what I would be expecting from SAP	17	0	3	3	11	0	3	3	12	0	3	3	17	1	3	3	15	0	3	3	14	0	3	3	9	0	3	3	3	3	3	3	3	3	3	3	3	3	3	3	No significant difference between the departments in terms of their answer pattern		
13	As a SAP user, SAP has met or surpassed my expectations	17	0	3	3	11	0	4	4	12	0	3	3	18	0	3	3	15	0	3	3	14	0	3	3 ^a	9	0	3	3	3	3	3	3	3	3	3	3	3	3	3	3	No significant difference between the departments in terms of their answer pattern		
14	Pick 'n Pay has taken advantage of the learning in the SAP project to increase the overall knowledge of employees	17	0	3	3	11	0	3	3	12	0	3	3	17	1	3	3	15	0	3	3	14	0	3	3	9	0	3	3	3	3	3	3	3	3	3	3	3	3	3	3	Significant difference between Buying, IS & Supply Chain and the rest of the departments in terms of their answer pattern		
15	The SAP project was as successful in changing the way people work as it was in changing the systems	17	0	3	3	10	1	3	3	12	0	3	3	17	1	3	3	15	0	3	3	12	2	3	3	9	0	3	3	3	3	3	3	3	3	3	3	3	3	3	3	No significant difference between the departments in terms of their answer pattern		

		The change management approach																																										
		B.Admin				Biz Support				Buying				Finance				HR				IS				Supply Chain				All														
		N				N				N				N				N				N				N				N														
1='Strongly Disagree' 2='Disagree' 3='Agree' 4='Strongly Agree'		Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Median	Mode	
16	Management appeared united in their determination to implement SAP	17	0	3	3	11	0	2	2	12	0	3	3	18	0	3	3	15	0	3	3	14	0	3	3	9	0	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	Significant difference between Supply Chain and the rest of the departments in terms of their answer pattern
17	Management appeared to have a vision and strategy in how they would approach the change SAP would bring to the company	17	0	3	3	11	0	3	3	12	0	3	3	18	0	3	3	15	0	3	3	14	0	3	3	9	0	3	3	3	3	3	3	3	3	3	3	3	3	3	3	No significant difference between the departments in terms of their answer pattern		
18	The change approach fitted the company culture in how it transitioned from the old systems and processes to SAP	17	0	3	3	11	0	3	3	12	0	3	3	17	1	3	3	15	0	3	3	14	0	3	3	9	0	3	3	3	3	3	3	3	3	3	3	3	3	3	3	No significant difference between the departments in terms of their answer pattern		
19	The Management approach to change was successful in managing the transition to SAP	17	0	3	3	11	0	3	3	12	0	3	3	17	1	3	3	15	0	3	3	14	0	3	3	9	0	3	3	3	3	3	3	3	3	3	3	3	3	3	3	No significant difference between the departments in terms of their answer pattern		
20	As the SAP project is still ongoing, I know what phase we're in and what is expected of me	17	0	3	3	11	0	3	3	12	0	3	3	18	0	3	3	15	0	3	3	14	0	3	3	9	0	3	3	3	3	3	3	3	3	3	3	3	3	3	3	No significant difference between the departments in terms of their answer pattern		

The role of communication in change management																																	
		B.Admin				Biz Support				Buying				Finance				HR				IS				Supply Chain				All			
		N				N				N				N				N				N				N							
		Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode
1='Strongly Disagree'	2='Disagree'	3='Agree'	4='Strongly Agree'																														
21	I received personal communication how the change would affect me	17	0	3	3	11	0	3	2 ^a	12	0	2	2	17	1	3	3	15	0	3	3	14	0	2	2	9	0	2	2	3	3	Significant difference between IS and the rest of the departments in terms of their answer pattern	
22	The communication explained the business reasons why the change was happening	17	0	3	3	11	0	3	3	12	0	3	3	17	1	3	3	15	0	3	3	14	0	2	2 ^a	9	0	3	3	3	3	Significant difference between IS and the rest of the departments in terms of their answer pattern	
23	The communication was honest	17	0	3	3	11	0	3	3	12	0	3	3	17	1	3	3	15	0	3	3	14	0	3	3	9	0	3	3	3	3	No significant difference between the departments in terms of their answer pattern	
24	The communication message informed me what was changing in my role as I transitioned to SAP	17	0	3	3	11	0	3	3	12	0	3	3	18	0	3	3	14	1	3	3	14	0	3	3	9	0	3	3	3	3	Significant difference between Buying, IS and the rest of the departments in terms of their answer pattern	
25	The SAP project communication effectively contributed to preparing the company for the change	17	0	3	3	11	0	3	3	12	0	3	3	17	1	3	3	15	0	3	3	14	0	3	3	9	0	3	3	3	3	No significant difference between the departments in terms of their answer pattern	

The effect on organisational structure, culture and learning																																
		B.Admin				Biz Support				Buying				Finance				HR				IS				Supply Chain				All		
		N				N				N				N				N				N				N						
		Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Valid	Missing	Median	Mode	Median	Mode	
1='Strongly Disagree'	2='Disagree'	3='Agree'	4='Strongly Agree'																													
26	The implementation of SAP has directly changed what I do	17	0	3	3	11	0	4	4	12	0	3	3	16	2	4	4	15	0	3	3	14	0	4	4	9	0	3	3	3	3	No significant difference between the departments in terms of their answer pattern
27	I have new skills because of SAP	17	0	3	3	11	0	4	4	12	0	3	3	18	0	4	4	15	0	3	3	14	0	4	4	9	0	4	4	3	3	Significant difference between Biz Supports and the rest of the departments in terms of their answer pattern
28	SAP has contributed to me doing my job better	17	0	3	3	11	0	4	4	12	0	3	3	18	0	4	4	15	0	3	3	14	0	3	3	9	0	3	3	3	3	Significant difference between Biz Support and the rest of the departments in terms of their answer pattern
29	There is little resistance to change that SAP brings, today, in my area	17	0	3	3	11	0	4	4	12	0	3	3	18	0	3	3	15	0	3	3	14	0	3	3	9	0	3	3	3	3	No significant difference between the departments in terms of their answer pattern
30	SAP has made a positive impact on the culture of Pick 'n Pay	17	0	3	3	11	0	4	4	12	0	3	3	18	0	3	3	15	0	4	4	14	0	3	3	9	0	3	3	3	3	Significant difference between Biz Support & HR and the rest of the departments in terms of their answer pattern
31	SAP has contributed to Pick 'n Pay becoming a better performing company than what it was	17	0	3	3	11	0	4	4	12	0	3	3	18	0	3	3	15	0	3	3	14	0	3	3	9	0	3	3	3	3	Significant difference between Biz Support & Buying and the rest of the departments in terms of their answer pattern