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FACTORS THAT AFFECT THE OUTCOME OF PROCESS IMPROVEMENT PROGRAMMES IN SOUTH AFRICAN FIRMS

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A research report submitted to the Faculty of Engineering and the Built Environment, University of the Witwatersrand, in partial fulfilment of the requirements of the degree of Master of Science in Engineering

Johannesburg, 2012

Declaration

I declare that this research report is my own, unaided work. It is being submitted for the Degree of Master of Science in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in any other University

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SMIJA SIMON

_____day of _____ 2012

Abstract

Process Improvement programmes are often embarked on in organisations to close gaps in performance. It is becoming increasingly important to understand what the drivers of success are of these improvement programmes to maximise the investment (effort and monetary) in these programmes.

Using the Process Improvement classification of Slack and Lewis (2008) and the framework Lok et al. (2005) as the premise of this research, the study aimed to identify what factors affect the outcome of Process Improvement programmes in South African firms.

To answer the research question and evaluate the hypotheses, a qualitative study was undertaken. Using purposive sampling, a set of companies that met the criteria of having undergone Process Improvement programmes in the past 0-5 years was determined. A total of 20 individuals from 15 different organisations were interviewed.

The study has confirmed that the factors as identified by Lok et al. (2005) are considered important factors that influence the outcome of Process Improvement programmes in selected South African organisations as well. The factors that were confirmed included: *strategic alignment, structural alignment, IT alignment, executive commitment* and *employee empowerment*. In addition, a further set of five factors were identified in the study that were of significance and were critical to the success of Process Improvement programmes: *value and clarity of the proposed changes; pace of the change; inherent culture of an organisation; sustainability of the change;* and *skills.*

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List of Abbreviations

BPI – Business Process Improvement
BPR – Business Process Reengineering
BSC – Balanced Scorecard
CI – Continuous Improvement
CSF – Critical Success Factor
EVA – Economic Value Add
IT – Information Technology
ITIL© – Information Technology Infrastructure Library
ITSM – Information Technology Service Management
KPI – Key Performance Indicator
PI – Process Improvement
ROE – Return on Equity
SLM – Service Level Management
TQM – Total Quality Management
ZAR – South African Rand (currency indicator)

1 Introduction

1.1 Purpose of the Study

In challenging business environments, organisations are constantly trying to find new ways of remaining viable, and for some the challenge is even greater when seeking to be an industry leader. The use of industry best practices by organisations is no longer a factor for having a competitive advantage, but rather is becoming the norm for all businesses. Often, the need for change is usually stimulated by a need to improve on the efficiency or effectiveness of some part of the organisation to yield some degree of corporate advantage. In recent times, post the global financial crisis of 2008, organisations have had even more incentive to improve internal processes and reduce operational costs in order to remain in business (George, 2010, p. xv).

The starting point for most firms is defining, at a strategic level, where the firm would like to focus on having an advantage over its competitors. Once the strategy is defined, this is translated to the tactical and operational changes required to move the organisation from the current state to a state of having the competitive advantage. Corporate strategy is a balance between resources, businesses and the organisation (Collis and Montgomery, 1998, p.72). Once a corporate strategy has been defined, the alignment of the strategy is an important factor to the success of the strategy, where alignment is defined as the strategic, structural and IT system related alignment in an organisation (Lok et al., 2005, pp. 1360-1361).

An organisation's strategic definition or review process may yield a desired vision for the company that the current operational context may not be able to fulfil entirely, resulting in a *gap*. Gaps within the business can also be identified at the operational level where an undesirable level of performance has been observed. Process Improvement programmes are often embarked on to close these gaps. The nature of the *gap* between the current business context and the defined strategic objectives will determine what form of Process Improvement programme i.e. whether incremental changes (e.g. Continuous Improvement) or

drastic/breakthrough changes (e.g. Business Process Reengineering) are required in order to implement the strategy.

It is becoming increasingly important to understand what the drivers of success are of these improvement programmes to maximise the investment (effort and monetary) in these programmes.

This study aims to evaluate the factors that affect the outcome of Process Improvement programmes on company performance. The research also aims to assist organisations channel efforts on Process Improvement programmes in a more focused manner.

1.2 Context of the Study

Over the past 20 years, many organisations have undergone Process Improvement programmes. During the 1990's Business Process Re-engineering was a popular programme to embark on to aid organisations that were underperforming and became a turnaround strategy (Paper and Chang, 2005, p.121). These improvement programmes have experienced varying degrees of success over the years and have been the subject of numerous research topics with the intent of developing frameworks (Chang and Powell, 1998; Lok et al., 2005) and defining success criteria (Paper and Chang, 2005; Smit and Cronjé, 2004).

With the choice of numerous Process Improvement methodologies, organisations are looking for those few things that must be done well to maximise the investment (time, money and resources) in their Process Improvement programmes. Over the past three decades, there has being an increasing amount of empirical research being done on Process Improvement programmes to identify and quantify the importance of the factors that contribute to the success of Process Improvement programmes (Lok et al., 2005, p.1358).

This study aims to examine factors that influence the outcome of Process Improvement programmes in South African firms.

1.3 Problem Statement

Using the Process Improvement classification of Slack and Lewis (2008) and the framework Lok et al. (2005) as the premise of this research, the study aims to answer the following research question:

- *What factors affect the outcome of Process Improvement programmes in South African firms?*

1.4 Significance of the Study

Post the Global Financial Crisis of 2008, many firms faced pressure to remain profitable in tough economic conditions. Despite the world economies having recovered from the recession; organisations are prudent when embarking on Process Improvement programmes. There is a need to ensure that such programmes will deliver on the required results.

Through knowing what organisational factors can influence the success of Process Improvement programmes, companies can have the opportunity to ensure that the necessary 'support' is provided to maximise the outcome of Process Improvement programmes.

1.5 Delimitations and Limitations of the Study

1.5.1 Delimitations of the study

In identifying factors that influence the outcome of Process Improvement programmes in South Africa, the literature review process identified the framework proposed by Lok et al. (2005) for Australian firms as a suitable framework to leverage to explore factors that influence the outcome within South African firms. By basing the research instrument (semi-structured questionnaire) on factors identified in Lok et al.'s (2005) research, the intent was to explore the applicability of the pre-identified factors to South African firms. The intent of the study was not to define an exhaustive list of factors. The nature of the data

collection process (semi-structured interviews) also allowed for an opportunity to explore other salient factors that might be specific to the South African context.

A delimitation of the study is that the list of factors that were explored is not exhaustive, and therefore, it should be noted that there could be a number of other factors not explicitly discussed that could also influence the outcome of Process Improvement programmes.

1.5.2 Limitations of the study

This study was conducted on a sample of 15 firms that were selected through purposive sampling. Firms were selected based on the researcher's knowledge that they had experience of *Breakthrough* and *Incremental* Process Improvement programmes. The research sample consisted of individuals from organisations that had offices based in the Gauteng province within South Africa and were willing to participate in the study. The rationale behind the sample selection was the accessibility to the sample. Therefore it should be noted that the results may not be applicable to all South African firms.

The results may also not be applicable across all industries; as the study did not cover firms from all industry sectors. There may be limited applicability if the industry shares similarities to those included in the sample of this study.

1.6 Assumptions

In conducting this research the following assumptions were made:

1. The empirical nature of the study performed by Lok et al. (2005) provides a suitable, tested framework to base the study on;
2. The participants within the survey were able to provide a representative view of their organisation's Process Improvement programme(s); and
3. The participants possessed enough knowledge about Process Improvement programmes to participate in the survey.

1.7 Structure of the Report

The report is presented in nine chapters.

Chapter 1 (Introduction) provides the context of the study, presents the problem statement and discusses the significance of the study. The delimitations, limitations of the study and assumptions made are also discussed.

Chapter 2 (Literature Review) explores some of the theory and relevant studies in the field of Process Improvement. The outcome of the literature review is a framework that is used as the basis to explore factors that affect the outcome of Process Improvement programmes during the semi-structured interview process.

Chapter 3 (Research Questions) presents the main research problem and associated research hypotheses that were formulated to answer the main research question. A relational depiction of the research hypotheses is also presented.

Chapter 4 (Research Methodology) examines the theoretical aspects of qualitative research and discusses how the methodology for the study was selected. The selected methodology is further described in terms of the aspects: research population; sample size and selection; data collection; data quality and data analysis.

Chapter 5 (Methodology and Results of the Semi-structured Interview Process) discusses how the methodology was applied during the study and provides an overview of the interview process and research instrument used (semi-structured interview questionnaire). The demographics of the sample; data collection mechanism; and a summary of the analysis techniques are described in this chapter.

Chapter 6 (Discussion of Results) reviews the potential sources of bias in the study and a brief discussion on the quality of the research method is presented. The chapter contains the detailed results and discussion of the research findings

by research hypothesis. In some areas, the findings are contrasted with findings from the literature review.

Chapter 7 (Conclusion) summarises the findings of the research relative to the research hypotheses. The chapter also contains a section on the limitations of the study. The chapter concludes with overall recommendations on the main research problem.

Chapter 8 (Recommendations for Further Research) discusses areas for further investigation. The further research was influenced by both the limitations of the study as well as findings noted during the interview process that were not a key focus of the current study.

Chapter 9 (References) contains the references of books, journal articles and lecture notes as cited in this report.

The appendices that have been included contain details on:

a. The questions from the Lok et al. (2005) study;
b. The research process (letter of introduction, semi-structured interview questionnaire and participant demographics); and
c. Summary of the transcripts from the interview process.

2 Literature Review

The main concepts involved in the study are *Process Improvement Programmes, Performance* and *Critical Success Factors for Process Improvement Programmes*.

2.1 Process Improvement

Chase and Aquilano (2001, p.92) define a process as "any part of an organisation that takes inputs and transforms them into outputs that, it is hoped, are of greater value to the organisation than the original inputs."

Process improvement strategies that firms employ can be described as either those that target *incremental change* (e.g. Continuous Improvement) or those that come about from *breakthrough improvements* (e.g. Business Process Reengineering). Slack and Lewis (2008, pp.166-168) delineate the difference between the two strategies using the characteristics as noted in Table 2-1 below.

Table 2-1 Features of Breakthrough and Continuous Improvement (based on Imai) (after Slack and Lewis, 2008, pp.166-168)

	Breakthrough Improvement	**Continuous Improvement**
Effect	Short-term but dramatic	Long-term and long-lasting but undramatic
Pace	Big steps	Small steps
Time-frame	Intermittent and non-incremental	Continuous and incremental
Change Involvement	Abrupt and volatile	Gradual and constant
Approach	Select a few champions	Everybody
Stimulus	Technological breakthroughs, new inventions, new theories	Conventional know-how and state of the art
Risks	Concentrated – 'all eggs in one basket'	Spread – many projects simultaneously

	Breakthrough Improvement	Continuous Improvement
Practical requirements	Requires large investment but little effort to maintain it	Requires little investment but great effort to maintain it
Effort orientation	Technology	People
Evaluation Criteria	Results for profit	Process and efforts for better results

2.1.1 Breakthrough Improvements

2.1.1.1 Business Process Reengineering (BPR)

Russell and Taylor (2003, p.137) define reengineering as the "total redesign of a process". Reengineering considers businesses as horizontal input-output entities rather than the traditional vertical, functional entities (Grover and Malhotra, 1997, p.199) and is based on the work of Hammer and Champy in the early 1990's (Adesola and Baines, 2005, p.38). With the process model, there are no clear compartmentalisations of functions; rather, the functions are integrated into the appropriate place as depicted below in Figure 2-1.

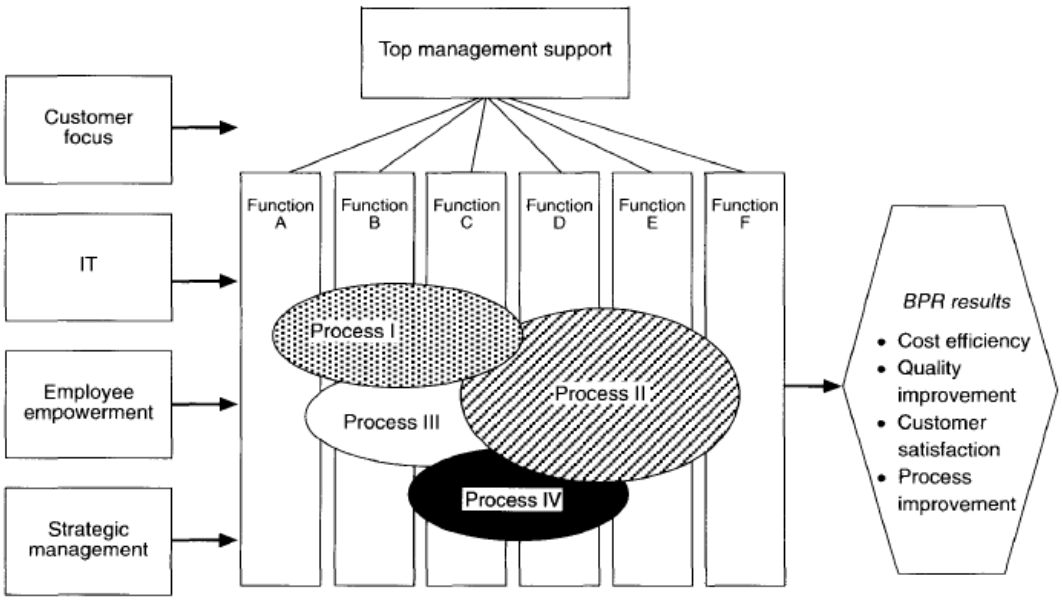


Figure 2-1 Main Elements of BPR (Chang and Powell, 1998, p.201)

2.1.1.2 Business Process Redesign

Another example of a contemporary breakthrough improvement approach is one that began in the 1980s – the redesigning of business processes. This was mainly based on the work of Davenport and Short (Grover and Malhotra, 1997, p.196) and the methodology focused on making businesses process-driven. Mansar and Reijers (2007, p.194) describes the difference between Business Process Reengineering and Business Process Redesign as "*reengineering assumes a much broader scope than the specific focus of process redesign. Process redesign is concerned with how to articulate a process in, e.g. terms of its interdependent tasks and resources, while reengineering can refer to all aspects of restructuring an organization's processes, e.g. from change management to project management issues*." Based on the aforementioned definition of Business Process Redesign, it could be seen as a subset of BPR.

2.1.1.3 Business Process Improvement (BPI)

Business Process Improvement (BPI) is also an example of a methodology used for achieving breakthrough improvements. BPI is based on the work done by James Harrington in 1991 (Adesola and Baines, 2005, p.39). However, Zellner (2011, p.205) notes that depending on the scale at which BPI is performed within an organisation, it may be classified as Continuous Improvement. Adesola and Baines (2005, p39) note the importance of having a suitable methodology for BPI that is structured and practical for implementation. The BPI methodology as formulated through Adesola and Baines (2005, p.43) in their research consists of seven steps as shown below in Figure 2-2:



Figure 2-2 Model Based and Integrated Process Improvement (MIPI) BPI Methodology (Adesola and Baines, 2005)

The MIPI methodology was tested across four organisations against three criteria: feasibility, usability and usefulness. The outcome of the assessment of the model was that the MIPI methodology was credible. However, a broader assessment is required before the MIPI methodology can be adequately assessed for validity and generalisability.

2.1.2 Incremental/Continuous Improvement (CI)

Continuous Improvement (CI) is the management approach of introducing incremental changes to attain changes in product or process performance. In some cases, Continuous Improvement has been chosen as the preferred management enhancement programme over other more radical approaches (Chase et al, 2001, pp. 270-271). It has also been argued by Hammer and Champy (1993) that since CI is an incremental change; it provides incremental changes in organisational performance (Lok et al., 2005, p.1363). Some examples of continuous improvement methodologies include Lean, Six Sigma

and more recently, the combination of the two – Lean Six Sigma (George, 2010, p.xi).

2.1.2.1 Lean

The Lean methodology is one that focuses on eliminating waste in an organisation (Chase et al., 2001, p. 395). The focus is primarily internal to the organisation; through the elimination of waste (e.g. time, motion, over production etc.), the speed through a process is increased (George, 2010, p.27-28). Bicheno (2004, p.25) outlines an iterative framework for Lean transformation. Although the framework is presented linearly in Table 2-2 below, it should be noted that during a transformation, organisations will move through cycles (e.g. of Plan Do Check Act) within a cycle.

Table 2-2 Bicheno's (2004) Lean Transformation Framework

Step	Activity
1.	Understanding the Principles
2.	Understanding the Customers
3.	Strategy, Planning and Communication
4.	Understanding the System and Mapping
5.	Product Rationalisation and Lean Design
6.	Implementing the Foundation Stones
7.	The Value Stream Implementation Cycle
8.	Building a Lean Culture
9.	Working Lean Supply
10.	Working Lean Distribution
11.	Costing and Measuring
12.	Improving and Sustaining

2.1.2.2 Six Sigma

Six Sigma is a quality focused methodology with the intent of minimising the defects in a process. The actual sigma value refers to the number of defective

parts allowed to be outside of the tolerance levels/specification. A quality level of Six Sigma implies that 2 parts per billion are allowed to be defective (Chase et al., 2001, pp. 293-4). Six Sigma is a statistics based approach to problem solving with a well defined, five stage, DMAIC methodology (the DMAIC phases are D – Define, M – Measure, A – Analyse, I – Improve and C – Control). The focus of the Six Sigma methodology is variation and defect reduction (Antony, 2011, pp.185-186). Traditionally Six Sigma has been viewed as a highly analytical methodology, and is perceived as requiring a certain level of experience and proficiency in statistics to be able to fully apply the methodology, compared to the more intuitive and less complex principles of Lean (Antony, 2011, pp.187-188).

2.1.2.3 Lean Six Sigma

Lean Six Sigma is a methodology that has resulted from the integration of Lean and Six Sigma principles by the George Group consulting firm in 2002. The combination of the methodologies has resulted in the ability to have improvement initiatives concurrently focus on increasing the speed (eliminating waste) and improving the quality (reducing defects) (George, 2010, p.xi).

Practitioners in the fields of Lean and Six Sigma acknowledge the synergies between the two methodologies (Antony, 2011, pp.185-190). The two methodologies have equally important and complementary roles to play in organisations. Antony (2011, p.190) summarises the synergies well in his comparison of Lean and Six Sigma, "*While Lean strategies play an important role in eliminating waste and non-value added activities across the organisation, Six Sigma, through the use of statistical tools and techniques, takes an organization to an improved level of process performance and capability*."

2.1.2.4 Adoption of Industry Best Practice Frameworks / Benchmarking

The results of benchmarking against industry best practices based on existing frameworks can also lead to an overhaul or alignment of a company's processes to these standards or frameworks. For example, an industry framework for IT Service Management (ITSM) was formed based on the United Kingdom's IT Infrastructure Library (ITIL©) and the United States' Service Level Management

(SLM). ITSM includes processes for many areas within service management (Winniford et al., 2009, p.155). The choice on whether to adopt such frameworks in a breakthrough or incremental approach is driven by various factors such as time available for the change; resistance to change or operating context (i.e. whether it is the setup of a new firm or whether the framework is being used to address pockets of inefficiencies in the process through continuous improvement efforts) (Pollard and Cater-Steel, 2009, pp.165-166). Lok et al. (2005, p. 1358) categorises benchmarking as a type of continuous improvement.

However, for the purposes of this research, benchmarking shall be considered as a trigger to improvement programmes and not as a form of continuous improvement.

2.1.3 Process Improvement Summary

In summary, there are many Process Improvement methodologies or techniques. Adesola and Baines (2005, p.40) in contrasting a number of methodologies noted that there are typically a few common phases: initiation, diagnosis, design, implementation and process management.

It is also important to note that the methodologies described under section 2.1.2 are typically considered as incremental improvement methodologies; however, when such methodologies are applied with the right levels of focus or broad enough scope, they can also fit the criteria for classification of breakthrough improvement and have a significant impact on organisations (George, 2010, p.xvi).

2.2 Performance Measurement

2.2.1 Performance Improvement as a Measure of Success

To determine whether Process Improvement programmes have been successful, the changes to the firm's performance will be examined. Performance can be

measured from a variety of perspectives. Neely (2002, p.1) notes some of the common measurement perspectives used by organisations as:

(a) the *accounting* perspective e.g. Return on Equity (ROE) or Economic Value Added (EVA)
(b) the *marketing* perspective e.g. Customer satisfaction
(c) the *operations* perspective e.g. cost, quality, speed

In addition to the above perspectives, a very common measurement framework adopted by organisations is Kaplan and Norton's Balanced Scorecard (Amaratunga et al., 2001, p.179).

2.2.1.1 The Accounting Perspective

The accounting perspective has been the traditional foundation of performance measurement in organizations. David Otley describes in Neely's compilation (2002, pp.3-4) that financial measures perform three functions within organizations:

(a) act as tools of financial management;
(b) set to be a major objective of an organisation; or
(c) are a mechanism for motivation and control within the organisation.

The limitation of using pure accounting measures as performance measures is that the other dimensions of a business such as innovation, quality or market share are not easily visible from finance-based performance measures.

2.2.1.2 The Marketing Perspective

The marketing performance measures are typically more externally oriented and evaluate aspects of performance such as sales, market share, customer satisfaction, service quality etc. (Amaratunga et al., 2001, p.181). Non-financial measures have an intrinsic challenge in that they are open to multiple ways of determining their values and are not as standardized when compared to some of the more common financial measures. For example, Net Profit is calculated in a standard manner: Sales from Revenues less Cost of Sales; whereas the

calculation of Customer Satisfaction could either be linked to customer complaints or market survey results.

2.2.1.3 The Operations Perspective

The common dimensions used by organisations at the operations level are *quality, cost, dependability, flexibility and speed* (Slack and Lewis, 2008, p.172). The operations perspective can be viewed as the internal perspective of an organisation's execution performance.

High-level operations performance targets (typically compound measures) can be further broken down to more granular levels, for example, manufacturing performance, can be quantified in terms of cost, quality, delivery, flexibility or a weighted index of the factors (Cua, McKone and Schroeder, 2001, p.679). In a manufacturing environment, examples of specific measures of plant performance [in terms of the factors: cost, quality and delivery] could be the change in machine downtime; number of defects resulting in rejection or penalties incurred due to failure to meet on-time delivery (Choi and Eboch, 1998, p.61).

2.2.1.4 The Balanced Scorecard Framework

Performance measures can also be aggregated to corporate or functional strategic measures. The use of Norton and Kaplan's Balanced Scorecard (BSC) is an approach used by a number of organisations to depict aggregated performance measures. The premise of the BSC is that it takes into account various perspectives that constitute an organisation: internal processes, financial, customer and learning and growth (Slack and Lewis, 2008, p. 173). Kaplan and Norton (1992, p. 72) illustrate the links between the performance measures using the figure below.

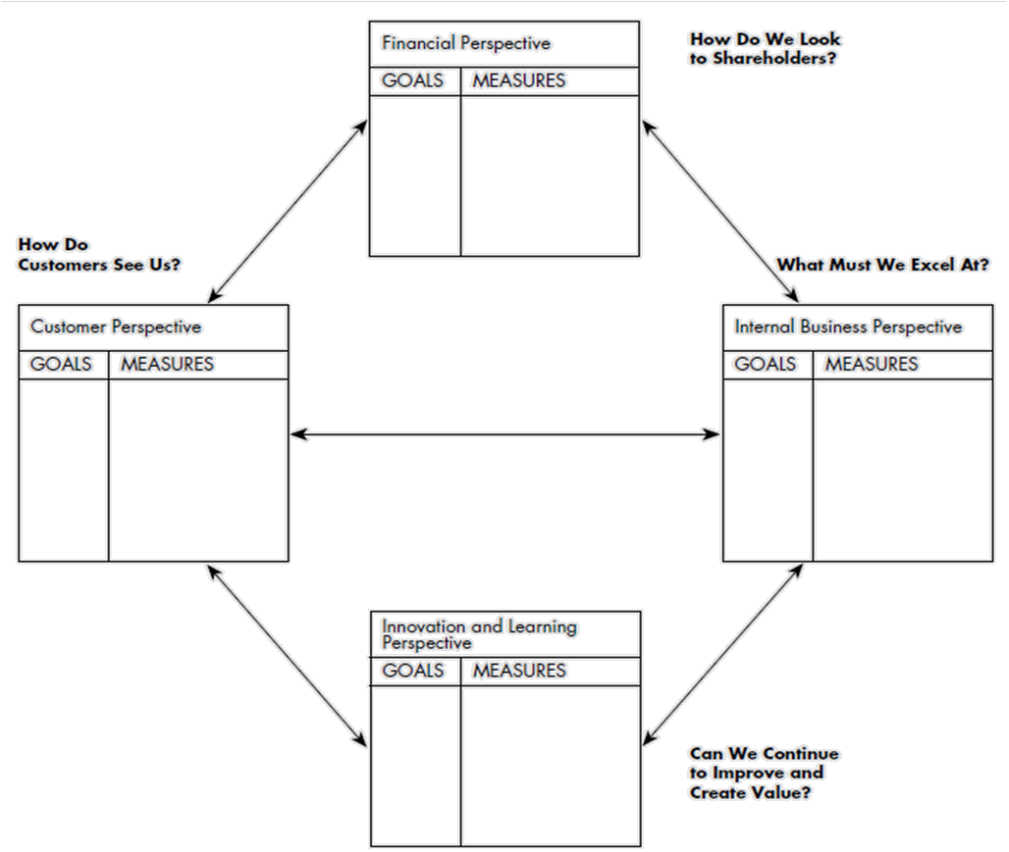


Figure 2-3 The Balanced Scorecard (Kaplan and Norton, 1992, p. 72)

2.2.2 Performance Measurement Summary

Non-financial measures are perceived to be more subjective in nature compared to financial measures; but caution must be exercised as there is also flexibility in the application of accounting principles which may result in a degree of subjectivity in financial measures (Neely, 2002, p.20).

According to Ittner and Larcker (2003, pp. 2-5) some of the common mistakes companies make when utilising non-financial performance measures are:

- Not linking the measures to strategy;
- Not validating the causal links in the causal models that are developed;
- Not setting the right performance targets; or
- Measuring incorrectly.

The adage “what you measure is what you get” is undoubtedly still applicable in organisations. Measurements are a means to achieve the required behaviours within organisations, therefore it is imperative to ensure proper thought and design is applied to the formulation of performance measures.

2.3 Frameworks and Critical Success Factors in the Improvement Context

2.3.1 Frameworks Related to Process Improvement

When examining organisational performance, it must be noted that performance is not a function of any single given factor. The quest to understand organisational factors that affect performance and determine the set of critical success factors for organisational change is by no means a new one. As Leavitt notes as early as 1967, organisations are multi-dimensional systems in which a number of factors can be altered to achieve changes in performance. There are three variables in an organisation that can be changed in order to affect performance (Leavitt, 1967, p.325): organisational structure, technology and human resources.

Many subsequent authors have formulated frameworks, theories and relationships linking organisational variables and outcomes. In more recent decades, frameworks to understand Process Improvement programmes have been developed. A framework developed by Chang and Powell (1998, p.203) shows four classifications for implementing Business Process Reengineering in small and medium-sized enterprises.

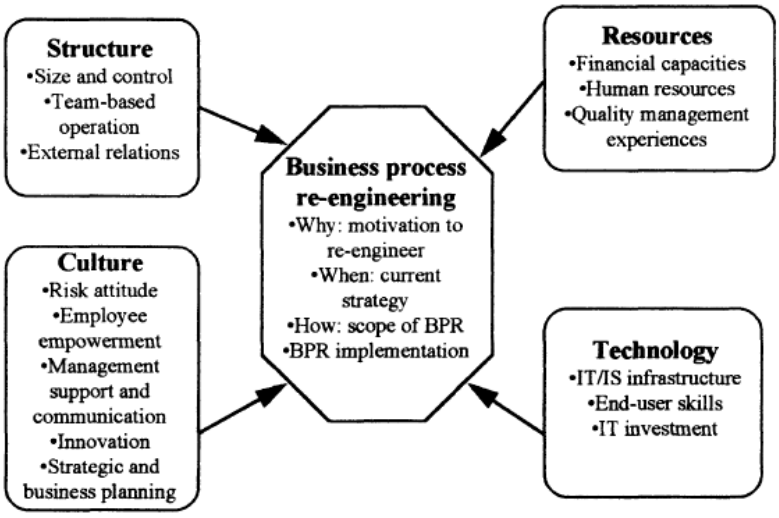


Figure 2-4 Chang and Powell's Framework for Implementing BPR in Small and Medium-sized Enterprises

With the advent of the technology-driven process enablement (and improvement) period where organisations embarked on large scale enterprise system implementations, there was a significant amount of research performed to identify frameworks to guide these technology transformations within organisations.

Liu and Seddon (2009, p.718) assess how organisational benefits are linked to project success factors by comparing models from various authors. The interpretation of the relationships between the models of factors and benefits of enterprise systems is presented in Figure 2-5 below.

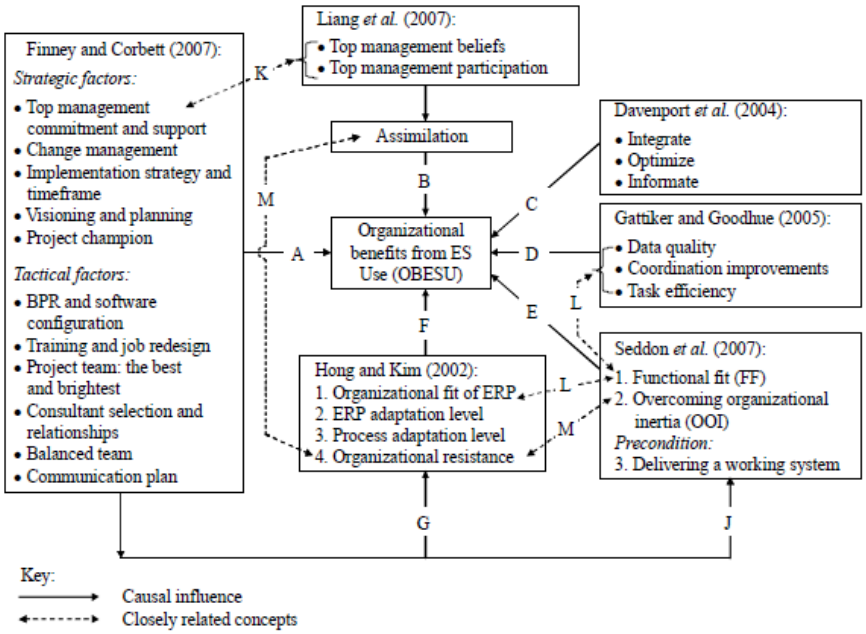


Figure 2-5 Comparing Various Models of Factors Affecting Organisational Benefits from Enterprise Systems (Liu and Seddon, 2009, p. 718)

Lok et al. (2005) proposes a framework of enabling organisational factors (Organisational Alignment and People Involvement) that impact the level of organisational performance as part of Process Improvement programmes, Figure 2-6 below.

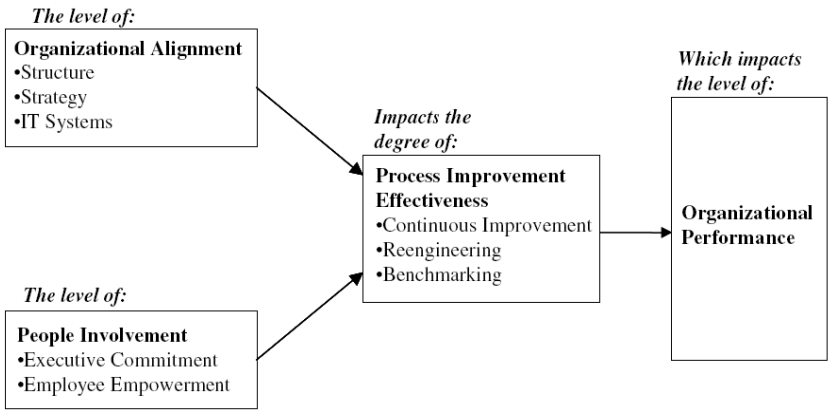


Figure 2-6 Integrative framework – how enabling organizational variables impact the success of process improvement programmes (Lok et al., 2005, p.1359)

The impact that organisational factors have on organisational performance may vary depending on the nature of the Process Improvement programme (breakthrough or incremental). For example, Lok et al. (2005, p1376) discusses that *Employee Empowerment* as a factor had the most influence on Reengineering programmes. This is as a result of reengineering programmes having the most notable impact on employee morale, as these programmes are often associated with downsizing the workforce.

Lok et al.'s study evaluated the framework through a survey across a range of firms from different industries in Australia (refer to Appendix A – Copy of Questions posed in Lok et al.'s Study for a copy of the questions posed). The study generated empirical evidence to support that consciously placing emphasis on the following guiding principles increases the likelihood of success in Process Improvement (Lok et al., 2005, p.1379):

- Alignment of process improvement with strategy;
- Demonstrating senior management commitment; and
- Employee empowerment.

When comparing frameworks that have been developed, there are a number of common elements across these models: support from senior management, organisation strategic alignment, people enablement, access to the right resources and IT enablement. These salient factors over the years have also often been described as Critical Success Factors for improvement programmes.

2.3.2 Critical Success Factors

As Business Process Reengineering (BPR) has evolved, many researchers have explored what the Critical Success Factors (CSFs) are for improvement programmes. Much like the preceding section on frameworks, many CSFs have been identified.

Smit and Cronjé (2004, p.53) identified six conditions for reengineering success, these are:

i. The change should be driven by strong external motives and thus make the change unavoidable;
ii. The reengineering process should have compelling backing from top managerial levels;
iii. Customers' needs should be foremost when undertaking reengineering activities;
iv. As a result of point (iii) above, it is imperative to have a sound knowledge of what the customer's wants and needs really are;
v. The reengineering team should be well represented in terms of the role players from different functional groups that form the process; and
vi. Any changes in information technology or human resources should be closely aligned with the reengineering process.

Bateman and Rich (2003, p.187) in their research on inhibiting and enabling factors of Process Improvement activities provide a classification of factors identified by four authors' work in their respective papers. This summary is presented in Table 2-3 below.

Table 2-3 Summary of Factors Affecting Sustainability of PI and CI Programmes - Bateman and Rich (2003, p.187)

	Upton (1996)	Bessant et al. (1994)	Dale et al. (1997)	Kaye and Anderson (1999)
Process Issues	Structure to stop backsliding	Lack of formal problem-solving process Failure to implement changes suggested	Failure to complete projects	
Strategy and objectives	Clear targets and common understanding of direction	Changes of organisational direction Lack of CI		Long term objectives Aims and objectives links to

	Upton (1996)	Bessant et al. (1994)	Dale et al. (1997)	Kaye and Anderson (1999)
	Consistent focus of improvement activities from centre of previous activity Credible plan of campaign	strategy		CI activities Managers should be aware of long term strategy and have measurable objectives for achievement for themselves and their teams Business objectives and critical success factors that link vision, mission and business plans
Leadership and motivation	Failure, cause of lack of clear motivation as to why improvement is important Charismatic leader	Top management support	Inadequate leadership	Senior management involvement Leadership and active commitment demonstrated by all managers
Cultural issues		Culture clash between espoused and practical values	Resistance to change	Culture for continuous improvement (awareness of CI by employees, managers reinforce culture by checking awareness, effective communication, multidisciplinary

	Upton (1996)	Bessant et al. (1994)	Dale et al. (1997)	Kaye and Anderson (1999)
				teams)
Measurement and information		Lack of measurement	Inadequate information and its analysis	Measurement and feedback systems
Training, learning and skills		Lack of training	Lack of quality management and problem solving skills	The learning organisation
Miscellaneous	Selecting projects based on ability to improve a specific target and ability to provide improvement opportunities for the future	Emphasis on big bang innovation and undervaluing of incremental changes Inappropriate infrastructure Lack of suitable vehicles for CI	Break of improvement teams Lack of resources devoted to quality improvement	Stakeholder focus Focusing on employees (involving all employees Focus on critical processes (VSM) Quality management systems

Comparing the CSF's identified by Smit and Cronjé (2004) and the summary of factors by Bateman and Rich (2003), the main difference in the set of factors is the mention of customer needs and IT alignment by Smit and Cronjé.

In summary, the frameworks that intend to model relationships between factors and the various CSFs identified through past research contribute toward a set of factors that can be described as having an effect on the outcome of Process Improvement programmes.

3 Research Questions

3.1 Introduction

This chapter presents the outcome of the literature review and how it shaped the framing of the main research problem and associated research hypotheses. This study set out to identify factors that influence the outcome of Process Improvement programmes in organisations with the intent to address the ideas introduced earlier in section 1.1 (Purpose of the Study):

- The importance of understanding what the drivers of success are of these improvement programmes to maximise the investment (effort and monetary) in these programmes; and
- Evaluate what factors affect the outcome of Process Improvement programmes on company performance to assist organisations to channel efforts on Process Improvement programmes in a more focused manner.

3.2 Main Research Problem

Using the Process Improvement classification of Slack and Lewis (2008) and the framework Lok et al. (2005) as the premise of this research, the study aims to answer the following research question:

- *What factors affect the outcome of Process Improvement programmes in South African firms?*

3.3 Hypotheses

The literature review has resulted in the following hypotheses being formulated, which were to be verified through the study in answering the main research question:

3.3.1 Hypothesis 1

- Process Improvement programmes contribute positively towards organisation performance.

3.3.2 Hypothesis 2

- The following factors, based on Lok et al.'s (2005) framework, contribute to the outcome of Process Improvement programmes:
    - Strategic alignment;
    - Structural alignment;
    - IT alignment;
    - Executive commitment; and
    - Employee empowerment.

3.3.3 Hypothesis 3

- There are other factors that influence Process Improvement programmes in South African organisations.

3.3.4 Hypothesis 4

- Breakthrough improvement programmes have different success factors compared to Incremental (Continuous) improvement programmes.

3.3.5 Hypothesis 5

- Organisations will continue with Process Improvement programmes where there has been a positive experience.

The relationships among the hypotheses are illustrated in the diagram below. The dotted arrows and boxes are investigated in this research, while the solid arrows and boxes show the relationships that have already been established by previous research (Lok et al., 2005).

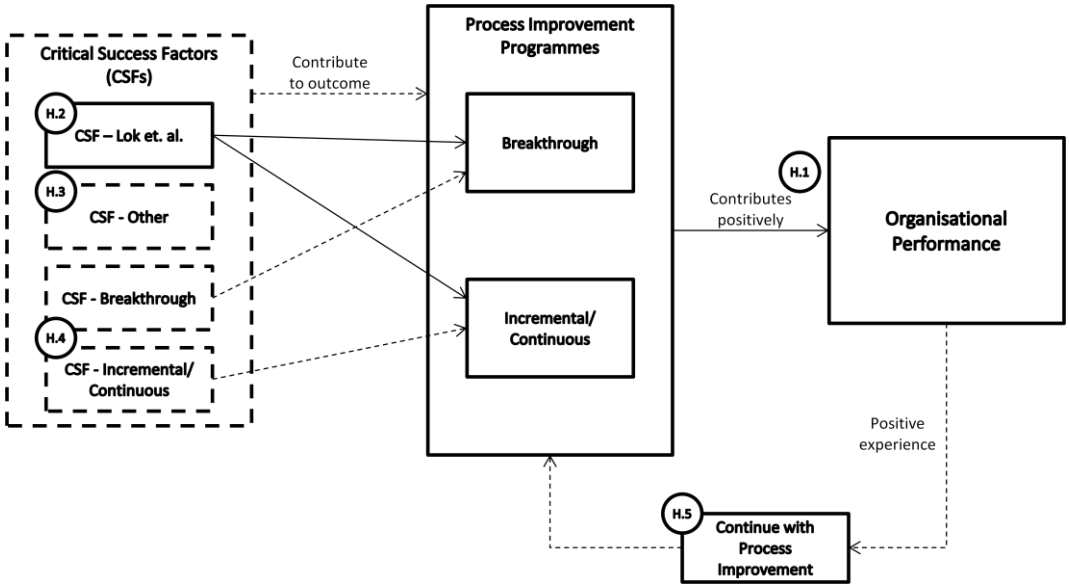


Figure 3-1 Hypothesis Relationships to Outcome of Process Improvement Programmes

4 Research Methodology

4.1 Introduction

The pursuit by humans to gain an understanding of everyday problems and real life issues, describe phenomena or explain things usually results in some form of research. Mouton (2001, p.139) uses the Three Worlds framework to assist in the understanding of the level of analysis and scientific reasoning across a spectrum of knowledge. Mouton (2001) classifies knowledge into three levels:

- World 1 – The world of everyday life and lay knowledge;
- World 2 – The world of science and scientific research; and
- World 3 – The world of meta-science.

The framework below shows the different interests and reasons for knowledge generation.

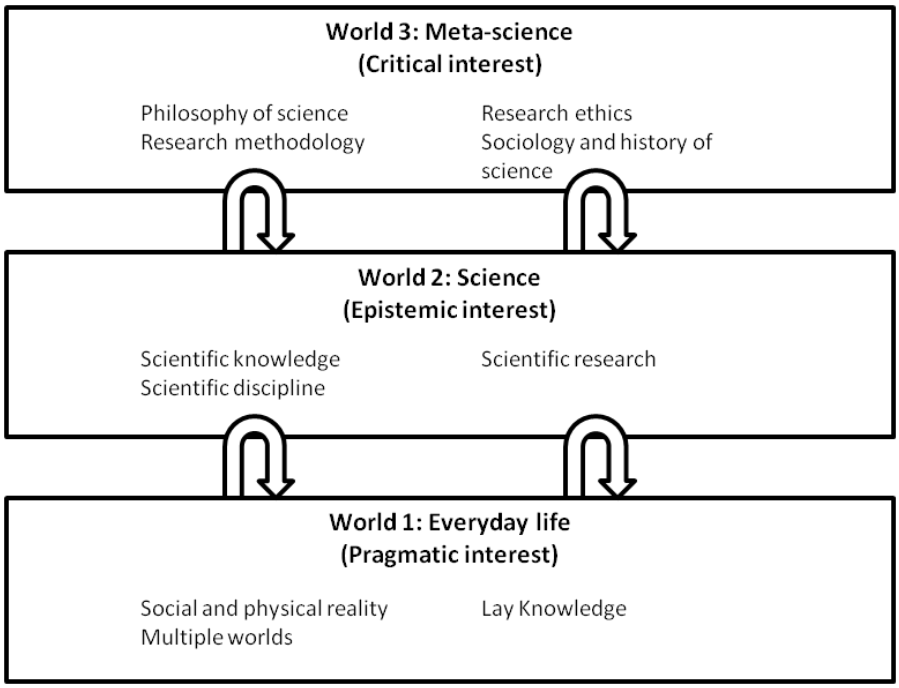


Figure 4-1 The Basic Framework: the Three Worlds (after Mouton, 2001, p.139)

Eriksson and Kovalainen (2008, p.13) notes and describes the concepts of philosophical science as:

- "*Ontology*. What is there in the world?
- *Epistemology.* What is knowledge and what are the sources and limits of knowledge?
- *Methodology*. How can knowledge about a given issue or problem be produced?
- *Methods*. What are the specific ways of data collection and analysis that can be used?
- *Paradigm*. What are the conceptual and/or methodological models that relate to a scientific discipline during a particular period of time?"

The beliefs around ontology and epistemology influence the methodology and methods chosen when conducting research. For example, an aspect of ontology is how reality is conceived – whether the social world is independent of people, their actions and activities (objectivism) or whether social reality is a result of social and cognitive processes (constructionism). Eriksson and Kovalainen (2008, pp.13-14) note that many qualitative methods are based on a constructionist (subjective) view.

From an epistemological aspect, there are three directions that can be followed – these are summarised in the table below (Eriksson and Kovalainen, 2008, p.15):

Table 4-1 Epistemological Directions and Relation to Philosophical Positions

Direction	Description	Philosophical Position
Empiricism	"reality is constituted of observable material things"	Positivism
Subjectivism	"views reality as being socially constructed"	Interpretivism
Substantialism	"takes reality as material, but acknowledges that people interpret it	Critical realism

Direction	Description	Philosophical Position
	differently in different times and contexts”	

Since the foundation of this research study was to *confirm* factors identified through previous research and *explore* other factors that people consider may be important within the South African context, it could be noted that the general philosophical position of the research is that of critical realism.

4.2 Methodology Selection

As a starting point in determining a suitable research methodology, the methodology applied in previous research was reviewed. This study was influenced by the initial research conducted by Lok et al. (2005, p.1366), so the aptness of the methodology applied in Lok’s (2005) study was evaluated. A notable disadvantage in the quantitative study performed was that there was a limitation in the richness of empirical data generated. Therefore, it was decided that a qualitative study would be conducted, to further explore the factors that had previously been tested using a quantitative method.

Mouton (2001, p.144) cross-tabulates the nature of studies and the nature of data against each other and produces the map below depicting research designs. This was used as a guideline to determine a suitable method for this study

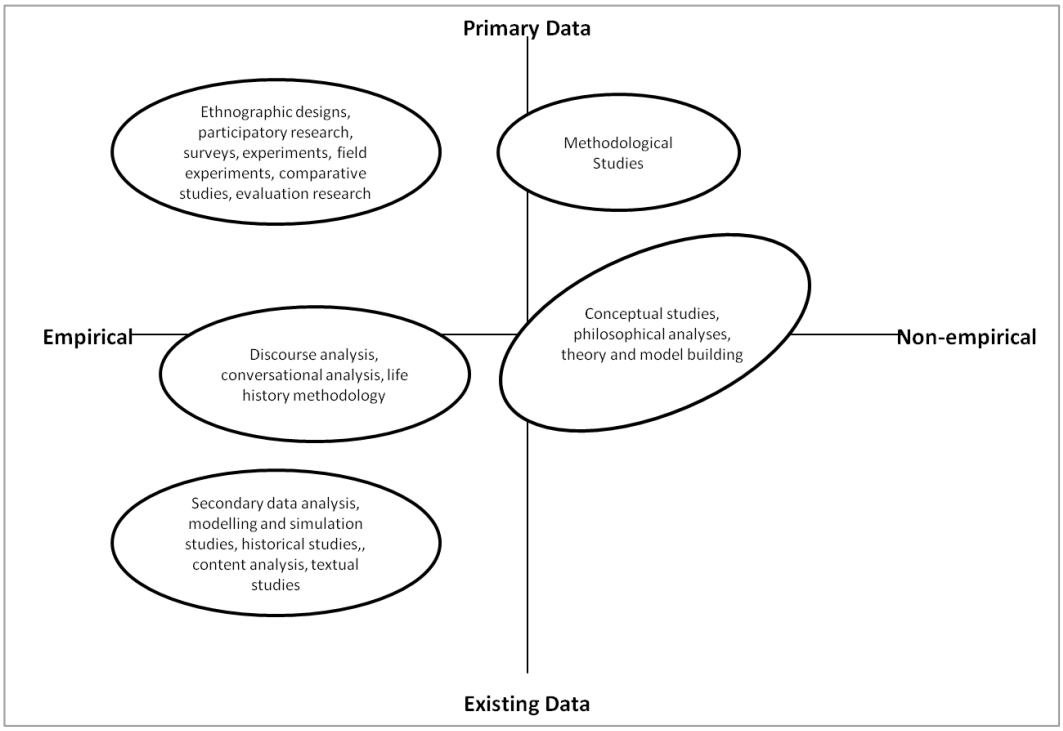


Figure 4-2 Mapping Designs (after Mouton, 2001, p.144)

For the purpose of addressing the research problem and related hypotheses, an empirical study generating primary data was selected. The data collection would be performed through interviews and data analysis through the summarisation of interview transcripts and thematic analysis. This would allow for the generation of content rich data from which to confirm the proposed factors and identify additional factors.

4.3 The Qualitative Study

4.3.1 The Research Population

A research population is defined by Welman and Kruger (2000, p.18) as "the entire collection of cases (or units) about which we wish to make conclusions."

For the purposes of this research, the population that conclusions would be drawn about, is organisations in South Africa that have executed Process

Improvement programmes. This collection is in turn made up of the employees with direct exposure to the Process Improvement programmes as the individual *units of analysis*.

4.3.2 Sample Size and Selection

4.3.2.1 Sampling Frame

By definition, a sampling frame is a complete list of units of analysis – in the ideal case this should be the population (Welman and Kruger, 2000, p. 49). A sample is then determined from the sampling frame using an appropriate sampling technique.

In this study, the sampling frame is individuals from organisations who have been exposed to breakthrough and continuous improvement programmes within their organisations (in South Africa). Individuals with any or all of the following exposure in Process Improvement programmes constitute units of analysis:

- Been a decision maker on improvement programmes; or
- Been directly exposed to improvement programmes; or
- Implemented changes as part of improvement programmes.

The abovementioned criteria put individuals in a position to knowledgeably comment on Process Improvement programmes.

4.3.2.2 Sampling techniques

A brief summary of common sampling techniques is noted in

Table 4-2 below. These have been based on definitions provided by Welman and Kruger (2000, p.52-63).

Table 4-2 Summary of Sampling Techniques

Type	Technique	Brief description
Probability Sampling	Simple random sampling	A member of the population has an equal chance of being selected
	Stratified random sampling	There are easily identifiable sub-populations (strata) that can be grouped with one characteristic (e.g. gender, industry, gender etc.). Samples are then taken from sub-populations
	Systematic sampling	Within a population of *1-N* units and a sample size of *n*, every $(N/n)^{th}$ integer in the sampling frame is chosen
	Cluster sampling	The population is grouped based on pre-existing heterogeneous groups (e.g. provinces in a country) called a cluster. Members of cluster then become the sampling frame from which the sample is selected. The technique is useful when time and cost are a constraint in identifying the population
Non-probability Sampling	Accidental sampling	Units of analysis that are readily available for the research
	Purposive sampling	Units of analysis deliberately obtained based on experience, previous research or resourcefulness
	Quota sampling	Attempt made to have the same proportions of units for analysis across strata. However units obtained within a stratum may be determined through accidental sampling
	Snowball sampling	Phase 1 of the sampling would be the individuals approached by the researcher, these individuals then refer other suitable individuals

The sampling frame for this study is individuals from organisations who have been exposed to breakthrough and continuous improvement programmes within their organisations (in South Africa). To determine the entire sampling frame would require knowledge of which organisations perform process improvement in South Africa. Due to the limitation of time and resources to determine the entire sampling frame and subsequently apply a suitable sampling technique in determining the research sample, a non-random sampling technique was applied.

Using purposive sampling, the sampling technique where the sample is chosen based on specific criteria and is not random (Leedy and Ormrod, 2010, p. 212), a set of companies that met the criteria of having undergone Process Improvement programmes in the past 0-5 years was determined. Firms were selected based on the researcher's knowledge that they had experience of Breakthrough and Incremental Process Improvement programmes. An initial set of participants was identified by the researcher. In some cases the initial set of participants referred further participants, which resulted in the snowball sampling technique being applied as well.

4.3.2.3 Sample Size

To determine whether the sample size selected for the research was adequate, several research methodology resources were reviewed. Collins et al. (2007, p.273) presents minimum sample size recommendations for quantitative and qualitative research designs in the table below. The quantitative sample sizes were determined for 0.80 statistical power at 5% level of significance. However, the qualitative sample sizes were based on *expert opinion* and not determined probabilistically.

Table 4-3 Minimum Sample Size Recommendations for Most Common Quantitative and Qualitative Research Designs (derived from Collins et al., 2007, p.273)

Research Design/Method	Minimum Sample Size Suggestion
Research design	
Correlational	64 participants for one-tailed hypotheses

Research Design/Method	Minimum Sample Size Suggestion
	82 participants for two-tailed hypotheses
Causal-comparative	51 participants per group for one-tailed hypotheses 64 participants for two-tailed hypotheses
Experimental	21 participants per group for one-tailed hypotheses
Case Study*	3-5 participants
Phenomenological*	10 interviews
Grounded theory*	15-20
Ethnography	1 cultural group
Ethological	100-200 units of observation
Research Method	
Focus Group	6-9 participants (other suggestions 6-10; 6-12; 8-12)

* *Identifies the comparable research designs for this study.*

Sandelowski (1995) (cited by Collins et al., 2007, p.290) provides a general rule for qualitative sample sizes i.e. "sample sizes in qualitative research should not be too small that it is difficult to obtain data saturation, theoretical saturation or informational redundancy. At the same time should not be so large that it is difficult to undertake a deep, case-oriented analysis".

Based on the guidelines for the qualitative research designs in the above table, and the general rule, a sample size of 18-20 units of analysis is determined as sufficient to generate empirical data to obtain data saturation. Therefore it is expected that the sample size will provide significant results and subsequently meaningful conclusions can be drawn.

4.3.2.4 The Research Sample

This study was conducted on a sample of 15 firms that met the selection criteria. A total of 20 individuals were interviewed. The sample was stratified by organisational level as it was deemed important to obtain views across levels within organisations in attempt to reduce bias in responses as a result of level

within an organisation. Participants ranged across organisational levels (i.e. executive, senior management, middle management and line function).

4.3.3 Data Collection

Primary data is defined as empirical data that a researcher collects themselves (Eriksson and Kovalainen, 2008, p.77). Data is commonly generated through an interview technique. Eriksson and Kovalainen (2008, p.80) present three types of qualitative interviews:

- "Structured and standardised – same standardised questions of all participants, mostly 'what' questions
- Guided and semi-structured – outline of topics, issues or themes, but variation in wording and sequence; both 'what' and 'how' questions
- Unstructured, informal, open and narrative interviews – some guiding questions or core concepts to start with, but freedom to move the conversation in any direction of interest that may come up; both 'what' and 'how' questions"

Given that the intention of the study was to confirm a set of pre-defined factors and also explore additional factors, the guided and semi-structured technique was the most suitable interview technique to apply.

4.3.3.1 Research Data Collected

The empirical data collected for this study was done through a series of semi-structured interviews. The research instrument used was a semi-structured questionnaire based on the questionnaire used in the study conducted by Lok et al. (2005) in developing a framework for measuring the success of Process Improvement programmes in Australian firms. A pilot study was performed with an individual who had experience in Process Improvement programmes. The aim of the pilot study was to test the questions for clarity. Minor wording changes were made post the pilot study.

Individuals from the companies were contacted via email or telephonically and were introduced to the research topic and requested to participate in the study. Where consent to an interview was obtained; a semi-structured interview was scheduled and conducted with the participants. Interviews were conducted either face-to-face or telephonically. Interviews were digitally recorded and then transcribed.

A copy of the letter introducing the study and the questionnaire used can be found in Appendix B.1 – Letter of Introduction and Appendix B.2 – Research Instrument: The Semi-Structured Interview Questionnaire.

4.3.4 Data Quality

The criteria widely used to assess the quality of data have been those used in quantitative methods: reliability and validity. However, due to the nature of differences between quantitative methods and qualitative methods, there are alternate criteria used to evaluate the quality of qualitative research: credibility, dependability, confirmability and transferability (Ulin et al., 2002, p.31). The four factors together evaluate the *trustworthiness* of data.

4.3.4.1 Credibility

Credibility is similar to the concept of validity and measures the level of "confidence in the truth of the findings" (Ulin et al., 2002, p.31). The process followed to preserve the accuracy of the data collected was that the interviews were recorded and subsequently transcribed. The detailed interview transcripts allowed the researcher to accurately utilise the original narrative data in summarising findings, thereby ensuring credibility of the findings. However it must be noted that there may have been bias from the researcher in summarising interview transcripts and applying discretion as to which points were most relevant to include in the interview summaries. A conscious effort was made to avoid bias during summarisation, and where possible, only reducing text that did not add value to the points being discussed.

4.3.4.2 Dependability

Dependability refers to the consistency of the research process (Ulin et al., 2002, p.32). The interviews were guided using a semi-structured questionnaire, with questions logically connected to the research purpose. The same set of questions was posed to all the respondents; thereby creating consistency. However, it should be noted that as this was a semi-structured interview, there was variation in wording when administering some of the questions. As there was only one researcher conducting the interviews, data collection was consistent.

With regards to the responses and data collected being consistent over time; as the nature of Process Improvements does evolve over time and has a dependence on business and market context, the data is anticipated to be predominantly consistent over time with minor differences based on the natural evolution in the field of Process Improvement practices and changing business contexts.

4.3.4.3 Confirmability

Ulin et al. (2002, p.32) describes confirmability as 'a way of knowing that, even as a co-participant in the inquiry, the researcher has maintained a distinction between personal values and those of the study participants.' The questions in the semi-structured questionnaire made use of open-ended questions as far as possible. The questionnaire was used to guide all the interviews to limit bias. It is assumed that the participants provided open, honest responses. However, as building rapport with respondents is required in the interview method, there was a level of co-participation by the researcher. Co-participation other than asking questions was limited to acknowledging responses, and demonstrating understanding of the responses by paraphrasing, and in some cases relating to examples from the researcher's own experience.

4.3.4.4 Transferability

Transferability refers to how extensible the results of the study are to the wider population (Ulin et al., 2002, p.32). The research sample covered respondents who had experience across a range of industry sectors; therefore, it is assumed that the results are transferable to organisations with *similarities* to the research sample. However, it must be noted that not all industry sectors within South Africa were covered. Another limitation of the transferability is that the sample had a geographical bias (Gauteng province) and was a relatively small sample of the population. Therefore the results may not be applicable to all South African firms who execute Process Improvement programmes.

4.3.5 Data Analysis

The data collected during the research process yielded a large volume of textual data in the form of the interview transcripts. Eriksson and Kovalainen (2008, p.90) note that there are a number of options for textual analysis, for example, *content analysis*, *conversation analysis* and *narrative analysis*. Since the primary objective of the research was to understand whether previous research was supported as well as understand what additional insights could be extracted from the research, it was decided to apply *content analysis* techniques to analyse the data.

In conducting the analysis, both vertical and horizontal analyses were performed. This was necessary given the volume of information gathered during the interview process. Van Zyl (2009, p.1-2) defines vertical analysis as the *summarisation* of content and horizontal analysis as the *comparison* of content.

During the vertical analysis of content, the volume of content is reduced by summarising text, paraphrasing or transforming data from text to tables. As the reduction in volume involves the researcher's discretion in elimination and retention of data, this results in a form of thematic analysis being performed (Van Zyl, 2009, p.1-2).

Once all the interviews are summarised within themselves, the cross comparison of interviews (horizontal analysis) is performed. The main purpose of this

comparison is to identify themes across units of analysis worthy of further discussion relative to the research topic (Van Zyl, 2009, p.1-2).

Based on the number of interviews conducted, it was also assessed that a level of count-based/frequency analysis would be relevant.

In the context of this study, the vertical analysis was performed when summarising individual interviews and horizontal analysis was utilised when comparing interviews against each other and extracting data in relation to the hypotheses.

Frequencies and counts of responses were also done as part of the horizontal analysis to gauge the significance of responses generated within individual interviews when compared to the research sample as a whole. In addition, content analysis of the summarised interview texts was performed to identify recurring themes that were noteworthy. For some hypotheses, a comparison of the findings against available literature was also done.

5 Methodology and Results of the Semi-Structured Interview Process

5.1 Introduction

The literature review identified a framework proposed by Lok et al. (2005, p.1376) that formed the basis of the semi-structured questionnaire. A limitation of the framework was that the study was based on Australian firms, and therefore factors identified may not have been representative of a South African context. It could be challenged that Process Improvement programmes are similar regardless of geographical location. However, there could be other factors that are specific to South Africa that impact the outcome of Process Improvement programmes; given the country's economic context, political and social history. A section was specifically defined in the questionnaire to allow for open ended comments on Critical Success Factors (CSF) prior to exploring the factors identified by Lok et al. (2005). The aim of the CSF section was to elicit the respondent's own views before discussing the factors as identified by Lok et al. (2005) in attempt to minimise bias in response.

5.2 The Interview Process

During the semi-structured interviews conducted with the participants, they were asked the questions listed in the table below. The hypothesis that the question evaluates has also been indicated.

Table 5-1 List of Questions Posed to Participants and Corresponding Hypothesis(s)

Section	Question	Hypothesis Evaluated
1. General Questions	1.1 What are the common triggers for Process Improvement programmes in your organisation?	General question
	1.2 Based on your experience, which Process	Hypothesis 1

Section	Question	Hypothesis Evaluated
	Improvement type (Breakthrough or Continuous) has a greater impact on organisational performance, and why?	
	1.3 Please describe any methodologies that are adopted for Breakthrough and Continuous improvement programmes in your organisation?	General question
2. Critical Success Factors	2.1 What are the top 5 Critical Success Factors (CSFs) for Process Improvement programmes?	Hypothesis 3 and 4
	2.2 Please describe what you consider are barriers to the success of Process Improvement programmes in your organisation?	Hypothesis 3 and 4
	2.3 Has your organisation addressed these barriers? If so, please describe how?	
3. Organisational Factors	3.1 How are Process Improvement projects strategically aligned in your organisation?	Hypothesis 2
	3.2 How are organisational structures aligned with changes to processes as part of Process Improvement programmes?	Hypothesis 2
	3.3 How are Process Improvement projects and IT alignment managed in your organisation?	Hypothesis 2
	3.4 What role do you think executive commitment plays in Process Improvement programmes?	Hypothesis 2
	3.5 To what extent are employees empowered in Process Improvement programmes within your organisation?	Hypothesis 2
4. Organisational Performance	4.1 Has your organisation's performance (competitive position, profitability, employee productivity, unit cost of product/service, quality of product/service) improved as a result of your Process Improvement programmes?	Hypothesis 1
	4.2 How has your organisation ensured that the	General

Section	Question	Hypothesis Evaluated
	desired results achieved are sustained over a long period?	question
5. Future Improvement Programmes	5.1 Please describe your general experience with Improvement programmes. Have your experiences been generally positive?	Hypothesis 5
	5.2 Will your organisation continue with Improvement programmes? If "No" please elaborate.	Hypothesis 5
	5.3 How are lessons learnt from previous Process Improvement programmes incorporated into future projects and shared in your organisation?	General question
6. General Comments	6. General comments pertaining to Process Improvement programmes	General question

5.3 The Interviewed Sample – Demographics

A total of 25 individuals across 17 organisations were contacted requesting their participation in the study. Out of the individuals contacted, 20 agreed to an interview. The 20 participants were from 15 different organisations. Participants varied among Line Management, Middle Management, Senior Management and Executive levels within these organisations. Appendix B.3 – Research Sample – Participant Demographics shows a list of participants and the industries they commented on. Due to confidentiality requests, company names have been omitted.

5.4 Data Collection

Interviews with participants were conducted one-on-one, either face-to-face or telephonically. The interviews were all recorded digitally and subsequently transcribed in order to maintain the integrity of the data collected. Written notes during the interview process often only contained high level points and the transcript provided a more accurate representation of each interview. Once the

interviews had been transcribed, the transcripts were summarised to reduce the large volume of information gathered.

Appendix C – Tabulated Results of the Transcribed Interviews presents the summary of the interviews by question. The data is presented by question and not by interview for legibility purposes.

5.5 Data Analysis

5.5.1 Data Summarisation

The interviews were initially transcribed in Microsoft Office Word document format. Each interview had a separate transcript file. Once all the transcripts were completed, a consolidated view of all the interviews was created in Microsoft Office Excel. The tabular format allowed for easier navigation across interviews and further data processing. The table was structured with the research questions as the column headings and the rows were each of the interviews as illustrated below. Responses related to the questions posed were captured in the cells.

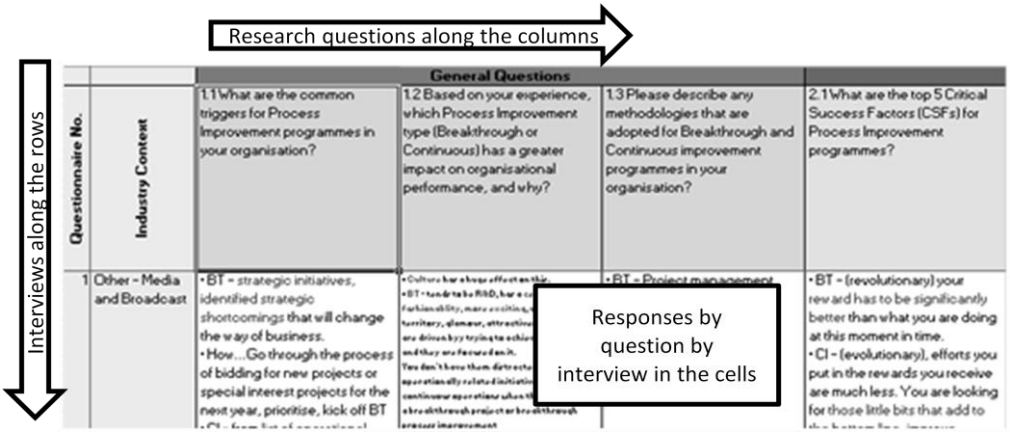


Figure 5-1 Snapshot of Working Document for Data Analysis

The content of each ‘response’ cell was summarised by reducing full sentences to key points and eliminating text that did not contribute to the point that was being discussed. This reduction in volume was the vertical analysis.

5.5.2 Data Analysis

Once the transcripts were summarised to a manageable amount of text (i.e. vertical analysis completed), the main analysis techniques that were applied included:

- **Horizontal analysis** to compare interviews against each other. The comparison was an iterative one, as a horizontal analysis was conducted for each hypothesis. In each cycle of comparison, the questions relevant to the hypothesis (as noted in Table 5-1) were first identified, then the information relevant to the hypothesis was extracted from the interview summaries
- **Frequencies and counts of responses** were also done as part of the analysis to gauge the significance of responses generated within individual interviews when compared to the research hypotheses. For the purpose of being able to generate counts, some of the text-rich responses were transformed by the researcher to a summarised “Yes”, “Neutral”, or “No” response when evaluating responses against hypotheses. Where counts were performed, visual summaries in the form of bar charts were produced
- **Thematic content analysis** of the summarised interview texts was also performed to identify recurring themes that were noteworthy (this was applicable mostly to Hypothesis 3)
- For some hypotheses, a **comparison** of the findings **against** available **literature** was also done to determine the relevance of the findings.

The above describes the majority of the analysis performed. Where a different analysis technique may have been required to draw insights from the data, the process followed is noted prior to presenting the results.

6 Discussion of Results

6.1 Introduction

The sources of bias, quality of research methods and responses to the semi-structured questionnaire are analysed in this chapter. The responses to the questionnaire are analysed with respect to the research hypotheses. Where appropriate, the findings are also compared to findings from the literature review to establish how this study compares to existing knowledge.

6.2 Sources of Bias

To determine potential sources of bias, the demographic information collected in section A (Demographic Details) of the interview questionnaire was examined. The demographic details that were extracted for analysis of potential sources of bias included:

- Respondent's position within the company
- Industry sector
- Company size (based on annual revenues)

6.2.1 Respondents' Position within the Company

The spread of the position of respondents is noted in Table 6-1 below. From the data it should be noted that there is an uneven spread of respondent positions. Therefore there is potential for bias based on level within an organisation. The number of respondents at the Line function level is low compared to the other levels; therefore findings may not be representative of employees at the line function level within an organisation.

Table 6-1 Respondents' Position within their Company

Position	Number of respondents
Line function	1

Position	Number of respondents
Middle Management	8
Senior Management	6
Executive	5

6.2.2 Industry Sector

The industry sectors that respondents commented on are noted in Table 6-2. Some respondents commented on more than one industry based on their overall experience. For the purposes of analysis, industry sector was not a parameter that was used to classify data. However, it must be noted that potential exists for response bias based on industry sector, as there are a higher number of respondents who commented on the Manufacturing, Mining and Utilities industries.

Table 6-2 Industry Sectors Commented on by Respondents

Industry Sector	Number of Respondents Commenting
Manufacturing	9
Mining	6
Utilities	6
Financial	5
Retail	3
Transport	1
Media and Broadcast	1

6.2.3 Company Size

In some cases respondents provided comments based on their experience at multiple organisations. For the purpose of determining company size where respondents had commented on multiple organisations, the size of their primary organisation (or primary client, in the case of consultants) used during the interview was used to determine the size of the organisation. All of the

respondents commented relative to large organisations (>ZAR 1 billion in revenue). Therefore, company size is considered to have a potential bias in the responses. Findings may not be representative of all company sizes.

6.3 Quality of the Research Method

The overall applicability of the research to the total population is limited due to:

1. The purposive sampling technique applied which implied that the sample was non-random and that in itself creates a bias; and
2. The additional sources of bias introduced in the sample discussed in section 6.2.

6.4 Discussion of Research Results in Relation to Hypotheses

6.4.1 Hypothesis 1

- *Process Improvement programmes contribute positively towards organisation performance.*

The responses to the questions posed in section one and four of the questionnaire, were evaluated to determine to what extent the respondents agreed or disagreed with Hypothesis 1. Figure 6-1 below shows the summary of the responses to Organisational Performance changes as a result of Process Improvement programmes.

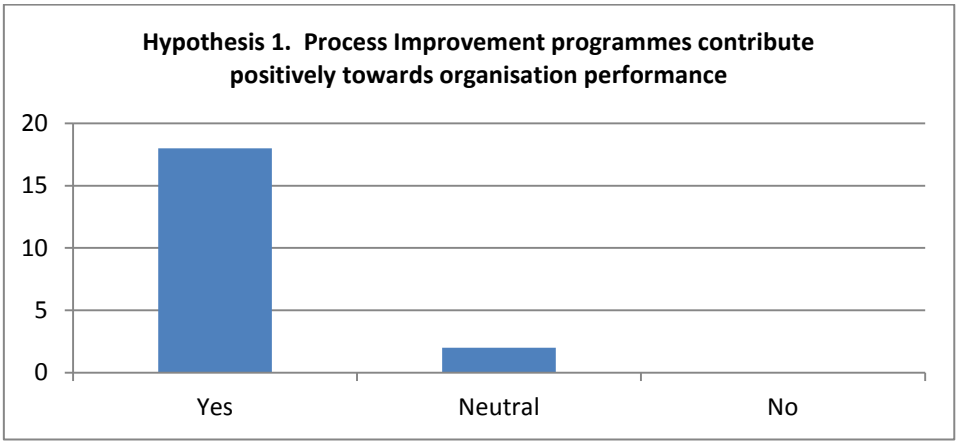


Figure 6-1 Summary of responses indicating whether Process Improvement programmes contribute positively to organisation performance in relation to Hypothesis 1

The majority of respondents indicated that they had experienced some level of improvement as a result of the Process Improvement initiatives that had been implemented. The neutral responses were either a case of it being too early within the programme to evaluate final outcomes, or during the respondent's time at the organisation, they hadn't observed sufficient traction in the adoption of the changes to comment.

Lok et al.'s study (2005, pp. 1364 and 1376) had hypothesised that "Reengineering programmes, owing to their radical process redesign, have a greater impact on organisational performance than do the less radical approaches of Continuous Improvement and Benchmarking". The hypothesis was confirmed in Lok et al.'s study.

When respondents were asked to comment on whether contributions to improvements in organisational performance differed based on the type of improvement (i.e. Breakthrough or Incremental); the general observation was that it is important to make these observations *relative to time*. The general observation was that Breakthrough programmes had more importance and visibility placed on them and may be perceived as having a greater impact. However, there was acknowledgement that Incremental (Continuous) improvement programmes were more *sustainable* in nature and over time may add more value to an organisation than Breakthrough programmes.

Comparing the responses obtained from this study against Lok et al.'s study, it is noted that the *sustainability* of the changes is a dimension that should be further explored in evaluating whether the different types of improvement programmes contribute differently to organisational performance changes.

Overall, it is concluded that **Hypothesis 1 is accepted** since the majority of respondents observed an improvement in performance as a result of Process Improvement initiatives.

6.4.2 Hypothesis 2

- *The following factors, based on Lok et al.'s (2005) framework, contribute to the outcome of Process Improvement programmes:*
    - *Strategic alignment;*
    - *Structural alignment;*
    - *IT alignment;*
    - *Executive commitment; and*
    - *Employee empowerment.*

During the interview, participants were asked to comment on the above factors. In some cases, the importance of the factors had already been mentioned earlier in the interview sequence; participants were then asked to elaborate on the factors and describe the extent to which they had observed the factors within their organisations. Where participants had not mentioned the factors prior to Organisational Factors section (questions 3.1-3.5) in the interview, the participants were asked to describe their view of the factors and also comment on the extent to which they have observed these factors. Positive responses were positively scored, and Neutral or Negative responses were negatively scored. The summarised results of these questions are presented in Figure 6-2.

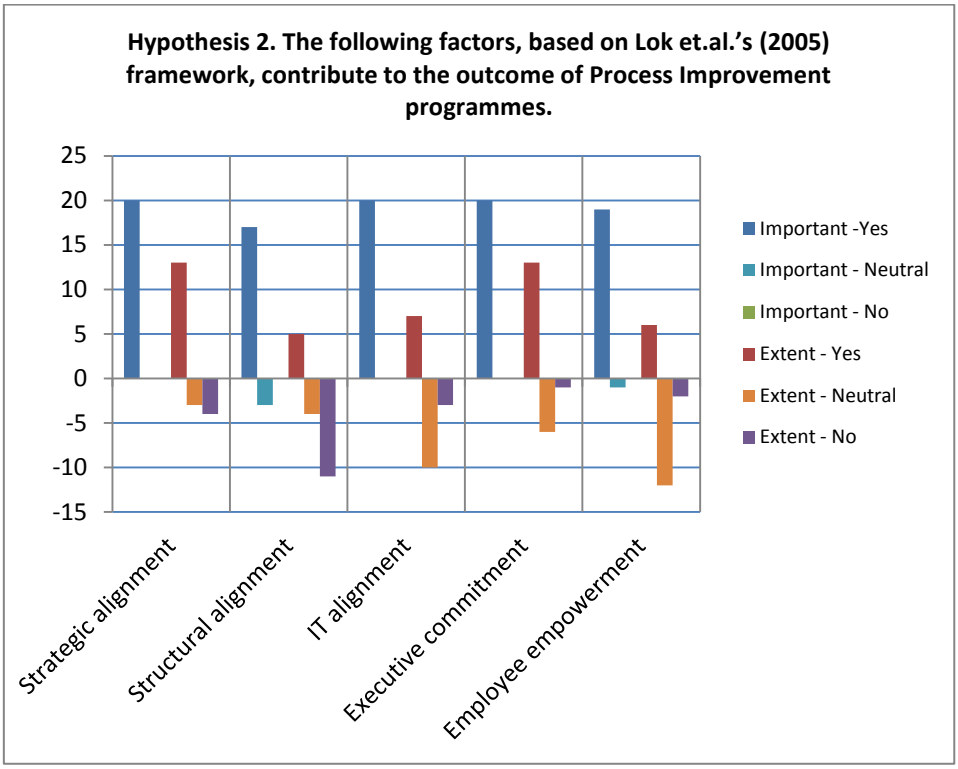


Figure 6-2 Distribution of responses relating to the level of importance of factors noted in Hypothesis 2 and the extent to which they are observed in organisations

Overall, the observation is that all the factors were perceived to be important in the outcome of Process Improvement programmes (i.e. responses that were tallied under "Important-Yes"). However, when viewing the *extent* to which these factors were practised or visible (i.e. tallied under "Extent-Yes"), only two of the factors came out as noteworthy: strategic alignment and executive commitment. Only moderate levels of visible structural alignment, IT alignment and employee empowerment are noted.

6.4.2.1 Strategic Alignment

Strategic alignment as a factor was indicated as being important by all respondents. In performing the horizontal analysis across interviews, in the cases where strategic alignment was fairly well observed there seemed to be more emphasis placed on formal strategic alignment, e.g. through the use of project selection criteria, governance forums, alignment of the changes to Key

Performance Indicators (KPI's) or performance contracting at the individual level. In the cases where a lesser extent of strategic alignment was noted, the observation was that there were competing priorities at the department level. Therefore this has an impact on how the broader organisation-wide priorities are cascaded down and implemented at the department level.

6.4.2.2 Structural Alignment

Structural alignment was the one factor overall that had the lowest number responses (17) interpreted as positively indicating that it was an important factor. There were three neutral responses provided. The neutral responses were attributed to the nature of the projects the respondents had worked on – mostly the projects had not necessitated any changes to structure to enable the improvement. Structural alignment was also the factor that the responses indicated the strongest negative extent to which the factor is observed (11 responses).

Overall, the organisations sampled were very traditionally, functionally structured. In the organisations that indicated that organisational alignment was prevalent; many of them were still functionally structured, however, leveraged cross-functional governance structures, Process Owners or Centres of Excellence-type structures to ensure alignment within the organisation.

Respondents from five separate organisations noted that often organisation structure design is performed independently of process design, thereby creating situations where the processes are retrofitted to the structure that is created and this inherently detracts from process orientation within organisations.

Lok et al.'s study (2005, p.1377) did not prove that structural alignment was a significant factor and noted this as partly being due to "many structural and IT reforms had already occurred in large Australian companies prior to the survey." In contrast, among the organisations sampled in South Africa, a number of the respondents cited programmes that are either currently underway or imminent that aimed to reorganise structures to transition to a more process-orientated organisation. Therefore, structural alignment as a factor within the South African

context could be argued is still a relevant factor that influences the outcome of Process Improvement programmes.

6.4.2.3 IT Alignment

All respondents indicated IT alignment as being important where Process Improvements required IT changes or enablement. Important to note is that not all Process Improvement initiatives require IT changes. Typically the larger scale and Breakthrough type of programmes were noted as the projects that required IT changes. Overall, there was a general understanding that IT enables process across the organisations. Respondents noted that there had been a conscious effort to move away from IT leading the change towards the Process leading the change.

Although there was the general understanding that the role of IT is to enable business processes, there were a significant number of responses (10) that were interpreted as “Extent - Neutral”. Half of the “Extent - Neutral” responses were attributed to the general comments on the *time* it takes to receive support from the IT teams. Within established organisations, IT processes tend to be formalised and in general have strict governance processes for change control. This results in changes taking time to get through the required stages of approval. Another observation contributing to the neutral rating includes a perception that IT resources tend to be allocated to the larger initiatives that are more visible and on management’s list of priorities; thereby limiting the resources available for smaller, yet important initiatives.

6.4.2.4 Executive Commitment

All respondents indicated that executive commitment is considered an important factor. When examining the extent to which executive commitment is observed, the majority (13) indicated that they have experienced positive demonstration of executive commitment in their organisations. The responses that were interpreted as neutral or negative were based on respondents who had experienced a mix of positive and negative demonstration of executive commitment. The main disconnect that was observed was often that the actions

did not match the verbal commitments made. Examples ranged from executives not having initially bought into the idea and subsequently not demonstrating support; and inconsistency in terms of verbalising certain priorities, but not matching those with actions especially with tougher decisions that may have needed to be taken e.g. cost reduction efforts that required headcount reductions.

6.4.2.5 Employee Empowerment

The majority of respondents (19) indicated that employee empowerment was an important factor for Process Improvement programmes. There was one neutral response, on the basis of the observation that it was quite early in the business' lifecycle and it was probably a bit premature for there to be adequate levels of empowerment. On examining the extent of which respondents considered employees to be empowered; only six respondents felt that a suitable level of employee empowerment existed within organisations they were commenting on. The remaining respondents tended towards a neutral to more negative response as they felt that more could be done with regards to empowerment.

An observation that was made across the interviews was that six of the respondents drew a definite distinction in the levels of empowerment by Process Improvement type (Breakthrough vs. Incremental). With Breakthrough programmes, the core project team are often considered to be more empowered when compared to the total group of people impacted by the change. With Incremental (Continuous) improvement programmes, the affected employees typically initiated the improvement ideas and were more empowered.

Lok et al. (2005, p.1367) evaluates employee empowerment in their study using criteria such as: the autonomy to take decisions, involvement in planning of one's own work, given the necessary resources to address problems, and increased interaction with external customers. An additional aspect of empowerment which was identified by four of the respondents was *training*. Linked to training was also the observation of the availability of suitably skilled resources across the organisations.

In summary, **Hypothesis 2 is accepted**, as respondents generally indicated the factors were important and contribute towards the outcome of Process Improvement programmes.

6.4.3 Hypothesis 3

- *There are other factors that influence Process Improvement programmes in South African organisations.*

To identify whether there were additional factors that influenced Process Improvement programmes, respondents were asked to list Critical Success Factors (CSF) and Barriers to Success for Process Improvement programmes when answering section two of the questionnaire. To avoid bias, this section was intentionally placed ahead of discussing the factors as identified by Lok et al. (2005) in section three of the questionnaire. Responses to questions 2.1 and 2.2 were analysed and where factors other than the organisational factors in Hypothesis 2 were mentioned, these were considered as a positive response for Hypothesis 3. The tally of this count is shown in Figure 6-3 below.

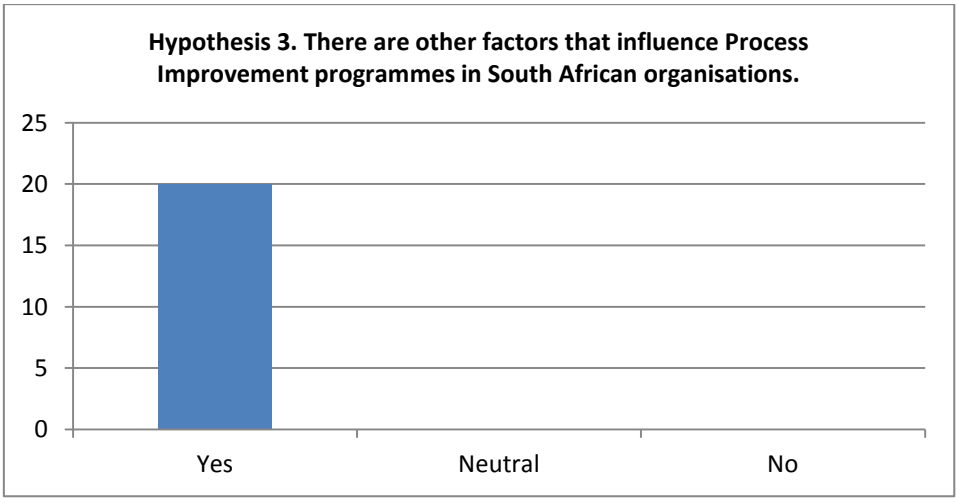


Figure 6-3 Overall indication of whether there are additional factors that influence Process Improvement programmes in relation to Hypothesis 3

A number of additional factors were identified by the respondents as factors that contribute or impede the success of Process Improvement programmes. However, only ones recurring across three or more interviews are discussed.

6.4.3.1 Additional factor 1 – Value and Clarity of the Proposed Changes

Over and above having strategic alignment, the changes being proposed as part of the Process Improvement must be of significant value (monetary or non-monetary) in order for the business to have the *will* to change. Eleven respondents discussed the importance of the clarity of the change. The vision, objectives and benefits associated with the Improvement programme have to be clearly articulated in a manner suitable for different stakeholder groups to ensure everyone has a clear understanding of the change required of them. The value to be derived from the Process Improvement has to be quantified, made visible, tracked and communicated over the course of the programme.

6.4.3.2 Additional factor 2 – Pace of the Change

Five respondents raised the pace of change as a contributing factor to the outcome of Process Improvement programmes. During the course of an improvement programme, a key to ensuring that the momentum of the programme is maintained is the importance of demonstrating benefits as early on as possible and showing success. The rationale was that if changes are visible, and people can see the benefits of the change, they are more likely to support and adopt the change.

6.4.3.3 Additional factor 3 – Inherent Culture of an Organisation

Four respondents highlighted that identifying the inherent culture of an organisation, taking into consideration the history and current state of an organisation and adapting Improvement Programmes to an organisation's culture influences the success of an Improvement programme. Failing to tailor project approaches to an environment with specific dynamics may result in resistance to change and lower adoption rates of the change by the impacted employees.

6.4.3.4 Additional factor 4 – Sustainability of the Change

Ensuring the sustainability of the change is something that has to be planned for during an Improvement programme – this was noted by ten respondents. Sustainability can be driven through a number of mechanisms: training on the changes; inclusion into company KPI's; linking to individual performance contracts, introducing monitoring and control systems; ensuring ease of adopting the changes; not linking initiatives to people but to organisational benefits to prevent programmes collapsing when people move; or teams conducting post implementation checks. Sustainability has to be built in to avoid people reverting to old ways of working.

6.4.3.5 Additional factor 5 – Skills

Half the respondents cited having the suitable skills as an important factor for both implementation and sustainability of the changes as part of Process Improvement programmes. The skills factor applies across the spectrum of the organisation, this includes (i) the skills of the team implementing the project (i.e. having knowledgeable resources, access to Subject Matter Experts, or appropriate steering committees) and (ii) skills of the people receiving the changes and their ability to learn and adopt the new process.

Five respondents specifically mentioned the skill levels in South Africa as being a challenge faced within the country. The literacy and numeracy levels of employees impact the ability to fully leverage the more technical improvement methodologies such as Six Sigma which have strong analytical and statistical elements. Organisations wanting to adopt Six Sigma or similar process improvement methodologies note the skills levels as being a limitation to the empowerment of employees.

Hypothesis 3 is accepted noting that the main additional factors that influence the outcome of Process Improvement programmes as:

- Value and clarity of the proposed changes;
- Pace of the change;
- Inherent culture of an organisation;

- Sustainability of the change; and
- Skills.

6.4.4 Hypothesis 4

- *Breakthrough improvement programmes have different success factors compared to Incremental (Continuous) improvement programmes.*

During the interview process, respondents were asked to indicate whether they thought the CSF's (Critical Success Factors) they listed in section two of the questionnaire differed based on Process Improvement type (Breakthrough vs. Incremental (Continuous)). The responses were tallied and the summary is presented in Figure 6-4 below.

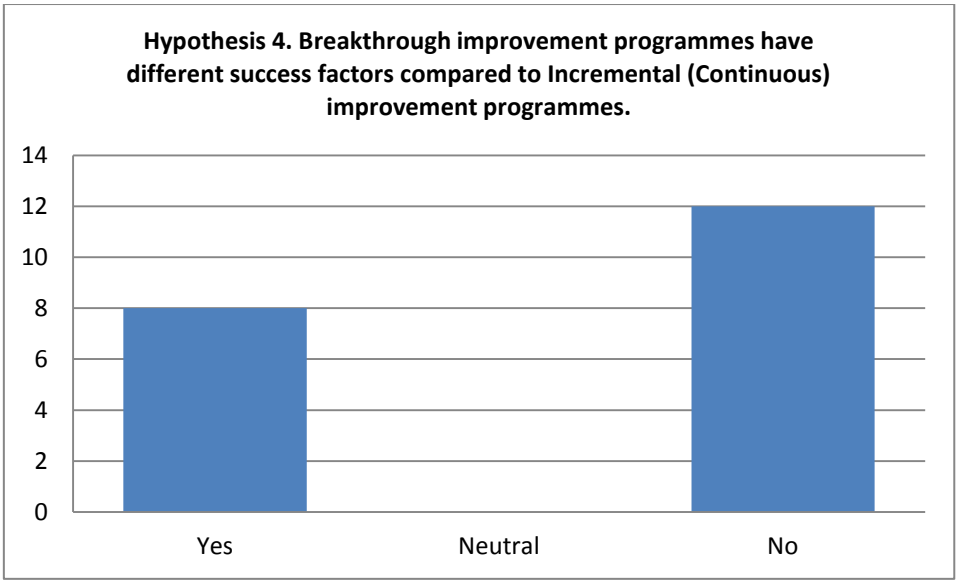


Figure 6-4 Summary of the responses in relation to whether success factors differ between Breakthrough and Incremental Process Improvement programmes (Hypothesis 4)

The majority of respondents (12) did not distinguish CSF's by Process Improvement type. However, eight respondents did highlight that there were slightly different CSFs. Only the factors that were mentioned across more than

one of the eight interviews will be discussed. Table 6-3 below shows a list of factors that were cited by more than one of the eight respondents who drew a distinction between CSFs for Process Improvement type. The tally marks indicate which category the factor was mentioned under (Breakthrough, Incremental or Common factor).

Table 6-3 Tally of Recurring Critical Success Factors by Improvement programme Type

No.	Factor	Breakthrough	Incremental	Common	Total
1	Measurement and control		||	||||	6
2	Change management		||	|||	5
3	Buy-in	|||		||	5
4	Clarity on objectives and benefits	|||		||	5
5	Sponsorship, leadership commitment	|		|||	4
6	**Right resources**	**|||**		**|**	**4**
7	Alignment to strategy	|		|	2
8	Rewards and recognition	|	|		2

It is interesting to note that of the factors that were discussed more than once, there was clear overlap in terms of where respondents categorised the factors. The only factor that stands out as being mentioned more for a specific type of Improvement type is "**Right resources**". Having the right resources dedicated to the project team was seen to be more important for Breakthrough type projects. The remaining factors had marginal differences on whether they were common factors or factors specific to an Improvement type.

There is insufficient evidence to support Hypothesis 4, therefore **Hypothesis 4 is rejected.**

6.4.5 Hypothesis 5

- *Organisations will continue with Process Improvement programmes where there has been a positive experience.*

To evaluate Hypothesis 5, questions 5.1 and 5.2 (section 5, Future Improvement Programmes) of the questionnaire were analysed. Figure 6-5 shows the

summary of the responses relevant to Hypothesis 5. Respondents' experience is plotted along the x-axis; likelihood to continue with Process Improvement programmes is plotted along the y-axis; and the size of the bubble indicates the number of responses.

Responses marked as neutral were where respondents indicated a mixed response of both positive and negative experiences.

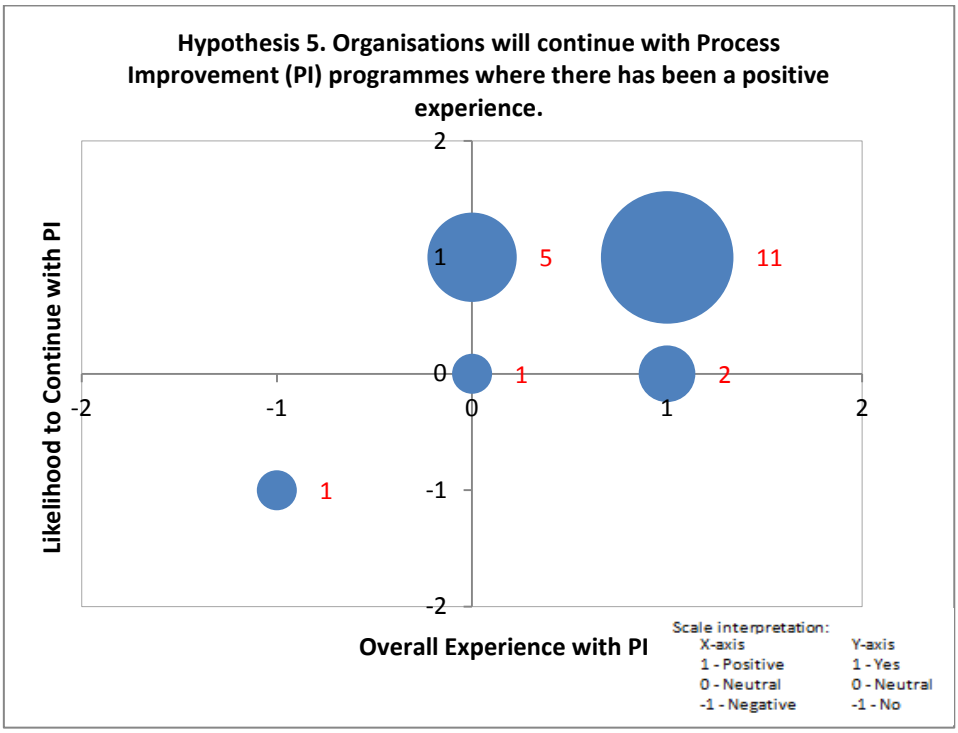


Figure 6-5 Likelihood of continuing with Process Improvement programmes based on prior in relation to Hypothesis 5

As indicated by the graph above, of the 13 respondents who had positive experiences, 11 indicated that the organisations they commented on were likely to continue with Process Improvement programmes. In addition, of the six respondents who had neutral experiences, five of them indicated that the organisations they commented on were also likely to continue with Process Improvement programmes. In summary, **Hypothesis 5 is accepted.**

On further analysis of reasons as to why respondents were neutral or negative about the likelihood of continuing with Process Improvement programmes, a common reason that came through across the interviews was that the Improvement programme was linked to an individual and not strongly enough to a business benefit.

6.5 Summary of Discussion of Results

In conducting an assessment of potential sources of bias and also considering the quality of the research method applied, it has been established that the results of this study are not necessarily applicable to the overall population due to bias introduced by the method and bias inherent to the sample.

The summarised interviews were analysed against the research hypotheses also compared to literature review findings. The conclusion of the discussion and study as a whole is presented in Chapter 7.

7 Conclusion

7.1 Research Overview

After performing an initial literature review, the main research problem that the study aimed to answer (using the Process Improvement classification of Slack and Lewis (2008) and the framework Lok et al. (2005) formulated as the premise of this research) was:

- *What factors affect the outcome of process improvement programmes in South African firms?*

To fully explore the factors, a further set of five research hypotheses were formulated. A semi-structured questionnaire was developed and a series of semi-structured interviews were conducted. The responses from the interviews were analysed against the research hypotheses and compared to existing literature. The following sections describe key findings and conclusions of this study.

7.2 Conclusions of the Study

7.2.1 Findings Relative to Research Hypotheses

The outcome of the analysis against the five research hypotheses is presented in Table 7-1 below.

Table 7-1 Summary of Conclusions Relative to Research Hypotheses

No.	Hypothesis Statement	Key Findings	Conclusion
1	Process Improvement programmes contribute positively towards organisation performance.	In order to evaluate the impact of Process Improvement contribution on organisation performance by	**Accepted**

No.	Hypothesis Statement	Key Findings	Conclusion
		improvement type (Breakthrough vs. Incremental), one has to include timeframe as well as an evaluation of the sustainability of the change.	
2	The following factors, based on Lok et al.'s (2005) framework, contribute to the outcome of Process Improvement programmes: • Strategic alignment; • Structural alignment; • IT alignment; • Executive commitment; and • Employee empowerment.	All factors were indicated to be important. In evaluating the extent to which the factors were observable, structural alignment and employee empowerment were the factors that respondents indicated were least observed within organisations.	**Accepted**
3	There are other factors that influence Process Improvement programmes in South African organisations.	The main additional factors that were identified that influence the outcome of Process Improvement programmes were: • Value and clarity of the proposed changes; • Pace of the change; • Inherent culture of an organisation; • Sustainability of the change; and • Skills.	**Accepted**

No.	Hypothesis Statement	Key Findings	Conclusion
4	Breakthrough improvement programmes have different success factors compared to Incremental (Continuous) improvement programmes.	The majority of respondents did not distinguish success factors by Process Improvement type. Of the respondents who had indicated there was a difference by Improvement type; there were no substantially common factors that could result in a set of CSFs being formulated per Improvement type.	**Rejected**
5	Organisations will continue with Process Improvement programmes where there has been a positive experience.	The majority of respondents who had positive experiences with Process Improvement programmes indicated their organisations were likely to continue with Process Improvement programmes in future.	**Accepted**

7.3 Limitations of the Study

The study has confirmed the pre-defined factors and identified a number of additional factors that influence the outcome of Process Improvement programmes across a sample of South African organisations. The main limitations of the study are noted below:

- Due to the relatively low sample size, industry sectors sampled and geographical limitations of the study, there may be additional factors that were not identified and therefore the list of factors is not exhaustive;

- The empirical data collected was based on the respondent's recollection of their experience and statements were not verified with facts or company data. The study relied on respondents providing an accurate account of their experience;
- The factors identified through the study have not been explored for relative importance; and
- As a result of some respondents providing input based on cross-industry and cross-organisation experience, it was a challenge to separate factors by industry sector. The factors have not been verified in terms of applicability by industry sector.

7.4 Recommendations

The study has confirmed that the factors as identified by Lok et al. (2005) are considered important factors that influence the outcome of Process Improvement programmes in South Africa as well. These factors are:

- Strategic alignment;
- Structural alignment;
- IT alignment;
- Executive commitment; and
- Employee empowerment.

A noteworthy point on *structural alignment* is that a number of respondents cited programmes that are either currently underway or imminent that planned to reorganise structures to transition to a more process-orientated organisation. It is anticipated that the extent of structural alignment would improve over time in the organisations sampled.

In addition to the factors based on Lok et al.'s (2005) framework; a further set of five factors were identified in the study that were of significance and critical to the success of Process Improvement programmes:

i. Value and clarity of the proposed changes;
ii. Pace of the change;
iii. Inherent culture of an organisation;
iv. Sustainability of the change; and

v. Skills.

Factors (i) to (iv) are considered to be applicable irrespective of geographical location, however, factor (v) was specifically noted as a factor more pertinent to South Africa (and possibly other emerging nations) and perhaps not as relevant to countries considered to be first world.

In conclusion, *the factors as confirmed and identified by this study, are considered by select South African firms undertaking Process Improvement programmes as being important in ensuring a successful outcome of Process Improvement programmes.*

8 Recommendations for Further Research

Recommendations for further research are influenced by the limitations of the study as well as research findings and are presented below.

1. Improve the transferability of the results and extend the study to companies outside the Gauteng provincial boundary, and also across a broader spectrum of industry sectors to gauge applicability across the country and across industry sectors. This will also assist in addressing the limitation that the factors have not been verified for applicability by industry sector;
2. Further investigate the factors that were identified to be important but not perceived to be adequate, i.e. structural alignment, IT alignment and employee empowerment;
3. Further test the applicability of the additional five factors identified in this study across organisations;
4. Conduct further quantitative research on the additional factors identified in the study to establish the relative importance of the factors and how they influence the outcome of Process Improvement programmes;
5. As there was a perception that the “Skills” factor was a South African specific factor, it is recommended that the impact of skill levels and skills availability on Performance Improvement programmes be further investigated across developed and developing countries; and
6. A number of respondents who commented on the Financial Services industry sector had also had exposure to other industries and an observation was that Process Improvement programmes in a service industry have different characteristics than a Manufacturing or Mining industry. There is a perception that the Financial Services industry is not as efficiency orientated as other industries and therefore does not apply the same level of rigour in Process Improvement initiatives (linked to being as a result of the South African context where Financial Services organisations typically do not face the same cost pressure challenges as other industries that may be heavily linked to commodity prices). A study comparing the Financial Services industry against a Manufacturing/Mining sector is recommended to further explore this perception.

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Appendix A – Copy of Questions posed in Lok et al.'s Study

The questions posed to participants in Lok et al.'s study (2005, pp.1367-1367) are presented below.

Table I. Items comprising composite variables

Scale	*Component items*	*Factor loading*
Organizational Alignment Scales		
1. Structural Alignment	1. There are high barriers between departments (reverse scored)	0.866
	2. We make frequent use of process teams	0.410
	3. Our cross-functional teams have more authority than departmental managers in making day-to-day decisions	0.838
	4. Our response time satisfies customers	0.421
	5. Horizontal communication is well practised in our organization	0.535
	6. We have a flat organizational structure	0.640
	7. We delegate managerial tasks to front-line staff	0.433
2. IT Alignment	1. Our technology enables our business processes to perform well	0.769
	2. Our technology is state-of-the-art	0.833
	3. The amount of data shared by employees is increasing	0.480
	4. Information technology is very important to the improvement of our business processes	0.651
	5. Our information technology systems are well integrated across functional units	0.754
3. Strategic Alignment	1. We develop strategies based on customer needs	0.453
	2. The management team has identified our core processes	0.621
	3. Our core processes are an important input into our strategic plan	0.566
	4. Our operational improvements have a direct impact on our ability to compete	0.774
	5. We have sufficient measures to permit a clear tracking of our performance	0.457
	6. Our current strategic plan identifies the projects we actually undertake to improve our business processes	0.452
	7. Our strategic planning process encourages information sharing and cross-functional cooperation	0.473
People Involvement Scales		
4. Executive Commitment	1. Top management has received adequate training in managing core processes	0.767
	2. Top management has sufficient knowledge on how to manage core processes	0.769
	3. Top management actively communicates to employees on how best to manage core processes	0.680
	4. Top management expressly recognizes the need to identify core processes	0.735
	5. Top management allocates adequate resources to improve core processes	0.654
5. Employee Empowerment	1. Employees are increasing their involvement in the way their work is planned	0.807
	2. Employees are increasing their autonomy in making decisions that affect their work	0.784
	3. Employees are not given the necessary resources to fix problems they encounter (reverse coded)	0.451
	4. Employees are encouraged to fix problems they encounter	0.514
	5. Employees are interacting more with external customers	0.474
Process Improvement Effectiveness Scales		
6. Continuous Improvement	1. We have increased the number of employees involved in Continuous Improvement programmes in the last three years	0.753
	2. The number of Continuous Improvement projects has increased annually in the last three years	0.572

Table I. *Continued*

Scale	*Component items*	*Factor loading*
	3. We have a formal methodology in place to guide our Continuous Improvement programmes	0.781
	4. Our organization will definitely continue with Continuous Improvement programmes	0.772
	5. Our experience with Continuous Improvement programmes has generally been positive	0.458
	6. Our Continuous Improvement programmes contribute to bottom line improvement	0.521
7. Reengineering	1. We have increased the number of employees involved in Process Reengineering programmes in the last three years	0.637
	2. The number of Process Reengineering projects has increased annually in the last three years	0.828
	3. We do not have a formal methodology in place to guide our Process Reengineering programmes (reverse coded)	0.751
	4. Our organization will definitely continue with Process Reengineering programmes	0.632
	5. Our experience with Process Reengineering programmes has generally been positive	0.542
	6. Our Process Reengineering programmes contribute to bottom line improvement	0.556
8. Benchmarking	1. We have increased the number of employees involved in Benchmarking programmes in the last three years	0.897
	2. The number of Benchmarking projects has increased annually in the last three years	0.439
	3. We have a formal methodology in place to guide our Benchmarking programmes	0.689
	4. Our organization will definitely continue with Benchmarking programmes	0.677
	5. Our experience with Benchmarking programmes has generally been positive	0.428
	6. Our Benchmarking programmes contribute to bottom line improvement	0.531
Organizational Performance Scale		
9. Organizational Performance	1. Our organization's competitive position has improved over the last two years	0.710
	2. The productivity of our employees has increased over the last two years	0.723
	3. Our organization's profitability has increased over the last two years	0.646
	4. The quality of our products and services has not improved over the last two years (reverse coded)	0.751
	5. Our average cost per unit of product or service has decreased of the last two years	0.452

Note: For each of the items, subjects indicated their agreement with the statement on a 5-point scale, with end-points 'strongly disagree' and 'strongly agree'. Items were coded 'strongly disagree' = 1 to 'strongly agree' = 5, except for those items identified with 'reverse coded', which were coded 'strongly agree' = 1 to 'strongly disagree' = 5.

Appendix B.1 – Letter of Introduction

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University of the Witwatersrand

15 November 2011

Process Improvement Research

Dear Sir/ Madam

As part of my Masters in Industrial Engineering research project with the University of the Witwatersrand, I am conducting research into the factors that affect the outcome of **Process Improvement** programmes in South African firms. The results of this research will help to understand what the drivers of success are of these improvement programmes to maximise the investment (effort and monetary) in these programmes.

In conducting this research, I am looking for respondents who have been exposed to **breakthrough** and **continuous** improvement programmes within their organisations.

The respondents should have either of the following experiences:

- Been a decision maker on improvement programmes;
- Been directly exposed to improvement programmes; or
- Implemented changes as part of improvement programmes.

The research instrument is a semi-structured questionnaire that requires a face-to-face or telephonic interview to complete. The interview is estimated to take **1 hour**.

Anonymity and confidentiality can be maintained if requested. If you would like a copy of the results of the study, please indicate this during the interview.

I thank you in anticipation of confirmation of an interview session.

Yours sincerely,



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Appendix B.2 – Research Instrument: The Semi-Structured Interview Questionnaire

(Please turn over for questionnaire)

Process Improvement Programmes Survey

A. Demographic Details

Questionnaire No. _____

Date of interview _____

Name _____

Company _____

Email _____

Tel. No. _____

Job Title _____

Time Period in Current Position _____

Please circle appropriate

Position within company

Line function	Middle Management	Senior Management	Executive

Industry Sector

Financial	Manufacturing	Mining	Retail
Agriculture	Technology	Utilities	Other

Company Size

Annual Revenues

< R250m	R250m - R500m	R500m - R0.1bn	R1bn +

Number of Employees

< 500	500 to 1000	1000 to 5000	5000 +

Comments

_____

_____

_____

_____

B. Survey Context

The purpose of this interview is to draw on the respondent's experience and knowledge of Process Improvement programmes at their company/clients.

Questions will be asked relative to two types of Improvement Programmes:

1. Breakthrough Improvement
2. Continuous Improvement

Characteristics of Breakthrough and Continuous Improvement Programmes are noted below.

	Breakthrough Improvement	Continuous Improvement
Effect	Short-term but dramatic	Long-term and long-lasting but undramatic
Pace	Big steps	Small steps
Time-frame	Intermittent and non-incremental	Continuous and incremental
Change Involvement	Abrupt and volatile	Gradual and constant
Approach	Select a few champions	Everybody
Stimulus	Technological breakthroughs, new inventions, new theories	Conventional know-how and state of the art
Risks	Concentrated – 'all eggs in one basket'	Spread – many projects simultaneously
Practical requirements	Requires large investment but little effort to maintain it	Requires little investment but great effort to maintain it
Effort orientation	Technology	People
Evaluation Criteria	Results for profit	Process and efforts for better results

Please Identify an example of each type of improvement programme at your organisation to draw on as an example for the remaining questions.

Breakthrough Improvement Programme : _____

Continuous Improvement Programme: _____

C. Survey Questions

1. General Questions

1.1 What are the common **triggers** for Process Improvement programmes in your organisation?

1.2 Based on your experience, which Process Improvement type (**Breakthrough or Continuous**) has a **greater impact** on organisational performance, and why?

1.3 Please describe any **methodologies** that are adopted for Breakthrough and Continuous improvement programmes in your organisation?

2. Critical Success Factors

2.1 What are the top **5 Critical Success Factors** (CSFs) for Process Improvement programmes?
Please list separately if CSF's are different for Breakthrough vs. Continuous.

2.2 Please describe what you consider are **barriers to the success** of Process Improvement programmes in your organisation?

2.3 Has your organisation addressed these barriers? If so, please describe how?

3. Organisational Factors

(Skip over factors if they have been covered during the discussion)

3.1 How are Process Improvement projects **strategically aligned** in your organisation?
Please comment per Process Improvement programme type if you think there is a difference.

Strategic alignment - strategies linked to customer needs; management team identified core processes; process improvement efforts are linked to strategy

3.2 How are **organisational structures aligned** with changes to processes as part of Process Improvement programmes?
Please comment per Process Improvement programme type if you think there is a difference.

Structural alignment - aligning organisation structures to processes, flatter structures, cross-functional flow; horizontal communication

3.3 How are Process Improvement projects and **IT alignment** managed in your organisation?
Please comment per Process Improvement programme type if you think there is a difference.

IT alignment -IT systems enabling business processes; accessibility to and sharing of information; system integration across

3.4 What role do you think **executive commitment** plays in Process Improvement programmes?
Please comment per Process Improvement programme type if you think there is a difference.

Executive commitment - top management has been trained on core processes; has sufficient knowledge on how to manage processes, communicates with employees, recognises need to improve core processes, allocates resources to improve core

3.5 To what extent are **employees empowered** in Process Improvement programmes within your organisation?
Please comment per Process Improvement programme type if you think there is a difference.

Employee empowerment - employees are involved in planning their work; they have increased autonomy in making decisions that affect their work; they are given necessary resources to fix problems encountered

4. Performance Changes

4.1 Has your organisation's **performance** (competitive position, profitability, employee productivity, unit cost of product/service, quality of product/service) improved as a result of your Process Improvement programmes?
If "Yes", please describe the contribution continuous improvement and breakthrough improvements have made.

4.2 How has your organisation ensured that the desired results achieved are **sustained** over a long period?

5. Future Improvement Programmes

5.1 Please describe your **general experience** with Improvement programmes. Have your experiences been generally positive?

5.2 Will your organisation **continue** with Improvement programmes? If "No" please elaborate.

If "Yes" to the previous question:

5.3 How are **lessons learnt** from previous Process Improvement programmes incorporated into future projects and shared in your organisation?

6. General comments pertaining to Process Improvement programmes

If you would like a copy of the research findings please supply an email address where a PDF document can be delivered.

Email: _____

End of survey. Thank you for your time.

Appendix B.3 – Research Sample – Participant Demographics

Table B3-1 – Participant Demographics

No.	Name	Position within company	Industry Sector
1	Bily Amit	Middle Management	Mining
2	Yashwin Bhoola	Senior Management	Mining, Utilities, Transport
3	Gerhard Carstens	Senior Management	Manufacturing
4	Kamendran Govender	Executive	Mining, Utilities,Manufacturing
5	Sanet Halgryn	Senior Management	Mining, Utilities, Transport
6	Beaudine Hanson	Middle Management	Utilities
7	Edward Heynes	Middle Management	Financial, Manufacturing
8	Marlyn Jose-Menon	Senior Management	Financial, Manufacturing
9	Yashica Kasiram	Middle Management	Mining
10	Stephan Kornelius	Executive	Manufacturing, Utilities
11	Nina Madsen	Executive	Retail
12	Ian Marks	Middle Management	Utilities
13	Joe Mathew	Executive	Retail
14	Bonnie McAdam	Executive	Retail
15	Gopolang Ntlha	Line function	Financial
16	Mhairi Pithey	Senior Management	Financial, Mining
17	Revasan Reddy	Middle Management	Financial
18	Sumoj Simon	Senior Management	Manufacturing, Media and Broadcast
19	Ofentse Tiro	Middle Management	Manufacturing
20	Amrith Withana	Middle Management	Manufacturing

Appendix C – Tabulated Results of the Transcribed Interviews by Question

1. General Questions

Question 1.1. – What are the common triggers for Process Improvement programmes in your organisation?

No.	Industry Context	1.1 What are the common triggers for Process Improvement programmes in your organisation?
1	Other - Media and Broadcast	• BT - strategic initiatives, identified strategic shortcomings that will change the way of business. • How...Go through the process of bidding for new projects or special interest projects for the next year, prioritise, kick off BT • CI - from list of operational projects (have an improvement aspect to it, a cost saving here or a quality improvement there, something of that nature.)
2	Financial Mining	• Cut costs • Often it's also as a result of headcount reduction, and them having to do the same work with less time, people, and money • Sometimes they've got no appetite for technology change, but they know that they have to do something because there's a pain point somewhere • Change in management and a person comes in and has experience in this from another organization or a past life and they want to make that change in the organization.
3	Manufacturing	• To improve the business in general – it's like "we know we can do better" • You need to solve some sort of a problem • Strategic initiatives - which could result in many improvement programmes
4	Retail	• Launch in applications • Introducing new areas of focus in our business • Change in systems, possibly enhancements in existing functionality • Find something is wrong, where we pick up issues through our general sort of support phase or support process that BSP follows. We often pick up things in our business where they are doing things incorrectly because we find abnormal financial results, an abnormal item that has flowed through or we've got an issue on the balance sheet or whatever it is. That would be triggering where we have to go and investigate and find out what's wrong • Stores Support team - looking at physical store operations - operational level type of efficiencies and performance
5	Manufacturing	• Normally gaps, in anything, there could be a gap in services being provided or a gap in a particular environment - performance gaps • Cost can also be one of the drivers (financial crisis, FE - cut cost by 30%) • CI it's more of you identify and opportunity, there's an opportunity or there's a challenge of not meeting a service level of a customer. • Competition commision - so regulatory/ need to stay in business and have to adapt
6	Utilities	• Different triggers. Not mutually exclusive though • CI - KPI's, your targets for the year, worked into your compacts • BT - more externally responsive, often is based on a leadership drive
7	Mining, Utilities, Transport	• Getting the Return on Investment (ROI) - do I make money for my shareholders • Long term plans - can I grow towards my long term plan, am I capable of the way that I am operating today to achieve the long term • Lower level guys is saying "well I need to fix this now" - an operational need • Market changes, for example like the recession
8	Mining, Utilities, Transport	• Underperformance • Performance gap relative to where they want to be - 1. So they know they're not doing as well their maximum capacity is and the other one is 2. They know that their demand is significantly more than what they're doing today, and a lot of them, they may not know their capacity or they may know their capacity and know that the demand is significantly higher.
9	Mining, Utilities Manufacturing	• Cost reduction • Service improvement • Recognizing that you're going to go out of business - a fight to survive and be sustainable • The drive for people just to improve their work environment and their work situation

No.	Industry Context	1.1 What are the common triggers for Process Improvement programmes in your organisation?
10	Utilities	• Monitoring of KPI's in the business • A strategic shift in management vision or objectives
11	Mining	• Typically because the business is cost focused, it has always been a spike in cost - sustainable cost reduction
12	Financial	• Gained enough knowledge about the department and the systems they use to know that what this guy is doing is crazy • Managers or Team Leaders to say 'please come help us' • SAP KC - users themselves will tell you that they've got a problem
13	Financial	• Lack of information or a lack of statistical information • Timeous availability of the information - to be able to do real time decision making
14	Manufacturing, Utilities	• Yes they differ. BT • A shock to the system to the business system typically occurs - regulatory intervention, legislation, competition commission, significant change in business environment (e.g. Commodity price) • Is a painful experience normally, it's expensive, it requires a significant amount of management attention and therefore you need a pretty serious motivation to go on that journey • In Transformation, it's typically the Technology, Process Reengineering, Transformation types of skills. CI • Realized that sharing capacity on a Global level, is almost always the most efficient way of conducting business - especially back office processes. Then start focusing on managing that process, or the efficiency of that process as you would any manufacturing operation • Whereas Contract Management, the typical Six Sigma efficiency or CI skills and culture is more dominant in CI.
15	Retail	• CI - a resource constraint. Starts usually when there is too many manual stuff. • BT - strategic things, for example, we find that replenishment, or auto-replenishment becomes a necessity rather than just a process improvement requirement
16	Retail	• The KPI's that we track for all the factories - if there is a global efficiency or factory efficiency or OEE which actually encompass most of the information. If that is not tracking, that is an indication that there is a process loss somewhere which we need to identify • Benchmarking exercise – so we have benchmarking on all performance indicators apart from the KPI's • Also do financial bottom-up - we classify it as Manufacturing controllable cost; and we always track our productivity • BT - acquisition and need to re-align both companies.
17	Financial, Manufacturing	• Manufacturing: Cost of poor quality - complaints, rework, scrap • Financial Services: Customer Satisfaction and cost containment
18	Financial, Manufacturing	• Cost drive; something related to bringing down the cost • Making a decision that an area has become very inefficient - excessive processing
19	Manufacturing	• Often something breaks and you've got to fix it, like a fire fighting approach. • Mostly yield driven, it's a cost factor • Improve efficiencies • The company is pretty old, about 50 years, and they have been doing things a certain way for many years, and we find that we've got to do things differently
20	Mining	• Improving performance so we had sets of KPIs that we measured, and if we realized we were going in the wrong direction, then something would have to be done

Question 1.2 - Based on your experience, which Process Improvement type (Breakthrough or Continuous) has a greater impact on organisational performance, and why?

No.	Industry Context	1.2 Based on your experience, which Process Improvement type (Breakthrough or Continuous) has a greater impact on organisational performance, and why?
1	Other - Media and Broadcast	• Culture has a huge effect on this. • BT - tends to be R&D, has a certain fashionablity, more exciting, unchartered territory, glamour, attractiveness. People are driven byy trying to achieve an end goal and they are focused on it. You don't have them distracted by other operationally related initiatives or continuous operations when they are running a breakthrough project or breakthrough process improvement • CI - people are creatures of habit, so they tend to stick to what they know, what they like, where things are predictable on a day-to-day basis. When you try to say, "don't do it this way, rather use this other process" it usually receives resistance. People don't like being told or dictated what to do, however the. If they own and have designed their own change, they are more likely to adopt ity adopt these continuous improvements if they come up with the way to do it themselves, and you change the business system to meet their needs, because they understand their job pretty well. • The greater impact is more visible in the breakthrough; however with continuous improvement your impact is only seen after the fact in a balance sheet that is generated maybe 6, 8 or 10 months after this process has been put in place.
2	Financial Mining	• They both have a role to play - they perform different functions. • You can plod along doing CI and then eventually you have to do some BT or step change because your processes have been improved to such a point, that you do need a huge technology change or you do need a huge operating model change • CI has longer term results on the organization if it is implemented properly. So if it becomes part of the culture and the way that things work and the way people do their jobs, in the long term you are going to get better results.
3	Manufacturing	• BT typically has a bigger impact because there is a bigger need • But there's other situations where we do stuff over years, where it adds lots of value, and it puts the company on a different level - so one could argue that it adds more to the bottom line if you do it in that way • The longer terms stuff has more value, but you don't see it; but in many years time you might realize that there is lots of value
4	Retail	• Understanding now how Stores Support is going to work, I think the CI is probably better - a dedicated department or a continuous group of people who all they focusing on is stores processes and making sure that they are followed correctly, adhered, the guys are trained, and from the change management perspective, I find that that works extremely well • Staff turnaround is high - so dedicated team that can ensure continuous transfer of knowledge at store level is important • Stores Support - they've got an advanced thought process in terms of how they want to monitor and maintain, and measure. Although it's quite early days, so whether those are going to stand up or not I don't know. • A new business from 3 acquisitions - focus now is to try and bring system controls in place and standardization into place
5	Manufacturing	• BT - the drive normally is much bigger and is identified on a much higher level. The goals are much bigger than CI ones. They look at an organization rather than a BU-specific or site-specific - larger scale • BT - impact that is often bigger, both ways – positive and negative • CI - often focused on a specific thing, for example Supply Chain Optimisation, you actually want to optimize a specific site. You cannot make it generic. You can optimize a process and try to implement it at a different site, but you may find the details are different at a different site. So you CI would be specific to a site, or specific to a process, or specific to a BU.
6	Utilities	• BT projects have more of a visible impact on the ogranisation performance (across the organization, supported from the highest level, Top down, resources aligned, and resources made available to ensure the success of those types of programmes). So definitely from that point of view I would say it's more visibly contributing to the organizational performance • I think there could be a chance that once you start adding up all those business improvement (CI) that you'd be surprised as to how good or how big the impact is on the performance

No.	Industry Context	1.2 Based on your experience, which Process Improvement type (Breakthrough or Continuous) has a greater impact on organisational performance, and why?
7	Mining, Utilities, Transport	• I think CI, because BT is that point in time, isolated, not to the whole company, it's not running sustainably. • When you look at isolated BT's, the advantage of that is disappearing in the bigger picture. Whereas if companies run ito of CI as a strategy for a company and say whatever I'm saving, I put in the bank and I keep it, I deduct it from my budget, then you start seeing the savings piling up and is not being diluted within a company going forward.
8	Mining, Utilities, Transport	• BT has an initial impact which you could quantify as greater - whether it is sustainable or not is questionable • So I think from an impact, if you quantify impact as a performance improvement relative to time, then BT will probably win. But otherwise CI probably gets there sustainably.
9	Mining, Utilities Manufacturing	• BT PI work typically has a greater impact. Although, having said that at some clients what I've seen is fundamental processes are just so broken anyway, that those small tweaks in fixing some of the blocks; so what you'd classify as CI, would also make a significant difference. • CI, because you hit the critical points in the process that you need to fix. • I think that BT is just you shift the paradigm of the organization and typically it impacts much bigger parts – it's more visible; but also you force people to think differently about what they do and it impacts your systems, your processes and your technology parts.
10	Utilities	• I'm hesitant almost to say without a doubt the BT • For different reasons, you need both • BT I find is the energy, the visibility of senior management, and impetus that starts turning the ship around. • BT thing creates the platform, then you obviously need the follow through of CI and the sustainability of that
11	Mining	• BT projects tended to be quite rapid in terms of their implementation; so the sustainability aspect of it is limited therefore I have to lean towards the CI, because the methodology, approach, the stakeholder engagement and the embedding of new behaviours makes it more sustainable. • Many of the CI require behavior changes in terms of people. In terms of how they engage with one another and how they engage with the work that's required. And because of that, you end up with a better benefit in terms of the bottom line.
12	Financial	• BT - without a doubt. Able to easily quantify the benefit of doing this new thing • CI stuff, it's more a convenience thing, you know either they have a new tactic that they're chasing - harder to quantify
13	Financial	• BT gives a company more of a competitive edge than CI • But over time CI does add more value • An organization does definitely need both • You've got to measure it within a time frame
14	Manufacturing, Utilities	• Depends on the timeframe you measure it across. Obviously given enough time, your CI processes will match your BT • BT - with a step change, process improvement, you performance tends to worsen initially until everything has been settled down and stabilized. Then you tend to get rapid improvements until you reach your performance baseline for the the new norm • Organizations that focus on CI diligently get significant medium term benefits out of CI. But obviously there is a ceiling or a floor beyond which you cannot go without another step change in your Technology or your Process
15	Retail	• BT, results are more visible on a consolidated view
16	Retail	• CI is to me more vital than the BT • If you're able to focus and deliver on small step changes on a continuous basis, changing the culture of the business, making it as (efficient??), for me that has more impact • If it's an R&D type environment, I would say, you sometimes really need a major step change to be even competitive
17	Financial, Manufacturing	• My first instinct is to say BT has greater impact by nature. The problem is BT is difficult to sustain in SA. And the major reason for that, and specifically in manufacturing is our skills gap, and the ever widening and diverging lines between Technology and People skills. • In Financial services, also there BT would have greater impact; but Banking specifically is very conservative. It's very governance driven. So the reality is while BT will give you that high impact, in Banking actually your more incremental changes are better received because it doesn't go against the governance structure as acutely as with your BT • BT is the one that gives high impact in a short space of time.

No.	Industry Context	1.2 Based on your experience, which Process Improvement type (Breakthrough or Continuous) has a greater impact on organisational performance, and why?
18	Financial, Manufacturing	• In terms of banking, I think the CI actually works the best and also has the more sustainable outcomes in the end - because firstly, people are a lot more open to it; they're a lot more open to receiving gradual change, and if you can track the benefits of gradual change, then they are more convinced in term of saying 'I think I can see the benefits of this, now my mind is more open towards doing something bigger, on a bigger scale'. • If you work in manufacturing, or you're working in that kind of space, if you go big bang it works really well, because processes are already streamlined. People have already started thinking about efficiency. • The Service driven industry always think of the customer first, they don't naturally think about improving efficiency first.
19	Manufacturing	• BT, not just specifically because I work in breakthrough, but it's just a fact that often we find that continuous improvement has gotten us to a point or in certain cases where we have gone down the wrong track and we have to redesign just to get a substantial change • We found that with quite a few processes we work on
20	Mining	• BT – because it's much larger in scale, doing something completely different to the way you've done it before – so takes a bit longer for people to get used to that change and get into the rhythm, so I would have to say BT would have a greater impact. • CI – just tweaking as you're going along. There's something in place, you're just changing facets of it.

Question 1.3 - Please describe any methodologies that are adopted for Breakthrough and Continuous improvement programmes in your organisation?

No.	Industry Context	1.3 Please describe any methodologies that are adopted for Breakthrough and Continuous improvement programmes in your organisation?
1	Other - Media and Broadcast	• BT - Project management methodologies • CI - debottlenecking, Lean principles
2	Financial Mining	• BT - Project management methodologies • CI - LSS, Lean, Six Sigma, Kaizen and variations of these
3	Manufacturing	• Mixtures of Industry best practice methodologies, plus our own unique flavour of those methodologies • Based on the company's approach to do projects – the BD&I model (more of a project management approach than anything else) • Experience, industry best practice, based on years of exposure, so it's a mix
4	Retail	• Own pre-defined project delivery methodology - a core section in there which deals with Business Process Management • Have had to adapt the methodology for the skill level at store level - used to dealing with a different audience, and less staff turnover. Have introduced the Standard Operating Procedure as the end user document. Process Description Documents - more for BSP use.
5	Manufacturing	• BT - they are customized, the company tends to use a lot of consultants, and tend to bring different methodologies custom made to that particular BT • CI - it's generic you know, there's a need -> identify opportunities -> start chasing after the opportunities -> look at what is the best opportunity or best solution to solve that particular need and objectives -> weigh them on the cost, risk, the company values -> and depending on where it features -> select the best option. • The methodologies that we have is for Project Management, BD&I. People do use it as well for problem solving. • There's also a MOC one as well which is structured
6	Utilities	• CI - ISO 9000 methodologies, project management methodologies • BT - common elements. Also depends on which implementation partner or consulting environment we would get in to assist us; because they would bring in typically their methodology for that particular environment
7	Mining, Utilities, Transport	• Typically in Lean Six Sigma (LSS) • A system upgrade is also a type of improvement project

No.	Industry Context	1.3 Please describe any methodologies that are adopted for Breakthrough and Continuous improvement programmes in your organisation?
8	Mining, Utilities, Transport	• There's not actually a nice holistic methodology • BT programmes is about mindset changes and management focus improvement - very different to the Lean 8 wastes • I've seen, and developed one to a specific situation,3-4 phases: (i) setting targets and setting goals and expectations, (ii) management intensity improvement, (iii) the wrap – a consolidation phase, (iv) sustainability • You can also get a very Technology driven programme that doesn't fit into that type of environment. • Suppose it also boils down to what you define what a BT to be. Because you can achieve a BT through Technology, People – so a few things
9	Mining, Utilities Manufacturing	• Haven't used any formal methodologies • CI - I think LSS sounds like one of the methodologies that people use for these programmes • BT - not sure if there's real methodology for that - somebody sees a market opportunity or recognizes the need to shift the business focus or something like that and then typically you kind of work to get to that end state and creates an approach • I do think that we're seeing different kinds of methodologies intertwined. For example, we're seeing our Strategic Sourcing methodology intertwined a lot with P&IP (LSS) tools and assets.
10	Utilities	• There is no single methodology at the company • BT programmes invariably, if triggered at the Senior Management level, seem to change or find their way through to the organization via HR channels and Change Management and Communication channels first • If it's used by Engineering or the Technical disciplines down at Power Station level for instance – there you'd find far more scientific approaches; either got elements of Lean, Six Sigma or whatever triggered the initial thinking • And I think it's also dependent on the initiator's exposure to that type of programme and their experience, training, exposure to different methodologies that they've found work.
11	Mining	• Within the BT (Energy reduction project), it was part of a Total Cost of Ownership approach within the procurement and it's typically about understanding your internal and external environments; building up your Value Chain analysis and extracting total value from that. • Within the CI there was a specific approach that we used, it was called the Business Process Framework – and it's owned by a consulting agency based in Australia, so we followed that approach. It's basically the Plan-Do-Check-Act. And it's based on that and hinges on that. • The BPF was used to varying degrees depending on applicability - was not a corporate-wide standard.
12	Financial	• Principles of Lean and Six Sigma. • System Development Lifecycles are definitely used in the CI stuff (SAP KC) • Systems environment far more formalised than PI
13	Financial	• RAD – Rapid Application Development - helps when the business actually sees what they're doing • CI needs to have a more structured approach. More, scope change, analyse, develop, test.
14	Manufacturing, Utilities	• BT - consultants usually have an established methodology. May or may not be linked to Technology - if it is, then it's usually more stringent • CI - varied. Where companies are aware of the benefits and they are able to afford it, they will typically go for the Six Sigma methodology - across all business processes. • But you get a lot of guys with Engineering, specifically with Industrial Engineering skills who go outside of the standard methodologies, and look at other statistical methods of analysis, and in some cases, just common sense in terms of what could be more efficiently done. And this is to some extent, where the experience of your management team can make a difference. But of course it's not as scientific as doing a thorough statistical analysis.
15	Retail	• A very thorough systems development lifecycle, which we have linked into a project approach. • The same methodology in both, but obviously more rigourously in something like a breakthrough. With the continuous improvement, there is a spectrum of change, and depending on the spectrum we will apply the same methodology, but maybe less rigourously
16	Retail	• Lean manufacturing principles
17	Financial, Manufacturing	• BT the methodology I've been working with for the last 5 years is Lean Six Sigma • CI – it's typically your ISO9001/2000 is the one that most companies in the manufacturing sector use
18	Financial, Manufacturing	• Really only went with Lean

No.	Industry Context	1.3 Please describe any methodologies that are adopted for Breakthrough and Continuous improvement programmes in your organisation?
19	Manufacturing	• CI - Six Sigma • Other methodologies, I wouldn't say there are any formal methodologies, no. It's more learning from what we have done before, and trying to apply that to what we need to do in going forward
20	Mining	• Project Framework - a company-wide standardized approach to projects • So it was just a Plan-Do-Review system that we adopted.

2. Critical Success Factors

Question 2.1 – What are the top 5 Critical Success Factors (CSFs) for Process Improvement programmes?

No.	Industry Context	2.1 What are the top 5 Critical Success Factors (CSFs) for Process Improvement programmes?
1	Other - Media and Broadcast	• BT - (revolutionary) your reward has to be significantly better than what you are doing at this moment in time. • CI - (evolutionary), efforts you put in the rewards you receive are much less. You are looking for those little bits that add to the bottom line, improve efficiencies
2	Financial Mining	• the right sponsorship – at all levels of leadership from the CEO right the way down. • alignment to strategy and the shared goal • rewards and recognition (probably more important in CI) • training – you have to train in some way, whether you're training on methodologies or training on new processes or whatever. • change management and training is vital • process owners are identified, are involved and bought in
3	Manufacturing	• Have the will to do it - some sort of a burning platform, some sort of a need - you have to have the support of the team in the business (includes top management support, willingness to change) • Clarity on your objective - You need to know what you want to achieve - have to have the end in mind • Need the right team, that is very important. • Obviously you need the budget, you need time and money to do it properly. • Manage expectations • It's very good if you can show value at certain points as well
4	Retail	• Business buy-in, they've got to want the changes that you are proposing (BT +CI) • And linked to business buy-in, they've got to know what they want changed (BT) • People within the team proposing the changes need to be skilled and knowledgeable about the area in which you're proposing the changes (BT +CI) • Making sure that your process is robust and has all the controls and checkpoints built into the process, as opposed to trying to build those things in post the event. (BT +CI) • How you execute those changes, so an effective change management process or a roll-down process. So how you physically get them effected and implemented (BT – incorporated in project del methodology +CI – relevant as well) • Approach Business Process Improvement in the same way, so there must be an established methodology, disciplines and standards for the team to follow (BT +CI)
5	Manufacturing	• How do you measure that you're successful • Having that Objective • BT are often focused on cost • CI are often service driven
6	Utilities	• Stakeholder management and proper governance and governance support • Clarity of the benefits and the drivers of the change -hugely important that it's not just about that individual • Change leadership and sponsorship • Pace of the change, should have a reasonable progress from, 'yes I'm aware of the change', 'now I understand it in broad terms' up to the point where 'I understand in detail what you expect of me' with the training support or the whatever support is required to 'empower me to do what you want me to do to support your change' • Financial plan for the project through its total lifecycle

No.	Industry Context	2.1 What are the top 5 Critical Success Factors (CSFs) for Process Improvement programmes?
7	Mining, Utilities, Transport	• Buy-in from strategy level, buy-in from your Top management level • Formal tracking of any process. • Structure to what you're doing - for this improvement, this is what I'm going to do, this is the toolset I'm going to use • Must have a goal in mind, otherwise you're just on a journey to somewhere • The people that can implement it - the group of people that, what they call the tipping point…who are those people who are going to make it happen. So the organisation has to want it.
8	Mining, Utilities, Transport	• People commitment, attitude and behavior • The organizational platform to make sure that we have the right people, skills, and systems to be able to do what you're trying to do, otherwise you know you almost can't do it in the first place – almost like a pre-requisite • The organizational infrastructure and they way the company runs. So the performance drivers, the performance metric systems that they have. And those would be the internal factors, and then of course there's external factors as well… • Government regulation, and those types of things • I think also with the BT programme, you need across all of those, if you had to rate them on a scale of 1-10, for BT's to work, you need them all around 7/10. For CI to work you need them all around 3/10.
9	Mining, Utilities Manufacturing	• Leadership commitment (be brave and bold in your approach) • Stewardship • Sticking to the cause, inspiring people to change – (critical for the BT) • Sticking to your guns when times get tough, when it looks like the whole programme is going to fold • Strong change management effort; or what does the company call it – Management of Change (MOC) programme. I think for CI, the most important thing is • Having empowered teams to do this. In my experience if I think about the company Mining – they have a pretty good CI team, and part of the reason they have it is because the guys have been formally trained, the understand the governance, they have a clear mandate within the business of what they can and can't change. So they kind of empowered to do what they need to do and they get on with it.
10	Utilities	For BT • Buy-in, ownership, acknowledgement from the affected area that we have a problem • *Quantification of the benefit to be had*. In most cases, that has always been the downfall – we are unable to quantify what the benefit will be fully, so never quite sure if we've got there or not. And the publishing of that as well, in so many business cases, some of projects are claiming the same benefits to be derived. • Getting the target audience to understand and visualize what the objective of the end goal is. For CI • The measurement and monitoring of the current status and the To-Be as you start to achieve that. It's almost monitoring against the plan – progress versus the plan. • The subject matter experts have bought into it
11	Mining	• So having the right stakeholders around the table and engaging with them continuously. • Having a good assessment of the level of knowledge of your various team. Globally you've got people in 1st world countries, emerging markets, developing countries. So their extent at which they can assimilate knowledge can vary. So you've got to have good engagement skills, and good interpersonal skills to be able to (i) engage with them at the right level and (ii) being able to embed the knowledge in the right way. • Having teams with a certain level of knowledge or extent of knowledge so that transferability is easier • Setting a longer term vision and managing expectation of how it will be delivered
12	Financial	Applicable to BT and CI • Understand the users' environment or the business. You've got to understand what goes on • Have knowledge about not systems as such, but how systems work - to be able to identify inefficiencies • A certain element of trust - from demonstrating that you're able to help out other people • Integration – that know how pieces fit together, not just systems, but knowing how a certain department functions, and what their outputs are • Whatever improvement you've done, sort of can live beyond your time with them. So things like good old documentation • Be prepared to make mistakes and learn from them

No.	Industry Context	2.1 What are the top 5 Critical Success Factors (CSFs) for Process Improvement programmes?
13	Financial	• Buy-in from senior management - no matter how good or how streamlined the process is, you've got to have senior executive management buy-in and it needs to be driven at that level and not at a middle management level • Measurability – if something is not measured it's not managed. No urgency to change, and it doesn't affect them immediately. So you tend to, you've got to keep fighting the change management. Unless you tell them it's part of their scorecard, or managing it on a daily basis or weekly basis, you'd generally see the adoption rates much higher. • Turnaround time of delivery needs to be short enough or deliverables need to be short enough so that they can see progress being made
14	Manufacturing, Utilities	BT. • A very strong senior management sponsorship. Unanimously standing up and saying 'this has to happen', you tend to lose momentum • A very strong, visible business case. Report on it regularly and make it visible. Otherwise the organizations will to spend that type of money waivers. • Dedicate the right management team to the project itself. Where clients really have dedicated the A-team to the effort, and they are always more successful. If you don't support it with a strong internal team, you tend to get a 'somebody is doing this to me' type of philosophy in the organization. You have to have strong internal advocates for the change to be accepted because it's so big. And the stronger that team is, the more successful it typically is. • If you're going to use Technology to do the change, you have to run an integrated change effort between your Process change and your Technology change. I have seen instances where those 2 are disconnected, and it's typically a mess. • Try not to do too much at once. Single tower or multi tower services transformation. Single tower is always easier to do From a CI perspective, • Requirement for a culture of excellence. It can't be something that you do once every quarter. It has to be engrained in the management philosophy or culture of the organization, otherwise it will always be something that happens on the side • Having the correct and consistent way of measuring performance is important. If you don't have a consistent baseline and you can't measure your improvements consistently; people argue about the measurement and not about the outcome Both cases • Including the outcome of what you want to do, in the performance contracting of the people who are going to do it. Because if they don't feel a personal benefit or a personal pressure to do it, you don't necessarily get the right answer
15	Retail	• Leadership buy-in • Thorough change management approach - that includes communication and training • Being clear about what your objectives are • Your scope of work must be well defined, and clearly understood • When you talk to people about your scope, you also have to express your exceptions, and assumptions.
16	Retail	• It must be driven from the Top. So leadership and driven from the top - not a CI Manager's responsibility • The culture. So everybody – it's like the TPM culture, where everybody is involved – it's the responsibility of everyone. So I would say the success lies on a culture intervention • How you actually sustain your benefits – a MCRS (Management Control & Reporting System). So whatever improvement you have made, and whatever process you are following, there must be a way to know that this is actually in control or out of control. And if it is out of control, how do you actually react. • Knowledge or the competency or the understanding of the people around Lean principles. • Alignment to the goals. Everybody is working towards one major objective; and they should be able to see through the entire organization structure, their role and impact and certain activities on the overall performance. The operator on the shop floor must know that he's tracking the downtimes and trying to reduce the waste – and it has a direct impact on the overall plant objective

No.	Industry Context	2.1 What are the top 5 Critical Success Factors (CSFs) for Process Improvement programmes?
17	Financial, Manufacturing	• You need your executive level support – the Top Down support. Executive level support, sponsorship, visible endorsement is critical BT • Make your top resources available in terms of their time, their skill and money. • Buy-in. you have to have buy-in at all levels of the organization. And buy-in at different levels of the organization mean different things. And this comes down to your communication plan, your change management • The use of a good engagement partner, in the early part of launching your BT – you know, for that high-level expertise. For the coaching, mentoring from an experienced engagement partner. I think that makes a huge difference. Especially in that first year • A good steering committee at the appropriate level, with the appropriate level of decision makers represented. That also makes a huge difference – keep the thing on track, intervene when needs be. Spot the trouble early and do something about it. That's why the appropriate muscle in terms of decision making needs to be represented. • A well customized reward and recognition system. CI • Resources not so critical. CI is more absorbed into your day-to-day working. So typically your Quality control manager or quality controller runs with your ISO process.
18	Financial, Manufacturing	• People's acceptance, or willingness to accept what we were trying to implement • How willing are people towards your ideas of improvement. Can they see the benefit to their lives and environment by accepting that methodology. • How much effort do I have to put in to push as opposed to them pulling the idea from me
19	Manufacturing	• Yield is big on our agenda, we need to address things that compromise yield. If we haven't had an impact on yield, we need to take a step back and find out why • Then meeting that target that you have set for that project - typically linked to yield
20	Mining	BT • Buy-in, because it's a complete change to what was currently happening. So you need people's backing. You really need people to buy-in to the idea for it to be successful. • Has to be a focused approach. You have to go in there, you have to have people working day-in, day-out trying to implement this change that's happening. So you do really need a focused team and approach • A lot of energy and enthusiasm. • Need to show success, of parts of it that have been implemented. And if it's running successfully, then I think that sort of feeds back into the whole process, and then you carry on from there. So perhaps work on bits and pieces of the change, get that to work properly, then use that to run the rest of your BT project CI • You do need buy-in again, definitely. • Bu you probably don't need a large team of people, you just need the people who are working in the particular setup to continue with the improvement. Only if they're struggling, I guess you can obviously bring in help. Common • Have to measure what you're doing. Because if you don't where you're going and you don't know how far you've gone, then it's a bit pointless. • Need to have specific goals that you need to achieve, and it needs to be measurable.

Question 2.2 – Please describe what you consider are barriers to the success of Process Improvement programmes in your organisation?

No.	Industry Context	2.2 Please describe what you consider are barriers to the success of Process Improvement programmes in your organisation?
1	Other - Media and Broadcast	• BT - consumes a lot of resources, and money and time; all of which are very scarce. But the benefits of BT are driven by the difference in returns, so it is the return on investment, the return on assets, the return on resources. You are looking at other things such as speed with which you deliver the product, or the efficiencies that you are now utilizing of the resources available to you. • CI - You have a diminishing curve, or you have a curve of diminishing returns on your efforts. continuous improvement programmes tend to add to your bottom line in your first or second year of implementation, however in your fifth or sixth year, unless there has been a massive technology change, or a materials or resources change, we don't see the benefits.

No.	Industry Context	2.2 Please describe what you consider are barriers to the success of Process Improvement programmes in your organisation?
2	Financial Mining	• understanding, that's understanding of the methodologies they are trying to use or what they are trying to achieve • conflicting priorities -differing agendas by leadership • conflicting priorities - day-to-day job vs. CI project over and above • trying to do too much (scope to boad, overly ambitious) • CI side, is where you have scattered approach - 150 projects in 150 directions - a more coordinated approach would achieve more results
3	Manufacturing	• So if there's no will, if you don't have the people for who this work is being done if they are not willing to do it, or they are not keen to do it, or they don't see the value. This is a big big big barrier – it's almost one of the biggest. • If the objectives are not clear and you don't know where you're going. Then everyone scatters around and no one knows what's going on. • If you don't have time and money, or if you don't have the right team, you not going to achieve it - It's also the right stakeholders, the right people who can remove barriers for you in the business. • It is important to show that we're going to get somewhere and to show value all the time. If it is a very long term initiative, it is difficult to maintain that. People's attention span is short; they start to ask questions, 'why are we really doing this' and start to lose sight of the end goal • You almost always need a plan. I think for us as people, we tend to be very 'do' focused and not 'plan' focused. And planning is really what makes the difference, so it's difficult to keep the plan focus
4	Retail	• BT - the business not really understanding what they want to change. They know that they have got to change something, or they know that they have a problem in a certain area but they can't physically tell you what needs to be changed • CI - the reception of those changes and how easy the business are able to assimilate or take in the new changes
5	Manufacturing	• Firstly it's the support from senior management • Misalignment of all stakeholders • Buy-in • The way we measure the profitability of the project • We also tend to also be short term focused
6	Utilities	• Inverse of CSF's • Focus on the communication - start off with a journey map, so that people in broad terms understand what pace they can expect, and that the expectations, if the expectations are not created, then the barrier would be that the people either want to move faster or slower than what your journey plan is highlighting • Sheer size and weight of the past, of the legacy - DNA of the organization • Not creating for support the change at all levels of the organization. Notably middle management
7	Mining, Utilities, Transport	• The 'apostles' and 'terrorists' effect. So there are people in a company that are against change • Need to understand your company culture, the people within the company • The bottom line and how people are measured - so the way you measure and monitor the performance of a company can be detrimental to a CI programme. So if you don't change that, and understand how your measurement of success of your programme is going to relate to the success of the company • Are you measuring a company as a whole or are you measuring departments • Change in leadership - if that person leaves, many a time that programme collapse if the programme depended on a person • In essence CI is a negative thing; because you're not looking out for people to pat on the shoulder and say 'you're doing good'. You're looking for things going wrong and fix it.
8	Mining, Utilities, Transport	• Internal and external factors. On the internal side, I think it's almost the opposite of CSFs • Existing management organizational structure sometimes prevents some of these BT's that you're trying to achieve • Legacy issues, because we're a South African and in Southern Africa, skills shortages, the whole racial issues and stuff like that which can be quite tricky and just adds a different dimension onto things. • If you don't have the right systems and things in place, you can't actually get to, or start thinking about running if you don't have any shoes to walk in. • Outside of South Africa, the government regulations are actually quite an important lever - don't have a free trade policy, e.g nly able to buy certain proportion of products from outside the country and there's only a limited supply within the country

No.	Industry Context	2.2 Please describe what you consider are barriers to the success of Process Improvement programmes in your organisation?
9	Mining, Utilities Manufacturing	• Sustainability is probably a key one, because I think a lot of programmes run through and make an initial impact and change, but sustaining that through the business is typically the challenge. • I think that businesses change quite often - trick is to understand if what you're doing now going to be valid for the next 5 years - demoralizes people for future imperatives if change happens to close to each other. • So it's not just about your company context that we spoke about, but the wider technology context, or you know your emerging technologies, or trends or I guess things that we see - future proof your PI programmes as much as possible.
10	Utilities	• if there's a hidden agenda, it will come up and that invariably where projects have been initiated because of specific systems or solutions or applications people want, and then they try and reverse engineer the business need for it. You will fail, it just the time to fail may be very different. • When the business appetite or the need is questionable • Obviously the inverse of CSFs • I wouldn't say specific to company, I think we all have the same challenges in terms of skills, competency levels. Well I've realized that coming fresh back from this trip (tour of Asian and European utilities), it's not an company thing, it's an African, South African issue. • Continuity of the resources involved in the initiative - so not being linked to person, but linked to the business benefit. • Failure to coordinate across an organization all the improvement programmes - competing priorities for subject matter experts being dragged in different directions.
11	Mining	• Retaining people selected as project champions - their loss of the opportunities of training and growth in their disciplines during the project duration • Attracting the right talent - require new roles in this new organization that you're building, and trying to get those roles in place, especially amidst a time where the business understands the importance of the role, but cannot attach the relevant value to the package • Buy-in was quite difficult. As much as the project was driven by the Executive, there was quite reluctance to the change. Natural skepticism by people who have seen this tried before.
12	Financial	• Organizational politics - critical decision makers make the right amount of noise, then it's not going to happen • A lack of follow through to check how the adoption of the change is progressing • People • Systems - technical constraints
13	Financial	• Biggest one is the management buy-in at the Top. Even if it's middle management, if it's not bought in correctly, they can derail a project very quickly. • Basically the negative of the 2.1
14	Manufacturing, Utilities	• Resistance to change in the organization - intellectual arrogance (where technical innovation is at the heart of the organisation), parastatal type organizations, there's a complete apathy • Both of them are a culture, an inherent way of doing things in an organization that makes it difficult to get momentum going in the process, or change programmes. • Average skill level of the employees. Things like computer literacy and numeracy in South Africa are in some cases barriers • We work with a very wide range of skills in our population base, and mistakes we often make is to assume that one training approach will work for everybody
15	Retail	• The training aspect isn't given enough time or air-time. It's the whole change thing, driven by the leaders. - due to time pressures that, there is not enough focus, competing priorities • Post-implementation is just continuous assessment, or inspection or monitoring to ensure that people are complying or adopting the change, and not just going back to their bad habits. It's not only the training, but it's got to be after the training. The buy-in; it's always harder to do, when the benefits of the change is not derived by the people making the changes
16	Retail	• People not understanding the priorities and thinking in short term benefits and not in long term - putting in a quick fix for that moment, not doing a proper root cause. And then they live in the cycle of fire-fighting mode. • You may have an organization which is aligned to all of this, but the larger organization can also pull certain individuals in the business also in a different direction. So priority must be clear, and allocating resources to support any extra work • Turnover of the people - you have new people coming in and they want to do things differently. And this should be a complete no-no. What should be the philosophy is that there should be a standard way of operating, and unless you can prove that you have a better way to do this, the standard way should apply in all cases. Obviously any business needs a healthy turnover • Not adhering to standard procedures can easily be a barrier for improvement.

No.	Industry Context	2.2 Please describe what you consider are barriers to the success of Process Improvement programmes in your organisation?
17	Financial, Manufacturing	• Opposite to what we listed on top (2.1); but there are some special others. • Over time in a CI process, it adds complexity to the business- in a CI programme like ISO, people don't take the time to differentiate between common causes and special causes. The other problem is that you could have a very well documented system which tells you to do the wrong thing. So you could have great documentation of the wrong things. And to your point, pass the audit. • Involvement – you know I think one of the barriers to success is that people, it's that age old thing of people don't really understand why things are done and a lot of things become wallpaper. • People high up in an organization don't trust people's ability to grasp the concepts, the high-level concepts. They don't have to be statisticians. • ISO type programmes, is on the training side of it, the training side of CI focuses only on the content when things go well - not much empahsis on the exceptions; whereas with BT (LSS), the Control Plan is an active thing
18	Financial, Manufacturing	• Management buy-in: so making sure that they understand what you're trying to do. So if it means you're going to see results in terms of bringing down staff costs, they have to be brave enough to make that call. So the whole thing just fell on its face because Senior Management weren't committed to see it through • The natural resistance from people. The fear factor of the workers.
19	Manufacturing	• People getting in the way. • The goal posts often shift while you are half-way down the project - dynamic sort of industry where customer requirements change often and sometimes products or changes become obsolete
20	Mining	• If what you're implementing is not apt for your environments then it probably will fall apart - fit for purpose • People were the biggest barrier for me. If you have people behind what you're doing and they really believe it then implementing changes were very easy. And if people saw the benefit of it, that's when people really continued to buy-in to the whole concept. Other than that, everything else you can work around – I mean resources, time, all of that came from the people aspect.

Question 2.3 – Has your organisation addressed these barriers? If so, please describe how?

No.	Industry Context	2.3 Has your organisation addressed these barriers? If so, please describe how?
1	Other - Media and Broadcast	Learnings have been that • CI - not to forcefully drive the change - involve staff who have the subject matter knowledge. Secondly take time to understand as much of the current design as possible and reasons for the design being the way it is. • BT - conduct thorough research ahead of projects. Develop the idea sufficiently upfront. Beware of yielding to management pressure to see results and compromise phases in proper project deilvery - finding, evaluating and deciding, not going for a final goal with ridiculous time pressure or ridiculous resource pressures.
2	Financial Mining	• Proper change management (communication, training, coaching) • Coaching leadership level to align on priorities • Putting in prioritisation approaches in place - to ensure only strategically aligned projects are worked on (create focus)

No.	Industry Context	2.3 Has your organisation addressed these barriers? If so, please describe how?
3	Manufacturing	• The will, in many initiatives, that is why it fails – it hasn't been addressed. Many of the larger initiatives, it is addressed by starting to broadcast the message from the top. In a very big organization, the hierarchy plays a big role. The top gives the direction, and if everyone buys into it. So managing the will starts with getting the top to buy in and getting the top to let the message filter down. • Change Management process; and I think what organizations do wrong is that Change Management becomes like a separate function. Change Management is inherent in everything that you do. It would be better to teach all managers and so on in the process of change instead of keeping it a separate thing • Having the right people, and the right budget – I don't think that is generally a problem in our organization. Problem is too many initiatives, lack of focus. But the way that we try and get the focus is by having a clear message coming from the top and have it filter down. But when it comes down to the lower levels, and middle management and so on, it sometimes gets murky. It's partly due to complexity, it's partly due to incorrect measurements. • Management of expectations - the company pays a lot of attention to Change Management. But it's like a separate initiative. So sometimes, the application of the process is not connected to the objective. Expectations are managed well through the whole BD&I process • Planning - the company good at this. Some room for improvement. • I think where the company makes mistakes, is that the timelines are not always realistic. So the planning is there, and all the details are considered, but, timelines, and the estimates of the timelines are optimistic. I think maybe one of the reasons it is optimistic is that all the other initiatives, the interfaces, the complexity is not always obvious. You only realize it once you start to run with the initiatives. You only see your little section. On the higher levels, I'd say that problem doesn't exist. There they have visibility, so the higher you go, the more you have visibility of everything. • I think another thing that makes things complex in the company is that it's so big and so integrated, there are so many role players. It's a long process, the change management is a long process. It's a very matrix type organization.
4	Retail	• BT - keep asking those questions • CI - I think there's just got to be a standard. The key business owners in the regions have to understand what those standards are and they get measured according to them, so if the standard is not at a certain level, they get penalized at a top management level.
5	Manufacturing	• Following a structured approach toward implementing a project. Start with your sponsor, get them involved, then get the people involved. Get them to buy-in even before you present your ideas. Before you even begin your project. That often works well. Make them feel that they are actually involved and that there are there to participate • Support from senior management - you address by having a mandate, a project charter
6	Utilities	• Stakeholder Management, I think the company has been able to manage and address that. Internally and Externally. • Pace, there's mixed success, but the general comment from people at the moment would be that the company is not very good at all to handle the pace of BT changes. • the company is quite good at managing clarity of benefits and drivers and not just hanging it around individual • Change leadership and sponsorship, the company was good at that as well • Financial and resource planning - better in the early stages, and for me not always taking it through to its natural conclusion • DNA of the organization - the company does well at that, (a) to recognize it, (b) to work with it, (c.) change it
7	Mining, Utilities, Transport	• Started changing how they measured success - changed their balanced scorecards • CI Programme collapsed when there were leadership changes the first time. Now programme is kicking off again, because the organisation realises the importance of CI • So change management is critical in this, because we think people is just going to accept it – they're not.

No.	Industry Context	2.3 Has your organisation addressed these barriers? If so, please describe how?
8	Mining, Utilities, Transport	• Initially you try to avoid them as opposed to address them -for the sake of trying to get at BT moving, and gain enough momentum for the rest of the troops to follow. You almost have to, you know to give everyone the inspiration to continue on this BT path, you need to show them the light • Probably at a later stage, you start addressing them, cos some of these things are actually very difficult to address - you can't change and org structure overnight, and change everyone's performance metrics etc. • You can call a truce at the start, and get a few barriers exempt from the process. I.e. certain performance metrics that are in people's contracts – you can create a programme where the leader of it, says 'okay guys, we're going to ignore all of our performance contract and are going to focus on these 5 things for the next month'. So you kind of avoid it – it's not sustainable. And you're going to have to address it at some point. But for the sake of BT progress you can do it.
9	Mining, Utilities Manufacturing	• Cross-functional collaboration emphasis is one way to mitigate some of this risk • Governance is really important - having the right forums to make decisions • Formally allocate PI responsibility to people, and not make it a part time job • Learning from other parts of the business
10	Utilities	• B2B – it's aimed at exactly that
11	Mining	• Attracting the right sort of talent to the project teams, I don't believe, I think we didn't actually do that to be honest • Attracting talent for the new organization - the third leg of Project 1 was 'systems for people' and that required also a very well thought out approach; which transitioned the Human Resources organization from a transactional organisaiton to a more tactical, and a strategic organization. And that's not easy to do, because (i) first of all you need to attract HR talent before you can attract underlying talent and then (ii) developing the right model to retain talent, manage talent. So those are being developed right now; so I don't believe they are being effectively used in the improvement project. But at a point when the 'systems for people' is developed, the Improvement project will start drawing on that in terms of 'now we need to buffer our skills when we implement that'. • Skeptical stakeholders - so to a large degree we would be involved in selling the requirements, so we'd tailored our message quite tactfully in terms of participation. And naturally have an escalation agenda in terms of understanding what is the type of reception we're getting, or response that we are getting from our stakeholders at various levels. And if we aren't able to manage it at our level, an escalation is required. So where and if necessary we needed to do that, we'd do that.
12	Financial	• Technical - go to the vendor • Organisational politics - get your own somebody who can go fight those politics • People - demonstrate credibility of what you're trying to do and you should win them over
13	Financial	• Had a few sessions / meetings with the CEO (so at the highest level) on a feedback loop • Regular meetings with management to analyse success really made future projects much more successful.
14	Manufacturing, Utilities	• When the communication approach and the leadership style of the individuals that lead the effort have been cognizant of the culture and have been adapted to it • When you do get some inspirational people in those environments, and you do get them, it does help if they can champion your cause • It's the carrot and stick approach – in some cases, the carrot works better, in other case the stick
15	Retail	• We try and not drive our project deadlines from an implementation date backwards, which often what happens in retail • Try and do our change management more diligently, and choosing the right people to own the change; and explaining what a change leader is and what their real roles and responsibilities are.
16	Retail	• In the process of standardizing a lot of our processes - to minimize variation across the process • There's a standard way of tackling solutions. So once it's developed, you don't go through the same learning cycle again and again. But body of knowledge might be a benefit or an outcome of doing this.

No.	Industry Context	2.3 Has your organisation addressed these barriers? If so, please describe how?
17	Financial, Manufacturing	• The build up of intelligence - the fault cards example • Another principle that the BT uses well is the principle of a Process Owner. So what BT does well compared to CI is that every functional area gets assigned the Process Owner, and this guy becomes a jacked up – becomes more jacked up than the normal, run off the mill supervisor • You pick your Process Owner upfront for a project, so this person co-designs the solution, therefore there is emotional buy-in and a vested interest in whatever is designed, and the person automatically just has a better vested interest in making the thing work. • A 3 month audit programme. And that's something that I've just added – because South Africans just don't adhere. • Adding to existing reports • Visual management
18	Financial, Manufacturing	• So we did all the proposals, we did all the business cases, we did all the numbers. We proved the reasons for introducing the methodology, introducing the change in the system. We did all of that – showed them the facts and the figures. We proved over and over again that by introducing this small change in the process we would cut down on 7 or 8 staff, we could immediately automate the process, we could leverage off what was already happening in other parts of the Bank. But the moment they say all of these things, really they literally got cold feet in actually implementing it, and they finally backed off. It was really frustrating in the end – what did we do all this for. If they weren't convinced why we were doing this, then why bother.
19	Manufacturing	• I think what they have tried to do, is get more and more people involved in things like Six Sigma, but I don't know if that has been very successful. To be honest, no, we haven't had major success there.
20	Mining	• A lot of consulting. A lot of sitting around the table and bashing out the ideas, and listening to everyone to see what was the real concern behind it – some people just say no for the sake of it, because they're afraid of change. This is something they've done for years, and all of a sudden it's not going to be done like that. So I think that's the best way to do it – sit around a table and really, really think through the whole process. • I think in many ways, what you need to check is whether your understanding of that project is exactly what the same as what the people understand.

3. Organisational Factors

Question 3.1 – How are Process Improvement projects strategically aligned in your organisation?

No.	Industry Context	3.1 How are Process Improvement projects strategically aligned in your organisation?
1	Other - Media and Broadcast	• They are prioritized by management and the executive, so they are aware of which programmes they are undertaking for the next financial year. • Also run and reported and managed in the performance contracts of this management and executive team • All projects linked to some business objective (e.g. customer need, efficiency etc.)
2	Financial Mining	• Not very well aligned and processes are not properly in place to make sure that projects are strategically aligned. • FS company - CI COE - they made it part of the objectives of every level of management beneath that to be involved and to support and to have improvement results and that cascaded down to everyone's personal objectives.
3	Manufacturing	• Very well strategically aligned. Most of the improvement initiatives comes from a strategic imperative. So there would be a strategy, and the strategy would be translated into critical success factors and the CSF's, would have their own strategies. And each of those strategies would result in many initiatives. And most of the CI projects fit in that domain.

No.	Industry Context	3.1 How are Process Improvement projects strategically aligned in your organisation?
4	Retail	• PMO office which is also, which is under the control of Stores Support. So at management meetings, or monthly exec meetings, we'd obviously just determine what needs to be prioritized over the other stuff • Have a list of projects that are critical or key to address certain issues or problem areas, or new projects and the Project Management Office would drive that through the retail director who is the head of retail • the company Strategy Session twice a year, which we really overlook at the pros and cons or the things that we've done well and the things we've done badly over the previous six months - that's a collective discussion session which we have offsite, with all the representation from all the areas in the business • There is direct link to Strategy. Part of our strategy document states that we will be focusing on standardizing operating procedures, we will be focusing on financial controls, we will be focusing on nationalizing applications and systems and structures. So I think it's clearly defined. We've just obviously got to break that work down into the smaller pieces and prioritise those considering the interdependencies to ensure that we get it done within a reasonable timeframe
5	Manufacturing	• About 70% because we often tend to work in silos • The establishment of the COE's is trying to get that kind of alignment • There's also governance. For example, we from Supply Chain Design, would govern SC designs to actually make sure for e.g. whatever BU1 designed is aligned to what was done from the other side – so there is that alignment. The BD&I will align this, the MOC as well is trying to align that • Complexity arises with Joint Venture companies and trying to arrive at the most appropriate solution
6	Utilities	• CI - aligned through compacting. • BT- typically large scale the company programmes, with representation and sponsorship from all parts of the organization, forces alignment • Boils down to, somehow it's going to boil down to the compacts and performance contracts and KPIs and what is important and what are you measured on.
7	Mining, Utilities, Transport	• Part of the culture of the company • Important to create that focus - leverage CI to put a strategy together based on facts (measure current reality to indentify poor performing, important areas)
8	Mining, Utilities, Transport	• Incredibly important. I don't always think it is done as it probably best could be. Projects take up energy in an organisation, and so best be steering in the same direction the captain wants to go. • If it is Top Down, CI or BT, are Top Down right from the Top, it tends to work quite well. • Where they're developed and run by middle management as part of their own processes to either shine or produce against their targets or for whatever reason, I've seen that's where potentially it can be quite disruptive • People don't believe in it at the top, it's not sustainable and clearly just a waste of time.
9	Mining, Utilities Manufacturing	• I think as a principle, you need alignment across levels and across functions. Because that sets up your governance and just provides leadership direction on what we're doing and why we're doing it. So I think that's critical. • How seen it done... a very structured filter process. So it's almost like a stage-gate process - somebody evaluates it at a first level, and in that evaluation understands "is this feasible", "does it align with the strategy, the company imperatives and objectives" and all of that good stuff. And does a first cut of that; and then you move into feasibility further down the track.
10	Utilities	• There's a lot more emphasis, energy and effort spent on that now that what there was even I'd say 18 months ago. Again B2B has been the catalyst to create awareness • Governance, stage-gates (e.g. of PCM standards and PCM methodology) • The main thrust is very much BPM; but the knock-on effect will be the Process Improvements in business and processes and so on • So I think it's very definite steps the company has made themselves clear from Top Management down is, as we move towards a Process Centric organization, and I would guess we're going to start seeing in the next couple of years, the move towards functional structures to actually depicting this.

No.	Industry Context	3.1 How are Process Improvement projects strategically aligned in your organisation?
11	Mining	• Had the benefit of a fresh start in terms of the CEO; and he was very methodical in terms of defining the vision, mission, values, and your strategic goals. And in devising those strategic goals, he sought out – and he had quite a few contacts in the industry as well – the right approach to deliver on those goals; and hence the vision and the values. So I think it was a direct alignment between the approach that was taken, the methodology used, there was direct strategic alignment. It drew on the strategy. • There are a large number of projects happening at any time in the business. So if you've got the 3 legs of the strategy being Improvement, Safety and People; then you have a number of projects happening in each one at the same time. Which becomes quite overloading for the business. So Executives were charged to seek out or pay attention to any other project that might come about that deviate from these thrusts. • there was an organization-wide awareness of the requirements and how resources and costs need to be allocated to it
12	Financial	• Not something we visit to often, so it's very easy to lose a sense of it. • Were asked at a leadership development course to say, how do you think it aligns (individual) • People always do when – you know the few business cases I've seen in the Bank – they always actually try to say which of those strategic objectives is this new initiative aligned to
13	Financial	• Important to have strategic alignment - no matter how far away your project is, you've got to tie it back to one of your business goals • The How is to always tie it back, ideally an organization objective
14	Manufacturing, Utilities	• If you have an astute or proper Governance environment in terms of the decision making, and decision makers in your business; you won't get approval to do this if it's not aligned to your overall business imperatives • If you can't link it to either the strategic intent, or one of the business drivers of the organization, you really shouldn't be doing it. • From a strategic alignment perspective, these PI tend to be very operational in nature; but it always comes from a business intent, or a statement of intent. The really good projects are very good at articulating it. But even where the team haven't, it's typically very easy to go through a cash flow analysis or some value analysis type exercise to link how your PI eventually links to shareholder value. We are getting better at doing that now. And it's a pretty powerful argument. But to say strategically aligned – these are very operational type projects, but you have to be able to say what business benefit there is; otherwise you're wasting your time.
15	Retail	• It is critical. I think it is not well done. • Have seen they will say that they are strategically aligned, and they'll say that this is a supply chain project, and yes merchandise is involved and so on, logistics… they are each out to get their own win, and not interested in each other's pain - competing sub-function drivers.
16	Retail	• Happens very well, it's very rigid, very strict - project charters have to be linked to a specific company goal
17	Financial, Manufacturing	• I mean strategic alignment is everything. I mean, your Project Selection matrix, you use a matrix
18	Financial, Manufacturing	• I really believe strongly now that there is no space or any room in a Banking type of Service industry for PI methodologies, because they're not committed – there's no alignment • Unless you have somebody at a very high level who is driving this, and really believes this strongly, it's a wasted effort in this kind of industry • SAB fully embraced it – efficiency is their culture, bringing down cost is their culture and they're very cut-throat in an FMCG/manufacturing kind of environment. Because cost means everything • In a Banking environment, they don't even have a full understanding of their profit, they don't have a full understanding of their cost – they just make a lot of money so is there really a need for them to cut costs. No burning platform/fire under their feet to become more efficient
19	Manufacturing	• In terms of group wide strategy, we could have better alignment, have better direction. We know in general terms what we need to work towards, I thinks there is a level of confusion in terms of how we handle things. • As a team we form part of an Oil and Gas development team. We have a set of objectives we need to meet on a yearly or six month basis. We assess how we perform against those objectives.
20	Mining	• That's so important. I've realized in an organization, everybody needs to be talking the same language. As soon as there's one person who's – especially strategically if the company is not aligned to what's happening on the floor, then it's just going to completely fall apart. • How...we all had a Plan that fit into the big picture. • We had that one KPI for the entire company, and then it was explained to everyone how each Operation was going to contribute towards it.

Question 3.2 – How are organisational structures aligned with changes to processes as part of Process Improvement programmes?

No.	Industry Context	3.2 How are organisational structures aligned with changes to processes as part of Process Improvement programmes?
1	Other - Media and Broadcast	• BT - initially quite chaotic. But experienced resources know how to quickly settle into a system that works; and put in the necessary control and oversight structures. • CI - takes longer for the resources to settle • So the structure has to follow and the structure has to undergo changes as a process improvement project is undertaken, and not everyone is comfortable with change.
2	Financial Mining	• I don't know if it's much of an organizational structure and more of a governance structure. They will create Process Owners, they will need CI project owners; sponsorship and that kind of thing. So it's more the governance and sponsorship structure rather than organizational structure change • I've never seen them do organizational changes as a result. Unless you doing like you say an operating model change, that's probably bigger
3	Manufacturing	•I think it's still very siloed, but the intention is to have it very end to end and that, in that context, everything that we do is to align the organization structure to that end to end view. But obviously it's a process. In SC, all the structures are now aligned, but the mindset might still be functional. • That's now obviously on a certain level. If you get into the details, it will be different.
4	Retail	• Very functionally structured, so I think the way in which how we've tried to oganisationally align ourselves to this is that we've established a Stores Support team. • There's a PMO running within Stores Support. And we've tried to align various roles within that, so the role of Stores Support is to allocate resources to projects, so they look at what this PI project is about, be it just general standardization or is it something like space planning, or is it something else. Then they say, "right, we need input from Merchandise from, IT, from Advertising, wherever" • We've tried very hard not to work in silos and I think that's the objective of the PMO is to get the resources brought back from the business to add value or whatever
5	Manufacturing	• It's more of a functionally structured organization • E.g. With FE - the (LOC) structure was already designed, so it's not really aligned to that particular opportunity or operational detail. • Assessments are not properly done at Operational level, and then a structural design is done and it doesn't fit the operational design. Or maybe it's people who don't want to fit it – that's another thing. Could be either way
6	Utilities	• Disconnect between the process development and the structural development. The structure leads • Entities like Finance and HR and Commercial were part of the SAP re-implementation and they were part of the B2B were able to get the timing as right as possible; structure follows strategy and process. Unfortunately, the rest of the organization was completely out of sync
7	Mining, Utilities, Transport	• Most companies are not • What you often see is that people create the organization structure first and try to hammer the processes to the organization structure • People don't get that people execute processes and processes enable a strategy. People think you create a strategy, you create a process, you create an organization structure, and miraculously it will work together.
8	Mining, Utilities, Transport	• Most of the ones that I've seen, these PI things are run independent of the org structures • It becomes questionable about who owns what at the end - although you can give people things to champion, etc. if it's not part of their job description and part of things that they're physically, actively trying to grow towards, then it's ultimately it's not going to work. It's going to be dropped at some point.
9	Mining, Utilities Manufacturing	• This is always the classic debate, on how you manage this • Have seen Regional functional teams, so they have Regional Finance functions or HR functions – but they have Global process owners. • So I think the classic model of managing each function separately at a grass roots/operational level is still there; but I think organizations are pulling higher levels of accountability across functions to manage end-to-end processes.

No.	Industry Context	3.2 How are organisational structures aligned with changes to processes as part of Process Improvement programmes?
10	Utilities	• Not yet, but we may still be living in an element of denial, because people stick to what they know best – which is functional structures. • So I think it's very definite steps the company has made themselves clear from Top Management down is, as we move towards a Process Centric organization, and I would guess we're going to start seeing in the next couple of years, the move towards functional structures to actually depicting this. • Am seeing it specifically in the formation of the COE's and the thinking around those structures, aligning very much to the newly defined business process
11	Mining	• A drive as part of the Systems for People where they're changing the organization structure to focus more on a process perspective • Current mostly in Functional, with the intent to transition into a value chain
12	Financial	• Org structure design is not very good, I don't think • I would say on the BT stuff, probably considered. But in the projects I worked on, it didn't happen. There was never really a need for it in the work that I worked on • Procurement department eg - centralising procurement. Now realigning the org structure and to be honest with you, I'm not sure on what basis he's doing it.
13	Financial	• Depends on the lifecycle of the business. In the initial lifecycle, you can chop and change a bit • But within a set structure, it's difficult to re-align, unless you get a different head which changes organizational objectives, then you basically wipe the slate clean and start afresh - then I would think the process would dictate the structure
14	Manufacturing, Utilities	• In South Africa, it's in its infancy • Most organisations are aware of the value of business processes. But the way they articulate it is either through process modeling and having a repository of business processes, or they delegate it to the ERP systems type environment. It is very often done in functional silos, the most mature organizations are starting to put a Business Process Management capability in place. • Starting to look at end-to-end process management. So crossing functional silos, but then typically for only 1 or 2 business processes • It's almost the next wave of business transformation is around process centric management
15	Retail	• I was an executive responsible for supply chain, and it nearly drove me mad because, it's such a cross functional activity, and so what happens is, that everyone is so focussed on their structural or functional responsibility, that as soon as it becomes cross-functional it's an add-on to what they do. And, then you are lucky if they get it done, "you are not my line manager"
16	Retail	• Had some challenges recently when we were merging the companies - overcome that. Accountabilities and reporting lines have been clarified for the CI organisation.
17	Financial, Manufacturing	• This speaks more to a business process reengineering type thing – because what this says to me, and this talks a little to the Process Owner concept from earlier as well; where if there's a compelling reason to reengineer a process • Deceased estates example - re-aligned the team to match the process. But not always the case - disability insurance claims - didn't work out as well.
18	Financial, Manufacturing	• No, not at all. • They don't have process thinking, so they understand, they haven't mapped all their processes.
19	Manufacturing	• Often it could be inhibiting, it's often a top-level directive "you need to this work, in this area, and do it like this." There is a degree of consultation, but often the people doing the instructing or project assignment are not close enough to the problems.
20	Mining	• Yes, where necessary. Example of Maintenance crew shift team structure

Question 3.3 – How are Process Improvement projects and IT alignment managed in your organisation?

No.	Industry Context	3.3 How are Process Improvement projects and IT alignment managed in your organisation?
1	Other - Media and Broadcast	• IT support is essential. A flexible IT team can make or break an improvement project. • Challenge experienced was also with the lengthy procurement process.
2	Financial Mining	• More relevant to BT. Often CI doesn't require IT changes. • I think that often conflicting priorities – between the two parts of the organization • Think they often have different reporting structures and different strategies in the two parts of the organization; which they shouldn't but they seem to. So then as a result they end up clashing. It takes a lot of effort to get them aligned and get the programme done
3	Manufacturing	• PI projects typically drives IT involvement • There are specific IM methodologies as well, so typically includes alignment with PI initiatives. And typically, the IT initiatives are driven by process requirements. The alignment is through the normal project management approach • I definitely think there is challenges in getting this alignment - it's a resource issue for one, there is not always resources available, and the technology side is also governed • It's very time consuming. In some high-level initiatives it has priority and will go through. But in general in the small PI or small to medium PI initiatives, technology takes time
4	Retail	• Have tried to subscribe to the PMO's way of working, but as we just said, we do things our own way sometimes • Sometimes an IT project methodology is different to what you would do for a non-IT project. So we do have that slight difference in how it works– we've just had to make sure that we speak their language. So Stores Support established their whole methodology based on wording and terminology that they were comfortable, ours is slightly different. So our project lifecycle says: Plan, Design, Build, Test, whatever, their terminology differs so we've just had to tweak, so when we're talking about Execute – Execute in IT speak is different to Execute in Stores Support speak. Execute in their speak is executing the project. Execute in our speak is you're rolling it in, it's in Production. So our terminology is different and we've just got to make sure we're speaking the same language at all times. • In the process of doing now is trying to incorporate in our methodology where Stores Support fits into that process. So if we've got a Stores Support project manager or a Stores Support analyst, where in our lifecycle does that person need to be involved, because one thing that we've always done is we have always taken ownership of change management and training. That now really is a Stores Support function, so we need to just reword our delivery methodology slightly to incorporate them in. • Stores Support are driving the documentation of the standardised operating procedures, so what we've done is given our analysts to them in order to do that work as opposed to them hiring or bringing in a whole new bunch of brand new people to do the work, cos our team understands more or less how the business operate
5	Manufacturing	• A business generated IT need - business would involve IM – all structures of IM, from sourcing, buying, implementing, ensuring that whatever software that is being required as a need is being designed and suits the company's environment and how does it interface to all other BU's. They would govern that, although the project guy is running the project management, they will be involved in the decisions, for example, there would be a BU1 IM who would be consulted to say, 'look we're implementing this system, let's do a risk analysis on what the impact would be on your environment.' The project planning, I was involved in it, then our IM would be running with it and govern the design, but the other IM guy would be consulted to determine the impact on them • Issue with a Shared Service IM need is that the BU's do not always see the need for the improvement - as they were satisfied with the existing service and do not want to pay more in future - even though it would be the better decision for the sum of the parts.
6	Utilities	• BT projects in future, you will first do the process, and then you will do the system implementation. • There's definitely an effort now to say whether you do BT or whether you're just a Business Improvement (CI) process, your processes should be standardized, and should then inform the systems and you need to avoid to over-configure the systems. • We now sit with legacy configurations, versions, you know disjointedness between various applications, so it's going to take us a while before we say we really enable the organization for the future • IT enabling of processes - I think more so that what we give ourselves credit for.

No.	Industry Context	3.3 How are Process Improvement projects and IT alignment managed in your organisation?
7	Mining, Utilities, Transport	• In many instances they're seen as in competition, whereas if you actually can get them as complementary to each other it can work well • The focus of the two are however different. IT is focusing on technology that I need to put in place to execute certain processes. Where PI is looking wider than technology – it's looking at the manual steps, the integration points, the handover points - lacks many times in the IT view.
8	Mining, Utilities, Transport	• I generally avoid IT when we're doing these PI • It takes far too long to change, it brings in a whole lot of complexity which slows everything down • I think it's very frustrating for most managers to deal with as well
9	Mining, Utilities Manufacturing	• A maturity in our clients that technology follows process. • IT solutions come with a pre-defined set of business processes anyway, so a lot of the time it's about customizing those standard processes to what the business actually needs, and figuring out how you configure the IT solution for it. Typically I think it takes a lot of time to do that • Once you've implemented, is your support structure in place to change IT as the business processes change.
10	Utilities	• In terms of Processes – world class. Systems – largely world class. • Going to be a subtle shift in the culture we had before where Group IT decide on a solution and either go and lobby or engineer a business need and convince people 'I've found this cool software product; you are so in the dwang if you don't get this thing'. I think there's going to be a subtle difference where business is going to be far more vocal in saying, "but how does it affect my business processes". • The systems we've got are very supportive of the process. Just for the record – that is not saying that SAP can support everything
11	Mining	• IT alignment in the process was very limited in terms of the IT organization - initially when the project started, this was very poorly scoped out, and their involvement was very limited. • Initially it's just a lack of understanding. So as they get to understand what it's about over time, they became more involved in it.
12	Financial	• A very good model in IT where they'll for example give you a project manager. The project manager will then coordinate all the IT resources, the infrastructure people, the database people – whatever the case is. Then you as a business person come in as an Owner and as a customer to them for them to deliver some or other system change that you want • On the funding side, I things are a bit grey - especially if (typically hardware) requirements were not budgeted for in IT's budget. Who should pay?
13	Financial	• Generally what I found is that IT drives change in some ways • The purist way, where the business requires something, and IT goes and gives recommendations. • But generally in a set organization, IT would dictate the changes. • I think in the more successful organizations, I think it's the other way around, where business would say 'we need this' and come up with a solution
14	Manufacturing, Utilities	• It's changing • Previously - IT enablement in many cases was seen as a way to automate processes, but then the IT systems were retro-fitted to the existing processes in the organization • In recent times, I think it's getting more to the point where people understand the best-of-breed processes are configured into these systems and they should be used as much as possible. So it is changing. Where the confusion comes in now is that, now the pendulum has swung to the other side, where the IT guys must manage the processes in some cases. As opposed to managing it as an asset with IT as an enabler. • You always have parts of your business process – and it's typically where you fall over- that are not systems enabled. So you have a front end and a back end of your process that is not systems enabled, and that's typically where you get noise - the only way I know of how to get around that is to be system agnostic in your process management approach
15	Retail	• It was kind of driven from IT, where what should have happened is that it should have been driven from operations, whether it was merchandise or store operations. That is where it should have been driven from, because they didn't have that buy-in we took over that • Now in the company, the project office now reports into me, and all projects that are cross-functional in nature, where IT is an enabler will sit in this project office, we will assign a project manager, and it will be more a programme, with programme managers and IT will be an enabler on that particular project. Where you have a pure IT project, you don't need that structure

No.	Industry Context	3.3 How are Process Improvement projects and IT alignment managed in your organisation?
16	Retail	• That has been our biggest challenge with IT – it is not fully aligned. • I think it is also complicated being a large organization where there is functional reporting and structure, and therefore there is the IT focus gets pulled into different directions as well. • IT - they are less resource, plus they have too much Global projects that they need to be involved in. And therefore the priority gets diluted • For a manufacturing that is delivering on a day-to-day basis there is certain priority that cannot be compromised. I think in our current situation it takes a bit of strain on not getting the right systems at the right time.
17	Financial, Manufacturing	• In the Bank – if you have 4 Business Units, and each has a legacy system; the only way, in a cost cutting environment where you don't have R100m to overcome that, you've got to do something in IT • Ease of aligning IT and the business process - was very difficult. The bank is so heavy on Governance, because the biggest thing in the Bank is Risk. You can't just say, 'listen guys, why don't we just do this'. It gets examined from every angle, because they must prevent fraud – it's money. • The biggest difficult thing was the Risk. Because the governance structure in the bank – they look at Risk, look at compliance, look at security
18	Financial, Manufacturing	• What I've seen over the last couple of years is there's more and more alignment in terms of the organization in terms of strategy – so more and more, the CIO very much part of the Executive decision, very much part of Sales strategy. So that alignment is definitely happening. • I think IT of all the departments, they are more in line with Processes, because obviously they are systematic - almost all of them follow a methodology.
19	Manufacturing	• There is some degree of control systems, and we definitely need that; IT enablement in order to do analyses and things like that, we need that, nothing too hectic. • Changes - not so easy, often we find that a lot of that development was done in-house, and some of that knowledge was lost through people leaving the company and that kind of thing. It is a bit tricky at this stage, and we struggle with the IT alignment to a large extent.
20	Mining	• Yes. Definitely • I think the system was definitely working for us. There were limitations, obviously. But there was always willingness to change and adapt depending on what we required to do our jobs. So I would have to say that the system worked for us. I don't think we had any problems. • SAP is a different story, but I guess that also worked for you if you scoped your project, or you requirements well enough

Question 3.4 – What role do you think executive commitment plays in Process Improvement programmes?

No.	Industry Context	3.4 What role do you think executive commitment plays in Process Improvement programmes?
1	Other - Media and Broadcast	• Executives have to be the final business owner. The executive has to be part of it, part of the management that is rolling this out.
2	Financial Mining	• Vital, it's absolutely essential and without it your programme is not going to fly – neither type; whether it's BT or CI • Part of the responsibility is that kind of consistent message and support and creating that alignment within the rest of the leadership environment.
3	Manufacturing	• Critical. • Especially in very large organizations, decisions have to come from the top, otherwise, you're wasting your time. The executive have to be committed
4	Retail	• Have to have buy-in from the top, and we do have that • We have weekly executive meetings • The PMO office have to give feedback at those monthly meetings in terms of what's going on and everything that both IT and the Stores Support team do have to have executive buy-in and support • So I think it would be CI is definitely Exec owned, what's different on the BT programme is that you would have an Executive steering group which drives the changes together with our Internal Audit department as representative on there as well. They still play a critical part in our BT sort of projects just to make sure that we, (i) adhering to methodology, our governance processes are correct and that we're not doing anything that puts our businesses at risk.

No.	Industry Context	3.4 What role do you think executive commitment plays in Process Improvement programmes?
5	Manufacturing	• BT – often close to it. • CI - they are a bit removed • Commitment to me, I'd say is not that good. But the role is very very important • Often they tend to adopt the steering committee role, then you try and make them involved by making sure they in a steercom where there are critical decisions to be taken or where there are shortfalls, they will be aware of it, and have to make a decision
6	Utilities	• I think it's all about ownership. Owning the change, demonstrating the commitment, building the support for it, and leading by example. Providing financial and other resources. Ensuring that the benefits are clear, the drivers are clear, and tracking those benefits. • BT -the specific examples I've mentioned now, and certainly, what is being demonstrated by the Exco members • CI - often get competing interests. Not always getting an integrated support for focused initiatives
7	Mining, Utilities, Transport	• Without that it cannot be successful and sustained • And I mentioned it as well, the ownership, through the executive commitment it becomes a company drive rather than an individual's drive and you establish ownership within a company rather than with an individual. • And reality is, whether we like it or not, things need to be forced down. Many times with PI comes negative things (headcount reduction, changes to structures etc.), if that commitment is not there, you cannot implement and execute the improvements that's needed • It's critical for any improvement project to touch on the burning platform. • What I found is that if it's impacting their measurements, then the drive and the urgency is there • Ownership comes with 'it's my pain, I feel the pain, I'm driving the pain' and maybe they don't have all the detail, but because the pain ripples up to them, ultimately they will put somebody in charge if they don't have the knowledge to deal with the pain. But if it's not really a pain, it can be the best idea, but never take off
8	Mining, Utilities, Transport	We think of it in 4 areas: • Role modeling – you actually need these guys to role model the change. And whether they do that through coaching or whether they self-propel themselves, whichever way works • Sharing their vision and building the commitment throughout the organization • Making sure that they become the change agents and coaching and training of people underneath them • To make sure that they drive the performance expectations that they want to achieve. • I think there's different guys and different personalities. I've seen great commitment, and some great leaders that have kind of run with this whole thing. I've seen some poor leaders as well. • I think personality profile has got something to do with it
9	Mining, Utilities Manufacturing	• PI programmes can work if you have commitment at some level, I think that it becomes more successful the more commitment you have. That's probably the most generic way to describe it. • You need good technical commitment and understanding. And usually these are the guys who are really good technically, but struggle to get the communication messages across, or don't foster collaboration etc. • So I think managing these programmes as projects is also something that organizations are starting to do - put together a formal steering committee, run it as a project, then once it gets more mature, filter people back into the organization.
10	Utilities	• CRITICAL. • Initially it's a little bit of fear factor, "the boss wants it"; however, what I've found – and this is completely a personal opinion - is that once we've dragged people into the first level of understanding of what it is that we're doing, the process that we use to unlock what the actual business process is and so on, it pretty much gathers its own momentum, because people see the benefit. • If you rely on the organization that to realize it needs to change and do things, I'm not convinced it'll come. You'll have continuous business improvement and that

No.	Industry Context	3.4 What role do you think executive commitment plays in Process Improvement programmes?
11	Mining	• Depends on the nature of the programme. In terms of the long term programmes, if the programme is aligned to strategy and I think it's paramount to have Executive Committee integration and alignment. • Some of the projects can…I believe you can't drive bottom up, it needs to be done both ways, bottom up and top down • So what the Executive Committee does, would do well, is basically to communicate the importance of the programmes and align that in terms of KPI's to the business. So you're driving the right values in more ways than one. • There are so many other programmes that might be run in the different parts of the business, that might not necessarily require Executive approval and oversight, requires different level of involvement • You'd always expect your executive to have some sort of view in terms of how their business units, or how their region is performing – as an overall perspective without knowing the details of exactly what initiatives are in place to achieve that performance.
12	Financial	• BT - a crucial one - invariably involves big investment • CI - probably not a big role, because, it's the day-to-day type stuff
13	Financial	• Important. • If the person has some understanding of technology, then the buy-in or the commitment is actually genuine and is not just lip service
14	Manufacturing, Utilities	• Seen both. • I have seen situations where a strong executive leadership team have stuck to their guns and said, 'we will do XYZ' and it is always the more efficient way of doing it. Always. • PI - this is not something that typical executives do every day. So for them it's just, they pick the path that is as consistent with their prior experience; and it's either more or less aligned to what we know works well. And sometimes we're able to convince them that's the right way, and sometimes we're not. The less efficient way is also initially the cheaper way; which is why a lot of companies do it that way. But it depends on the situation
15	Retail	• As I said, continuous is on a continuum, there is a wide range of continuous improvement projects, where it is simple and easy, it is less important, where it becomes more complex, the more important the executive commitment becomes. • I think it is all about people who can see the bigger picture, and who put the business ahead of their own functional area, or their own personal priorities.
16	Retail	• It's important to drive projects Top Down • Very much committed - when we do PI workshops, the senior directors – the Plant Directors, senior subject matter experts come in from globally, they sit on this project, full time for 3 weeks. They commitment is really good from the top. That's one of the reasons we've been successful • We handpicked people with the help of the executive directors. So if I need a certain specialist – no matter where in the globe he is sitting, the executive director will help me to find the person – if not, somebody equally good as well. Therefore the alignment and support is really top class.
17	Financial, Manufacturing	• Very important • I've seen both sides. I've seen the lip-service, I've seen where the guy below the top guy didn't really buy into it, but pretended to buy into it. So when it comes to the actually delivery - was the force of resistance • Overall, would have to say slightly more negative – not by a long shot, 55/45 • In South Africa, unfortunately, when we start a thing like a BT programmes, we don't start from a clean slate, the business is in crisis already. And that's always been what I hated the most. I always used to say to myself, 'if we could just start in a new business'. From the start. So to be fair to the guys, you're already in crisis mode, fire-fighting mode. Sometimes they want to be supportive of this, they want to make the time available; but are juggling so many balls at the same time. • So it's not always a personal thing. There were one or two guys 'because they don't like the CEO or the way he thinks' then they kind of passively resist. • So that slightly more negative should be seen in context.

No.	Industry Context	3.4 What role do you think executive commitment plays in Process Improvement programmes?
18	Financial, Manufacturing	• Is important. • So this is exactly what happens – they say 'oh we want to see efficiencies, we definitely want to cut our costs, we definitely want to have Processes here, and we want to understand everything'. But the moment you start getting into the nitty gritties,you identify some of these low hanging fruit, and say, let's cut this environment by half because hey, it's a low hanging fruit. Suddenly they get cold feet, and they're like 'we didn't mean such low hanging fruit, we meant you know, like over 5 years' • How do you motivate the PI team for 5 years if they're not able to implement anything. You have to give your team 6-month targets, so in 6 months they start a new thing, the next 6 months the next. and you lose the momentum • Unless you have senior management who is very determined and focused on what they want to achieve and how they want to achieve it, you really can't have any business continuity (continuous) improvement. • You need clarity senior management vision
19	Manufacturing	• Is important, executive commitment. Basically you need to know that the executive gives you their buy-in on any projects you are undertaking, otherwise you wouldn't be funded. • Visible support -it is more acknowledgement, if you deliver and are able to produce the required objectives; and you have delivered to requirements. You will get recognised, it is a little superficial, but it is important.
20	Mining	• It's exactly like the system working for you. You're not really working for the Executives, they're supposed to mirror what's happening in their organizations. So support from them in every level is actually very key. • Actions definitely matched the support we got - section visits, involvement in union discussions etc. They knew what was going on.

Question 3.5 – To what extent are employees empowered in Process Improvement programmes within your organisation?

No.	Industry Context	3.5 To what extent are employees empowered in Process Improvement programmes within your organisation?
1	Other - Media and Broadcast	• It is not always possible in all cases to have all employees empowered in a continuous improvement programme or a breakthrough programme, sometimes you dictate what hast to happen. • The other one I also see is that sometimes we give employees the responsibility, but not the authority to make changes. • And as managers or senior specialists due to extenuating factors, we tend to disregard employee suggestions. It may be to our detriment, but there is a reason why we have done it, because we are looking at something that is bigger than just the one space of work.
2	Financial Mining	• Seen varying degrees, and people tend to be more empowered in the BT type of programmes (have a formal project structure, have the project methodology training, removed from line function) • CI - haven't seen a lot of empowerment (having to deliver on line roles at the same time, too little knowledge in terms of understanding of the methodologies causes this confusion and then inertia, too much knowledge causes them to over complicate it) • To empower - first of all you need to train and arm them with the right knowledge. And I think they also need to have it put into their performance reviews, objectives, the whole lot.
3	Manufacturing	• Difficult to answer as I am not working in that environment. I am working more in the Group type of environment. So we don't really do that, we have our own internal processes and we have full control over that • In the business - there is processes you go through and get it done. So I think they are fairly empowered • The employee might be empowered, but the employee may not always have the skills to bring it to a level of attention • It's very much a thinking type of organization when you think about it. There are people who are paid to think to solve problems

No.	Industry Context	3.5 To what extent are employees empowered in Process Improvement programmes within your organisation?
4	Retail	• Empowered to a certain degree. • Regional structures we have these Admin roles, so those Admin guys are empowered to make their Region work from an administrative perspective and that the controls are in place • In terms of the employee, the guy on the ground, his communication channel if he feels that something's not working properly would be to the Regional Admin level, and the Regional Admin up to National. But to be dead honest I don't think they're really empowered as in somebody saying to them "please go and think of new ways of doing this", we're in such a stabilization phase it's like "you will do what we're telling you to do". And I really just think that's being born out of where we're at as a business at this point in time, it's not a negative thing, when we stabilize and when we're making money and when there's area for creativity, it will come when it's right.
5	Manufacturing	• BT – I would say 40% and this is mainly because this comes from the top. And you know, the consultation is not done that adequately and that's where you get the misalignment. • CI -they are often quite involved, because it starts with them. The research on going on identifying an opportunity and making a business case is with them, so there they are quite involved, about 95% involved.
6	Utilities	• Ironically, I think in the past they were very empowered, to a point where the company had, you know, we literally had a 100 processes because that was what was required for various reasons by different stakeholders in the organization. So going forward, they're going to feel a loss of empowerment because there's a lot more focus on standardization, therefore you have to give up some of your requirements, and they therefore they might feel that they are not as empowered as they used to be.
7	Mining, Utilities, Transport	• I think it's easier for BT than CI. • Many times CI are central programmes that are running, so as soon as you have somebody standing externally from a line function, telling line how to operate is more difficult to empower, more difficult to influence • BT it's done by line, so they do they programme, they wanted the success, they implement it.
8	Mining, Utilities, Transport	• You've got to differentiate between the core team and then everyone else - core team are completely empowered right. Expectation is they will drive it through the organisation • I think the important thing then is, making sure the core team is right.
9	Mining, Utilities Manufacturing	• Typically employees do get empowered to some level to run these programmes. • Empowerment also is driven by how we incentivize people to reach some of the objectives. And again, that can be a double edged sword in terms of what behavior it drives
10	Utilities	• You'll find different levels of maturity towards this from different divisions - e.g. BU1 have been process orientated for a while now (7yrs), so at the coal face, they are encouraged to find PI ideas. But this is not the case in BU2 • But definitely the way that we see this going, it's instilling exactly that – to empower people right down at the coal face level to be part of the CBI (Continuous Business Improvement) programme.
11	Mining	• Prior to launching the Improvement programme, we did a survey which was a people oriented survey - people were not empowered to work the way they needed to work • They didn't feel empowered to do that because they weren't engaged. • Part of embedding the new way of working, people were empowered to understand knowledge is power, if they understand the new way of working. This is my role in this new organization, they have a greater chance of executing their work within the discretion of their role. Because, without that you're kind of left boundless. • People were more empowered to (i) perform their roles and (ii) to contribute to the business in a positive way • This specific PI programme aimed to empower them to make the right decision, because it was geared towards reducing variation.
12	Financial	• Tend to do a good job, like I was saying they've got the Six Sigma thing – anybody can go on that training.
13	Financial	• In the bigger organizations, innovation is driving from the ground up, so people are empowered to think freely and laterally, not to make the decision to change, but are empowered to think of improvement. • In the bigger organizations, there's more of a change management process

No.	Industry Context	3.5 To what extent are employees empowered in Process Improvement programmes within your organisation?
14	Manufacturing, Utilities	• Seen a lot of consultation - there's always a need and an understanding of the fact that you cannot just issue a decree. Somebody sitting in an ivory tower at the top of an organization very rarely knows what it practically takes to be successful on a business process level. Some cases they do, but very often they don't. Because they work with the results of the process, not the process itself. So there's always a willingness and understanding of requirement to consult and allow employees to influence the process. • What doesn't work is that people don't know where to draw the line. At some point in time it will take a decision, because you will never – very rarely get – a 100% consensus on what the right solution is.
15	Retail	• Not yet at the company. • The culture should be, and I want to change it slightly, was what we had before was we had auditors checking on stores, and they were not only auditing and checking, they were also mentoring and coaching, and I don't believe that those two functions go together. What I'm trying to set up here is to separate that function, so that the auditing type function is going to sit separately from the training, mentoring and coaching function. So I hope through the training, mentoring, and coaching function, we're going to see ideas coming through.
16	Retail	• There's a lot of room for us to work on the empowerment portion of it - we are in the process of learning, so the management team is learning and once they start involving the operators as part of the implementation, then the involvement gets better, plus it automatically transfers into empowerment • The ideal state should be a self-sustaining shop floor team which is fully capable of making decisions around quality, cost, safety, delivery, morale. And then highlight or elevate problems which they cannot make (fix). So we're not in that level yet. • This also means that we need to have the right skills in our levels. We are in the process of acquiring the right skills and coaching and developing the people so that they can be empowered
17	Financial, Manufacturing	• There's also the levels, there's different structures, different levels here. I think definitely on the project level with BT, there's massive empowerment, compared to your CI programme where it's used as stick • Part of the empowerment is the training.
18	Financial, Manufacturing	• They have a very Owner-Manager culture, this is your goals, and you make sure you get it done, how you get it done, nobody really goes up to you and checks up on you and all of that. • But was different in the Optimisation department - analysis paralysis. Were not willing to commit.
19	Manufacturing	• In this instance we are pretty well empowered. We are autonomous to an extent, we can make decisions, we can go and make changes; but, that is purely on a development level. • If they are going to be passed to production, we have to prove that they are improvements. • In terms of getting the tests done, and getting things implemented, we are pretty well empowered.
20	Mining	• I can't really say. In general they were involved. • Obviously BT is a different story, because that's sort of something the parent company is implementing, and then you just have to buy-in to that. • So I would think that on the CI side, there was definitely a lot of empowerment and they were very much involved.

4. Organisational Performance

Question 4.1 – Has your organisation's performance (competitive position, profitability, employee productivity, unit cost of product/service, quality of product/service) improved as a result of your Process Improvement programmes?

No.	Industry Context	4.1 Has your organisation's performance (competitive position, profitability, employee productivity, unit cost of product/service, quality of product/service) improved as a result of your Process Improvement programmes?
1	Other - Media and Broadcast	[Manufacturing] - • the wastage was reduced drastically because of the way the production process was changed. The quality definitely improved. • BT -That in itself was breakthrough, just by adopting the latest technology. So technology itself and technology evolution allowed that electronic product to 1/5th of the original cost.

No.	Industry Context	4.1 Has your organisation's performance (competitive position, profitability, employee productivity, unit cost of product/service, quality of product/service) improved as a result of your Process Improvement programmes?
2	Financial Mining	• I must admit I've never seen an organization measure their performance against some of these criteria you've mentioned as a result of a project • Very little check back to say "did we, when at the start we set out these reasons for starting the project, were to reduce cost by x" - i.e. don't quantify upfront and measure after the fact. • Financial Services just seem to have a whole pile of budget and not much trouble with budget. • Benefits tracking - quite rare that it is done with the rigor that is required on both fronts (CI, BT)
3	Manufacturing	• Definitely • It's all about getting the business value and the initiatives are designed to get it and they are measured to get it. So specifically they are tracked at budget level, tracked at financial level, you know it's very important. Cos when you invest a lot of money into big CI initiatives you want the returns. So it's the same kind of problem. A BT one you might see very quickly, but a CI one you might see over many years. But it's all about value to the organization ultimately.
4	Retail	• CI - Difficult one to answer because our Stores Support team has only been around for about 3-4 months. Firmly doing what it's needs to be doing • What we've done is try to focus on the areas where we know the problems are the biggest. So I think it is a little bit too early to measure the effectiveness of it, but the view is that once the work has been done in those specific areas, then yes, we would be able to see a vast difference, specifically in terms of financial controls, and specifically in Gauteng around shrinkage • BT type work, the Denver DC, we put that business, or that instance together, we rolled out new systems in there, when we went live, there were control issues. We have focused a lot on working, or tightening those controls or tightening those operating procedures and there have been performance improvements in the DC and store deliveries.
5	Manufacturing	• BT - FE, I think it has improved on a company level. • So competitive wise we have improved, the fact that we are now able to benchmark from one process to another and take the best. Employee productivity wise, I think it has, on a high level • CI - yes it has, you tend to say, look we're losing money on this, then you obviously go and defining the business case, developing it. Then the whole objectives is to often get to those goals. We want to reduce cost therefore increases profit, we want to provide a better service.
6	Utilities	• It's early days for the specific example I chose (which is the Strategic Review), because it hasn't been fully implemented. • Historically, I've been able to look back and say, 'we've done better', and our performance have improved. • CI projects, generally, although put together those measurable business cases; in my experience, it's been very very difficult to prove the improvements in performance after the fact. • We often get sold solutions in a vacuum - it doesn't take into consideration the company's labour practices, network constraints, so there might be benefits there that you put upfront in terms of the business case, but afterwards you have to say "because the company's labour practices, you cannot reach that benefit'; and or 'because of the company's network constraints, you haven't been able to reach that performance target'. • So it's my experience that we have not done well in terms of measuring and proving the quantifiable process improvement targets that we've set upfront.
7	Mining, Utilities, Transport	• Seen pockets of it. I've never seen a whole company performance really change. • I think the focus needs to be 'how do I use a CI capability to improve my day-to-day job' versus 'It's something I need to do a project, which project can I do'. • So come back to the Change Management thing, so how do you manage that people see putting a graph up and see that "I'm not performing" as a positive thing so that "next month I can improve". It really takes a lot of skilled ownership to get an organization to do that.
8	Mining, Utilities, Transport	• BT - the Transport side, have achieved between 30-50% productivity improvement consistently. I don't think there actually has been one that has achieved less than 30%. • The question again is how sustainable is that performance. Whilst everyone is down on the floor changing and making all these cool decisions, things are great. But typically there's a bit of a retraction after, when the project team leaves. • In the private sector, the success rates are quite high. In the public sector, the success rates are very low. I think skills is definitely a part of it. But also the political and organizational changes that consistently take place there, and the corporate memory now within those organizations because of the change over the last 10 years, is a lot lower than it was ever before.
9	Mining, Utilities Manufacturing	• Mixed bag - many organizations we've worked with have implemented new processes, have built that into their technology and they've maintained or improved competitive position • There are other organsations that have just drifted back into the old way of doing things.

No.	Industry Context	4.1 Has your organisation's performance (competitive position, profitability, employee productivity, unit cost of product/service, quality of product/service) improved as a result of your Process Improvement programmes?
10	Utilities	•B2B -so it will do, obviously won't be evident right now - from an IT point of view, maintaining a single environment, instead of 4 different environments. From an ultimate, Total Cost to Company for all the different business processes, it can only improve. • From other initiatives, that I've seen over the years. Absolutely. E.g's of cost and reliability improvement
11	Mining	• Yes. Eg's of cost reduction, increased throughput, system availability increases
12	Financial	• Yes • Capacity that you add back into the system • Brought down the time it takes to process stuff at the end of the month. Quality of course improved.
13	Financial	• Definitely. If the improvement programme was well thought out, the performance is more than visible. • It's within the lifecycle of that application. In the initial phases you generally, you don't see it, until it gets through to the CI. You will see a lot of improvement, but until it's the fine tuning and the real benefit really comes towards the end.
14	Manufacturing, Utilities	• Yes, absolutely. • It's not always about performance. In some cases it's about compliance. That is always the first thing we address in any organization – compliance and governance. That has legal and financial implications. • The large, sort of step change transformations tend to have a larger, short term benefit – although not immediate. We spoke about it earlier, you tend to get a bit of a decrease, but then quite a rapid increase – you can get double digit increase quite quickly. But the CI is not necessarily less impressive, it just takes longer.
15	Retail	• Yes, Absolutely. • More with breakthrough.
16	Retail	• Yes, definitely. When we identify opportunities, our process finishes when we seen an improvement. • So we definitely see bottom line cost benefits. We see, after you have cost benefits, you have to have delivery benefits, and also it transforms into indirect morale benefits. When we have better operating systems, or you improve a certain process, at the end of the day, one major output that we cannot really measure is the happiness of the people working in the area – which has an impact on morale.
17	Financial, Manufacturing	• Yes, definitely.
18	Financial, Manufacturing	• Yes, I mean like there were a lot of things. When we started mapping processes, we immediately saw – they weren't just checking once or twice, they were checking 3 or 4 times. The same thing they were checking – and we would immediately pick up that you're wasting 4 hours in a day on triple checking something that has already been verified • So it was very clear to me from the beginning – the moment we started doing the process mapping itself, we saw how many layers of irrelevant management and supervision levels there were. And how many irrelevant levels of signatories there were. I mean, it's like I said – you have to have management that's committed to getting rid of those layers to actually see the benefit of removing them.
19	Manufacturing	• From a quality perspective, yes. From a unit cost, the cost is directly related to quality, is the cost of quality, with the higher quality your costs should go down, you should have higher yields, but the present the costs have gone up. • I would say that there has been an improvement of the competitive position as a result of some of the changes we made; as we had customer reviews, that we were performing more consistently and that sort of thing.
20	Mining	• Definitely. • Example of improved equipment availability after Maintenance crew team restructure project • BT vs CI - I think both would contribute. I think it's just the scales would be different probably. But I think change is still change. I don't think there'll be any difference. The one you might see a change today, the other you might see a change in 5 years time, for example.

Question 4.2 – How has your organisation ensured that the desired results achieved are sustained over a long period?

No.	Industry Context	4.2 How has your organisation ensured that the desired results achieved are sustained over a long period?
1	Other - Media and Broadcast	• When you have concrete, visible changes that are not hidden somewhere and the change is tangible it tends to carry itself because it becomes the new standard (for the product). If it's something in the process flow, it has to flow into the KPA's or KPI's of that individual that has to execute the changes • In a Production environment, it is easier to do the KPI's, but in a Service environment it is harder do enforce the changes. Especially if it's an environment driven by customer service; people tend to follow the easiest way to meet the customer requirements and may fall back on old ways of doing things.
2	Financial Mining	• Measurement - having your charts up on your walls which constantly measuring your process and constantly making sure you are improving and that you are within your limits etc. • Building it into your performance contract and your promotion criteria • Making reward and recognition and incentivisation important and part of it • CI programme is constantly chipping away, I think if you've got the right kind of programme in place, it's always going to be sustainable • BT - sustainability comes in that uptake and traction of the new process and system. People adopt change and you don't go back to the old way of working.
3	Manufacturing	• The bigger the initiative is, typically it will be People, Process and Technology. So you will start, you will understand the problem, design the new environment, design the new way of work, and then you would restructure the organization to fit that and fit the appropriate technology. On the smaller initiatives, you have different structures in all the businesses that kind of mirror what we in Group have for PI, so the way to make it stick is to ensure that those structures take it over • To answer your question, to make it stick, you must involve the business • Obviously you need to show value – that's another way of making it stick
4	Retail	• We can't really answer yet, but I think that's one of the objectives of the Stores Support team, that they are going to have to ensure that whatever they are changing is (i) sustainable and (ii) they can provide some metrics that it is. • And I think our numbers, specifically on things like shrinkage, processing stock coming into the stores, looking at profits; the minute there's a big gaping hole somewhere or some number pops up that shouldn't be there, the Analysis team and the investigation team goes in and checks it out and you'll soon be able to see if somebody's stopped following a process. So for us, our numbers tell us largely where there's issues
5	Manufacturing	• BT project, they often look at that- is this sustainable change. The only thing that makes a difference is the people who are doing it. They may not keep it sustained, but trying to get them involved, getting their buy-in, showing them why you're doing it, they may sustain it. • Try to make it focused on the process not the people
6	Utilities	• Does put in either formal or informal structures to sustain change
7	Mining, Utilities, Transport	• Establish that culture of CI, of people looking for things • Part of your sustainability is having that big goal post, but having the small goal post and beyond for people. • How do you actually give something back. Part of people's nature is "I don't do things if I don't get something back", so with remuneration or with certification or with something • How do you safeguard your CI or BT programmes against culture change, organizational shift change, industry changes.
8	Mining, Utilities, Transport	•I think the guys that have achieved and sustained these results are the guys that achieve the results are the guys that just follow the programme, sustain the results are guys that physically look to address all of the barriers • The biggest hurt comes in the sustainability of the initiative as a whole. You find that the private sector are lot more open to changing these things and making things work. Public sector is not so easy to make those types of changes
9	Mining, Utilities Manufacturing	• The element around embedding the change in your technology almost forces people to use the new way of working, and so a critical part of actually improving performance is to make sure that the technology supports the new process – like at a transactional level, and then building all the measures and metrics in that technology as well. • I've seen is the most effective way to sustain the improvement over a long period of time

No.	Industry Context	4.2 How has your organisation ensured that the desired results achieved are sustained over a long period?
10	Utilities	• Drove very hard the FRA component of closing out business cases. And in doing that, it instilled a culture of 'but let's monitor the results' because of continued reporting for whatever the duration of the Benefits Realisation Plan was, at least. • But again, I must say that you won't generally find that down at BU level, at all sites • There will be actual KPI's, to monitor that and to feed back to the stakeholders, not necessarily the project team. That's the other thing, we never quite used to get right. We'd hold the project team accountable to realize the benefits and not those who should really be accountable for the adoption of the change.
11	Mining	• Impromptu checks by the business team • Checks by project team • The overarching *system, was able to draw quite a bit of data regarding the system* - had its own KPI's • Incentives were linked to the success of the programmes
12	Financial	• Document • Explain what's going on in the background - empower with information
13	Financial	• The continuous feedback loops, that actually ensures the sustainability.
14	Manufacturing, Utilities	• Not all organizations see the need for sustainability. They think that the transformation is going to be magic wand and it's going to last forever. So it takes some effort, and some intelligence for organizations to get to that point. • In the really big transformation – where you change operating model in the organization – you typically have to make some governance changes in the organization to make sure that operating model doesn't get diluted over time. • Where you have a large systems component to it – your maintenance and change management effort associated with that system also needs attention. • For a CI, there's some structural, systemic stuff you can do – it's about how you measure and monitor the organization; how you report on your performance and those types of things. And it's a culture of CI that's more important than anything. Because that sustains itself over time.
15	Retail	• Ended up going back and doing a business benefits realisation, we put that in place. • We had very specific measurable outputs, which we tracked and reported on monthly.
16	Retail	• Management Control & Reporting System (MCRS) - at the Plant level to ensure that they have the full dashboard and that they know what's happening and they know what to do • Have audit that we do Regionally and Globally to ensure alignment of – we do the audit of the (??) of the system; so we have tracking system, we have reporting Globally that we need to do. • A commitment that we make in an annual contract, so if that annual contract is not met and the review on periodic basis – it gets highlighted in that as well.
17	Financial, Manufacturing	• Control Plans • Reporting – including your BT (Six Sigma) reporting in your standard reporting. That is critical. • Visual management – make it very visual, put it up there. • Link it to performance, link it to KPI's. Link it to the guy's pocket. Reward.
18	Financial, Manufacturing	• Programme fell flat – did not see through to full implementation
19	Manufacturing	• A large degree of the problem comes in with the variability • From our perspective, with design changes, we need to make sure that the design changes are sustainable, and is productionisable • From Productionisable, it's not just small quantities, but you can roll out into thousands of components being made per week at the required quality. We've had some challenges there, but it is bit of hand-holding over the time when going over into production. Often we've had to switch between suppliers of components and that kind of thing to get the quality needed. We've gone for new enabling technologies to be able to get the improved performance and that kind of thing.
20	Mining	• Upfront, when you discuss the changes, when you think about actually changing something, you've got to look at whether this is viable. It's pointless changing something now, and then two months down the line, you have to change it completely. So you can continuously improve whatever you've made the drastic changes to. Y • Where the measurement comes in. You have to really get a feel for whether people are changing, and people are sticking to. I always measured it in terms of effort. If you found that people would have to do a lot to maintain it, then it's definitely not going to work, because it's not going to continue – they will definitely go back to their old ways. But if you see people easing into it, and it's becoming sort of, 'this is how we normally talk', then yes, then it's sustainable and it's going to continue.

5. Future Improvement Programmes

Question 5.1 – Please describe your general experience with Improvement programmes. Have your experiences been generally positive?

No.	Industry Context	5.1 Please describe your general experience with Improvement programmes. Have your experiences been generally positive?
1	Other - Media and Broadcast	• Largely, yes, it has been positive. • Pushback when you are in the middle of it and things aren't going right, there's losses here and there, or the cultural differences in the team, or the dynamics of the team aren't right because you are going through that chaotic phase at first and no-one is settling in to the way of work. The upside is when the programme is over, and things are being done faster, cheaper, and there is less problems, less callbacks, people always wonder why haven't we done it from scratch.
2	Financial Mining	• Ambivalent • A lot of the projects whether BT or CI programmes start off with huge momentum and energy and such positive energy and slowly lose momentum, it could be that they are not seeing results fast enough or that they don't have the time to do as much as they thought they would • Often seen it fall apart when there is an organization change in leadership
3	Manufacturing	• I've had very positive ones, I've had very negative ones, and I've had mediocre ones. But in general it's been positive and you can show value. • In many instances that you can see the value, and you can see the opportunities, but it's not always easy to verbalise it in such a way that others buy into it • People are fixated with methodologies and don't think in terms of business value. People apply it for the sake of applying it and not for reaching an objective or they lose sight of the objective. So I've seen in Six Sigma type of environments, they Analyse for 6 months, and then nothing changes. So it's like you need a balance. And that I could tie to that they don't know where to focus. You could analyse for many many months and years and if you don't know where to focus you're not going to find it
4	Retail	• Ya, I think it is (positive) • We never embark on specifically going out there and making life difficult for users, so if we can find better ways of doing things we do so
5	Manufacturing	• Has been positive, positive generally • Getting people to buy-in and understand where I'm trying to get to was the only sort of negative experience I've had. • But identifying things has been good.
6	Utilities	• Positive
7	Mining, Utilities, Transport	• Being in the CI programme, it's extremely rewarding because you very focused, you drive change, you run the programmes, you see the improvement • People on the receiving end. "Somebody else with a really bright idea is putting more stuff on my table, they don't understand my world, they don't understand what I'm doing 8-5. They're just coming from outside". So it's extremely difficult to motivate these people, to get buy-in from those people, to instill the change in their world. • Line management - with all the knowledge and capability of knowing what you can achieve. And all of a sudden you now have to address that resistance. So the challenge is, how do you make that part of your 8-5 job.
8	Mining, Utilities, Transport	•I think they've all been positive, the only thing that sometimes gets you down is the sustainability. But overall, over the duration of the initiative it's always positive. Over the longer term it's not always positive.
9	Mining, Utilities Manufacturing	• As consultants we always go in with a positive mindset to make the change, so I think looking outside in, it's always positive. • People in organizations look at it differently, some of them see it as an opportunity to improve themselves and move up the career ladder • Other clients see it as threats to their jobs and the way of doing things; they feel exposed because it's their knowledge they now have to let go of • But in general I think the world recognizes CI is important and they need some capability and capacity to invest in this - they'll fall behind very quickly unless they have something in place
10	Utilities	• Prior to 2010, negative. And I would think invariably the reason for that was that the really big ones were invariably always corporate driven • Very different experience in the last year, possibly 18 months - based on the fact that I can see there's not a lot of talking, it's actually demonstration of Executive level support, the will to want to change things and so on
11	Mining	• They've been positive, I think there's always these negative bumps that you experience. • When you see the benefits of it, and you see that come together, you kind of realize that there is tremendous value when you see the tangible results of it

No.	Industry Context	5.1 Please describe your general experience with Improvement programmes. Have your experiences been generally positive?
12	Financial	• Generally yes • Where it's *not* is when probably I've been let down by the user themselves • Not given this a clear accountability for who's accountable for making sure that Business is fully going to use the systems that you're implementing or the changes that you're bringing about,
13	Financial	• Boils down to the how much of thought was put into it initially. If it was an airy, fairy, spur of the moment, let's do some changes – there is some success and there is some failure stories. • But generally the well thought out ones generally work. And I do feel that even though they may start out as a BT, with the CI, it definitely does improve.
14	Manufacturing, Utilities	• If you talk to the executive management teams of organizations, or shareholders – the result has generally always been positive. • If you sort of drop it down a level to middle management, it is almost always in the short term, a painful experience.
15	Retail	• Positive
16	Retail	• CI resources are seen as consultants to Operations - important to have a manufacturing manager who is a well rounded person who understands the overall business and how to achieve that objective is critical, otherwise the moment he sees the CI person as somebody who is going to bring more work to them, and then you're lost. Then you have a much bigger battle to fight with. • Get the buy-in as quick as possible, then motivate him on long term plan, that will actually have more strategic benefits to the Plant. Try and get the short term benefits, so that it is visible, he can see it in his numbers • The key objective is to be fully aligned and convince the leaders that whatever you're doing is actually for the same outcome. It is just coming from a different angle – that you're either helping in a situational or a systemic or a strategic way.
17	Financial, Manufacturing	• Positive
18	Financial, Manufacturing	• Negative in FS, Positive in Manufacturing
19	Manufacturing	• I think in between • We definitively had some very good initiatives on improvement, but at the same time I feel that with things changing as rapidly as they do, we can't get as far along as we would like to. • Often we find also that different teams of people often work on different ideas, and some of your ideas get shot down compared to someone else's, which is good, depending on which technology is the best for the company in going forward.
20	Mining	• Somewhere in between. • There were definite positives and there were definite negatives. But I guess change is always difficult, regardless of how small or big it is. So I think it's always going to be an in between for me. So I don't think I'll ever be completely happy or depressed about it

Question 5.2 – Will your organisation continue with Improvement programmes? If "No" please elaborate.

No.	Industry Context	5.2 Will your organisation continue with Improvement programmes? If "No" please elaborate.
1	Other - Media and Broadcast	• Yes, we can always improve right. We can always do what we are doing now, better, there is always technology that is coming to the fore, there is always something where you are stretching you core competencies or leveraging something you do in one market in another market. So, you will always be in a space of continuous or breakthrough improvement.
2	Financial Mining	• I think they will • For CI programme to be successful it has to be more coordinated and more structured - don't see that commitment right now
3	Manufacturing	• For sure.
4	Retail	• Of course, because we have a whole team of people dedicated to it.
5	Manufacturing	• Definitely will do • Things always change. FE may work today, and it may not work in 10 yrs time, not because I'm saying it's not going to be, but the demand then may have changed (e.g. Legislation, carbon footprints etc.)
6	Utilities	• Most definitely – that's part of our DNA

No.	Industry Context	5.2 Will your organisation continue with Improvement programmes? If "No" please elaborate.
7	Mining, Utilities, Transport	• If you can find the right amount of people that understands it and is apostles to it, it will rise again, and it will be sustainable and it will happen • There's companies where it was the 'flavour of the month' • And there's a company where they're running it, but because it's not changing, it's not doing what it's supposed to do. It's there, but it's actually doing silly projects and the wrong things. It's not reaping the benefits
8	Mining, Utilities, Transport	• There's the 1 school that truly believe and are dead focused on making sure that they typical Lean concepts are carried through. And then there's the other group of people – the pessimists, which after you've done a few of these things, start to question whether performance improvement or additional resource and capital is actually needed to achieve a step change. • I think overall, the optimists outnumber the pessimists. • Also comes down to where things have worked and have been sustained – everybody is quite happy to see those as huge success. Where things have worked, but have not been sustained, questions become asked • Consultants are probably the biggest culprits in this whole confusion. We interchange the names (BT &CI), maybe because some of us don't fully understand it. And there's some BT programmes that are actually CI programmes and the expectations are not actually managed as such and vice versa; when pushed through as BT, you burn everyone out.
9	Mining, Utilities Manufacturing	• I think they certainly will • New challenge they will face is how to integrate and align improvement programmes • I think there's still silos around Divisions or Complexes or Geographic areas not really sharing that experience in a tangible way – and this is a generalization. But I think the next level of benefit will come from how leadership is able to orchestrate that knowledge sharing across Geographies and boundaries to really get bottom line benefit.
10	Utilities	• I believe the intention is to continue.
11	Mining	• Definitely. • Always need to look for options and alternatives in terms of improving the way you're doing business. • There's a lot of potential in terms of becoming a world class business. And usually improvement programmes will take you there
12	Financial	• No doubt.
13	Financial	• Definitely.
14	Manufacturing, Utilities	• Absolutely, because you have to continue to improve, otherwise the competition will leave you behind. • So you know there's no doubt that these things – it will come in waves. If you do it well, it should have a pretty good lifespan. • Especially your CI processes, they should continue running for the lifecycle of the business. • Large transformations typically have a 7-10 year wave cycle if you will, purely because if you're going to do a proper transformation, you should do a proper transformation. That's typically the time it takes for an environment to change enough for you to do it again. And for the organization to build up the appetite to see the need. Because these things can be quite disruptive. They have to, otherwise they become irrelevant.
15	Retail	• Yes, definitely.
16	Retail	• Yes, I think this is the way of running our business. So as long as we exist we should be working on CI.
17	Financial, Manufacturing	• That's a very good question. It's actually something I find difficult to answer. There's a danger that some of them might derail • The Bank it will definitely continue. Consol, it will definitely continue. MCG – it might fizzle out. In MCG, I think it is Executive commitment, and I think the mistake that MCG made was to make me (Edward) the face of the programme
18	Financial, Manufacturing	• FS - Unlikely. Not ready for efficiency thinking yet. • Manufacturing - yes.
19	Manufacturing	• Yes, definitely. We have to if we have to stay in business longer.
20	Mining	• Definitely. There was a culture of that. • Also comes from empowerment to a certain degree. If your employees are empowered, they will find ways to improve. If you sort of given them that responsibility, and make them feel a part of, they're contributing to that final mark – then they will continue to improve and find better ways of doing things.

Question 5.2 – How are lessons learnt from previous Process Improvement programmes incorporated into future projects and shared in your organisation?

No.	Industry Context	5.3 How are lessons learnt from previous Process Improvement programmes incorporated into future projects and shared in your organisation?
1	Other - Media and Broadcast	• Shortcoming - don't have a formal continuous improvement programme. Don't have that post-mortem of projects properly documented. We don't have a learning database where someone can go and search for similar sort of initiatives we have undertaken elsewhere in the business and what the learnings were. It is usually in the minds of the project manager, the management team and the employees involved in that change process. However what is done is that the project managers or the employees that previously have that experience are coupled in to that programme that is going forward and is of a similar nature.
2	Financial Mining	• Not seen it done with a huge amount of rigour • Have seen Post Implementation Reviews which are often conducted after a BT programme as long as they are conducted properly and as long as the learnings of those are passed onto the next project, they can be quite powerful • CI - depends on how well you setup your knowledge sharing and experience sharing network and that is one of the things that is setup as part of the programme
3	Manufacturing	• Various methods - in the functions itself, there are regular forums to discuss things. • Archives where information is stored and captured • You do lose some of the stuff • Forums do not always happen so well, because, it takes a lot of time, it takes real understanding
4	Retail	• We have a evaluation mechanism built into our project delivery lifecycles - a review cycle, get input from our *own team* as well as from the business • They are formally shared and documented • I think it's about maturity and learning to learn stuff from other people within our team. It's about thinking of them as peers as opposed to us thinking we know it all
5	Manufacturing	• BD&I model and the MOC • Bring in the lessons learnt into the BD&I model
6	Utilities	• Protocols - every project has to close out and you have to have a lessons learnt log and you know that is archived • Made available in a collaboration platform • Mixed success with it, and hence we really at the moment, one of IT's biggest challenges is Collaboration • Really in practical terms share knowledge and share experience; as opposed to something that is quite mechanistic, and unless you know that it exists, you'll probably never know or get to know about the lessons.
7	Mining, Utilities, Transport	• Create that ownership and the tipping point • You need the right culture, the right support, the right training, everything else.
8	Mining, Utilities, Transport	• It is done. • The standard PI programmes which have been done over and over and over again, and those are almost like a recipe you follow and you roll-out and it just works. • Then there's the ones that you're doing and still learning. BT programmes – a lot of us are still learning about. We've seen pieces of them work, but I haven't seen any company yet perfect them yet. There's definitely a process of incorporating knowledge etc. to re-configure and redesign them to make them better. • Ultimately the champions who form part of your team would also be part of that process. And at the end they would also reflect on what's happened and discuss the things that they think they did well, could have done better, things that were handled wrong etc. And those I suppose they keep within themselves, and we (consultants) also take those back. • But what I also find is that, you know, it's quite rare that you do a CI or BT project in the same place twice
9	Mining, Utilities Manufacturing	• Leveraged a dedicated Change team that the team channel all these lessons learnt to. • Many companies have Corporate Communications or that kind of thing. • In general as a close out to an improvement programme, there's typically a step that says 'capture lessons learnt' • There's the formal way to do it, but just the war stories people share
10	Utilities	• Primarily on B2B, it's been some time now that there's a lot of emphasis on knowledge sharing, even if it's informal. • People attending conferences, we need to formalize the lessons learnt – tell us how it impacts the organization, what are the 3 quick things that we could do to use the…. • So there's a reasonable culture of sharing and bringing back knowledge.

No.	Industry Context	5.3 How are lessons learnt from previous Process Improvement programmes incorporated into future projects and shared in your organisation?
11	Mining	• Within the department it could easily be done. But across departments or functions, it's not so much • It's not the culture in that organization as yet, to share learnings. There's huge opportunity to develop and approach for something like that.
12	Financial	• Project managers do is to have an actual meeting to discuss just that • Always put in 'these are the shortcomings we had from this particular PI project' in documentation • Not part of the methodology. So maybe you might find that some teams don't do it.
13	Financial	• At the end of the projects, there are the feedback discussions • They always try to implement a knowledge base. But it's not Google • Generally lies with the people involved to actually share the learnings with the greater team. And it's difficult to get the knowledge out.
14	Manufacturing, Utilities	• People who are involved in process transformations are actually quite keen to talk to one another - for some of your production stuff, there's competition laws that stops you from talking about certain things. • How... the experience of the people doing it. You obviously get better at this, the more you do it. Your methodologies and the tools that you use improve. But a lot of the value is knowing what to look for. • Some of it you can capture in things like tools and methodologies • Intelligence and willingness and good tools will get you very far; but the last 25% depends on how experienced the people are – to make the judgment calls.
15	Retail	• Every project ended with a project implementation review, and was part of our change management thing. People had to answer questionnaires and we reported on that. So we did that quite thoroughly. • I don't think that the knowledge is managed very well, cause I think, very often there is a lot of people movement, and so it is not managed very well • Used the network drive as the workspace - happens within teams more • It's something I am passionate about, while I was there I drove it • Not organisation wide - person driven.
16	Retail	• Not having a great system to do that • since we have done so many workshops across, we've developed good networks across our business. So I know whom I can contact, certainly in Nigeria or Saudi Arabia. I can get through to the people and I can guide the CI Engineers or the Site CI Managers to get the right information. So getting the information, I can say 70-80%, okay 70% we can still do it with our networks, but that doesn't substitute a Global knowledge sharing point. Which I think it's something we're actually working on, but it will take some time to be fully working.
17	Financial, Manufacturing	• You need to have a project library. It needs to be easily accessible, and you need to entice people to use it. • In the Bank for instance, SharePoint, and the projects get dumped in there in PDF format. What the bank does nicely with their library, is their library is themed. So what they would do is, they have a portal; and you go in and say – if I can remember the detail – they would say Design, and when you click on Design, you see projects where things were re-designed. Then you have Optimise, then click under Optimise it says Credit, Operations… so there are themes. You click on Credit and you can see that these are the projects Credit's done, and you can see by the title and you open it and read. So what they do is, they use Prince 2, and lessons learnt is big in Prince 2 • Consol - used a portfolio management tool called PowerSteering
18	Financial, Manufacturing	N/A
19	Manufacturing	• We are trying to go for this whole One "e6" type of philosophy now, where we are trying to integrate teams across divisions and across countries, and to work together and share knowledge, on different projects, where problems might have been similar • It's been spoken of, but it is not formalised as such. There are secondments and that sort of thing, and there a people from different groups that interact with other groups. • There are good initiatives in place, and there is room to grow. I think our team is a good team but it's relatively new, only a year and a half old, and we just need to grow from here.
20	Mining	• Weekly Brief - printout, email and video round-up of the previous week in the business. Teams were encouraged to contribute content

6. General comments pertaining to Process Improvement programmes

No.	Industry Context	6. General comments pertaining to Process Improvement programmes
1	Other - Media and Broadcast	• PI - the ideas can come from anywhere, but the ability to argue and present those ideas, means that one gets chosen over another. So, a well presented idea is easier to motivate and adopt in the company for changes or improvement. • As long as a project or process improvement programme, meets the criteria in terms of the vision and strategy of the tactical objectives of the company, it's easier to motivate.
2	Financial Mining	• I think physically with CI programmes, there's not a lot of understanding in SA, I think we are way behind the UK and US for example. • People are very scared by the methodology, terms and the requirements of a methodology, so they can get put off by it • A lot of organizations work in silos, so it's difficult to push the initiative through the whole organization • Retail, manufacturing and mining have had more success than FS • Possibly Financial Services is not getting as much traction because it's not tangible, they are not getting those tangible results
3	Manufacturing	• The most important thing is understanding where you want to go and focusing • How do you demonstrate value quickly? Well, number one is you must know what is value. And I think that is already where a lot of the CI initiatives fail. It's not linked to value, it's not linked to improving the situation, and number 2 is that you must do it quickly. • 80/20 principle is so relevant in PI • Back to the 5 things: the objective must be clear, you must know how to focus, you must know how you're going to add value and so on. That ties to planning as well.
4	Retail	• What I've learnt in the last 6 months is never underestimate how important this part of the project delivery lifecycle is. • Allocate enough time to it in a project • Never underestimate the value of physically doing the As-Is business process mapping because the way you think they're doing it and the way they're actually doing it 3 years later could be two completely different things. • You can understand any application and how to click how to click through any sets of windows to get to an answer, but it might not be the right way for your business. So for me I want my Analysts to be able to tell or I can need to be able to go to one of them and say, "explain to me how you GRV", I can click through the screens and see how you GRV, and what is required, but what is our process, what is our steps.
5	Manufacturing	• Benchmarking should actually be something that should be used - • Currently with the competition laws, we're limitedt – the external programmes, there is more regulation in terms of what you can say and what you cannot say, what I can tell you and what I can't tell you. And that is hindering programmes that are aimed at improvement, so you cannot easily find out what is someone else is doing so that you can then implement those changes • I think also maybe we should start engaging with the universities much more • There's quite a lot of rules as well, so creativity has been taken away
6	Utilities	• Haven't really seen the ideal balance between speed, responsiveness, standardization and your triangle of structure, process and technology to support it and your people element in terms of their skills. • Managing the governance of all of those elements and the integration of it is very very challenging. • Biggest risk in terms of PI programmes at the company is going to be the credibility of your BPM environment, and your responsiveness of that environment. Because if you're not, and your responsiveness of your governance environment, and if that is not in place, you'll probably find that the risk will be people will start to ignore and start working outside of the process – and they won't even document it • And link that to the fact that we're vertically integrated, and therefore we do have different businesses;
7	Mining, Utilities, Transport	• People see it as very expensive, people see it as tedious in terms of "I need to train people on". So the challenge is to upfront understand how the company is going to view it and to understand the culture of the orgnisation and actually do a readiness assessment on any company before you move into a big CI programme and do change management. • CI, yes, you get positive rewards, but it's finding negative things to improve and people don't like that. Human's don't like that, and people start hiding, and people don't tell you what's going on, and people are putting wonderful, they call it the 'rose tinted glasses' when they look at things.

No.	Industry Context	6. General comments pertaining to Process Improvement programmes
8	Mining, Utilities, Transport	• A lot of the BT programmes rely on experts to run those programmes. Because of the intensity that is required, you really need somebody who knows how to run those programmes • CI ones you can get away with a combination of experts and some inexperienced type people. • A lot of the methodologies that exist today, like the very technical methodologies for CI (Lean, Six Sigma etc.) are very technically focused, they're built for Europeans and Japanese and don't necessarily fit the African context - it's all of those challenges I mentioned, the skills shortages, the regulation challenges etc. and the main result of what happens at the end is sustainability itself. Because we try and adopt an European concept into an African environment which may not culturally fit, it may not technologically fit, and you know it may not fit with the management and skills and structure that's in place; and we're stuffing this methodology down people's throats. • So I think there's maybe a different, slightly tailored approach for, depending on the maturity of the organization that possibly needs to be considered. I haven't seen that yet. I think we implicitly do it, but I don't think explicitly there's a nice out-of-the-box solution
9	Mining, Utilities Manufacturing	• I think organizations are going to start to ask themselves 'what's core, what processes are core to my business, and what's not core'. • So I think organizations will start to look at "how do I prioritise and understand my really important processes, and how do I focus my improvement programmes on those processes that will make the real difference". As opposed to everything
10	Utilities	• I've come to realize that the only way you are going to, from a very clinical and logical way of improving that is to go the Business process route: document the processes, go through the process of documenting the methodologies and so on. Because in that, it makes you really look at this thing with completely fresh eyes • So you know, if I think about our attempts at standardizing systems from a Group IT point of view, so almost in complete ignorance of the process was, and then go back and wonder why we're battling to implement the system, and why there's such a lot of kick back. Because people don't feel that it meets their needs. • the interesting thing is that a lot of my learnings and experiences, and I mean, I started my career – and I'm an Electrical Engineer by profession, as Electrical Maintenance manager, to Electrical Support Services manager to Project Manager at a Power Station, to IM manager, and then moved up from IM to Corporate as Architectural Applications manager. A lot of the insight and learnings and that actually all come back to Business Processes. I still see mistakes being made, as of this week already talking to some Architectural types in IT – they're going to go do use cases and have a look at a system, 'but you haven't even finished defining the process and how does that work' and the look of utter shock when I realized, but who wants this thing. Because the people we want to try and sell it to, don't yet know what their process is – so how are you already spec'ing the system?
11	Mining	N/A
12	Financial	• How so much of it boils down to IT changes. There's always a system involved. You've always got to make some or other system implementation or change. Very few PI projects that didn't have a system touchpoint • Shocked to find that you can still find really crap business cases - e.g there's no calculation, there's a few statistics, and 'therefore we estimate that we're going to save R12m" • And coming back to measure those sorts of improvements – I don't think there's enough rigour in that
13	Financial	• You need to 2 distinct IT resources/division/department. The first thing being a structured, robust, sustainable IT division, and the second one being a Rapid sort of development, business improvement area – where all new ideas or processes are handled • And if you only have either one, if you only have a think tank, which is rapid, you're going to fail on the sustainability. And if you just have a dept that focuses on sustainability, robustness, you're going to stifle the organization, creative ideas etc.
14	Manufacturing, Utilities	• The concept of PI is with us to stay • The concept of managing business processes as assets; is becoming much more well known • But the whole asset management and innovation type of thinking is still a bit over-shadowed by risk management. • One other thing that I think is useful to note – which we learnt the hard way at some clients. When you think about PI programmes, people tend to think of the financial and efficiency benefits – it should always have an element of proper corporate governance, and financial governance built in there as well, because people tend to think about the technical efficiency without thinking about governance and then people have SOX failures and those types of things afterwards.

No.	Industry Context	6. General comments pertaining to Process Improvement programmes
15	Retail	• People that go into do a process improvement project, do not have enough business analysis skills, and they will often look at a portion that they understand and that affects them, and they don't do a complete analysis, end-to-end throughout the business of the impact of the process improvement project. So, it will work wonderfully in store operations, but it will have a little hiccup in finance, or somewhere. They don't look at it thoroughly, and I don't think we have the people with the right analytical skills, doing the questioning and the probing, in that whole business requirements phase. • I don't think, because very often we are driven to do things too quickly, I don't think they are smart, so they don't look at lean stuff, and a lot of process improvement projects are putting one control on top of another control. So you have improved the process, but you haven't done real Root Cause Analysis, done a lean look at it, and where is my waste; am I wasting time, product…? I don't think they look at lean and proper root cause analysis. • No proper training provided on Lean tools
16	Retail	• For me, a lot of times we talk about complex Six Sigma methodologies or complex way of solving problems. My view is that, not all problems that we see in our day-to-day life is complex and warrants that sort of an approach. • So the Lean part has not been fully explored in many places, and they're so eager to get into the high level (the analytical). So what happens is that you'll end up saving money, but when you look at the overall bottom line, you will gain a lot of benefits where you've put the focus and the resources. But there are a lot of areas still losing money, because your basic practices have not been entrenched. • Should not underestimate the power of basic foundational CI Lean practices to be entrenched before embarking on any major you know… 80% of your problems on your Line should be able to be solved by using a 5Why, which is the simplest of all techniques
17	Financial, Manufacturing	N/A
18	Financial, Manufacturing	N/A
19	Manufacturing	• It would be nice if we had better support structures in place. We run along on our projects and we don't get the direction we need at times. I don't know if that is common in most industries, but we are more unique than others. • We don't seem to stick by many standards. • We just generally have an open-ended sort of priority as to where you need to be in the next year or two. But, often if you don't achieve it, I don't know, the targets aren't often clear-cut.
20	Mining	• For me, in any organization, People always stand out. We have got to really pay cognizance to that before thinking about PI and things • People can be very powerful, and they can also destroy the project. So if you have people's backing, then you could probably do it very quickly. If you don't, then you'd probably struggle. • So for any scale of project, or anything, just bear that in mind. That it really isn't about the project, it's just about the People that work in it.