



JOINT RESPONSIBILITY FOR THE OPERATION OF THE ENTERPRISE: WORKPLACE REFORM AT BHP NEW ZEALAND STEEL¹

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Abstract

Ryan's (1994) framework for understanding the essential components of workplace reform ties management notions of quality and continuous improvement - key 'drivers' in New Zealand business today - to union concerns about shared decision-making and joint responsibility between management and labour. The purpose of the present paper is to use a 'grounded theory' approach to further develop and illustrate that framework, drawing on a recent case study of workplace reform at BHP New Zealand Steel's Glenbrook plant between 1990 and 1994. Case study data on the company's Business Improvement Programme (BIP) shows what 'joint responsibility' actually means in terms of the development of business strategy and work practices built round quality on a day-to-day basis.

Against a backdrop of turbulence created by the legacy of the 'Think Big' project, deregulation and frequent ownership changes, BHP New Zealand Steel commenced a three-year 'Business Improvement Programme' (BIP) in 1991 at its Glenbrook plant south-west of Auckland. Operations at the steel plant were divided into 30 business units. In a succession of 'waves', clusters of units underwent a 12-week in-depth analysis of existing operations, identifying cost-savings and value-added ideas and developing an implementation plan.

The company made some progress in improving productivity, product quality and customer service. Case study findings show, however, that significant progress could only be made when joint management/labour agreements and processes were developed that facilitated genuine participation, information-sharing and other improvements in the quality of working life.

This paper briefly outlines the workplace reform context, describes the BIP process with examples from the Supply and Inventory Unit and the Coil Coating Line, and examines worker and union experience of the reform initiatives. In particular, the paper examines joint management/union agreements and processes that were developed as the company gained experience with the BIP process and saw its limitations. Indicators of the success of the reform initiatives for New Zealand Steel's viability are also summarised. Case study data are then used to develop and illustrate a model that shows how workplace change can be effected to mutual advantage when management, unions and workers take joint responsibility for the operation of the enterprise.

Context of workplace reform

BHP New Zealand Steel is a fully integrated steel plant employing 1853 full-time employees and 238 casual employees and contractors. Substantial increases were made to plant capacity during the 'Think Big' era. By 1989 there had been significant overruns in capital expenditure and the plant was not performing to capacity. Added to these problems, import protection and export incentives had been withdrawn. BHP New Zealand Steel faced a major problem with high debt servicing costs, declining domestic demand, increased competition from imported steel and considerable ownership uncertainty arising first from its privatisation and then from the collapse of its new owners.

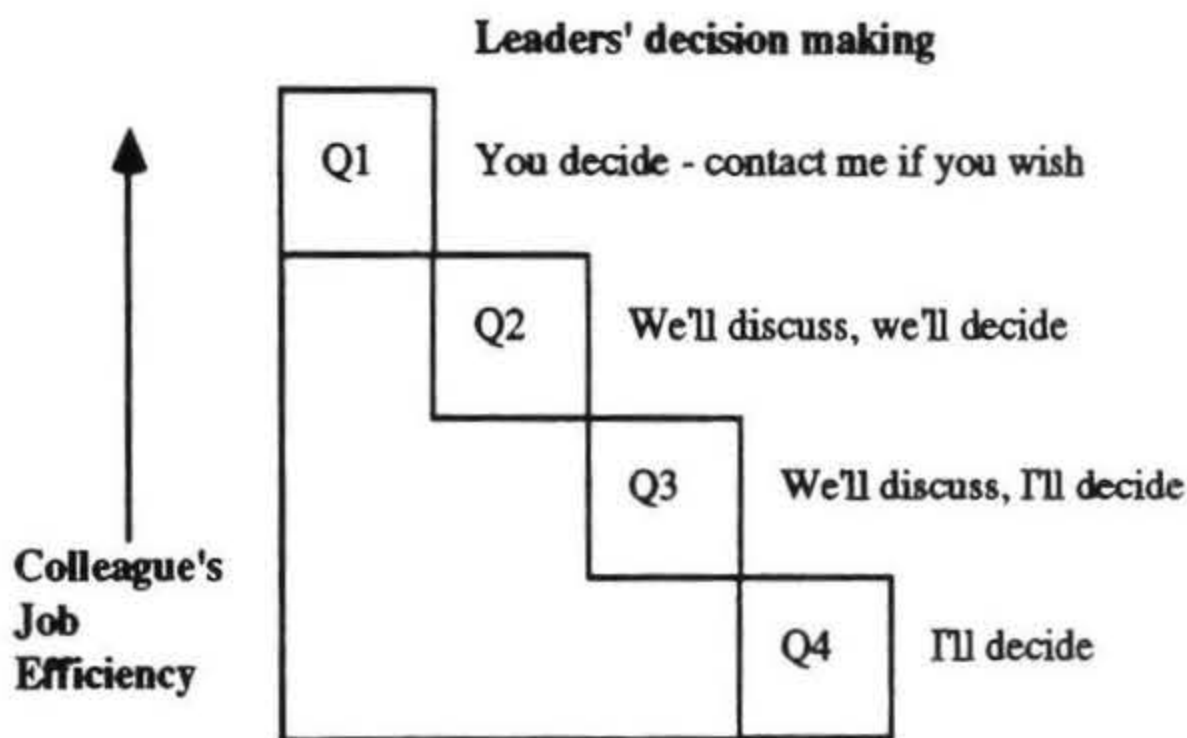
When BHP took control over the plant in 1989, as part of an investment consortium, the company set three performance goals: a 50 per cent increase in production without adding to capacity; reducing unit costs by 40 per cent; and doubling productivity. BHP New Zealand Steel developed the longer-term strategic BIP Programme to achieve these goals by eliminating defects, reducing cycle times, achieving a 40 per cent reduction in 'compressible costs' and identifying cost savings of \$50 million. These initiatives were underpinned both by a 'Total Quality Management' (TQM) approach and a 'Four Quadrant Leadership' (4QL) strategy² aimed at empowering people to make decisions to increase their job efficiency.

BIP programme

A small project group, reporting to the managing director, was set up to develop a cost-reduction continuous im-

provement strategy. The group began by talking to their Australian counterparts, American and New Zealand consultants and other New Zealand companies. A number of consultants made formal submissions and presentations to the senior management group. As this process unfolded, the project group concluded that the change process should be handled internally to provide 'better buy-in and ownership' on site. Their proposal was based on 'creating a uniquely NZ Steel approach' and adapted approaches proposed by outside consultants and involved greater emphasis on TQM and 4QL Leadership (see Figure 1).

Figure 1. Four quadrant leadership



The 4QL Leadership model empowers people to make decisions depending on their 'job efficiency' level (a mixture of knowledge, skills and motivation). The model spells out four increasing levels of participation in decision making based on the extent to which the leader can have confidence in the job efficiency of the employee or colleague and should therefore delegate the task. For example, a Q4 level means that the leader has complete confidence in the colleague and can delegate decision making on the basis of the instruction 'You decide, but contact me if you wish'. In a Q3 decision, the leader has agreed that 'the parties will discuss and the parties will decide'. Q2 is used when the leader agrees to respect and consider colleagues' views and opinions before making a decision. The leader's message is 'we'll discuss and I'll decide'. Q1 implies the leader's message, 'I'll decide'.

Following further research, the project group - later renamed the business improvement programme (BIP) team - recommended that two separate approaches be adopted to search for cost savings. The first approach was based on the method developed by international business consultants, McKinsey and Company, known as 'Delta P', which had been successfully employed in the French steel industry and by BHP in its Australian steel operations. The Delta P method is essentially concerned with identifying cost savings. It provides a way of distinguishing total production costs between those which are 'compressible', that is reducible within current production capacity, and those which are fixed or 'non-compressible'. From the application of this method, a 40 per cent reduction in compressible costs was aimed for.

The second approach involved the use of process mapping. This technique was made popular by its use in the American company, Motorola, where it had been used to eliminate defects and reduce cycle times. The success achieved by Motorola was reviewed and this convinced the BIP team that considerable savings could be found by using the mapping methodology to identify inefficiencies and improve the integration of different business units on the Glenbrook site.

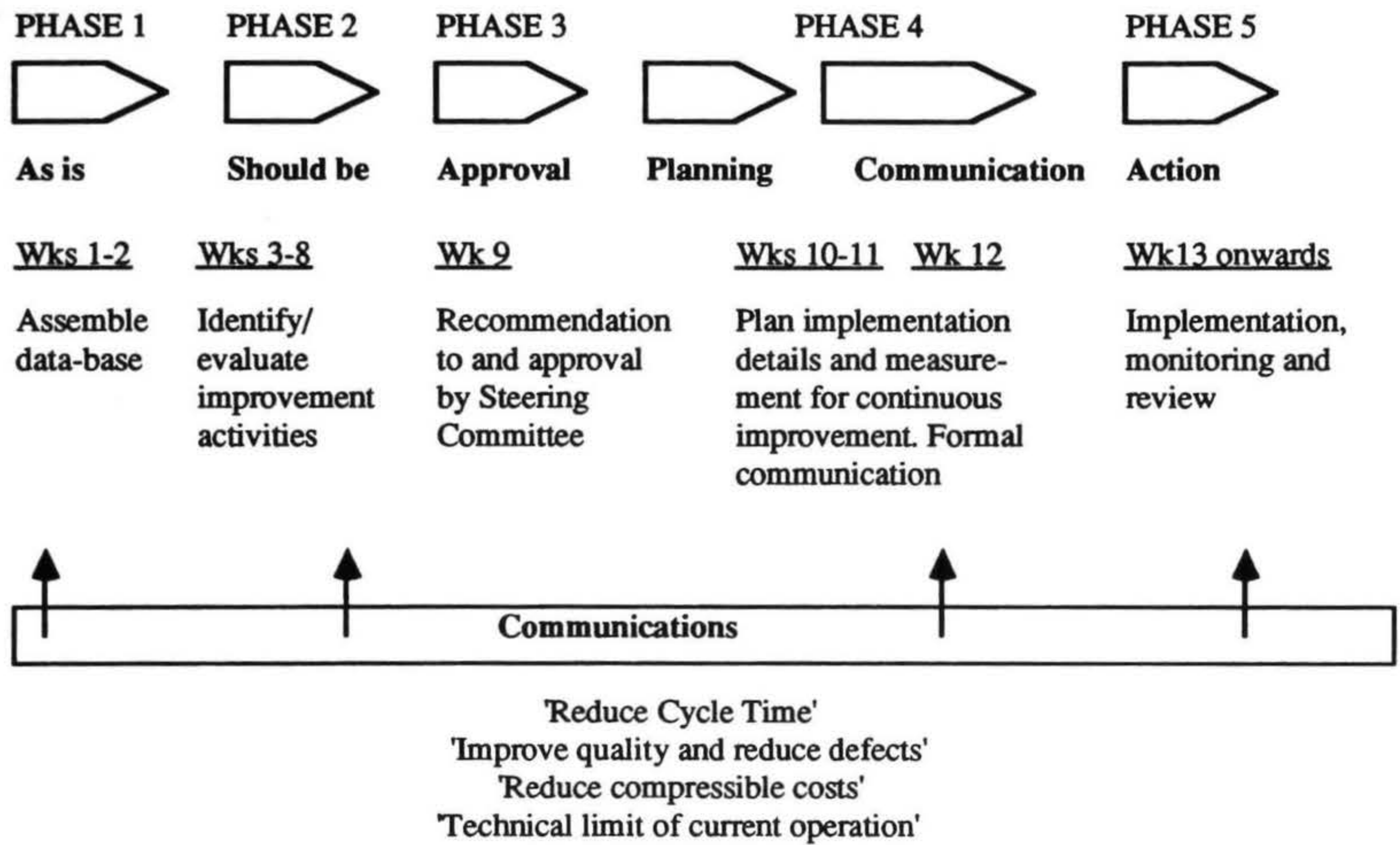
The BHP New Zealand Steel operation was divided into 30 business units which were assigned a business improvement leader from the BIP Team. These units were selected for in-depth analysis from which line managers would identify and implement improvements. Each unit had a leader to work full-time in developing and applying the process. The analysis took place in five phases (Figure 2) within 12-week waves covering four to eight units. A pilot wave of three units began in April 1992 and was followed by eleven further waves which concluded in April 1994.

BIP unit teams were instructed in the use of two methodologies: an organisational unit method, and a cross functional process mapping method.

The unit method was typically used for discrete organisational areas or business units, such as the Coil Coating Line or the Steel Plant Mechanical Maintenance. Over the 12-week wave, the organisational unit underwent five successive phases: it assembled a data base on the existing operations, identified and evaluated proposed improvement activities, made recommendations and sought approval from the steering committee, developed an implementation and measurement plan, communicated the outcomes and in week 13, began a phase of implementation, monitoring and review. During the 12-week BIP process, the base costs and key performance measures were established, projected savings targets defined, ideas to meet or exceed this target generated and, after approval for the recommendations was reached and communicated widely, the implementation plan and performance indicators were developed.

Cross-functional process mapping is used to analyse work processes that span several work areas or functions, such as the cycle involved in receipt of an order for a particular product to its delivery to the customer. Cross functional process mapping involved a 'diagonal slice' of the relevant workforce across all relevant functions as well as across key internal customers and suppliers. The process was carried out in two formal mapping sessions, usually held about a month apart, and taking one to three days each session depending on the size of the process. The first session created an 'as is' map, setting out the start and end points and each step in the process, determining times associated with each step and identifying any issues. The second session developed a 'should be' map, reviewing the first map and times, and brainstorming possible solutions to the issues raised in the first session. After the mapping sessions, the cross functional process followed

Figure 2. Overview of the BHP New Zealand business improvement process



the same stages as the organisational unit method.

Cross-functional mapping can be illustrated through the experience of the Supply and Inventory Unit. The unit comprises 55 people in the following departments: stores, purchasing, accounts payable, raw materials, finance and planning. A team of 35 was brought together for six days of 'as is' and 'should be' process mapping. As BIP Leader, Robert Cram, explained, the team comprised senior management (including the managing director), site delegates, chargehands and people from the shopfloor and represented 'every division, every discipline, every geographic location' involved with the supply and inventory process. Cram said this meant that 'you had representation of all functions and authority, and therefore you were able to make decisions then and there'.

The unit had a cycle time range (defined as 'when a need is identified through to when the goods or services are accepted and paid for') of between 28 to 75 days. A new target cycle time of 17 days was identified during the process mapping phases based on identifying the non-value adding activities and how to remove them. Twelve improvement groups were set up to achieve this reduction in cycle time. A key strategy involved setting up a limited number of contract partnerships with 200 suppliers, and operating a 'stockless inventory' which reduced or removed former purchasing functions. By June 1994, cycle time had been reduced to three to four days on a rolling average.

Social Policy

Alongside the search for cost savings, the business improvement programme introduced a 'social policy'. That policy was designed to reduce the fear of change and encourage maximum employee participation in the improvement process. The policy was developed by a team of nine representatives from management, union, workers and supervisory or salaried staff. It provided two opportunities for everyone on the Glenbrook site to make written submissions to a draft plan. More than 100 at each opportunity were received by the team, 30 per cent of them groups, indicating the high level of discussion encouraged by the social policy proposal. The policy noted that while jobs would change, and many would disappear entirely, no layoffs would be enforced solely as a result of the BIP initiative. Employment would be safeguarded through redeployment and training and various other employment safeguards including:

1. maintenance of earnings for six months;
2. a guarantee of an alternative job, with provision for refusal if it was not seen as appropriate;
3. defined criteria for selection of surplus employees in a particular operational area;
4. a temporary labour register of surplus employees was maintained confidentially by personnel staff and these people were given priority for any vacancies;
5. if at the end of six months suitable alternative employment had not been found, the person could apply for voluntary release, including a 'lump sum' payment;

6. the establishment of an independent appeals board.

The provisions of the social policy were effective from April 1992. The policy was reviewed in February 1993 and a decision confirmed that the policy would end in May 1995. By June 1994, out of 107 people who were shifted between jobs as a result of the BIP process, only three used the appeal procedure to review their job reallocation.

Consultation and participation structure

A final component of the BIP was the establishment of a new consultation and participation structure. Unit Communications Groups (UCGs) were set up to facilitate consultation and participation in the improvement process. UCGs consist of representatives from management, elected representatives from all parts of the unit, and the local union area representative. They met weekly during the formation of the BIP plan and, less regularly, to monitor its implementation. Ideas for cost savings, adding value and customer service improvements were generated in brainstorming sessions with the entire work group in the unit. UCGs evaluated the ideas put forward and proposed changes for management approval. The communications group was responsible for keeping the workforce of the unit informed of progress and providing feedback on any issues at all stages of the process (Elsley and Graham, 1993). Formation of the UCGs led to increased employee involvement in key steps of the process, especially in the evaluation of ideas that had been generated from the shopfloor and in implementation planning.

Working through change - a mixed response

The previous section has outlined the BIP process as it was finally assembled. Its various components were modified as experience was gained, particularly with respect to the consultation procedures. The UCGs were extended after the BIP team and senior managers reviewed the success of the BIP process in the first two business units affected. BIP leader, Peter Jenkins, believed that while employee involvement in the BIP process initiatives was considerable - in keeping with past practice on the site - it was also acknowledged that employee involvement was not as effective as hoped in the first two business units 'partly because we were all learning, and partly because there were different expectations'.

Site delegates confirmed that there was resistance to the BIP process because workers were initially involved in ideas generation, but not the stages of ideas evaluation and decision making about subsequent implementation. As a site delegate explained, 'we did bring about some change and managed to get employees involved in evaluation, but only after management had done the initial sifting of the ideas'. Union concerns were then taken up during negotiations over the 1992 Collective Employment Contract (CEC), discussed in the following section. The communication elements of BIP were then completely reviewed by the BIP team and members of the CEC negotiations group.

Site delegates from the Electrical Workers' and Engineers' Union provided the following perspective on the BIP process that illustrates the range of key issues and attitudes that need to be addressed when implementing significant workplace reform initiatives. They explained that unions did not become involved in the BIP process, except in a reactive way, until the CEC Contract of December 1992. The delegates said that there was a lot of debate among members about whether unions should be part of the process at all and, as one of them put it, 'we had to persuade members that these things were going to happen anyway' and that the business had to stay viable. Negotiations over the issue of consultation and participation (Clause 5 of the CEC Contract) took place because 'management had seen that they wouldn't get very far without our involvement'. One delegate explained that

What had happened was that management would come to the end of a BIP and say 'yes, that is going to happen', but then they couldn't make it happen without our involvement. [Then he added] Why should we have to put in [the contract] 'you will behave in a consultative way'. Why shouldn't they do it naturally?

We've found that we're going to have to teach managers who've spent 20 years managing in an environment in which people are simply told - we're having to teach them the skills to consult, where they are genuinely seeking advice - teaching the skills to do it and the attitude.

In reflecting on what he had come to understand 'consultation' actually meant, the other delegate commented:

What I've learned is if you go into a discussion with a pre-determined idea of what the outcome is likely to be, you don't get genuine consultation. [However] If you go in with a situation where you say "here's the issue and let's work through it" then you do.

It only takes the other side to fall into that situation, put the [pre-determined] agenda on the table, then you don't get anywhere.

The critical thing is to seek advice then make the decision. We've still got heaps of people on both sides who make the decision in advance, then they consult. We've got a lot of history here that makes that approach hard.

CEC negotiations led to a review of BIP communications. The review was done in January 1993 and modifications incorporated in BIP. The CEC (with its consultation and participation provisions) was ratified in December 1992 and ran to September 1994. The CEC covers shop-floor production and support staff such as trades, clerical and stores. Previously consultation had only been guaranteed in the Engineers' Union CEC and this only specified co-operation, not participation as in the new agreement. The agreement was intended to cover restructuring such as that

occurring at Glenbrook under the BIP programme. It made provisions to:

1. establish an effective consultation and participation structure,
2. recognise that employee security and welfare required a joint co-operative approach between the company and the unions, and
3. recognise that the smooth introduction of new production improvements, work methods, processes, equipment, technology and training could only be achieved by consultation and participation.

The agreement commits BHP New Zealand Steel management and site unions to reach consensus on any of these itemised changes in order to:

1. ensure that workers can contribute information and input into decision making,
2. make full use of workers' experience and ideas on the efficient running of BHP New Zealand Steel,
3. give management and unions the opportunity to understand each others' views and objectives, and
4. preserve the employment of individual workers and to avoid redundancies.

Three main structures were proposed as the mechanism to achieve these various goals: (i) the BHP New Zealand Steel Consultation Group; (ii) local Consultation Committee activities; and (iii) business review meetings.

1. A BHP New Zealand Steel Consultation Group would represent all workers covered by the CEC, and comprise a representative from each of the unions who were party to the contract, and an equal number of management representatives. This group has been formed and meets every two months and/or as required to raise and resolve issues.
2. Local consultation committees were to be established in business units or plants to consider matters relevant to that area of the company. Unit Communications Groups, discussed in the preceding section, were subsequently formed to achieve this objective.
3. Information sharing with delegates was to be further developed into full-day quarterly business review meetings to consider and discuss BHP New Zealand Steel's performance and company-wide matters of common concern to management and the unions. The company would provide relevant commercial, financial marketing and production information at the meeting. This has since occurred.

The pursuit of greater employee involvement and participation in decision making put different pressures on management and workers. Some senior managers were seen by their peers and employees as 'having trouble letting go' of control, while middle managers were seen as 'being pulled in both directions. They're in the process of putting in place changes that will ultimately see their positions go'. Conversely, managers who were grappling with the prac-

tical implications of providing employees with greater opportunity for involvement in workplace decision making, noted that this was not always easy to achieve. As one manager expressed it, 'people on the shopfloor say they want the responsibility. When they suddenly get it, it really frightens them.' One implication of this is the need for managers at every level and shopfloor workers to have appropriate training and skills development to assist them in making the transition.

The nature of the decision-making process was a cause of debate among delegates. One commented that management had a tendency to begin discussions on an issue

by stating 'we'll discuss this under Q3' [by operating on the basis of the leadership principle 'We'll discuss and we'll decide']. Then if we don't get agreement they'll shift to Q2 ['We'll discuss and I'll decide']. There's still the problem with management that they won't relinquish the power. Some will, but not across the board.

The nature and extent of employee involvement and genuine participation in decision-making varied from unit to unit (Elsley and Graham 1993). Common problems experienced by the UCGs included the fact that the success of the communications strategy was dependent on the original relationship between the unit head and the workforce, and UCG members did not always understand their role. The workforce was not able to influence the outcomes as much as some workers would like because of workers' lack of experience in the situation, a similar lack of experience by management, and the need for greater training to address these problems (Elsley and Graham, 1993). Where these problems were overcome, as in the Coil Coating Unit Case Study described below, workforce relations have improved, leading as far as experimentation with self-managing work groups.

A senior site delegate summed up the BIP programme in the following way, revealing how different attitudes cut across traditional 'them and us' thinking:

Many workers at BHP Steel see the trust [from managers] is still not there. We've still got a long way to go. It's going to take a long time to turn that round. Trust has to be given. I think that the union has given a lot. The reality is that there is still a lot of mistrust, but not just between workers and management, but among unions as well.

BIP has disrupted a lot of cosy existences and a lot of positions have disappeared here. A lot of people who didn't have to justify their existence now have to. People at all levels are a lot more accountable. It was a cosy existence for a lot. There were cosy little numbers for people everywhere - on the shop floor right through [to management levels].

People had manipulated themselves into those situations because there was no overall strategy to ensure

that people would play their part. The BIP process has put everything under the microscope. Everybody, right through all the levels. Every job had to be justified. Nothing has been missed. You can run but you can't hide. [He cited the example of] A person who used to do very little. He did what he was required to do, but three quarters of the day he sat round doing crosswords.

Union people objected to labour once again being treated as 'compressible costs'. Too often when labour costs are looked at it's only the shop floor. This time the BIP process looked at every position up to Area Manager. It looked at all positions.

While the improvement programme did not have a 'head-count reduction' target, given the history of job losses in earlier phases of restructuring, in some workers' minds the cost saving target of \$50 million was seen as a labour-saving strategy, even with the social policy provisions. This view was greatest in those areas which lost jobs, such as the stores. In the 18 months prior to December 1993, the number of storepersons had been reduced from 23 to 13. Three supervisors and four staff had taken voluntary retirement, while the remainder had moved to other jobs on the site. An older storeperson commented:

BIP is coming into all companies [in New Zealand]. It is a numbers game. I don't say I like it, but it has to happen. It's put people under a lot of stress. You don't know where you stand. The way to work is to come and do your job to the best of your ability and hope you'll be there the next day. It's hard for young people with family. Who knows what the future holds. You just live in hope.

That's the hardest thing to deal with. I want to retain my job. I'd go nuts just sitting around at home. And [referring to his age] then the age comes into it. [He paused uncertainly, then added, as if to reassure himself], they say if someone's BIPPED out of here, they'll find you another job within the company. They'll do their very best. They're not just going to BIP you out of here and out the gate.

Coil coating line case study

The coil coating production process

The coil coating line was commissioned in 1982, at a cost of \$23 million. Coil coating is the process where paint is applied to galvanised or cold rolled steel continuously, producing a range of Colorsteel T products. The coils are uncoiled, degreased, chemically retreated, primer-coated on both sides, baked, cooled, painted, rebaked, cooled, inspected and then recoiled. All this is done at speeds ranging from 30 to 76 m/min (Naidu and Preece, 1993). The plant operates on fifteen shifts per week, with overtime on weekends to supply peak demands. The base production capacity is about 45,000 tonnes per annum, although this varies with the mix of products made (Naidu

and Preece, 1993).

The change process

The coil coating line was one of the units in the third wave to go through the BIP process on the Glenbrook site. The unit manager worked fulltime on this process for three months together with a BIP leader. A total of 570 ideas for cost-savings were generated through involvement of all employees in the unit in brainstorming sessions. From this a total of 38 were selected for implementation. Out of a total cost structure of \$46.1 million for the base period 1991/92, \$38.9 million were identified as 'non-compressible' (ie. fixed) with an identified savings target of \$3.8 million. By July 1993, \$4.03 million in cost savings in operational expenses, labour, raw materials, energy and water had been identified.

One identified cost saving related to delays in gauge changes. The unit manager, Bob Naidu, explained that the saving came as a result of an idea by a person from the shopfloor who had said 'run by gauge not by width, a suggestion that didn't involve one cent of investment. The average delay in gauge changes had been running at 38 hours per month. As a consequence of implementing the worker's idea, for the three month period from October to December, 1993, delays fell to an average of 25 hours per month. Sustaining these reductions would lead to savings of 12 hours per month, enabling additional production of 1,200 tonnes of painted steel per year, valued at around \$2 million.

Experience of the changes

The manager, Bob Naidu, described his experience with the BIP programme in the following way:

It was a good thing, an important catalyst that helped us start seeing what we could do with the numbers. BIP is a very structured process, and Rod McBride [the BIP leader working with him] had an accounting background. [However] We were looking at reducing 40 per cent of compressible costs. It was very stressful for everyone.

We didn't go in with a view of taking out people. We had an open mind. [However, he expressed concern that] from a human point of view how much would people want to give ideas when they were likely to result in a reduction in the number of jobs... The workforce would give lots of ideas but not always appreciate that it would affect manning levels - even if not directly.

A steering committee was formed three months into the unit's BIP process as a pilot when the first two BIP waves were experiencing difficulties. The committee comprised elected members from each of the key areas of the plant, together with the unit manager and the site delegate. The manager said

There's a lot of experience in the group - a mixture of a lot of machine experience and outside business experience... This steering committee couldn't have existed before [under the previous climate, management processes and working relationships].

Decisions were made by the steering committee, then each member took responsibility for restructuring a particular area of the plant using the appropriate quadrant level of decision-making. The site delegate believed the trade-off was that the delegate and workers 'got to buy into' the decisions. Contrasting this with the situation prior to the development of the consultation and participation process, and the formation of the steering committee, the manager commented that:

We'd been trying consultation for some time here. [They - the site delegate and workers] always brought up the kitchen sink issues. Then BIP came in. It made me think as well [about union views on the different issues]

The site delegate, Alan Preece, admitted candidly that given the adversarial nature of the workplace

When I started here seven years ago they got the delegate they wanted. I was very good at being belligerent... so I managed to force Bob [the manager] into being a general asshole.

The union and management in Coil Coating had been trying to develop a process of consultation since 1989, but it had not worked because of the antagonism between him and the manager. In the end we said 'we'll just call it quits and just go back to 'them and us', then the business improvement programme was introduced.

Along the way we got a bit of respect for each other and we discovered that we had a number of things in common. I started not calling Bob 'a shit' in front of union meetings. I believe the guys were sick of playing games. The BIP process was a catalyst for this.

A member of the steering committee, Steve Wotton, who works as a coater, said that he hoped they would not come to the end of the BIP implementation process 'and just decide to stop'. He voiced the feeling of other members in the group that the Steering Committee should be the vehicle for continuous improvement indefinitely.

Alan Preece also spoke for everyone when he described the Steering Committee as the plant management committee:

We are not just here to manage the process, we're into what business decisions are being made. Here we're using Q3 Decisions. Before, Bob was using Q2 and I said, basically, "you don't trust me".

Coater: *We have a mutual respect for each other now.*

Site delegate: *Bob's really at the stage where he thinks it would be marvellous to be done out of a job. We get the same data as the manager.*

Coater: *The track we're going down is endless. Both management and workers are having to let go some of the traditional things we've had control over. [Ultimately] You let go.*

Site delegate: *We've let go the right of a union to say 'no you're not changing us'. We say now, we work on base numbers, if the business signal is you get rid of six people tomorrow then we have to look at it.*

Coater: *In the past if the management said it you'd do the opposite. Now we're starting to look at things through management's eyes and they're looking at things through our eyes. We've cut out a lot of the bull.*

Workplace change through joint responsibility

Total Quality Management systems depend on achieving a higher level of commitment and the contribution of workers' knowledge and skills through increased participation. They are also based on the principle that 'those who are involved in making the decision work, need to be involved in making the decision' (Young, 1992). New Zealand case study research indicates that levels of consultation are certainly increasing as workplace reform strategies are implemented (Perry, Davidson and Hill, in press), and they create a basis for wider participation in the workplace as the example of BHP New Zealand Steel shows.

However to assess the extent to which decision-making is changing the balance of power in the workplace, it is important to distinguish strategic decision-making and decision-making that relates to the organisation and conditions of work on the 'shopfloor'. Moreover, the latter can take the form of 'managed participation', rather than genuine 'participative management' (Deutsch, 1989). Participation in strategic decisions can give the workforce a material effect on the success of the business and its long-term viability and, consequently, on the employment security of those who work there. Similarly, genuine participative management in technology changes and job design captures the ideas and commitment of workers to processes of continuous learning and improvement.

Table 1 provides a conceptual framework, based on the experience of BHP NZ Steel, that shows what participation and joint responsibility can mean for (i) the development of business strategy, production processes and work practices built around 'quality'; (ii) structures and processes for participation in these three arenas of decision making; and (iii) business and employment outcomes for management and workers respectively.

Table 1 also illustrates the range and nature of mechanisms

Table 1. Workplace change through joint responsibility: arenas, mechanisms and outcomes

Decision -making arenas	Mechanisms for Participation and Accountability¹	Outcomes for Management and Workers
<i>Business Strategy</i>		
<ul style="list-style-type: none"> • investment • markets • technologies • products • HR policies 	<ul style="list-style-type: none"> • participation agreement in CEC² (covering production changes and restructuring) • quarterly business review (reps from management and site committee) • Coil Coating Line management committee (reps from management, work areas and delegates) • Hollow Sections survival plan 	<ul style="list-style-type: none"> • captures ideas and commitment of workers in business development • fosters long term viability of business and employment security
<i>Production Processes</i>		
<ul style="list-style-type: none"> • BIP³ programme • 'TQM' processes • technology changes and job design • work-based continuing education 	<ul style="list-style-type: none"> • BIP methods teams, cross-functional process mapping teams, to redesign work systems (includes union delegate) • UCGTs⁴ (Unit consultation and participation structure-includes delegate) • Team-based work systems that optimise commitment and learning (Hollow Sections Unit and Coil Coating Line) 	<ul style="list-style-type: none"> • identifying cost savings and added-value • captures ideas and commitment of workers to processes of continuous learning and improvement • quality employment • skills and career development
<i>Employment Conditions and Practices</i>		
<ul style="list-style-type: none"> • remuneration, employment conditions • performance development and review • training/learning 	<ul style="list-style-type: none"> • contract negotiations (reps from company and union site committee) • special BIP team to develop social policy for redeployment and retraining (reps from management, workers, unions) 	<ul style="list-style-type: none"> • rewards shared • employment security • protection during restructuring

¹ Model assumes union structures and culture undergo similar processes of workplace reform

² Collective Employment Contract

³ Business Improvement Programme

⁴ Unit Communications Groups

Examples drawn from case study on BHP NZ Steel, Chapter 9 in *Reform at Work NZ Workplace change in the New Industrial Order*, Longman-Paul, in press, Martin Perry, Carl Davidson and Roberta Hill.

for participation and responsibility in each of the decision making arenas. As BHP New Zealand Steel's experience shows, the involvement of site unions was fundamental to the achievement of effective change. Workers were involved in the restructuring process, both directly in the workplace and indirectly through union representation through a consultation and participation agreement negotiated by the combined site unions. This agreement committed BHP New Zealand Steel management and the site unions to reach consensus about all aspects of the restructuring. Unions and management were expected to work together to gather information, investigate options for restructuring, develop a restructuring plan, and jointly communicate about the plan and its implementation with the workforce using the mechanism of the Unit Communications Groups (UGCs). One of the principles driving this agreement was a recognition that the smooth introduction of new production improvements, work methods, processes, equipment, technology and training could only be achieved by consultation and participation.

The BIP process was seen to have achieved significant efficiency and financial benefits. Utilisation of the plant went up from 58 per cent in 1989 to 90 per cent in 1992, cost per tonne of raw steel fell from \$450-500 to \$340-360 over the same period, and productivity increased from 200 tonnes per year per employee to 420. Raw steel slab production increased from 411,000 tonnes a year to 645,000 tonnes by June 1994 (close to plant capacity of 700,000 tonnes), and a small profit had been achieved (Skellern, 1994).

By March 1994, BHP NZ Steel had identified more than \$154 million per annum in savings and had implemented \$60 million of these savings. Total sales volume had doubled, although revenue had remained constant over the same period because of significant pricing pressure in export and domestic markets. However, domestic market volumes had grown 20 per cent in the 1992/93 year, and a further 5 per cent in 1993/94, driven by a strengthening of the New Zealand economy.

In the light of these positive improvements and experience from the implementation of the BIP strategy, the development of the CEC and long-term strategic plans, in late 1993 BHP New Zealand Steel embarked on a further strategic programme called the mutual development project (MDP). Peter Jenkins, the MDP leader, believed that the BIP process was 'the broad trigger which brought out the people issues' now being addressed through the MDP project.

Our sophisticated 'real-time' computer systems mean that much more information is available. The business won't get the maximum advantage out of this unless employees on the shop floor have the skills and authority to make decisions based on this information. This leads us naturally into increased training, developing employees with wider skills. And if production workers are making production decisions which have major busi-

ness implications, they need to be in self-managing teams.

A senior site delegate explained that MDP had grown out of the learning that occurred through the business improvement programme. The BIP process involved an attempt to build up trust within the company that there was a commitment to form autonomous work groups. However, in his view,

when the BIP process went through, they looked only at how work is done. You can't legislate inside people's heads. You've got to get co-operation. If you don't get commitment people will just say 'this is not my job' implying 'I'm not going to co-operate'. Mutual development was borne out of BIP, which was not going anywhere in the area of work practices.

The MDP aims are 'to ensure the ongoing viability of BHP New Zealand Steel and the well-being of its employees' by taking a decentralised but co-ordinated approach across the whole company. The aims are seen to be intrinsically linked so that each will be enhanced by the success of the project, which has been designed to

- * enable achievement of the company's long-term business goals by people at all levels of the company
- * lead to increased job satisfaction, employment security and productivity.

The MDP project will set basic principles for a co-ordinated programme covering areas such as remuneration packages, career paths, training and portability of skills, work organisation (moving more fully into self-managing teams), work allocation (addressing demarcation issues) and the use of contractors (*NetWork News* 1993).

Conclusions

Despite the turbulence created by the legacy of the Think Big project, deregulation and frequent ownership changes, BHP NZ Steel was able to develop a successful programme of reform and restructuring in the workplace. Pressure from customers put pressure on the company, initially to achieve cost and price reductions and quality improvements, and subsequently to achieve significant improvements in delivery lead time and reliability. This required significant changes in workplace organisation, since customer demand for products on a shorter lead time required more frequent product cycle changes (including the size and chemistry of the product). As a consequence, frequent machine changes were required and this led to pressure to reduce set-up time.

A key factor in the success of the workplace reorganisation and reform was the involvement of workers directly in the workplace and indirectly through union representation. Notwithstanding the difficulties that this has involved, the ability to discuss problems and issues through a formal

system of consultation and the BIP process allowed the company to make progress in developing programmes to improve productivity, product quality, customer service and the quality of working life. Significant progress, however, could only be made when joint management and union programmes were developed that facilitated genuine participation and information sharing.

The experience of an earlier survival plan, and, subsequently, the longer-term business improvement programme, taught BHP New Zealand Steel management that a focus on cost savings and value added ideas was insufficient to produce the flexibility and innovativeness that is needed for the current business environment. The next stage is to move, through the mutual development project, to a variety of innovative changes including self-managing work groups.

Future research

The paper has focused on structures and processes for joint decision-making on workplace reform by management and labour. As many writers have argued, these are not homogeneous categories. Further research is needed to examine the ways in which relationships based on gender and race affect the development of these structures and processes during periods of workplace transformation.

Research also needs to be directed towards assessing whether, and to what extent, union cooperation with workplace reform initiatives results in co-option.

Finally, workplace reform research, such as the case study on which this paper is based, derives primarily from research on the manufacturing sector. Future research needs to examine the utility of the conceptual framework outlined in Table 1 of the paper for understanding quality initiatives in the service and information sectors.

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Notes

¹ Derived from Chapters 9 and 12 in jointly-authored book, *Reform at Work: Workplace change in the New Industrial Order*, (Perry, Davidson and Hill, 1995).

² Developed by Wilfred Jarvis of Wilfred Jarvis and Associates, NSW, Australia.

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