# UNIVERSITY OF CAPE TOWN

**Faculty of Humanities**

# A Qualitative Study of Team-based Self-Management in a Southern African Organization

**A minor dissertation submitted in partial fulfilment of the requirements for the award of the degree of Master of Arts in Organizational Psychology**

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**Declaration**

**This work has not previously been submitted in whole, or in part, for the award of any degree. It is my own work. Each significant contribution to, and quotation in, this dissertation from the work or works, of other people has been attributed, and has been cited and referenced.**

**Signature:** _____ **Date**_____

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To the last two, I dedicate this study, symbolising as I hope it does, a commitment to the search for meaning behind the numbers.

## Preface

As an African with personal and professional interest in Indigenous Knowledge Systems (IKS), I believe that the Western conception of work organization, based on the individually focussed *protestant work ethic,* may be inadequate to either understand or to maximise, the potential of African organizations. This failure to understand, acknowledge, and consequently build on group based, non-hierarchical indigenous African forms of work organization (exemplified by *ilima* - discussed elsewhere in this thesis), blinds researchers, managers and even targeted workers themselves, from appreciating the resonance of involvement oriented modern workplace initiatives (such as empowered teams) with the old indigenous work practices.

The introduction of these initiatives by Western trained managers of African organizations, under alien guises (such as *Japanese management techniques*) and to solve short-term organizational/management challenges, limits both their legitimacy and potential. Introduced in such a manner, these initiatives risk becoming fads, to be ignored, abandoned or replaced by management when the heat (short term challenge) is over or when more fashionable ones hit the market. They fall short of their potential for being embraced as *indigenous*, empowering, sustainable, sources of unforced, discretionary work effort.

This thesis is premised on a personal belief that industrial and organizational psychology in Africa will play a more meaningful role if, even occasionally, it lets go of quantifying individual differences and seeks to understand and build on the potential of what may already exist. Qualitative methodologies, used together (as in multi-method triangulation), in the quest for *meaning and sense making* may help us close historical and cultural knowledge gaps.

## Abstract

A Southern African (Zimbabwean) nickel refinery's team-based employee involvement initiative is studied using a qualitative, single case design with the objective of describing, understanding and characterising a Self Directed Work Team's experience in its context. It is found, through a variety of triangulated case study methods, that the selected team's work, and its members' perception of it, have changed significantly from traditional 'foreman supervised' and 'gang-leader driven' organization to relatively informed decision making, objective driven, multi-skilled teamwork. Findings are analysed in the light of international and Southern African literature and case studies of enterprise level, team-based employee involvement in work related decision making.

Context considerations, in understanding the team and its potential for self direction were found to be pervasive. The initiative was found to be part of a bundle of complementary interventions that top management perceived to be organizational survival imperatives. Successful implementation was largely limited to the Smelter and Refinery Business Units (BSR Ltd) which were led by a succession of dynamic and committed senior line managers. The failure to diffuse the initiative to the rest of the organization (the organization's mining division) was blamed on the departure of the key sponsor as well as wider corporate and societal systemic constraints. The contextualised study suggests ways of seeing, and possibly going beyond the claimed and real constraints.

**Key words**

Self-Directed Work Teams; Self Managing Work Teams; Self Managing Teams; Team-based employee involvement; Teamwork in Africa

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from 1998-2002

**FIGURES**

# LIST OF ABBREVIATIONS

(When these are used for the first time in the text, the full name/meaning is also given)

| | | |
|---|---|---|
| AAC(S) | : | Anglo American Corporation (Services) Limited |
| AMWZ | : | Associated Mineworkers Union of Zimbabwe |
| AMZIM | : | Anglo American Corporation (Zimbabwe) |
| ANGLO Plc | : | Anglo American Corporation (Public Limited Corporation) |
| BNC | : | Bindura Nickel Corporation |
| BSR | : | Bindura Smelter and Refinery |
| COM | : | Chamber of Mines (Zimbabwe, unless otherwise specified) |
| CRO | : | Control Room Operator |
| JSE | : | Johannesburg Stock (or Securities) Exchange |
| LSE | : | London Stock Exchange |
| NEC | : | National Employment Council (Zimbabwean Mining Industry) |
| NEDLAC | : | National Economic Development and Labour Council |
| P/A | : | Plant Attendant |
| P/L | : | Pressure Leach |
| P/O | : | Plant Operator |
| PDM | : | Participation in Decision Making |
| RNLB | : | Rhodesian Native Labour Board |
| SDWT | : | Self Directed Work Teams |
| SI | : | Statutory Instrument |
| SMT | : | Self Managing Teams |
| SMWT | : | Self Managing Work Team |
| T/L | : | Team Leader |
| TBWO | : | Team-based Work Organization |
| TEBA | : | The Employment Bureau of Africa |
| W/C | : | Workers Committee |
| WC | : | Works Council |
| WNLA | : | Witwatersrand Native Labour Association |
| WPC | : | Work Place Challenge (Initiative) |
| ZAL | : | Zimbabwe Alloys Limited |
| ZCTU | : | Zimbabwe Congress of Trade Unions |
| ZSE | : | Zimbabwe Stock Exchange |

# CHAPTER ONE
# INTRODUCTION

## 1.1. Overview and Rationale for the Study

The potential benefits of empowering employees through increased involvement in decision-making are well documented. These include higher productivity and other organizationally relevant positive outcomes, as well as increased well-being and satisfaction of the employees themselves. It is not surprising, then, that many organizations, at various times, claim to be involved in one type of staff empowerment scheme or the other. Many of these well intentioned schemes fail. Others are customised and are often 'watered down' versions that do not live up to the claims and standards of those who originally developed them. There are even some, which do not live up to the claims of the very organizations that claim to be using them.

The reasons for the failure to empower employees are many. They include, *inter alia:* a lack of understanding of the concept; lack of commitment; bad timing; and interventions that are introduced in a piecemeal fashion without regard to either congruence with other management practices or organizational culture, systems and practices. Any intervention designed to achieve organizational change, including employee empowerment strategies, must take into account wider contextual implications (at organizational, corporate and national/cultural levels) and potential obstacles. Reward systems, management practices, organizational values and mission statements must also be simultaneously examined for congruence. However, before any intervention can be evaluated for its impact or effectiveness, especially in comparison to other interventions, it is important to ensure that ***it is what we think it is.***

## 1.2. Brief Outline of the Objective of the Study

In this project, the initiative of Bindura Nickel Corporation (BNC), a publicly listed subsidiary of Southern African multinational, Anglo American Corporation Plc (AAC), in instituting team-based employee involvement in the form of Self Directed Work Teams (SDWTs) is the site of study. An exemplar SDWT in the Refinery Division of the Company's Smelter and Refinery (BSR Limited) operation is validated. Its day-to-day realities and context are examined in-depth for their role in enhancing or constraining team's potential to live up to the main (idealised) characteristics of empowered team-work and for what they mean to participating team members.

### 1.3. Brief Outline of the Research Strategy

International and Southern African literature, experience and case studies are reviewed to gain an understanding of high involvement management; team-based employee participation in decision-making; and the organizational environment in which they thrive. A qualitative, embedded, single case research design using multi-methods is used as the basic research strategy (Yin, 1994).

In order to help understand the corporate organizational context in which BSR and the studied team operates, the experience of a sister operation in the AMZIM stable- Zimbabwe Alloys Ltd (ZAL)- which shares a similar industrial relations; corporate; organizational, socio-cultural and economic environment; but has not instituted Self Directed Work Teams, (persisting with natural work teams) is also briefly examined. This not being a comparative case study, the experience of ZAL is not examined in-depth. Rather, ZAL is used as a vantage point from which to further understand the observations made in the primary (BSR) case and to heighten sensitivity to rival hypotheses in the primary case.

Within the limits of single case based qualitative empirical research, and the uniqueness of the Company (BNC/BSR) and its circumstances, an attempt is made to draw out some insights that help explain enterprise level, team-based participative management strategies in a Southern African socio-cultural environment and to generate some questions for future research.

# CHAPTER TWO
# LITERATURE REVIEW

## 2.1. Enterprise Level, Team-based Employee Involvement: Conceptual Issues

Employee involvement, in particular the formation and 'empowerment' of work teams, has "become an almost universal OD prescription" (Herman, 1999, p. 82). Driven in particular by American management consultants (such as Tom Peters) and the Human Resources Management (HRM) movement, employee empowerment has in the last twenty years, become one of the *'central motifs'* of Western management thought and practice (Collins, 1999). In a review of the literature on SDWTs, Cotton (1996) called them "the fastest growing approach to participation in the late 1980s and early 1990s" (p.173). Herman (1999) cites a report claiming that more than three quarters of American organizations use teams. Bishop, Scott and Burroughs (2000) concur, citing a 1997 report, that all 25 finalists for the Industry Week sponsored Best Plant contest for the previous year had "implemented work teams and the majority of these companies' production work force (were engaged) in self-directed or self-managed teams" (p. 1113).

In spite of Cotton's (1996) assertion that worker participation, employee empowerment and employee involvement are "the same animal" (p. 219), it is important to understand that different socio-economic and cultural environments have historically spawned differing rationales for, and meanings of, 'involvement' and its resultant work structures. Several writers (Cotton, 1996; Sagie & Koslowsky, 2000; Wilkinson, 1998; Wood, 1993) make distinctions between American, European and Japanese inspired high involvement management systems and the work organizations they gave rise to. Cotton (1996) reviews research on international differences in the meaning of involvement and says while in the United States it tends to be direct, face-to-face, and seen by managers as a means to improve performance, in Europe it tends to be indirect, representative and viewed by managers as a societal obligation (Netherlands) or an undesirable threat to management control (UK). Anstey (1997a) says employee participation "has assumed various forms over time and across countries, reflecting shifts in the shape of economies, production methods, trade union strengths and the strategies of employers, organised labour and the state" (p.17). He provides a comprehensive, international, comparative overview of employee participation from a South African perspective.

Sagie and Koslowsky (2000) make a distinction between *employee participation* and their more specific phrase *employee participation in work related decision making* or *PDM*, which they define as "an organizational process by which management shares influence on decision making between hierarchical superiors and subordinates" (p. 3). They argue that the former, employee participation, has diverse meanings, and can include worker participation in management's boards of directors, employee share ownership programmes or gain sharing, (in which case they prefer the term employee involvement). They also make comparisons and tabulate differences, not only between American and European approaches but, also, among different regions of the world on the criteria of typical meanings of participation and primary reasons (rationales) for participation. They report lack of congruence in meaning, especially when it comes to the developing (third world) societies, where often "work (presumably Western, organizational) values are adopted and modes of behaviour imitated without internalising them" (Sagie & Koslowsky, 2000). In a recent review of a published book Blunt (2002) pointed out that there is nothing new in the finding that many Western management concepts are not universally applicable.

All these issues lead to fears that researchers attempting to make shallow comparisons will measure different things (Batt, 2000; Dachler & Wilpert, 1978). These concerns would be significant in Africa, where the typical modern enterprise is Western and the management philosophy, literature, language, practices and technology are largely imported.

Yeatts and Hytten (1998) say while the participative management/High Involvement management school of thought follows the broad Human Relations (rather than Taylorist) model of work organization, "they distinguish themselves by placing even more emphasis on the importance of employee participation in decision making" (p. 8). Fundamental to this perspective are the beliefs that:

- Non-management, shop-floor employees can be trusted to make important decisions about their work
- Employees can develop the knowledge needed to make such decisions
- The result of such employee participation in decision making is greater organizational effectiveness

- Employees, when provided with the authority to make decisions about their work, can typically consider both social and technical factors more effectively than can management and engineers (who often lack first-hand knowledge).

Yeatts and Hyten (1998), however add that the advocates of this school of thought "are *not* (italics theirs) in complete agreement regarding the amount of authority that should be given to employees (with practices ranging from)…soliciting employee opinions only as in quality circles, to allowing them to make most or all decisions related to their work as in the case of SMWTs" (p. 9).

Several writers have predicted that "high-involvement workplaces" exemplified by SDWTs (are) the work organization of the future (Cotton, 1996; Harris, 1992; Moon, 1992; Oldham, 1996; Pfeffer, 2000; Ripley & Ripley, 1992; Stewart, 1992). Some of the reasons they give include:

- The increasing complexity of most jobs;
- The need to achieve competitiveness through responsiveness;
- Improved processes and maximum utilisation of workforce talents;
- The evolution of information technology to the point where knowledge, accountability and results can be distributed rapidly anywhere in the organization (enabling real-time decision making);
- The unaffordable luxury of layers of management and staff functions that are used primarily to communicate and control directives from the top.

Tom Peters (1989), the renowned American management consultant, says team-based organization "... is hardly a new idea ... (and) certainly not Japanese inspired" (p. 297). He goes on to discuss numerous examples of Western companies, which have experimented and (some) successfully implemented team-based organization and self managed teams. He also argues that the self-managing teams should become the basic organizational building block of the future.

### 2.2. Self Directed Work Teams (SDWTs)

The history and study of Work Teams is usually associated with the work and theory of socio-technical systems, pioneered in the 50s and 60s by Eric Trist and his colleagues at the Tavistock Institute in the United Kingdom (Fox, 1990; Gulowsen,

1972; Lawler III, 1991; Yeatts & Hyten, 1998). Trist himself (as cited in Fox, 1990) traces the history of the concept of Work Teams and socio-technical systems to experiences in World War II and before.

Following the Tavistock research and cases, numerous experiments took place, particularly in Scandinavia where social scientists argued that the basis of participation (therefore industrial democracy) "should permit every employee to develop himself through his work and to take on responsibility. Otherwise participation would be of little importance if this did not occur" (Gulowsen, 1972, p. 208). Work teams began to increase in number and were variously called:

- Autonomous work groups
- Self-managing work groups
- Self-managing teams (SMTs)
- Empowered teams
- Self directed work teams (SDWTs)
- Semi-autonomous work groups
- Boss-less Teams

As Fisher (1993) aptly puts it, "unlike fads, which tend to be popular for a few years and then fade away into obscurity ...self directed work teams have been around for decades" (p. 21).

Benders and van Hootegem (1999) review the history of teams and their contexts and provide the following definition of what they call the *socio-technical team*: "A group of workers, generally between 4 and 20 persons, responsible for a rounded part of the production process, and entitled to make certain decisions autonomously" (Benders & van Hootegem, 1999, p. 618).

Benders and van Hootegem also cite Muller's (1994) definition, which they say helps to exclude *Fordist* teams: "A group of people that has between 8 and 15 members, is responsible for producing a well defined output within a recognisable territory, where members rotate from job to job with some regularity, under a flexible allocation of tasks" (Muller, 1994, as cited in Benders & van Hootegem, 1999, p. 618).

The slight differences in these definitions are that the former includes autonomy and the later member rotation. This reflects the plethora of theoretical models of SDWT functioning and definitions that are available. Yeatts and Hyten (1998) review at least 7 of the major issues and synthesise them in a generic input-process-output model, outlined in Figure 1 (see p. 226).

Benders and Hootegem (1999) discuss three *clusters of contexts* for teams which may be potential leverage points for understanding, evaluating or revitalising an organizational team initiative. These are:

- **Job and organizational design**
  - Whether the work structure is designed according to some work design logic

- **Task environment**
  - Whether the work structure follows the task or output logic (product range variability or volume)

- **National environment**
  - Whether the structuring is influenced by national, environmental or business systems (sectoral compositions, cultural norms and values or industrial relations systems).

### 2.3. The Logic of Self Directed Work Teams

The concept of empowerment is critical to understanding the need, meaning and characteristics of Self Directed Work Teams. In his book *Thriving on Chaos*, Peters (1989) asserts that organizations can achieve a flexible, responsive and adaptive organization through maximum employee involvement. He argues that "there is no limit to what the average person can accomplish if thoroughly involved ...(and) this power can most effectively be tapped when people are gathered in human-scale groupings- that is teams, or, more precisely, self-managing teams" (Peters, 1989, p. 282). Barry (1991) also argues that self managing teams, are in part, a product of the information technology explosion, which has resulted in large numbers of highly educated, self-motivated, self-directed specialists "most of (whom) know more about their given work area than their managers. For such specialists to work efficiently and effectively, highly participative and flexible work structures such as SMTs are necessary" (p. 31). Barry (1991)

additionally argues that the increasing use of extremely expensive equipment and technology in all industries makes it imperative that "groups of operators be (empowered) ...to make real-time decisions and interventions on their own rather than relaying problems up to a supervisor" (p. 2).

Conger and Kanungo (1988) reviewed the literature and, in a seminal paper, noted the growing interest in the concept of empowerment. They however lamented the fact that despite its widespread use, the understanding of empowerment is limited and confusing, with most theorists dealing with the concept "as a set of managerial techniques (with little) ...attention to the nature of the processes underlying the construct" (Conger & Kanungo, 1988, p. 472). A fundamental misconception, they noted, is that of simply equating empowerment with "delegating or sharing power with subordinates ... (resulting in) the idea of delegating and the decentralisation of decision making (being seen as) ...central to the empowerment motion" (p. 472-472). They argue rather that empowerment should be seen as more of a motivational construct in which the intrinsic need for self determination and personal 'self-efficacy' are satisfied.

The process, then, becomes one of enabling, which "implies creating conditions for heightening motivation for task accomplishment through the development of a strong sense of personal efficacy" (Conger & Kanungo, 1988, p. 474). Conger and Kanungo's (1988) views are shared by Alpander (1991) who also notes that a whole range of participative management and decentralised decision making techniques (eg. collaborative goal setting and quality circles) have simplistically been equated with empowerment. Alpander (1991) offers a comprehensive definition of empowerment. In particular he also emphasises the cognitive and motivational aspects of empowerment:

> Power in the motivational sense refers to the individual's need for self determination ...or ...to his/her belief in personal self- efficacy, or ...the feeling of *I can do it*. Empowerment becomes motivational as it increases self efficacy or one's belief in one's capability of performing a task. Self efficacy influences the amount and quality of effort an individual will exert to complete certain tasks.
> (Alpander, 1991, p. 14).

Conger and Kanungo (1988, p. 474) offer a definition of empowerment as: "A process of enhancing feelings of self efficacy among organisational members through the

identification of conditions that foster powerlessness and through their removal by both formal organisational practices and informal techniques of providing efficacy information".

Conger and Kanungo (1988) then provide a five stage process model in Table 1 (p. 147based on their definition. Finally, Conger and Kanungo (1988) identify principal contextual factors that contribute to disempowerment among organizational members. They classify these as:

**Organizational Factors**

- Significant organisational changes / transitions
- Start-up ventures
- Competitive pressures
- Impersonal bureaucratic climate
- Poor communications / network-forming systems
- Highly centralised organisational resources

**Supervisory Style Factors**

- Authoritarian (high control)
- Negativism (emphasis on failures)
- Lack of reason for actions / consequences
- Reward System Factors
- Non-contingency (arbitrary reward allocations)
- Low incentive value of rewards
- Lack of competency-based rewards
- Lack of innovation-based rewards

**Job Design Factors**

- Lack of role clarity
- Lack of training and technical support
- Unrealistic goals
- Lack of appropriate authority / discretion
- Low task variety
- Limited participation in programs, meetings, decisions, that have a direct impact on job performance
- Lack of appropriate / necessary resources
- Lack of network - forming opportunities

- Highly established work routines
- High rule structure
- Low advancement opportunities
- Lack of meaningful goals / tasks
- Limited contact with senior management.

Arnold, Robertson and Cooper (1991) argue that regardless of their theoretical origins, post-Taylorist attempts to re-design job centres lead to an increase of one or more of the following:

- **Variety** (of tasks or skills)
- **Autonomy** (freedom to choose work methods, scheduling and occasionally goals)
- **Completeness** (the extent to which the job produces an identifiable end result which the person can point to)

Attempts to increase the factors mentioned by Arnold et al. (1991) have been made ever since social scientists rejected scientific management and have included the following:

- **Job rotation**, which usually results in increased variety
- **Horizontal job enlargement**, which usually results in increased variety
- **Vertical job enlargement**, which usually increases autonomy, variety and completeness
- **Semi-autonomous work groups**, which usually increases autonomy, variety and completeness in the same way as vertical job enlargement but at group level.

Self Directed Work Teams (SDWTs) can be viewed as a job design intervention. It is clear from examining the literature on why and how SDWTs work that they represent an enrichment model of job design. Such a design is best encapsulated by Hackman and Oldham (1980)'s *Job Characteristics Model.* This is because, apart from their wider goals as a form of organizational design, genuine SDWTs impact directly on core job

characteristics or dimensions (Hackman & Oldham, 1980). Blunt and Popoola (1985) supporting the concept of viewing SDWTs as a job design intervention say most enlightened Western approaches to job design "emphasise the devolution of power to the worker or group and therefore greater individual autonomy opportunities for personal development, variety and meaningfulness in work" (p. 159). Peters (1989) suggests three common approaches to forming teams, viz. (i) combining tasks (ii) establishing internal and external client relationships and (iii) vertical loading. The first and last, in particular, emanate from the job design perspective exemplified by the Job Characteristics Model.

Robbins says in job design terms SDWTs or Autonomous Work Teams "represent job enrichment at group level" (1989, p. 213), because SDWTs (a) consist of employees with functionally interrelated tasks who collectively are responsible for end products, (b) include individuals have a variety of skills so they may undertake all or a large portion of the group's tasks and (c) because feedback and evaluation are made in terms of the performance of the whole group.

More specifically, Hackman and Suttle (as cited in Robbins, 1989) suggest five ways of enriching individual jobs which have a bearing on SDWTs which (as mentioned earlier), Robbins calls "... job enrichment at the group level" (p. 213). These guidelines and indications of which aspects of the Job Characteristic Model they affect are shown in Table 2.

### 2.4. Distinguishing Characteristics of SDWTs

Katzenbach and Smith (1993) argue that the word "team" is used very loosely. They note for instance that most executives, when asked, will say they advocate team work- when in fact they mean that they promote team work values which may include: listening and responding constructively to views expressed by others; giving others the benefit of the doubt; providing support and recognising the interest and achievements of others.

Such values, Katzenbach and Smith (1993) argue, help individuals, teams and organisations perform, but are neither exclusive to teams, nor are they enough to ensure team performance. Katzenbach and Smith (1993) also highlight that teams are not just any group working together; committees, councils and task forces are not necessarily teams and groups do not become teams simply because they are called so.

Katzenbach and Smith (1993) summarise the characteristics that distinguish 'groups' from teams. Kinlaw (1993) provides a "partial list" of the tasks that teams can perform when they meet together (apart from actual work that they have been tasked with). Teams may:

- **Develop the team**: Develop benchmarks regarding the team's performance, evaluate team meetings, set norms for team meetings, design team-improvement projects.
- **Make decisions**: Focus on issues of budget, hiring, awards, selecting contractors, setting goals, agreeing on schedules, identifying improvement opportunities, setting priorities.
- **Solve problems**: Analyse data and identify causes, modify work processes, reallocate resources to respond to changes and crises, design alternatives and contingencies.
- **Share information** about anticipated problems, status of current activities, projected changes in policies, team successes and achievements, training opportunities.
- **Learn** through a discussion of a new procedure, briefings about new technologies, and presentations from experts and specialists.
- **Design improvement projects** to measure quality of services and products, to improve customer satisfaction and to improve work processes.

Although the actual characteristics of work teams differ from situation to situation, there are common elements that characterise what has come to be known as SDWTs (or its variants). Katzenbach and Smith (1993) summarise the characteristics that distinguish "groups" from teams in Table 3 (p. 149).

### 2.5. Decision Making in SDWTs

Decision making (in particular its scope or limit) is perhaps the most controversial aspect of SDWTs because it encroaches on traditional management prerogatives. Lawler III (1991) argues that there is as much variability in the kinds of decisions teams can make as there are different names (eg. self managing work groups, work teams, semi-autonomous work teams, self-regulating work groups, self-directing work teams, and so on). Gulowsen (1972) examining the concept of work-group autonomy, already well established in the 60s, argued that the criteria of whether a group was autonomous was concerned with the "what,

where, when, who and how" of the group functions. He came up with the following criteria:

1.The group **can influence the formulation of its goals** (qualitatively and quantitatively).

2.Provided that established goals governing relationships to the super-ordinate system are satisfied, the group **can govern its own performance** in the following ways:

- **Where to work** (to the extent that the choice is physically meaningful)
- **When to work** (specifically the timing of different tasks, the limitation of working hours, time off during working hours and overtime)
- Other activities the group wishes to engage in (as long as the goals of production have been satisfied.

3.The group **can make decisions concerning the choice of production methods** (if they exist).

4.The group **makes its work internal distribution of tasks**.

5.The group **decides on its own membership**:

- Selection and appointment of new members
- Expulsion of unwanted members.

6.The group **makes its own decisions with respect to leadership** (if and who).

7.The **group members decide how the work operations shall be performed** (bearing in mind the limitations of technology).

Referring to Gullowsen's list, Lawler III (1991) noted that even this early, "the terminology was meant to imply that not only did the work teams have responsibility for a significant area of the workplace but that they could make a number of decisions concerning when and how the work would be done" (p.102).

Finally, in answer to the question of what the criteria for identifying successfully functioning SDWTs is Byham (1991, p.71) argues that such teams "set goals for themselves

and take responsibility for the quality of their output ... create their own schedules and review their own performance as a group ... prepare their own budgets ... and coordinate their work with work done in other departments or divisions of the company". In their research, Wellins, Byham and Wilson (1991) examined the extent to which typical SDWTs or supervisors alone assumed various management and production related tasks. The results of the Percentage of Tasks Assumed by SDWTs are detailed in Table 4 (p. 150). Wellins et al. (1991), noted that the truly leaderless team a myth and suggested that responsibility migrates gradually to team members as a team matures.

### 2.6. Benefits Derived From Self Directed Work Teams (SDWTs)

In general, studies have shown significant positive correlation between employee involvement and various organizational and employee outcomes. Spector (1986), working on the premise that increased autonomy and participation (both of which were viewed as aspects of employee involvement) results in high perceived control feelings by employees, conducted a meta-analysis cumulating the research results of 101 studies. Spector's (1986) aim was to determine the relationship of perceived control to several individual and organizational outcomes. On the basis of a literature review, he predicted that perceived control (conceptualised as highly related to autonomy and participation) would be associated on the one hand with high levels of motivation, performance, job satisfaction, involvement and commitment and, on the other, with low levels of absenteeism, turnover, intention to quit, role stress, emotional distress and physical symptoms. His results confirmed the expected correlations with all outcome measures. He commented that employees who perceive high levels of control at work "... are more satisfied, committed, involved and motivated. They perform better and hold greater expectations. They experience fewer physical and emotional symptoms, less role ambiguity and conflict, are absent less, have fewer intentions of quitting and are less likely to quit" (Spector, 1986, p. 104).

Pfeffer (2000) includes self managed teams and decentralisation of decision making in his list of seven practices of successful organisations and cites two decades of research which has provided "considerable evidence that workers in self managed teams enjoy greater autonomy and discretion and this effect translates into intrinsic rewards and job satisfaction...(leading them to)... out-perform traditionally supervised groups in the majority of empirical studies" (p. 498). In a review of research on job design Oldham (1996) examines SDWTs as a form of job design and cites case studies and other

investigations providing "substantial support for the argument that autonomous teams have positive effects on employee attitudes and behaviours" (p. 51).

In a review of the empirical findings on Employee Involvement, Cotton (1996) compares SDWTs to six other employee involvement strategies and tabulates the results as shown in Table 5 (see p. 151). Cotton (1996, p. 225) describes SDWTs as "a monumental example of organizational change requiring changes in training, compensation management and other aspects" and argues that it is not clear what factors are necessary for their success but concludes that they are "the primary employee involvement approach of the 1990s" (p. 225).

Numerous studies show that SDWTs have brought tangible benefits to many organizations (Barry 1991; Barton 1991; Fisher, 1993; Gordon, 1992; Lawler III, 1991; Owens, 1991; Peters, 1989; Rigg, 1992; Salem, Lazarus, & Cullen, 1992; Shrednick, Shutt, & Weiss, 1992). Fisher (1993) cites a prominent socio-technical systems consultant who reports after a study of organizations using SDWTs in seven countries that: 93% reported improved productivity; 86% reported decreased operating costs; 86% reported improved quality and 70% reported better employee attitudes.

Fisher (1993) reports the result of studies from 21 American Corporations showing a range of benefits (most of them quantified) including higher productivity, profitability, efficiency, work turnover and quality; and lower cost processing/handling time, accidents, sickness, absenteeism, defects (pp. 24-25).

More recently Sagie and Koslowsky (2000) reviewed half a century of empirical research on the effects of participative decision making (PDM), including the noteworthy dispute between Cotton's (1996) high positive findings and Wagner's (1994) more tempered conclusions (see also Cotton, 1995 and Sagie, 1995 for a summary of the disputed issues). While generally finding low to moderate positive outcomes Sagie and Koslowsky (2000) found that work centred approaches to participation provide more positive (productivity and effectiveness) outcomes for organizations than ideologically centred approaches. Sagie and Koslowsky (2000) however, also found that the same approaches are "not necessarily superior to other, non-participative approaches" (p. 117). They isolated self managing teams as an example of an exceptionally effective direct participation method and warned against the trap of using narrow organizational

outcomes as the only criterion and pointed out that in some parts of the world participation is a value (whose outcomes may lie in humanising the work-place, increasing morale or just being an end in itself). They concluded by positing a multiple level model (individual; dyadic; group; organisational and cultural), in which each level has its own moderator variables. This model is explained in Chapter 3 and is used to frame this study.

After listing and discussing some of the positive outcomes listed above, Lawler III (1991) argues that problems can also result from SDWTs. Lawler III (19991, p. 113) lists some of these problems below:

- Salary costs will go up
- Training costs will go up
- Additional support personnel may be needed for training
- Unmet expectations for organisational change may occur
- Resistance by middle managers
- Resistance of staff support groups
- Unmet expectations for personal growth and development
- Conflict between participants and non-participants (where a piece-meal approach is used)
- Time consuming meetings
- Decision making process may be slower
- Resistance by "social isolates".

Cotton (1993) suggests that the three most common pitfalls organizations will face when implementing SDWTs are: "the resistance of lower and middle level managers; inadequate training for all concerned and the lack of support from top management, without which "all other problems may prove insurmountable" (p. 199).

### 2.7. The Political Context of Team-based Employee Involvement

Godard (2001, p. 44) calls for a need to move beyond "the essentially universalistic and unitary assumptions associated with the high performance paradigm and instead ...adopt a political economy approach which recognises...the essentially political problems associated with reforms". Wilkinson (1998) notes that while the worker participation structures of the 1970s and before were driven by belief in industrial democracy (Europe) and quality of work-life (QWL) (in the United States of America),

the 1980s /1990s empowerment movement was accompanied by a political and economic shift to the right in the West and were consequently driven by pragmatism and business considerations. This, competition and market driven shift to the right has been variously referred to as post-Fordism: flexible specialisation or lean production.

Perhaps the most notable correlate of the rise of the Employee Involvement movement in Europe and America has been the decline of Unions and, in particular, their influence at enterprise/plant level. While it cannot be said that all management attempts at direct employee participation and direct employee involvement are anti-union, what is true is that the adoption of these initiatives in the 1980s and 1990s in The United States and Europe increased sharply as Unions lost influence. Godard and Delaney (2000) argue that new work, and Human Resources Management (HRM) practices have replaced unions and collective bargaining (in Europe and USA) as the core innovative force in industrial relations. They trace European, particularly British, attempts at conceptualising this dichotomy, to Fox's distinction between *unitarist* and *pluralist* management philosophies, which they say is further elaborated in "Purcell's related individualism and collectivism typologies" (Godard & Delaney, 2000, p.494).

Locating employee empowerment within the "wider political economy within which organizations operate", Claydon and Doyle (1996, p. 24) note that "the progressive exclusion of collective organizations from (enterprise level) decision making". Wilkinson (1998, p. 52) argues that calling on employees to commit to and identify with managerial objectives "... can marginalise unions and, in some cases, is clearly intended to do so", differentiating between active anti-unionism and non-unionism where "unions are (merely) seen as unnecessary and irrelevant or at best marginal". Guest (1987) states that the later has characterised the HRM dominated environment.

Deutsch and Schurman (1993, p. 346) noted that, since 1980, there has been (in the USA) a resurgence of the most virulent anti-union element among some employers...(involving) "the adoption of aggressive tactics to de-certify or eliminate unions in some unionised settings and (the nurturing) of *union-free* programs". In Europe, Roche (2001), referring to what he calls the "individualisation of Industrial Relations", says that though the "adoption of HRM practices focussed primarily on managing the contribution and commitment of individuals ...(including pay;

communications; involvement; autonomous working etc)... workplaces established since the late 1980s have frequently been successful either in excluding unions or severely limiting their influence" (p. 184). This was found to be more prevalent in 'greenfield' or newly established sites. In earlier research on commitment oriented HRM practices and the conditions that sustain them, Roche (1999) found that organizations where unions are not recognised (other things being equal) were three and a half times more likely to adopt the high commitment/ HRM model.

Reshef, Bemmels and Wolfe (1993), report that one of Canada's most influential and innovative unions, the Canadian Auto Workers Union (CAW) condemned HRM innovations (defined by Reshef et al. as any new organizational program policy or practice designed to influence employees' work related attitudes and behaviour). They point out that often union members and officials cannot be sure whether they gain or lose from such new programmes and see them (as the CAW did) as nothing more than smoke screens for anti-union activities.

Turner (1991) examines the appropriateness of union responses in Europe, USA and Japan to the new work place challenges and the consequences of these responses. Turner (1991, p. 12) reports that analysts in countries such as Italy, France, Great Britain and the US "have linked all these (management driven, plant level, work re-organization) processes to the decline of Unions". He further states that where they had not declined, as in Sweden and Germany in the early 1990s, they "… had to grapple with new problems, develop new strategies and make new organizational adaptations" (Turner, 1991, p. 12).

In a thesis that would augur well for the potential of union supported workplace forums in Southern Africa, Turner (1991) states that the reason German, Scandinavian and Japanese unions have coped better with work reorganization is "...first, the extent to which (they)...as a broad national pattern, are integrated into the process of managerial decision making and, second, the existence of laws or corporatist bargaining arrangements that regulate (d) firm-level union participation from outside the firm" (p. 12).

## 2.8. Criticism of the Team-Based Empowerment Model

The claimed transformation from Fordism to post-Fordism or as Walton (1985) called it: *control to commitment*, has not been without its critics (Babson, 1995; Barker, 1993; Claydon & Doyle, 1996; Eaton, 1995; Godard & Delaney, 2000; Guest, 1987; Guest & Peccei, 2001; Roche, 2001; Turner, 1991; Wilkinson, 1998). Wilkinson (1998, p. 49) states that "the rosy picture of an 'everyone wins' scenario is hard to reconcile with what has been happening in the real world...downsizing, work intensification, career truncation".

Kriesky and Brown (1992, p. 125) argue that "neither employers nor unions come to EI (employee involvement) as a writer comes to a blank page". Collins (1999) argues that empowerment in the workplace is a complex, ambiguous and contested concept and popular management literature on it is "notable for its studious avoidance of conceptual reflection" (p. 208). Collins (1999) offers an account of empowerment as an ideological construct to counter management authors "who seem keener to *inspire* (original emphasis) and exhort than to offer wise counsel" (p. 209). Concepts reflecting cynicism about these high commitment employee involvement practices include: collaborationist (Holden, 1999), responsible autonomy (Collins, 1999), concertive control (Barker, 1993), participative Taylorism (Eaton, 1995), concessionary bargaining (Deutsch & Schurman, 1993).

In their much debated (see Bishop et al., 2000) thesis, contained in their book *The Machine That Changed The World,* leading advocates of this new notion of empowerment, Womack, Jones and Roos (1990) drove home the expected relationships:

**High involvement**

(leading to)

**High commitment**

(leading to)

**High performance**

Claydon and Doyle (1996) argue that aspects of empowerment that emphasise personal accountability frequently referred to as *ownership* (original emphasis) "are the averse of autonomy and discretion" (and) are often associated with "robust systems" and "the disciplinary technology of empowerment" (p. 14), to monitor performance and

improvements such as: set objectives; customer reports; policing by fellow team members and other forms of surveillance. They add that empowerment has also been closely associated with organizational restructuring, job cuts and ... fragmented, unstable and contingent employment relations. They give the example of employee self development under these empowerment initiatives, which has become "an obligation which employees must accept as a condition for continual employability (p. 15). Claydon and Doyle (1996) further decry the ethical contradiction of encouraging employees to believe that control over their lives; self control; self determination and self development are the same as higher commitment, higher productivity etc. They say that by managing meanings and imperceptibly merging organizational and individual goals, "becoming a better worker is represented as the same thing as becoming a better person" (p. 15).

Eaton (1995) surveyed both management and labour representatives from 80 bargaining units, in and around Winsconsin in the US, as part of a study on Union involvement in participative programmes. They noted that workers reported a 'speeding up' and intensification of their work efforts as well as "exhaustion and high levels of repetitive motion injuries in some ...production facilities" (Eaton, 1995, p. 71). Calling these programmes "participative Taylorism" Eaton (1995) said they often involved "significant reductions in negotiated protection for workers" and emphasised the importance of examining them "as they actually function and not as they are designed or believed to function" (p. 71). After such an examination, Eaton (1995) concluded that most of these cases "fall short of the high commitment, intrinsically fulfilling work-places advertised in the business and popular press" (p. 75).

Barker (1993) conducted an ethnographic case study of the implementation of Self Managing Teams which showed how the new team members soon developed a system of value based normative rules that controlled their actions more powerfully and completely than the former (hierarchical and bureaucratic supervisor based) system. Calling this the *tightening of the iron cage,* he illustrated how through "concertive control" within the team system, organizational control became less apparent and more powerful and the iron cage becomes stronger. Barker (1993) concluded that "the powerful combination of peer pressure and rational rules in the concertive system creates a new iron cage whose bars are almost invisible to the workers it incarcerates" (p. 435).

Babson (1995) argues that to many workers, the management version of teamwork "threatens a new form of exploitation with greater demands on their mental as well as physical energies but with no real control of the pace or content of their work" (p. 2). Babson (1995) reports that the pre-amble of United Auto Workers (UAW of America) reflects both endorsement of the potential of new work practices and, at the same time, opposition to "democratic sounding programs (that are )... a smokescreen designed to undermine collective bargaining and workers' rights" (p. 2). He warns against seeing empowerment/exploitation as categorical outcomes of the new work arrangements (where workers are either empowered or exploited) and suggests that seeing them as part of a continuum is more useful.

### 2.9. Employee Involvement in Africa

There is widespread anecdotal and research support for the view that Africa may provide a natural home for participative management/work approaches (Beugre & Offodile, 2001; Blunt & Jones, 1992, 1997; Blunt & Popoola, 1985; Lessem, 1996; Mbigi, 1993, 2000; Mbigi & Maree, 1995; Nzelibe, 1986; Sibanda, 1996; Thairu, 1999). Giving the example of the *girati* system among the Gikuyu of Kenya, which was later developed into the *harambee* national movement, Thairu (1999) asserts that "teamwork is one of the strongest work patterns or practices in African communities" (p. 265). Similar co-operative self-management examples include the ideologically inspired *Ujamaa* championed by Julius Nyerere in Tanzania. In Southern African rural areas, self-managing, mutual work teams are known in the Nguni (Zulu, Ndebele, Xhosa and siSwati) languages as ***amalima*** (singular- ***ilima***).

The *stokvel* concept (also in Southern Africa) involves community-based savings clubs usually consisting of between five and 15 people who pay each other set amounts in turn. Every month a different member of the group gets payment from the others, thus accessing a lump sum (secured with the commitment to continue participating) to buy capital (usually white) goods that otherwise would be bought on hire-purchase at high commercial interest rates. The groups also open savings accounts through which they collectively save and from which they make interest bearing loans to non-members. These stokvels are more than just savings clubs and small mutual societies. They represent the urban version of *ilima.* Members with onerous functions (weddings, funerals etc) rely on the clubs for cost saving labour and other forms of mutual support.

These are some of the more obvious and surviving cultural legacies Western organizations in Africa have had the opportunity to tap into.

In their review of worker participation in Africa Blunt and Jones (1992) point out that most of the well known examples (such as the Algerian self-management system) have been of indirect or representative, rather than direct participation. They review other examples of government promulgated worker participation initiatives in Tanzania and Zambia (both indirect and direct) and point to promising results particularly with direct participation. Kester (as cited in Anstey, 1997a), reports on extensive research (surveys of worker opinions, trends and case studies) on Worker Participation in Africa by the African Worker Participation and Development Programme (APADEP). He notes that many of these initiatives were inspired by European (mainly Yugoslavian) theory and experience; characterised by "high ideological loading"; often socialist in character, and were based on a weak participatory base. He reports that although there were few findings of outright failure of participation, this, decreed participation, was not strong enough to counter (hierarchical) Company laws inherited from colonial times. He also reports that the participation process was "highly vulnerable to manipulation by government and employers, as well as by the management of public enterprises" (Kester as cited in Anstey, 1997a, p. 56).

Kester (as cited in Anstey, 1997a) notes the enduring optimism and belief in participation by labour in Africa (who, unlike Eastern Europe, do not throw it out with the corrupt and undemocratic politicians). In his assessment of the prospects for worker participation in Africa, Kester (as cited in Anstey, 1997a, p. 79) argues that the union movement is "the only social force that can fight for worker participation". He suggests that worker participation will succeed (in spite of dwindling numbers of Unions' traditional shop floor power base caused by informalisation, casualisation, flexible production), if they form alliances with organizations for youth, women, informal workers and other non-governmental structures. Kester (as cited in Anstey, 1997a) notes that in Africa, the vocabulary of worker participation has disappeared from the politicians and governments but remains on the agenda of worker organizations and workers who seem to value it not only for 'instrumental' reasons (ie. satisfaction of extrinsic goals) but also for 'terminal' reasons (ie the satisfaction of intrinsic goals such as self respect and dignity). In other words, as democratic participation outside the

organization becomes eroded, its importance within the enterprise becomes more significant to workers.

Blunt and Jones (1992, p. 168) state that there seems to be "persistent doubt among (African) workers as to whether participation is simply another management device to elicit greater productivity or whether it is a genuine attempt to humanise work and to improve organizational effectiveness". Blunt and Jones (1997) review research from several parts of Africa, including Southern Africa (Botswana) and point to an organizational culture typified by paternalistic exercise of authority and high deference for authority figures. They also report "hierarchical relationships ... (with)...dependence on seniors by more junior individuals... accepted as normal" (Blunt & Jones, 1997, p. 17). They point to the limits of western management theory and models in Africa (and East Asia) which "cannot be merely adopted or copied … (but) have to be adapted in the most culturally appropriate manner" and call for "indigenous forms of organization" (Blunt & Jones, 1997, p. 18).

Thairu (1999, p. 267) state that it is regrettable that " … few management programmes have ever properly utilised indigenous knowledge systems". This view is also held by Nzelibe (1986) whose main concern is that the exclusion of African management values (characterised by ethnocentrism, traditionalism, communalism and co-operative teamwork) is the cause of organizational performance problems among organisations in Africa. Kirkman and Shapiro (1997) consider the impact of cultural values on employee resistance to teams and suggest a complex interplay of values generated from both within and outside the organization. From within organizations, decades of not having their input taken seriously by management may cause employees to resist newly discovered, high involvement management strategies. From outside the organization, cultural values such as *power distance*, *being* (as opposed to doing) *orientation* as well as *determinism* (as opposed to free will) can affect acceptance and effectiveness of self-management and team-based high involvement initiatives.

Many African private sector organizations are owned by Western multi-national corporations and, to a significant extent, managed by Westerners. This, however, does not tell the full story as many, especially quasi-governmental organizations are managed by African (albeit Western educated and trained) managers. Cheater (1992) reports examples of increased status consciousness and related practices among black managers

in Zimbabwe. In a review of management and leadership styles in African organizations, Blunt and Jones (1997) lament the lack of substantive empirical investigations and indigenous models. Blunt and Jones (1997) state that there is "some sort of consensus" that the predominant management style tends "towards the authoritarian end of the continuum (from participative to authoritarian, i.e. more 'tell' than 'join')" (p.81). Kiggundu (as cited in Blunt & Jones, 1997) uses descriptors such as 'authoritarian', 'personalised', 'bureaucratic', 'risk-aversive', to describe the predominant African management style.

Blunt and Jones (1997) cite views attributing this style of management to a legacy of colonial administrators who, with little faith in the ability of their African subordinates, kept managerial authority in their own hands and closely supervised the remaining menial tasks. This, it is argued, created the "typical African management style which tends to concentrate managerial authority and functions in a small number of positions at the apex of the organization" (Blunt & Jones, 1997, p.82). Could it be possible that the oft quoted, occupational stress inducing South African *management to labour* ratio of 1:25-40 (compared to 1:8-10 in the developed, Western, economies) that is often attributed to acute managerial skills shortage is, in fact, part of this colonial legacy?

### 2.10. Employee Involvement in Southern Africa

A brief discussion of industrial democracy and workplace participative initiatives in South Africa is useful in providing an important part of the context for an Anglo American Corporation (Zimbabwe) (AMZIM) case study. South Africa is also the largest economy in the region by far. South African companies, besides Anglo, are notable investors in Zimbabwe. Most importantly, the literature and experience of post - independence South Africa may well be of more relevance to the understanding and contextualising of a case from neighbouring Zimbabwe than most of the Western literature available.

The history of the establishment of Zimbabwe's 20$^{th}$ Century (colonial era) mines (originally optimistically, but mistakenly, touted as the second Rand) is closely intertwined with the development of the Witwatersrand mines. In particular their similar use of legislative methods, coercive recruitment structures and control of African workers in the four decades from about 1890 to the mid 1930s laid the foundation for the

survival and prosperity of both industries. In fact they drew from the same Southern and Central African labour pool and the Chambers of Mines on both sides of the Limpopo often used joint and co-operative strategies to coerce and induce labour as far afield as Northern Rhodesia (Zambia), Angola, Nyasaland (Malawi) and German East Africa (Tanganyika/Tanzania) to ensure a cheap continuous supply of mining labour (see section 2.11.1).

Horwitz (2000, p. 214) reports that "(in South Africa)…decades of economic isolation have created tough but inward-looking managers…who are results oriented…individualistic and directive in their styles". Horwitz (2000) argues that the evident managerial culture in South Africa is "underlined by individualist values and a societal culture with a relatively large power distance between groups" and points out that "indigenous models of leadership have not emerged …although the concept of *ubuntu* (humaneness) underlines traditional group decision making" (p. 214). In their discussion of the Cashbuild case, referred to later in this section, Horwitz and Townshend (1993) report on (former chief executive) Albert Koopman's call for a "rediscovery of the traditional African value of *ubuntu*" and they suggest that "a managerial paradigm shift from a strong individualist orientation towards collaborative or collective values could facilitate the process of achieving both economic growth and equity in the workplace" (p. 931).

Schlechter and Maritz (2001a, 2001b) report on their research on various dimensions of a model they call the "competence model" in a South African retail organization. *Ubuntu* (as they define and operationalise it) is one of the support conditions for commitment, one of their three dimensions. The other two dimensions are collaboration and creativity. A common operational definition of the concept of *ubuntu* and its constituent dimensions would help to make it testable and for researchers to find its utility in workplace participative management research. This is highlighted in the discussion and recommendations section.

The South African industrial relations system (a full review of which is beyond the scope of this thesis) has, since the late 1970s, been characterised by collective bargaining (Horwitz, 2000; Maller & Dwolatsky, 1992). Horwitz (2000) argues that this has been on the back of "rapid growth of the trade union movement since 1980" (Horwitz, 2000, p. 215). Maller and Dwolatsky (1992) describe industrial relations in

this, generally adversarial period, as being "historically related to decisions about wage levels and conditions of employment and not about corporate policy on work organization, investment patterns or new product or marketing strategies" (p. 79).

A lot has changed in South Africa since 1990 when Anstey (1990a) published the proceedings of a 1989 conference on Worker Participation. Anstey (1990a) introduced the volume by noting that constitutional negotiations were likely to usher in a 'mixed' political and socio-economic regime which would not be "...either rigorously worker controlled or free enterprise in character... (and)... new forms of relations between labour and management would be required (which would) move beyond the adversarial and ...explore the potentials of co-operative endeavour at all levels of the economy" (1990a, p. vi). At the time the conference was held in 1989 and the constituency represented by the country's remarkably strong unions was still politically disenfranchised and their political and civic structures banned. Collective bargaining then "asserted itself as the dominant form of worker participation" in an environment characterised by "political unionism" (Nupen, 1990, p. 36-37). The dominant context to the industrial relationship at the beginning of, and well into, the 1990s was the "...legacy of the apartheid system and the strategies adopted to change it" (Nupen, 1990, p. 38).

Almost a decade later, in a re-visit to the worker participation debate, Anstey (1997a), found the landscape "(now) advanced, with the introduction of statutory workplace forums under the 1995 Labour Relations Act (and) new options ...available to unions and employers alike in shaping relations at the level of the enterprise" (1997a, p. v). Anstey (1997b) reiterated that, in the face of increasing international competition, and (in-spite of international and South African labour's stated intention to focus on national and sectoral engagements with employers) "... joint endeavour is demanded at the level *where work is done* and that emphasis must be on *how the work is done*" (p. 2). Chetty (2000) agreeing with this view says the debate on worker participation in South Africa is (now) less about ideology than it is about survival.

Since its re-admission to the international trading community, the challenge in South Africa has been to respond simultaneously to the advent of globalisation and competition and, at the same time, redress "the apartheid workplace regime" (von Holdt, 2000a). This regime was characterised by racial division of labour in which poorly educated black workers performed unskilled tasks, and skilled and managerial jobs were

reserved for whites (von Holdt, 2000a, p.61). Douwes (1998) notes that even as early as 1989 black unions and the "pro union think tanks", such as the University of the Witwatersrand's Sociology of Work Programme (SWOP) and the Industrial Strategy Project (ISP), were beginning to take the new challenges into account. Douwes (1998) also highlights that Europe and later Australia were the "reference groups" for the black unions while the USA and UK influenced employers, particularly conglomerates.

It was noted in the early 1990s that many of the management driven piecemeal workplace participation schemes "designed to incorporate workers into a system for information sharing, and decision-making" in South Africa are Japanese inspired (Maller & Dwolatsky, 1993, p.79). In fact Maller (1992) argued that it had been anticipated that South African managers "would adapt the models of participation found elsewhere and apply a different, more limited notion of worker participation in local industry" (p. 1). Maller (1992) suggested four reasons why South African management were experimenting (in the late 1980s and early 1990s) with participation: to improve productivity in the face of an economic crisis; to increase labour loyalty and diminish confrontational action in the face of a growing union movement; to improve quality in the advent of international competition and to 'rescue the project of free enterprise' from being thrown out with apartheid (because of a perceived 'functional linkage') by the new labour backed political movement that was replacing apartheid ruling structures.

Using the example of the petroleum sector, Phillips (2000), says one of the results of plant level restructuring has been a decline in job and task divisions. She says that although new technology, especially information technology (IT), has driven some of the work re-design, there are widespread instances of deliberate management strategy to integrate tasks, resulting in: the establishment of formal work teams; the introduction of informal multi-tasking and restructuring of grading systems to allow for multi skilling. She reports on research, such as the Petroleum and Industrial Restructuring Audit (PIRA). This research, while finding some positive examples of team-work, found little consistency in its implementation, adding that workers were not rewarded for the increased work and despite management representing teams as self-managed, self-motivated and self-rewarded, this was not the case (Phillips 2000).

Klerck (2000) attributes the uneven spread of post-Fordist production techniques in South Africa to "the uneven distribution of resources and power among the various

unions" (p. 15). A similar theme emerges from Eaton's (1995) United States research where he found that " the local unions with the most control over EI (employee involvement) were those which had either singly or jointly initiated the program, had reached out to other unions and to educational institutions…and had the backing of a national union …" (Eaton, 1995, p. 76). Apart from access to skills and resources by workers representatives, the level of education and consequently the ability to participate effectively of the workers themselves is important. Poor employee education on the post-apartheid shop floor has been noted elsewhere. Horwitz and Townshend (1993), noted this "structural inequality" in the South African labour market in which "over 60% of SA's workforce has no education or primary schooling only … (resulting in)…an oversupply of unskilled people and a shortage of technical and managerial skills" (p. 920).

Valoyi, Lessing and Scheepers (2000) cite research showing that there are different areas in which employees would like to participate (eg the work itself; working conditions; human resources issues and corporate issues). They researched the issue themselves in South Africa and found the preference for participating in decision making to be positively related to higher education, higher job grades and gender (men more than women). In their study Valoyi et al. (2000) noted that a confounding variable was that there were more men than women at the higher grades. It would not be surprising to anyone familiar with the South African educational situation that the common dimension is really education or the lack thereof. In other words, people are insecure about their ability to participate directly in complex issues (and are in lower grades) because of a lack of education, which affects more women than men.

Goll and Johnson (1997) study the influence of environmental factors (such as increased global competition, deregulation and industry restructuring), corporate strategy, union/non-union setting on the implementation of employee participation programmes. They argue that, in general, union presence constrains management's ability to implement participative programmes although environmental issues mediate the direction and extent of union influence. They recommend a closer look at union strength and union strategy as important variables.

Douwes (1998) notes that the National Union of Metal Workers of South Africa (NUMSA) had by 1989 started re-orienting its bargaining strategy from its focus on a

"living wage for unskilled workers...to a proactive strategy to understand the changing production processes and changes in training requirements" (p. 36). This also entailed membership drives among semi-skilled and skilled workers; promoting a less complicated job grading system; broad-banding of skill-bound job categories; fighting for reduced wage differentials and endorsing multi-skilling, teaming and short-cycle manufacturing processes (Douwes, 1998).

Judging from the pronouncements of their key officials, South Africa's leading unions seemed ready for meaningful worker participation and appeared to be ahead of most of the employers. This researcher attended an industrial psychology congress in June 1994 where (then) NUMSA education officer Adrienne Bird presented the Union and incoming African National Congress (ANC) government's Human Resources development (HRD) strategy to a largely bemused, unprepared (for the changes) and sceptical management oriented audience. It may well be worth noting that South Africa's National Skills Development legislation, which is aimed at reversing this anomaly, has been driven to a very large extent by ex-NUMSA union officials, (such as Adrienne Bird) now in the government.

Some of these employers (inspired by Japanese management thinking and enthused by techniques such as Quality Circles and their variants, including Green Areas) were, and still are, primarily focussed on increasing the individual employee's involvement through high commitment policies and practices. Many of these strategies, in South Africa and other parts of the world ,are underpinned by the unitarist perspective in which the union and collective bargaining has a peripheral, if any, place in enterprise level workplace arrangements (Douwes, 1998; Guest, 1987; Wood & Albanese, 1995).

Some high profile cases of employee participation and team-based employee involvement in South Africa have been documented and used at some of the country's leading business/management schools. Some of these, eg Cashbuild (Horwitz & Townshend, 1993; Lessem, 1996; Maller, 1992) and PG Bison (Horwitz & Townshend, 1993; Webster, 1996) have tended to be driven by charismatic leaders. Consequently, their generalisability, and sustainability, has sometimes been doubted. Other examples include the Volkswagen case (Maller, 1992), which Webster (1996) calls the "vanguard participation case" and the Highveld Steel case where NUMSA shop-stewards played a leading and driving role (von Holdt, 2000a).

Maller (1992), using Salamon's differentiating typology, presents and analyses three cases: Jabula Foods, Cashbuild and VWSA. Maller (1992) notes that most of the schemes being introduced, as exemplified by Jabula Foods, remained task centred, and did not go anywhere near power centred worker self-management. She presents Cashbuild as a better example of direct participation but one that precludes (or thrives in the absence of) a strong Union (Maller, 1992). The promise of industrial democracy to her (as exemplified by VWSA) is one where the gains of the strong labour movement (structured conflict) are used to complement direct participation (co-operation).

In an ethnographic study of the NUMSA organised steel factory (also referred to elsewhere as the Highveld Steel case or under the pseudonym Steelco), von Holdt (2000a) describes how management attempted, during 1993 and 1994 to unilaterally introduce shop-floor restructuring, to make the mill more internationally competitive. Some of the new processes included Total Quality Production and Green Areas. In the face of active resistance from shop-stewards and workers these attempts failed. Key NUMSA shop-stewards (based on some the union's new strategies) then initiated their own restructure of a section of the mill run by a co-operative manager. The attempt included the introduction of a self-directed work team and the removal of a layer of supervision. In-spite of some initial success, both the diffusion to the rest of the plant and ongoing maintenance of the initiative did not take place. When management showed a willingness to involve the union in a new plant level negotiated process (through joint plant-level Management/Union technical committees), the over-extended shop stewards, without adequate policy guidance, expertise and support from their national office (which was itself loosing expertise to the new government structures), failed to make a meaningful contribution.

The NUMSA/Highveld Steel case, happening as it did in 1993/94, provides an example of the shop-floor environment into which the Labour Relations Act (LRA) of 1996 introduced the legal framework for work place forums. The case exemplifies attempts at operationalising the new union vision in the face of a legacy of shop-floor adversarialism, over-stretched union resources, lack of understanding (of the technical aspects of the union strategy by shop-stewards), lack of adequate central union support and a lack of clear implementation strategies. Von Holdt (2000b) says while the Union had adopted a new set of policies on a new negotiating programme it was "unable to

translate this into a dynamic unionism in the plants or the regions… (and, in addition)… the union's new negotiating programme took a complex and technical form that few shop-stewards could apply creatively" (p. 125). He notes that neither COSATU nor its affiliates had a common and coherent vision or strategy on worker participation. Addressing the challenge of participation to the union, von Holdt (1994b) argues that many employers were introducing quality circles, green areas and team briefings in an attempt to enlist worker co-operation and win consent but (citing examples of companies visited) "shop stewards were suspicious or sceptical of these schemes, seeing them as dominated by management and designed to undermine the Union" (p. 314).

Phakathi (2002) reports on post apartheid team-based work organization in a South African gold mine owned by Anglo Plc. Mineworkers are trained using what is called New Era Crew Training (NECT) to create *new workers* in a putative, globally defined, fundamentally new workplace…in line with current global forms of work…with multi-skilling (and) continuous learning… - the flexible workplace" (p. 279). In a case study (using participant observation methods), Phakathi (2002) finds that workers, faced with the frustrating reality and constraints of the old "apartheid workplace, make SDWT inspired improvisations called *planisa*, a colloquial reference to "make a plan". Phakathi (2002, p. 285) concludes that the gap between espoused "lofty ideals" and the operational reality of the shop-floor remain large and recommends the "occupational culture of the …workers … (as) the starting point for any workable strategy of fast tracking skill formation in South Africa".

Douwes (1998) advocates a notion of industrial competitiveness that reflects:

> "the holistic approach of integrating the social and economic dimensions of development, (which while not denying the necessity for efficiency and effectiveness)… ensures that these outputs are achieved through endorsing human rights, identifying behavioural responsibilities and leadership commitment to go sufficiently beyond organizational self interest in the search for societal values reflecting the ability to satisfy the basic needs of all groups in society".

He refers to the Intelligent Production Index (IPE), developed by the Industrial Strategy Project (ISP- "a COSATU think tank") to promote holistic competitiveness. The components of this strategy encapsulated in the IPE are:

- **Intelligence**

  Skills, knowledge and informed decision making capacities in production
- **Production**

  Sufficient and flexible production, team-based work organization, flexibility, job design and broad banding of grades
- **Strategy**

  Management and labour should jointly plan, implement and monitor new production techniques (Douwes, 1998).

A "simple and transparent" index (the IPE Index) was developed which could be used to measure best practices. Within an IR driven employment relationship that recognises the role of both parties, the joint management and labour goal would then be the diffusion of these measurable best practices "as desirable targets throughout the company, the sector and the supply chain" (Douwes, 1998, p. 155). He provides a full description of the Index (Douwes, 1998, annexure O).

Webster and Omar (2003) expound on von Holdt's *apartheid workplace regime* which they characterise as resulting in low trust; low levels of skill; a reluctance to identify with the goals of the enterprise; the persistence of the racial division of labour into the present post apartheid era.

They outline the systematic removal of apartheid legislation and its replacement, immediately following independence in 1994, with a suite of enabling/repressive Acts: the NEDLAC Act (1994), the Labour Relations Act (1995), the Basic Conditions of Employment Act (1997), the Skills Development Act (1998), the Employment Equity Act (1998) and the Social Plan Act (1998).

These were designed "…to position South Africa on the *high road* – a route that emphasises skills through training and high wages, through effective collective bargaining, rewards and incentive schemes" (Webster & Omar, 2003, p. 4).

Webster and Omar (2003) refer to case studies in the mining, footwear, manufacturing and call centres in their examination of the shop-floor responses that South Africa's transition has generated and find that "…a hybrid mix of managerial and strategies is emerging that reveal both continuities and discontinuities with past

practices" (Webster & Omar, 2003, p.2). They posit what they call a *Triple Transition Model* (Economic/Political/Racial) for South Africa, within which workplaces seek to balance efficiency, rights and equity.

At the national level Webster and Omar (2003) refer to the Workplace Challenge Initiative (WPC), whose objective of the WCI is to ease South Africa's re-entry into the global market by assisting industries to become more competitive through "…transforming work practices and work organization towards equity, efficiency and productivity" (Webster & Omar, 2003, p. 2).

The WCP, (a 24, 5 million Rand initiative started by the state, labour and employers through the National Economic Development and Labour Council – NEDLAC - in 1997/98) is overseen by a tripartite committee and implemented through the Department of Trade and Industry. It consists of initiatives in each of South Africa's nine provinces involving union and employers organizations of the province's dominant sectors " …to inform and promote the project with employers and employee organizations … with the objective of producing *workplace change programmes* that could serve as models for firm level agreements" (Grutter, 2002). The Initiative's primary focus to date has been employee participation at small and medium sized manufacturing firms. Twelve firms from 5 sectors were in the initial roll-out. Consultants, partly paid for by the WPC, worked with firm committees to develop firm-level workplace change plans, which they also helped to implement. Regular sector milestone workshops were held. A researcher was appointed to document the process and lessons for each sector.

At a seminar of the WPC initiative, held at the University of Cape Town, in December 2002 sector researchers from the plastics (Dickinson, 2002), footwear (Tshifularo, 2002), metal fabrication (Mhlongo, 2002), clothing and fishing (Godfrey & Maree, 2002) reported on progress in the implementation of a bundle of practices packaged around team-based work organization (TBWO). Dickinson (2000) reported that implementation of the Workplace challenge "was difficult" and "peak level agreements, at sector level, could not substitute for processes at the Company level" (p. 24).

In a report on the ongoing cross sector (longitudinal multi-case) study of the initiative, Grutter (2002) reported on variable findings and noted research and experience showing that benefits of introducing TBWO usually accrue from about three years down the line. Grutter (2002), however, noted that a divide could already be seen between *High* and *Low* implementing firms, with the former spending more time on shop floor communication, teamwork activities and training - with some beginning to see benefits. He gave the example of one firm whose major customer, impressed with the firm's re-organization of its shop floor as a result of the initiative, had rewarded the improvements by inviting the firm to participate in a major product development initiative. Preliminary conclusions were that while some of the benefits from the initiative were sure to come, there were some which were already accruing, including positive reactions from employees and customers.

Professor Eddie Webster, Director of the University of Witwatersrand's Sociology of Work Unit (SWOP) which is referred to elsewhere in this report, commented at the seminar about the need to recognise the Industrial Relations (particularly the absence or presence of workplace forums), restructuring, race and democratisation processes as part of the context for the TBWO initiatives under review (E. Webster, personal communication, December 10, 2003).

The, University of Cape Town (UCT) based, Manufacturing Round Table (MRT) is a working partnership among corporate and academic South African and international members whose vision is to enhance members' competitive capability through determining and implementing world class practices. Research emanating from the MRT (Grutter, Field, & Faull, 2002), includes case studies on the introduction of 'shop-floor improvement teams' by three corporate members. Focusing primarily on implementation strategy, timing and sustainability of teamwork, they found stakeholder support (including the early support of employee representatives), task orientation and programme institutionalisation to be positively related to successful implementation, programme effectiveness and sustainability. Grutter et al. (2002) provide important contextual nuances by purposefully linking the training and skilling of shop-floor workers (to facilitate the initiatives) with post-apartheid education and training redress. In other words, any high involvement, world class, or high skill based initiative involving black workers on a South African shop-floor is uniquely constrained by the need to overcome the effects of von Holdt's "apartheid workplace regime".

The definition of shop-floor teams referred to by Grutter et al. (2002), is limited to differentiating them from strategic management, project or other teams at higher organizational levels. By their own admission, in defining the teams they studied, "… rigorous qualifying criteria … were not applied" (Grutter et al., 2002, p. 643). Added to this, "non-permanent teams" are included in their third case. Without an operationalised definition of "teams" and without their characterisation in terms of level and degree of self direction, it is difficult to make meaningful comparisons of their useful contribution in terms of international work on team-based high involvement work design. In other words: are these studies of empowered team implementation or of world class process improvements or team-based manufacturing? Wood (1999) provides the stringent criteria (or bundle of practices) for what he calls "the transformed high performance organization" (p. 402). A revisit of the MRT cases with a clearer definition of empowered teams and with the purpose of characterising them would make it easier to compare their findings in relation to other claims of team-based self directed work design.

## 2.11. Employee Involvement in Zimbabwe

### 2.11.1. *Chibaro*: A Legacy of Coerced Mining Labour

Any attempt at understanding the Zimbabwean workplace, particularly in the mining industry, outside its historical context would be naïve. There is abundant evidence of indigenous pre-colonial mining between the Limpopo and Zambezi rivers that dates back at least six centuries (Van Onselen, 1976). Indigenous mining practices are not irrelevant to this case. Van Onselen (1976) an acclaimed historian and authority on Southern African socio-economic history, reports evidence of alluvial gold washing in the Angwa, Ruenya and Mazoe Rivers ( the latter within 60 kilometres of the location of BNC's Smelter and Refinery) evidence of gold mining pits "sometimes extending to depths of 80 and 100 feet", elsewhere. Van Onselen (1976) argued " the mining industry of the ancients was both skilled and extensive…their competency in detecting gold bearing reef…(such that)… no large scale prospecting was necessary during the first twenty years of capital intensive mining in Rhodesia : white 'prospectors' … were simply guided to ancient workings by local Africans". (p. 11). Notably, van Onselen (1976) stated that virtually all the modern mines of Rhodesia were sited on such old workings.

Although the mining practices of indigenous Zimbabweans is important and raises questions about indigenous work practices (see suggestions for future research) the modern/colonial mine and its strategic linkages and labour control strategies is used this organizational case to provide a historical context. The modern mining industry in Zimbabwe is just over a century old. As in South Africa, the perennial challenge facing the Rhodesian colonial mine of the first three to four decades quarter of the 20th Century was to ensure the adequate supply of cheap, unskilled, African, labour.

In a history of labour in the South African gold mines on the Witwatersrand, Wilson (1972), says at the turn of the Century the mines were short of 100 000 men. To coerce a reluctant population into cheap mine labour, and ensure adequate supplies, "the mineral magnates developed and refined two instruments: the law and (the) recruiting organization" (Wilson, 1972, p. 2). Laws to control labour movement in the new mines (as exemplified by a pass law enacted in 1895 by the Transvaal Volksraad), *were often drafted by the Chamber of Mines.* The Rhodesian Chamber of Mines (in the first of many subsequent instances), drafted its own pass law for promulgation by the Company state (the British South Africa Company – BSACo-) in 1901 "to prevent desertions and control the flow of unskilled labour" forcibly recruited by Native Commissioners (Van Onselen, 1976, p. 80).

In the South African situation the use of the law entailed introducing new taxes to force rural people into wage labour, legal restrictions on mobility and Land Acts which had the double effect of creating white commercial farms as well as forcing blacks into an untenable existence in overcrowded reserves (from which the Chamber of Mines recruited). In 1900 the South African Chamber of Mines (after failing to get the Government to recruit for the mines, established its own recruitment arm the Witwatersrand Native Labour Association (WNLA, commonly known as *Wenela* whose objectives were to ensure a steady supply of labour as well as the reduction of native labour wages. This remained so until the late 1970s when it was changed to The Employment Bureau of Africa or TEBA).

It was in this environment (characterised by the Rand mines' richer seams, longer lives greater resources and therefore relatively higher wages) that the Zimbabwean mines found themselves competing with their South African counterparts for capital, white skills and cheap African labour. With several notable disadvantages including shortage

of capital, skilled manpower and machinery; being geographically landlocked; longer distances from the coast (which added an extra 20% to rail haulage costs for supplies and machinery), the Rhodesian mine's profitability strategy was output maximisation and cost minimization. With skilled (white) labour costly to attract from the Rand, and therefore attracting a premium, the industry staked its feasibility and future on an adequate supply of cheap African labour – thenceforth made to bear the brunt "as the single most important cost determinant in the industry" (Van Onselen, 1976, p.32).

In 1903, three years after the establishment of *Wenela* in South Africa, the largest Rhodesian mines established the Rhodesian Native Labour Bureau (RNLB) which over the next 30 years was to ensure, through a variety of methods, steady supply of unwilling recruits to the mines. The coercive recruitment and employment of African labour and its intense exploitation in the mines (and the 'recruitment' organization that effected it) came to be known as *chibaro* (Van Onselen, 1976). In the Shona language of Zimbabwe this word means enslavement or forced labour. It is also the word used for rape.

Van Onselen (1976) provides a detailed and extensive description of the labour recruitment and management practices associated with *chibaro*. They can only be summarised here as characterised by:

- The use of legislation, such as the introduction of a variety of taxes (eg. hut tax poll tax) licences (eg for dogs and bicycles) and other schemes to foist a cash economy on rural areas and force people to work.
- The use of force by native commissioners (with the aid of notoriously brutal native messengers) to 'press gang' men in rural Mashonaland and Matabeleland to work in the mines.
- The introduction of legislation (Land Acts) to simultaneously create white commercial farmland on the best land and force black people to overcrowded marginal lands (or reserves) run by the recruiting Native Commissioners and making up the catchment area for the RNLB
- Destroying by any means possible any alternative rural African income generating economic activity. In the twenty years straddling the turn of the century an emergent African farming class had sprung up to supply the new mines with agricultural produce and grain in Mashonaland (as in the Rand and around Kimberley). By the beginning of the second decade of the new century it had been suppressed. In South Africa the Land Acts

of 1913 were motivated in part by the need to destroy this competition for white farmers.

- Taking advantage of natural disasters (such as the droughts of 1903 and 1912 and the influenza epidemic of 1918) to extend credit or advance cloth, grain or cash, thus creating an indebtedness that could only be relieved through mine work
- Waylaying and "catching" people (including those from as far afield as present day Malawi, Angola and Tanzania) who were prepared to head for the better paying Rand mines and press ganging them into Rhodesian mines
- Recruiting people from the hinterland of Northern Rhodesia (Zambia) and Nyasaland (Malawi) and further, who would find it more difficult to desert and using them to force down the wages of locals
- Lying about work conditions and the length of the contracts that recruits would be forced to work.
- The recruitment and use of child labour "particularly in the base mineral industry" where profit margins were even were lower the gold mines (eg mica mines and as *cobbers* in the asbestos mines). Associated with this was also the use of corporal punishment
- The use of forced convict labour particularly at Wankie Colliery
- Unilaterally extending the disliked contracts through the use of numerous enslavement ruses, including paying workers in kind or in tokens redeemable at the mine store ( which was often owned by a mine shareholder) .The store owner , with the co-operation of the mine usually ran a range of forced/ conditional credit schemes (such as the token scheme, the box lay-bye scheme) all designed to lock miners into a non cash relationship the wage deductions for which could extend contracts significantly and lengthen the period required to accumulate the cash needed for the rural taxes.
- The use of pervasive tobacco, meat and weekend beer brewing permission as 'bonus' in crude productivity incentives and inducements to work longer hours or to work unpopular days. Van Onselen (1976) says "this perverted bonus system represented the apex of management achievement in the social control … among black workers" (p. 169)

- Intensive social control through overcrowded compound accommodation systems.

For decades workers, many starting far north of the Zambezi, tried to work the system from the poorest paying mines in the northern parts of Rhodesia to the bigger and better paying Matabeleland mines and ultimately to the best paying Rand mines. The other objective was to avoid being on either an RNLB or a WNLA contract and remain an independent, less controlled and better paid worker who normally had a shorter contract. RNLB (Chibaro) recruiters patrolling the northern border awaited them as the crossed the Zambezi River, Police waylaid them before they crossed the Limpopo River into South Africa (with demand for "passes" – control documents signed by the last employer recording their district, work history, rate of pay and reasons for leaving - an instrument for directing deserters and others to needy mines). If they managed to cross the Limpopo, WNLA recruiters awaited them. Those economically stranded after successfully crossing the two borders worked for farmers, accumulated enough to desert and move on.

Strategies employed by migrants to anticipate and circumvent the system included the use of "market intelligence" about wages, the conditions at the different mines, the presence of notorious mine bosses some of whom were known as far away as the furthest recruitment areas. Colloquial and indigenous nicknames, rich in meaning were given to various mines and managers and the "most helpful to the prospective worker were those names which gave ready insight into management policies and practices" (van Onselen 1976, p. 235). Examples include Makombera for the mine Old Chum (meaning you are hemmed in or enclosed), Chimpanzi (meaning small portion), to refer to Ayashire mine, known for small food rations etc

Van Onselen (1976) reviews studies in the history of labour in colonial Zimbabwean mines up until the 1930s and notes the tendency to regard the mine owners as benignly paternalistic and says this view has allowed a gross distortion of conditions in the compounds. He offers detailed evidence of inhuman and dangerous mine work "squalid, sordid, oppressive and contrived" living conditions, related health and death statistics. He asks "why (if the conditions were so benign) was there such a persistent shortage of labour in the industry… (and) why was it that …Africans refused to work in the mines?" (Van Onselen, 1976, p. 93). He also notes that a lot of the literature has

shown an inability to understand African resistance to the exploitation which was "continuous and subtle (and) expressed through loafing, desertion, theft, and property destruction" (Van Onselen, 1976, p. 44).

This researcher recalls stories told by a grandfather Njini (so named because he was born the week in 1897 when the first rail steam *engine* rolled into Matabeleland) who from the ages of 17 until ten years later (about 1914-1925), made the annual journey from his home in the Southern part of Zimbabwe ( Matabeleland South) to the Rand gold mines. This dangerous and long journey, which involved walking and working for brutal potato farmers in South Africa's Northern Transvaal was, to avoid being pressed (through *chibaro*) into low paying work at Legion Mine or Sun Yet Sen or Antelope Mine, which he disdainfully called *ezinkomponi* (at the Compounds), all gold mines within 30 kilometres from his home. It is not inconceivable to imagine that the current employees of Zimbabwe's mining industry, on whose self directed discretionary efforts the hopes of international competitiveness are being pinned go home at the end of their shifts to tales of coercion from their still living, grandfathers. From a historical perspective this case, then, is an examination of whether the descendants of ancient miners, fortunately spared the worst excesses of Bantu education that their contemporaries suffered under apartheid, have recovered enough from the effects of colonial labour management to provide Zimbabwe's mining industry with the edge to compete in the world.

### 2.11.2. Enterprise Level Employee Involvement in Zimbabwe

In Zimbabwe, enterprise level Works Councils, in which workers participate in enterprise level issues, indirectly, through Workers' Committees, were introduced by the government (through a 1981 promulgation) immediately after political independence in 1980. All government, parastatal and private work places with more than five employees were obliged to implement the structures. Mutizwa-Mangiza (1992) stated that this was done with the expressed intention that these structures would develop into worker self-management. Mutizwa-Mangiza (1992) described this, state-prescribed, worker participation as "limited to the shop-floor...concerned with trivial welfare issues (rather than) wages, production, technology, co-determination or worker self-management. Workers have no right to information and ... no veto power" (p. 36). Although this may not have been a stated intention, one of the notable effects has been the side-lining of Trade Unions.

Social and industrial anthropologist, Angela Cheater (1986), introducing her own in-depth study of a Zimbabwean textile factory (conducted in 1983, three years after independence), described these new enterprise level institutions - which she regarded as motivated by socialist intentions: "These are modelled on Gramscian lines and are *de rigueur* in every plant. However, many of (their) functions… specified in the guidelines…may actually be seen as challenging the existing rights and obligations of trade unions"'. (Cheater, 1986, p.xiii). It is important to note that Antonio Gramsci was an Italian Marxist/communist Trojan horse strategist.

Mutizwa-Mangiza (1992) in her case study of the Workers Committees as an organ for enterprise level participation cites Stevens' typology for characterising worker participation structures as either integrative (facilitating workers' acceptance of the existing system) or transformative (facilitating the transfer of power from owners to workers, leading to self-management) gives the following reasons why the structures have not achieved their (government stated) transformative aim:

- Important decisions about the enterprise takes place at levels beyond the Works Councils
- The legal limits of the scope (meant management was not obliged to act on issues they raised)
- Lack of adequate education and training (meant that not all- especially technical- issues under discussion were fully understood.
- Co-optation by management through involvement in the implementation of management technologies (eg Job evaluation/grading and others) for which they were either out of their depth or, unlike unions, they would receive management oriented training
- Their use as a management communication channel to workers (particularly useful to management for selling controversial issues)
- Co-optation by management through patronage and largesse
- Promotion of many of their best members into supervisory / junior management roles (effectively they became another pool from which to source junior managers)

This researcher acted as a secretary to all the Works Council meetings at a sister company, for a period of 12 months while a graduate trainee Personnel Officer in 1989

and recollects most of Mutizwa-Mangiza's (1992) findings, including the Personnel Manager's budget for entertaining Workers Committee members. Because of the incumbent Personnel Manager's discomfort with its purpose the budget was reallocated to other purposes during the year referred to.

Mutizwa-Mangiza (1992) characterises the Zimbabwean workers committees as integrative and their main achievement as "industrial peace and productivity rather than (the) democratisation of the decision making process at the enterprise level" (p. 37). Maphosa (1992) describes the socio-political context in which the Zimbabwean, enterprise level, employee participation (Works Councils) was introduced as characterised by, *inter alia,*

- Racial polarisation between the mainly white managers and black workers;
- Lack of experience and desire among employers to introduce participation;
- Lack of a legal framework. (Until the replacement of the pre-independence labour statutes with the country's Labour Relations Act of 1985 the Zimbabwean government's worker participation promulgation had no legal force.)
- The proscribed scope and range of the decisions that could be taken at local level;
- The dis-empowerment of local management of trans-national corporations;
- Illiteracy and poor 'quality' among worker representatives.

Maphosa (1992) reports that "the workers' desire for participation and influence was considerably higher than management's acceptance of such participation and was also higher than the government's guidelines permitted" (p. 19). Maphosa's (1992) final assessment is that, in-spite of its potential, and in the face of an excessively interventionist state, the scope for an influential, decision-making enterprise level role for workers committees (or the, then, weak trade unions for that matter) was small.

Cheater (1992) concludes a review of a decade of post-independence attempts at industrial democracy by noting that in-spite of the, socialist inspired promise (as espoused in the ruling Zanu-PF's election manifestos at independence and five years later) to ensure that workers would be " involved as full participants in both the decision making process, management and control of the industries concerned", the government's main concern was redressing colonial racism, rather than worker self-management. Cheater (1992) asserts that, if anything, the new black managers "have tended to widen the already large gap between management and workers" (p. 69).

### 2.11.3. Industrial Relations in Zimbabwe's Mining Industry

According to Zimbabwe's Labour legislation, Collective Bargaining takes place at sector/ industry level within structures called National Employment Councils (NECs). Every sector/Industry is entitled to set up their own NEC provided that there is a registered employers' organization and a registered Trade Union. Until recently, the principle of *one sector one union* held. Lately, however, (since 1998/99) when the country's sole labour federation the Zimbabwe Congress of Trade Unions (ZCTU) formed a political party, the Movement for Democratic Change (MDC) to challenge the ruling ZANU (PF), things have changed. The state has allowed (even set up and encouraged) so called liberation war veterans and other ruling party linked groupings to challenge the ZCTU hegemony at plant, sector and national level. In virtually all cases the challenges have been mounted violently, without verifiable membership. The government has, rather disingenuously, claimed to be implementing International Labour Organization (ILO) conventions on freedom of association. The purpose of the NECs, which are bodies corporate (funded from equal contributions by employers and the Union) is to provide "a forum for negotiations that lead to Collective Bargaining agreements that are binding on all employers and employees in the industry, whether , whether or not they are members…" (CoM, 2002, ). An agreement, once struck is sent to the Ministry of Labour to be ratified and gazetted into a statutory instrument (S.I.). It then has legal force until a new one is struck. Working agreements between management and unions can be made at corporate level but these are subordinate to NEC agreements, which are in turn subordinate to the country's Labour Relations Act (of 1985) which is currently undergoing controversial, contested, amendments.

Bindura Nickel Corporation belongs to the National Employment Council (NEC) for the mining industry. Employers are represented in the NEC by the Chamber of Mines

(CoM) and non-management employees (as defined by the bargaining unit) are represented by the Associated Mine Workers of Zimbabwe (AMWUZ). Anglo American Corporation Zimbabwe (AMZIM) through the Chamber of Mines (to which it has provided two of the last three presidents) is an influential party in the Mining NEC. AMZIM's Group Industrial Relations Manager sits on the Labour Committee of the NEC. More case relevant references to the Mining Industry NEC are in the Case Narrative (See Appendix 1, p. 117).

Given the all these contextual factors, 22 years after the Zimbabwean workplace experiment started [and paraphrasing Cheater's (1986) justification of in-depth factory studies] the questions remain pertinent in 2002:

- What does it mean to be an industrial worker in this environment?
- What does it mean to be a member of a Self Directed Work Team in a plant with existing (government promulgated works council) participation structures and union structures?
- What scope is there for self-direction in a country experiencing severe economic and political participation problems?

### 2.12. Conclusion and the Purpose of this Study

Blunt and Jones (1992), argue that understanding African organizations is essential but difficult, adding that "…such is the dearth of reliable information that we cannot make confident statements about *how* (italics mine) African organizations function or about how their managers might best be helped…" (p. 87). Blunt and Jones (1992) express disappointment with 'anecdotal' and/or prescriptive literature and say "what we need urgently is description… and a conceptual framework within which we can analyse and compare our findings" (p. 87).

In a reference to financial participation, that is equally relevant to the analysis of all forms of worker participation, Horwitz (1990) warns about the use of common concepts "to describe phenomena which are substantially different" (p. 99). Horwitz (1990) also voices the need for "reliable and valid frameworks" for understanding participation. Proposing a framework based on the work of Poole and that of Salamon, for analysing enterprise level (financial) participation, Horwitz (1990) adds that an understanding of (financial) participation "…must be rooted in an analysis of socio-historical patterns of IR (industrial relations) in a particular society and an examination

of the goals or rationale for participation at both societal and organizational levels" (p. 99).

Ichniowski et al. (1996) warn against subjective judgements of many constructs central to innovative work practices, arguing that for example *"a semi-autonomous work team* maybe a totally autonomous group without outside direction or it may be a traditional work group with a supervisor who held a single meeting six months ago" (p. 309). They cite research showing that managers and union leaders often disagree about whether or not a claimed program was actually in existence at the establishment.

In a 2001evaluative study of SDWTs at Bindura Nickel Corporation (BNC), but focusing on the better implemented BSR teams where the subject of this thesis is located, Batirai Manhando (2001), a senior line manager in the organization and a key respondent in this case study, reported benefits, including increased productivity, discipline and job satisfaction and reduced absenteeism.

Without the kind of clear, operationalised characterization of what constitutes a Self Directed Work Team (SDWT) at the Company (the primary objective of this study), it is difficult to compare and cumulate these positive African reports with confidence.

### 2.12.1. Statement of Purpose

The purpose of this study was to characterize the nature, meaning and context of a Southern African organization's team-based employee involvement initiative (claimed as SDWTs), and validate the claim, doing so from the vantage point of an exemplar team.

The study is driven by some of the questions, issues and concerns raised below. The study is not an evaluation of the effectiveness/success of teams at the selected organization. The claim of the organization to have instituted *self-directed* work teams, effective or not, is however, critically and empirically evaluated.

### 2.12.2. Research Questions

**2.12.2.1. Properties of participation.** Focus, in-depth on a selected team in the organization to explore (formal and informal, direct or indirect) objectives, activities, roles, measurements of and rewards for, performance at individual and team level and

other observable or recorded characteristics that suggest, high involvement, self direction or empowerment:

- What is a team in this organization and what are the salient characteristics of the target team that define the concept of team work in the organization?
- What activities, characteristics and objectives of this team suggest high involvement, self direction or empowerment?
- What formal and informal roles are evident in the team that suggest support (or fail to support) team-based self direction?

**2.12.2.2. Values, Assumptions and goals of implementers.** What are the espoused organizational policies, beliefs, and practiced rituals, practices and activities that support or hinder empowerment and self direction in the team

- What is the implicit philosophical framework of the initiators of the team concept in this case?
- What are the implications of this framework in relation to the day to day work of the team (if any) and how has this impacted on the development of the team as a vehicle for worker participation in decision making?

**2.12.2.3. Outcomes.** What are the perceived, stated and real outcomes of teamwork for individuals the team(s) and the organization and which and how are they measured and rewarded:

- How is the performance of this team measured and rewarded and what does this suggest about the espoused and operationalised objectives of those who implemented teams in the organisation?

**2.12.2.4. Contextual Factors.** What are the characteristics of the environment within (eg relationships with other forms of participation and Human Resources practices) and outside (eg industry, sector, society). To identify factors in the inside and outside the organization which sustain support team-based employee involvement and those which do not.

- How do teams co-exist with other representative/participative structures, if at all , in this organization?

- What organizational policies, practices and activities support autonomy and self direction in this team?

- What is the relationship between team-based high involvement management and other nationally driven human resources development initiatives (Skills Development, Employment Equity) that are aimed at redressing past imbalances ?

- What is the relationship between team-based high involvement management and employment security or lack thereof in this team and organization?

- Has the presence or absence of a union affected team-based high involvement management? At what stage (implementation, development or maintenance) and in what way?

**2.12.2.5. Implications and Further Research Questions**. What further research questions does this case raise in relation to shop-floor worker participation/employee involvement structures in relation to wider socio-cultural issues, such as African / indigenous work traditions, systems or cultures?

### 2.12.3. Research Propositions

Marshall and Rossman (1995) suggest that qualitative studies should reserve some flexibility in research questions and design because these are likely to change during the research process. The following are tentative propositions which were deemed essential to focus the study in the absence of explicit hypotheses (see Research Design section for a more detailed description and explanation of the design).

- **The exemplar team** at the site purporting to have SDWTs will meet the criteria for classification as a self directed work team.

- **Team members from the exemplar SDWT** will express themselves about their work and their team in ways that evidence pride and ownership.

- **Members of the exemplar SDWT** would be found to have received training in self-management and would participate in the direction and management of their own team and work.

- **The organization** (whose management purports to be running self directed work teams) will have Human Resource management policies, systems, and practices that support and complement team-based self direction.

- **The national socio-legal framework** supports and provides "space" and (even) support for, team-based, direct employee participation in decision making at the enterprise level.

# CHAPTER THREE
# RESEARCH STRATEGY, DESIGN AND METHODS

## 3.1. Research Strategy

Within a qualitative research framework, the case study approach was adopted because this is an exploratory and investigative study. No explicit hypotheses were being tested, although some tentative propositions were posited.

### 3.1.1. The Qualitative Research Framework

Winegardner (1998) argues that the generally accepted characteristics of qualitative research are:

- An over-arching interest in understanding the meaning people have constructed.
- An inductive approach to knowledge generation where "…typical findings are in the form of themes, categories, typologies, concepts, tentative hypotheses or theory which have been induced from the data" (p. 2.)
- The research focuses on the *emic perspective* "…the insider's perspective, that is the perspective of the participants in the research study" (p. 2).
- Meaning is mediated through the investigators perceptions.
- The researcher is the primary instrument for data collection and analysis.
- The end product is narrative and descriptive (usually richly descriptive, expressed in words …rather than numbers).
- The design is emergent, flexible and responsive to changing conditions of the study in progress.
- The sample selection is usually non-random, purposeful and small.
- The researcher spends considerable time in the natural selection of the study, often in intense contact with the participants.

### 3.1.2. The Case Study Approach

Robson (1993) defines case study as "a strategy for doing research which involves an empirical investigation of a particular contemporary phenomenon within its real life context using multiple sources of evidence" (p. 146). Mouton (2001) refers to case studies as "studies that are usually qualitative in nature and that aim to provide an in-depth description of a small number of cases" (p.149). Drenth refers to a case study as a "characterisation" (in Drenth et al., 1998, p.15). Tellis (1997) argues that unlike experimental or quasi-experimental studies whose data collection and analysis methods tend to "hide some details… (case studies)…are designed to bring out the details from the viewpoint of the participants by using multiple sources of data" (p. 1). Winegardner (1998) says the case study method "focuses on holistic description and explanation" (p. 3). She reviews the definitions of several writers and their classification of case studies and gives the following summary classification:

- **Exploratory Case Studies**

  The most characteristic here is the research "seeks to find out what is happening, to seek new insights, to ask questions to assess phenomena in a new light" (Winegardner, 1998, p. 5). She regards this as the most hypothesis or theory building form of case study.

- **Descriptive Case Studies**

  Where the researcher looks for constructs to organise the data and relate it to other research findings and for themes which identify the salient features of a case.

- **Explanatory Case Studies**

  Where "the operative dynamic is the identification of patterns" (p.4) and variations are systematically related in a relational or (sometimes) causal way.

- **Evaluative Case Studies**

  Where the researcher makes judgements about the attainment of some standard or objective.

Yin (1989) argues that the defining characteristics of case research are: firstly, empirical inquiry within a real life context, secondly more variables being researched than subjects and thirdly, greater depth of examination (than experimental research).

Ratliff (1989) states that the real defining characteristic of case studies is that "case research preserves and depends upon the integrity of the individual case, either from which or to which inferences are made, whereas non-case research constructs fictional composites from systematic observations of individuals, from which inferences are made" (p. 51).

Yin (1994) states a fundamental problem of doing case research concerns "defining the unit of analysis" (p. 22). Klein and Sorra (1996) call this the *levels issue* in organizational research and describe it as the problem of what to do with "elements that are nested in or are members of higher level entities" (p. 198). Klein and Sorra (1996) organizations are by their nature multi-level "level issues pervade organisational theory and research" (p. 198). In this case, the possible levels of analysis include processes such as team activities, like meetings (where analysis could be made of and how differently, a team purporting to be self directed conducts its meetings) or individuals, teams, departments, organization, sector and national/societal level). The selected level of analysis (in this case, the exemplar team) is 'embedded' or nested in the other levels.

Sagie and Koslowsky (2000) suggest that even if the discussion (or unit of analysis in the research design context) is limited to the individual, dyadic or group level, there is a place for higher level variables (organizational and national cultural values or practices- they give the example of Japanese morning ceremonies and songs) which "moderate the group level impact of PDM" (p. 117). They offer a model outlined in Figure 2 (see p. 227) which in this case has helped to clarify literature review and research design (particularly unit of analysis) issues.

At different levels, different types of data may be gathered. Cassell and Symon (1994) recommend "taking an explicitly contextual perspective (which) recognises the influence that the situation has on behaviour and that behaviour has on situations". Cassell and Symon (1994) argue that in organizational research, in particular, "considerations of context should be paramount (since) the field itself is defined by the context of organizational life" (p. 5). In researching this case, a contextual approach was taken.

The case study strategy was used, employing multiple qualitative methods (primarily participant observation at the team level) to understand, from the perspective of

the selected team's members, what it means to be a member of the self directed work team in the particular organizational and contextual environment. At other levels, the description and understanding, of the environment in which the selected team operates was aided by the use of other qualitative methods normally associated with case studies.

The unit of analysis in this descriptive and exploratory case study is an exemplar, so called, Self Directed Work Team at the Refinery Division of Bindura Nickel Corporation.

### 3.2. The Research Process/Procedure

During the course of 2001 and 2002, an extensive review of the literature was undertaken before the search for a Southern African organization that claimed to have instituted team-based employee participation in decision making and was willing to allow an in-depth study. The first identified case withdrew permission (after granting and allowing a first site visit) citing a major restructuring exercise.

This studied case was identified in early 2002 through a database search of research reports from Southern Africa's Business Schools. Permission was sought and granted in mid-2002. This was followed by a background search on the Organization (involving internet searches, a visit to the Institute of Mining Research at the University of Zimbabwe and e-mail correspondence with the Human Resources and Training Managers of BSR as well as the writer of the University of Zimbabwe MBA case who was then the organization's Refinery Manager (promoted to BSR General Manager by the time of the fieldwork). This contact proved to be a key source of information as well as facilitator of the field work.

This researcher corresponded with researchers at the Institute of Work Psychology (Sheffield University, UK) which focuses on High Involvement Management practices research under the Directorship of Professor Eric Wood. The researcher prepared for the field work by attending lectures and seminars conducted by senior researchers associated with the Cape Town based Manufacturing Round Table (MRT) and the Workplace Challenge Initiative (WCI). The researcher also registered for multi-disciplinary post-graduate research seminars in Ethnographic, Oral History, Case Study and Qualitative Analysis research methods at the University of Cape Town's Graduate School in

Humanities. A fieldwork plan was drawn up and approved by both the University thesis Supervisor as well as the Company in September/October 2002.

The fieldwork was conducted from 16 December 2002 to 7 January 2003. The researcher was resident in Harare , 80 kilometres away during the field work period and (for the day trips) was given permission to join Harare based management employees in the Company bus which left Harare at 6am and returned at 6pm . For the shift-work, participant observation block the researcher stayed at a local (Bindura) Bed and Breakfast facility. Full cooperation and unrestricted permission was granted for the fieldwork. The team leader of the target team offered the researcher protective clothing and facilitated security clearance. For the shift-work period the researcher was a *de facto* member of the team. The only problems encountered were difficulties in setting up interviews with key respondents at a busy period as well as finding missing documents (such as minutes of meetings).

The field-work was organised as follows:

- A preliminary 1 day site visit **(1 day)**
- A. 2 day visit to interview key respondents **(2 days)**
- A 7 day site visit to join the SDWT team during shift work **(7 days)**
- 3, separate, day visits to interview more key respondents **(3 days)**
- 2 separate day visits to Zimbabwe Alloys Ltd (ZAL) to interview 4 key respondents **(2 days)**

During the month of January 2003 (after the researcher had returned to Cape Town) there was extensive e-mail interaction with some key respondents and team members to clarify responses and request missing, or more, information.

## 3.3. The Participants (The Case)

### 3.3.1. The Subject of the Study (the Case) and its Organizational Environment.

The subject of study, the exemplar team is the Pressure Leach Team, a Self Directed Work Team (P/L SDWT) at the Refinery Division of Bindura Smelter and Refinery Limited (commonly referred to as BSR) an operating company wholly owned by Bindura Nickel Corporation. BSR together with the Company's Mining Division make up Bindura Nickel Corporation Limited (BNC). The case is studied within its context. The exemplar team is one of five, so called, Self Directed Work Teams in the BSR Refinery and

is in its fifth year of operation as a SDWT. Figure 3 (see p. 228) shows the Pressure Leach team in relation to other teams within the Refinery.

Because this is a descriptive single case study, a more in-depth description of the case and its operation (which is part of the results and a fulfilment of the objectives of the study) is located in the results section of this report and in the appended narrative in Appendix 1 (see p. 117).

The core business of BNC, which was established in 1966, is the mining and processing of Nickel and related products, primarily for the international market. The by-products include copper, cobalt other metals belonging to the platinum group. The shares of BNC, which was listed on the Zimbabwe Stock Exchange (ZSE) in 1971, are largely (80%) owned by Anglo American Corporation Plc through its wholly owned Zimbabwean holding subsidiary Anglo American Corporation (Zimbabwe) (AMZIM). Anglo American Corporation, traditionally a mainstay listing in South Africa's Johannesburg Stock/Securities Exchange (JSE) relocated to the London Stock Exchange (LSE) in 1999 and is now known as Anglo Plc.

### 3.3.2. Case Selection (Sampling Strategy)

While a typical sampling strategy would be used in experimental designs to aid generalisation of results, this is not the case here, where the objective is an in-depth characterisation of a single case. According to Merriam (1998) the most appropriate "sampling" or selection strategy for qualitative case studies is non-probability sampling employing the use of purposeful, judgemental or theoretical rationale. By purposeful case selection rationale is meant the extent to which the case (even at face value) typifies (or is deviant from) the phenomenon of interest or is of strategic importance etc. Theoretical selection rationale is the selection of cases based on the extent to which they help you to answer your research question. Ertmer (1997) encourages the "purposeful" selection of cases for in-depth qualitative inquiry "to increase utility obtained from small samples" (p. 162). Mouton (2001) who decries the potentially misleading use of the concept of *sampling* (for participant observation and small number cases) prefers the expression "*case selection*". Mouton (2001) recommends the use of judgement or theoretical case selection for ethnographic (and participant observation) case studies.

Bearing in mind the difficulty of accessing organizations for in-depth study, the selection was also based on convenience. The researcher wanted to study a team of largely African workers whose mother tongue (presumably also the preferred language at work) could be understood with all its nuances without the need for an interpreter. All Master of Business Administration (MBA) research reports at the University of Zimbabwe's graduate school of management for the 10 year period leading up to 2002 were scanned for organizations that had implemented team-based worker participation or employee involvement initiatives. The organization was identified in January 2002, after Manhando (2001) had presented it as an evaluation of the effectiveness of its Self Directed Work Team initiative for his MBA research report.

Manhando is a senior manager (BSR General Manager) and a key respondent in this case. His own study is different from the current study in that he sought to evaluate *the impact* of SDWTs at BSR and made a comparative quantitative evaluation of the 10 SDWTs operating in the organization. His report and those of middle managers who conducted their own evaluations were treated in this case as a secondary source and their results are summarised and referred to in the results section of the study. As a member of BSR's senior management team, Manhando's (2001) claims were treated with caution until the participant observation study. The middle management groups' evaluations of the SDWT initiative were not known to the researcher until they were referred to in conversations with Manhando and the HR manager during fieldwork. Coming from a management level/group (middle management) which is typically marginalized by such initiatives and which usually bears the brunt for implementation the reports were welcome. In the end although they are not solely about the Pressure Leach Team they provide compelling corroboration for some of the observations made. This unintended investigator and data triangulation is seen as strengthening some of the conclusions drawn in this case.

Even though convenience sampling can be justified for single case organizational studies, theoretical selection rationale was used to qualify the organization. The organization meets Osterman's criteria for the "transformed organization" in which 50% or more of core employees are involved in at least two of the following practices; online teams; Total Quality Management (TQM); off-line quality Circles or job rotation. Osterman (1994) defined core employees as the "largest group of non-supervisory/non-management workers in the establishment who are directly involved in making the product or providing the service" (p. ). A more detailed analytical examination of the organization's qualification

in terms of Wood's (1999) more stringent criteria (or bundle of practices) that should characterise "the transformed high performance organization" is presented in the results section (p. 402).

To select the exemplar team, key organizational informants (listed and described in Table 5, see p. 151) were asked to assist in identifying the team that best typifies the success of the concept in the organization. The key informants were probed for their reasons for regarding this team as successful. This in itself was used as a method for eliciting the implicit value system of key informants about team-based employee involvement in the organization. If this study had been to evaluate team effectiveness the strategy, described above, for selecting the target team would be problematic. Here, however, the main concern was in-depth qualitative probing of the experiences of a team that typifies the best efforts of the organization to implement the initiative. Theoretical rationale (based on the review of the literature on SDWTs) is also used to qualify the Pressure Leach SDWT as a suitable subject for further/in-depth study.

It is worth noting, as some critics such as Ichniowski et al. (1996) and Osterman (1994) have that many of the large quantitative samples on teams and teamwork, relied on a single informant from each organisation, in many cases a person with a vested interest in reporting positive implementations and outcomes. Ichniowski et al. (1996) argue that in these one respondent studies "any idiosyncratic opinions or interpretations of the questions can distort the results (and such studies are)…particularly noisy (their word) and potentially biased indicators of actual workplace practices" (Ichniowski et al., p. 309). They recommend more than one respondent per organization or that "the researcher conducts site visits and interviews …multiple respondents at different levels and in different roles…to obtain rich information on work practices from knowledgeable respondents" (Ichniowski et al., p. 310). Osterman (1994) cautions against restricting one's organizational respondents to Human Resources people, arguing that years of research with firms "have suggested (to him)…that too often HRM staff *even at the establishment level* (my emphasis) are not in touch with work organization" (p. 174).

Knowledgeable individuals (referred to as key respondents in this study) were people who have been in the organisation since the inception of the team empowerment initiative. Respondents who provided detailed /extensive information (and in some cases documents) are listed in Table 6 (see p. 152). At least 5 of the key respondents were

mentors in the Management Development Programme (MMDP) whose middle management participants evaluated impact of the SDWT (and Multi skilling) programmes in 1991 and were therefore very familiar with the initiative.

### 3.4. Research Design

The design chosen to conduct this qualitative study is a complex or embedded single case multi-method study of an organization of purportedly empowered work teams (Type 2 in terms of Yin's 1994 classification). The quality and depth of the information gathered was enhanced by ethnographic study of an exemplar team at work. Drawing a distinction between single and multiple case study designs, and between holistic and embedded cases, Yin (1994) presents a typology of case designs (Table 7, see p. 150) and justifies the embedded case design as being appropriate where there are several possible units and levels of analysis. He deems embedded case designs appropriate for both single and multiple case studies.

The focus of this study is Bindura Nickel Corporation's Refinery where Self Directed Work Teams (SDWTs) have been introduced. The Refinery has five of BSR's 10 SDWTs, the others being in the Smelter. Although Zimbabwe Alloys Limited (ZAL) another Anglo American Zimbabwe (AMZIM) Refinery was visited the purpose of visiting Zimbabwe Alloys Limited (ZAL) was not to collect additional case data but (at the analysis level) to clarify and confirm emergent themes and hypotheses generated in the concurrent data gathering and analysis of the data from Bindura Nickel Corporation (BNC)'s Refinery. Both the BNC and ZAL Refineries are part of listed AMZIM group operating companies and share the same corporate environment. ZAL has, however not instituted any SDWTs. This is not to be seen as an attempt at a fully fledged comparative case study but an opportunity from which to try and understand the uniqueness (or otherwise) of some of BNC findings. Only four key people were interviewed. These were the Production Director, the Furnace Manager, the HR manager and the Senior HR Officer. Only a small section of this report will be on the information gathered from ZAL and only in so far as it illuminates the BNC/BSR findings.

### 3.5. Research (Data Gathering) Methods

Use of multiple sources of evidence "in a manner encouraging convergent lines of inquiry" (Yin, 1994, p. 34), was adopted to allow triangulation and increase construct validity because the same phenomenon is measured several times. Yin (1994) argues that the use of multiple methods allows findings to be corroborated. Brewer and Hunter (1989)

describe the multi-method approach as a "strategy for overcoming each method's weaknesses and limitations by deliberately combining different types of methods within the same investigation" (p. 11). They refer more specifically to triangulation as an attempt "to pin point the values of a phenomenon more accurately by sighting in on it from different methodological viewpoints" (Brewer & Hunter, 1989, p.17).

Palmquist (2001) and Yin (1994) list the following six types of data as typically collected in case studies: documents, archival records, interviews, direct observations, participant observations and artefacts (e.g. awards or trophies or photographs of the exemplar team).

All these methods of data collection were used as part of triangulation in this study. In line with qualitative research traditions (Marshall & Rossman, 1995) and the research design, participant and direct observation, in-depth interviewing and document (and archival data) reviews were used to collect data. In using interview guides in in-depth information gathering a balance was kept between too much structure on the one hand and the flexibility that is required for qualitative interviewing. Where unplanned lines of inquiry were followed these were noted. Table 8 (see p. 151) is a matrix showing which of the different research methods and techniques were used in relation to the different levels of analysis.

The research proposal (detailing the research plan, design methods budget and resources) submitted and approved by the thesis supervisor met the requirements of what Yin (1994) refers to as the case study protocol.

### 3.5.1. Semi-Structured Interview of Key Respondents

Key respondents, consisting of a purposefully selected list of key people were interviewed about the historical and organizational context of team-working initiative using the appended information gathering/ interview guide. This is outlined in Appendix 3(see p. 136), which is adapted from Appelbaum and Batt (1994) and Wood (1996, 1999).

Respondents were given the guide/schedule to think through (and make some notes) in advance of scheduled interviews which were conducted at their convenience in their offices. During the interview the guide was used to ensure that all key issues were covered. Notes taken and their responses to the more open ended questions were probed. Responses

on the same question were added to a central document (See Appendix 3 p. 136) in a cumulative and corroborative way.

### 3.5.2. Document (and Archival Data) Reviews

Jorgensen (1989) cites research to show that various forms of documented communication (records, pictures, letters, diaries, memoranda) can be used to supplement and enrich participant observation. A selection of documentary and archival material going back five years to the inception of the SDWT initiative, were reviewed for case relevant material. Documents included organisational policy guidelines and key memoranda and reports. Human Resource Management policies, records and reports were given careful attention. Company newsletters, magazines and communication documents were also reviewed for articles and material relating to teams and related activities e.g. multi-skilling. The Zimbabwe Chamber of Mines (COM) and Mining Industry National employment Council (NEC) websites were reviewed for relevant material on industrial relations, agreements and other relevant pronouncements. Any available Southern African case studies on enterprise level worker participation decision making or team-based organization were reviewed.

### 3.5.3. Participant and Direct Observation of Exemplar Team

The most successful example of the Refinery's SDWTs (in the opinion of key respondents who were, themselves, questioned on their reasons for regarding this particular team as the most successful) was selected for in-depth participant observation , to gain what Jorgensen (1989) calls "an insider's viewpoint" (p. 14). A full cycle of shifts (eight hour shifts that the team three groupings did in the course of a week) were spent with team's members, observing them at work and during team meetings. A field journal/diary was kept (Jorgensen, 1989).

### 3.5.4. In-Depth Interviewing of Individual Members of the Exemplar Team

During the week spent with the team, as many members of the team as was possible / as their work would allow were interviewed in depth, individually. The interviews were aimed at allowing the members to tell their own stories about the team and its background and performance and to describe what it means to them to be members of a successful, ostensibly empowered, team. A very short guide was initially used to structure these interviews/discussions but after a number of them the sequence was so familiar that it was only mentally referred to. In order to keep these interactions as un-obtrusive as possible,

notes were written after each discussion, in the Control Room, before proceeding to the next member's work station.

Recorded notes were used to later write the case narrative (Appendix 1, see p. 117) which when put together with other evidence (Tables 29-32, see p. 188-132) and interview guides (Appendices 3-5, see p. 136-145) constitute the case study database as recommended by Jorgensen (1989), Tellis (1997) and Yin (1994).

### 3.6. Data Analysis

This case focuses on an exemplar so called SDWT in an organization purporting to have instituted team-based work organization. Analysis draws on a variety of data sources (personal direct and participant observations of a "sampled" experience of its members; interviews with team members and knowledgeable individuals within the organization; documentary and archival sources; a body of literature and Southern African research and experience on team-based direct worker participation) to try and characterise the case (Pressure Leach Team) within its context. The objective of the analysis is to draw, from all these sources, a valid characterisation of the selected team as a self-managing work structure.

Marshall and Rossman (1995) state that in qualitative studies, "data collection and analysis go hand in hand to promote the emergence of substantive theory grounded in empirical data" and the model qualitative researcher, needs to analyse as he goes along "both to adjust his observation strategies…to exercise control over his emerging ideas (by checking and testing them)…and to…discover significant *classes* of things, persons and events and the *properties* which characterise them" (Marshall & Rossman, 1995, p 112). They offer five modes which guide qualitative data analysis. These were used in this case and are: organising the data, generating categories, themes and patterns, testing the emergent (emphasis mine) hypotheses against the data, searching for explanations of the data and writing the report.

Data analysis in this case follows Yin (1994)'s advice that where you have made use of existing theory to formulate your research question and objectives you should use the theoretical propositions which helped you do this as a means to devise a framework to organise your data analysis. Similar advice is given by Saunders, Lewis and Thornhill (2002). This analysis is based on a premise that inductive and deductive approaches at the

analytical level are not dichotomous but rather a continuum along which one may move depending on the stage of the analysis. This approach leans more towards Yin (1994) and Miles and Huberman (1994)'s approaches (that are more tolerant of the interplay between deductive and inductive analytical processes) rather than Strauss and Corban's (2014) purely inductive grounded theory (after Glaser and Strauss, 2012) approach.

In this case the research questions are used to focus and guide the data analysis. Huberman and Miles (1994) state that choices of conceptual framework, of research questions, of samples, of the case definition itself "all involve anticipatory data reduction (which is )…an aspect of analysis" (p. 430).

Miles and Huberman (1994) based on their view of qualitative research analysis as anticipatory, interim and iterative, provide three linked analytical processes. These (linked analytical) processes are data reduction which involves the use of summaries and various kinds of memoing; data display which comprises of case summaries, synopses, vignettes, network diagrams and matrix displays and conclusion drawing and verification.

The analytical framework used in this case is adapted from what Miles and Huberman (1994) call a pre-structured case which they recommend for situations where time is limited, research questions are well defined and the researcher has established / adopted a conceptual framework. Figure 4 (see p. 229) shows the analytical framework (adapted) in this case.

To ensure that emerging analysis is based on data Huberman and Miles (1994) recommend an iterative interplay between data display and analysis. Huberman and Miles (1994) state that "valid analysis is immensely aided by data displays…(where) displayed data and the emerging written text of the researcher's conclusions influence each other" (p. 433)

Referring to data displays Fielding and Lee (1998) say, unlike quantitative research, what is displayed (in the Miles and Huberman qualitative analysis) is not restricted to numbers but may include quotations references to data sources, comments, ratings etc. Explaining the interim and iterative nature of qualitative data analysis they say understandings emerging from the analysis are fed into and modify further data collection and "patterns, hypotheses and themes are discovered inductively. Possible verification of

the emerging patterns is then sought using deductive strategies. This then, potentially yields further (inductive) insight" (Fielding & Lee, 1998, p. 40).

The use of multi-method triangulation, particularly at the data gathering level, in this case, meant that a lot of disparate data were gathered. Tabulation of data summaries was used extensively as a means of analytical data reduction, categorisation and structuring. Where numerical tabulations and data presentations were used, these were not of an inferential nature (as used in quantitative numerical analysis) but were used to aid reduction, description and "illumination " of observations, responses and reports. For example: basic descriptive statistics were used to draw age, educational and experiential distributions within the Pressure Leach SDWT. This was seen as the deductive part of an iterative process which would facilitate a more inductive analytical discussion of the results.

The disadvantage of the analytical approach used is that the researcher may be led, by over-structuring of data, into a purely deductive mode and associated early (premature) closure and conclusion drawing (Saunders et al., 2002 p. 391). The recommended antidote is "triangulation …with different data collection methods, theories or respondents…" (Miles & Huberman, 1994, p. 85). All of these types of triangulation were employed. The extensive use of triangulation was deemed sufficient to answer the main research question and to generate sufficient evidence to allow reformulations of the hypotheses (for future research) with some confidence.

In the view of this researcher while enough information was gathered for grounded for basic grounded theory analysis (and the researcher undertook training in computer assisted qualitative data analysis- CACDAS) such highly inductive grounded theorisation will have to wait for the next step of this research (see proposals and recommendations) which will entail less methodological triangulation and a more intensive and longer participant observation study. Content analysis was used in the review archival and documents.

# CHAPTER FOUR
# RESULTS

## 4.1. Introducing the Case Narrative

(The full narrative is included in Appendix 1, see p. 117)

Ertner (1997) discussing the communication of qualitative case findings says case compositions "often take the form of a rich descriptive narrative that attempts to reconstruct the participants' reality" (p.158). Yin (1994) adds that "the narrative information may be augmented with tabular as well as graphic and pictorial displays" (p. 134). A contextualised case narrative, telling the story of the Pressure Leach SDWT as gathered during the participant observation study in December 2002/January 2003 and related by team members and other key respondents is appended (see Appendix 1, p. 117). It was composed (written up) using the acceptance standards of *The Management Case Study Journal* as published on the publisher's (the International Graduate School of Management) website (IGSM, 2001). The process of validating the case continues beyond the UCT thesis report. The case is being validated by a number of key respondents and permission will be sought for the case to be used for learning/training purposes (with appropriate conditions such as the use of initials rather than full names).

## 4.2. Qualifying the Organization

The claims of the organization to have instituted SDWTs were not taken at face value. A preliminary composite framework for qualifying the organization, adapted from Osterman (1994), Pil and MacDuffie (1996), and Wood (1999) was compiled and used on BSR. The organization meets Osterman (1994), Pil and MacDuffie (1996) and most of Wood's (1999) criteria. All core employees of BSR (and its refinery) are involved in on-line teams within which there is job rotation and multi-skilling. The verification of these and other criteria was by participant observation, interviews of team members, refinery team leaders and key respondents as well as document and archival reviews. Details of the information gathered about the organization is contained in Tables 32 and 33 (p. 192-196)which summarise the results of document reviews and content analyses (for SDWT relevant references) of policies, Works Council minutes, and training audit and other reports. The only reference found on an employee suggestion program was a complaint in the Works Council minutes and another by one of the two union leaders about the (lack of) value of the rewards made to employees (t-shirts) for improvement suggestions.

Although BSR has no staff canteen facilities, status differentials are evident, from reserved parking to more significant, Paterson Job grade related, seniority perquisites such as differential support for children's schooling and eligibility for company cars and housing. Table 9 (see p. 155) illustrates how the organization fares.

### 4.3. Qualifying the Team as a SDWT

Table 10 is a detailed table on the composite framework for qualifying the P/L Team as a SDWT (see p. 157). The findings in Table 10 were derived from discussions with team members as well as team leaders and key organizational respondents.

### 4.4. Description of the Pressure Leach Self Directed Work Team

With 23 members, the Pressure Leach SDWT is the smallest team in the Refinery. Detailed demographic and other statistics characterising various aspects of the team are appended (See Table 11, p. 159). Team member ages range from 23 to 57 with a mean of 36.8 (SD: 8,7) while the team leader (AB) is 42 years old. Pressure Leach Team membership ranges from 1-4 years with a mean of 2.9 (SD: 1.2). 15 members have been with the team for at least three years while 10 (with four years) are founder members. The Team Leader, AB, has been with the team for 3 years. Table 12 (see p. 1162) and Figures 7 -10 (see pp. 232-235) illustrate these findings and other characteristics of the Pressure Leach SDWT.

As Figure 6 (see p. 231) shows 14 P/L Team members have at least 11 years of formal education. That is, they have sat for public school leaving "O" level examinations. Only 1 team member did not finish the 7 primary schooling years. Other aspects of the P/L team, such as its work organization and communication routines are described in the case narrative (Appendix 1, see p. 117). All these support the finding that the team is a real, functioning entity with goals, boundaries and an identity.

### 4.5. Participant Observation of the Pressure Leach SDWT at Work

At the time of the study (November, December 2002 and January 2003), the Pressure Leach Self Directed Work Team (P/L SDWT) consisted of 23 employees who were responsible for the Pressure Leach production process. The team consists of a Team Leader (a management appointee), 4 Control Room Operators (CROs) and 18 Plant

Operators. The team works in three, eight hour (7am-3pm; 3pm-11pm and 11pm-7am) continuous plant operation, shifts.

An interesting observation was the *de-facto* leadership role exercised by the control room operators who are the hub around which the rest of the team revolve. Team members work in groups of six, each group (including the swinging/ spare group of four) built around a CRO. On a 24 hour period, the three shifts will work towards exactly the same goals with CROs maintaining a line of communication between successive shifts. In fact one is tempted to say the Pressure Leach Plant with the 23 people as composed of interlinked common purpose teams of 6 led by CROs. The team leader, who keeps day time hours (8am- 4pm), oversees the team's 24 hour objectives.

The Pressure Leach SDWT has a clear team identity that is reinforced during the regular pre-shift safety meetings. While not quite at the same level (in terms of objectives) as green areas these meetings clearly have a broader focus than safety. They are in fact problem-solving sessions. That these sessions are called *safety talks* seems to be a function of the current dominance of the Safety Health and Environment (SHE) initiative rather than a pointer to their objective. The routine discussion of the team's daily goals also reinforces a sense of "belonging". Appendix 1 (the case narrative) provides further report of the participant observation exercise.

### 4.6. Views of Pressure Leach Team Members

Information collected directly from Pressure Leach team members was used to compile the case narrative (Appendix 1, p. 117) a profile of the team (Table 11, see p. 159) and to gain an appreciation of the team's historical development. Table 25 (see p. 201) consists of selected excerpts and verbatim quotes from interviews with team members. Appropriate parts of this information are used in Chapters 4, 5 and 6 to support answers to different research questions and conclusions and to justify recommendations. A summary of findings based on these discussions is that:

- All 23 members know about the concept of SDWTs and are aware, and conscious of their own membership of the Pressure Leach SDWT
- All members regard their SDWT as one of the (if not the) most successful SDWT in the organization.

- There is a palpable sense of pride and ownership in the team and its achievements especially by longer serving members several of whom proudly call themselves *founder members*.
- There is a notion (particularly among older members) that SDWTs have restored respect and dignity in the workplace
- There is interest in learning more about SDWTs and how they operate (as shown by questions to the researcher about SDWTs in South Africa)

## 4.7. Education, Training and Development for Team-based Self-Management

### 4.7.1. Education

Christian missionaries conducted the first formal education in Zimbabwe and the schools they established for black scholars originally focused on industrial training. They were later to escape the apartheid–like control that was exercised in South Africa after the 1940s and remained the mainstay of good quality black education in Zimbabwe up until independence in 1980 and beyond. With the growth of white settlement in the late 19th and early 20th centuries, schools for the white population were established in all the major towns. These were only opened to all races at, or around, independence in 1980. No government education was provided Africans before 1920. As late as 1965 there were only two government-run secondary schools for blacks.

The missionaries were again the first to provide rudimentary (later primary) night schools in the mining compounds. The initial growth of these were driven by mineworkers themselves who bought books and writing materials and in a case cited by van Onselen (1976), even constructed a school and paid for a full time teacher. Studies by van Onselen (1976) and others show that, in the early Rhodesian mines, mission educated immigrants from as far away as Nyasaland (where mission schools were established earlier) and Natal (where there were already mission schools) were better placed to get better employment on the mines such as semi-skilled, clerical or "baas/boss boy" (the ancestor of the mining position of gang leader). In this case the position of the Control Room Operator would be the equivalent. These immigrants also often doubled up as night school teachers. Mines accepted these schools because they cost the industry nothing and, more importantly, attracted stable labour. Wilson's (1972) argument that the migrant labour system with its limited contract discouraged investment in the development of mineworkers (who could desert, move to other mines at the end of the contract etc) is as true of South African mines

as it is of those in Zimbabwe. Only much later did some mines start providing primary school education for their workers and children.

That the importance of education and self development among mine and shop floor workers remains as strong as it was a century ago is reflected in the findings about the educational levels of Self Directed Work Team members at BNC's Refinery and in particular the Pressure Leach Team. Most of the members and leader of the team reported they had done their secondary schooling at mission schools. Interviews with other management members also show that present day management sees the education of shop-floor workers as critical to their contribution in the workplace. A senior manager at BNC's mining division was reportedly asked if he thought an A1 employee (Grade A1 is the lowest job grade on the Patterson Job Evaluation system) would be motivated by more responsibilities and empowerment without "an upwards surge in remuneration and rewards" . His response is cited below at length as it is very illustrative.

> …we need to have a complete overhaul of our career progression in the organization …today some of the A1 employees have good A levels (Researcher note: post –matric international university entrance qualification) and it is only a question of time before we have lashers with University degrees. We must never under-estimate the potential in people. A lot of youngsters today have a lot more capabilities that we have been able to tap. The biggest limiting factor is our organizational structure, reward system, career paths etc.
>
> Let me give you one of the true stories that I have witnessed (and I can supply you with names): In 1997 when I was Resident Engineer (Smelter) I was approached by an A1 tea maker at the BSR who was requesting me to transfer him to the workshops as an Artisan's assistant (B1) I then said to him the future of the assistants as we know them was short lived as we now wanted trainable people who would be more productive . He left. A month later he came to me to sign his change note and said he was going to write exams. Then I got a bit more interested and asked him what exams? He said A levels. I then asked him what his ambition in life was and he said "to be an engineer". I was about to laugh when I realized that he was serious.
>
> I then decided to appoint him to the new post of PM clerk that we had created with the new PM database and trained him from scratch. Believe me he turned out to be the

best PM clerk I have worked with. He then went on to do an apprenticeship with BNC. I believe he is going to be a very good fitter. He could even be a good foreman or engineer…….

I could tell you another story about another guy who has now moved from C1 to C6. All I am saying is that the potential is limitless and all we have to do put the right conditions in place for anyone to reach their own limit and not be limited by the system or vacancies or the budget or job grading or Paterson etc. You should listen to our HR friends talking about these things!
(Written comment to a 2001 GETTEC Middle Management SDWT Interview questionnaire)

### 4.7.2. Training and Development

Emphasis on training is one of the critical factors distinguishing SDWTs. As Cotton (1993) put it "…a two hour session on teams , conflict resolution , group decision making is not training…members of SDWTs in many companies devote 15-20% of their time –equivalent of 1 day a week- in training" (p. 198).

The 2000 BNC Training Report (reviewed in more detail in Section 4.10.4 and Table 13, p. 163) provided a nine step model for SDWT implementation which was said to have been agreed upon at BNC. The steps are:

1. Establish a vision
2. Get management and employee commitment
3. Set up teams
4. Define inputs and outputs
5. Define competencies
6. Identify gap(training needs/gap)
7. Close gap
8. Reward structure
9. Review performance ( with loop back to vision)

During the time spent with the Pressure Leach team this researcher sought to establish what training members had received in their quest for effective self direction. The findings are presented here in some detail (including a description of the content of training received). Where data from members was sketchy this was double checked and supplemented (i.e. triangulation) with documentary reviews of BNC and AMZIM

training audit reports particularly the showcase (1996-1998) report, which dealt with the organizational renewal programme and its components notably proudly and at length. Details of exposure to training for each P/L SDWT member are presented in tabular form in Table 11 (see p. 159). The planned and actual provision of training to SDWT members is also referred to in the BNC 2000 Report (see Table 13, p. 163). Table 14 (see p. 166) shows the extent of training among Members of the Pressure Leach SDWT.

Team members indicated that the Continuous Improvement Programme (CIP) training had prepared them to play an informed role in the SDWT. All BSR employees had been through CIP training in 1996, although this was before the advent of the SDWTs. Several members said they did not, then, make any connection between the initiatives. The CIP programme had two parts, each consisting of a theory and a practical application exercise / component:

**CIP Part One**

**(Theory or "content")**

- Understanding business
- The Nickel business
- Business and achievement History of BNC
- Business Unit (smelter or refinery level BU) targets and budgets
- Individual Key Performance Indicators (KPIs)
- Continuous Improvement Philosophy (the basis for the CIP)
- Good versus bad Business
- Winning versus losing behaviour and activities
- Case studies
- Business games
- Customer and supplier chains

**(Project Exercise or "Process")**

These were carried out in natural work groups and facilitated by line managers. Employees were asked to provide answers to the following questions

- Where can you save costs in your Business Unit?
- What currently prevents you and your team from improving your performance?

**CIP Part 2** (a one day refresher "Action Planning" workshop held in 1998)

**(Content)**

- A recap on Part I content
- Introduction of a "Problem solving model"
- Team building concepts / theory

**(Exercise)**

Employees in their natural work teams were asked:

- What successes has your BU experienced since CIP Part one?
- What continues to prevent you and your team from improving your performance?

The Problem Solving Model was used to solve selected problems from the constraints list and the teams were asked to implement using the Action Planning process.

Interviews with the Human Resources and Training & Development managers confirmed that SDWT training had not (at the time of fieldwork in December 2002) been extended below the CRO level. This off-site SDWT training for team leaders and CROs had two parts:

**Part One:** **Focusing on SDWT Theory/Concepts**

**Part Two :** **Various Business Appreciation and Customised modules**

- Labour relations
- Managing Performance
- MIMS, Stores, Purchasing , Costing and Budgeting
- Safety Health and Environment (SHE)
- Quality Assurance
- Incentive Bonus Scheme

### 4.8. Views of BSR Refinery Team Leaders

The P/L Team leader as well as the Refinery's 4 other team leaders were asked about who gets involved in the decision making on various issues in the teams they lead and for each issue they were asked to select from 5 options (Team members on their own; team members with team leaders; team leaders on their own; team leaders with more senior managers; senior mangers on their own or other parties). Their answers to those questions are summarised in Table 15 (see p. 167).

In analysing the team leaders' results, two decision making reports showing contrasting (High and low) levels of devolution were compared with that of the Pressure Leach Team Leader. The Cobalt SS SDWT (where the most devolution was reported) and the Metal Handling SDWT (where the least devolution was reported) were juxtaposed with the case team, the Pressure Leach SDWT (which shows the second highest level of devolution). Figures 9-14 graphically illustrate the contrasts (see pp. 234-239). Significantly when the 3s (decision of team leader on his own) are added to the team member tallies, member participation in decision making shoots up for the Pressure Leach SDWT.

The Cobalt SS Team leader (GM) with 4 years leadership of the team has the most enviable degree of participation by ordinary team members. This team, when still called the Boilers SDWT, used to be the smallest with 15 members and, according to Manhando (2001) was the most successful refinery SDWT [see Table 16 in this report for a tabular summary of Manhando's (2001) findings, see p. 169] . Following a restructure, which must have happened in the course of the year 2001/2, the Cobalt team now has 33 members with only the P/L Team, at 23, being smaller. The Metal Handling SDWT, with the least enviable team member participation profile is, tellingly, the largest team in the refinery with 70 members and is led by a team leader (CM) with only 6 months as leader. The Metal Handling Team leader was until mid 2002 a long serving Chairman of the Workers Committee. His self-reported deference to more senior management and "other" (HR and other specialists) decision makers is notable.

The more experienced team leaders (AB and GM) of the smaller teams (Cobalt and P/L) both let their teams make more decisions (on Safety and Health, leave and vacation scheduling and House Keeping issues) while their less experienced (as leader of his SDWT) colleague (CM) will only trust his team alone with Housekeeping decisions. While the Cobalt SS Team Leader (GM) decides together with his team on quality control and improvement, internal customer communication, communication with other teams, redesigning team members' jobs, work scheduling and member training needs analyses (TNAs) the P/Leach team leader (AB) makes these decisions himself and the Metal Handling leader (CM) makes them together with more senior managers.

Significantly, what these findings may be confirming is that there is considerable leeway /scope in the Refinery organization for devolution of decision making at least to

team leaders and potentially to team members. These findings corroborate Manhando's (2001) finding / conclusion about the importance of team size as a factor for team success, effectiveness and self-directedness. Team leader decision making /leadership style, experience, confidence and team characteristics (such as size, member education and experience) and type of decision to be made may be interacting to influence what happens on the ground. It may also be possible that a leader of a successful team is more willing to facilitate the devolution of more decision making to members –creating a self fulfilling spiral of team empowerment (See discussion and recommendations).

In terms of areas where team members are more likely to be involved, (see Table 17, p. 170 and Figures 12-14, p. 208-210) housekeeping; safety and health; meeting facilitation; communication with other teams work and vacation scheduling, seem to predominate . Communication with external customers, choosing new technology, recruitment and dismissal (hiring and firing), remuneration and bonus allocations seem to lie beyond the involvement of ordinary team members although team leaders have some involvement.

### 4.9. Views of Key BSR Respondents

Key respondents provided information about the rationale and history of the SDWT initiative in the organization. They directed the researcher to the Pressure Leach SDWT as a successful working exemplar of the initiative. They also provided and corroborated factual information about the organization. Deliberately, about half the respondents were interviewed prior to the participant observation and the others after. This allowed the researcher to take some "context" into the participant observation and afterwards to query some of the information from the observation with remaining key correspondents.

Table 20 (see p. 174) is the composite document in which key respondents' information and responses are summarised. A response on a question was treated with caution until confirmed by several key respondents and in some cases corroborated by information from primary and secondary documents. Table 21 (see p. 181) is a collection of verbatim excerpts from some of the key respondents (including senior and middle level line managers, Human Resources people and Union/ Worker representatives). These excerpts, when read together with those from Team leaders (junior/ supervisory level) and shop-floor team members, provide a cross section of organizational views about the Refinery's SDWT initiative.

Several key findings emerged from the analysis of key respondents' information. **The BNC top management's rationale** for introducing the initiative in 1997 was productivity and efficiency triggered by a fall in the international price of nickel that was going to make the company unviable. Workers or their representatives were not part of the adoption decision but were won over in Works Council debates (and staked their support on the un-guaranteed hope that there would be no job losses). The initiative was linked to other complementary practices (multi-skilling, gain-sharing/bonus scheme) and **sold to employees (by both management and Worker representatives) mainly in terms of potential financial/economic benefits. Employees bought into the initiative** both for financial/economic reasons as well as for the intrinsic democratic / empowerment rationale. **Employees have both the willingness and the ability** to participate fully in empowered teamwork. **The initiative succeeded beyond the initial stage in those parts of the organization where there were committed senior and middle line managers** who were prepared to create and sustain a team-based environment based on employee involvement (as exemplified by the Pressure Leach SDWT in BSR). **The initiative has the potential, (based on management preparedness to make bold changes to the system) to succeed and be entrenched throughout the organization.**

### 4.10. Analysis of Records, Policies and Archived Documents

Nearly 40 documents were reviewed for frequency and nature of reference to team-based employee involvement. Table 18 summarises the review (see p. 171). In the next sections , 4.10.1- 4.10.5 key documents / archives the BNC annual report; previous (archived ) SDWT programme reviews; works council minutes; training audit submissions reports; relevant statutory and legal instruments and BNC policy documents are presented and analysed, in turn.

#### 4.10.1. The BNC Annual Report

The annual report (a statutory public accounting statement) for the listed company mentioned SDWTs, specifically, for four (1998-2001) of the five years reviewed. At the time of conducting the case study the Report for the fifth year (2002) was still under preparation. Under the Section Headed Employment Policy the Report for the four years reviewed (see AAC Services Ltd, 1999; 2000; 2001 & 2002) gave the following line, which was repeated verbatim, annually, in addition to a similarly regular line noting *close liaison* through regular works council meetings , with both Union and Workers

Committee representatives: "The Group's employment policy…is embraced by participative programmes designed to achieve appropriate communication and sharing of information between employer and employee" .

The 1998 Report (AAC Services Ltd, 1999, p.6), under a section headed Restructuring, the report went as follows

> The organizational renewal programme, which commenced in 1997 continued during the year …Self Directed Work Teams, which are small objective oriented units whose performances are linked to meaningful reward systems were established.. with pleasing results…such measures have already seen significant real increases in a great number of employs' pay packages. It is important that the trade unions continue to support such initiatives…

The 1999 Report (AAC Services, Ltd, 2000, p. 7) had the following excerpts in the Human Resources Section: "The incentive bonus scheme is currently under review with improvements planned during 2000" and "Multiskilling, the establishment of SELF DIRECTED WORK TEAMS and performance management were the key human resources development strategies during the year". Notably, in the 2000 and 2001 Annual Reports (AAC Services Ltd, 2001; 2002) the Board of Directors was silent on SDWTs, multiskilling and the incentive bonus scheme.

### 4.10.2. The Analysis of Previous Internal Organizational SDWT Review Documents

Manhando (2001) reviewed the 10 SDWTs (five at the Smelter and five at the refinery) active in the BSR in 2000. His findings for the five Refinery SDWTs are summarised in Table 13 (see p. 163). His general conclusion was that SDWTs had "made a positive impact *in BSR* (italics mine) as an alternative work design" (Manhando, 2001, p. ii). Specifically, his findings *for the Refinery* were that the Pressure Leach, Boilers and Metal Handling SDWTs had shown big improvements while the Leach Plant and Tank House SDWTs had shown little or no improvement. He noted that (for both the Smelter and Refinery) the biggest improvements were seen in teams with fewer people and those whose member ages had a balanced mix of older (and more experienced) with younger (and presumably more educated and status quo challenging) ages.

Manhando (2001) also made recommendations to move the SDWT strategy forward, including:

- The development of a shared SDWT enabling vision at BNC
- The creation and communication of a clear executive statement of intent
- The setting up of a project team with "enough power" to lead the implementation
- The development of a long range SDWT support plan
- The training and education of all levels of the organization about SDWTs with (external) benchmarking visits
- The addressing of fears about job losses
- The implementation of an appropriate team-based incentive system to replace the current (2001) BU (Business Unit) level one
- A minimum (he suggested "O" Level) educational requirement for team members
- Restructuring to create smaller teams at both the Smelter and Refinery

For the Refinery restructuring, Manhando (2001) recommended a redesign that would see levels collapsed into three that is:

**Refinery Management Team Leader (x1)**

**Team Leaders (x10)**

**SDWT Members**

The restructure would necessitate the combining of the current Refinery Manager and Refinery Superintendent's roles as well as the subdivision of the larger teams. In 2001, five groups of BNC middle managers doing a Middle Management Development Programme (MMDP) in an internal post–implementation project review of the SDWT and Multi-Skilling (MS) initiative, surveyed top and middle managers and shop floor employees and found differences in perceptions about many aspects of the initiative. Table 19 (see p. 173) below summarises the findings of one of the groups (Dlamini, Mbada, Mundiya, & Changunda, 2001). All three levels thought employees understood the concept but not the company's intentions. All levels thought the initiative would benefit organization and was achievable although this had not (yet) happened. A moderate proportion of shop-floor and top management respondents shared (with 40% each) the view that SDWTs had been successful but this view was not shared by any (0%) of the middle management respondents.

Tellingly, three quarters of shop-floor employee respondents thought the SDWTs might lead to job losses and sixty percent of top management were not sure. Overall, the results can be interpreted (particularly from the point of view of shop-floor workers) as indicating that there is a gap between the potential /promise of the initiative and what had been achieved so far. In other words shop-floor workers bought into the initiative and welcomed it but did not have sufficient trust in management's intentions and ability to implement it for their benefit and feared that this implementation would lead to job losses.

The five reviews (Chiwaka & Masukwedza 2001; Dlamini et al. 2001; GETEC, 2001; Mejic, 2001; Poplar & Godwin 2001) of the SDWT initiative (which they, generally, branded a good initiative suffering from poor implementation) are treated as both organizational archives and a source of secondary data. Their reports are summarized in Table 20 (see p. 174). The appended summary focuses on the general finding on whether the initiative was a success for the whole of BNC, what the positives and negatives were and the main recommendations of each group and whether at the time of this case study these (recommendations) had been acted upon. Their findings (on the SDWT initiative) are summarized in Table 22 (see p. 190) below. Please note that their review was of the initiative in the whole of BNC (including the mining division). Manhando's (2001) focus was the initiative at BSR Ltd and the current study reviews the experience of a successful team at the refinery division of BSR. Although it was reported that the MMDP delegates had made presentations of their findings and recommendations to BNC's Executive management Committee (EXCO) there was nothing to suggest, during the study in December 2002, that either theirs or Manhando's (2001) recommendations had been implemented.

### 4.10.3. BSR Works Council Minutes

Works council structures and their meetings are the main structures for department and enterprise level communication between management and employee representatives. Obliged by the law to keep minutes of their meetings, they are easily the richest source of documentary evidence about plant level employee involvement issues in any Zimbabwean enterprise. Table 23 (see p. 192) summarises the results of a review of 19 BSR Production and BSR Main Works Council minutes from 1998 to 2002. Of the 277 issues minuted 129 (or 47%) related to, or referred (directly or indirectly) to the SDWT initiative. The presentation and discussion of the Company's performance is excluded from the analysis as

it is a standard item at all Works Council meetings. Items relating (directly or indirectly) to SDWTs are highlighted).

Table 24 (see p. 193) is a more detailed report on each SDWT related issue over the five year period and focuses in more detail on *what was said* about SDWTs and related issues at the Works Council meetings. Largely unedited verbatim extracts (with very few and minor para-phrasings) are presented in tabular format. Selected excerpts are used in Chapter 5 to support the discussion of emergent themes and hypotheses. What is clear though is that, in line with Mutizwa-Mangiza's finding (1992), the Works Council forum is used extensively, particularly by management as a communication clearing house for the enterprise's contentious issues.

The preponderance of SDWT related issues (129 out of 277or 47% of all issues, if we exclude the standard production updates) is a reflection of the contested terrain that was held by these issues in the 5- year period, 1998 –2002. It is also a confirmation of the interest and high expectations of worker representative structures in the initiative. The evidence of high (and, as yet, unmet) expectations is corroborated in the 2000 BNC Report as well as in the 2001 findings of the MMDP reviewers and Manhando (2001).

### 4.10.4. Bi-Annual Training and Development Review Reports

A copy BNC's half a page Training and Human Resources Development policy, drawn up in 1999 is appended (Appendix 2, see p. 134). It makes no reference to SDWTs Multi-skilling or line driven training.

An audit of training activities in the AMZIM group takes place bi-annually. The process, traditionally, is that operating Companies each submit a standardised report covering training and development activities, for the two years just ended, to Organization Training and Development (OTD). OTD Private Limited was, until a recent management buy out, AMZIM's semi autonomous central training organization, offering mainly generic and management training and strategic human resources development input. In this bi-annual, audit process OTD would then set up qualitative field evaluation processes involving AMZIM executive management representatives as well as (latterly) invited evaluators from Anglo, South Africa. After the field visits, OTD or an external consultant draws up a composite AMZIM report highlighting key operational positives and negatives

and making training and development policy and strategic recommendations. This report would be sent to all the participating/operating Companies.

Five Documents (two BNC submissions/reports for 1997/98 and 1999/2000 as well as three AMZIM composite reports for 1995/96; 1997/98 and 1999/2000) were reviewed (see Table 13, p. 163) primarily for references to BNC's SDWT initiative but also to get an appreciation of whether Training and Development strategy and activities at BNC and AMZIM support team-based high involvement initiatives. At the time of the review (December 2002/ January 2003) the submissions and reports for 2001/2002 were still under preparation and were therefore not reviewed. The BNC Human Resources and Training & Development Managers as well as the Senior Technical Training Officer were interviewed and were the source of the training reports and other archival documents.

In general as illustrated in tabular form in Table 13 the year 1998, while Dr Leonard Chimimba was still General Manager witnessed the BNC Training and Development function's greatest (espoused) commitment to the company's world class initiatives. Of all the training reports reviewed the 1997/98 was the most expansive and comprehensive, giving both the background to the initiatives and spelling out the impending HR training and development roles and enthusing the larger AMZIM group (see Table 13 for a detailed review of the AMZIM training audit report, p.163) into recommending an group-wide rollout. By the 2000 report the momentum had dissipated. The BNC and AMZIM reports, presented side by side, give the most illuminating historical account of events surrounding the initiative and have been tabulated in Table 13 with as much detail as was feasible. Verbatim excerpts have been retained as they provide a nuanced account of BNC events and how they were perceived by the larger AMZIM group.

The AMZIM Report for 1999/2000 was , however different in that in addition to the usual internal "audit" focus an expanded team including senior training managers from Anglo SA sought to " compare AMZIM training and development against international benchmarks" (OTD, 2000 p. 1 ). The report provided AMZIM group companies with feedback and benchmarks. Table 26 (see p. 207) shows Amzim companies' 1997/98 training and development activities against international benchmarks and against each other. BNC was found to be above the international average on comparable benchmarks and was the top ranked AMZIM human resources developer on most criteria. Where it was not (as in

the potentially misleading "amount per employee") Zimbabwe Alloys Limited was the leader.

BNC's internal measure of training over time showed that it fell consecutively from 1998, through 1999 to 2000. Table 27 (see p. 208) illustrates this progressive decline which, if one were to adjust for hyperinflationary conditions pertaining to Zimbabwe (see Zimbabwe fact-file in Appendix 1, see p. 117) would look even steeper .

What all these statistics seem to suggest is that the organization into which SDWTs were introduced has a world class record of training and development. Potentially, Tables 26 and 27 show, BNC had the capacity to invest in the development of SDWTs. The exciting plans unveiled in the 1997/98 BNC and AMZIM training reports indicate that left to its own strategies BNC would have used its capacity to follow through with effective developmental support for its SDWTs. That this was not done effectively is reflected in the disappointment expressed in the 2000 (BNC and AMZIM) reports, the 2001 Middle Management Development Programme (MMDP) reviews and in various interviews conducted with key respondents.

### 4.10.5. National and Industry Statutory and Legal Documents

The only national statutory document reviewed was Statutory Instrument (SI) 372 of 1985 which gives guidelines for Workers Committees and Works Councils. The implementation of this statute is dealt with in more detail under the section on Industrial Relations in Zimbabwe (Section 2.11). The statute is silent on direct forms of plant level employee participation. As shown elsewhere in this report (section 2.11) the BNC Works Council structures, 22 years after their establishment have helped (wittingly or otherwise) to facilitate a more conducive climate for the implementation of more direct employee participation in decision making at BSR.

In 1999, the minister of mines (quoted in Appendix 1) clearly supported and encouraged plant level worker management initiatives that are aimed at increasing productivity and competitiveness. The NEC Collective bargaining agreement (legalised as S.I. 152 of 1990) does not give any guidelines, or explicitly support (or constrain) team-based work organization and related enterprise level activities.

There were suggestions by some key respondents, that the bargaining agreement's entrenchment and elaboration of the Decision Band Method (DBM) of job evaluation or the

Paterson Plan (commonly known as the Paterson system, after its originator a Professor Thomas Paterson) might be the very antithesis of flexibility, de-layering and broad banding. The perception that the BNC SDWT initiative is hum-strung by a combination of NEC and Paterson Grading constraints was found to have fairly strong currency at the Refinery. Almost all the key respondents mentioned it. Some suggested that it might even be hostile to such plant level initiatives. According to the minutes reviewed, it was also put forward at the Works Council. The Works Council meeting reportedly put it on record that "there was conflict" between the concept of SDWTs and the provisions of the NEC for the mining industry and the Paterson Job Evaluation method. The Union president also reportedly criticised the Paterson Job evaluation system at the NEC workshop in 1999 (quoted in the case narrative: Appendix 1).

The Paterson system, in the use of which this researcher was trained while still at ZAL is based on the basic premise that the value of a job to an organization is based on its level of responsibility, which in turn is reflected and measured by decision making requirements Table 28 (see p. 209) below shows the system's grades and their relationship to NEC and BNC structures.

There is evidence from elsewhere (Fox Lawson & Associates 2002) that the state of North Carolina in the USA recently adopted the Paterson System for its 119 000 employees because they want to move towards broad banding and simplification. The BNC Human Resources Manager however did not share the belief in the inflexibility of the Paterson System and pointed to cases where the A band (or parts of it) are being phased out "without the roof falling in" (D. Chifamba, personal communication, December 24, 2002). The idea of the Paterson System as an obstacle, and this researcher scepticism of it, is discussed further in the discussion section of this report where a rival hypothesis is posited.

It is worth mentioning that whatever is contained in the NEC bargaining document is not cast in stone. On mutual (Chamber and Union) agreement, the NEC agreement can be amended every year. In fact Section 3.3 says "nothing shall preclude the parties from entering into negotiations to amend any clause at any time…" (Zimbabwe Government Printers, p. 1074).

### 4.11. BNC Multi-skilling Programme

Two documents governing BNC's multiskilling programme were reviewed. The first document (Multi-skilling Policy and Models) was signed by Dr Leonard Chimimba in

December 1997 and introduced the Company's new training strategy aimed at creating multi-skilled employees to enable "sustained production of quality products at competitive production cost". The document gave job enlargement as the rationale for multi-skilling and resultant multi-tasking and argued that "employees with multiple kills have the potential to be more productive and their work organization and scheduling more flexible" (p. 1). The document set out the rules for the recognition of additional skills and competence which were: approval by the Business Unit manager; limited to employees in Grades A1-C5; conditional upon suitable basic qualifications, experience and performance; based on approved business and career development needs; to be competency based and certified and limited to a maximum of 4 practical additional skills per employee.

The document also stated managements' wish to enter into a "*recognition agreement* with the BNC Workers Committees over the multi skilling strategy… (to cover) the scope, structure, reward and management of the multi-skilling initiative" (p. 2).

The second (BNC Multi Skilling Programme, 1999) was drawn up in 1999 and provides more detailed guidelines and procedures including

- the BNC definition of multi-skilling
- the procedures leading to certification (and 10% skill based pay)
- guidelines for 7 types of multi-skilling BNC programmes
  - electrical to mechanical
  - mechanical to electrical
  - plant operator basic engineering skills

(according to the 1997/98 BNC training Report this entailed plant operators being "formally equipped with insight into the engineering aspects of the machines they operate…to cultivate a better understanding… of the care they can give to such machinery and to equip them with the skills to attend to minor engineering faults on the plant")

- scoop tram driver- basic maintenance
- fitter- basic fabrication and welding
- fitter- rigging
- boiler maker- basic machining

Neither of the two documents makes any specific mention of SDWTs although there is talk of flexible work structures and organization. This researcher did not find any other mention of the intended *recognition agreement* in any formal form although both key respondents and the minutes of Workers Council meetings allude to communication and briefing processes. In terms of the Workers Committee guidelines (reviewed) it is also doubtful whether the structures have the legal mandate to enter into plant level recognition agreements although Mutizwa-Mangiza (1992) and other researchers note that in practice workers committees did supplant weak trade unions and encroach on their rights, particularly in the 1980s when unions, marginalized by a corporatist state, were weak. The mining union in Zimbabwe particularly in the late 1990s was one of the strongest and the Company could however have negotiated a potentially more robust and sustainable plant level agreement *with the Union.*

### 4.12. BNC Remuneration System and Incentive Schemes

Three documents on the BNC Reward and Remuneration System ( Company policy manual Series A, Number 1.3 (dated 1998) and Series B, Number B.2 (dated 2000) and the Incentive Bonus Scheme Guidelines (dated 1998 and including a review of the 1997 scheme), were reviewed.

The two remuneration policy documents are similar though the 1998 document is signed by Dr L Chimimba (then General Manager) and the 2000 document is signed by Mr S Reynish (then Chief Executive Officer). The documents basically define BNC additions to the standard NEC agreement (for bargaining unit/ non managerial employees) and AMZIM policy (for managerial and professional employees outside the bargaining unit). These additions were payment for job related prior experience, additional skills and performance.

- **Pay for job related prior experience**
    - Scheme was limited to Paterson B band level and above. (in other words **A Band employees were excluded)**
    - 2 % of the employee's Paterson band scale for each year of prior experience to a maximum of 10 years for B band and C level (technical), 15 years for C-Level supervisory and 70% of band for managerial and technical employees.

- **Pay for additional job related skills**
  - Scheme open to all permanent employees.
  - Covers horizontal (within job) , vertical (above job level) and cross skills
  - 5% of job band scale
  - To be forfeited on transfer to job where skills are irrelevant

- **Performance-based pay**
  - Scheme open to all permanent employees (from A- E band but excluding trainees) after three months employment.
  - Annually determined percentage paid for performance as measured on the AMZIM and BNC performance assessment and development system

The two documents both also recognised a payment for multi skills for artisans (10% of Lower C band), technicians (10% of Upper C band), operators and drivers/operators of transport and mining equipment (eg. scoop tram drivers) "as per approved models" (see Section 4.11 on multi –skilling models).

The third document, the Employee Incentive Bonus Scheme drawn up in 1998 gave a review of the 1997 (Phase 1) Bonus Scheme (its background, objectives, operation and an evaluation of its strengths and weaknesses). The document reiterates the objectives of the two part (production targets and cost saving) incentive scheme as set out during phase one which it states as:

- The linking of employee performance to rewards
- The focusing of team efforts to marketable outputs for the Company
- The offer of incentives for employees at all levels to operate as effective teams

(more specifically).

- To meet production targets
- To reduce unit costs
- To increase returns to the Company
- To improve safety

This document says while the Phase 1 scheme (which it describes as "comprehensive") encouraged teamwork; cost and safety awareness; production efforts and improved earnings for employees it also lists some of the weaknesses of the previous scheme as including: being viewed with suspicion because of thresholds which were too high; too complicated for low level employee's activity; inflexible unit costs; inadequate cost information (bracketed as a "major issue"); measured on indirect uncontrollable costs and unrealistic targets.

Noting the need to go beyond Phase 1 (which focused at the Business Unit level) and in Phase 2 to "spread the bonus sources across the three organizational levels": Business Unit Level (Mining BU; Concentrator BU; Smelter BU and Refinery BU), Operating Unit Level (Mines and BSR) and Corporate level (BNC). Other Phase 2 changes included raising most qualifiers and penalty kick-in thresholds to 100%; raising employee share of the cost saving bonus from 20% to 30% and paying Managers (from HOD upwards) quarterly- based on the aggregate indices for the three months.

The stated underlying objective was "to achieve or exceed production targets, safely and within budgeted unit costs" (p. 8). Setting the cost and safety penalty as triggers at 100% meant that if unit cost limits (set in US dollars) and zero accident targets were not met in a particular month, there would be no bonus regardless of the achievement of qualifiers.

In spite of the reference to teams in the stated objectives of both Phase 1 and Phase 2 of the incentive scheme and the reference to self directed work teams in the 1998 report as "small, objective oriented units whose performances are linked to meaningful reward systems" (see Section 4.9.1) there is nothing in any of the reviewed remuneration and incentive documents suggesting achievement or measurement of incentivised output at the level of the SDWT. In fact, this shortcoming was corroborated by the HR manager and other key respondents during interviews as well as by the MMDP reviewers.

### 4.13. The Corporate Context for the BSR SDWT Initiative (As corroborated in a visit to Zimbabwe Alloys Ltd – ZAL)

A visit to ZAL allowed the experience of the exemplar team at BSR and the company's initiatives to be seen from a different perspective within the AMZIM group context. The 1998 AMZIM audit training report (Powell, 1999 p. 8, reviewed in Table

13, p. 163), noting the impending restructure of AAC "into a world class corporation", called on all group companies "to translate this vision to the development of world class employees at all levels" and (recommending BNC's just reviewed initiatives) urged "every group Company (to) have self directed work teams and strong, line driven training" (p. 8). The report also recommended "a focus on the development of supervisors and operational employees (to support such initiatives)" (Powell, 1999 p. 8). ZAL, having been specifically mentioned in these recommendations and being similar to BNC in many respects (including having a dispersed mining division feeding ore into a centralised smelter/refinery complex seemed to be a good place to corroborate findings about BNC findings about corporate cultural SDWT conduciveness or obstacles .

The ZAL Operations Director (Dr Nyembe Shoko), the Furnace (Business Unit) Manager (Mr Jabulani Chirasha)-who was at the BNC mining division when SDWTs were introduced- the HR Manager (Mr Mike Dzinoreva), and Senior HR Officer (Mr George Dondoredziva-Mawere) were interviewed in the last week of December and first week of January 2003. A few months before, while planning (and awaiting permission for) the BNC case study the researcher had a discussion with the CEO, Mr. Tony Devlin and the then Chairman of the Workers Committee. The researcher also examined copies of the minutes of the last 10 of ZAL's Works Council meetings.

Other similarities between ZAL and BNC include the use of both Companies as training centres for skills (particularly graduate and technical) needed by the group. In the years before South Africa ended its apartheid policies both companies were also used to train black South African mining cadets in a relatively non racial environment where experienced skilled black people were well entrenched. Significant and sustained operational productivity increases that accompanied the training and appointment of black management professionals (who included the current operations director) at ZAL in the in the first 12 or so years of Zimbabwean independence (analysed and reported by the current ZAL CEO, then the AMZIM Group HR Manager) were presented to, and used by Anglo (South Africa) to support its affirmative action drive in the face of white South African middle management resistance.

Like BNC, ZAL is at the mercy of the international price fluctuations and demand for its products which are sold mainly to Japan but also to Europe. ZAL has also gone through difficult times with the low international demand and therefore price of high

grade or low carbon ferrochrome (the company abandoned its production of high quality low carbon ferrochrome and boarded up some of its furnaces, leaving only the one producing high carbon- that is impure – ferrochrome and offering voluntary retrenchment packages which were taken up by almost half of its 1360 refinery employees in 2000/2001).

The visit to ZAL, and a review of its Works Council minutes, confirmed the pervasive impact of macroeconomic issues on the management of Zimbabwean organizations. The findings from BNC that poor management of the country's economy (characterised by high inflation and shortages of foreign currency, fuel, food and other commodities) is having serious negative impact on enterprise management was confirmed at ZAL. As at BNC, food shortages in the country have seen the Company using its resources to purchase food that is then sold to employees at cost. Following are some examples:

- According to reviewed minutes, the continuation of a system where a meal is provided for shift workers was debated at Works Council and justified on the basis of the general shortage of food in the country.
- To overcome the fuel and transport crisis and ensure that employees can travel to work ZAL has even introduced a scheme where bicycles were bought for all willing employees (and the money recovered through gradual salary deductions).
- According to the Operations Director, employees have responded very well to the Company's Incentive Bonus Scheme and ( after seven awards in the first ten months) were set to get bonuses for November and December 2002 but "factors beyond the company's control …product prices, the exchange rate and the negative macroeconomic environment" were the anticipated obstacle.

The ZAL Refinery has been run in "Business Units" for the last decade or so. The Business Units are both cost and profit centers and are subunits structured functionally along more traditional business lines. This researcher working at ZAL as a graduate trainee Human Resources Officer in 1989/90 (a role which included being the secretary and minute taker at all Works Council meetings for the year) recalls strongly contested productivity competitions between Business Units. Quarterly winners received non

monetary prizes (T- shirts and caps with printed proclamations of their victories) and were hosted to a celebratory party by the General Manager and senior management. The celebratory fanfare that went with these victories seemed to be more motivational than the complicated and rather "*un* contingent" monetary incentives described at both ZAL and BNC in 2002.

In 2002 it was found that ZAL, without any hype about empowerment and the buzzwords of high involvement such as "self directed work teams" management have successfully introduced, multi-skilling, a successful production incentive scheme, as well as a formal employee *Ideas and suggestion scheme* (in which suggesting employees can be rewarded by up to 35% of the proven cost savings achieved in the first month up to Z$150 000 per suggestion). In fact ZAL has initiated most of what BNC has except for SDWTs.

The company's incentive scheme, previously an annual scheme which was suspended in 2000 when the company was facing severe viability problems, was re-started in January 2002 as a monthly scheme for employees /quarterly for managers (similar to the current BNC scheme) and works well. According to Operations Director, Dr Shoko, (N. R. Shoko, personal communication, December 30, 2002) employees earned bonuses in the first seven months of the year and on their productivity measures would have earned on more occasions "but we are constrained by macro -economic factors". The scheme rewards employees at the Business Unit level on monthly production, cost, quality and safety targets. Dr Shoko described how putting safety as part of the scheme had elevated the seriousness with which it is taken "as it is within the control of employees and its achievement impacts directly on the incentive scheme" he added that ZAL management's view was that "it is actually unfair to penalise workers when they have performed admirably (because of)…factors beyond their control" (N. R. Shoko, personal communication, December 30, 2002, p. 1). Asked whether ZAL had considered SDWTs Dr Shoko (with more than 20 years postgraduate production management experience at ZAL and whose hands-on participative management style is legendary in the organization) argues that "the idea of teams, whether self directed or not, is a good one but one must examine what is actually happening on the ground" (N. R. Shoko, personal communication, December 30, 2002, p. 1). He described the ZAL CEO (and top management's) open door policy and management style.

The current ZAL management philosophy was fine-tuned in a campaign called *"Hearts and Minds"* which focused on transparency and communication. Interviews with the Human Resources Manager and Senior HR Officer as well as discussions in an earlier visit with the (then ) Workers' Committee chairman corroborated Dr Shoko's positive belief, the assessment of the organization's open door policy and hearts and minds philosophy. In addition to on-going, unscheduled Worker Representative access to executive management, the actual communication structures consists of: **monthly works council meetings** at departmental and enterprise level; **monthly department liaison meetings; daily production meetings** between management , supervisors and safety reps and a system of ***feedback notice boards*** at every business unit and tea room where information on progress against cost and safety targets is posted monthly (and more frequently on Production figures. The manning clerk supposedly checks the boards daily for employee also postings (suggestions /issues) which end up as discussion points in the daily production meetings.

A brief examination of how ZAL's communication structures may actually be working on the shop-floor was provided by the Furnace Manager when this researcher wanted an indication of how frequently frontline workers (outside the works council system, which is indirect) meet to discuss work issues related to their area of work. Liaison meetings, as described were meant to fulfil that purpose but the Furnace Manager indicated that they might not be working as well as planned. Instead of meeting every month on shop-floor related issues as planned, the production group was split into five groups which meet *in sequence*. In other words each group gets to meet every five months. The furnace manager said this was because the group was too large and its interest were too diverse. He also expressed views that communication was a 'problem' and pointed to 'low levels of education of shop-floor workers. He expressed doubts about the ability of shop floor workers to make meaningful input on direct job related issues (a view Dr Shoko, noting that there were at least 5 effective employee suggestions in the previous 12 months, said was not supported by his own experience).

This researcher's summary assessment is that ZAL's communication policies and practices rely a lot for their success on the personalities and leadership styles of the senior line executives and have primarily benefited / empowered Workers' Committee representatives (*indirect* worker participation for shop-floor workers). The communication structures /processes may not as systematically entrenched in the critical direct relationship

between middle and junior line managers and shop-floor workers. At their best, the liaison meetings are too infrequent (monthly) to serve the purpose of direct employee participation in decision making. As it is they are not even held monthly. That employee representatives may not be complaining is a reflection of their own enjoyment of ready access to executive management.

This researcher suggests that a top management open door policy that is not complemented by participative decision making at first line manager level may inadvertently erode shop-floor communication structures and lead Worker representatives to overload senior executives with operational issues. If the current CEO and the Operations Director were to leave and be replaced by non participatory senior executives the current IR climate might sour as there would be no meaningful participation at both direct and indirect levels.

Structures such as SDWTs entrench direct participation and empower supervisors/ team leaders and shop-floor workers *directly* regardless of the day to day management style of senior executives. This is the participation that yields productivity improvements and not just industrial peace.

In summary, it is evident that within the AMZIM organizational culture there is considerable leeway for operational executives to implement different types of enterprise level management systems depending on their leadership styles. Successful initiatives and programmes tend to get copied and at times improved on. Despite the presence of highly participative senior management (at ZAL) and the urging of AMZIM in the 1998 Amzim Training Audit Report for the group wide adoption of BNC SDWT initiatives ( an exhortation specifically targeted at ZAL) , there was no such adoption. An explanation could be the unstable employment conditions that have been characteristic of ZAL in the past few years. Ironically, this researcher believes SDWTs, which have succeeded at BSR, have a much better chance of talking root and delivering productivity improvements in ZAL's refinery (where there is a history of team/Business Unit productivity efforts and a long standing participative management culture ) than in BNC's mining environment.

### 4.14. Analytical Multi-Level Summary of Findings

In line with Sagie and Koslowsky (2000)'s multi-level model of viewing SDWTs or PDM, an attempt is made to understand the factors that were found to affect

(positively or negatively) the level of team-based self-direction at BSR and in the Pressure Leach Team. Table 29 (see p. 210) below is an attempt at an analytical summary of findings on the Pressure Leach SDWT case in its BNC/BSR organizational and wider societal context.

# CHAPTER FIVE
# DISCUSSION

## 5.1. Theoretical Location of Findings

Before revisiting the tentative research hypotheses in the light of findings, it is perhaps useful to select a framework that was developed for synthesizing previous research findings and theoretical approaches for understanding SDWTs. After reviewing SDWT literature Yeatts and Hyten (1998) posited a simple input (external and internal organizational factors and team design) and output ( team performance) model mediated by team and organizational factors (within the and outside the team) which they proceeded to test rigorously and further develop. Their final model (1998, p. 53) suggests that the following factors are important to the effective functioning of SDWTs:

- **Environmental Factors (within the organization)**
    - Organizational philosophy and culture
    - Clear and engaging mission for the team
    - Reward, training information and performance assessment systems
    - Management roles and support
    - Supplier/ customer / union support
    - Available appropriate resources
- **Environmental Factors (outside the organization)**
    - Economy, Technology, Political –Legal, Demography, Education and societal Culture
- **Team Design Characteristics**
    - Goal clarity , challenge and priorities
    - Job design
    - Team size and composition
    - Decision making methods and process
    - Work norms
    - Roles of team and team leader
- **Team Member Characteristics**
- **Interpersonal Process**
    - Within and between team and others
- **Work Process**

- Effort, talent and resources and procedures applied

The above depending on the demands of the task would deliver

- **Team Performance**
  - Customer Satisfaction
  - Productivity
  - Timeliness
  - Reduced Costs
  - Economic Viability

While the model goes on to focus on the outputs of the SDWT process (and its measurement, this descriptive case study had no such evaluative intentions , limiting itself to noting the presence and importance placed on these output measures by the implementers of the initiative and by the exemplar team itself. All the other factors were, however, studied in the case study and the findings presented in the results section, appendices, tables and figures. The findings are hereafter discussed in terms of the tentative research propositions.

## 5.2. Research Propositions Revisited

- **The exemplar team at the site purporting to have SDWTs will meet the criteria for classification as a self directed work team.**

Evidence, gathered from various sources (primary, secondary, documentary, archival and so on) and through a number of methods (site visits, participant observation, interviews and documentary analysis) all used in a triangulated way, was provided to show that BSR's Pressure Leach Team more than meets the minimum requirements of being regarded as a semi autonomous work team and is well placed for increased self direction. A composite framework drawn from the literature and three other comprehensive criteria lists for assessing team-based self direction was compiled and used to qualify the team. Although team level self direction is not universally or uniformly implemented throughout the BSR plant the Pressure Leach Team itself can justifiably call itself a SDWT.

- **Team members from the exemplar SDWT will express themselves about their work and their team in ways that evidence pride and ownership.**

The team selected to look at closely sees itself as a team that has broken with historical hierarchies and worker alienation. Members of the team are multi-skilled; most

know and do each other's jobs, perform basic maintenance of their own plant without calling specialized artisans. They do not only talk the language, but seem to understand the logic, of empowerment and team-based self direction. Each and every member has accepted the responsibility for learning in order to make a meaningful impact at the team level. The *de facto* leadership role of the four control room operators allows for devolution of decision within the team, particularly in the absence of the "official" team leader (who works only the day shift) to much lower levels.

- **Members of the exemplar SDWT would be found to have received training in self-management and would participate in the direction and management of their own team and work.**

It was found that team members had received extensive training and development over the years. In particular the Continuous Improvement Programme (CIP) Training that preceded the implementation of SDWTs laid a good foundation for the functioning of SDWTs. While team leaders and CROs seem to have received further training on SDWTs (most regarded it as inadequate) and there was no evidence that ordinary team members had received direct training on SDWTs. There was also no evidence that team members had received any training for facilitating basic team processes. During interviews with team members, it was noted that memories of details of training were sketchy. This was seen as partly linked to an absence of awareness (at a team level) of the team's skills profile and the absence of visual management within the team precinct.

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- **The organization (whose management purports to be running SDWTs) will have human resource management policies, systems, and practices that support and complement team-based self direction.**

The findings of this study were that the organization has not sufficiently changed or introduced organizational systems to support SDWTs. Although a considerable amount of awareness of, and talk about, the kind of systems needed to support SDWTs was found among key respondents, it was mainly in the context of obstacles. In the BSR organization there was a slight re-design of the structures but they did not follow SDWT job design logic. Rather they involved the renaming of existing business units as SDWTs without breaking them down into smaller sizes. Those Business Units, like the Pressure Leach, which were already relatively small have thus found the change to SDWT easier.

Some significant changes were attempted, such as the introduction of multi skilling and incentive pay although they were not fully implemented. Line driven training was also started and then not fully implemented. Manhando's (2001) proposed changes are the most significant this study came across and reflect this awareness of what needs to be done. His findings also represent evidence of the potential gains that could come from creating real, smaller SDWTs throughout the organization. Two years later they have not been implemented. The obstacle seems to be that the bundle of initiatives that BNC introduced in 1997/98 lost their sponsor (Dr Chimimba) and in his absence senior managers lost the conviction, and will, to implement beyond their immediate areas of control (BSR).

A major problem seems to be human resources systems and structures that have remained geared towards supporting the old Paterson based system. Discussions with the human resources managers of both BNC and ZAL seemed to indicate that the AMZIM organizational culture allows operations considerable leeway to introduce new systems. The 1998 and 2000 Training Reports, particularly the former, suggest that the training and development function had plans for assisting the development of SDWTs but during this study (at the end of 2002) there was a reluctance, to discuss these plans. Obstacles mentioned, such as the cost cutting environment at the time of the study were seen to be a major source of frustration but did not seem to have adversely affected other initiatives (notably SHE- Safety Health and Education). The human resources system at BNC has done a reasonably good job in helping to facilitate the changes without changing the system. It is clear for instance that the teams are not sure what their next step in developing themselves *as self directed work teams*. This will not work however and the time has come to look at renegotiating (whether with the corporate head office or with the union) the organizational space within which self direction occurs.

The issue of the Paterson Job grading system is an interesting example. The title of the appended case narrative (Paterson's Hurdles – Can the Pressure Leach Team jump high enough?) was inspired by this, oft repeated , reference to the Paterson system as an impediment to (and an explanation for) the failure to institutionalise SDWTs at BNC. This researcher is not entirely convinced. Why would the Paterson system, based as it is on decision making as a differentiator, be the main obstacle to an initiative whose rationale is increasing employee participation in decision making? Decision making is, in fact, the root of both the Paterson system's technically correct name 'Decision Making Band Job

Evaluation System' and most of the criticism it elicits among Human Resources Management students and job evaluation practitioners.

It is the suggestion of this researcher that the real reason the Paterson system comes up for criticism is because of a fear by management that (of all major Southern African job evaluation systems) the system is eminently suited to the task of measuring, grading and rewarding self directed workers. The real fear (harking back on a century old industry – and management-view of workers as a cost) is that decision making workers will have to be graded higher and have to be paid more. Self Directed Workers, by definition and intent, are supposed to eventually assume many of the decisions hitherto the prerogative of managers. It is the grading of a proven decision making member of a SDWT in the 'Paterson a Band' and not the concept of SDWTs that is inconsistent with the Paterson system.

The law in Zimbabwe, for instance, differentiates workers (who are part of the Union's bargaining unit) from managers (who cannot be) by the criterion that the later make hiring and firing decisions. In time, genuine self directed workers make decisions about (hiring) new members. If management is not serious about self directed workers, then there is no problem. They can just keep real decisions away from team members, which would constitute a serious double standard. If however they are serious then they have to deal with the real problem, which is how to share the productivity gains of self direction with decision making teams. This researcher suggests a more fruitful direction lies in convincing the union to enter into plant level productivity bargaining/ gain sharing agreements that allow remuneration above the industry minima (for broadened bands) to be variably linked to team decision making and productivity criteria.

The development of a team version of the current Paterson non-management (A1-C5/6) is a project worth investing in. Such a scale could for instance, reflect the four levels of team self direction identified by Wellins et al. (1991), which would be differentially rewarded to encourage its team to move towards more self direction. The team leader or manager to whom the team(s) report(s) if accordingly incentivised, would then have a stake in team development, in addition to its performance. Added to the team development measure could be human resources development criteria. This would play a central role in making line driven training, development and team empowerment complementary and sustainable.

### 5.3. Properties of Participation

What was confirmed in the interview with the P/L Team Leader (on decision making within the team) is that the team does not yet participate fully in the making of important team decisions. The organization does not appear to prevent the team making some of the more important decisions (and there is evidence that in another team, the Cobalt SS SDWT, members are involved in the making of such decisions). The P/L Team Leader seems, at this stage to be making the decisions himself. This is viewed here as a developmental process in the progression of the team towards self direction. If the organization is serious about SDWTs, then their development must be a conscious, planned measured and rewarded process. Part of the team leaders' Key Performance Indicators (KPIs) could be developing the decision making capacity of the team. Team decision making can be learned. Control room operators (the *de facto* shift leaders) are already making some significant decisions without referring upwards. What seems clear is that to get team leaders to devolve some of the decisions they may be making at the moment to team members, it is necessary to further empower team leaders themselves to make higher level decisions.

All these developments require that senior management make certain organization design changes. The recommendations made by Manhando (2001) if implemented would trigger a significant and real devolution of decision making.

### 5.4. Values, Assumptions and Goals of the Implementers

Results indicate that the implementers introduced SDWTs to try and tap workers discretionary effort and input for organizational survival purposes. A business case (as comprehensively presented in the BNC 1997/98 Training Report) was made for the SDWTs as part of the Organizational Renewal Initiative. However, the very belief and assumption that workers have something significant and additional to contribute to the solution of this, major organizational crisis, reflects an acceptance that the organization had been under-utilizing worker creativity and input. From a historical context, it may well be the first, fundamental attempt at liberating the industry's shop-floor worker from the burden (of classification as the most malleable cost) that was hung around his neck three generations before.

There is evidence that (in the face of different corporate priorities and in the absence of the considerable influence of the initiating CEO), that the SDWT initiative

lost steam in parts of the organization. This setback also coincided with a return to better market conditions and (typical of enterprise level reforms initiated, unilaterally, by management in Southern Africa) betrays the 'expedient' nature and rationale of the initiators. Characteristically, such initiatives tend to be abandoned in good times. At BSR however (while we shall never know what would have happened if the initiating CEO had not left in those critical two years) the concept of empowering shop-floor workers seems to have been taken seriously by a succession of operationally influential and educated black line managers (all with tertiary engineering and production qualifications and some with post graduate Business Administration degrees). They do not seem to have limited themselves to viewing SDWTs as simply a productivity tool. Evidence from the Works Council minutes (over which they presided, particularly during two years of unsupportive top leadership) indicates that their arguments and explanations to workers were not just about survival imperatives and incentives but about empowerment. Workers too, expressed gratitude for the restoration of dignity and value in their work. The history of how workers and their contribution were treated in the mining industry may explain this expression of gratitude.

Evidence from the participant observation of the Pressure Leach Team and interviews with its team leader and members indicates that some teams transformed themselves enough for the new way of working to be regarded as permanent. The team is in its fourth year and getting more and more self–directed. This is in spite of all the obstacles- including the withdrawal of team incentives that the team won more repeatedly than any other team. In fact this entrenchment of teams in various degrees of self – management is true of all the 10 BSR teams. The difference seems to be in the manageable factors (team design, team size, team leadership, lack of clear standards etc.) and not in the values of implementers.

Evidence has also been presented to show that there is considerable leeway in the range and extent of decision making each team can make.

### 5.5. Outcomes

This case study did not focus on the evaluation of outcomes per se. The interest here is in the presence of real, measurable team performance measures as indicating the seriousness with which the SDWT structures are taken by all stakeholders. The studied team has a set of outcome measures that distinguish it from other teams in addition to

some common ones like accidents (safety) and absenteeism. In its 1998 Annual Report BNC emphasized the significant increases in (incentive enhanced) pay packages as the main outcome of SDWTs for employees.

In addition to monetary benefits, employees seemed to place a lot of value on the different way of working and the status as valued and respected contributors. They appear to have bought into the empowerment outcome of participation in decision-making. The gratitude expressed by a 44-year-old employee with 18 years of experience that workers' right to "sevenza sevanhu" (to "work like people", in the indigenous Shona language) had been restored by SDWTs is interesting and significant. "Unhu" (plural "vanhu") is the Shona word for "Ubuntu". This valued outcome was expressed in several different ways but its importance was unmistakable. Self Directed Work Teams give these African workers the right to work as mutually respecting and accountable team members. It is, evidently also an environment in which they are more productive.

Reference to the concept of *hunhu or ubuntu* is significant. As stated in the literature review this concept still begs operationalisation, particularly in the modern African workplace setting. It is this researcher's suggestion that frequent references to Ubuntu in relation to African management or leadership style, while seductive is misleading management scholars into overlooking the one area where ubuntu has always been traditionally critical- in group based self directed work or productive enterprise. It is suggested here that stockvels, ilima and other leaderless initiatives are a better indicator of the operationalised concept. SDWTs may offer African workers an opportunity for productive work that resonates with effective traditional peer based self regulation. It is not a coincidence that many professional working Southern Africans today find mutual, group-based, savings clubs the more satisfying and effective way of doing what in other cultures is achieved through individual effort. The emphasis on "we" rather than "I" that underpins ubuntu finds unforced expression in SDWTs. Effective SDWTs in African settings offer an opportunity to study and operationalise the factors that may be important to those people who may be inclined to such similar structures.

If, as it is suspected, there are within group, or even individual, differences in inclination for self directed team work there may be opportunities to develop tools for selecting prospective members who are more likely to make SDWTs more effective (and are more likely to get work satisfaction from working in them).

The Labour Movement (Unions) in South Africa (and other parts of the world) have embraced (and even championed) broad banding where it was linked to a broader national human resources development, recognition of prior learning and industry certification. A visible, transparent, team development matrix (showing the development of both individual members and the team itself against development targets) taking the pride of place in a team room has been observed in other workplaces with "sophisticated SDWTs" to be as big a motivational instrument as the display of team performance indices. The former (team development measurement and display) was notably absent from both the talk and the walls of BSR teams.

### 5.6. The Pervasiveness of Contextual Factors in an African Firm

In a post independent socioeconomic environment characterized by attempts (genuine or false) by a dominant ruling party to create a socialist society the contextual factors are pervasive. Cole (1985)'s concept of "macro-politics of organizational change" (meaning the influence of national employer/employee and state structural and power relations and their influence on enterprise level processes) was very evident. Evidence of this influence is presented in both the results sections and the case narrative. It is also shown in the analytical summary of results (Table 20, see p. 174). Organizational case studies whose unit of analysis is the group level, or lower, (unless they consciously touch on the wider contextual levels) may find themselves bordering on the unrealistic.

Economic activity in present day Zimbabwe, however micro its focus, has been dominated by pervasive contextual issues. This was dramatically exemplified in this case by the group of pressure Leach shift members I found huddled around newspaper after a team meeting discussing the cautionary statement (see Appendix 1, p. 117) issued by the Company to warn its stakeholders (and no doubt the government as well) about a real possibility of a cessation of operations. There was a palpable sense particularly among middle managers and lower level that whatever they did at their level, their fate and that of the organization lay at the mercy of national political decision makers. That is the very antithesis of self direction and as such has to be disempowering. When chief executives and senior managers spend significant amounts of time and energy discussing the sourcing of basic staple food for employees (as found at both ZAL and BNC) focus on enterprise priorities can only be diluted.

The dire state of the Zimbabwean economy, and its poor, even reckless, management described in some detail in the narrative, presents a huge obstacle to any firm seeking to participate in international economic activities. Using enterprise level initiatives to increase competitiveness is normally done under the assumption that the macroeconomic system is favourable (or at least not an impediment). This increases the effect of enterprise level, and even team level productivity efforts. As shown at both BNC and ZAL, employees can set and exceed reasonable productivity targets to no avail when exported goods are paid for at unreasonable state determined rates. The only reason that this issue is not more demotivating is that both employees and enterprise management are agreed as to the uncontrollable source of the problem. On the positive side, the structuring of the enterprise in productive self managing teams under these very difficult macro economic conditions should yield very significant competitive advantages when the macroeconomic problem is resolved.

While it was found that negative political developments in Zimbabwe have eroded the kinds investments social capital (exemplified by the work of concept and work of NEDLAC – the National Economic Development and Labour Council - South Africa), there is a good enough bipartite investment at the NEC and enterprise level. Here Dekker (1990) uses the concept of Industrial Relations Readiness to explain a situation where parties to an industrial relationship have matured their relationship by acknowledging each other's existence, prerogatives and bona fides to an extent where an integrative relationship is possible. This is social capital and it allows for the development what Dekker (1990) refers to as an industrial relations based industrial competitiveness agreements.

In the case studied here, BNC/BSR management seems to have preferred to work through the Workers Committee and, as suggested in the Multi-skills policy documents, even intended signing a recognition agreement with the Committee on the initiatives. The history of the Workers Committees in Zimbabwe and findings at both ZAL and BNC/BSR confirm the view that their participation on issues beyond their limited legal mandate is at the goodwill and pleasure of management. As found in this case, in the face of broken /unfulfilled management promises, they could only complain. The role of the Workers Committee, over the years has been to create and maintain a good and effective enterprise level communication channel. This, it has done admirably. The Workers Committee and Works Council are, however, not fully legitimised decision making partners.

It is the view of this researcher that if the initiatives at BNC had been cemented in a plant level agreement with the Union this would have almost guaranteed the initiatives against willy-nilly changes by different CEOs. Interviews suggested that although the Union itself (at sector level) was ambivalent about the BNC's SDWTs and similar employee involvement initiatives it had a "wait and see" rather than negative attitude. In fact local Union representatives were won over and helped (as members of the Works Council) to sell the concept to workers. A broad, longer term, enterprise level industrial competitiveness agreement with the Union whose implementation includes the Workers Committee would be a better framework within which to implement viable SDWTs.

On the positive side Zimbabwe's good educational system provides a firm foundation on which to build world class self managing shop-floor teams. Conventional hierarchical structures, inherited from the traditional Western organization are being asked to accommodate the kind of career aspirations and occupational energy captured in the extended quote on the A1 Grade employee and his senior manager in Section 4.7.1 above. That is a recipe for frustration. It would be fair to suggest that Self Directed Work Teams on the other hand, exemplified by the Pressure Leach Team would harness this energy (of a new generation of young, educated and keen shop floor workers) without resorting to numerous hierarchical rungs.

# CHAPTER SIX
# CONCLUSIONS AND RECOMMENDATIONS

## 6.1. Conclusion

Many organizational claims of self directed teamwork, in Southern Africa, are not true. Even some of the genuine ones that are built around charismatic personalities are not sustainable over time. They are reported, or presented at seminar discussions, usually by self serving consultants or employees on academic courses and, without detailed description and qualification, passed as fact. Not so in this case, where hypercritical middle managers ran a very strict rule on an initiative that has more going for it than most. Examination, using different methods, from different perspectives (properties of participation; values assumptions and goals of implementers; outcomes and contextual factors), seems to indicate that real SDWTs were initiated at BNC and successfully implemented at the Smelter and Refinery (BSR) but not at the mines. The studied case is a successful exemplar of the initiative at BSR's Refinery Division. In the BSR organization, teams, particularly the better structured, smaller ones typified by the Pressure Leach SDWT have taken root and are even thriving under the oversight of a succession of committed senior production managers.

From the examination of documentary and archival records it seems clear that the initiative was communicated widely within the organization (BNC) and the wider (AMZIM) group where it was endorsed and lauded officially. Within the BSR organization shop-floor workers, despite initial uncertainty about job security, accepted the initiative as offering the potential for their empowerment and the recognition (financial and otherwise) of their contribution. That the initiative and the exemplar team studied may have not yet reached its full potential (for both self direction and productivity) is an indicator of the difficulty of successfully implementing fundamental changes in an existing (as opposed to a Greenfield) operation that is part of a larger controlling organizational system.

The Pressure Leach Case can be seen as either an example of potentially unmet worker expectations or world class worker potential waiting to be uncorked. What to do with the reality of hurdles and levers found at different levels in this case will separate great African organizational leaders from mere operational managers.

## 6.2. Recommendations

The following recommendations are made on the assumption that it is BNC's wish to eventually implement SDWT throughout the Organization.

- The organization should authorise a project to turn the best two SDWTs at the BSR, including the Pressure Leach Team into world class, internationally benchmarked SDWTs within a six month period.
- The organization's EXCO (Executive Committee) should consider a consolidated review [incorporating the findings and recommendations of the MMDP, Manhando (2001) and the current study] of the SDWT initiative to date.
- That the organization should constitute a representative task group consisting of a non-management and middle management member from each of the Refinery, Smelter and Mining Division. Also included should be a two senior Line Managers an EXCO member and a senior HR Practitioner. Its job would be to:
    - Research and Develop a team-based evaluation and incentive reward system for approval within six months
    - Recommend for Board/EXCO adoption, a comprehensive world class BNC team-based organization implementation strategy within six months
- That the organization should push for the negotiation and adoption (as soon as possible) of an NEC (Mining industry) resolution enabling plant level incentivised world class manufacturing competitiveness agreements/ over and above broad banded NEC Collective Bargaining Agreements.

This study also raised other issues which could not be adequately answered within the limits of this study. These included:

- The extent to which the history of abusive management is recalled and to what extent if affects participation in management initiated participation strategies
- The nature and effect of special expectations in terms of management style that are made on black managers by black workers

## 6.3. Weaknesses and Limitations of the Study

The potential shortcomings were dealt above by refraining from generalising the findings of this single case study and limiting recommendations to the organization. (The Research Design section deals more comprehensively with potential design and methodological weaknesses and the steps taken to counteract them). Potential weaknesses of this study include the weakness normally associated with qualitative studies, in general

and case studies in particular. Stake (1995) says because qualitative inquiry is subjective, "new puzzles are produced more frequently than solutions to old ones" (p. 45). Ichniowski et al. (1996) state that although case studies "may provide rich insights …and can be very useful for suggesting hypotheses, must ultimately study larger samples to test those hypotheses" (p. 304). They also warn about the problems of samples of convenience. Noting that in qualitative inquiry initial questions for research often come from real world observations and from "the researcher's direct experience, tacit theories and growing scholarly interests" (Ichniowski et al., 1996, p. 304). Marshall and Rossman (1995) warn that the "challenge is that this personal interest will not bias the study" (p. 16).

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Appendix 1

BSR Pressure Leach SDWT Case Narrative

## *PATERSON'S HURDLES – Can the Pressure Leach Team jump high enough?*

*When I ask **BSR General Manager, Batirai Manhando** (who was BSR's Refinery Superintendent when SDWTs were introduced into BNC in 1998) which team is a good example of the BNC SDWT initiative he has no hesitation in recommending that I spend time with the **Pressure Leach Team.** My objective is to spend a week with the Refinery's **exemplar SDWT** and build up an in-depth understanding of what it is that this team does differently and how team members view their team and the environment in which it operates.*

**BNC and BSR**

Bindura Nickel Corporation(BNC)'s Smelter and Refinery, BSR, complex is nestled in the northern part of Zimbabwe (see map below) approximately 80kilometres away from Harare. The site is on the northern reaches of the mineral rich Great Dyke (which stretches from around Zvishavane in the South to Bindura , 80 kilometres north of the capital Harare).

BNC is the Zimbabwe Stock Exchange listed holding Company of Trojan Nickel Mines Ltd (the Mines Division with just over 1500 employees) and BSR Ltd (just over 700 employees), The mines produce nickel concentrates (with elements of copper, cobalt and precious metals) which are railed to BSR in Bindura where they are refined into nickel cathodes and other metals for sale on the international markets.

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*The participant observation study and interviews resulting in the composition of this case was undertaken between 18 December 2002 and 7January 2003.*

*Manhando's office, in the heart of the BSR Complex is a good place to start. It was from his University of Zimbabwe 2001 MBA Research Report (a somewhat quantitative evaluation of SDWT performance at BNC) that I first got wind of the initiative. He was the Refinery Manager at the time of his review of the (then) three year old initiative but has since been promoted to his present GM position. He has been an enthusiastic participant in the development of BSR's SDWTs from the beginning. He is visibly upbeat about their potential to elicit increased worker commitment to the objectives of the*

**BNC MISSION**
**(1998)**

**To be a profitable, world class quality producer of low cost nickel & by – products**

**VALUES**

- Customer Focus
- Appropriate Technology
- Transparency
- Entrepreneurship
- Professionalism, competence & Ethics
- Knowledge based organization
- Appropriate Structures
- Competitive Raw Material & Service
- Reward

*Company. Later, I discover that he is not the only Refinery line manager who believes in the SDWTs. In fact, I note with interest, there is more enthusiasm about the initiative among line managers than among the HR support staff.*

*My interviews, early in my first week at Bindura, are with the BSR General Manager (Manhando), The Human Resources Manager (Mr Danet Chifamba) The Training and Development Manager (Mr Norman Nyawo who was also a member of BNC's SDWT project committee), and HR Officer (Mr Livingston Madzimbamuto).By the time I get to the selected team, I have been given a general historical overview of the SDWT initiative at BNC.*

*The bundle of business process initiatives that were introduced at BNC in 1997/98, as part of an organizational renewal initiative, seem to have been an all or nothing strategy initiated by the organization's executive leadership to cope with a survival-threatening business environment. The ore mined and refined by BNC has always been low grade compared to that of its international competitors and profitability has always been both (production) cost and price sensitive. The operating environment for the period preceding the 1997 crisis was characterised by Low world nickel prices; a rapidly weakening Zimbabwean currency; high and increasing (largely inflation, and exchange rate driven) operating costs; low nickel grade ores from the mines; ageing plant needing expensive capital and lack of (or very expensive ) capital. In addition, there was increasing competition from low cost, high grade nickel producers –particularly from Australia and North America.*

*Given the choice of sourcing very expensive capital to refurbish or attempting business process improvements as a survival strategy, BNC Executive management, led by then General Manager Dr Leonard Chimimba chose the latter. As he explains in a video used in the organizational renewal "hearts and minds "promotional strategy* ***"We had to change the way we do things at BNC".*** *The organizational renewal strategy was envisaged as a 5year strategy with four components (management/leadership; culture change; training and technical innovation) all focused on delivering targeted productivity improvements by the year 2000) A number of business processes were decided upon. These were preceded by, and linked to The Organizational Renewal initiative and were:*

- *Multi-skilling*
- *Self Directed Work Teams*

- *An Incentive Bonus Scheme*

*In all of these, uppermost in BNC management's thinking, according to middle ranking managers who reviewed two of the initiatives (SDWTs and Multiskilling) in 2001, the ultimate objectives were cost reduction and improved efficiencies – that is improved productivity. A task team headed by the, then, BSR Manager Mr July Ndlovu and including the Training and Development Manager and a management accountant was given the job of implementation. My initial general impression at that stage was that (almost five years after its introduction) the initiative had not been a resounding all-round success. I had been told by my HR hosts that in the mining Division it had "gone cold" and that in the BSR the interest was waning.*

| ***YEAR*** | ***BNC CEO*** | ***BSR GM*** |
|---|---|---|
| *1997* | *Dr Leonard Chimimba (then called GM)* | *Mr July Ndlovu* |
| *1998* | *Dr L Chimimba* | *Mr July Ndlovu* |
| *1999* | *Mr Rod Petzer (Chief Operating Officer)* | *Mr July Ndlovu* |
| *2000* | *Mr R Petzer/ Mr S Reynish* | *Mr Raphael Moyo* |
| *2001* | *Mr S Reynish / Dr L Chimimba* | *Mr Raphael Moyo* |
| *2002* | *Dr L Chimimba* | *Mr Raphael Moyo/ Mr Batirai Manhando* |
| *2003* | *Dr L Chimimba* | *Mr Batirai Manhando* |

*Mr Manhando had referred me, in the first instance to the Refinery Metallurgist, Mr Munyaradzi Kwatara(MK) to give me an overview of the Refinery's operations before I joined any operational team. Mr Kwatara is a product of the AMZIM graduate development scheme who also believes in the SDWT concept. He explained as he took me around the Refinery, that Safety Health and the Environment or SHE, driven to the top of the Agenda at Anglo Plc had become a very important issue at BNC and in fact focus on it was almost at the expense of the focus on the SDWT implementation process.*

*Several key management members of the refinery (interviewed in December 2002 and January 2003 referred to Self Directed Work Teams and other related strategies as the initiative of Dr Chimimba when he was the executive head of BNC, a position then titled General Manager. They also pointed to the driving enthusiasm of the then BSR Managers*

*July Ndlovu and his successor Raphael Moyo - particularly the former.*

*Many in the organization believe it was Dr Chimimba's departure in late 1998 and his absence for the next two years that took the steam out of the SDWT initiative. In his absence the two people who held the top position had other priorities. In particular, during a Mr Reynish's leadership, Anglo listed in the London Stock Exchange (LSE) and Safety Health and the Environment, (SHE) (allegedly triggered by massive accidents in Anglo's South African mines) an inventory management system called MIMS and an anti fraud push became the main organizational initiatives diverting focus, energy and resources from both SDWTs and Multi-skilling. A former General Manager of one of the operating companies was put in charge of the Group's SHE efforts at AMZIM and an executive manager for SHE was appointed at BNC. Training officers supporting line driven training and the multi-skilling project became SHE officers. Some said by the time Dr Chimimba returned to lead the company as CEO, in 2001 the SDWT initiative had lost momentum.*

**Zimbabwe Fact File**

| | | |
|---|---|---|
| Population | : | 13.1 Million. African =98% White=1% Asian=1%(1999) |
| Religion | : | Christian/Indigenous 50%;Christian 25%; Indigenous 24% |
| Life Expectancy | : | 37.17 years (down from 50 fifteen years before) |
| Pop Growth Rate | : | 0.05 % (down from 3.6 fifteen years before) |
| HIV/AIDS Prevalence: | | 30% (World's Highest) |
| Literacy | : | 85%(f=80,m=90) (Age 15+, who can read/write English) |
| Urbanization | : | 31% |
| Labour Force | : | 5.5 million |
| Unemployment Rate: | | +60% |
| Currency | : | Zimbabwe Dollar (Z$) = 100 cents |
| GDP per Capita | : | US$505 |
| GDP | : | US$6.40 billion (Mining 8%) |
| GDP Growth rate | : | -7% (Industrial production: -10%) |
| Exports | : | US$2.20 billion (Mining 45%) |
| Imports | : | US$2.12 billion |
| Exchange Rate | : | Official rate Z$55 = US$1 (Unofficial Z$1800= US$1) |
| Principal Exports | : | Tobacco, Gold, Ferro-alloys, Cotton |
| Principal Imports | : | Machinery, Transport Equipment, Chemicals, Petrol |
| Main Export Destinations : | | South Africa, UK, Germany, Japan, USA |
| Main Import Origins: | | South Africa, UK, Japan, USA, Germany |

Zimbabwe Fact file ( compiled from www.thebtr.com , wwwmdczimbabwe.com , wwwsadcreviw.com , wwwzimembassy-usa.org )

*It is now 22 years since Zimbabwe achieved its political independence. In this organization, at least, the professional and managerial leadership of black Zimbabweans, who make up 99% of the population, is well entrenched at all levels . Nine of BNC's 13 Directors are black, including Dr. Chimimba, its CEO, a PhD (metallurgy) graduate with more than 20 years experience in the Anglo Group. All members of the Pressure Leach team are black Zimbabweans , as indeed are all the members of the production , Human Resources and other management teams that I came across. I understand and can speak Shona, the language of 85% of the Zimbabwean population) but I need not have worried. Most, if not all members of the Pressure Leach SDWT understand English.*

*Although clearly more comfortable communicating in Shona, team members initially kick off the communication at the pre-shift team meetings called* ***Safety Talks*** *in English but switch back to Shona as matters get less procedural. Throughout the week when I was with the team conversation switched from one language to the other without much apparent difficulty. One team member, JC, whose parents were originally from Malawi grew up and went to school in Bulawayo (Matabeleland) and speaks fluent Ndebele. When he discovered that it is my mother tongue he made it a point to speak to me in siNdebele and in fact sent me an e-mail in siNdebele when I was back in Cape Town. I made it a point, though to start off conversation with each team member in Shona and let them switch as they wish. Shona is a language that is rich in idiom and symbolism. Although all team members are literate (can read and write) in English, a Shona greeting is a sure way to show respect and break the ice at the beginning of the shifts in this team.*

***The Pressure Leach Self Directed Work Team***

*The Pressure Leach SDWT, consisting of 22 team members and a team leader, distributes the continuous responsibility of managing the Pressure Leach Plant by working in 3 rotational 8 hour shifts. Each shift group consists of 5 plant attendants and one of the four Control Room Plant Operators in the team. The remaining operator and three attendants form the Relief or filler shift. This fourth group, comes to work during the day (8am-4pm) and provides replacements for members who are ill or on leave. Membership of a shift group is not permanent and every team member eventually gets to do the spare/ relief shift. The ultimate, permanent identification for each member is with the SDWT rather than with the shift group.*


***Diagrammatic illustration of the Pressure Leach SDWT Structure***

**History of P/L SDWTeam**
**Key Points**

- **1995-1997 BNC Survival Crisis**
- **1995: P/L Plant Commissioned**
- **1997 : Org Renewal Initiative**
- **1997 : Multi skilling introduced**
- **1998 : P/L SDWT Formalised**
- **1998 : Dr Chimimba Leaves**
- **1999 : Anglo Plc Restructure**

*The modern (computerised and automated) Pressure Leach Plant was commissioned in 1995, two years before Self Directed Work Teams were introduced to BNC and does not have unskilled lowest level workers (or "general hands"). Plant attendants do one of 5 or so jobs (monitoring one of the major processes on the plant itself) on a three month rotational cycle while the operators monitor and control the whole Pressure Leach Plant production process from the desktop computers in the Control Room. This room also doubles up as the team room. Every eight-hour shift starts with a five to fifteen minute meeting, sometimes called a* ***SAFETY TALK.*** *The meeting is usually opened by the Control Room Plant Operator (CRO) who welcomes shift members, gives a run down of the previous shift's production report ( communicated to him in a 'handover" by the departing CRO) and communicates production and other targets and issues for the day. The targets are also displayed on the* ***team notice board,*** *also in the Control Room. Wellington Manda (WM) one of the CROs tell me that the SAFETY TALK is more than just about safety. It is also an opportunity for the tem to see who is not present for the shift or who is not well.*

**Summary Characteristics of P/L SDWT (n=23)**

| CHARACTERISTIC | TEAM (INCL TEAM LEADER) | | | TEAM LEADER |
|---|---|---|---|---|
| | Range | Mean | Standard Deviation | |
| Member Age (years) | 23 - 57 | 36.8 | 8.7 | 42 |
| Formal Education (Years) | 4 - 13 | 9.9 | 1.84 | 9 |
| Years at P/L SDWT | 1 - 4 | 2.9 | 1.2 | 3 |
| Years at BNC | 4 - 31 | 14 | 7.8 | 25 |

*The key result areas for the P/L Team are production; plant availability; product quality; within budget cost containment; Safety (avoidance of Life Threatening Accidents(LTAs), absenteeism and Disciplinary cases. The Team Leader meets with full team approximately once a week mainly about production and new initiatives, Company policy changes etc*

*BNC Refinery Superintendent Joseph Mungozhi (JM) says that Team leaders were initially allocated teams on the basis of "skills fit" but after a year we rotated them successfully. He says "remember these were people who had already proved themselves as foremen" Their initial off site preparation consisted of Business skills training, seminars and team leadership training. The second wave of training (with their teams ) focussed on Business skills.*

*A day before I join the team first shift of the team I have a two hour interview with Alex Binauli (AB) the Team Leader of the Pressure Leach SDWT, a BNC veteran of 25 years who has worked as an operator, and a shift–foreman before his current role. AB explains to me that the essence of the SDWT initiative at the Refinery was to break the (production) organization into "small enough groups to be focussed on the same area /job instead of organization wide" He saw these groups as definable in terms of* ***goals*** *and* ***self service***

**Alex Binauli (AB)**
42years old
Team Leader P/L SDWT
Educated to Junior Certificate (JC) Level
25 years BNC experience(Operator/Shift Foreman/Team Leader) of which the last three have been as

AB is one of the five SDWT leaders in the Refinery and his profile is typical of the others. They range in age from 42-46; in formal education from 9-13 years; in BNC experience from 22-26 years and, with the exception of one, have led their teams from two to four years. AB also shares their common career route of Control Room Operator to Shift Foreman to Team Leader. Outside the workplace AB is a Choir leader in his church. He says he believes a team works best when it *has "fewer people- not more than 20- but with multi- skills".* AB believes the training he has received in SDWTs and supervision is enough to make him an effective leader of his team and he says he has nor encountered any difficulties in leading his team.

He says having more production meetings, remaining focussed on budgets and production and in-house training are what will help the Pressure Leach team become more self directed. As team leader, he says , he has a performance contract covering production ; product quality ;safety ; cost budgets ; Continuous Improvement.
To AB *the "missing link" at BSR is a direct team level incentive scheme.*

*AB says they were told that some Japanese and other overseas companies were had tried these teams and they were working well. When I ask AB what has changed he says the concept of refinery wide foreman does no longer exist and instead of having foremen taking turns to "run" the whole plant you now have team leaders with a smaller span of control but focusing much more in a particular area. For him and other foremen working day shift only enabled them to spend more time with their families. At work it means that the teams have more space to manage their own work in the absence of continuous foreman supervision.*

*JN (28) has been at BNC for seven years and was in the Mining Division when SDWTs were introduced at BNC. He has only been with the P/L Team for one year and He says he*

*has not yet achieved any bonus earning target with this team but has heard from other team members about the team's history of achievement. He says the daily and monthly targets are there "and we work towards them but the incentives seem to have faded away". JN has received training in Good Citizenship (environmental awareness) and communication skills.*

*P/L Team members are very interested in the Concept of SDWTs. In my second shift (11pm – 7am, with Wellington Manda-WM- as shift CRO) half the Safety Talk session is taken up by members asking me( introduced by WM as "the visitor from Cape Town") about SDWTs in South Africa. What do they do? How have they improved things for workers? Have they not led to job losses? How do they earn their bonuses? etc. At the session WM nominates an unprepared member to present and after a short uncomfortable silence another member voluntarily steps in and talks about importance of good house-keeping for safety and the need for awareness of hazards such tools which are left lying around/misplaced.*

James Chirwa (JC)
35 years old
Control Room Operator , Founder Member P/L SDWT

Recalls the days when he was a gang leader all gang leaders reported to a shift foreman who covered the whole plant and says the new system is much better. He says communication, decision making and production have all improved. Says budgets are much closer to the team

JC says multi-skilling has been very beneficial. He cites examples of some production operatives who, after multi skilling, discovered that they had an aptitude for certain repair work and technical skills and went on to train and are now artisans

Each area has its own team and targets on which it focuses. Describing the P/L communication process he says the Team Leader gets a report for each of the previous 3 shifts plus a 24 hr "Total production" report. As a CRO he can do call outs (eg of stand-by artisans) when there is a need "without consulting any superior".

On the issue of the promised team level bonus, he says the issue is demoralising people and asks "Are goal posts being moved?

*Also, during this shift an illustrative incident happens. During Safety talk a team member reports to the team that a pipe connection that is loose and the production flow has been stopped to prevent excessive leakage. WM asks what has already been done and the team member explains that he is trying to find a suitable tube to connect the two pipes until the next day when the mechanical workshops are open and the correct fitting can be ordered. Other team members make suggestions and promise to look in their areas for usable short tubes.*

*Twenty minutes later the team member, with the help of another member who has also received basic engineering maintenance training, fit on a tube that they say will hold, but not for long. They ask WM to call someone from stores (who is on stand-by). WM calls and the stores person says there is a shortage of those connecting pipes which have been ordered from a supplier in Harare. WM then makes a call to the stand-by artisan for advice and to arrange the opening of the mechanical workshops to check for a suitable temporary spare. When this also prove futile he makes a decision to call the standby artisan to come in and machine a suitable part .*

*By 2am (three hours after the initial team member's report, the machining is done and the piece fitted on. In all this neither the team leader nor the workshop has been called. WM tells me that if a suitable piece had been available to be "scavenged" from the plant, no one from the mechanical workshop would have been called. He adds that before self directed work teams and multi skilling he would not have had the authority to make the decisions to solve that problem.*

**Lewis Kachaka (LK)**

**44 year old father of 7 educated to grade 7.** Fonder member of P/L SDWT. Currently performing the role of Copper Sulphate Filter Press attendant but has performed all the job roles in the P/L Plant over the years

On the night (20/12/2002) that I join his 11pm to 7am shift, LK leads the **safety talk.** His topic is the importance of wearing safety goggles. Speaking in Shona but with a sprinkling of English, LK emphasised that *goggles must be worn all the time and not just in your own area.* He also reminded the team of a worker who had an eye related accident far from his own area because he was not wearing safety goggles . Two other team members chirp in with points in support of LK's safety talk.

Later when I talk to him alone at his Filter Press work area, LK says he believes in the SDWT because ***it has helped him learn more about his job and that of his fellow team members.*** He also says that in the past he ***was always being overlooked for recognition. He says he was grateful that workers right to*** *"sevenza sevanhu" (work like people) had been restored.*

*A recurring theme in my discussions with team members is the SDWTs have restored the respect to which workers are entitled. Member, particularly older ones spoke as if Dr. Chimimba (whom they credited with the initiative) had restored their right to be respected for their opinions and contributions at work. One member's comments suggested that, under white management workers had expected to be denied dignity and respect. 45 year old Lewis Kachaka (LK) referred to the restoration under "management ye vanhu" (black people's management) of*

*the " right yekuti tisevendze sevanhu, tichiitwa respect" (to work like people; to be respected). Thomas Mazaradaka (TM) with 23 years BNC experience and a " proud founder member" (his words) of the P/ L team , believes SDWTs offer workers "empowerment" and "freedom yekuti tisa dzvinyirirwe nema foreman nema gang leaders isvi tichiziva basa redu" (freedom not to be oppressed by foremen and gang leaders when we know our jobs). 43 year old Henry Ngwerume (HN) says "ma self directed teams aka introdusva ne management kuti tizvitungamire nezvebasa" (Self directed teams were introduced by management so that we can govern ourselves on work issues). He said even safety had improved noticeably and attributed this to "ownership of the problem" adding that "people now say I am the one who is doing that job It is mine , although my colleagues may point things out and make suggestions" . He used a family metaphor to explain teamwork. "In a family you rely on each other and complement one another's contribution"*

*At 48 Professor Mazunde (PM) is another BNC veteran of 24 years and a founder member of the Pressure Leach SDWT. On the day that I join his shift he is swinging (doing a relief shift) as a Press attendant . He tells me that his "normal "job is autoclave attendant. Asked about his education he says he went to school a long time ago and went as far as standard 6. In his recollection of the introduction of SDWTs at BNC he says it was management that initiated the teams. He recalls reasons that were mentioned including the " consolidation of work". He says they were told that they knew their jobs and "there was no need for them to be followed around by foremen and gang leaders" All they needed to do was learn and follow the STPs (standard task procedures). He adds that one has to be literate to be a member of this team as manuals with the STPs were kept in the Control Room (inspected/viewed by the researcher ) and had to be read and mastered.*

*Asked what has really changed in his work PM says "There was no more being shouted at ( by foremen and supervisors)...Just know your own procedures. Each person now had full responsibility". "No more excuse that this has not been done because you have not been told" He also recalls being trained in Continuous improvement Programme (CIP), Quality Assurance, 6M and other types of training. Benefits of the new initiative included incentive bonuses which seem to have disappeared asked if he knows how the bonus is calculated he says he has a general idea but its complicated.. The disappearance of the bonus is "maybe because of quality standards not being met or problems with the thickener ... I am not sure"*

*PM also says they were promised upgrades upon becoming multi-skilled and at the removal of gang leaders "but this did not happen". He uses himself as an example where in addition to his usual job he added some new aspects, such as adding barium hydroxide and monitoring the resultant effluent (which required additional skills). This, he says , started off as a n experiment involving 1 experimental bag of barium hydroxide in a single shift but is now 4 bags and seems to be a permanent part of his job.*

***Occupational Flexibility and the Zimbabwean Mining Industry***

*Bindura Nickel Corporation belongs to the National Employment Council (NEC) for the mining industry. Employers are represented in the NEC by the Chamber of Mines (COM) and non-management employees (as defined by the bargaining unit) are represented by the Associated Mine Workers of Zimbabwe (AMWUZ). Anglo American Corporation Zimbabwe (AMZIM) , through the Chamber of Mines (to which it has provided two of the last three presidents) is an influential party in the Mining NEC. AMZIM's Group Industrial Relations Manager sits on the Labour Committee of the NEC.*

*In May/June 1999 the Mining industry NEC (with sponsorship from the ILO) held a seminar on Trends in the Mining Industry. Among the delegates were the AMZIM Group IR Manager as well as BNC's Human Resources Manager. Technical experts from the ILO , South Africa and the Australian mining industry, presented to sector union and management representatives union on issues that included broad-banding, job evaluation, multi-skilling (Mdongo 1999a;b;c). Opening the seminar the Minister of Mines and Tourism (see Moyo, 1999) acknowledged the "difficult conditions "under which the mining industry was operating. The following excerpt from his paper concerns Collective Bargaining in the industry:*

*On the Collective bargaining side, the Government is for , preferably, company level then (italics mine) National Employment Council level negotiations. Company level negotiations, when conducted in good faith, reflect to a large measure the position on the ground, promote partnership and are related to efficiency and productivity gains. Non wage conditions of service such as profit sharing, employee stock ownership and performance bonus merit consideration in your discussions today. So do issues of workplace health and safety. However more importantly the cardinal principles of ability*

*to pay, job retention , employment creation, transparency, viability and productivity steeped in some scientific basis should be observed as we move towards social contracts at all levels of the economy*
*(Moyo 1999 p.9-10)*

*The AMWZ president (and, then, ZCTU Secretary General) Mr Jeffrey Mutandare also presented at the seminar. He said that the ruling Collective Bargaining Agreement in the sector was based on the Paterson System (which was) "very unpopular with the lower echelons of our labour force as it focused on decision making rather than take into account the complexity or arduous nature of the job... (and was improperly implemented)... as the Chamber picked and chose areas of the system that were advantageous to themselves", Mutandare, also pointed out that 60% of the industry's workforce was "graded as unskilled or semi skilled" (Mutandare, 1999, p. 1). He expressed union opposition to "new technologies" which had "...brought about new concepts and philosophies like multi-skilling, broad banding, subcontracting and outsourcing which are a breach of our CBA... (and if incorporated would lead to)...massive job losses and safety standards will be severely compromised" (Mutandare, 1999, p. 2). He ended his paper by requesting assistance from the ILO for the union to create a "research department which will be sensitive to these developments and (would) be able to institute research on behalf of the Union" (Mutandare, 1999, p. 2)*

| **Paterson Job Evaluation System** | | | | **BSR** | | | **NEC** |
|---|---|---|---|---|---|---|---|
| Decision Making Function | Band | Job Grades | Sub Grades | **BS& R Production** S R | | **P/L SDWT** | **Statutory Instrument 152 of 1990** |
| Policy Formulation (Top Management) | F | F Higher F Lower | F 4-5 F 1-3 | | | | |
| Programming (Senior Management) | E | E Higher E Lower | E 4-5 E 1-4 | **1** | | | **Mgmt** |
| Interpreting (Middle Management) | D | D Higher D Lower | D 4-5 D 1-3 | **1** **1** | **1** **1** | | |
| Routine (Skilled Workers/ Supervisory) | C | C Higher C Lower | C 4-5/6 C 1-3 | **14** **10** | **10** **18** | **1** **4** | **Non- Mngmnt (Bargaining Unit)** |
| Automatic (Semi-skilled workers) | B | B Higher B Lower | B 4-5 B 1-3 | **154** | **231** | **18** | **13 NEC Grades** |
| Defined (Unskilled workers) | A | Lower | A 1-3 | | | | |
| | | | | | | | |

Higher Grades in each band coordinate the band function (except A where there is no co-ordination)

*The Chairman of the NEC (Mr H Clements made an impassioned plea for multi skilling and flexible work practices arguing that*

***Multi-skilling is not just about expanding the range of tasks for which a person is responsible …(but also)…encompasses team working, small group activities, continuous improvement, taking on responsibility for quality and housekeeping training others and becoming involved in multi-disciplinary teams. It means accepting responsibilities that once belonged to more senior or junior people.***
***(Clements. 1999, p.5-6).***

*In its August to September 2002 report to its members the chamber of mines indicated that The AMWUZ had announced that it had held a seminar /workshop on multi-skilling (and other issues and " would be submitting a paper to the Chamber for consideration in due course" COM 2002. In December 2002 the Labour Committee of the Chamber of Mines indicated on its website that "items under discussion (in the NEC) include*

*proposals for a new collective bargaining agreement for the industry that would include multi-skilling and re-grading... (and)the idea of productivity agreements"*
*(http://chamines.co.zw/labourcomm.htm )*

***The Business Environment in which BSR operates***

***Organizational Macro environment***

*The core business of BNC, which was established in 1966, is the mining and processing of Nickel and related products, primarily for the international market. The by-products include copper, cobalt other metals belonging to the platinum group. The shares of BNC, which was listed on the Zimbabwe Stock Exchange (ZSE) in 1971, are largely (80%) owned by Anglo American Corporation Plc through its wholly owned Zimbabwean holding subsidiary Anglo American Corporation (Zimbabwe) (AMZIM). Anglo American Corporation, traditionally a mainstay listing in the Johannesburg Stock/Securities Exchange (JSE) relocated to the London Stock Exchange (LSE) in 1999 and is now known as Anglo Plc. In terms of the new structure, Anglo Plc, manages its worldwide operations along product lines(such as gold , coal etc). BNC is part of Anglo's Base Metals Division, known as AMBASE.*

*In spite of the London Stock Exchange listing of its newly formed parent Anglo American Plc, and the relocation of AAC Plc Head Office from Johannesburg in South Africa to London) Anglo American Corporation is, essentially, a multi-national company with strong Southern African roots. Strategic management policy in the Zimbabwean operations is still influenced, if not directed, from Johannesburg. In the 1990s the Chief Executive of the International Head Office still served as the Chairman of the Zimbabwean group. Anglo experiences in South Africa particularly corporate strategic and Human Resources management innovations and initiatives still provide the inspiration for Zimbabwean direction. Employee Share Ownership Participation Schemes (ESOPS) and structured Graduate Traineeship programmes in the 1970/80s are good examples. The Zimbabwean group for instance is currently actively evaluating the implications to its own operations of the South African parent group's decision to provide anti-retroviral drugs to HIV/AIDS affected employees.*

***The Zimbabwean mining Industry***

*According to the Zimbabwean Chamber of Mines (COM, 2002) and other statistics on the chamber's website (http://www.chamines.co.zw/ ) the Zimbabwean mining industry employs 50 000 employees and has traditionally been the second largest foreign exchange earner after agriculture. Lately, following "significant negative growth" in all sectors of the country's economy (2002 figures: mining –7.1%; manufacturing –17.2%; agriculture –20.8%, hotel and Distribution –12%; electricity-4.7%) , mining , even with its own negative growth has seen its foreign currency earning role rise to 45%. In 2002 Nickel, at Z$ 7.6 billion was the second most significant mineral after gold (Z$10.6 billion) and followed by High Carbon Ferrochrome (Z$6.6billion). According to the Camber's reports, BNC is Zimbabwe's major source of Nickel production and the refinery at BSR is the major of only two in the country. Mainly because of reduced production at BNC, the Chamber expected nickel production for 2002 to decline from that of 2001.*

***The macro economic situation Zimbabwe in 2002***

*The Chamber described the Zimbabwean macro-economic environment from the point of view of the mining industry as characterised by:*

- *Very high (200%) inflation*
- *Declining performance of all "real" sectors*
- *Poor and decline export performance*
- *Critical foreign currency problems*
- *Negative interest rates*
- *Negative Gross domestic Product (GDP) growth (at –11.9%)*

*The Chamber's report described an environment where "...prices of end products were frozen ( by government price control) while salaries and wages, costs of inputs such as raw materials, insurance , electricity and transport were allowed to rise" (COM 2002). The major problem was the shortage of foreign currency, which the chamber blamed, largely, on an unrealistic official exchange rate of US$ 1:Z$55. (in November/ December the real rate ranged from what is known as the "parallel rate" of US$1: Z$800 to the black market rate of US$1 : Z$1500). The Chamber noted that while this official rate (at which exporters were forced convert income from exports) to remained fixed, the local costs increased "without restraint". The Chamber noting that the government had not adequately dealt with the macro economic issues to create the necessary foundation for economic recovery and said an attempt to create "a social contract between business labour and government to create confidence ...(had)...failed*

*because some of the parties had failed to honour their obligations under the Declaration of intent towards a social contract" (COM December 2002).*

*The 2003 budget in (in mid November2002) had been eagerly anticipated by all sectors of the economy, particularly the export sector which had hoped for (among other things) a devaluation or some kind of relaxation of the foreign currency situation. There was none. In fact the Government announced a decision to effectively commandeer the portion of foreign currency that exporters had until then been allowed to keep in foreign currency accounts for priority imports. This was now redirected to the Reserve Bank of Zimbabwe which would re-allocate on the basis of its own priority list. The Chamber had complained that the Government had (through a statutory instrument) earlier in the year de-listed certain essential items from this " priority list". The items now considered as luxury or non essential imports included: industrial safety footwear, safety headgear overalls and some commercial vehicles! In its December 2002 review of the budget, the Chamber warned that " there are companies that may not survive beyond December as export proceeds ( at the official exchange rate...would) not be sufficient to cover labour costs".*

*On 20 December, 2002, BNC issued a cautionary statement to its shareholders and the market. It was published in all the country's major papers on 24 December 2002 (see The Herald , 24 December 2002) and read as, reproduced verbatim, below.*

**BINDURA NICKEL CORPORATION LIMITED**

The Board of Directors of Bindura Nickel Corporation Limited wishes to advise its shareholders that the recently introduced measures and controls governing foreign currency accounts issued by the Reserve Bank of Zimbabwe , following the 2003 National Budget announcement , severely impacts on the Group's viability.

Unless the situation is urgently resolved by the relevant authorities, the group will not be able to continue trading due to its inability to meet its expenses. Management , through the Chamber of Mines , are in active discussions with the relevant authorities on this matter and the Board remains hopeful that a satisfactory conclusion will be achieved. Shareholders will be kept informed of any new developments . In the meantime they should exercise caution in their share dealings and , if in doubt, consult their professional advisors where applicable.

By order of the Board : Anglo American Corporation Services Limited
Secretaries
**Per : FF Ndhlela Company Secretary**
20 December 2002


*Map of Zimbabwe. From HTS Maps (1998) (http:hotels-tours-safaris.com/Zimbabwe/map.htm)*

**Please note that the full references of materials cited in this case narrative are in the main thesis reference list**

Appendix 2

BNC Ltd Training and Development Policy (1999)

**BINDURA NICKEL CORPORATION LIMITED**

## TRAINING AND MANPOWER DEVELOPMENT POLICY

In order to support BNC's mission of being a profitable, world class , quality producer of low cost nickel, the Training and Manpower Development department endeavours to develop a human resources base that has world class competencies and skills to enable the organization to meet the challenges of the present and of the future

The Training and Manpower Development department is committed to Management excellence which is measurable by world class benchmarks. Appropriate interventions will be adopted with a view to fulfilling the needs and aspirations of both the organization and employees.

The Training and Manpower Development will offer focussed, integrated training and development that will provide a system and culture of value addition. The department shall carry out an annual Training audit to assess the effectiveness of Training during the year under review and set objectives for the coming year.

The training and Development department will operate within the parameters set by the ISO 9002 standards

Appendix 3

BNC Key Respondents Employees Involvement Information Gathering Response Guide/ Schedule

(Adapted from Appelbaum & Batt, 1994; Wood 1996 ; Wood 1999)

(Please note that the Guide appended here has been completed from the interviews conducted and is part of the portfolio of evidence)

**Key Respondents at BNC who provided interview and documentary information**

| RESPONDENT | NUMBER | YEARS AT BNC |
|---|---|---|
| The General Manager Of the Smelter and Refinery (BS& R) | 1 | +8 |
| The Refinery manager | 1 | +6 |
| The Human Resources Manager | 1 | +6 |
| The Training and Development Manager | 1 | +6 |
| The Quality Manager | 1 | +5 |
| The Refinery Production Superintendent | 1 | 25 |
| The Refinery Plant Metallurgist | 1 | +5 |
| The Team Leader of P/ Leach Team (the exemplar team) | 1 | 25 |
| Other Refinery Team Leader | 1 | 26 |
| Other Refinery Team Leader | 1 | 22 |
| Other Refinery Team Leader | 1 | 23 |
| Other Refinery Team Leader | 1 | 22 |
| Senior Technical Training Officer | 1 | +6 |
| Refinery Personnel Officers | 3 | All + 6 |
| 2 Union officials | 2 | 9 & 23 |
| **Total Number of Key BNC Respondents** | **18** | |

(Kindly note that although permission to use interviewee's real names was not denied, and these are used in this case, a further process of validating the case narrative (by sending it to key respondents for comment is still in progress) The company details and names contained in this case may not be used for purposes other than UCT internal processes and , in any case may only be used, with permission. for academic/research purposes.

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# Employee Involvement Study Guide For Key Respondents

**(Unless stated, responses should be taken as referring to BSR Ltd)**

## 1. Numbers (BSR)

| | |
|---|---|
| Total in BSR Refinery at Inception of Teams | 750? |
| Total now | 714 |

**2. Unionisation**

| NAME OF UNION | AFFILIATION (FEDERATION) | YEAR RECOGNISED | NO OF MEMBERS ON ORGANIZATION | BARGAINING UNIT | % PENETRATION |
|---|---|---|---|---|---|
| *AMWUZ* | *ZCTU* | *1990?* | | *All non management* | |

## B. Teams in the Organization

**3. Historical Information on Teams**

**3.1 What is meant by team/teamwork in this organization?**

*The organization was broken down into Business Units each headed by a Team Leader and with its own budget and deliverables*

**3.2 Is there another term that you use to refer to teams/ team-working in this organization?**

*Self Directed Work Teams*

**3.3 How would you describe the basic , permanent work structure that typifies the frontline (production if you make or sales/customer service if you sell things) of your organization**

Traditional work group_____

Natural Work Group/Team_____X_____

Semi- autonomous work Group/Team_____X_____

Self- managing teams_____

Other (What?)_____

Please briefly explain your choice of description

*Although called SDWTs the structures are not fully self managing and range from natural work groups to Semi-Aoutonomous Teams*

**3.4 When were teams (team working) introduced in this organisation?**

*1997/98/99*

**3.5 Why were teams/teamwork introduced (Rationale)?**

*To deal with organizational survival crisis (1995/96) caused by globalization (low international nickel prices, low grade ore, high production costs, ageing plant, new low cost/high grade ore/better equipped producers from Canada and Australia, high cost of capital for refurbishment)*

**6.4. Were teams/ teamworking adopted as practice on their own or were they part of a bundle of other practices eg Total Quality Management (TQM)? Please elaborate on your answer and mention the other practices**

*Bundle : Organizational Renewal Initiative; TQM;Multi-skilling; SDWTs; Production Incentives*

**6.5. Who suggested/ initiated the idea?**

*Consultants (Lexion)/ Dr Leonard Chimimba (then General Manager)*

**3.8 Who else was involved in making the decision to adopt teams?**

*Dr Chimimba (then General manager)/EXCO*

**3.9 Were any non-management employees or their representatives involved and if so how?**

*Not at this stage (adoption) The concept was sold to them via the Works Council System and they the participated in communicating it down*

**3.10 At the time teams were introduced were they associated with any of the following?**

**(please select the correct option(s) and explain briefly**

Downsizing _____No_____

Reduction of management levels / De-layering____x(partial)_____

Greenfield (The organisation was new_____No_____

**3.11 Briefly describe the way in which team working was introduced in the organisation**

(Including resources outside the organisation/consultants or the use of experience/expertise of other organizations)

*First Multi-skilling was sold (linked to a promise to reward the extra –skills).and introduced. The SDWT concept follwed a few months later. It was sold to employee reps by linking it to an incentive scheme and then communicated to all employees through the briefing system. A small task team was set up to drive the initiative. The organization was broken up into Bus to be led by people who were formerly shift foremen. These and all operators people at the higher levels of non management were trained on the SDWT concept which was then implemented with varying success Consultants stayed with the process for the first 15 months or so*

## C. Employee Participation

**4.1 At what level would you say your organization usually involves people (non managers) in work related decision making Please state whether it is DIRECTLY (with employees) or INDIRECTLY (through representatives)**

| LEVEL | No participation | Indirect Participation | Direct participation |
|---|---|---|---|
| Individual Issues | X | | |
| Team/ Work group Level Issues | | X | X |
| Cross Functional Issues | | X | X |
| Department Level issues | X | X | |
| Organization level issues | X | X | |
| | | | |

**4.2 The following are some of the ways in which some organizations "involve" their staff. Which ones are there in your organization? (Refer only those occurring in most parts of the organization) Please describe briefly and state whether participation is voluntary or mandatory/compulsory**

| Participation Scheme | Voluntary or Compulsory? | Brief description |
|---|---|---|
| Suggestion Scheme/Box | V | |
| Quality Circles | C | |
| Feedback/ Communication Sessions | C | |
| Problem solving Teams | C | |
| Self Managing Teams | C | |
| Work Place Forum/councils | C | |
| Other: | | |

**4.4 Which topics or decisions do non-management staff get directly (ie not through representatives) involved /participate in? (Do not consider employees for whom the domain is a direct responsibility)**

| Area/ Topic | Never | Sometimes | Regularly/ Frequently | Always |
|---|---|---|---|---|
| Choice of Technology | X | | | |
| Design of Jobs | | X | | |
| Work process planning | | X | | |
| Quality improvements / Work process problem solving | | | | X |
| Administrative/ Scheduling | | | X | |
| Strategic/Business Planning | X | | | |
| Customer Service | | X | | |
| Human Resources Management ( IR, Recruitment, Discipline etc) | X | | | |
| Compensation | X | | | |
| Other: | | | | |

**4.5 Which of these approaches, techniques or processes are currently (or within the last two years) being used within the organization?**

| **Technique/ Process** | **By who** |
|---|---|
| Jod Redesign | *Teams(attendants/ operators/Team Leaders)* |
| **Japanese Management Techniques** | *N/A* |
| **Total Quality Management (TQM)** | *At the shop floor/ Team(attendants/ operators/Team Leaders)* |
| **Just- In – Time (JIT)** | *N/A* |
| **Statistical Process Control (SPC)** | *Team (attendants/ operators/)* |
| **Performance Management** | *T/Leader & Above* |
| **Job enlargement/Enrichment** | *Team (attendants/ operators/Team Leaders)* |
| **Job Rotation** | *Team (attendants/ operators/Team Leaders)* |
| **Multi-skilling** | *Team (attendants/ operators/)* |
| **Other:** | |

## D. High Involvement HR Policies & Practices

**(Documentary examination of Policies, Guidelines, Reports and archives)**

**5. Recruitment Practices**

**5.1 What does the organization DO to source trainable, flexible team-workers ?**

*Internal recruitment and identification of more educated ('O' Level) employees for training and advancement*

**5.2 Who participates in the recruitment process?**

*Team Leaders / Management /HR*

**5.3 What influence do team members have in the recruitment of new members?**

*Very Little …some input in developing the specifications/profile depending on Team Leader*

**6. Education & Training Practices**

**6.1 Is training available to (non management) team members in the following areas**

| **Area** | **T/Leaders** | **Team Members** |
|---|---|---|
| Understanding of Business Information | *Yes* | *Yes* |
| Interpersonal skills | *Yes* | *Yes* |
| Team building | *Yes* | *Some* |
| Group Dynamics | *Yes* | *Some* |
| Problem solving | *Yes* | *Yes* |
| Quality Awareness | *Yes* | *Yes* |
| Quality related techniques | *Yes* | *Yes* |
| Job related technical skills | *Yes* | *Yes* |
| Cross-training/ Multi-skilling | *Yes* | *Yes* |

### 7. Industrial Relations

**Please confirm the existence/presence of the following IR features (or the absence there-of)**

**7.1 Presence of a union**

*Yes (AMWUZ)*

**7.2 Presence of a Workplace Labour/Management Committee (Forum)**

*Yes (Compulsory Works Council in which employees participate indirectly through Workers Committee)*

**7.3 A contract/ agreement with the union on participative programs**

*No, just informal corporate level by-in by workers representatives*

**7.4 The company policy on participative programs**

*None ascertained*

**7.5 An institutionalised/formal employee consultation policy (Please elaborate)**

*Yes (Legally promulgated compulsory Works Council*

**7.6 A formalised disciplinary and grievance procedure (View Doc if any)**

*Yes*

**7.7 Does the organization have a job security policy or agreement? (Doc if any)**

*No*

**7.8 Has the organization experienced any lay-offs/ retrenchments since the introduction of teamwork. If so please describe briefly (incl dates numbers and issues)**

*No , but one mine closed (1999) and all willing employees were re-deployed*

---

## E. Effectiveness Outcome Measures of Team Working

**8.1 How does the organization measure the effectiveness of team-working.? In other words what are the teams held accountable for. Please consider the following suggested measures and add any that may be missing . Briefly explain the ones you select and indicate whether they have been MEASURED in the last two years**

| MEASURE | YES/ NO |
|---|---|
| Increased Profit | *Y* |
| Reduced costs of production | *Y* |
| Reduced employee numbers | *No* |
| Productivity (indicate how defined/measured | *Y mainly Plant availability* |
| Improved Product Quality | *Y* |
| Reduced Cost of Quality | *Y* |
| Lower Cycle time | *N?* |
| Lower Down-time | *Y* |
| Improved Customer Service | *N* |
| Reduced Inventories | *Y* |
| Wage Cost Savings | *Y* |
| Reduced ratio of employees to Supervisors/ managers | *N* |
| Improved wages | *Y* |
| Reduced grievances | *Y* |
| Reduced number of Disciplinary cases | *N* |
| Reduced Employee turnover | *Y* |
| Reduced absenteeism | *Y* |
| Improved employee safety | *Y* |
| Improved employee health | *Y* |
| Improved employee morale | *Y* |
| Improved employee job satisfaction | *Y* |
| Other | |

## F. Incentives and Remuneration

(Detailed answers to this section contained in the Results section of the thesis)

**9 1 What non-monetary incentives are given to employees ( eg Public Recognition, pledges and awards etc) and at what level are they given?**

| Description of incentive and how measured | individual | Team/ Sections | Department | Organization |
|---|---|---|---|---|
| *Tokens of appreciation ( eg t-shirts and shirts)* | *For suggestions* | *For production achievements** | | |
| *Party or celebration* | | | | *Safety Records* |
| | | | | |

*** Reported by P/L Team member who said it is no longer there**

**9.2 What monetary incentives are given (eg non-guaranteed cash bonuses , profit sharing, gain sharing etc and at what level are they measured and given?**

| Description of incentive and how measured | individual | Team | Department (Business Unit) eg Refinery | Organization |
|---|---|---|---|---|
| *Incentive Bonus Scheme ( Explained in detail elsewhere) Calculated on achievement of targets (qualifiers), within cost budget while avoiding penalties ( accidents)* | *X* | | *X* | *X* |
| | | | | |

**9.2 Does your organization offer the following incentives? Please provide a short description of your organization's version of the incentives as labels can mislead**

| | |
|---|---|
| Employee Share Ownership Programme (ESOP)? | N/A |
| *Skill Based Pay?* | *Yes remuneration policy accommodates pay for additional job relevant vertical, horizontal and cross/multi skills acquisition in addition to multi-skills programme* |
| *Deferred Pay* | *Partial at senior levels (incentive bonus earned is only paid after 3 months) Also part of executive pay is deferred* |
| *Others(Please elaborate)* | |
| | |

9.3 What other policy, practice , activity or characteristic (not mentioned above) does your organization have that **encourages and supports employee participation/involvement within a team working environment?**

- *Indirect participation through Workers Committees has laid a preparatory and conducive environment for direct team participation*
- *Training esp. as part of Continuous Improvement Programme (from 1996)*
- *Organizational Renewal Initiative from 1997*
- *Multi skilling in 1997*
- *Introduction of Self Directed Work Teams in 1998*
- *Job rotation within teams*
- *Job enlargement*
- *Enabling information systems (MIMS) and production control systems mean that information needed by teams to make decisions is readily available all the time without needing to ask managers*
- *SDWT friendlier structure – "no more foreman on your back"*

9.4 What other policy, practice, activity or characteristic does your organization have that **discourages employee participation/involvement within a team working environment**

- *Lack of enabling legal framework*
- *Paterson Job Evaluation System*
- *Current Hierarchical organization structure with many layers and seniority based benefits and perquisites*
- *Lack of team-based remuneration*
- *Lack of team-based monetary and non monetary incentives*

- *Insufficient training for team members*

**9.5 Do you think there is a culture of team work and collaborative participation/involvement among your organization's employees? Please explain your answer.**

*Yes (several people mentioned that team work is part of "African culture")*

---

**9.6 Do you think there is genuine support and encouragement of teamwork and worker participation/ involvement in the organization's senior management team (Explain)**

*Yes but not enough.*

*The SDWT initiative was originally introduced by senior management. When the main executive sponsor of the initiative left BNC for 2 years the initiative lacked active executive team support and lost steam in the wider organization (BNC particularly in the mining division). That it remained strong at BSR is tribute to the commitment of a succession of senior line managers some of whom were middle managers when the scheme was introduced. The original sponsor is now back as the CEO and the former middle managers are now part of the senior management team. Although the revival strategy is not yet clear, there is now a top management team with enough interest and power in the organi9zation to take the team-based initiative further .*

**9.7 Do you think the Union or employee representatives support team-working and employee participation/involvement in the organization?**

*Yes*

*The workers committee bought in and are actually disappointed with lack of progress*

*The local union reps are lukewarm in their support but may seek guidance and direction from AMWUZ. What is promising is that at Sector level AMWUZ has started work shopping about initiatives such as multi-skilling etc and the fact there were not consequent retrenchments in the BNC initiative may be a very positive point in the Union's consideration*

**9.8 Is there any major /important stakeholder in the organization (including suppliers or customers or shareholders) that that may be opposed or unsupportive of employee participation/involvement and teamwork in the organization? Please explain**

- *None known. Local Union reps have played along (wait and see attitude) although the views of the union at the Sector (AMWUZ) and national (ZCTU) level on direct plant level participation are not clear/ have been mixed.*
- *Supervisory (foremen) were initially feeling threatened but they have since been won over by appointments as team leaders.*
- *Some Middle managers have not fully bought into the idea or understood their role*

**9.9 Is there any legislation or relevant national legal or institutional framework that you believe to be either particularly supportive or an impediment to teamwork and enterprise level employee participation/involvement ? Please explain**

*(According to most respondents)*

- *The Paterson Job Evaluation system is an impediment*
- *The NEC grades are the antithesis of broad banding and job enlargement that are required to support flexibility in the teams*
- *The "silence" of legislation (lack of legal framework)at both sector as well as national level is seen as a disadvantage*

**9.10 Since the introduction of teamwork team-based employee participation/involvement has the organization ever had reason to re-look or revise a major policy (eg remuneration, recruitment etc. Please explain the change and circumstances**

*Yes, partially*

- *Policy on multi-skilling introduced as part of Organization Renewal Initiative*
- *Remuneration policy now accommodates multi skilling*
- *Training focus was made to support both multi-skilling and SDWTs*
- *There are talk of give in more support to teams through changes eg incentive scheme for SDWT level*

**G. General**

**10. Any other Comment?**

*Yes*

*See Team Leader interview results as well as verbatim reports from key respondents*

**THANK YOU VERY MUCH FOR YOUR ASSISTANCE.**

If you think of anything else do not hesitate to call or E-mail me. I may also need to contact you to clarify a response that you made today.

# Appendix 4

## Issues Probed With Team Members

1. Biographical details
2. Education
3. Length of service at BNC and elsewhere
4. Length of Membership of the SDWT
5. How the concept was introduced to them and by who
6. Their work and skills
7. Extent of multi-skilling and job rotation
8. Training Details
9. What SDWT training they had received
10. Their community leadership and/or other roles
11. What they thought about SDWTs
12. What it meant for them personally to be SDWT members
13. Their views on the incentive schemes
14. Their views on the prospects for SDWTs in the Refinery
15. Their views on management commitment to SDWTs

Appendix 5
Issues Probed With Team Leaders

Q1. Name of the SDWT that you currently lead?

Q2. How long have you led the SDWT?

Q3. How many members in this SDWT?

Q4. Have you been a Team leader before your current SDWT?

Q5. What jobs did you do before SDWT leader role? (Please give dates)

Q6. Do you have (or have you had in the last 10 years) any other leadership (Community/political/religious)role outside work? Please give details

Q7. In your opinion what makes a SDWT different from any other "ordinary" work team?

Q8. What training have you PERSONALLY received to make you a better TEAM LEADER of a SDWT?

Q9. In your opinion was this training enough/adequate?

Q10. What difficulties have you encountered in your SDWT leadership Role that you were not prepared for?

Q11. Name and explain as many things as you can that help YOUR SDWT To be more SELF DIRECTED/ EMPOWERED

Q12. Name and explain as many things as you can that PREVENT YOUR SDWT from being more SELF DIRECTED/EMPOWERED

Q13. Who makes the following decisions regarding the following issues in your team

Choose your answer from:

1. The Team/A member of the team
2. The Team Leader in consultation with the team
3. The Team Leader on his own
4. The Team Leader in consultation with more senior managers
5. More Senior Managers
6. Others (who)?

| ISSUE | 1 | 2 | 3 | 4 | 5 | 6 | Brief Comment |
|---|---|---|---|---|---|---|---|
| House keeping ? | | | | | | | |
| Leading/facilitating a regular team meeting? | | | | | | | |
| Determining a team member's training needs? | | | | | | | |
| Scheduling a team member's training? | | | | | | | |
| Running/facilitating Team Training? | | | | | | | |
| Work Scheduling? | | | | | | | |
| Leave/ Vacation scheduling? | | | | | | | |
| Decision to recruit a new team member? | | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| The process/activity of recruiting a new member? | | | | | | | |
| Designing/Redesigning a member's job? | | | | | | | |
| Choosing new work technology/machinery? | | | | | | | |
| Changing the salary of a team member? | | | | | | | |
| Allocating an incentive bonus? | | | | | | | |
| Disciplining a team member? | | | | | | | |
| Dismissing a Team Member? | | | | | | | |
| Setting the TEAM's production targets/budget? | | | | | | | |
| Setting the Team's Cosumables budget? | | | | | | | |
| Communicating with other teams? | | | | | | | |
| Communicating with internal customers? | | | | | | | |
| Communicating with suppliers? | | | | | | | |
| Communicating with external Customers? | | | | | | | |
| Quality Control and Improvement? | | | | | | | |
| Safety and Health Issues? | | | | | | | |
| | | | | | | | |

Any other Comment?

_____

_____

_____

_____

_____

Thank You

Table 1

*Five Stages in the Process of Empowerment (Conger an& Kanungo, 1988)*

| **STAGE I** | **STAGE 2** | **STAGE 3** | **STAGE 4** | **STAGE 5** |
|---|---|---|---|---|
| **Conditions leading to a psychological state of powerlessness** | **The use of managerial strategies and techniques** | **To provide self efficacy information to subordinates using four sources** | **Results in empowering experience of subordinate** | **Leading to behavioural effects** |
| • Organizational Factors<br>• Supervision<br>• Reward system<br>• Nature of job | • Participative Management<br>• Goal Setting<br>• Feedback System<br>• Modelling<br>• Contingent/ Competence based reward<br>• Job Enrichment | • Enactive attainment<br>• Vicarious experience<br>• Verbal persuasion<br>• Emotional arousal<br>AND<br>• Removal of conditions under Stage1 | Strengthening of Effort – performance expectancy or belief in personal efficacy | Initiation / persistence of behaviour to accomplish task objectives |

Table 2

*Guidelines for enriching a job (Adapted from Robbins, 1989, p. 212)*

| | Affected Core Job Dimension | | | | |
|---|---|---|---|---|---|
| | **Skill Variety** | **Task Identity** | **Task Signifi-Cance** | **Auto-nomy** | **Feed-back** |
| **Combining Tasks** | X | X | | | |
| **Forming Natural Work Units** | | X | X | | |
| **Establishing Clear Relationships with Clients** | X | | | X | X |
| **Vertical loading** | | | | X | |
| **Opening Feedback Channels** | | | | | X |

Table 3

*The difference between work groups and teams (Katzenbach & Smith, 1993)*

| **WORKING GROUP** | **T EAM** |
|---|---|
| Strong, clearly focused leader | Shared leadership roles |
| Individual accountability | Individual and mutual accountability |
| The group's purpose is the same as the broader organisational mission | Specific team purpose that the team itself delivers |
| Individual work-products | Collective work-products |
| Runs efficient meetings | Encourages open-ended discussion and active problem-solving meetings |
| Measures its effectiveness indirectly by its influence on other (eg. financial performance on the business) | Measure performance directly by assessing collective work-products |
| Discusses, decides and delegates | Discusses, decides and does real work together |

Table 4

*Percentage of Tasks Assumed by SDWTs (Wellins et al., 1991, pp. 35 & 36)*

| Task | T/Leader Alone | T/L With Team | Team Responsibility |
|---|---|---|---|
| **Production Task** | **%** | **%** | **%** |
| Prepare and Manage Cost Budget | 55 | 39 | 6 |
| Set Production/ Team Goals | 22 | 49 | 29 |
| Work with External customers /supplier | 22 | 44 | 34 |
| Select Production / Work Methods | 8 | 54 | 38 |
| Implement process Improvements | 7 | 51 | 42 |
| Perform Routine Equipment Maintenance | 11 | 44 | 45 |
| Stop production line or work process to address quality concerns | 12 | 42 | 46 |
| Work with internal customers and suppliers | 8 | 39 | 53 |
| Assign Daily tasks to work team members | 12 | 30 | 58 |
| Maintain safety and House Keeping | 3 | 28 | 69 |
| **Management Task** | | | |
| Make Compensation Decisions | 70 | 23 | 7 |
| Handle Performance Appraisals | 46 | 37 | 17 |
| Handle Individual Performance Problems | 41 | 45 | 14 |
| Select Team Members | 24 | 42 | 34 |
| Determine and Address Training Needs | 14 | 53 | 33 |
| Handle Vacation Scheduling | 29 | 27 | 44 |

Table 5

*Seven Forms of Employee Involvement Compared (Cotton, 1996, p.220)*

| | **Focus** | **Decision-making power** | **Success** |
|---|---|---|---|
| Quality of Work Life | Facility or Firm | Management and Union | Mixed |
| Quality Circles | Groups | Management | Poor |
| Gain-sharing | Department or Firm | Management and Employees | High |
| Representative participation | Facility or Firm | Management | Low |
| Job enrichment | Individual Job | Management and Employees | Mixed |
| Self-directed Work Teams | Teams. | Employees | High |
| Employee Ownership | Firm | Employees | Mixed |

Table 6

*Key Respondents at BNC who provided interview and documentary information*

| RESPONDENT | NUMBER | YEARS AT BNC |
|---|---|---|
| The General Manager Of the Smelter and Refinery (BS& R) | 1 | +8 |
| The Refinery manager | 1 | +6 |
| The Human Resources Manager | 1 | +6 |
| The Training and Development Manager | 1 | +6 |
| The Quality Manager | 1 | +5 |
| The Refinery Production Superintendent | 1 | 25 |
| The Refinery Plant Metallurgist | 1 | +5 |
| The Team Leader of P/ Leach Team (the exemplar team) | 1 | 25 |
| Other Refinery Team Leader | 1 | 26 |
| Other Refinery Team Leader | 1 | 22 |
| Other Refinery Team Leader | 1 | 23 |
| Other Refinery Team Leader | 1 | 22 |
| Senior Technical Training Officer | 1 | +6 |
| Refinery Personnel Officers | 3 | All + 6 |
| 2 Union officials | 2 | 9 & 23 |
| **Total Number of Key BNC Respondents** | **18** | |

Table 7

*Basic Types of Designs for Case Studies (Yin 1994, p. 39)*

| | Single Case Designs | Multiple Case Designs |
|---|---|---|
| Holistic Case Design (single unit of analysis) | TYPE 1 | TYPE 3 |
| Embedded Case Design (multiple units of analysis) | TYPE 2 | TYPE 4 |

Table 8

*Research methods and their use in the study*

| METHOD | INDIVIDUAL TEAM MEMBER LEVEL | TEAM LEVEL | ORGANIZATIONAL LEVEL | SECTORAL/ NATIONAL/ INTERNATIONAL |
|---|---|---|---|---|
| Interviews/ Questionnaire | In-depth interviews of members of the exemplar team about their occupational lives and meaning of team work to them | Interviews with the Refinery's 5 team leaders on team level practices in the Refinery | Semi- structured interviews of key respondents in the organization<br>Semi-structured interviews with 4 key respondents at a sister AMZIM group refinery (mainly to corroborate information about the wider organizational system | |
| Participant/ Direct Observation | | Joining the exemplar team as an observer for a full set of shifts and attending all their meetings | | |
| Archival/ Document Reviews | | Examining/Reviewing all available minutes of the exemplar team's meetings and any available written team document or records | Review of Organization's HR/HRD policy documents and Reports<br>Review of any available BSR Works Council minutes from 1998 to 2002 (5yrs) for references to SDWTs and related issues | Review of mining sector employer, union and state reports and public pronouncements and legal documents<br>Review of the literature on team-based empowerment as well as written references two work organization and structuring in the industry. |

Table 9

*A preliminary framework for qualifying purported team-based high involvement management claims at BSR (adapted from Osterman 1994; Pil & Mac Duffie, 1996; Wood, 1999)*

| **Organizational SDWT Related Criterion** | **Osterman (1994) *** | **Pil & Mac-Duffie (1996) **** | **Wood (1999)** | **BSR (2002) ***** |
|---|---|---|---|---|
| TQM (Quality efforts decentralised to shop floor) | • | • | • | • |
| "On-line" Teams Work Teams | • | • | • | • |
| "Off –line" Regular problem solving groups eg Quality Circles, Green Areas etc | • | • | • | • |
| Job rotation | • | • | • | • |
| Formal Employee Suggestion Program | | • | | • |
| Cross Training/ Multi- skilling | • | | • | • |
| Human Relations skills as selection criteria | | • | • | • |
| Internal Recruitment | | | • | • |
| Employment Security Policy | | | • | |
| Use of Statistical Process Control (SPC) | | | • | • |
| Organization Training Plan with 2 year or longer cycles | | | • | • |
| Contingent Compensation | | | • | • |
| Single status terms and conditions of employment (No petty status differentials eg canteen, reserved car parks) | | | • | |
| Flexible /generic job descriptions | | | • | |
| Explicit job design policy that ensures full use of workers skills and abilities | | | • | • |
| Regular Team briefings | | | • | • |
| | | | | |

**Notes**

* Osterman's criterion is that at least 50% of core employees must be involved in at any two

** Pil & MacDuffie have a 'within item' grading (which has not been used here)

*** Osterman's definition of core employees (shared by Wood) as *non-supervisory ,non management workers in the establishment who are directly involved in making the product or providing the service*, is adopted here.

Table 10

*Detailed table on the composite framework for qualifying the P/L Team as a SDWT.*

(Adapted from Byham1991; Gulowsen1972; Katzenbach & Smith 1993; Kinlaw 1993)

| **Team Activity Normally Associated with SDWTs (In addition to normal tasks)** | **Observed/ Confirmed at P/L SDWT** | | | |
|---|---|---|---|---|
| | **Not Confirmed** | **Confirmed (None)** | **Partial** | **Confirmed (Fully)** |
| Developing the team | • | | | |
| Making decisions | | | • | |
| Active Problem Solving meetings | | | | • |
| Sharing information | | | | • |
| Learning | | | • | |
| Designing improvement projects | • | | | |
| Job rotation | | | | • |
| Multi-skilling | | | | • |
| Performs routine equipment maintenance | | | | • |
| Maintain safety and House keeping | | | | • |
| Vertically loaded tasks | | | • | |
| Shared leadership roles | | | • | |
| Specific Team purpose/goals | | | | • |
| Open ended team discussions | | | | • |
| Qualitative influence over goals (What) | | • | | |
| Quantitative influence over goals (How much) | | • | | |
| Can decide where to work (Where) | | • | | |
| Can choose production methods (How) | | • | | |
| Internally distributes own tasks | | | • | |
| Reviews its own performance | | | • | |
| Implements process improvements | | | • | |
| Takes responsibility for the quality of its output | | | | • |

| | | | | |
|---|---|---|---|---|
| Can stop production for quality/safety reasons | | | | • |
| Relating to clients or suppliers | • | | | |
| Interacts with internal customers | | | • | |
| Determine s training needs | | | • | |
| Address training needs | | | • | |
| Handle individual Team member performance problems | • | | | |
| Handle individual performance appraisals | • | | | |
| Make compensation decisions | | • | | |
| Prepares its own budget | | | • | |
| Manages its own budget | | | • | |
| Decides its own membership | | • | | |
| Can expel an unwanted member | | • | | |
| Decides its own leadership | | • | | |

Table 11

*Tabular Summary of Key Information about P/L Team Members*

| Name | Age | Highest Educational level | Community leadership | Current Job title | BNC (yrs) | P/L Team (Yrs) | List of Training Courses Attended at BNC | Other P/ L Jobs done |
|---|---|---|---|---|---|---|---|---|
| A Binauli (AB) (Team Leader) | 42 | Junior Certificate | Yes Church Choir master | Team Leader | 25years | 3 Years | Comm Skills; SWDT Basic Supervision; First Aid Safety motivation for managers; 6 M's; CIP part 1& 2; EMS; Code conduct & ethics; Good citizenship; QA awareness MIMS Training | Operator Shift foreman |
| Vhane Chilokola (VC) | 35 | O'Level | Church leader | Control Room Plant Operator | 12Yrs | 3 | Basic Supervision ,First aid, C.I.P, Based Behaviour Safety B.B.S , Comm Skills ,6M simulation, Code of ethics ,Good Citizenship, Motivation Safety for managers, Principles of basic supervision | iv |
| James Chirwa (JC) | 36 yrs | O' Level | Treasurer/church | Control Room Plant Operator | 13 yrs | 4 yrs | Basic Supervision , 6M Simulation , QA , Industrial First Aid; Comm skills (supervisory), Supervisory Effectiveness , Safety for Managers , C.I.P , E.M.S.,Code of Ethics , Computers ( Excel) . | iv ; Gang leader (supervisor) . |
| Filmon Chirwa (FC) | 32 | O' Level | Executive Secretary of Burial Society | Control Room Plant Operator | 10 | 4 | Basic Supervision ; 6M simulation ,Q.A , Industrial First Aid, Comm skills (supervisory), Supervisory Effectiveness , SDWT Courses Motivation Safety for Managers ,C.I.P., E.M.S. ,Code of Ethics , Computers | Metallrgical Clerk |
| Wellington Manda (WM) | 44 | O Level | None | Control Room Plant operator | 19 | 4 | Basic Supervision ,First aid, C.I.P, Based Behaviour Safety B.B.S , Comm Skills ,6M simulation, Code of ethics ,Good Citizenship, Motivation Safety for managers, Principles of basic supervision | Attendant, Supervisor |
| | | | | | | | | |

| | e | Educational level | y leadership | Job title (See key) | (yrs) | Team (Yrs) | Attended at BNC | P/ L Jobs done ( see Key) |
|---|---|---|---|---|---|---|---|---|
| George Kaluzi (GK) | 24 | O'Level | None | i | 6 | 1(ex boilers and mines) | Communication skills, Code of Ethics, Good citizenship First Aid ,Quality assurance | None |
| Benson Mbaringa (BM) | 23 | O'Level | None | v | 4 | 2 | Comm Skills, first Aid ,C.I.P.,Code of ethics Quality assurance, Good citizenship | None |
| Wonder Asiki (WA) | 30 | O'Level | None | vi | 9 | 3 | First Aid, Comm skills, C.I.P, Code of Ethics ,Quality assurance ,Good citizenship. | None |
| Damson Arab (DA) | 28 yrs | O' level | None | iv | 10 yrs | 4 yrs | Industrial First Aid , Comm skills ,Code of Ethics , Good Citizenship , Q.A , C.I.P , EMS , Safety Awareness | i ; ii |
| Lewis Kachaka (LK) | 47 yrs | Grade 7 | Church leader | i | 18 yrs | 4 yrs | 6M Simulation , Code of Ethics , Industrial First Aid ,Good Citizenship , C.I.P. , Safety Awareness , E.M.S. , Comm skills , Q.A . | ii ; iv ; v |
| George Jamu (GJ) | 40 yrs | O'Level | None | ii | 13 yrs | 4 yrs | 6 M Simulation ,Industrial First Aid , Good Citizenship ,C.I.P.) , Safety Awareness ,Code of Ethics Comm skills , Q.A ; E.M.S. | i ; iv ; v |
| Chakanetsa Makono (CM) | 46 | Form two | N/a | v | 24 | 3 | First Aid, Code of Ethics, C.I.P, Comm Skills, Good citizenship Quality Assurance | None |
| Henry Ngwerume (HN) | 44 | Grade 7 | N/a | iv | 25 | 4 | First Aid, Comm Skills, C.I. P, Code of ethics, Good citizenship, 6M simulation Basic supervision | iii |
| Professor Mazunde (PM) | 48 | Standard 6 | None | iv | 24 | 4 | QA , First Aid,Comm Skills,C.I. P, Code of ethics,Good citizenship,6M simulation Basic supervision | i ; iii ; v |
| Edwin Katyamakwara (EK) | 29 yrs | O'Level | None | v | 10 yrs | 1 yr | Communication skills ,Code of Ethic , Continual Improvement Programme(C.I.P.) , Good Citizenship , Industrial First Aid , E.M.S.).Safety Awareness , Q.A | ii |
| Cheton Sanga (CS) | 57 yrs | Standard 2 | Priest | v | 31 yrs | 4 yrs | 6M Simulation ,Good Citizenship , EMS ,Code of Ethics ,Comm Skills ,C.I.P. , Industrial First Aid , Safety Awareness , Q.A . | i |
| Mabvuto Sachilili (MC) | 34 | JC | | i | 9 | 2 years | First Aid, Comm skills, C.I.P, QA ,Code of Ethics ,Good citizenship. | ii ; iii ; iv ; v |
| Chakanetsa Katiza (CK) | 32 | O level | | iv | 7 | 2 | First Aid, Communication skills, C.I.P, Code of Ethics ,Quality assurance ,Good citizenship. | |
| Thomas Mazaradaka (T.M) | 40 | JC | | ii | 23 | 4 years | QA , First Aid, Comm Skills, C.I. P, Code of ethics, Good citizenship,6M simulation Basic supervision | v |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Idi Kambora (IK) | 30 | Olevel | | | 8 | 6months | Comm Skills Safety | Ex-Boilers SDWT |
| Julius Nyashanu (JN) | 28 | Olevel | | | 7 | 1yr | Comm Skills , Good Citizenship | Ex-Madziwa Mine |
| Mabasa Rabaya (MR) | 33 | Junior Certificate | Chairman of Church Fund Committee | v | 6 | 1 | Behaviour based Safety Code of Ethics; First aid CIP Good citizenship | |

**Key**

**i. Copper Sulphide Filter attendant**

**ii. Copper Solution Thickener attendant**

**iii. Press attendant**

**iv. Autoclave Attendant**

**v.5 Press Filter attendant**

**vi. Re-pulper attendant**

Table 12

*P/L SDWT Member Age, Education, P/L Membership and Experience (n=23)*

| CHARACTERISTIC | TEAM (incl. Team Leader) | | | T/LEADER |
|---|---|---|---|---|
| | Range | Mean | Standard Deviation | |
| Member Age (years) | 23 - 57 | 36.8 | 8.7 | 42 |
| Formal Education (Years) | 4 - 13 | 9.9 | 1.84 | 9 |
| P/L SDWT Membership / Experience in (years) | 1 - 4 | 2.9 | 1.2 | 3 |
| BNC Work Experience (years) | 4 - 31 | 14 | 7.8 | 25 |

Table 13

*A Review of the BNC and AMZIM training/ audit reports from 1996-2000*

| Period | BNC Report<br>Relevant Highlights | Amzim Report<br>Relevant Highlights |
|---|---|---|
| **1995 /96** | 7. Report not available | **8.** Reference to BNC Plan to make **line managers the centre of the training process**<br>9. Reference to "on-going" Continuous Improvement Programme at BNC |
| **1996 /97 /98** | • Foreword by CEO (then GM) Dr Chimimba alluded to the Organizational Renewal Initiative which "was developed in 1996 as a vehicle to bring about fundamental changes on a broad front…in anticipation of … increase in competition in the Nickel industry and (a)…resultant drop in the cost of production by the major producers.<br>• Foreword also stated BNC 's "commitment to be a low cost producer of quality nickel by the year 2000"<br>• On SDWTs: the objective of the SDWT is to allow employees autonomy in focusing on and resolving local issues . Results have been positive and the objective is that by the end of 1999 the whole organization will be structured on this model<br>• Indicated that SDWTs were being coupled with the continuous improvement programme (CIP)<br>• Reported that in 1998 all 750 BSR employees had attended the one day CIP refresher programme | • Noted the impending restructure of AAC into a world class corporation (with a London listing) and called on Amzim Group companies to translate this vision to the development of world class employees at all levels<br>• Recommended (following BNC's initiative) that "every group Company should have self –directed work teams and strong , line driven ,training".<br>• Recommended a focus on the development of supervisors and operational employees(p 8) and decisions on key interventions to support SDWTs that are appropriate to Amzim's core business and organizational structure. This recommendation was specifically noted as targeted at ZAL, BNC and Border Timbers Ltd<br>• Recommended the **DEVELOPMENT OF CASE STUDIES** on key areas such as SDWTs to share with other group companies during the( also recommended) annual HRD and Training Days |
| **1999 /2000** | • Started off by stating that "our objective is to develop a human resource base that | • Started by noting that almost everyone (during |

| Period | BNC Report<br>Relevant Highlights | Amzim Report<br>Relevant Highlights |
|---|---|---|
| | meets the challenges of the 21st century by having world class skills and competencies in both managerial and technical fields and… at all levels within the (BNC) group<br>• Gave a historical account of major initiatives at BNC<br>• The Lexion (Organizational Renewal Initiative ) intervention provided a basis for "best practice" OD. However somewhere along the line these best practice strategies were abandoned. The advent of Anglo PLc with its focus on SHE activities for example resulted in the Training and Department concentrating on basic operational issues at the expense of Strategic HRD issues<br>• The report appended a list of AMZIM strategic plans which made no mention of employee empowerment or involvement but mentioned an undertaking "to create a safe working environment in which jobs are challenging and the scope individual development is great ( and rewards will be dependent on performance).<br>• Referred to line driven training initiative as "the biggest disappointment and failure… brought about by the removal of the original training co-ordinators(to make them SHE officers)… and their replacement with people who were either ignorant of the process or were not keen to do so' p.4<br>• Said line driven training " cannot be effective at this stage as line managers are not ready"<br>• Reported on progress on Multi- skilling<br>• The bulk of multi-skilling had been carried out in the engineering sections" but "21 operatives from the Refinery Section had been trained in the standard boiler maintenance and operation techniques"p14<br>• Reported that at all BNC operations " the majority of teams have been set up and their objectives /outputs have also been identified" p 35<br>• Said SDWT's had concentrated on the **team leaders** (up till then) and " a leadership programme was designed and | field evaluations) had expressed **concerns about the Zimbabwean economy.**<br>• **Commended BNC on its Quality people** " … a particular strength at BNC. Supervisors and managers are well qualified and enthusiastic ( and many ) are in the process f developing themselves further and see the roles they play as mentors and coaches as important' p16<br>• Noted "three *demanding* top driven Anglo Plc programmes Safety Health and Environment(SHE), Mining Industry Inventory Management Systems (MIMS)and Fraud Management Initiative (FMI) had been introduced group wide in 1999/2000<br>• Noted that "from the outset it was made clear to auditors that training and development had suffered due to a reallocation of resources, particularly to the SHE function" p 16<br>• Noted that whilst corporate driven initiatives such as SHE FMI and IT/MIMS Implementation had been implemented well **"some good interventions such as SDWTs had faltered" p. 17**<br>• **Recommended that the "planned resurrection of the BNC SDWT initiative be instituted, taking into account risk assessments and needs analyses (and added).. it is important however not to over – complicate this initiative.p.18** |

| Period | BNC Report<br>Relevant Highlights | Amzim Report<br>Relevant Highlights |
|---|---|---|
| | delivered to all team leaders across the group"<br>• Reported that the development of a programme for **Team members** "was underway and training should start towards the the end of the year (2000)<br>• Reported that the only other outstanding issue in the intervention is the reward structure which should be incorporated in the new bonus scheme.<br>• Noted " mounting expectations from both managers and employees on the success of the initiative ) and cautioned that "these should be managed effectively"p6<br>• Reported that a 9 point SDWT implementation model had been agreed<br>• Reported that "Phase 5,6 and 7 (define competencies; identify gaps; close gaps) on the SDWT implementation model require a lot of work from both line managers and the training function "p 35<br>• Outlined SDWT Plans for 2000<br>- complete definition of outputs & standards<br>- Define **T/Leader** competencies & training needs<br>- Implement resultant training & development plans<br>- Repeat above 2 steps for **T/members**<br>- Implement new team reward/ incentive scheme<br>- Draw up prog for T/L and CRO multi-skilling process<br>- Review Performance of SDWTs<br>• Reported that SHE, Code of Ethics and fraud mangmnt " took the centre stage of training …with every individual in BNC having received training in Code of Ethics and Fraud management within 2 months<br>• Under the subheading " Capacity Building, the Report referred to "the issue of creating **a "B" team (as) becoming more and more imperative as the HIV / Aids pandemic continues to reduce skills"** | • Recommended focus groups at lower levels to get input and by in into the development of new company value systems |

Table 14

*Type and extent of member training in the Pressure Leach SDWT*

| | Team Leader (AB) | CRO ( all 4) | Most experienced Member (LK) | Least experienced Member (IK) |
|---|---|---|---|---|
| **SDWT Training** | • | • | | |
| **Communication Skills for supervisors** | • | • | | |
| **MIMS (Mining Inventory Management System) Training** | • | • | | |
| **Basic Supervision** | • | • | | |
| **Safety Motivation for Managers** | • | • | | |
| **Safety Awareness** | | • | • | • |
| **Behaviour based safety** | | • | • | |
| **QA Awareness** | • | • | • | |
| **CIP (Continuous Improvement Programme) 2** | • | • | • | ? |
| **CIP (Continuous Improvement Programme) 1** | • | • | • | • |
| **Good Citizenship** | • | • | • | |
| **Environmental Management Systems** | • | • | • | |
| **Code of Conduct and Ethics** | • | • | • | |
| **Basic Communication skills** | | • | • | • |
| **6Ms** | • | • | • | • |
| **Industrial first aid** | • | • | • | |
| **On the job training for own job** | • | • | • | • |
| **On the job training for all team jobs** | | • | • | |
| **Multi-skilling (Basic Maintenance skills** | | • | • | |

Table 15

*Team Leaders' views on Participation in Decision Making in their Teams*

| **T/L, Team Characteristics & Issue Involvement** | **Leach Plant SDWT** | **Cobalt & SS Plant SDWT** | **P/L SDWT** | **Tank House SDWT** | **Metal Handling SDWT** |
|---|---|---|---|---|---|
| **T/L Initials** | **KN** | **GM** | **AB** | **WM** | **CM** |
| **T/L Age (years)** | **45** | **46** | **42** | **46** | **44** |
| **T/L Exp (Team) (yrs)** | **2** | **4** | **3** | **3** | **6months** |
| **T/L Exp (BNC) (yrs)** | **23** | **26** | **25** | **22** | **22** |
| **T/L Highest Educational Level** | **O Level** | **O level** | **JC** | **O level** | **O level** |
| **Num in Team** | **63** | **33** | **22** | **64** | **70** |
| Housekeeping | 2 | 1 | 1 | 1 | 1 |
| Meeting Facilitation | 2 | 1 | 3 | 3 | 3 |
| Member Training Needs | 4 | 2 | 3 | 1 | 3 |
| Scheduling Member Training | 3 | 4 | 3 | 4 | 4 |
| Team Training | 4 | 1 | 3 | 6 | 5 |
| Work Scheduling | 3 | 2 | 2 | 3 | 3 |
| Vacation/Leave Scheduling | 2 | 1 | 1 | 2 | 4 |
| Decision to recruit new member | 2 | 4 | 1 | 4 | 5 |
| Process of recruitment | 4 | 4 | 2 | 6 | 4 |
| Member Job (Re)design | 5 | 2 | 2 | 2 | 2 |
| Choosing New Technology | 5 | 5 | 5 | 6 | 5 |
| Member Remuneration | 5 | 5 | 5 | 6 | 5 |
| Incentive Bonus Allocation | 5 | 5 | 5 | 5 | 5 |
| Member Discipline | 3 | 3 | 3 | 3 | 5 |
| Member Dismissal | 5 | 5 | 4 | 5 | 5 |
| Team Production Targets | 5 | 5 | 4 | 4 | 4 |
| Team Consumables Budget | 4 | 5 | 4 | 4 | 3 |
| Communication w Other | 3 | 2 | 3 | 1 | 3 |

| teams | | | | | |
|---|---|---|---|---|---|
| Communic. (internal customers) | 3 | 2 | 3 | 2 | 4 |
| Communic w suppliers | 4 | 3 | 5 | 2 | 6 |
| Communic (external customers) | 5 | 4 | 5 | 4 | 6 |
| Quality Control & Improvement | 1 | 2 | 3 | 2 | 4 |
| Safety & Health | 1 | 1 | 1 | 5 | 2 |
| **T alone or T+T/L** | **6** | **11** | **8** | **8** | **3** |

**Key :**

**1 Team/A team member**

**1 Team Leader with Team**

**2 Team Leader Alone**

**3 Team Leader with more senior managers**

**4 More senior Managers**

**5 Others (eg Human Resources or other functional specialists)**

- **Responses classified 1 and 2 ie *team members on their own or together with leaders* are tallied at the bottom and regarded as indicating higher levels of team self direction.**

Table 16

*Tabular summary of BSR (Refinery) SDWT effectiveness review (Summarised from findings by Manhando, 2001).*

| | **MEASURE** | | | | | | |
|---|---|---|---|---|---|---|---|
| **BSR Refinery SDWT** | Productivity /Efficiency | Plant Availability | Cobalt Recovery | Product Quality? Customer Complaint | Life Threatening Accident (LTA) | Absenteeism | Disciplinary Cases |
| Leach Plant N= 63 (in year 2000) | Slightly worse | NA | Worse | NA | Worse | Worse | Worse |
| P/L Plant N=25 | Improved (up 35%) | Improved ( from 82-92%) | NA | NA | Excellent Record Maintained | Improved | Improved |
| Boilers* N=15 | Improved | Improved | NA | NA | Excellent Record Maintained | Improved | Improved |
| Tank House N=60 | Worsened then improved | | NA | Worse | Improved | Slightly Worse | Remained poor |
| Metal Handling N=60 | NA | Marginally improved | NA | Worsened then improved | Improved | Improved | Improved (40%) |

* Now part of Cobalt SS SDWT with 33 members

Table 17

*Summary of BSR Production and Main Works Council Minutes Review*

| Issue | References in 19 W/C Documents Reviewed |
|---|---|
| Self Directed Work Teams | 19 |
| Multi- Skilling | 7 |
| Work/ Job Re-design | 6 |
| Incentive Bonus | 24 |
| Other Involvement Initiatives (eg Green areas) | 5 |
| Refinery Communication Structures/ Processes | 18 |
| Quality Issues | 4 |
| Productivity Related suggestions /issues | 13 |
| Safety Issues | 52 |
| Job descriptions and grading Issues | 50 |
| Recruitment, Pay and Promotion Issues | 13 |
| Unfair Labour Practice allegations / IR Issues | 8 |
| Physical Comfort & Working Environment | 43 |
| Housing and Welfare Issues | 15 |
| **TOTAL ISSUE COUNT** | **277** |
| **Total SDWT/ Employee Involvement related references** | **129** |

Table 18

*Tabular overview/summary of documentary review*

| **Name of Document Or Archival Record** | **Period Reviewed** | **# of Docs** | **SDWT/ related refs** | **Researcher Summary Comment/Note** |
|---|---|---|---|---|
| Annual Company (BNC) Report | **1998-2001** | **4** | **3** | Most notable 1998 & 99<br>None in 2000 & 2001 |
| BNC Ltd Organizational Structures Manual | **Doc dated Nov/ 2002** | **1** | **1** | Refers "Team Leaders" but teams are referred by their technical names |
| BNC Reward and remuneration Policy | **Doc dated<br><br>Sept/2000** | **1** | **Several refs to multi-skilling** | Refers to support for broad banding; multi-skilling and multi-tasking by additional pay for extra skills ; No reference to SDWT or Team-based remuneration<br>Document signed by Mr SD Reynish |
| Training & Dvpmt policy | **Dated 1999** | **1** | **None** | Document is signed by Mr Rod Petzer |
| BNC & AMZIM Training Audit Reports | **BNC 1997-2000<br><br><br>AMZIM 1995-2000** | **2<br><br><br>3** | **Several significant<br><br><br>Several Significant** | Bi-annual : 1997- 1998; 1999- 2000<br><br>Bi-annual : 1995-1996; 1997-981998;2000 |
| Multi-Skilling Policy & Guidelines | **Dated 1999** | **1** | **Numerous significant** | (Multi-skilling) |
| Works Council Minutes | **1998-2002** | **19** | **Numerous significant** | Main forum for tabling and resolution of enterprise level issues excluding wages |
| Mining Industry Collective Bargaining Agreement (Statutory Instrument 152 0f 1990) | **1990-date subject to Ammend-ments** | **1** | **Describes in inflexible detail ALL the jobs in bargaining unit** | General Mining Industry Collective Bargaining Agreement. Defines the bargaining unit (all non management employees) and basic non management job descriptions/definitions |

| | | | | |
|---|---|---|---|---|
| Statutory Instruments 103 of 2001; 230 of 2001 and 85 of 2002, | **2000-2002** | **3** | **None** | Give legal status to annual mining industry (Chamber of Mines & AMWZ) National Employment Council (NEC) agreements (Mainly on wages) |
| Statutory Instrument 372 of 1985 aka Labour Rltns (Workers Committee) Regulations, 1985 | **Dated 1985** | **1** | **None** | Gave belated legal status to enterprise level non-adversarial involvement structures<br>Defines the objectives and scope of the Workers Committees & Councils |
| Middle Management Development Programme (MMDP) Syndicate Group Project Reports | **1997-2001 (Reviews conducted April/May 2001)** | **5** | **Numerous Significant** | 5 groups of middle managers on an in-house management development programme did a review of Multiskilling and SDWT initiatives in the organization. |

Table 19
*Different perceptions of the BNC SDWT Initiative (Adapted from Dlamini et al. 2001)*

| Issue | % of Top Management Agreeing/ Strongly agreeing | % of Middle Management Agreeing/ Strongly agreeing | % of Shop-floor Workers Agreeing/ Strongly agreeing |
|---|---|---|---|
| Employees understand the SDWT concept | 80 | 83 | 78 (22 strongly) |
| Employees understand Company intentions in instituting SDWTs | 40 | 33 | 44 (22 strongly) |
| Employees might lose jobs | 40 (60 don't know) | 33 | 76 |
| Employees will benefit | 100 (20 strongly) | 100 (83 strongly) | 44 |
| Organization will benefit | 100 (40 strongly) | 100 | 100 |
| SDWTs will create unsafe working conditions | 0 | 17 | 22 |
| SDWTs achievable at BNC | 80 | 100 | 78 |
| The Organization is capable of Managing SDWTs to the benefit of all employees | 80 | 83 | 66 |
| SDWTs reduce the authority levels of employees | 0 | 0 | 76 |
| The SDWT initiative has been successful | 40 | 0 | 40 |

Table 20

*Analysis of middle management Development Programme (MMPD) Groups' Evaluative Reviews of BNC SDWTs and Multi Skilling*

| **Doc Authors** | **Chiwaka & Masukwedza** | **Dlamini et al.** | **Getec** | **Mejic** | **Poplar & Godwin** |
|---|---|---|---|---|---|
| **Review Yr** | **2001** | **2001** | **2001** | **2001** | **2001** |
| **Scope/ Focus** | **SDWTs & Multi-Skilling. Mining Div (Shangani)** | **SDWTs & Multiskilling (BNC)** | **SDWTs & MS (BNC)** | **SDWTs & MS at BNC** | **SDWTs and MS at BNC** |
| **Level Of Reviewer** | **Middle Managers (MM)** | **MM** | **MM** | **MM** | **MM** |
| **Summary Evaluation** | **Largely a Failure (particularly in the mines Shangani Mine).** Resuscitation will be difficult but possible. | **Largely a failure of company-wide implementation** | **Largely a failure of implementation** at BNC level Half baked implementation | Slow Take off with **varying success. Plagued by unfulfilled promises** | **Major intervention which "regressed"** because it was not supported by a proper implementation process |
| **Main Positive findings** | Increased productivity of Multi- skilled artisans ; Reduced call outs ; increased plant | Increased Production (both Smelter& Refinery); Reduced absenteeism; Reduced | Multi-skilling worked; Reduction in Them and us attitude>>joint problem solving; | SDWTs still functioning with some outstanding successes at BSR and one or two mine | There was a visionary ( Dr Chimimba) with a clear vision for the |

| Doc Authors | Chiwaka & Masukwedza | Dlamini et al. | Getec | Mejic | Poplar & Godwin |
|---|---|---|---|---|---|
| | efficiencies; empowered and motivated workforce; | accident rates; Most respondents agreed that SDWTs & MS were appropriate & achievable for BNC | ;Successfully sold by BSR Manager; All BSR Team Leaders trained in SDWT concept (not so in Mining); Every BNC employee bought into concept and was ready to run with it | departments. Multi skilled A1 employees upgraded eg Trojan Mine Increased pay packets for incentivised, multiskilled employees Productivity increases in some areas . Increased plant availability because of multi skilled production workers doing their own basic maintenance (eg Boilers) | organization ; The organizational renewal project team di achieve some successes esp on multi-skilling (Initiallly) Lots of enthusiasm about SDWTs with people raring to go and reap the benefits ; Sense of urgency that was conducive to change ; |
| **Main Negative findings** | No clear vision on SDWT & multi-skilling; No clear implementation strategy; Clash with career | Lack of Top Mgmnt commitment; Lack of Top Mgmnt continuity; "Since the | No official project status;(Charter with budget C/B analysis, Proj Manager, Board Approval; | Lack of Commitment at EXCO level; Unfulfilled promises of team level | Lack of snr Management commitment ; Lack of implementai on Teams at |

| Doc Authors | Chiwaka & Masukwedza | Dlamini et al. | Getec | Mejic | Poplar & Godwin |
|---|---|---|---|---|---|
| | dvpt plans Project Team unknown; too much focus on senior artisans; Insufficient training of middle management; No ownership by local senior mngmnt. Remuneration promises made and not kept; Differently paid workers expected to perform same tasks ; Too many initiatives at the same time (SDWT; Org Renewal; CIP; Incentive Bonus; Multi skilling;) resulting in confusion; Management back-tracking | departure of Dr Chimimba SDWT& M/S do not seem to have been on the Exec Mgt agenda No middle mgmnt buy-in No Common Mgmnt/Emp'ye e understanding of objectives ; No comprehensive Change Mgmt Process; No sufficiently detailed guide & implementation Plan Complicated & Unclear reward /incentive structure; Insufficient training of Implementors; Rushed Implementation; Failure of SDWTs robbed | SDWT/Multi skilling not complementary enough; High turnover of top mngmnt; Building SDWT around Bonuses instead of Long Term issues; delays in fianlising reward scheme made explaining SDWts difficult; No dedicated task force; Insecurity at the time SDWTs were introduced Hierarchical Structure/Paters on Grading System; Broken Remuneration Promises; Inappropriate team structuring eg Shangani high skilled individuals were put in teams | incentive bonuses; Lack of continuity at EXCO level Lack of buy-in at Department level.; Some shopfloor operatives reported experiencing no difference at all, "same gang leaders who bark the same instructions the same way"; Legal (NEC) job definition constraints ; Paterson Job Evaluation/grading system; Established individual meritocracy; Lack of role clarity and | operations ; Failure to prepare management and employees; Turnover among key people ; Lack of a Team model and knowledge of how teams operate; Unfulfilled expectations ; Lack of proper training; Lack of clear reward system;Policies and procedures not reviewed; Lack of support systems |

| Doc Authors | Chiwaka & Masukwedza | Dlamini et al. | Getec | Mejic | Poplar & Godwin |
|---|---|---|---|---|---|
| | (esp. on remuneration). Not enough consultation> suspicion ; Lack of Snr mine management commitment ; No allowance for initial dip in productivity during team learning phase; No needs analysis; no proper selection of suitable team leaders; Bonus scheme was inflexible and too dependent on external factors (Z$ exchange rate) even when teams achieved prod targets.; Lack of monitoring and evaluation; | M/S of space to be successful; Selection of candidates for M/S in mines based on seniority; No official Evaluation | were their skill was not needed leading to de-motivation | individual accountability in some areas; Some teams just too big; Foreman Insecurity ; No selection , leading to unskilled and unsuitable Team leaders with a history of autocratic supervision; Inadequate training for team leadership and membership role Inadequately skilled (multi-skilled ) production staff; Inappropriate targeting of engineering foremen for multi skilling in the mines; | |

| Doc Authors | Chiwaka & Masukwedza | Dlamini et al. | Getec | Mejic | Poplar & Godwin |
|---|---|---|---|---|---|
| | Implementation too fast. | | | Reward structure ; Lack of proper review and feedback system | |
| **Main Recommend-ations** | Clear Policy on Initiatives' Objectives; Follow clear stage by stage , operation by operation implementation plan; De-link initiative from bonus scheme until it is fully implemented; More visible top Mgmnt championing; Set up Independent evaluation; Make training more relevant through needs analysis Communicate clearly and | Address Weaknesses and re-launch; Install Proj Team headed by passionate Proj manager with visible authority and clear terms of reference; "Project must be opened like a Capital vote: Planned, documented and evaluated"; Maintain visible top mngmnt commitment; Plan and Implement in shortest possible time; Put Implementation milestones as | Create shared Vision and Strategy of SDWT Cater for implications : need for new reward structure; Full-time implementation Task force with clear targets and quarterly review; Ensure entrenchment as management systems that can survive executive Management changes Change the current management | Well articulated and documented vision mission and policy on SDWTs Multi-disciplinary Proj Team Three Phase Change Management Process : Awareness >>Transformation>>Continuous Improvement; Implementation as well as Compensation Model for multi skills | Three Phased approach: **Awareness:** planning & prep work, securing buy-in & mngmnt commitment , readiness assessment etc **Transformation Phase** Organization wide buy-in, piloting & implementation **Continuous improvement Phase** |

| Doc Authors | Chiwaka & Masukwedza | Dlamini et al. | Getec | Mejic | Poplar & Godwin |
|---|---|---|---|---|---|
| | consistently to all stakeholders | Mgmnt KPIs; Give Teams real authority "framework…to implement without need for constant authorizations'; Institute an unambiguous and transparent bonus scheme; "Don't listen too much to consultants" | culture that is based on a hierarchical structure. Run SDWT and multi skilling as complementary mutually supporting initiatives Change management – deal with fears(esp mid mgmnt and shift boss level) Recruit adaptable people Visit and Learn from more successful organizations Select Team Leaders carefully and train them on their new role | | Measuring, auditing, retraining, redeployment, problem solving, rewarding, recognition |
| **Presented to Top** | Yes | Yes | Yes | Yes | Yes |

| **Doc Authors** | **Chiwaka & Masukwedza** | **Dlamini et al.** | **Getec** | **Mejic** | **Poplar & Godwin** |
|---|---|---|---|---|---|
| **Mgmnt ?** | | | | | |
| **Recommendations followed Up/implemented by 2002** | New Bonus Scheme in 2003 (Planned) | New Bonus Scheme in 2003 (Planned) | | | |

Table 21

*Excerpts from interviews with Key Organizational Respondents (Excluding Team Leaders)*

| **Respondent (Role/Title)** | **Initials** | **Comments and or verbatim excerpts** |
|---|---|---|
| **BSR GM (Position officially called Production Manager-BSR)** | **BM (was Refinery Production Superintendent at the time of SDWT initiative)** | **(On Rationale)** The rationale for SDWTs was the empowerment of workers by breaking down the structure into smaller teams. It was hoped that this would benefit the organization through accessing worker productivity, thinking creativity suggestions and greater control over resources. Initiative was a strategic move by the executive leaders hip team under Dr Chimimba.<br><br>**( On Process)** Union was involved once the decision had been made but before and communication and training took place issue was debated at Works Council Assurances were made that the SDWTs would be within NEC framework and system) the union ( after by-in) helped in communication / selling the concept. After that the issue was regularly reported on at Works Council meetings<br><br>**(On Changes)** Before SDWTs, budgeting, ordering interaction with suppliers and general accountability was at superintendent level and higher. .In the SDWT system budgets are now down at team or (Old section) level and only presented to higher levels for approval. Accountability is now at SDWT level.<br><br>**(On successes)** Variable success was achieved depending on individual drivers at senior / middle management levels> At the time of the initiative July July Ndlovu was BSR Manager, Raphael Moyo was Refinery Manager and I was Refinery Production Superintendent. Various indices went up at BSR, but Mining Division were a different issue. It appears success |

| | | |
|---|---|---|
| | | depended on buy in and support at the right level<br>**(On resistance)** Some people, particularly at Section Head level felt threatened ( and some still do) by SDWTs but there has been very visible empowerment at Plant Operator level<br>(See also secondary analysis (Section 4.10.2 in this report ) of Manhando (2001)'s full evaluation of the Initiative) |
| **BNC HRM** | **DC** | **(On rationale)** Low nickel price precipitated crisis for BNC which had always been always been one of the world's lowest grade ore producers .<br>**(On history/process)** Consultants (LEXION) were called in by initiating GM Dr Leonard Chimimba "to look at everything" and ended up spending 1bout 18 months in 1997/8 facilitating a survival strategy based on a bundle of business process changes including Multi-skilled workforce working in SDWTs; profit sharing incentive (monthly for lower levels and quarterly for managers); 70/30 employer /employee gain sharing split. But these incentive. But the problem with the incentives is that they were global and had no direct link to SDWT level measurements of performance .<br><br>**(On results)** Initiating GM left in early 1999 an there were two successors in the two years he was away. Role of committed line management esp in the absence of DR Chimimba, was critical. This period of different BNC leadership also saw several things happening: Consultants left; the price of nickel improved considerably ( esp in year 2000). A combination of these changes helped to derail the initiative's successful implementation on a BNC wide level More success was seen in the BSR where Mr July Ndlovu was the Manager. This was the critical difference. Without management commitment in the mining division employees became reluctant.<br>(On Communication ) believes the initiative was "effectively communicated"<br>**(On structural impediments)** The Paterson System is not as rigid as is often claimed. (Gives example of the Mining Div |

| | | |
|---|---|---|
| | | which has actually eliminated Paterson A1 band and other AMZIM companies that have removed even A2 "without the roof falling in". Admits that Multi-skilling was and is not "legalised via the NEC"<br>**(On corrective action)** says the SDWT and multi-skilling initiatives were reviewed by groups of middle managers in 2001 who presented recommendations ( some very good) to the Company's EXCO under the leadership of Mr Reynish (as CEO). They "seemed to be well received but were not acted up"<br>**(On the education level of employees)** believes he country's worker literacy and the company employees' educational level "is good enough to build world class practices on".<br>**(On prospects for SDWTs)** "good if pitfalls are taken into account and the initiative/ revival is line driven". |
| **BNC Training & Manpower Planning Mgr** | **NN Views recorded here based on Dec 2002 discussions ; The Year 2000 SDWT Training Progress Report and archived responses to 2001 MMDP questionnaire .** | **(On initially on track SDWT Plan)**<br>• Reported that a 9 point SDWT implementation model had been agreed"<br>• "Phase 5,6 and 7 (define competencies; identify gaps; close gaps) on the SDWT implementation model require a lot of work from both line managers and the training function "p 35<br>• Reported that at all BNC operations " the majority of teams have been set up and their objectives /outputs have also been identified" p 35<br>• Said SDWT's had concentrated on the **team leaders** (up till then) and " a leadership programme was designed and delivered to all team leaders across the group"<br>• Reported that the development of a programme for **Team members** "was underway and training should start towards the end of the year (2000)<br>• Reported that the only other outstanding issue in the intervention is the reward structure which should be incorporated in the new bonus scheme. |

| | | |
|---|---|---|
| | | **(On Multi skilling progress)** The bulk of multi-skilling had been carried out in the engineering sections" but "21 operatives from the Refinery Section had been trained in the standard boiler maintenance and operation techniques" BNC 2000 p14<br>**(On expectations arising from the team initiative)** " mounting expectations from both managers and employees on the success of the initiative ) and cautioned that "these should be managed effectively" (BNC Report, 2000 p 6)<br><br>**(On SDWT Implementation Failure)** Believes the root of the problems faced by SDWT and the other related initiatives (Org Renewal, Multi-skilling) was the absence of a proper Company project status ( with full Cost Benefit analysis, well sponsored powerful project implementation taskforce). The result was that when Dr Chimimba left and Organizational priorities shifted from strategic to operational HRD issues ( See more on this analysis in the 2000 BNC Training Report).<br>Says there was no effective task force : "it was all left to the HR people and the Training and Manpower Development Manager to handle<br><br>**(On Linking the SDWT Initiative to incentive Scheme)** Says another mistake was to link initiative to incentive scheme and adds that "Rewards actually killed the whole initiative, through complication…and the fact that the reward structure did no take off the ground (2001 MMDP Interview).<br>**(On competing initiatives)** Reported that SHE, Code of Ethics and fraud management " took the centre stage of training …with every individual in BNC having received training in Code of Ethics and Fraud management within 2 months<br>**(On Line driven training)** Referred to line driven training initiative as "the biggest disappointment and failure… brought about by the removal of the original training co-ordinators(to make them SHE officers)… and their replacement with people who were either ignorant of the process or were not keen to do |

| | | |
|---|---|---|
| | | so' Said line driven training " cannot be effective at this stage as line managers are not ready" (From 2000 BNC Training Report p.4) |
| **Refinery Prod Supt** | **JM**<br>• **51 years old**<br>• **26 yrs at BNC**<br>• **O levels**<br>• **Dipl in Extractive Metallurgy**<br>• **Career: Operator> Shift Foreman> Asst Gen Foreman. Gen foreman> Prod Supt**<br>**(Was on his 10th year as General foreman at initiation of SDWTs** | **(On rationale).** Rationale was to enhance efficiency by giving people ownership of their work in smaller teams . Personally I thought it was a good thing to have responsible people running smaller sections. Exciting. Gave me more time to do more interesting things. My role is now more of co-ordination ( though I still report to the refinery manager)<br>**(On history and communication)** First heard about teams from his HOD ( Refinery Manager Mr Raphael Moyo) in a briefing. There was an offsite awareness training of the supervisory/foremen levels before they were appointed as Team Leaders. After their appointment there was a second wave of training of team leaders with their teams.<br>**(On Changes)** Before SDWTs there were 5 shift foremen who reported to me (General foreman). The Business Unit was the refinery. The Refinery plant was divided into 5 sections or Business Units which were to be the SDWTs. "The five foremen were appointed leaders of these teams and given some of the powers which had been mine eg Budgeting for their new BUs/Teams. But authorisation was left with me" Team Leaders now "more involved in their work…more critically analysing and coming up with suggestions"<br>**(On team leader selection , preparation and development)** Team leaders were initially allocated team on the basis of "skills fit" but after a year we rotated them successfully. He says "remember these were people who had already proved themselves" Their initial off site preparation consisted of Business skills training, seminars and team leadership training. The second wave of training (with their teams) focussed on Business skills.<br>**(On qualities of a good Refinery SDWT Leader)** Good communication skills; open minded/ willing to change ; big |

| | | |
|---|---|---|
| | | picture person ; committed to team work.<br>**(ON Teams and their performance)** Says KPIs were introduced for every Section or Team and "in my view these were and are still not very clear *especially the demarcation of the beginning or end of a product or process"* Somethings are simply beyond the control of certain teams eg pressure of steam at Boilers is dependent on machinery capacity. Says the problem of poor measurement spills into the area of incentives. If there is poor measurement this might result in perceptions that there is a "rotation of winners" And some teams are still too big.<br>**(On the Pressure Leach SDWT)** Says the P/L team is outstanding because its members were better selected and specifically trained for the plant. "This has come out in their superior output as well as the number of changes and suggestions that come out of that team." Refinery Teams are motivated<br>**(On SDWT Prospects)** says the refinery can reasonably expect its teams to succeed and team members to achieve. |
| **Refinery Manager** | **EK Was at the Mines (Shangani) as Snr Plant Metallurgist) when teams were introduced (only appointed to Refinery in Sept 2002)** | **(On mines experience)** Information came via a brief by the BNC Technical Services Manager but "I was the driver at Epoch and Shangani Mine. We tried to introduce the system but there were challenges".<br>Shift foremen were now leading lower level teams but there were not enough of them and some ended up leading two teams. Artisans were also not enough for us to allocate to each team and some were floating. Found it easier to teach artisans plant attendance skills than for production people to learn engineering skills. Production people also resisted production skilling of artisans as they feared retrenchments despite assurances. Mines foremen had always been day shift so that could not work as an incentive. It was only seen as a reduction in control. Tried multi skilling but it seemed to only benefit the individuals (not teams).<br>**Mining team leaders were not given any Team leadership** |

| | | |
|---|---|---|
| | | **training. " C6 and above were regarded as senior enough to understand team leadership"**<br>After a while reverted back but multi skilled individuals continue to draw extra pay.<br>**(On Refinery Success)** Thinks the difference between Refinery (success) and Mining (failure) could have been the quality and situation of the Team Leaders<br>**(Attribution of SDWT Success )** Says key to team success is: young more educated members not afraid of change ; willingness to change ; more compact plant; smaller teams.<br>**(On things to do in future to ensure success)** Recruit younger, more educated people at CRO / Attendant level ; Use successes as models ; Provide more leadership training ; Clarify SDWT concept/workings/ earnings). Would personally like to interact more with team leaders.<br>**(SDWT obstacles in the Refinery)** Resistance to change ; remuneration implications of changes; |
| **WC Chair at the time Team Initiative** | **CM** | **( On initial Worker Fears)** Originally SDWTs were communicated in a brief to Works Council Leadership in 1998. Initially Workers Committee was not happy as this was the first time they had had heard of such a thing and there were no other Companies to use as a reference. The fear was that there would be victimisation (of shift foremen) and that once things ran smoothly there would be job losses. In time people started gaining confidence and fears proved to be unfounded. Same with mul;ti-skilling until people were trained and certified and realised they would get skill based increments<br><br>**(On Communication)** Says the SDWT initiative was well communicate and adds that "the company is one of the best when it comes to communication. He says communication was in the form of top down briefings and workers also got information from Workers Committee representatives who, |

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| | | themselves got their information at the monthly WC meetings with senior management where a report and discussion on the issue became a standard agenda item .<br>**(On Positive Outcomes)** These include bonuses (refinery wide) that have been paid "on numerous occasions" when targets have been met. CM says he understands there is a team level bonus that has been promised but workers have not yet seen this. Says the main positive result of SDWTs is that "workers are now more respected for their input and there is now ownership" |
| **Union Exec Member** | **PK** | **( ON what SDWT mean)** Says SDWTs were first mentioned in 1997 and to him the concept means working together as a team" The Most visible change was that shift foremen were moved from plant wide responsibility to leading a section team.<br>**( On rationale for teams)** Says the teams were introduced by management to "to meet productivity targets and team-based bonuses were promised" . They have not been accompanied by job losses and down sizing although shift foremen were redeployed as team leaders.<br>**( On initial Union Response)** "We were told by Mr Raphael Moyo ( then Refinery manager ) that teams were going to be introduced and we asked for explanations" People had a wait and see attitude"<br><br>**(On relationship of SDWT to other initiatives)** PK confirmed the existence of a suggestion scheme but said if people make good suggestions they only get T shirts. Said team leaders and worker Representatives have opportunities to brief workers during team briefs at the beginning of every shift.<br>Says there is no legislation to in support of teams. Current legislation only provides for Works Councils<br>**(On disadvantages),** he cited the lack of communication and communication from management about team progress. Says employees were trained for these teams " but there was no communication and feedback when the initiative seemed to be |

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| | | losing steam" Asked if top management is supportive of teamwork, he says "not really" but says Union is prepared to support SDWT concept if it is communicated and done properly and adds that " although the culture of teams is there , there are some employees who are "individualistic". |

Table 22
*Tabular summary of Reviews of BNC SDWTs by 5 Groups of Middle managers*

| **Doc Authors** | **Chiwaka & Masukwedza** | **Dlamini et al.** | **Getec** | **Mejic** | **Poplar & Godwin** |
|---|---|---|---|---|---|
| **Summary Evaluation** | **Largely a Failure** **(particularly in the mines Shangani Mine).** Resuscitation will be difficult but possible. | **Largely a failure of company-wide implementation** | **Largely a failure of implementation** at BNC level Half baked implementation | Slow Take off with **varying success. Plagued by unfulfilled promises** | **Major intervention which "regressed"** because it was not supported by a proper implementation process |
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|---|---|---|---|---|---|
| **Main Recommendations** | *Clear Policy on Initiatives' Objectives;*<br><br>Follow clear stage by stage , operation by operation implementation plan;<br><br>*De-link initiative from bonus scheme until it is fully implemented ;*<br><br>More visible top Management championing ;<br><br>*Set up Independent evaluation;*<br><br>Make training more relevant through needs analysis<br><br>Communicate clearly and consistently to all stakeholders | *Address Weaknesses and re-launch;*<br><br>Install Project Team headed by passionate Project manager with visible authority and clear terms of reference;<br><br>*"Project must be opened like a Capital vote: Planned, documented and evaluated";*<br><br>Maintain visible top management commitment;<br><br>*Plan and Implement in shortest possible time;*<br><br>Put Implementation milestones as management KPIs;<br><br>*Give Teams real authority framework...to implement without need for constant authorizations ';*<br><br>Institute an unambiguous and transparent bonus scheme;<br><br>*"Don't listen too much to consultants"* | *Create shared Vision and Strategy of SDWT*<br><br>Cater for implications : need for new reward structure;<br><br>Full-time implementation Task force with clear targets and quarterly review;<br><br>*Ensure entrenchment as management systems that can survive executive Management changes*<br><br>Change the current management culture that is based on a hierarchical structure.<br><br>*Run SDWT and multi skilling as complementary mutually supporting initiatives*<br><br>Change management – deal with fears(esp mid management and shift boss level)<br><br>*Recruit adaptable people*<br><br>Visit and Learn from more successful organizations<br><br>*Select Team Leaders carefully and train them on their new role* | *Well articulated and documented vision mission and policy on SDWTs*<br><br>Multi-disciplinary Project Team<br><br>*Three Phase Change Management Process : **Awareness >>Transformation>>Continuous Improvement;***<br><br>*Implementation as well as Compensation Model for multi skills* | Three Phased approach:<br>***Awareness:*** *planning & prep work, securing buy-in & management commitment , readiness assessment etc*<br>**Transformation Phase**<br>Organization wide buy-in, piloting & implementation<br><br>***Continuous improvement Phase***<br>*Measuring, auditing, retraining, redeployment, problem solving, rewarding, recognition* |
| **Presented** | Yes | Yes | Yes | Yes | Yes |

Table 23

*Summary of BSR Production and Main Works Council Minutes Review*

| Issue | References in 19 W/C Documents Reviewed |
|---|---|
| Self Directed Work Teams | 19 |
| Multi- Skilling | 7 |
| Work/ Job Re-design | 6 |
| Incentive Bonus | 24 |
| Other Involvement Initiatives (eg Green areas) | 5 |
| Refinery Communication Structures/ Processes | 18 |
| Quality Issues | 4 |
| Productivity Related suggestions /issues | 13 |
| Safety Issues | 52 |
| Job descriptions and grading Issues | 50 |
| Recruitment, Pay and Promotion Issues | 13 |
| Unfair Labour Practice allegations / IR Issues | 8 |
| Physical Comfort & Working Environment | 43 |
| Housing and Welfare Issues | 15 |
| **TOTAL ISSUE COUNT** | **277** |
| **Total SDWT/ Employee Involvement related references** | **129** |

Table 24

*Excerpts of Case Relevant Material: Refinery Production [Ref(Prod) WC] and Main Works Council [Ref(main) WC] Minutes from 1998-2002*

| **Meeting & Date** | **Reference to SDWTs and Issues related to the initiative** |
|---|---|
| Ref(Prod) WC 30/4/98 | **Green Areas meetings were being conducted on a regular basis** and suggestions recorded in black and white. The General Foreman came up for **criticism for lack of feedback** "feedback expected but no feedback being provided. |
| Ref (Prod) WC 10/4/98 | Refinery manager gave a general overview on SDWTs and their expected impact on the Company after Workers Committee Representatives **(W/C Reps) had "commented that workers had different views about the issue'** |
| Ref(Prod )WC 19/3/99 | Refinery Manager told W/C Reps **that SDWTs would commence in the Refinery in April 1999**. W/C Reps commented that they viewed SDWTs as a system which will bring better rewards to employees and boost production |
| Main WC 26/3/99 | Responding to W/Reps request to increase the pay of Dryer Plant attendants ( who ere now attending to 4 instead of 1 conveyers) the BSR Manager (GM) "explained that following the advent of SDWTs in the BSR the issue would be addressed" |
| Main WC 26/3/99 | The BSR GM clarified the formula for calculating the incentive bonus |
| Main WC 26/3/99 | The BSR GM "explained the essence and concepts of the SDWTs in BSR. He mentioned the advantages of the SDWT- remuneration among others He **cited a job group whose entry point is now B1**" He appealed to workers to implement the change together with Management. Worker Leadership "pointed out that that workers unwillingness on the issue was as a result of the experience they had had with Lexion (consultants involved in the Organizational Renewal Initiative–researcher note),who **made promises which were not fulfilled by management** following the restructuring exercise.<br>It was then agreed to hold a workshop on the SDWT concept with Worker Leadership on the 6th of April 1999 |

| Meeting & Date | Reference to SDWTs and Issues related to the initiative |
|---|---|
| Ref(Prod) WC 13/4/99 | **W/C Reps inquired about the delay in commencing with SDWTs**. The Chairman (Management) said this was now rescheduled for 19/04/99. **W/C Reps said employees were expecting of job groups for SDWT members before commencement of SDWTs**. They said some **employees lacked confidence in the people appointed to lead SDWTs.** |
| Ref (Prod) WC 13/4 /99 | W/C Reps alleged that **subordinates were measuring barium a task meant to be done by their supervisors, without being given justification** for doing the work. (the issue came up again at the next meeting 19/5) Management promised to look into the issue. |
| Ref(Prod)WC 19/5/99 | The Refinery Superintendent commented that the **SDWTs had started well**.. He further commented that concerns of the workers over the issue were being looked into. **A steering committee would be reporting on SDWT progress** |
| Ref(Prod) WC 19/5 / 99 | W/C Reps asked that attendants be issued with Leather boots instead of gumboots. After the Safety/Training Officer had looked into the issue. The issue came up again on 22/6/99. Management responded on 13/7/99 that gumboots were more suitable for wet conditions but finalised the issue by saying that **Leather boots would be issued to operators only**. |
| Ref(Prod)WC 19/5/99 | The Chairman **commended workers for the suggestions** which they forwarded to the Refinery Management<br>(At 13/7/99 meeting) A suggestion on the improvement to be done at the centrifuge was noted by management. **W/C Reps expressed reservations about the awarding of T-shirts as the only reward** |
| Prod WC 02/06/99 | **(Special SDWT Review Meeting) Meeting Reviewed SDWT progress Section by section.**<br>A General Foreman reported Production improvements; improvement in employee attitudes ; better house keeping standards and "a reduction in the number of Plant breakdowns' since the introduction of SDWTs". Another Gen Foreman complained that workers were "take(ing) advantage by ignoring proper communication channels and …approaching the Plant Superintendent directly leaving out their immediate supervisors" On the feeling s of workers W/Reps were non committal.<br>Other issues raised included: |

| Meeting & Date | Reference to SDWTs and Issues related to the initiative |
|---|---|
| | "although employees appreciate the benefits attached to SDWTs **some employees still have an element of fear towards losing their jobs" .**<br>" It was highlighted that the **team leaders' jobs would be enriched** once they acquire the necessary training"<br>**"management was... still working on the SDWT bonus rewarding system"**<br>Certain Team leaders "expressed concerns about being confined to certain sections of the Plant only"<br>A member " **inquired whether there were any laid out plans for rewarding those who were given extra responsibilities** since they have proved to be capable. The acting chairman ( a Gen Foreman) said that would be a prerogative of senior management. The issue was put on the agenda for the next meeting |
| Ref(Prod) WC 22/6/99 | Industrial Relations Officer appealed to W/C Reps to bring issues /views from employees to the meeting . He added that these issues should cover production , safety/health and **developments on the SDWTs** |
| Ref(Prod)WC 22/6/99 | W/Reps commented that there was good development on the SDWT programme but **called for better communication skills at the Metal Handling Section** . (At 13/7/99 meeting) W/ Reps reported that Boilers & Metal Handling were now doing very well on Communication |
| Ref(Prod)WC 22/6/99 | The Refinery Supt expressed concern over **notes which were written by some employees inciting industrial (strike)action over unpaid incentive bonuses**. Employees were urged to present their grievances /problems/complaints through the proper channels and management will respond. |
| Ref(Prod)WC 22/6/99 | W/Reps appealed for the leaders of SDWTs to brief their teams about costs |
| Main WC 30/8/99 | BSR GM explained the Incentive Bonus Scheme points of considerations "qualifiers alongside penalties : the qualifiers being production and unit costs while the penalties are safety, quality and recovery |
| Main WC 19/11//99 | BSR GM commented that **progress on SDWTs was encouraging** although a lot of work has to be done |
| Main W/C | W/ Reps **expressed concern on the issue of job grades allocation** |

| Meeting & Date | Reference to SDWTs and Issues related to the initiative |
|---|---|
| 7/6/2000 | **/remuneration**. It was acknowledged (by Management) that " the issue was inevitable" The concept of SDWTs was reiterated (by management ) to generate awareness and understanding…." |
| Main W/C 7/6/2000 | W/Reps **were concerned that the Refinery was having many jobs graded A1 while supervisors were being upgraded without budgetary constraints**. National Union (AMWZ) Rep would present to the BSR GM a copy of the minutes of the Union /Management (for a record) advocating for change of job grades of some a1 jobs to A2 grade in an effort to resolve the issue |
| Main W/C 7/6/2000 | W/Reps (referring to Safety Reps), expressed concern …that communication and education of safety issues was not good enough. ie **safety reps training had not been done since Safety Reps were elected – *resulting in representation without appropriate knowledge.*** (researcher italics) |
| Main W/C 7/6/2000 | After W/Reps **expressed concern about delays in briefing workers about incentive bonus figures**, management pointed output that employees should be informed of incentive figures via team leaders |
| Main BSR W/C 02/03/01 | W/**Reps inquired about slow SDWT progress** and were informed that "progress was being made in conjunction with the legislature governing the industry and the job evaluation system. This was resulting in the progress taking a slow pace. |
| Main BSR W/C 02/03/01 | It was noted that **employees were being rewarded through incentive bonus ; tokens of production achievement ; revisiting the job descriptions (regarding?) and "the NEC agreement" (doing what with it?- researcher note)**<br>Management undertook "to look into how the HT (a contractor?- researcher) and other service providers will be measured and awarded tokens of production achievement as the case was with the production crews who were benefiting. Management noted that SDWT reward was determined by output through team work |
| Main BSR W/C 02/03/01 | **Skills Recognition : Recognition was through matrix interaction of vertical and horizontal skills and multi-skilling was going to be incorporated in the SDWT concept. Management undertook to offer** |

| Meeting & Date | Reference to SDWTs and Issues related to the initiative |
|---|---|
| | **skills training to employees during the year 2001** |
| Main BSR W/C 02/03/01 | Job upgrading : W/Reps would **revisit (Plant) attendant jobs in the refinery, in conjunction with NEC Agreements** for the Mining industry |
| Ref(Prod)WC 13/3/01 | **W/Reps inquired on the commencement of the Incentive bonus scheme for the SDWTs.** Refinery Prod Supt advised that this was not yet in place |
| Main BSR W/C 19/09/01 | **W/ Reps inquired about the government's involvement on the on going issue of SDWTs .** Management responded that the government was involved through legislation |
| Main BSR W/C 19/09/01 | **Refinery Attendants job upgrading (See 02/03/01) : The issue "was resolved by abolishing sub-grades A1 & A2 so that all in Parterson A Band were going to be paid , at least , at the increased A3 BNC minimum rate w.e.f. 1/7/01** |
| Main BSR W/C 19/09/01 | Job Grading Committee W/Reps were concerned that BSR was not convening Job Grading Committee meeting while Trojan ( mining Division) was making progress on the issue. Management promised to convene JGC before Nov 2001.<br>Mr C M, the WC Chairman would be the permanent W/C Rep (Researcher note-CM resigned in early 2002 . Was appointed as Team Leader for Metal Handling in late 2002 ) |
| Main BSR W/C 22/01/2002 | The meeting put it on record that that **"there was conflict between the concept of the SDWT and provisions of the NEC for the Mining Industry , and the Paterson Job Evaluation Method** |
| Main BSR W/C 22/01/2002 | The issue of SDWTs was noted as ongoing: **Management elaborated on the following SDWT principles: empowering of the workers to decision making ; self – management ; team building**<br>**It was discussed and agreed that the fruition of the SDWT principles was not going to in the near future due to the interpretation given to the issue of remuneration by the NEC for the mining industry and the practice of the Paterson Job Evaluation Method. Employees would undergo retraining on SDWTs** |
| Main BSR W/C | BSR Job Grading Committee not conducted in November due to other work commitments Now Feb 2002. **W/R to attend Paterson Job** |

| **Meeting & Date** | **Reference to SDWTs and Issues related to the initiative** |
|---|---|
| 22/01/02 | **Evaluation Training before the JGC meeting** |
| Main BSR W/C 22/01/02 | Incentive Bonus Info : **W/Reps expressed concern that information on costs was not readily available to employees**. HR will make cost info available on the Notice Boards Team Leaders will also communicate Cost figures when communicating the production figures to their teams<br><br>Incentive Bonus Budget for 2002: W/Reps inquired about the issue. It was explained that no change was made to the principles of the Incentive Bonus Scheme . **However it was stressed that this year's budget on Z$ costs was close to U$ parallel exchange rate**. Employees were therefore urged to produce more and save on costs. Line supervisors and managers would brief employees on the budget for 2002 with emphasis on the team and departmental objectives **as well as the effects of the exchange rate on the Incentive bonus calculations** |
| Ref(Prod)WC 26/7/02 | **W/ Reps appealed for a revival of sectional incentives . In response the chairman (Acting Prod Supt) said the incentives were stopped as this had created IR misunderstandings.** |
| Ref(Prod)WC 26/7/02 | W/Reps said **although employees had been out to attend the incentive bonus seminar "it appeared as though most of them did not grasp the rules"** W/Reps expressed concern over the failure in briefing bonus figure breakdowns and delays in notifying them (W/Reps)" |
| Main BSR W/C 29/8/02 | SDWT Update:<br>It was reported that the **Principles of the SDWTs had been implemented at BSR**. Improved work efficiency and team spirit were discernible in areas of the plant. **Employees were remunerated as a team through the incentive bonus scheme. W/Reps were looking forward to the rewards of the SDWT in (the)form of increased wages and salaries. It was not possible in the meantime because of legislatures, which do not cover the issue. Employees were being encouraged to pursue and implement the principles of the SDWT. Self Directed Work Teams training is going to be provided to all employees.** |
| Main BSR W/C | Incentive Bonus Communication:<br>W/Reps alleged that the monthly brief for the incentive bonus was coming |

| Meeting & Date | Reference to SDWTs and Issues related to the initiative |
|---|---|
| 29/8/02 | out late instead of the 10th of each month as per standing agreement …and also that BSR employees were not briefed on the July 2002 bonus. The acting BSR GM (Batirai Manhando- researcher note) apologised on behalf of management and undertook to forward the concerns to management. **The BSR HODs (would thenceforth )…timeously carry out bonus incentive briefings.** The BSR HR Officer would disseminate copies of the Brief to W/Reps as part of the communication |
| Main BSR W/C 29/8/02 | 2002 Incentive Bonus:<br>Thorough explanations were given on the issue , coupled with by training on the calculations of the incentive bonus scheme.<br>W/Reps advised that **some employees still have the opinion that the CEO devised stringent measures on the incentive bonus schemes , making it unattainable or attainable with less amounts in 2002."** The acting BSR GM explained that it was unfortunate to learn that employees have such wrong feelings about the CEO because he introduced the incentive bonus scheme in BNC. He reiterated the point that principles of the incentive bonus scheme have not changed from the past. **The exchange rate of the Z$ to the US $ was affecting the incentive bonus scheme.** Employees were therefore being urged to produce more and save on costs. W/Reps were advised to disseminate correct facts about the incentive bonus calculations given the knowledge that was gained through training. It was suggested and agreed to conduct refresher training on incentive bonus scheme in the near future |
| Main BSR W/C 29/8/02 | W/Reps Allegations<br>Safety Reps made the **following allegations in respect of accidents in BSR: That supervisors , including team leaders were not accommodating the views of their subordinates ; …and lodge complaints against subordinates to induce fear ; that subordinates are involved in unsafe acts due to work pressure exerted on them by the supervisors , including team leaders.**<br>The acting BSR GM advised that employees should raise grievances on any issues of concern. However Management ( also) commented that the |

| Meeting & Date | Reference to SDWTs and Issues related to the initiative |
|---|---|
| | manner in which the lost time accidents happened had no relation with the allegations , which were being levelled.... HODs were urged to convey the allegations to the supervisors including team leaders |
| Main BSR W/C 27/11/02 | **SDWTs : all employees would receive training**<br>BSR Job Grading Committee: to meet twice a year and Trojan ( Mining Div) to assist in clearing backlog<br>Incentive Bonus Communication : W/Reps reported slight improvement<br>Achievement Bonus : Consideration is going to be given to teams in Smelter Production on the issue as was happening in the Refinery.<br>**New Incentive Bonus Scheme: was developed and would commence in 2003** |
| Main BSR W/C 29/8/02 | Remuneration for artisan helpers: **W/Reps alleged that artisan helpers were promised remuneration for maintaining good performance after reduction of artisan helpers(numbers) through the Organisational Renewal Intervention.** Management explained that remuneration was linked to the concept of multi-skilling. It was however agreed that artisan helpers with class 1 qualifications should approach HRO BSR for higher positions/employment opportunities .<br>Management undertook to "look into an appeal to revert to the applicability of engineering job grades B5, C1 and C2 |

Table 25

*Key Excerpts from Discussions with Individual team members*

| Member (initials) | Age/Edu/BNC/Team/ Role or Job | Comments and or verbatim excerpts |
|---|---|---|
| **(FC)** | **32/O Level/ 10/4 Control Room Operator (Shift Leader) Founder P/L Team member** | **( On team )** P/L Team is a Business Unit with its own cost centre. Team members are involved in the budgeting process. The team's costs and other figures are displayed on the team notice board and updated regularly, at least weekly. Members understand the info<br>**(On member recruitment)** The first choice is to fill the vacancy internally (team) through rotation. If there has to be a recruit from outside the final choice rests with the team leader<br>**(On shared facilitation)** Described how he ( as shift leader) used to present at every safety talk on the topic of the day but "people started regarding it as a sermon" Now, on his shifts everyone takes turns to choose a topic and speak on it [Researcher note: On the day I joined FC's shift a team member (LK, see case narrative) presented on the importance of safety goggles]<br>**(On training)** says there is continuous training which is linked to job rotation and multi-skilling in the team and " we rely on the senior team members to identify needs and problems<br>**(On an Ideal P/L SDWT member)** says it is someone who, " when they walk around , they have an eye for things that need attention and they are fully rotated and multi-skilled, capable of coming up with new ideas"<br>**(When a member is not performing)** Initial approach at shift level where a team member's slack has to be covered up by shift colleagues. Is there a problem at home? Is the team member sick? Etc. FC noted that it is not easy for team members to discipline others. The matter is usually forwarded to the T/Leader after probing by the CRO. |

| Member (initials) | Age/Edu/BNC/Team/ Role or Job | Comments and or verbatim excerpts |
|---|---|---|
| | | **(On member representation eg in SHE Committee)** FC says in the past certain people (eg gang leader) would represent the shift in the SHE steering committee. Now the shift puts several names (typically 3) to be reduced to 1 by shift leaders ( CROs) for the role which lasts for 1 year. |
| **(WM)** | **44/ O Level/ 19/4**<br><br>**Control Room Operator (Shift Leader) Founder P/L Team member** | **(On the SDWT Initiative)** says although there were outside consultants involved , the concept was sold to workers by senior production management.<br>**(On SDWT related changes)** says "before SDWTs everything operational revolved around the Shift Foreman. Now the team has input and participates in the decision" Says "there is more transparency –(gives example that)- before, you would not know who or which department paid for your overalls but now even an ordinary team member knows how much money is left for overalls on the team budget" He says these two examples and "many others" show that "workers have been empowered by SDWTs"<br>**(On Safety Talk Sessions)** says these are not solely about safety but helped the team communicate to each other and determine who was there for the shift and who was not. Also who was not feeling well |
| **(JC)** | **36/O Level/13/4**<br><br>**Control Room Operator ( Shift Leader)**<br><br>**Founder P/L Team member** | **(On Changes)** Recalls the days when he was a gang leader all gang leaders reported to a shift foreman who covered the whole plant and says the new system is much better. He says communication, decision making and production have all improved. Says budgets are much closer to the team<br>**On P/L SDWT Achievements** JC refers to himself as a very proud "founder member of the Pressure Leach team. Gives me a brief history of the Pressure Leach Section, which was commissioned 2 years before the advent of teams and its staff were "specially recruited from the rest of BSR. He says this has instilled a sense that "we are a |

| Member (initials) | Age/Edu/BNC/Team/ Role or Job | Comments and or verbatim excerpts |
|---|---|---|
| | | select group of achievers". Says the team broke budgeted production targets from the beginning. The Canadians who had commissioned the plant "could not believe it and came back to take a second look and ask how we had done it". JC attributes this to the P/L Team spirit.<br><br>**(On multi skilling)** JC says multi-skilling has been very beneficial. He cites examples of some production operatives who, after multi skilling, discovered that they had an aptitude for certain repair work and technical skills and went on to train and are now artisans<br><br>**(On team Production/ Objectives)** Each area has its own team goals and targets on which it focuses. Describing the P/L communication process he says the Team Leader gets a report for each of the previous 3 shifts plus a 24 hr "Total production" report.<br><br>**(On team level authority)** As a CRO he can do call outs (eg of stand-by artisans) when there is a need "without consulting any superior".<br><br>**(On Incentives)** On the issue of the "long promised" team level bonus, he says the issue is demoralising people and asks "Are goal posts being moved? |
| **(PM)** | **48/Std 6 / 24/ 4 Founder team member Autoclave attendant** | **(On what has changed)** "You know your own job. No need to be followed around by foremen. Just follow the STPs ( standard task procedures)"<br>"No more being shouted at. Know your own procedures. Each person has full responsibility. No excuse that you have not been told"<br>**(On History)** recalls customers from Japan who came to visit and to talk about quality and productivity |

| Member (initials) | Age/Edu/BNC/Team/ Role or Job | Comments and or verbatim excerpts |
|---|---|---|
| | | **(On unfulfilled promises)** We were promised upgrades after multi skilling and the removal of gang leaders but this did not happen. In my case I added some new skills such as how add barium hydroxide and to monitor and test for effluent. This started off as an experiment involving 1 bag of barium hydroxide in an single shift, but now its 4 bags and its part of my job, but I have not been upgraded.<br>Incentive bonuses seem to have vanished |
| **(MS)** | **34/JC/9/2**<br>**Copper sulphide**<br>**Filter press**<br>**attendant** | **(On SDWT benefits)**<br>In the short time I have been a member I have mastered every other member's job |
| **CK** | **32/O level/7/2**<br>**Autoclave**<br>**attendant** | **(On Co Objectives)** "I think the objectives of the company were cost cutting although this has led to empowerment yevashandi (worker empowerment)"<br>**(Problems/misgivings )** "You can't take a B4 grade employee and treat him like an A1"<br>"I acquired some of my skills before joining the P/L Team multi skills have not been fully rewarded or recognised" |
| **TM** | **40/JC/23/4**<br>**Five Press**<br>**attendant** | **(On history of initiative/team)** recalls that multi-skilling and job enrichment started before SDWTs. Recalls the P/L Team was the first to win section level production competitions and won shirts and T-shirts for exceeding targets. " Others followed but never reached our standards" Says refinery wide bonus is still there but team bonus seems to have disappeared.<br>**On Changes and why he believes in SDWTs** believes SDWTs offer workers "empowerment" and "freedom yekuti tisa dzvinyirirwe nema foreman nema gang leaders isvi tichiziva basa redu" (freedom not to be oppressed by foremen and gang leaders when we know our jobs). Says there are other teams where gang leaders still exist. |

| Member (initials) | Age/Edu/BNC/Team/ Role or Job | Comments and or verbatim excerpts |
|---|---|---|
| | | **(On Multi skills)** supports multi skilling and says he has acquired many skills but is not sure whether the organization has been keeping records |
| **IK** | **30/O Level/8/<1 (EX Boilers SDWT)** | **(ON SDWT Improvements)** They have improved communication and productivity |
| **JN** | **28 / O level/7/1 (Moved from mines on Madziwa closure)** | **(On history)** described poor implementation of SDWTs at the mines. Has not achieved any targets with P/L Team past heard stories about past achievements ( and winning of T shirts and shirts. Says "daily and monthly team targets are still there but he doesn't know what has happened to incentives.<br>**(Safety Talk)** On the day I joined his 11pm-7am shift JN took over the safety talk from an unprepared member and talked about the importance of communication among team members. |
| **GK** | **24/O Level/6/<1 Thickener Attendant Ex – Boilers** | **(On team benefits)** Believes "people grow faster within a team environment as you do different things and have more responsibility" Used a family metaphor to describe empowerment. Says when you grow you are empowered with responsibility and you look after siblings even if they are also children like you". Says he did his multi skilling at Boilers to which he still owes some allegience but has only worked one position in P/L SDWT |
| **HN** | **44/Grade 7/25/4** | **(On Why SDWTs were introduced)** says "ma self directed teams aka introdusva ne management kuti tizvitungamire nezvebasa" (Self directed teams were introduced by management so that we can govern ourselves on work issues).<br>**(On Benefits)** He said even safety had improved noticeably and attributed this to "ownership of the problem" adding that |

| Member (initials) | Age/Edu/BNC/Team/ Role or Job | Comments and or verbatim excerpts |
|---|---|---|
| | | "people now say I am the one who is doing that job It is mine , although my colleagues may point things out and make suggestions" . He used a family metaphor to explain teamwork. "In a family you rely on each other and complement one another's contribution"<br>**(On Multi skilling)** Fully supports multi-skilling "now I can do more than my own old job. I don't have to call an artisan for a blown gasket or any small job"<br>**(On teamwork and culture)** Singing team songs when they did CIP training and says this lifted team spirits. Says team work is part of our culture. |

Table 26

*Amzim 1997-1998 training statistics against international benchmarks*

| Company | Total Training Expenditure | % Training to Payroll | % Staff Trained Annually | Reported Training Expense per employee | Calculated Training expense per employee | Two year training Strategy |
|---|---|---|---|---|---|---|
| ASTD* Benchmark | N/A | 1.46 - 3.93 % | 65-85 % | N/A | About US $450 | N/A |
| BNC | Z$ 17.8 million | 9.23 % | 173% | Z$2693 | Z$4810 | Yes |
| ZAL | Z$9.3 million | 5 % | 92% | Z$6300 | Z$9375 | Yes |
| HVE | Z$8.3 million | 7.63% | 47% | Z$1041 | Z$980 | Yes |
| BTL | Z$6.2 million | 7.28% | 69% | Z$11468 | Z$2070 | Yes |
| MCE | Z$0.62million | 4.44% | 107% | Z$545 | Z$659 | Yes |
| AAC(S) Ltd | Z$0.70million | 0.64% | 29% | Z$4102 | Z$3771 | No |

*** American Society Of Training and Development . ASTD Benchmark statistics are from 540 USA European Companies in the period 1997-1998**

Table 27

*BNC Training Statistics 1998-2000*

| | 1998 | 1999 | 2000 |
|---|---|---|---|
| **Training Spend Per Employee (Z$)** | **7772** | **5768** | **1027** |
| **BNC Training costs As % of Total Co Costs** | **Data not avail.** | **.76** | **.20** |
| **BNC training as % of Turnover** | **Data not avail** | **.57** | **.14** |
| **BNC Training as % of payroll** | **9.23** | **4.87** | **12.2** |

Table 28

*The Paterson JE Bands in relation to NEC and BSR/Pressure Leach Job Grades/Structures*

| **Paterson Job Evaluation System** | | | | **BSR** | | | **NEC** |
|---|---|---|---|---|---|---|---|
| Decision Making Function | Band | Job Grades | Sub Grades | **BS& R Production**<br><br>**S**<br>**R** | | **P/L SDWT** | **Statutory Instrument 152 of 1990** |
| Policy Formulation (Top Management) | F | F Higher<br>F Lower | F 4-5<br>F 1-3 | | | | **Mgmt** |
| Programming (Senior Management) | E | E Higher<br>E Lower | E 4-5<br>E 1-4 | **1** | | | |
| Interpreting (Middle Management) | D | D Higher<br>D Lower | D 4-5<br>D 1-3 | **1**<br>**1** | **1**<br>**1** | | |
| Routine (Skilled Workers/ Supervisory) | C | C Higher<br>C Lower | C 4-5/6<br>C 1-3 | **14**<br>**10** | **10**<br>**18** | **1**<br>**4** | **Non-Mngmnt (Bargaining Unit)**<br><br>**13 NEC Grades** |
| Automatic (Semi-skilled workers) | B | B Higher<br>B Lower | B 4-5<br>B 1-3 | **154** | **231** | **18** | |
| Defined (Unskilled workers) | A | Lower | A 1-3 | | | | |
| | | | | | | | |

Note: Higher Grades in each band coordinate the band function (except A where there is no co-ordination)

Table 29

*A multi-level summary of factors influencing the SDWT effectiveness*

| Level | Positive Impact on Pressure Leach SDWT | Negative Impact on P/ Leach SDWT |
|---|---|---|
| Individual Member Issues | • Member Education (most)<br>• Member multi-skills and job rotation<br>• Member job knowledge<br>• Member willingness to learn<br>• Member team tenure (eg "founder members)<br>• Commitment to SDWT concept | • Rigid Individual job grades<br>• Grade based remuneration<br>• Inadequate Training<br>• Inadequate Team "process/development" skills |
| Team Level Issues | • Team Leading experience (Team Leader)<br>• Team Leadership depth (CROs)<br>• Relatively Smaller Team (de facto shift teams of 6)<br>• Clear Team goals<br>• Experience/history of positive outcomes<br>• Pride and team "consciousness"<br>• Selected team members.<br>• Balanced mix between experience and education | • Leader lack of Team leadership experience<br>• Inadequate focus on Team skills development<br>• Large team (even with 23)<br>• Some Targets / Measures beyond team control<br>• Lack of clear team boundary/ work demarcation<br>• Inadequate team and member training.<br>• Lack of "Visual Management" |
| Organizational Context Issues | • Visionary and Initiating Leadership<br>• World class intentions / vision in 1996-98 period<br>• Continued tenure of initiating/supportive leadership<br>• Learning culture<br>• Committed world class oriented Production / frontline management<br>• Complementary Initiatives<br>• (multi-skilling, job rotation, organizational renewal Initiative; CIP initiative)<br>• Commitment to Incentivised remuneration<br>• Co-operative Worker Representatives<br>• Support of shop-floor workers for SDWT initiative<br>• No job losses<br>• World class resource allocation to training (1997-98) | • Inadequately managed implementation<br>• Unmet expectations<br>• Absence of team level reward and incentive system<br>• Lack of management will to implement necessary system changes<br>• Insufficient SDWT information and training<br>• Lack of creativity on systems<br>• Middle and junior management<br>• Rigid remuneration system<br>• No job security commitment<br>• Complexity of Incentive Bonus Scheme<br>• Management stopping team incentive scheme at will<br>• Linking of Incentive to unrealistic exchange rate<br>• Derailment of initiative by |

| Level | Positive Impact on Pressure Leach SDWT | Negative Impact on P/ Leach SDWT |
|---|---|---|
| | • Expectations that employees have of black professionals (to restore respect and empower them)<br>• Job evaluation system focusing on Decision Making (Hidden potential) | introduction of new corporate programmes<br>• Unfulfilled management promises<br>• Nothing done to place the issue on the NEC agenda in-spite of promises to "re-visit " the agreement<br>• Failure to Act on MMDP recommendations<br>• Failure to indigenise team concept<br>• No detailed/ planned job redesign focus<br>• Legacy of Job descriptions<br>• Petty and systematic status differentials |
| Business Context Issues | • Global competitive pressure<br>• Good industrial Relations or *Industrial Relations Readiness* (Douwes 1998; Dekker, 1990)<br>• HIV / AIDS Pressure for multi-skilled depth | • Very negative national economic environment<br>• Lack of framework for enterprise level reform initiatives<br>• Non management and Junior Management Employee Fear of job losses<br>• HIV/AIDS threat<br>• Lack of clarity on Sectoral./ National Union position on enterprise level reform<br>• Conflict ridden relationship between the state and the Union (potential tripartite members)<br>• Inadequate profiling of non management employee skills |
| Cultural Environment | • Low level of conflict ( including racial conflict)<br>• High literacy levels<br>• Relatively High educational levels<br>• Indigenous cultural practices (eg reported singing on Continuous Improvement Programme workshops)<br>• Management yevhanhu ( People's management). Successful black professional managers | • Failure to tap into legacies<br>• "Dressing of teamwork in foreign (non indigenous) robes"<br>• Industry legacy of coercive and abusive management of black employee<br>• Legacy of low management expectations of employees |

| Level | Positive Impact on Pressure Leach SDWT | Negative Impact on P/ Leach SDWT |
|---|---|---|
| | • Belief (among some older workers) that respected input into work *is a right* (expected to be respected under black management)<br>• Indigenous Mining legacy<br>• High employee expectations of industrial democracy in the absence of societal democracy | |

Table 30

*Tabular Summary of Key Information about Refinery Team Leaders*

| **Name of Team Leader** | **Age** | **Highest Educ Level Reached** | **Community leadership** | **Name of Current SDWT** | **Tot # of Years as SDWT leader** | **Total # of Years in BNC** | **Other BNC Jobs the performed** | **List of Training Courses Attended at BNC** |
|---|---|---|---|---|---|---|---|---|
| A Binauli (AB) | 42 | J.C. | Yes Church Choir master | P/ Leach Team (n=23) | 3 years | 25 Years | Plant Operator Shift foreman | Comm skills; SWDTs; MIMS Basic Supervision; First Aid; Safety ; Motivation for managers; 6 M's CIP part 1& 2; EMS; Code of Conduct & ethics; Good citizenship QA awareness |
| G Mutupo (GM) | 46 | "O"level | Nil | Cobalt & SS Team (n=33) | 4 years | 26 years | Plant operator | SDWT ; Supervisory skills; MIMS; ENVIRONMENTAL COURSES |
| K Nyamutora (KN) | 45 | "O"level | Nil | Leach Plant (n=63) | 3 years | 23 years | Plant operator | Trainer of trainers, safety, quality control, supervision environmental |
| W Mutandiri (WM) | 46 | "O"level | Nil | Tank house (n=64) | 3 years | 22 years | Plant operator | Effective time management; supervisory skills; computer courses |
| C Murisa (CM) | 44 | "O"level plus teacher training | Chairman Trojan & BSR housing committee & chairman CBS | Metal handling (n=70) | Acting team leader (4 months) | 22 years | Plant operator .C RO | Analytical process control |

**Note: Case study team leader is highlighted**

Table 31
*Excerpts from Discussions with Team Leaders*

| **T/Leader Initials (Age/Edu/BNC/Team)** | **T/Name (Size)** | **Comments and/ or verbatim excerpts** |
|---|---|---|
| AB<br>(42/9/25/3) | P/ Leach<br>(23 members) | **(On Teams)**<br>Team work here meant breaking the plant down into small enough units to be focused on the same area<br>Teams are definable in terms of goals and self service<br>SDWT works better if it does not have too many people<br>**(On SDWT Leader Training)**<br>Have received training on how SDWTs work and how other organizations have benefited.<br>Feels that training was "adequate" and has not faced any team leadership issue he can not cope with<br>**(On developing his team to be more self directed)**<br>Have regular production meetings, remain focussed on budgets and production and implement in-house (on the job training).<br>When recruiting , specify teamwork and reference check on it<br>**Obstacles to higher SDWT work**<br>No incentives directed at teams<br>Teams too large |
| GM<br>(46/11/26/4) | Cobalt&SS/Plant<br>(33 members ) | **(On Teams)**<br>SDWTs are different from other teams in that they empower workers to make decisions and thus improve productivity and reduce operating costs<br>**(On SDWT Leader Training)**<br>Attended SDWT Leader training. Thinks it was adequate but needs refresher courses to keep up with change. The difficulties he encountered were how to motivate team not to fear job losses and convince them that the system would work for them<br>**(On developing his team to be more self directed)**<br>Rewards good performers<br>Encourages members to make improvement suggestions and rewards those who make good suggestions<br>**Obstacles to higher SDWT work**<br>Too much interference from the top |

| T/Leader Initials (Age/Edu/BNC/Team) | T/Name (Size) | Comments and/ or verbatim excerpts |
|---|---|---|
| | | Not enough in the system for incentive<br>Inadequate resources<br>Unstable economic climate |
| KN<br>(45/11/23/3) | Leach Plant<br>(62 members) | **(On Teams)**<br>There is team work and the team tries to do better than other teams<br><br>**(On SDWT Leader Training)**<br>Have attended several leadership seminars<br>Training was adequate but should continue<br><br>**(On developing his team to be more self directed)**<br>Incentive bonus for achieving targets<br>Token non monetary prizes<br>Develop culture for working like a Business Unit<br>Keeping the team informed about company business issues<br><br>**Obstacles to higher SDWT work**<br>Escalating costs- we are forced to cut costs and risk using sub-standard equipment<br>Supply of feed material<br>Manpower losses due to deaths, ill-health and retirements |
| WM<br>(46/11/22/3) | Tank House<br>(64 members) | **(On Teams)**<br>"The team members feel as if they own the section"<br><br>**(On SDWT Leader Training)**<br>SDWT Courses<br>Feels that training was **not** adequate<br><br>**(On developing his team to be more self directed)**<br>Ownership<br>Team meetings<br>Improved communication<br>**Obstacles to higher SDWT work**<br>Team members not prepared to accept change and responsibility |

| T/Leader Initials (Age/Edu/BNC/Team) | T/Name (Size) | Comments and/ or verbatim excerpts |
|---|---|---|
| | | Lack of team incentive bonus<br>Not enough knowledge about SDWTs ( and how they work) in the team |
| CM<br>(44/13/22/<1) | Metal Handling<br>(70 members) | **(On Teams)**<br>There is "team work " in a SDWT<br><br>**(On SDWT Leader Training)**<br>No T/L training yet but,<br>Have acted as team leader many times (leadership preparation)<br>Chairman of WC for 10 years<br>Have not faced any difficulties in leading team<br><br>**(On developing his team to be more self directed)**<br>Doing work in teams<br>Delegation of (team leader?) duties in a descending order (???)<br>Multi -skilling<br><br>**Obstacles to higher SDWT work**<br>Self Centred Decisions<br>With holding of instructions/information<br>Team leader lack of knowledge<br>Lack of team motivation |

Table 32

*Frequency of SDWT and Related Issues Before the Refinery Production and Refinery Main Works Council (1998-2002)*

| Issue | 1998 | 1999 | 2000 | 2001 | 2002 | Total |
|---|---|---|---|---|---|---|
| **Production targets and figures** | **Standard agenda item at all meetings** | | | | | |
| **Self Directed Work Teams** | **2** | **8** | **1** | **2** | **6** | **19** |
| **Multi- Skilling** | **1** | **1** | | **2** | **3** | **7** |
| **Work/ Job Re-design** | **1** | **4** | | **1** | | **6** |
| **Incentive Bonus** | **1** | **10** | **2** | **2** | **9** | **24** |
| **Other Involvement Initiatives (eg Green areas ; Suggestion Schemes)** | **2** | **2** | **1** | | | **5** |
| **Refinery Communication Structures and Processes** | **2** | **9** | **1** | **2** | **4** | **18** |
| **Quality Issues** | **1** | **2** | **1** | | | **4** |
| **Productivity Related suggestions /issues** | **2** | **5** | **3** | **1** | **2** | **13** |
| **Safety Issues** | **2** | **16** | **14** | **10** | **10** | **52** |
| **Job descriptions and grading Issues** | **1** | **17** | **14** | **13** | **5** | **50** |
| **Recruitment, Pay and Promotion Issues** | **4** | **8** | | | **1** | **13** |
| **Unfair labour Practices and IR Issues** | **1** | **1** | | **2** | **4** | **8** |
| **Physical Comfort & Working Environment** | **3** | **20** | **10** | **6** | **4** | **43** |
| **Housing and Welfare Issues** | | **4** | **2** | **3** | **6** | **15** |
| **Minutes Analysed** | **2** | **8** | **2** | **3** | **4** | |

Table 33

*Excerpts of Case Relevant Material: Refinery Production [REF(PROD) WC] and Main Works Council [REF(MAIN) WC] Minutes from 1998-2002*

| **Meeting & Date** | **Reference to SDWTs and Issues related to the initiative** |
|---|---|
| Ref(Prod) WC 30/4/98 | **Green Areas meetings were being conducted on a regular basis** and suggestions recorded in black and white. The General Foreman came up for **criticism for lack of feedback** "feedback expected but no feedback being provided. |
| Ref (Prod) WC 10/4/98 | Refinery manager gave a general overview on SDWTs and their expected impact on the Company after Workers Committee Representatives **(W/C Reps) had "commented that workers had different views about the issue'** |
| Ref(Prod )WC 19/3/99 | Refinery Manager told W/C Reps **that SDWTs would commence in the Refinery in April 1999**. W/C Reps commented that they viewed SDWTs as a system which will bring better rewards to employees and boost production |
| Main WC 26/3/99 | Responding to W/Reps request to increase the pay of Dryer Plant attendants ( who ere now attending to 4 instead of 1 conveyers) the BSR Manager (GM) "explained that following the advent of SDWTs in the BSR the issue would be addressed" |
| Main WC 26/3/99 | The BSR GM clarified the formula for calculating the incentive bonus |
| Main WC 26/3/99 | The BSR GM "explained the essence and concepts of the SDWTs in BSR. He mentioned the advantages of the SDWT- remuneration among others He **cited a job group whose entry point is now B1**" He appealed to workers to implement the change together with Management. Worker Leadership "pointed out that that workers unwillingness on the issue was as a result of the experience they had had with Lexion (consultants involved in the Organizational Renewal Initiative–researcher note),who **made promises which were not fulfilled by management** following the restructuring exercise.<br>It was then agreed to hold a workshop on the SDWT concept with Worker Leadership on the 6th of April 1999 |

| Meeting & Date | Reference to SDWTs and Issues related to the initiative |
|---|---|
| Ref(Prod) WC 13/4/99 | **W/C Reps inquired about the delay in commencing with SDWTs**. The Chairman (Management) said this was now rescheduled for 19/04/99. **W/C Reps said employees were expecting of job groups for SDWT members before commencement of SDWTs**. They said some **employees lacked confidence in the people appointed to lead SDWTs.** |
| Ref (Prod) WC 13/4 /99 | W/C Reps alleged that **subordinates were measuring barium a task meant to be done by their supervisors, without being given justification** for doing the work. (the issue came up again at the next meeting 19/5) Management promised to look into the issue. |
| Ref(Prod)WC 19/5/99 | The Refinery Superintendent commented that the **SDWTs had started well**.. He further commented that concerns of the workers over the issue were being looked into. **A steering committee would be reporting on SDWT progress** |
| Ref(Prod) WC 19/5 / 99 | W/C Reps asked that attendants be issued with Leather boots instead of gumboots. After the Safety/Training Officer had looked into the issue. The issue came up again on 22/6/99. Management responded on 13/7/99 that gumboots were more suitable for wet conditions but finalised the issue by saying that **Leather boots would be issued to operators only**. |
| Ref(Prod)WC 19/5/99 | The Chairman **commended workers for the suggestions** which they forwarded to the Refinery Management<br>(At 13/7/99 meeting) A suggestion on the improvement to be done at the centrifuge was noted by management. **W/C Reps expressed reservations about the awarding of T-shirts as the only reward** |
| Prod WC 02/06/99 | **(Special SDWT Review Meeting) Meeting Reviewed SDWT progress Section by section.**<br>A General Foreman reported Production improvements; improvement in employee attitudes ; better house keeping standards and "a reduction in the number of Plant breakdowns' since the introduction of SDWTs". Another Gen Foreman complained that workers were "take(ing) advantage by ignoring proper communication channels and …approaching the Plant Superintendent directly leaving out their immediate supervisors" On the feeling s of workers W/Reps were non committal.<br>Other issues raised included: |

| Meeting & Date | Reference to SDWTs and Issues related to the initiative |
|---|---|
| | "although employees appreciate the benefits attached to SDWTs **some employees still have an element of fear towards losing their jobs" .**<br>" It was highlighted that the **team leaders' jobs would be enriched** once they acquire the necessary training"<br>**"management was... still working on the SDWT bonus rewarding system"**<br>Certain Team leaders "expressed concerns about being confined to certain sections of the Plant only"<br>A member " **inquired whether there were any laid out plans for rewarding those who were given extra responsibilities** since they have proved to be capable. The acting chairman ( a Gen Foreman) said that would be a prerogative of senior management. The issue was put on the agenda for the next meeting |
| Ref(Prod) WC 22/6/99 | Industrial Relations Officer appealed to W/C Reps to bring issues /views from employees to the meeting . He added that these issues should cover production , safety/health and **developments on the SDWTs** |
| Ref(Prod)WC 22/6/99 | W/Reps commented that there was good development on the SDWT programme but **called for better communication skills at the Metal Handling Section** . (At 13/7/99 meeting) W/ Reps reported that Boilers & Metal Handling were now doing very well on Communication |
| Ref(Prod)WC 22/6/99 | The Refinery Supt expressed concern over **notes which were written by some employees inciting industrial (strike)action over unpaid incentive bonuses**. Employees were urged to present their grievances /problems/complaints through the proper channels and management will respond. |
| Ref(Prod)WC 22/6/99 | W/Reps appealed for the leaders of SDWTs to brief their teams about costs |
| Main WC 30/8/99 | BSR GM explained the Incentive Bonus Scheme points of considerations "qualifiers alongside penalties : the qualifiers being production and unit costs while the penalties are safety, quality and recovery |
| Main WC 19/11//99 | BSR GM commented that **progress on SDWTs was encouraging** although a lot of work has to be done |
| Main W/C | W/ Reps **expressed concern on the issue of job grades allocation** |

| Meeting & Date | Reference to SDWTs and Issues related to the initiative |
|---|---|
| 7/6/2000 | **/remuneration**. It was acknowledged (by Management) that " the issue was inevitable" The concept of SDWTs was reiterated (by management ) to generate awareness and understanding…." |
| Main W/C 7/6/2000 | W/Reps **were concerned that the Refinery was having many jobs graded A1 while supervisors were being upgraded without budgetary constraints**. National Union (AMWZ) Rep would present to the BSR GM a copy of the minutes of the Union /Management (for a record) advocating for change of job grades of some a1 jobs to A2 grade in an effort to resolve the issue |
| Main W/C 7/6/2000 | W/Reps (referring to Safety Reps), expressed concern …that communication and education of safety issues was not good enough. ie **safety reps training had not been done since Safety Reps were elected – *resulting in representation without appropriate knowledge.*** (researcher italics) |
| Main W/C 7/6/2000 | After W/Reps **expressed concern about delays in briefing workers about incentive bonus figures** , management pointed output that employees should be informed of incentive figures via team leaders |
| Main BSR W/C 02/03/01 | W/**Reps inquired about slow SDWT progress** and were informed that "progress was being made in conjunction with the legislature governing the industry and the job evaluation system. This was resulting in the progress taking a slow pace. |
| Main BSR W/C 02/03/01 | It was noted that **employees were being rewarded through incentive bonus ; tokens of production achievement ; revisiting the job descriptions (regarding?) and "the NEC agreement" (doing what with it?- researcher note)**<br>Management undertook "to look into how the HT (a contractor?- researcher) and other service providers will be measured and awarded tokens of production achievement as the case was with the production crews who were benefiting. Management noted that SDWT reward was determined by output through team work |
| Main BSR W/C 02/03/01 | **Skills Recognition : Recognition was through matrix interaction of vertical and horizontal skills and multi-skilling was going to be incorporated in the SDWT concept. Management undertook to offer** |

| Meeting & Date | Reference to SDWTs and Issues related to the initiative |
|---|---|
| | **skills training to employees during the year 2001** |
| Main BSR W/C 02/03/01 | Job upgrading : W/Reps would **revisit (Plant) attendant jobs in the refinery, in conjunction with NEC Agreements** for the Mining industry |
| Ref(Prod)WC 13/3/01 | **W/Reps inquired on the commencement of the Incentive bonus scheme for the SDWTs.** Refinery Prod Supt advised that this was not yet in place |
| Main BSR W/C 19/09/01 | **W/ Reps inquired about the government's involvement on the on going issue of SDWTs .** Management responded that the government was involved through legislation |
| Main BSR W/C 19/09/01 | **Refinery Attendants job upgrading (See 02/03/01) : The issue "was resolved by abolishing sub-grades A1 & A2 so that all in Paterson A Band were going to be paid , at least , at the increased A3 BNC minimum rate w.e.f. 1/7/01** |
| Main BSR W/C 19/09/01 | Job Grading Committee W/Reps were concerned that BSR was not convening Job Grading Committee meeting while Trojan ( mining Division) was making progress on the issue. Management promised to convene JGC before Nov 2001.<br>Mr C M, the WC Chairman would be the permanent W/C Rep (Researcher note-CM resigned in early 2002 . Was appointed as Team Leader for Metal Handling in late 2002 ) |
| Main BSR W/C 22/01/2002 | The meeting put it on record that that **"there was conflict between the concept of the SDWT and provisions of the NEC for the Mining Industry , and the Paterson Job Evaluation Method** |
| Main BSR W/C 22/01/2002 | The issue of SDWTs was noted as ongoing: **Management elaborated on the following SDWT principles: empowering of the workers to decision making ; self – management ; team building**<br>**It was discussed and agreed that the fruition of the SDWT principles was not going to in the near future due to the interpretation given to the issue of remuneration by the NEC for the mining industry and the practice of the Paterson Job Evaluation Method. Employees would undergo retraining on SDWTs** |
| Main BSR W/C | BSR Job Grading Committee not conducted in November due to other work commitments Now Feb 2002. **W/R to attend Paterson Job** |

| Meeting & Date | Reference to SDWTs and Issues related to the initiative |
|---|---|
| 22/01/02 | **Evaluation Training before the JGC meeting** |
| Main BSR W/C 22/01/02 | Incentive Bonus Info : **W/Reps expressed concern that information on costs was not readily available to employees**. HR will make cost info available on the Notice Boards Team Leaders will also communicate Cost figures when communicating the production figures to their teams<br><br>Incentive Bonus Budget for 2002: W/Reps inquired about the issue. It was explained that no change was made to the principles of the Incentive Bonus Scheme . **However it was stressed that this year's budget on Z$ costs was close to U$ parallel exchange rate**. Employees were therefore urged to produce more and save on costs. Line supervisors and managers would brief employees on the budget for 2002 with emphasis on the team and departmental objectives **as well as the effects of the exchange rate on the Incentive bonus calculations** |
| Ref(Prod)WC 26/7/02 | **W/ Reps appealed for a revival of sectional incentives . In response the chairman (Acting Prod Supt) said the incentives were stopped as this had created IR misunderstandings.** |
| Ref(Prod)WC 26/7/02 | W/Reps said **although employees had been out to attend the incentive bonus seminar "it appeared as though most of them did not grasp the rules"** W/Reps expressed concern over the failure in briefing bonus figure breakdowns and delays in notifying them (W/Reps)" |
| Main BSR W/C 29/8/02 | SDWT Update:<br>It was reported that the **Principles of the SDWTs had been implemented at BSR**. Improved work efficiency and team spirit were discernible in areas of the plant. **Employees were remunerated as a team through the incentive bonus scheme. W/Reps were looking forward to the rewards of the SDWT in (the)form of increased wages and salaries. It was not possible in the meantime because of legislatures, which do not cover the issue. Employees were being encouraged to pursue and implement the principles of the SDWT. Self Directed Work Teams training is going to be provided to all employees.** |
| Main BSR W/C | Incentive Bonus Communication:<br>W/Reps alleged that the monthly brief for the incentive bonus was coming |

| Meeting & Date | Reference to SDWTs and Issues related to the initiative |
|---|---|
| 29/8/02 | out late instead of the 10th of each month as per standing agreement …and also that BSR employees were not briefed on the July 2002 bonus. The acting BSR GM (Batirai Manhando- researcher note) apologised on behalf of management and undertook to forward the concerns to management. **The BSR HODs (would thenceforth )…timeously carry out bonus incentive briefings.** The BSR HR Officer would disseminate copies of the Brief to W/Reps as part of the communication |
| Main BSR W/C 29/8/02 | 2002 Incentive Bonus:<br>Thorough explanations were given on the issue , coupled with by training on the calculations of the incentive bonus scheme.<br>W/Reps advised that **some employees still have the opinion that the CEO devised stringent measures on the incentive bonus schemes , making it unattainable or attainable with less amounts in 2002."** The acting BSR GM explained that it was unfortunate to learn that employees have such wrong feelings about the CEO because he introduced the incentive bonus scheme in BNC. He reiterated the point that principles of the incentive bonus scheme have not changed from the past. **The exchange rate of the Z$ to the US $ was affecting the incentive bonus scheme.** Employees were therefore being urged to produce more and save on costs. W/Reps were advised to disseminate correct facts about the incentive bonus calculations given the knowledge that was gained through training. It was suggested and agreed to conduct refresher training on incentive bonus scheme in the near future |
| Main BSR W/C 29/8/02 | W/Reps Allegations<br>Safety Reps made the **following allegations in respect of accidents in BSR: That supervisors , including team leaders were not accommodating the views of their subordinates ; …and lodge complaints against subordinates to induce fear ; that subordinates are involved in unsafe acts due to work pressure exerted on them by the supervisors , including team leaders.**<br>The acting BSR GM advised that employees should raise grievances on any issues of concern. However Management ( also) commented that the |

| Meeting & Date | Reference to SDWTs and Issues related to the initiative |
|---|---|
| | manner in which the lost time accidents happened had no relation with the allegations , which were being levelled.... HODs were urged to convey the allegations to the supervisors including team leaders |
| Main BSR W/C 27/11/02 | **SDWTs : all employees would receive training**<br>BSR Job Grading Committee: to meet twice a year and Trojan ( Mining Div) to assist in clearing backlog<br>Incentive Bonus Communication : W/Reps reported slight improvement<br>Achievement Bonus : Consideration is going to be given to teams in Smelter Production on the issue as was happening in the Refinery.<br>**New Incentive Bonus Scheme: was developed and would commence in 2003** |
| Main BSR W/C 29/8/02 | Remuneration for artisan helpers: **W/Reps alleged that artisan helpers were promised remuneration for maintaining good performance after reduction of artisan helpers(numbers) through the Organisational Renewal Intervention.** Management explained that remuneration was linked to the concept of multi-skilling. It was however agreed that artisan helpers with class 1 qualifications should approach HRO BSR for higher positions/employment opportunities .<br>Management undertook to "look into an appeal to revert to the applicability of engineering job grades B5, C1 and C2 |

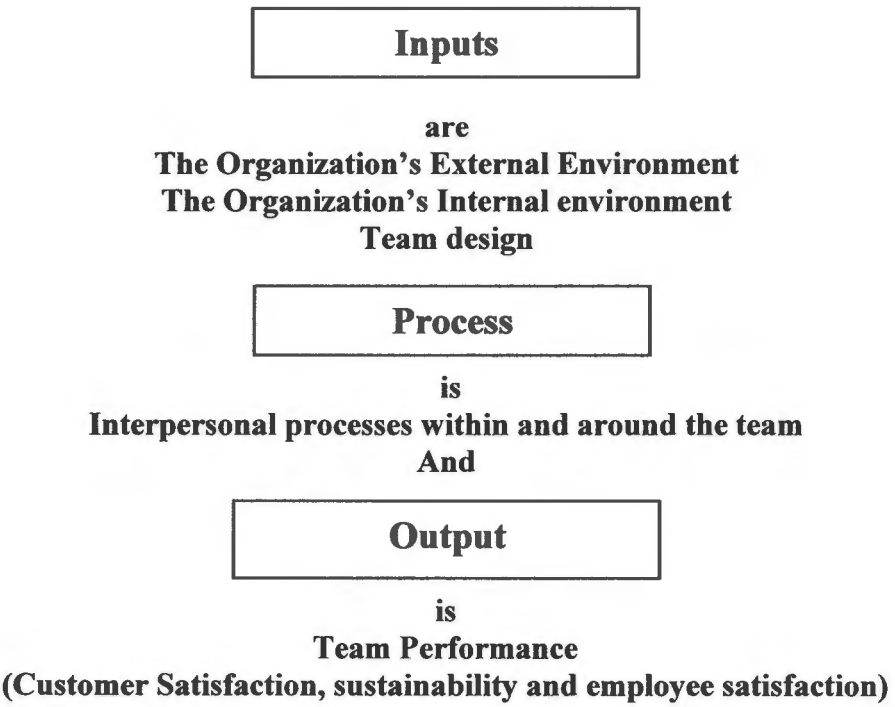


*Figure 1.* A synthesis of Theoretical Work Team Performance Models (Adapted from Yeatts & Hyten 1998, p. 48)

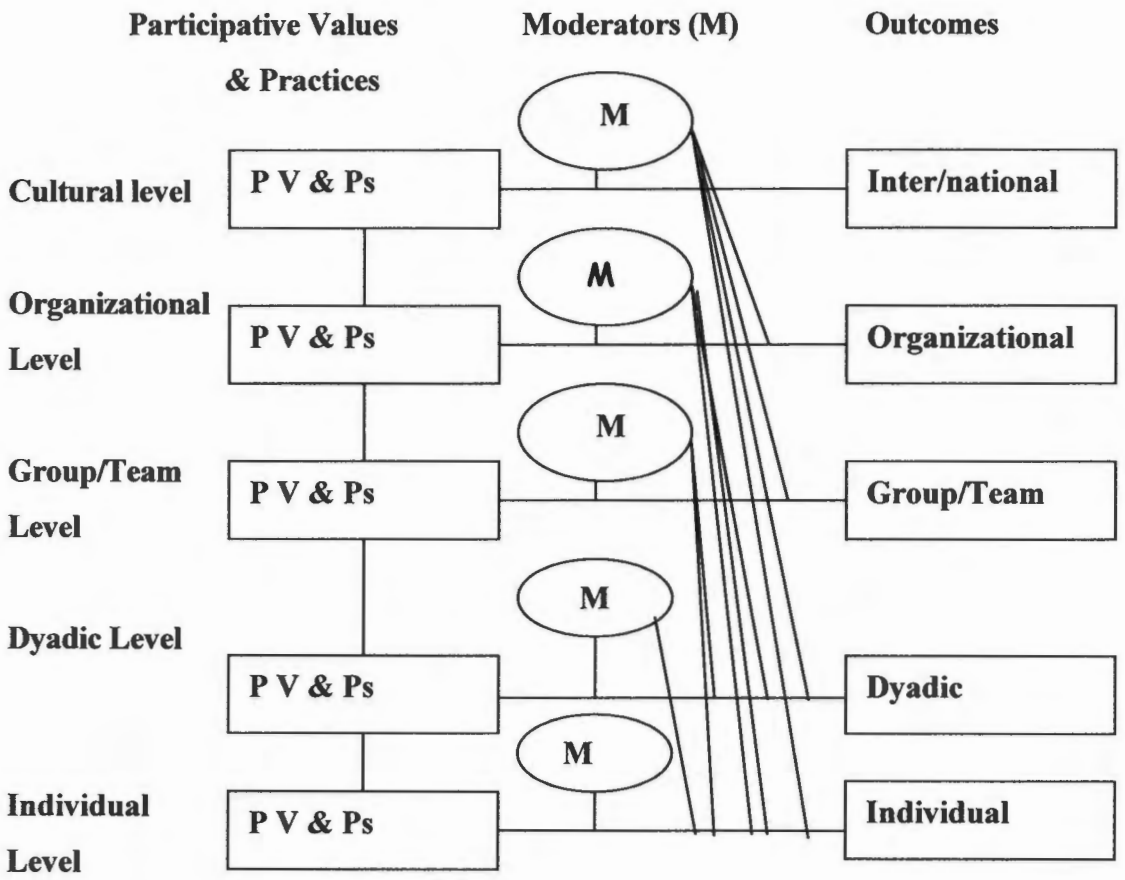


*Figure 2.* A Multi-Level Model of PDM (from Sagie & Koslowsky 2000, p. 119)

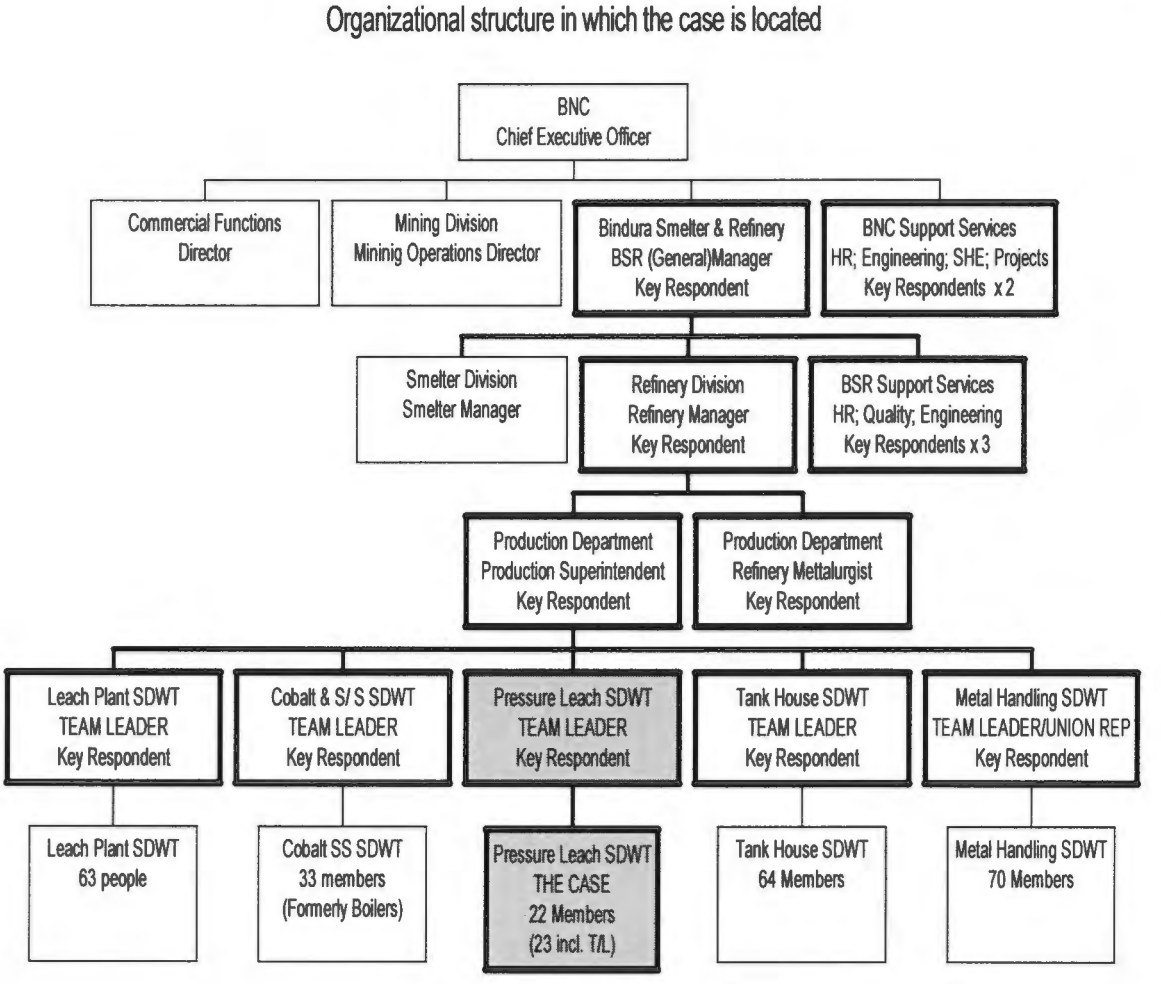


*Figure 3.* The P/L SDWT within the BSR Organizational Structure

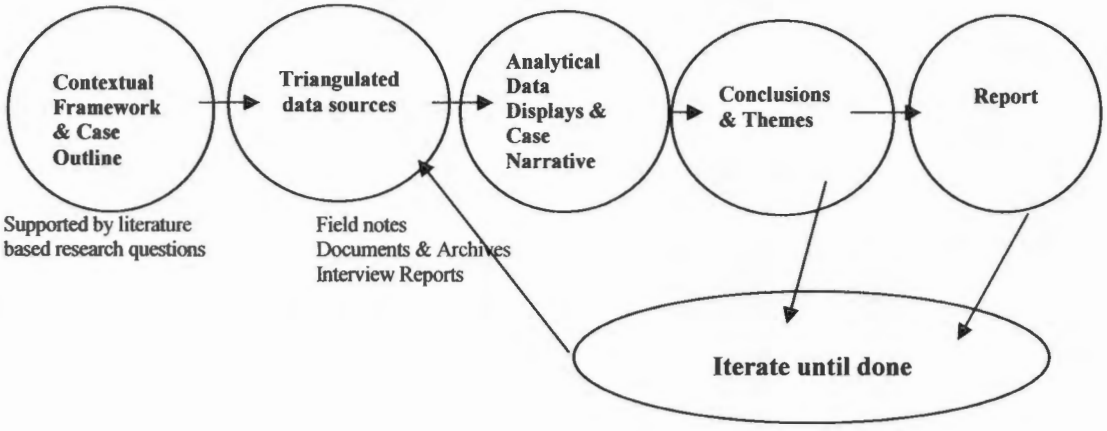


*Figure 4.* Case analytical framework (adapted from Miles & Huberman, 1994, p. 85).

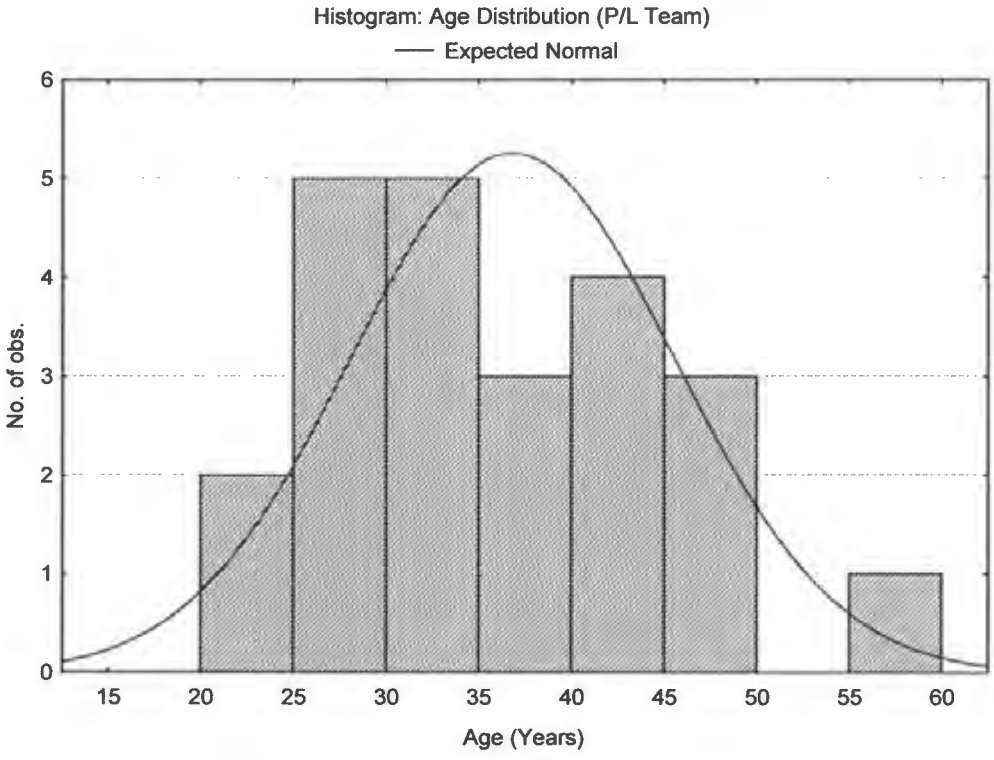


*Figure 5.* Histogram showing the age distribution among members of the P/L SDWT

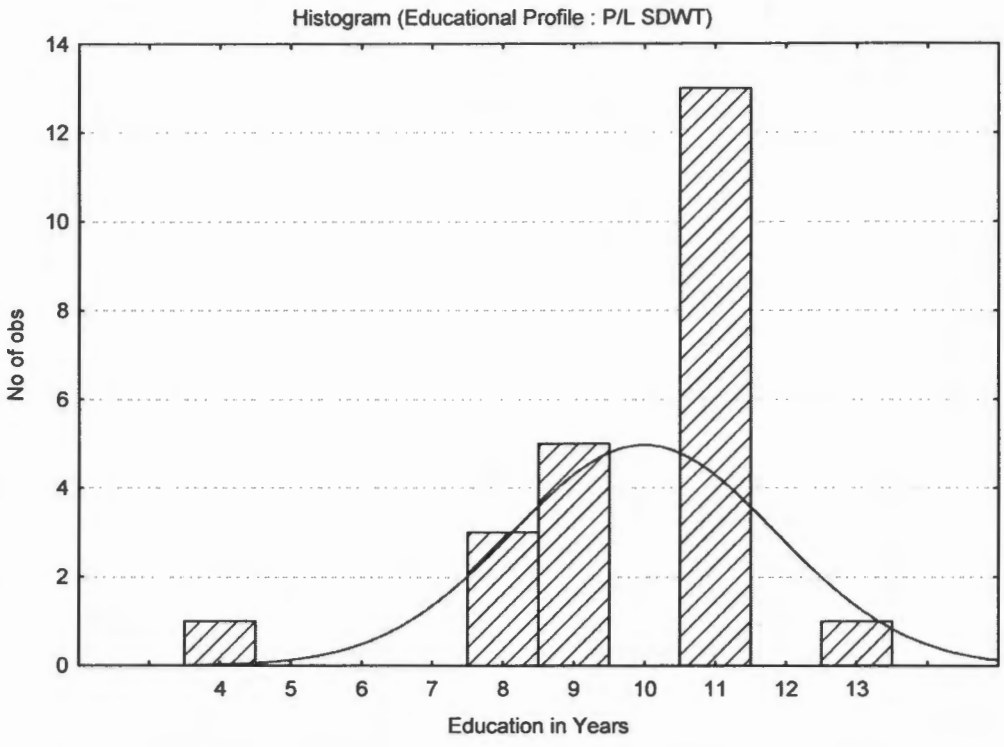


*Figure 6.* Distribution of number of years of formal education in the P/L SDWT

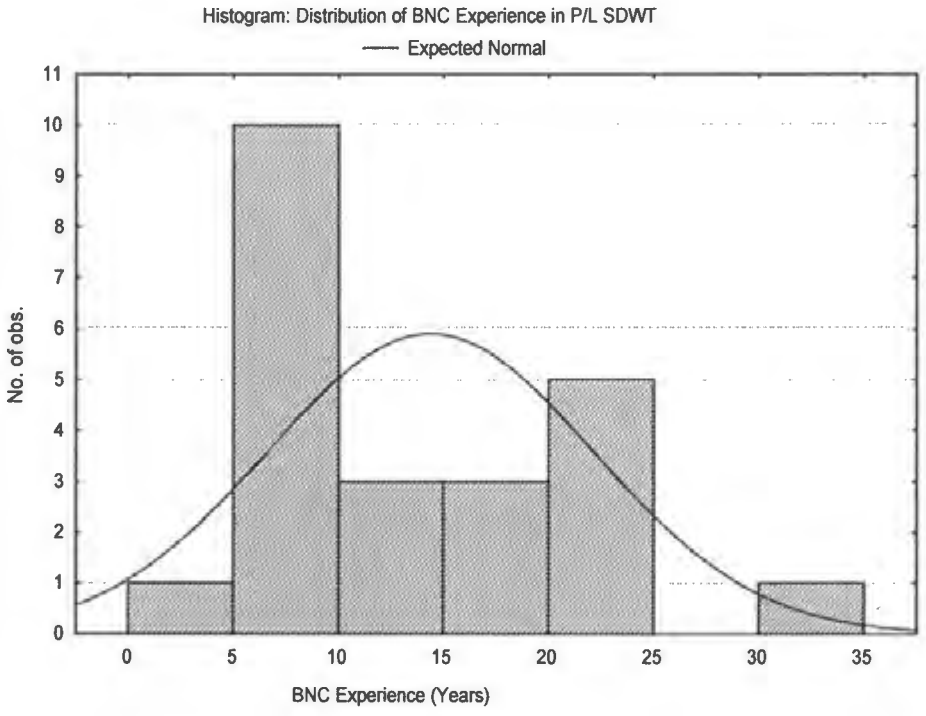


*Figure 7.* Histogram showing the distribution of BNC experience in the P/L SDWT

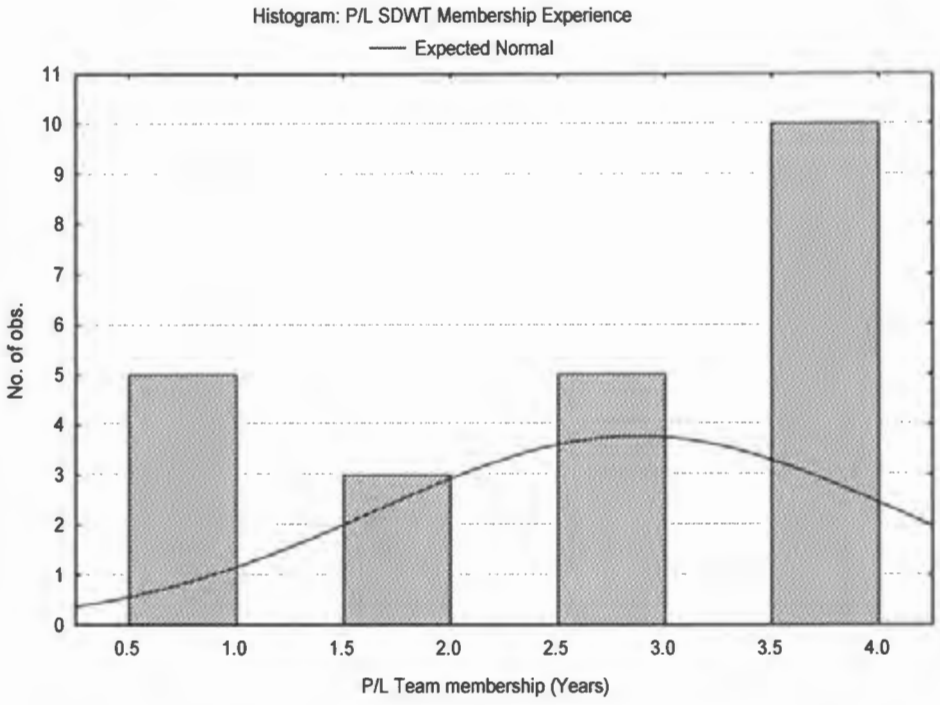


*Figure 8.* Histogram showing Distribution of P/L SDWT membership experience

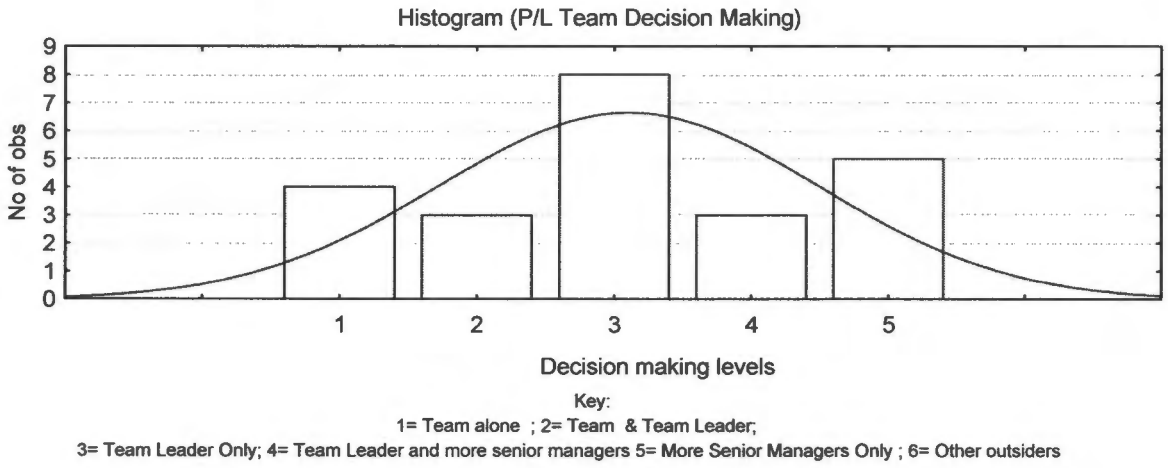


*Figure 9.* Illustration of P/L T/ Leader's view of decision making devolution in his team

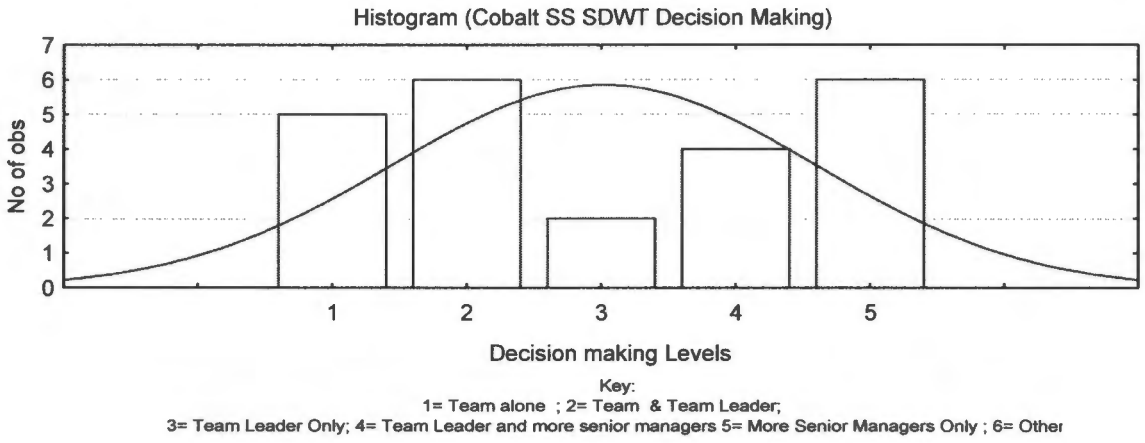


*Figure 10.* Illustration of Cobalt SS T/ Leader's view of Decision making devolution in his team

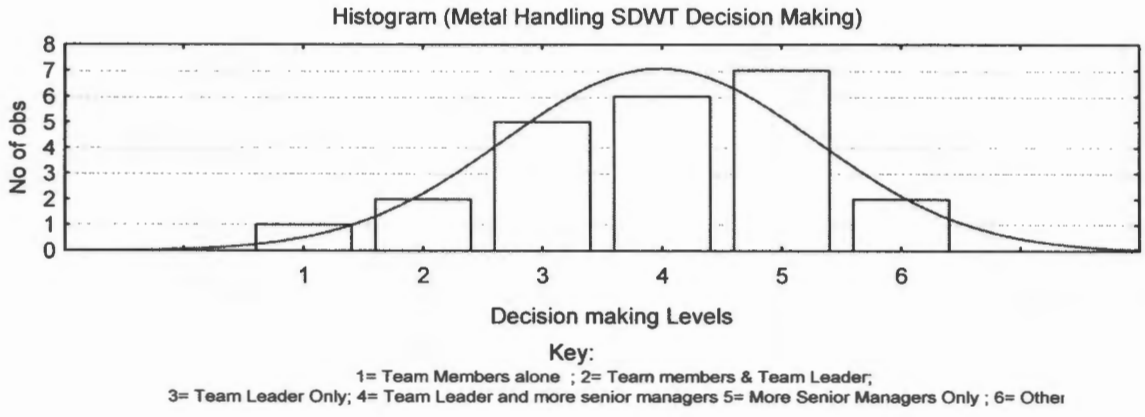


*Figure 11.* Illustration of Metal Handling T/ Leader's view of Decision making devolution in his team

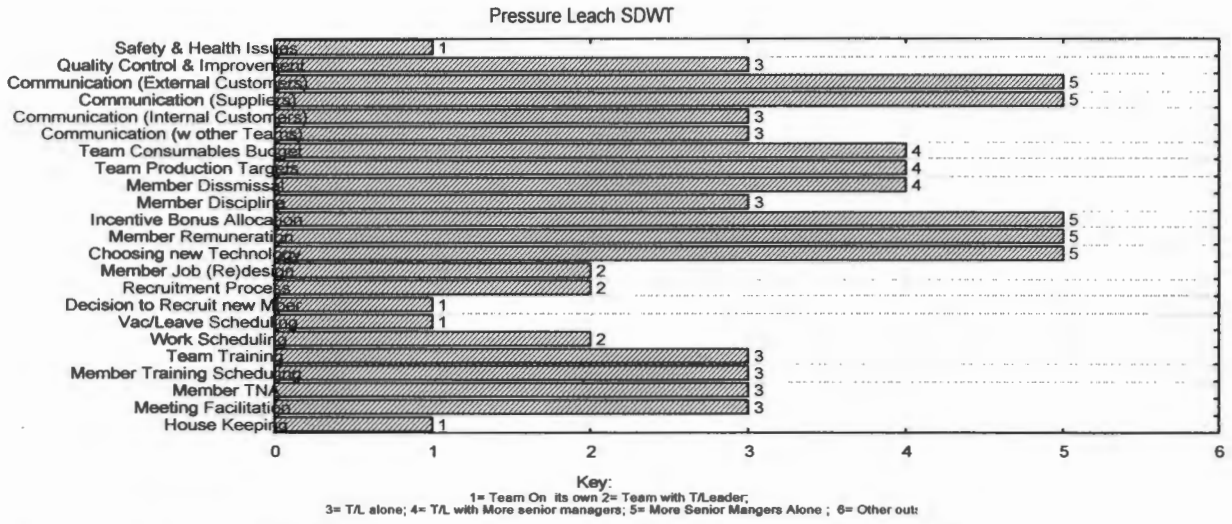


*Figure 12.* Leader reported decision making devolution by issue ( P/L SDWT)

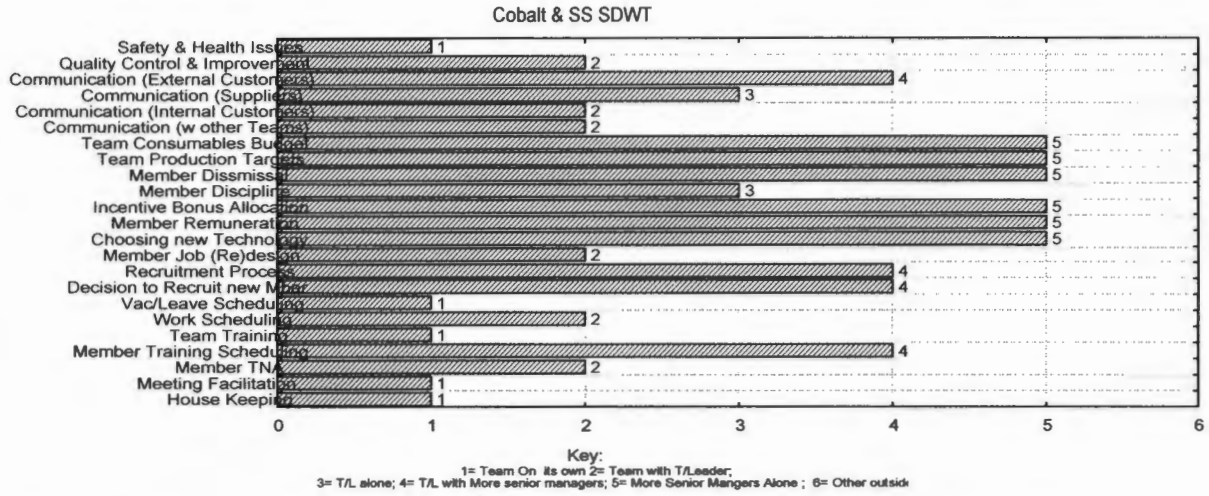


*Figure 13.* Leader reported decision making devolution by issue (Cobalt SS SDWT)

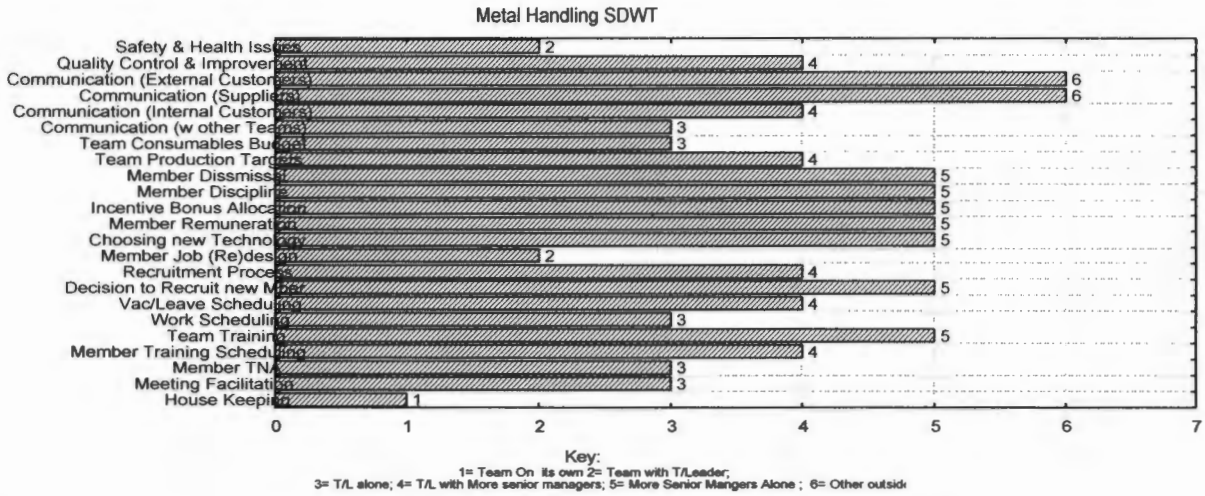


*Figure 14.* Leader Reported decision making devolution by issue ( Metal handling SDWT)