

Changing work organisation and skill requirements

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Program 3:
The changing nature of work organisation



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The views and opinions expressed in this document are those of the author/project team and do not necessarily reflect the views of the Australian Government, state and territory governments or NCVER

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About the research



Changing work organisation and skill requirements by Bill Martin and Josh Healy

How work is organised is an important factor in determining what skills workers need to do their jobs. It is common to think therefore that, with today's emphasis on teamwork, employees must be multi-skilled and able to work collaboratively and flexibly, unfettered by traditional hierarchical structures and rigid task separation.

This research, part of a larger body of work addressing issues on changing work and skill needs in Australia, investigated the extent to which the contemporary workplace has changed. It compared practices in several industries (call centres, hospitals, manufacturing plants and mining operations) with a model of high performance, to see how they were faring and their degree of success in meeting the complex demands of industry. It also considered whether employees needed new sets of skills and the role the vocational education and training (VET) should adopt in providing these skills.

Key messages

- Australian organisations have experimented with elements of the high-performance model, including teamwork, decentralisation of authority, increased knowledge-sharing, flexibility in job content, pay for performance, strict recruitment practices, and additional training provision. However:
 - there are few examples of organisations that have sustained teamwork systems. Instead, teamwork has either declined or been used primarily to ensure the social integration of workers or induct them into organisational cultures.
 - none of these practices has been used consistently to produce permanent changes in how work is organised, nor to produce a demand for significant new skills (for example, communication skills) among employees.
- Cost-cutting and cost containment have often been the motivation for reorganising work practices. While these have resulted in multi-skilling, such changes are unintended and normally not resourced. They run the risk of high degrees of work intensification and people quitting.
- Nevertheless, employees do need to be able to negotiate workplace changes by developing skills in areas such as cooperation and negotiation, as well as greater abilities in administrative, supervisory and even management skills.
- While it would be unwise of the VET system to design future training on the assumption that high-performance practices will become widespread, VET providers do need to remain sensitive to these changes in work organisation among their clients, and to the skills development they can offer employees needing to cope with them.

For a synthesis of the entire program of work conducted by the National Institute of Labour Studies, Flinders University, and the Centre for Post-compulsory Education and Lifelong Learning, University of Melbourne see *A well-skilled future* by Sue Richardson and Richard Teese.

Tom Karmel
Managing Director, NCVER

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Executive summary

This report is a component of a research program entitled *A well-skilled future: Tailoring VET to the emerging labour market*. This research program examines the evolving labour market and changing work organisation and management in the context of the vocational education and training (VET) sector and its role in the development of the appropriate levels, types and quantities of skills required to satisfy the future demands of Australian industry. The research reports have been produced by researchers from the National Institute of Labour Studies, Flinders University, and the Centre for Post-compulsory Education and Lifelong Learning of the University of Melbourne.

Many work organisation analysts have identified a sea change in how people work together, and the consequences for the skills they need. In Australia and similar societies it is often argued that such factors as increased global competition, rapidly changing consumer markets, and the expansion of the service sector all require much more flexible work practices. These in turn require new constellations of skills amongst employees. Put more concretely, the argument is that work has become more and more organised and displays many of the following features:

- ✧ the use of team-based work systems, requiring cooperation and multi-skilling amongst team members, rather than hierarchical and rigid task separation
- ✧ the decentralisation of authority and decision-making
- ✧ the sharing of knowledge between employees to facilitate efficient work and rapid response to changing market demands
- ✧ workers taking greater responsibility for their own work
- ✧ workers moving freely between tasks as required, rather than being bound by occupational divisions.

Changes such as these would normally be expected to increase requirements that employees have team-working skills, such as the ability to communicate effectively and to cooperate, as well the capacity to acquire new skills readily.

The aims of this project were:

- ✧ to assess the evidence that there has been a sea change in work organisation in Australia, along the lines described above
- ✧ to understand the implications of any such changes for vocational education and training (VET).

To achieve these aims we collated and analysed evidence contained in published (and some unpublished) case studies of Australian work reorganisation in the past decade. The cases do not provide an exhaustive database for assessing the actual course of organisational change, since their coverage by industry and types of work is somewhat patchy. However, they are diverse enough to allow new insights into the course of change in Australia. The cases span a range of industries and geographical spaces: call centres, hospitals, and manufacturing plants in the major urban centres and mining operations in remote areas across several states. Some are focused on a single industry, others compare several sectors, and still others focus on a major occupation or group of workers (for example, nurses). The cases have a common interest in describing the nature of work in contemporary Australia. Our aim was to synthesise their major conclusions, draw out the emergent themes, and assess the implications for skills utilisation and the demand for VET.

Reorganisation for high performance: Australian evidence

The idealised 'high performance' workplace, a model of work organisation designed to improve output and empower workers and which gained currency from the 1990s, exerts a strong influence in consideration of future skill needs and the orientation of VET policy. Evidence from Australian cases indicates widespread experimentation with teamwork in industry. Teams have been introduced to negotiate technological change (and associated staffing changes), to explore options for productivity improvement, and to improve information exchange. They have also been established in some cases for cultural reasons, for example, to improve sociability among individuals doing mostly repetitive and impersonal tasks.

The measure of successful teamwork arrangements is whether the teams survive past an initial period of enthusiasm and support. The more ambitious teams appear not to have met this test. In manufacturing, teams restricted to single organisational sections were more likely to survive than those spanning multiple functions and initiating job rotation schemes. In call centres, on the other hand, team-based working arrangements succeed because they benefit both the floor workers (who receive social support) and managers (who receive advice about improving work processes), while leaving intact the accepted and highly individualistic nature of the work itself.

Beyond these teamwork initiatives and experiments, evidence about the implementation of other aspects of the high-performance paradigm is very patchy for Australia. This is not to suggest that success stories do not exist, only that written reports of this achievement cannot be readily found in academic or industry journals, or through direct contact with key research institutions that are likely to have conducted the relevant study. We argue that, at this point, the high-performance mode of work remains peripheral to mainstream trends in Australian work reorganisation over the past decade.

Cost reduction and its unplanned consequences

There is more substantial case study material documenting a different kind of workplace change in Australia. Here the motive for reorganisation is not a quest for quality improvement or better employee morale, but a drive to reduce operating costs. The principal routes to this form of change have been downsizing and the increasing use of 'non-standard' forms of employment such as casual and agency staff.

Three key features define this strategy.

- ✧ An emphasis on cost reduction or restoration of profitability generally leads to short-run gains which can be achieved only at the risk of more distant and often unforeseeable costs of other kinds. Examples from the healthcare sector include higher rates of turnover among staff who survive initial downsizing efforts and the engagement of agency workers lacking role-specific skills to meet immediate labour demands. 'Flexible' staffing arrangements are most successful where they draw on a stable local supply of potential recruits to casual jobs.
- ✧ Paradoxically, some of the results of the cost-driven 'low road' to workplace change are similar to the outcomes of the high-performance approach. Both may lead, for instance, to employees taking on a broader range of tasks, more on-the-job learning, fewer occupational boundaries, and more decentralised authority structures.
- ✧ The crucial difference is that, in the low-cost model, a widening of job responsibilities comes without additional resources and support. Workers who remain with their organisation after downsizing or 'rationalisation' are expected to fill the void left by those who have departed. In general, the 'survivors' face work intensification (including unpaid overtime) and are more likely to quit (a scenario that high-performance workplaces expressly try to avoid).

New or different skill requirements?

There is little evidence that major changes in skill requirements are arising from any actual moves towards 'high performance' work practices in Australia. Nevertheless, the increasing use of some limited forms of teamwork probably increases the value of skills in communication and cooperation. It does appear that these changes often make the most of workers' existing abilities, which have been previously unused, rather than requiring that they develop new skills.

On the other hand, case studies suggest that it is the *unplanned* consequences of cost-reduction strategies and not the process of carrying out planned work reorganisation that most affects employee skill requirements. In particular, cost-reduction strategies often involve increasing the proportion of contingent workers in workplaces and reducing overall staff numbers, particularly those of administrative staff. The result is to increase the skill requirements of workers, although often without clear recognition of the change by employers. The changes in skill demand are:

- ✧ increased requirements for skills in cooperation and negotiation amongst casual and contract staff as they are required to negotiate their positions in organisations
- ✧ increased requirements for a range of administrative skills amongst supervisory staff to whom tasks are devolved as overall staff numbers are reduced. These include skills such as budgeting, management, OH&S, rostering, and complaints handling.

It would be unwise for the VET system to base future developments on putative changes in work organisation arising from widespread adoption of high-performance practices, given that there is virtually no evidence of their widespread embedding in Australian workplaces. Instead, the system might serve its students better for the realities of workplace change if it developed their skills in areas such as:

- ✧ cooperation and negotiation
- ✧ administrative, supervisory and even management skills.

It may be particularly valuable to impart these skills to workers employed on a contract or casual basis or those at risk of becoming so employed, given that such workers are generally less likely to receive employer-sponsored training.

Context

How work is organised is one of the most important factors in determining what skills workers need to do their jobs successfully. Many analysts have argued that recent decades have seen the beginnings of a revolution in work organisation, a revolution that continues and will have ever-widening effects in the workforce. No longer will workers be successful if they are able only to complete one small unchanging set of tasks in a workplace that puts together the work of many to produce goods or services. Instead, they will need to be far more flexible, able to fit productively into teams that are formed for specific work tasks or projects that may only be performed once. They will need a new range of skills to negotiate the new, much more changeable, communication-rich, and customer-focused world of work. These broad images of change have been expressed in a myriad of ways, with a variety of emphases. They have become almost an article of faith when talking about the likely future of work and skill requirements, often providing the context for various claims. To take one example, a recent National Centre for Vocational Education Research (NCVER) collection on 'generic skills' begins with the assertion that:

In today's economy, knowledge, information, customer service, innovation and high performance are at a premium and generic skills are essential ...[for workers].

(Gibb 2004, p.7)

The implication is clear: 'today's economy' is different from yesterday's and so are the kinds of skills it demands of workers. In a similar vein, a recent report commissioned by the Australian Industry Group, the largest existing employer group in Australia, claims that changes in the workplace:

mean that employers are looking increasingly for people ... with good 'soft' skills, such as team work, problem solving, commitment, the willingness to understand and model firm values and culture.

(AiG 2006, p.20)

The purpose of this paper is to take stock of existing research on how work organisation has actually been changing in Australia during the past decade or so and to assess the implications any change for shifts in skill demand.

To provide context for the paper, we begin by reviewing the main features of the most coherent arguments about why work organisation has been changing, and how it has been changing. We draw out the implications of these arguments for changes in skill requirements. Much of our focus is on the often claimed rise of sets of work and employment practices that are usually called 'high performance Work Systems' (HPWS). There has been some research focus on these arrangements, and, though there is little consensus about their exact contours, they represent the main strands of most arguments which suggest a rising set of skill demands on workers. We also briefly consider other views about key forms of workplace change, noting that some analysts have a much more sceptical position than advocates of HPWSs.

The main contribution of this paper is to bring together all the case studies of work organisation and workplace change in Australian workplaces during the past decade and use these to assess exactly what we do and don't know about such change and its effects on skill requirements. Before analysing the case studies we found, we describe our approach to locating relevant studies, how we decided what to include and exclude, and the limitations of the approach.

Why should work organisation be changing?

Analyses of changes in the ways work is organised usually connect change to the needs and demands faced by employers. Over recent decades, researchers and theorists have focused on four main sets of new demands that are said to be driving work organisation change. These can be described as the *flexibility demand*, the *autonomy demand*, the *customer focus demand*, and the *knowledge demand*.

The flexibility demand: A sharply increased premium on flexibility is one of the central planks of many analyses of the origins of recent workplace change. This position often uses a shift from 'Fordist' mass production to 'post-Fordist' flexible production as the paradigm of the change (Harvey 1990). Driven by changes in consumer markets, and the increased competition resulting from neo-liberal economic regimes and globalisation, organisations can no longer succeed by producing the same goods or services year after year. Instead, they must be able to rapidly adapt to changing consumer demands and unpredictable competition by rapidly altering what they produce to meet the market. This requires that work be organised in new ways. No longer can organisations survive with workers who do the same well-defined tasks, with sharp distinctions between the roles of one worker and another. In the flexible workplace, workers need to be able to move from one task to another, as the need arises. More than this, work needs to be reorganised so that people work in flexible teams, where the team focus is on getting the required job done, and where team members organise themselves to achieve this most efficiently. With rapid changes in demand for goods and services, teams will move quickly from completing one job to beginning the next one, although the next job might be quite different.

The autonomy demand: A related analysis suggests that the waves of restructuring in large organisations, driven primarily by competition and the need to increase efficiency, have produced unprecedented needs for autonomy amongst many workers. As management layers have been stripped out of organisations, so the argument goes, there is less direct supervision of workers, and organisations move towards new methods of ensuring that workers do what is needed. Fundamentally, they require that employees become much more autonomous in their day-to-day work, such that work is increasingly organised in ways that rely on workers being self-directed, making judgements about what exactly to do next in their jobs, with an ability to focus on achieving a final outcome that is optimal for the organisation. In many analyses, organisations seek to achieve these new levels of employee autonomy by developing organisational cultures that are internalised by workers, producing commitment that guides them in their new autonomous work situations (Kunda 1992; Thompson & Findlay 1999).

The 'customer focus' demand: The increasing significance of customer relations is a further dimension to the changing character of work that is often seen as shifting the way work is organised. Here, the emphasis is on the increasing proportion of organisations whose primary focus is customer service and the more general growth in the 'service'/frontline function in many organisations. Successfully responding to customer needs and demands requires that employees be able to exercise autonomy, judgement and initiative, so that rigid work organisation will not usually be successful. Although organisations do sometimes attempt to standardise employee responses to customers (McDonald's, some call centre operations), standardisation is not feasible for many forms of customer service. In short, the emphasis here is on new ways of organising work that allow employees to provide the customer focus that is now said to be the life-blood of most organisations (du Gay 1996).

The knowledge demand: The image of the knowledge economy as a big picture summary of the force driving workplace change gained currency in the late 1990s. It emphasised the idea that knowledge and information had become the new driving forces of economic development, largely as a result of the impact of new information and communication technologies. The knowledge-intensive nature of production, it is often claimed, has now spread to all areas of goods and service production. It requires that work be organised so that knowledge is easily shared within the organisation, and that the organisation is capable of gathering and assimilating new knowledge (the 'learning organisation'). The emphasis here is on work patterns that allow knowledge to be developed and

flow within the workplace, so that it can be used most effectively for efficiency and innovation. Again, rigid work roles and inflexible definitions of work tasks need to be structured out of work organisations for them to thrive in the new knowledge economy (ABS 2002; Burton-Jones 1999; Reich 1991; Senge 1990).

Claims that each of these new demands has been growing and driving workplace change have been subject to much research and dispute. Indeed, the shorthand versions of many of these arguments – ‘Post-Fordism’ or the ‘Knowledge Economy’ – are now treated with considerable scepticism by influential analysts (for example, Thompson 2003). Nevertheless there remains a widespread belief that work organisation has changed, and will continue to do so (for example, White et al. 2004). And these images of the impetus for change continue to lie behind many analyses of how work organisation is changing. We now turn to the content of exactly what about work organisation might have changed, bearing in mind that each of the above demands is usually seen as driving change, though to varying degrees.

How work organisation might be changing: High-performance practices

Many of the main implications of the economic changes described above and encapsulated by the four sets of ‘demand’ for the organisation of work are embodied in work arrangements that are referred to variously as High-performance Work Systems (HPWSs) (for example, Appelbaum et al. 2000), High-performance Workplaces (for example, Whitfield 2000), and High Commitment Workplaces (Fink 1992). Godard (2004) has recently described the various models of employment and workplace covered by these labels as ‘high-performance practices’ (HPPs). We adopt this useful term here since it indicates that we are referring to a range of employment practices, which are taken as capable of substantially improving the performance of organisations in the areas described above. Godard makes the point that discussions of HPPs refer to two sets of arrangements: those around the development of alternative work practices and those around the development of ‘high commitment’ employment practices (designed to enhance the commitment of workers to the organisation and their work within it).

Teamwork is the pin-up example of alternative work practices. In essence, the form taken by teamwork in HPPs is little different from the teamwork models that pre-existed the HPP paradigm: teams of workers taking responsibility for achieving particular outcomes through organising themselves, with the result that authority is decentralised within teams, workers move flexibly between tasks as needed, and both authority and responsibility are more widely distributed amongst workers. The distinctive feature of teamwork in HPPs is that it is implemented in the context of other HPP practices, with the argument that implementing the full set of HPPs is much more effective than introducing any single one alone. In this vein, other forms of job redesign associated with the HPP model include job enrichment and job rotation.

In addition, HPPs are sometimes taken to include reforms designed to increase workers’ participation in some aspects of decision-making about work organisation. These include quality circles and similar participatory systems designed to involve workers in influencing work practices that affect the quality of output. These forms of work reorganisation respond to needs created by several of the demands described above. They add to flexibility by making it possible for work to be easily reorganised as demand changes; they may reduce requirements for direct supervision of workers insofar as teamwork involves conscious cooperation between workers; practices such as quality circles and some teamwork may respond to the need for customer focus when they are directed at this issue. Clearly, these practices could entail significant alterations in the skills required of workers compared with traditional ‘command and control’ relationships in which workers are simply told what to do by bosses. To be successful, practices like teamwork and quality circles require that workers have more developed skills in such areas as cooperation, negotiating with others, and communication.

High-commitment employment practices, the other important set of practices usually associated with the HPP model, are focused on supporting and enhancing employees' commitment to their work, with the aim of improving its quality. They include a focus on careful selection and training of workers, systematic behavioural appraisal of performance, relating pay and advancement to performance, and other practices. These practices may aim to assist organisations to respond to the flexibility demand by supporting and motivating workers to work more flexibly; they may be used to respond to the autonomy demand by selecting and supporting workers who are able to act with less supervision; they may enhance customer service again by orienting selection towards workers' ability to offer customer service, and by creating new and clearer incentives for workers to focus on customer service through appropriate performance appraisal. High-commitment work practices place some emphasis on selection of workers and, in this sense, seek to employ workers who bring appropriate skills to an organisation. At the same time, a key focus of high-commitment practices is to train workers in new skills as they are needed and to reward them for the skills they acquire. Overall, the focus of the practices is to enhance the productivity of workers by ensuring they are appropriately skilled and motivated to use their skills to achieve maximum productivity, and to retain productive workers in the organisation.

In reality, few workplaces implement all of these HPPs. Moreover, there remains considerable debate about their effect on organisations and workers (Godard 2004; and for a recent Australian contribution, see Harley, Allen, & Sargent 2006). It can be expected that the more of these practices an organisation adopts, the greater will be the effect on skill needs. It does appear, though, that the adoption of some kind of teamworking model of work organisation is likely to have qualitatively different effects on skills compared to the adoption of high-commitment employment practices. This is partly because teamworking requires specific skills of employees, while high-commitment practices are as much about how organisations deal with employees as they are about how the work of employees is actually organised. For this reason, we particularly focus on evidence about the presence and character of teamwork and its effects on skill needs, in our analysis of Australian case studies.

Downsizing and work intensification

The 'high road' of seeking to implement aspects of the high-performance paradigm has not been the only response of organisations to the pressures described above. Reforms aimed primarily at cutting costs have also been widely used. So-called 'downsizing', essentially any form of organisational change that involves a systematic attempt to reduce staffing numbers, has been a widespread strategy to reduce organisational costs across the public and private sectors in Australia (Littler & Innes 2003; Morehead et al. 1997). Recent research suggests that downsizing is associated with reduction in net skill levels in organisations (Littler & Innes 2003), strongly indicating that downsizing and the adoption of high-performance practices are unlikely to occur together. Reduction in staff numbers associated with downsizing and attempts to cut costs do often affect the demands placed on employees. Most obviously, it is likely to produce work intensification, as net organisational output does not decline as much as staffing (for example, Green 2004).

However, research on the relationship between cost-cutting strategies like downsizing and work reorganisation is limited, except in the apparently unusual cases where downsizing is associated with the adoption of HPPs (Littler & Innes 2003). Despite Littler and Innes's research showing that downsizing has usually been associated with reductions in the overall employment of more skilled workers, it may be that the work reorganisation associated with downsizing increases or decreases the skill requirements placed on remaining workers. Much depends on how work is reorganised following downsizing.

Method

The aim of this project was to assess whether changes in work organisation consistent with the images of work reorganisation described above are evident from relevant Australian cases studies and what implications the body of case studies has for changes in skill requirements. This required finding and reviewing all available case studies of Australian organisations which provided information about how work was organised. While an initial focus was on organisations that had undergone some change in work organisation, a few were found in which no change had occurred, but in which work organisation was clearly described; these were also included. Many of the case studies were undertaken for research purposes other than for the assessment of the character of work reorganisation. However, they frequently contained the necessary information about work organisation and were therefore included.

Case studies were located using standard bibliographic techniques, including searching relevant databases, journal tables of contents, and relevant websites. In addition, an attempt was made to access any relevant 'grey literature' (that is, unpublished case studies). For this purpose, the International Employment Relations List Server (IERN-L) was used, and all members of the list server were invited to contribute either published or unpublished case studies. In addition, a letter of invitation was sent to 18 business schools in Australia, with the aim of capturing any other available case studies. We received 23 pieces of research in response to this call. However, the vast majority of contributions were either studies conducted in the very early 1990s, or were based on 1995 AWIRS (Australian Workplace Industrial Relations Survey) data. Such studies were excluded as being outdated for the purposes of this research. Nevertheless a small number of useful studies were received and included in the analysis for this report. Ultimately, we included 27 published or unpublished reports, representing case studies of 33 organisations and consolidated data from surveys and summarised cases representing another 73 organisations. As far as we have been able to ascertain, this group of studies represents all existing case study research that can throw light on work reorganisation published or produced in Australia since 1995.

The cases span a range of industries and geographical spaces. Approximately equal numbers of studies focus on manufacturing (9), health care (7), and miscellaneous service organisations (10). The remaining studies are of government administrative organisations and industry (mining, meat processing, and electricity generation). Most studies focus on one industry, though a few make comparisons across sectors. Clearly, these cases do range across important sectors in Australia. However, because they form an 'opportunity sample' composed of cases that researchers studied for a wide range of reasons, they also cannot be taken as strictly representative of what is happening in Australian workplaces, so we must be cautious in drawing universal conclusions.

All case studies included in this research were systematically analysed for information about key aspects of work organisation. Analyses focused on:

- ✧ The type and extent of work organisation change, in particular, evidence related to: team-based organisation; decentralisation of authority; increased vertical or horizontal knowledge sharing; employees taking greater responsibility for work; flexibility in job tasks.
- ✧ The effects of change on skill requirements, whether training practices or investment changed, and whether there was evidence of a shift in the way skills were viewed.

- ✧ The course of any change in work organisation: was it maintained, attenuated, reversed? Over what period did this occur?
- ✧ The main purposes and outcomes of change for the organisation
- ✧ Any evidence of change in employment contracts (for example, use of casual or part-time workers).

We have summarised the case studies examined for this report in Table 1 in appendix 1. The table outlines the main features of work practices in the case study organisations, insofar as they are revealed in the available studies. It also outlines the rationale for the observed work practices.

Case study evidence

Teamwork

Central to the ‘new world of work’ discourse is the prediction that organisations will increasingly favour team-based work organisation over hierarchical forms. Teams are said to facilitate worker empowerment by establishing vertical and horizontal channels for communication and problem-solving. In addition, teams either require or encourage other work practices consistent with ‘high-performance practices’ (HPPs), including information-sharing and decentralisation of internal authority.

What is the evidence on the use of teams in Australian organisations over the last decade? Where teams have been adopted, have they become permanent features of the work environment? And have they affected tangible measures of organisational performance or the demand for particular kinds of skills?

Is there teamwork in Australia?

Our first finding is that there has been widespread experimentation with teamwork in Australian organisations. Of all the work practices that potentially indicate a movement toward HPPs, we have the most detailed evidence about teamwork and its consequences. We can assert with some confidence that the conception of teams as a method of work organisation largely confined to the manufacturing industry has been eclipsed. In the process, the nature of teamwork – its purposes and connections to other components of organisational strategy – has changed. We explore this evolution in more detail below.

The objective here is to report the evidence on *where* teamwork currently exists, where it has been tried and abandoned, where it has not been tried, and where we have no indication either way. In discussing these trends we refer extensively to the ‘study site’ column of Table 1. It is clear, first, that manufacturing has been one of the major sites of teamwork. We have specific evidence on team arrangements in the automotive manufacturing sector, in other significant areas of the metal manufacturing sector, and in other areas of capital equipment and materials manufacturing (for example, a paper mill). A substantial number of these teams began under the federal Labor Government’s (now defunct) Best Practice Demonstration Program in the early 1990s. But there has not been a universal adoption of teams, even in manufacturing. The cases suggest little current use of teams in food and grocery manufacturing, for instance, and a rollback in whitegoods manufacturing.

Elsewhere, there has been a significant penetration of teamwork into the service industries. Since some of the relevant sectors are relatively recent entrants to the labour market, their experiences of teamwork have been qualitatively different from the established areas of manufacturing. The implications of these contextual differences are developed in greater detail below. For ‘mapping’ purposes, we note the evidence of teams in hospitals, nursing homes, call centres, travel agencies, parts of grocery and pharmaceutical distribution industries, and in government departments. As these patterns also imply, teamwork practices have spilled over from private-sector service firms to significant government-owned and regulated institutions, utilities, and the state bureaucracies.

Finally, although we would like to provide a comprehensive account of where teams do and don't flourish, the available case study evidence is too patchy for a complete picture to be presented. We are not able to draw conclusions either way about the incidence of teamwork (or other key work practices) in major industries such as hospitality, construction, transport, and agriculture.

Forms of teamwork

A second issue is what *forms* of teamwork have emerged. The team concept is not homogenous, and there is ample evidence on the variability of teamwork across different industries. The teams that have grown up (and sometimes declined) in automotive manufacturing have few similarities to the teams that can now be readily found in call centres, hospitals, or grocery warehousing. In general, the evidence suggests that the 'teams' which have been taken up in manufacturing more closely resemble the idealised 'high performance' team than those which have appeared in other places. However, this is not terribly surprising, since the HPP paradigm originated in analyses of manufacturing performance.

What is perhaps more surprising is the divergence of teamwork forms *within* the same industry. A number of studies conducted in automotive manufacturing make this plain. Here we have a small number of competing firms, producing highly substitutable goods. Yet the divergence in working practices is remarkable. One company has organised its production around an inclusive model of teamwork in which workers elect their own representatives and direct their own activities toward pre-determined quality and productivity objectives. In another company, teamwork is considered integral to the 'continuous improvement' process, but affords employees fewer opportunities for direct participation in goal-setting. In yet another firm, teams are narrowly focused and play little substantive part in how work is planned and executed. This diversity is not limited to automotive manufacturing. In grocery distribution, another industry for which we have evidence about more than one company, teamwork arrangements are similarly mixed. One distributor employs 'process improvement teams' and combines these with other mechanisms to ensure a high level of job security. Its competitors pursue lean production without teams, or use more nominal forms of 'teamwork' principally to control and coordinate the work process.

Where the adoption of teamwork has involved changing existing work practices, we also observe some departure of actual achievements from the expressed aims. One manufacturing study found that, while 50 per cent of companies sought to implement 'self-managing' teams, few had reached this destination after three years. Instead, 61 per cent had directed or 'semi-autonomous' teams, 22 per cent had 'project' teams (convened for a single issue), and a small remainder had quality circles (Park, Erwin & Knapp 1997). Across the range of studies reviewed in this paper, we found very few examples of practising 'self-managed' teams. The vision of teamwork in which constituents share power, collaborate, and jointly make consequential decisions about their work, largely in the absence of guidance or censure from management, remains, on our evidence, unfulfilled. It is possibly one that will never be realised.

The types of teamwork that appear most frequently in Australian cases are not of this idealised kind. They are teams in which top-down direction from management, or from appointed 'team leaders', is customary. The following are some examples of how teams appear to operate away from the high-performance systems that characterise some parts of manufacturing:

- ✧ In one grocery distribution centre, workers must coordinate with a sophisticated automated conveyer system. While there is a 'team culture', its main function is to monitor performance at both ends of the conveyer line, since the rate of work is dictated by the progress of cartons along the conveyer belt. Formalised exchanges between team members are few (Wright & Lund 2006).
- ✧ Teams in a banking call centre exist not to decentralise authority (which is strongly centralised through sophisticated internal monitoring) or to share information, but mainly to improve the sociability of the work environment. Team members are those located within the same part of the centre, and team leaders are responsible for performance 'coaching'. The team system has little impact on the essentially 'individualistic' nature of work in the centre (Russell 2002).

- ✧ A public hospital introduced the new position of Personal Service Attendant and insisted that these workers operate in ward-based teams. However, while the new approach increased task variety and job satisfaction for PSAs, teamwork itself was illusory. Jobs were instead carried out on a strict 'just-in-time' basis, and done so at the direction of nurses (Willis 2005).
- ✧ The Australian Taxation Office pursued a less hierarchical internal structure in which agencies would have increased autonomy. One component of the shift was the use of work teams, but these were implemented in a way that required team members to perform tasks only up to the level of responsibility appropriate for their classification level, which often prevented them from performing work that they were able, in fact, to perform (Anderson, Teicher & Griffin 2005).

Why is teamwork adopted?

An issue we have not yet dealt with is why teamwork arrangements are adopted in the first place. What motivates their introduction? The first observation is that change is almost always initiated by management, and typically without employee or, where relevant, union consultation. In only one case did teams come about following a union or worker proposal to management, and in the event the union only succeeded in having its proposal adopted after a protracted struggle against entrenched managerial resistance (Murakami 1999). Two related conclusions flow from the recognition that teamwork is usually the product of managerial decree. The first is that the idea may have to be 'sold' to the workforce, especially if there is the prospect of redundancies. How readily workers embrace teamwork will depend at least on their attachments to existing practices, and their propensity to resist top-down change. The second implication is that, for any change to proceed as planned and achieve its intended objectives, substantial commitment from those who initiated the idea is mandatory. We have already seen that the implementation of teamwork is a time-consuming process – after three years, many manufacturers had not realised their preferred team model. Along the course of change there may be few markers indicating whether the goal is in sight, or hopelessly lost.

It is perhaps for these reasons that, in practice, many of the notable Australian work teams have arisen only after some external stimulus, usually the availability of government funding. The Best Practice Demonstration Program of the federal Labor Government provided one such incentive to manufacturing firms in the early 1990s (Buchanan & Hall 2002). A comparable program initiated by that government in public health seems to have motivated team experiments in that industry, too (Germov 2005). The obvious limitation of this approach is that, when funding ceases to be available, the team arrangements sponsored by the funding may also be in jeopardy.

Under these conditions, and with the potential constraints outlined above, have Australian teams generally been resilient, or have they fallen victims to subsequent losses of internal (managerial) or external (funding, innovative climate) support? This question is complicated because it is only possible to represent how teams evolved up to the ends of whatever study periods were covered by the cases reviewed. Nonetheless, the following messages emerge from the evidence available.

First, and with some exceptions, the most ambitious teamwork experiments have not been long-term 'survivors'. In a study of 19 'best practice' metals and engineering firms, the forms of teamwork adopted were diverse. Many were consultative, but few had a say on strategic matters such as personnel and training requirements. The experiments with 'self-managing' teams were, after a time, either abandoned entirely or brought back under direct managerial control. While the teams restricted to single functions sometimes survived, the more expansive cross-functional teams did not enjoy ongoing support. One simple explanation is that the 'novelty' of these teams wore off as it became apparent what disruptions to existing processes such as autonomous work practices might entail (Buchanan & Hall 2002). Alternatively, the rolling-back of the farthest reaching teams may reflect resistance from workers (and line supervisors), whose roles they threatened.

Second, there appears to be a more general process through which teams become progressively infiltrated and 'captured' by managerial agendas. Again, because of its position at the forefront of past high-performance initiatives, manufacturing is an indicator of the likely future for other industries. A study of three manufacturing firms in the period 1994–2001 discussed three 'phases'

through which these firms seemed to pass. There was little employee empowerment in the first phase because teams tended to stand alone without substantial resources or support. In the second phase a loss of key external supports meant that managers were able to exercise increased influence on the direction and concerns of the site teams. In the final phase, this control was consolidated, as team leaders internalised managerial concerns about efficiency improvement and competitive survival, to the exclusion of other aims (Macneil & Rimmer 2006).

Third, the teams that seem most likely to endure are those that have not undergone the upheaval of organisational change. They are ‘inbuilt’ teams, rather than the products of job redesign. The archetype is the call centre, in which ‘teams’ exist in the planning phase even before workers are hired. If the centre expands, new teams are added. Inductees are expected, as a condition of their being hired, to fit into an existing team culture. Contrast this situation with the internal changes that many manufacturers underwent to develop their teams. Even modest team structures were confronted with substantial impediments in these environments, notably worker resistance and unrealistic management expectations. To some extent these could be overcome through external incentives (for example, funding), or other instruments of workplace reform (for example, enterprise bargaining), but in many cases the eventual outcomes fall into one of the above two categories (that is, abandonment or capture).

Future directions in teamwork

In the passages to follow, we distinguish ‘frontline’ and ‘second-tier’ industries, which represent these different directions of change. By frontline industries, we mean those that have already been exposed to teamwork and other components of the high-performance model. These are typically firms operating in highly competitive product or commodity markets, where ‘best-practice’ management practices first develop. But we also include in the ‘frontline’ category those firms where teamwork has been long established as a method for organising work. We contrast against this frontline a set of ‘second tier’ industries and firms, where reorganisation of work is less familiar. Firms in this category have the advantage of being able to learn from experiments and errors in frontline firms. We argue that second-tier operators are not proceeding simply by repeating the successes and mistakes of pioneering firms, but rather are developing on a different path, where teams and other practices are organic and accepted parts of the workplace culture, rather than being products of reorganisation.

Teamwork seems now to be developing in one of two broad directions. On the ‘frontline’ of change – the parts of industry where teams have historically enjoyed their strongest advocacy, and in which the period of exposure to such arrangements is longest – there is some evidence that the mood is turning against teamwork. This is not happening across the board in the parts of the economy we refer to, so we hesitate to present it as a sharp reversal of previous trends. But clearly there are now parts of the frontline for which teamwork has limited appeal. We identify in the frontline category those organisations which are either exposed to international competition, or obliged by comparable outside forces to minimise their operating costs.

Three examples illustrate the changing perceptions of teamwork in these frontline areas:

- ✧ Following a period of experimentation with teams, a major whitegoods manufacturer invested heavily in fixed capital and restructured its workforce around the operation and maintenance of this new equipment. In interviews with researchers, one manager reflected that the benefits of teamwork, in terms of productivity growth, were inferior to those achievable through new capital investment. Teamwork had been detrimental to the company’s competitive position, relative to rivals that had prioritised new capital investment (Lambert, Gillan & Fitzgerald 2005).
- ✧ In another capital-intensive industry, coal mining, the flexible deployment of labour on the mine site was abandoned after this was shown to compromise both performance and safety standards. The unique characteristics of work in the industry – geographic dispersion, high reliance on advanced technology, necessity for rigorous adherence to work processes – each favoured task specialisation, rather than the job rotation envisaged by teams (Barry 2000).

- ✧ A study of one nursing home found widespread dissatisfaction among staff with the ‘Work Improvement Teams’ that management had instigated at the facility. One of the reasons for this negative sentiment was that, since floor staff were expected to take the lead in resolving their own issues, clear channels of authority for notifying and remedying problems with the provision of care were lost. Staff perceived that instead of everyone ‘taking ownership’, no one did. Standards of care were consequently at risk due to teams (Allan & Lovell 2003).

Behind the work reorganisation frontline, in second-tier industries and firms, teamwork is developing in a different direction. There is less indication that teams are falling out of favour. The most important observation here is that teamwork seems to be evolving into new forms and taking on new meanings, which are distinct from – and perhaps at odds with – the objectives of information-sharing and empowerment that influenced the first generation of teams in manufacturing. The process at work is different from the familiar one, in which an innovative industry or cluster of industries blazes a trail along which others subsequently follow. Instead, a transformation of sorts is taking place in the philosophy of teamwork behind the reorganisation frontline, which has been little influenced by the experiences of teams in manufacturing or elsewhere.

The evolution of teams in the second-tier service industries appears to reflect two concerns. The first is to provide social support to employees. The team exists in some cases to relieve the daily repetition of scripted tasks (Russell 2002), and in others to alleviate the burden of work that is being ‘intensified’ through downsizing and technological change. In other cases the team exists principally to cover absenteeism (Dunford & Palmer 2002). Obviously these manifestations of teamwork are widely approved of by employees, who perceive that their own work would be more difficult without the assistance of other individuals within their own team. However, the provision of social support is some distance from the aims of empowerment and increased autonomy that underpinned the original ventures into teamwork in manufacturing.

The service-oriented team also has a more insidious side. Here its function is principally one of cultural control. The team is a mechanism through which management establishes pervasive work norms. These norms are reinforced by expectations within the team. Call centre teams provide one example. The team leader exists to discipline the observable departures from rule, but other forms of less easily detected resistance remain. These are discouraged by inculcating loyalty to a team. Members refrain voluntarily from actions that will reflect poorly on their team – such as leaving one’s phone too long in ‘unavailable’ mode, causing the work rate indicators of the team as whole to deteriorate (van den Broek, Callaghan & Thompson 2004).

The important conclusion about both the social support and cultural control functions of service teams is that their implications for skill requirements are likely to be quite narrow. Because these teams have none of the hallmarks of more transformative teams, and indeed because they often are not in fact the outcomes of workplace change, any changes in skill needs may be incidental. We develop this theme in more detail in the later section of this report, ‘Implications for VET’.

Other high-performance work practices

What is the evidence that Australian organisations are moving to adopt other components of the high-performance paradigm in conjunction with, or independently of, their experimentation with teams? In this section we examine four additional features of the model high-performance workplace: decentralisation of authority, increased horizontal and vertical information-sharing, flexibility in the ways work is done (particularly breaking down or eliminating occupational distinctions), and selecting and motivating employees.

It is part of the received wisdom of high-performance work organisation that responsiveness to changing customer demands and the commitment of employees can be improved by deliberate ‘employee involvement’ schemes. One determinant of whether participatory mechanisms are of the

kind envisaged in the HPP model is the extent to which they form deliberate and purposeful elements of the organisational design, or instead represent ad hoc reactions to evolving circumstance.

The available case studies suggest that, in 'frontline' organisations, teams are the cornerstone of employee involvement opportunities. This matters because of the previous evidence that teams take variable forms (with different allowances for group members to exercise influence over the teams' purposes independently of managers), and may after a time become captured by external agendas. In circumstances where managers are able to guide site teams towards particular issues, the extensiveness of teams' opportunities to participate meaningfully in policy formation must be curtailed. Similarly, the information that is shared within the team, and between it and managers, will be of a particular kind, tailored toward the underlying issues which managers perceive to be most threatening at any given time (Macneil & Rimmer 2006). The 'consultative committees' which evidently operate in some frontline automotive manufacturing firms are potentially a remedy for the limitations, such as worker resistance, otherwise faced by teamwork. However, these committees are restricted in other ways, by their being convened typically to deal with a single or temporary issue (Lansbury, Wright & Baird 2006). The involvement which employees attain through these committees is episodic and fits the above ad-hoc or convenient characterisation of involvement schemes better than the notions of purposeful redesign associated with HPP.

Decentralisation of authority and increased employee autonomy

Decentralisation of authority is integral to the employee involvement condition and implies that workers will have a say in how their work is done. There are several cases, however, that suggest trends in the opposite direction. In grocery distribution, an automated conveyer belt determines the pace of work. Much the same thing occurs in even the most modern and comfortable of call centres, where a central computer distributes customer inquiries to available phone operators. The distinction we are making is between the physical level at which work is done, and the level at which that performance is coordinated and monitored. The work of customer representatives in a call centre is highly individualised, but their control over it is not, apart from limited avenues through which 'resistance' to the system can be expressed. Teams may be organised at the ends of the grocery or telephone call distribution lines to provide camaraderie and to help team leaders monitor performance, but they are not intended to shift the power base from managers and their appointed representatives to the larger mass of employees. This conclusion implies that the apparent adoption of high-performance practices cannot be equated with the inclusive attitudes that HPPs are designed to promote.

There are several cases where the increased employee autonomy was curtailed by the recurrence of hierarchical structures or problems in overcoming informal power relations – even when the formal architecture of participation was erected. In the Australian Taxation Office, researchers documented a gradual reversion to hierarchical structures after a period of allowing particular agencies and workgroups to exercise increased autonomy (Anderson et al. 2005). In various public health organisations, teams failed to realise their participatory benefits, at least in the eyes of employees, because of a perceived lack of independence from appointed leaders (Germov 2005). Even in the more radical cases of job redesign, formal hierarchies were remarkably resilient. The creation of a Personal Service Attendant position in one hospital was intended to help relocate responsibility for patient care at the ward level, but in reality the work of these PSAs was dictated to them by nurses on a just-in-time basis (Willis 2005). The locus of authority shifted, in other words, but not so far as to increase the personal control that lower-level workers could exercise within their jobs. Finally, when formal channels of power are actively dismantled (or left to wither) with the aim of reshaping work processes, there is nothing to suggest that the change will necessarily increase the choices available to workers, or their beliefs about the efficacy with which internal problems are resolved (Allan & Lovell 2003).

Information-sharing

Another important finding is that information-sharing sometimes occurs for defensive reasons. In these cases it is done to allay workers' fears about potential threats to their jobs coming from new technology, outsourcing, or the replacement of permanent workers by casuals. The sharing of information is 'defensive' in that its purposes are to dispel rumours and assuage some of the tensions which arise during organisational change. In extreme cases, information is provided not to win workers' support for controversial change before it occurs, but to persuade them, after the fact, that it was necessary for the survival of the organisation and the preservation of their jobs. The central purpose of information-sharing in the HPP model is employee empowerment. This requires that employees be kept 'up to speed' about how external conditions and internal developments are impacting on their own jobs. In only one case, however – a distributor of cold and frozen goods to grocery retailers – was this approach being clearly followed (Wright & Lund 2006). In other cases the information shared seemed to be less about responding to changes in external demands and more about basic functional issues. In one organisation which appeared to follow many HPP precepts, employees were expected to share information with each other, but this was mainly to ensure that it was always possible to deal with clients, whether or not particular employees were present (Dunford & Palmer 2002).

Self-styled 'learning organisations' seem to do better at approximating the involvement traits of prototypical HPPs. For instance, the Royal District Nursing Service successfully increased employee autonomy and communication mechanisms as strategies to improve patient care. In a similar fashion a pharmaceuticals firm used information-sharing to provide its employees with a more holistic understanding of their organisation's place in a challenging global market. Finally, there have been efforts at a poultry processing facility and at a local council to let employees collaborate with each other and with management over the design of work rules and business plans (Johnston & Hawke 2002). It is easy to appreciate how sharply these approaches are in contrast to the methods of work organisation adopted in other firms, such as the call centres where conversation scripts are worked out by experts ahead of employees actually putting them into use. In the latter, employees are taught how to work with the system; whereas in the former cases, they have a say in how that very system is designed. We are encouraged by these instances of employee involvement schemes in place at some workplaces, but are not persuaded from the evidence available that these represent the general course of change in Australian organisations.

Erosion of occupational boundaries and flexibility

The high-performance paradigm also predicts the erosion of existing occupational barriers and distinctions to facilitate increased movements across accepted job boundaries, in conjunction with coordinated multi-skilling. This 'flexibility' in work organisation must be distinguished from the more familiar flexibility in staffing practices; the former concerns how work is done, the latter is about who does the work. Since the focus here is on changes in the organisation of work, we make only passing reference to the evidence about flexibility in the types of labour engaged, and concentrate instead on how jobs and tasks (rather than workforces) may have been reshaped. It is also appropriate to reflect on whether the practice of multi-skilling has produced any tangible change in organisational training practices or tacit skill requirements.

On the frontline of work reorganisation, broadening of job responsibilities has occurred in the normal course of workplace change and adjustment to market conditions. The practice of task flexibility has brought with it a concern for developing or recruiting polyvalent workers – those with more generic competencies with which to complement their traditional, task-specific skills. In the automotive manufacturing industry, employees have been expected to conceive of their jobs as containing multiple 'general duties', rather than strictly demarcated tasks associated with single occupational domains (Lansbury et al. 2006). In the best cases, reorganisation on the frontline has been accompanied by a new emphasis on refining internal training protocols and investing in the acquisition of variable skills. As an example of a major financial institution, Westpac provides

something of a model for how induction training can be expanded, then progressively built upon by short courses which impart function-specific knowledge tied to pay increases and a reasonable prospect of internal progression through the organisation (Kitay 2001).

At the same time, several frontline industries appear to be retreating from multi-skilling projects in order to ensure the continuity of production efficiency. BHP reinstated task specialisation after an expensive training effort failed to instil diverse and practically applicable skills in its large and geographically dispersed workforce. The need to maximise output to meet fluctuating demand on international coal markets meant that the best miners could not be spared to take up adequate new training or move to other (potentially less productive) areas of the business. Another smaller mine operator supplied the comparatively stable domestic market and was able to realise its job rotation ambitions by adopting a more relaxed training program and ensuring that resultant skills were sufficiently mastered by those who would later be expected to use them (Barry 2000). Away from mining, there is evidence that other large manufacturing and distribution firms have recently drawn back from the HPP ideal of multi-skilling because the costs of moving workers through different areas of the business are too high in terms of the opportunity costs of training and the comparative efficiency gains that continued specialisation makes available.

Apart from the reorganisation frontline, flexibility proceeds apace, but is not the product of HPPs. In industries behind the frontline, training (if it is offered at all) tends to be of short duration at induction and more sporadic later in the period of employment. High turnover of staff in some industries remains a disincentive for employers to offer training. In addition to the length and availability of training, its content is different in second-tier industries from those on the frontline. In the former, there is little presumption of existing knowledge. Workers are chosen into the firm based on assessed fit with the organisational culture and structures, and it is presumed that the knowledge required to do the work adequately can be quickly and systematically taught. Programs focus on customer service and mannerisms conducive to smoothing the interaction of workers with outside clients. Training is streamlined in recognition that some workers will not remain at the organisation for long, while others who do will learn from doing and from informal coaching by team leaders.

In relation to the nexus between different types of flexibility at work, there are interesting signs of how organisational objectives can sometimes pull against one another. For instance, increased casual employment or the outsourcing of certain functions is a cost-motivated strategy that runs counter to the proposition of moving multi-talented workers through high-output regions of the business as dictated by outside demand. Instead, these operational 'pieces' are in some industries being stripped off the 'core' business, standardised, and outsourced (or sent offshore). Similar forces are at work in healthcare, where the use of temporary and agency workers has depleted on-the-ground knowledge to the point that permanent staff and managers are facing onerous new responsibilities that diminish their own opportunities to provide direct care to patients. At the managerial level, such flexibility strategies have forced organisations to adopt (mostly with limited success) novel strategies for 'stabilising' their non-standard workforces (Allan 1998). The tensions between task flexibility (HPP) and labour flexibility (usually cost-driven) are plain from our analysis and likely to be an ongoing source of conflict in workplace change.

Selecting and motivating workers

Finally, Australian case studies disclose evidence about a range of other practices used to select and motivate the high-performance workforce. The limited detail provided in most cases about organisational recruitment policies does support the view that organisations are now looking for workers less with a view to their particular competencies, and more with a view to their likely 'fit' with existing internal cultures (van den Broek 1997). Two things are at work here. First, there is a presumption that required work orientations can be quite easily inculcated through short formal induction and learning from one's peers. Second is that organisations are probably not screening

recruits with a view to their long-term development into managerial careers. High turnover rates in a number of service areas make firms more interested in 'psychological match' and less with the possession of tangible and immediately applicable skills.

Performance-related pay schemes are a further source of controversy. While there are few cases in which such approaches have been successfully bedded down, several attempts have led to resentment among staff and accusations of favouritism. Paradoxically, the firms that now appear to contain most HPPs have eschewed wage incentives out of fear that these might undermine safety codes and jeopardise 'cooperative' workplace relations, especially those involving unions. Such a possibility is another manifestation of the cost-quality dichotomy which is shaping change in many of the organisations whose experiences are reported in the case studies reviewed here.

Cost-cutting and cost containment: Effects on work organisation

The Australian case studies did not always show that the reality of work organisation and reorganisation was a result of conscious attempts to change the way work was arranged and performed. Sometimes it arose largely as an unintended consequence of other pressures, and sometimes as a result of pursuing other goals than enhancing the quality of work. Generally, this tended to occur where organisations were focused on cost-cutting or cost-containment.

Many of the relevant case studies were of organisations in the public health sector, although there are a few examples in other areas. However, only one relates to a private business, and this refers to work organisation in two private hospitals. To this extent, these case studies necessarily give us only a small part of the story about the extent to which organisations are confronting cost-cutting and cost-containment pressures, and how work organisation is affected by their responses. That most are in the public sector is striking, and worth considering. Cost-cutting and cost containment are certainly well-documented orientations in private firms (Morehead et al. 1997, pp.241–2). However, they are almost always a part of a strategy to strengthen a firm to enhance its longer-term possibilities for profitability and growth. Indeed, this strategy either tends to lead to growth and greater resources in the firm, or decline towards bankruptcy or takeover. In this sense, cost-cutting and cost containment cannot be permanent primary foci of a firm's strategy. In contrast, public sector organisations have often been under long-term cost-cutting or cost-containment pressure since the late 1970s. Many are limited in the capacity to increase their revenue base, and so general pressures to reduce or limit government budgets necessarily impact on them in the long-term. Perhaps the health sector is particularly susceptible here since it also faces strong tendencies that increase costs, primarily arising from new health technologies and growing social expectations about health.

Pressures to reduce costs in the public agencies have usually arrived alongside moves to restructure how the agencies are managed. These often conform broadly to the model of New Public Management (NPM). While there is no simple consensus about exactly what this model entails, it usually involves re-imagining public agencies as goods or service producing organisations, and then applying management techniques familiar from the private sector to them. These include increased autonomy of agencies, with more market-like relations between them, the development of performance targets and standards, the fostering of a more entrepreneurial approach amongst employees, assessment of whether privatisation or contracting out of some parts of service delivery would increase efficiency (Pollitt & Bouckaert 2004). Cost-cutting couched in moves to NPM often produces new work arrangements as solutions designed to increase efficiency and ensure that agencies meet newly specified performance criteria. The exact form these take may vary. Stack's (2003) research on the effects of NPM in nursing homes shows one outcome: work intensification based on sharper formal prescription of the key tasks workers are required to undertake. In the case

of nursing homes, the implementation of the NPM model was further complicated by the increasing compliance requirements placed on nursing homes to protect against the deregulation that unfettered NPM principles might have produced. The result was that many nursing home workers, particularly personal carers, found themselves working in a 'production line' mode. As attempts were made to contain and cut costs, they were required to undertake the main tasks of physical care of nursing home residents in a newly regimented fashion, with resulting reduction in time spent on softer aspects of caring. This work intensification produced considerable resistance and reduced morale amongst workers. It effectively reduced the scope of work undertaken by workers.

Another response to cost pressures associated with NPM in the health industry is the redesigning of jobs so as to increase the range and scope of tasks to be performed, while reducing the overall number of employees. Willis (2005) describes the creation of a new position of Personal Service Attendant (PSA) in one public hospital in South Australia. This new position combined the tasks of several prior jobs, including orderly, nurse assistant, cleaner and kitchen hand. It was developed in response to sharp budget cuts to public hospitals and the long-term effects on the availability of relatively low-skill workers in hospitals of the move away from hospital-based training of nurses. The development of PSAs clearly increased the range of skills that workers required, compared with those needed for any of the previous occupations superseded by PSAs. However, it was also associated with reductions in overall employment numbers, and there was strong evidence of work intensification. Workers had considerably less 'down time' as PSAs than they had previously, and were required to take responsibility for juggling the range of tasks they were required to perform. The greater variety of job tasks and range of skills required did appear to increase workers' job satisfaction.

At a different point in the occupational hierarchy, White and Bray (2003) found that reorganisation of management arrangements, prompted partly by cost pressures, produced a significant alteration in the job roles of Nursing Unit Managers (NUMs). With management change, NUMs took on a wider range of tasks, including budgeting, occupational health and safety, and human resources responsibilities. Again, this resulted in the relevant employees requiring a larger range of skills, but also experiencing significant work intensification as they juggled responsibilities and added tasks to existing workloads. In addition, their work was intensified simply because responsibilities to manage reduced or contained budgets led them to reorganise staffing and staff work responsibilities in ways that ultimately increased their own workloads. Here, work reorganisation has little 'up' side: NUMs may develop some additional skills, but receive little support for doing so, and they are constrained to manage those in their units in ways that simply increase their workloads. In cases where no significant management reorganisation occurs, responses to cost pressures may simply be to alter staffing arrangements to reduce costs. One obvious response is to increase the use of casual workers, so as to optimise staffing as work peaks and troughs occur (see Allan 1998). This involves some work reorganisation, as some kinds of responsibilities are confined to permanent staff. However, the effects are limited compared with other forms of work reorganisation.

Cost pressures and public sector management fads can produce short-lived changes in work organisation that initially appear promising, but revert to type quite quickly. Germov (2005) analysed the development of teams in 11 organisations prompted by a federal government program called the Best Practice in the Health Sector (BPHS) program. The public sector health organisations in the study were generally under considerable budget pressure. They responded to the BPHS program strategically, aiming to take advantage of the competitively allocated funding it offered by implementing 'best practice' projects to reorganise work in the organisation. All projects involved teamwork models. However, these team models were generally abandoned when funding was withdrawn following the ending of the BPHS program, indicating the lack of organisational hold the work reorganisation had established.

These cases illustrate that sustained cost pressures in public organisations lead to a variety of responses. In each case, the rising skill requirements are largely unintended, and therefore not an explicit focus of employment policy. The result is that increased skill requirements are often not supported by appropriate training and other support. In this sense, they are often under-resourced.

However, cost pressures may lead to different outcomes where the pressures can be relocated away from the public sector organisation itself. This may be achieved by contracting-out services, and thereby displacing cost pressures to external contractors. In the case of one South Australian local government, this appears to have led to a sustained range of changes in work organisation and involved teamworking which was quite egalitarian, offered greater employee autonomy and had requirements that employees become more entrepreneurial (Johnston & Hawke 2002). These changes were generally matched by appropriate formal training and informal support.

Implications for VET

Substantial change in how work is organised can have significant implications for training and, therefore, for VET. For example, widespread use of teamwork in which autonomous teams organise themselves to achieve defined outcomes might require that workers develop skills in communication, negotiation, and even management, that were not previously required. For this reason, the extent of actual change in work organisation in Australia is an important issue, as is the direction in which change is moving.

The Australian evidence about changes in the organisation of work is not ideal for drawing conclusions about how training authorities should respond. This is primarily because the relevant research does not cover all major industries in ways that produce a representative picture. However, our analysis of the existing case study research indicates that it would be inappropriate to build substantial elements of curriculum, aimed at developing skills appropriate for workplaces which have fully implemented HPPs, on the assumption that Australian workplaces have experienced substantial change in work organisation during the past decade, or are likely to do so in the near future.

In broad terms, this is because organisations have responded in different ways to the four ‘demands’ about work reorganisation that we described at the outset. They have dealt with the *flexibility demand* mostly by increasing the flexibility of employment contracts, rather than increasing flexibility in how workers are moved between jobs. Where the latter form of flexibility has occurred, it has required some worker training or retraining, but this has usually not been extensive, and has been easily accomplished at the organisational level. In government bureaucracies, experiments with increased job flexibility have usually ended with a return to sharply delineated job responsibilities. Despite expectations amongst some advocates of HPWSs, few team experiments have been used to try to deal with this demand.

There is certainly evidence that increasing worker *autonomy* has been an important goal in some organisations. Various work reforms have been implemented to augment workers’ independence from direct supervision. However, where research covers a sufficient period, there are strong indications that organisations do not find the results of these moves conducive, and move back towards more management-directed working patterns. Teamwork experiments have had this character frequently, and moves to make employees more autonomous in government bureaucracies have generally been sharply attenuated over time.

A focus on *customer service* is quite evident in a number of our case studies, though in some this is not an issue at all (for example, manufacturing) or is of secondary concern. Responses to the customer service demand included government organisations seeking to give employees greater scope to deal with a range of citizen issues and problems. Again, many of these reforms appeared to be attenuated or reversed over time. However, there were a few examples where a customer service focus did become more important to jobs that had previously been primarily technical, as markets became more competitive. This did have the sustained effect of requiring customer service orientations and skills from workers who previously did not need them. Of course, in some new forms of work, the customer service focus was central from the beginning, as in the case of call centres. Many service sector organisations viewed the ability to provide customer service as virtually a personality characteristic, and therefore focused their selection processes on choosing appropriate staff, rather than looking for appropriately trained recruits or training them once they were appointed.

Changes in how *knowledge* is distributed and used in organisations were fairly limited in our case studies. Where shifts in work organisation were directed at altering knowledge flows, this tended to be narrowly based or temporary. One of the more common uses of greater information-sharing was to attempt to alleviate employees' concerns in organisations undergoing rapid organisational change. A small group of case studies of 'learning organisations' did show some evidence of a move towards work arrangements that facilitated the development and accumulation of greater knowledge and skill. However, in some cases, this is associated with increased use of a peripheral workforce, through employment of casuals or outright outsourcing of work, which does not participate in the learning processes. The net result is often that knowledge flows and participation and worker skills are enhanced in the centre of an organisation, but that their appearance in the periphery is reduced.

In some organisations, there was evidence of a range of work organisation changes that required new skills or workers of the kind expected by many analyses of the new world of work. However, rather paradoxically, these seemed to be organisations in which the primary impetus for change was the need to cut or contain costs. Here, work intensification driven by this imperative sometimes involved expanding the work demands on lower skilled workers. This required that they develop not only a range of skills necessary to perform their expanded jobs, but also skills to allocate time between the various demands on them.

Based on these consolidated findings from cases studies of workplace change, it is clear that the VET sector should not respond by broadly accepting the need for training appropriate for HPPs, or similar work systems. Thus, a sector-wide emphasis on teamwork skills, or customer service skills, or communication skills, would be inappropriate. Beyond this, there is a range of possible responses. These include:

- ✧ The VET system might not respond to these putative changes in work organisation at all. A defensible view is that where work organisation change is evident, employers are able to provide the relevant training, and should be expected to do so. This applies both to intentional change and change in work organisation that is an unintended consequence of cost-cutting or cost containment.
- ✧ The VET system might respond by being ready to assist in training workers in specific situations where employers consistently indicate that new forms of work organisation are demanding new skills. For example, there is clearly a range of areas where customer service training may be relevant. It is likely that VET providers are already focusing on relevant skills in these areas, notably in service occupation training. However, the system may choose to adopt responsiveness to these needs as a matter of curriculum policy.
- ✧ The VET sector may focus on imparting skills that are likely to be particularly useful to employees faced with the exigencies of unplanned change in work organisation. First, these would be skills in cooperation and negotiation, relevant to working effectively with others when organisational change occurs. Second, they would be basic skills in administration and management, since the unintended consequences of changes in workplace organisation are quite often to increase requirements that staff administer and manage aspects of their work and that of others.

The VET sector or, perhaps, individual VET providers will need to decide which of these options to adopt. The implications of each will be complex.

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Appendix 1: Case studies of Australian work reorganisation

Source	Study site	Timeframe	Work practices	Rationale for work practices
Lansbury et al. (2006)	Automotive manufacturing industry	1992–2004	Lean production is common to all four major manufacturers, as are consultative committees – although these tend to be convened for a single, often temporary, issue. Teamwork is more varied, from an inclusive group-work model at GMH, to more narrowly focused teams at Mitsubishi. Across the industry, a push for ‘flexibility’ has seen increased use of non-standard employment forms, but labour hire remains unusual. Broadening of job responsibilities has been the norm, with an increasing emphasis on generic competencies or ‘general duties’, rather than traditional task-specific skills.	Search for efficiency gains, brought on by declining tariff protections and increasing international competition from low-wage manufacturing countries. Although these were initially countered through redundancies and the adoption of more ‘precarious’ employment arrangements, it is clear that more sophisticated forms of work reorganisation have also gained a foothold in the industry.
Macneil & Rimmer (2006)	Manufacturing industry	1994–2001	Documents three phases of teamwork for three manufacturing firms that participated in the Best Practice Demonstration Program. In the first phase, teams were adopted in various forms but their role was small and there were few complementary HR practices suggestive of a broader shift to HPWS. The second phase saw company managers exerting increased influence over workplace teams, as Federal funds and union support evaporated. The surviving teams were functional but minimalist, their main function being to deliver on strategic targets devised by management. Phase 3 saw the teams embedded within their respective companies, with the major threat to their continuation represented by the prospect of external company takeover.	Motives for the initial experimentation with teamwork included to restore profitability, compete in global markets via higher productivity, and improve industrial relations. Teams survived beyond this early phase because they enjoyed the support of employees and were the main mechanism by which management persuaded the workforce of the need for ongoing efficiency improvements. However, they may be unable to withstand the pressures to drive costs lower in the interests of shareholders.
Wright & Lund (2006)	Grocery distribution centre 1 (dry goods)	Not stated	Labour-intensive. Workers manually assemble orders to specification of the end retailers, leaving completed pallets at a loading dock once complete. A central computer assigns each job and monitors time to completion. These records are later used in performance reviews. No evidence here of teams or other factors associated with HPPs. The basic <i>modus operandi</i> is lean production.	The common context for workplace reform in the three centres is the maximisation of efficiency. This is an environment in which it may be difficult to navigate toward HPPs. However, the different methods of efficiency improvement observed at the three centres suggest that there are possibilities for what the authors of the paper call ‘variations on a lean theme’. Factors that appear to determine how far each firm moves away from a pure cost-driven model include managers’ views about best practice, the structure of the firm and its existing capital, and employee and union attitudes to change.
	Grocery distribution centre 2 (frozen and cold goods)	Not stated	Manual labour combined with an automated sorting line. Information sharing and limited use of casualisation give workers job security, while ‘process improvement teams’ allay concerns about use of new technology. Wage incentives avoided for fear of safety breaches.	Efficiency remains a major determinant of work practices, and this is the basis on which teams are formed: ‘process improvement’. At the same time, there appears to be a genuine concern for skills retention and employee morale, hence the limits on casualisation.

Source	Study site	Timeframe	Work practices	Rationale for work practices
Wright & Lund (2006) (continued)	Grocery distribution centre 3 (general merchandise)	Not stated	Workers operate once again in a high-technology environment, with sophisticated sorting machines and conveyor lines. The centre has a 'team culture' but there appears to be little to this besides designated team leaders who monitor performance. The rate of work is dictated mainly by the automated system, and management resists further speed-up believing this would jeopardise the centre's 'constructive' workplace relations and lead to offsetting quality or safety costs. An effort is made, however, to select and recruit new workers carefully, often based on performance during a probationary time as a casual.	See above, plus the aim of minimising storage times. At this centre goods received from grocery suppliers are distributed to end retailers on the same day, with handling and storage costs kept to a minimum. The major impediment to this is not error caused by manual handling (i.e., the fault of workers), but incorrect coding of cartons received at the start of the distribution line (i.e., from grocery suppliers).
Anderson et al. (2005)	Australian Taxation Office	1989–2002	Initial shift from a very hierarchical organisation to devolved structure where agencies have more autonomy. However, less scope for employees to increase individual autonomy – hierarchical structure tended to reappear, at least partly, over time. Despite initial increase in workers' autonomy and flexibility of task performance, this fairly quickly returned to previous patterns. In particular, sharp and clear boundaries around work roles and agencies were reinforced. Work teams are used, but these are quite rigidly and hierarchically structured, with fixed roles and responsibilities. Evidence that work intensification occurred, and some rise in use of contract staff.	'Modernisation' of tax office beginning in 1989 as it shifted from an orientation towards policing tax returns and compliance towards providing a service to tax payers and educating them. Modernisation was based on New Public Management (NPM) model – focus on use of private sector-like practices to improve efficiency, including use of performance management in managing staff, and establishment of more market-like relations between agencies. Some reforms seek to increase employee involvement at all levels in workplace decision-making. This research finds evidence of gradual roll-back of much of this reform, as the organisation reverts to more hierarchical patterns, particularly within workgroups and agencies.
Germov (2005)	Public health sector	1995–96	Combined case studies of 11 organisations involved with the Best Practice in the Health Sector program. Teamwork structures adopted in all 11 cases. Project leaders emphasised benefits of teamwork, but participants' experiences were more varied. Some considered teams to be lacking independence from the directions of project leaders. It proved difficult to overcome informal power relations, even when the formal structures for teamwork were in place. Following withdrawal of BPHS program funding in 1996 due to change of government, team structures were generally discontinued in the cases observed	There was no groundswell of support for HPPs among management or workers in these 11 cases. The shift to teamwork was instigated by the availability of program funds. All project participants admitted that their involvement was opportunistic, in that it would contribute to alleviation of an existing funding crisis. For this reason the teams that did emerge must be considered experimental and temporary, rather than products of a concerted shift to new forms of work organisation.
Lambert et al. (2005)	Whitegoods manufacturer	2000–03	Characterised by a reversion to Taylorist practices after a period of experimentation with alternative flexible work models. Employees are confronted by considerable job insecurity from knowing that their performance is measured only by shareholder returns. Nothing here to suggest the company is contemplating a shift to a HPWS. Indeed the opposite, since working routines and roles are determined solely by the need for labour to operate significant production machinery. To the extent that casual workers can be substituted for permanent staff at lower cost, this has occurred, alongside general cuts in the overall workforce size (from 1800 to 750 plus casuals).	Hostility to teamwork and other HPPs in this organisation (at least among the managers interviewed) was due to the perception that productivity and efficiency gains to be made from teamwork were inferior to those achievable through large fixed capital investment and ongoing workforce restructuring (downsizing). The widespread use of teams was seen as having contributed to the declining relative position of Western manufacturers compared to their Asian rivals in the past two decades.

Source	Study site	Timeframe	Work practices	Rationale for work practices
Willis (2005)	Public hospital	1996–2000	Examines the creation of a new Personal Service Attendant (PSA) position in one public hospital. The PSA position resulted from the amalgamation of several prior jobs, including orderly, nurse assistant, cleaner, and kitchen-hand. The author described the PSA position as an outcome of 'radical job redesign'. For the individuals who became PSAs, particularly those who formerly held one of the more narrow positions, there was multi-skilling and attractive task variety. To some extent there was also decentralisation of authority. But teamwork was limited, nurses exerted strong control, and work was on a JIT basis.	Creation of the PSA position had little to do with 'post-Fordist' notions of multi-skilling, although the position itself involved a range of tasks. Instead, the PSA role was created because of: (1) budget cuts which drove hospital-wide staffing reductions, (2) desire of nurses to reduce some of their own workloads by passing certain tasks onto PSA, and (3) government pressure to outsource 'non-core' activities. Creation of the PSA position allowed several important non-core activities, such as kitchen and ward cleaning, to remain 'in-house', but did little to alleviate the pressure on nurses.
Hall (2004)	IT consultancy	?2001–03	Work is organised around projects, with a strong emphasis on customer service. Project organisation probably means quite a lot of teamwork, though this is not explicit, and is probably not done with the common HPWS notions of teams. Employees do have considerable autonomy, particularly in their dealings with customers – the customer focus requires this autonomy. The customer focus means that, to be successful, employees need the skills to positively interact with customers. The company also recruits very carefully, and aims to employ people with a range of skills (because work practices mean that they need to be flexible in what they can do), along with the appropriate 'attributes' – personal characteristics relevant to customer service. The paper argues that the result of project-based work and the emphasis on customer service is that workers, though they have considerable autonomy, are nevertheless 'controlled' through the market mechanism.	Main aim is to maintain, increase profitability of business. The customer focus of workers is a central strategy here. This latter is not a 'culture' in the sense often used by organisational analysts (instilling values etc.). Instead it operates as the real focus of work – workers know that having customers view their work positively is the most important factor in their careers. In this sense, the customer focus is the mechanism by which the market for workers directly affects (and 'controls') workers. This all takes place in an environment of increasing competition and growing client demands in IT.
van den Broek et al. (2004)	Telephone call centres	Not stated	Examines in detail the characteristics of teams in two Australian call centres. Despite the 'individualistic' nature of call centre work, teams are widely found, and are generally seen as integral to centre design. Teams in call centres are, however, qualitatively different from those found in manufacturing. These service-based teams have low or non-existent autonomy, and do not facilitate job rotation or multi-skilling. In the main their role is to reinforce cultural norms: conscientious workers must 'play by the rules of the team' and can expect to receive periodic coaching from their team leader.	The purpose of call centre work organisation is to reduce costs, improve the speed of service, and minimise errors (hence 'scripting' of typical query responses). Teams exist to reinforce these objectives and to soften the reality of low task discretion and pervasive performance monitoring. If teams exercise any authority, it is likely to be over minor issues such as how the work area is decorated.
Allan & Lovell (2003)	Nursing home	1998–2000	Shift to teamwork, coupled with increased vertical information-sharing and decentralisation of authority. Teams used to monitor performance and suggest to managers potential changes to work processes. Only senior managers seemed to be convinced, however, that the benefits of teams outweighed their costs, in terms of extra work for employees, and loss of internal authority structures.	No clear 'efficiency' motivation for the change. Instead the goal of senior management appears to have been change in the organisational culture, with the aim of fostering an environment in which employees would take 'ownership' of their own work, rather than merely following managers' directions. Not clear that this particular HPWS will survive.

Source	Study site	Timeframe	Work practices	Rationale for work practices
Stack (2003)	Nursing home	1999–2000	New Public Management has produced significant increase in demands for aged care workers to document and record their activities. In addition, cost-cutting pressures produced by competitive demands of NPM result in work intensification, especially aged care workers' tasks being treated in a 'production line' mode. True caring work is heavily reduced by the demands of cost containment.	Work practices are produced by New Public Management models of service provision. Focus is on efficiency, cost containment and reduced interference in day-to-day management. However, at the same time increased reporting requirements and regulation appear to contradict aspects of NPM that emphasise autonomy of management.
White & Bray (2003)	Public hospital, but focusing only on the role of Nursing Unit Managers (NUM)	1997–2002	Examines the role of six Nursing Unit Managers (NUM) within a single public hospital. Provides evidence that NUM faced substantially wider task responsibilities in their jobs, including budgeting, OHS, and HRM. NUM have taken on additional tasks as authority structures have been decentralised – consistent with the HPWS paradigm – but have done so without additional resources or support, resulting in 'intensification' of their work.	Not apparent that changes in the NUM role are due to any deliberate rationale. Rather, they are outcomes of: (1) an increased emphasis on the customer and the resolution of complaints, which NUM have been largely responsible for, and (2) the rationalisation or restructuring of management tiers within the hospital, leaving several downstream tasks uncovered. NUM jobs have expanded into the void left by consolidating or removing existing bureaucratic layers.
Wright & Lund (2003)	Food and grocery manufacturing		Evident preference for a 'flexible firm' model of production, wherein a casual 'periphery' supplements a 'core' of permanent workers. This strategy has been accompanied by the outsourcing of maintenance work to labour hire firms. One outcome of this flexibility has been a reduction in employment costs associated with leave, compensation for injury, etc. Automation of production has increased the need for multi-skilling and competencies, but structured training is still focused on permanent workers whose numbers are falling relative to casuals.	Increasingly, the large grocery retailers have come to dominate their supply chain. This has led them to carefully scrutinise which product lines are on display in retail outlets, guided by sales information. The consequences for grocery manufacturers include increased outlays to get particular items stocked by the two main retail chains, pressure to cut production costs generally, and a renewed impetus for flexible production to meet the evolving needs of major retailers, especially if repackaging is required for temporary promotion of particular lines.
	Food and grocery retail		Numerical flexibility achieved through casual labour, although some signs of reversal here to moderate staff turnover. Broader push to precisely match employee levels to consumer demand means that all inputs, including labour, are rationed; work is intensified as a result.	An industry 'marked by low margins and close scrutiny from investors for improved returns and reduced costs' (p.141). The ECR principle – 'Efficient Customer Response' – adapts the JIT philosophy to retail, and involves reduced inventories and 'supply-chain rationalisation'.
Buchanan & Hall (2002)	Metal manufacturing industry	1991–97	Examined experiences with teamwork in 19 metals and engineering firms involved in the Best Practice Demonstration Program. Actual forms of teamwork were diverse. Some were consultative, with a view to introducing TQM or new capital equipment; others involved negotiation of future job cuts or implementation of substantially new work processes. More similarities were evident with respect to the low amounts of autonomy that the teams were ordinarily permitted. In particular, they seem to have had little impact on strategic decisions related to personnel or training requirements. The few experiments with 'self-managed' teams were either abandoned entirely or brought back within direct managerial control. While teams restricted to single functions sometimes survived, the more ambitious 'cross-functional' teams quickly lost their initial support and appeal.	The cases were from a variety of manufacturing sectors, but all had in common an increase in exposure to competition, an associated 'crisis of profitability', and historically conflict-ridden IR cultures. With respect to outcomes, 'managed' teams typically had negative effects: downsizing, intensification of work, increased use of precarious forms of labour, and higher stress levels for workers who 'survived' change. In these 19 cases, the need to achieve objectives such as reduced employee numbers and higher productivity trumped the 'softer' aims of reorganisation such as employee 'empowerment'.

Source	Study site	Timeframe	Work practices	Rationale for work practices
Dunford & Palmer (2002)	Travel agency	Not stated	High-performance practices are well established. A large workforce is divided into small teams at the workplace level. The team ethos is bolstered with team-based performance bonuses, giving individuals an incentive to identify with their colleagues and, if necessary, attend to each other's clients. As well as teams, there is internal promotion, information sharing, and 'a strong egalitarian culture' minimising status differences. Steady business expansion and a rising share price suggest these practices are likely to be relatively stable.	Work practices are strongly shaped by the personal philosophy of the company's founder, who considered a 'cell-like' structure to be the antidote to excessive bureaucracy within the large and growing firm. A 'cap' is placed on the size of any one branch of the company, so that if demand expands, a new branch will usually be opened, in preference to increasing the size of existing branch teams.
Harris & Sohal (2002)	Aluminium can manufacturer		Relaxation of internal hierarchies and distinctions between workers (e.g., fitters, electricians). The traditional work process meant that the single production line could easily be stopped by groups of workers standing down – and others declining to take up their tasks. After the change, all workers were treated as 'Production System' employees. No evidence regarding long-term course of change, or whether other HPPs, especially teamwork, were adopted.	The principal drivers of change seem to have been to implement new technology which would raise productivity, to change the production process so as to make it less vulnerable to stoppage, and to reduce or eliminate existing union demarcations (and the influence of unions over employee attitudes more generally).
Johnston & Hawke (2002)	District nursing service	? 1996–2001	RDNS has a strong emphasis on participation in decision-making by all employees. Communication is said to have shifted from an 'autocratic' style to a more open and cooperative style. A new call centre has been a key development, with work there being organised around providing high-quality service to clients. The call centre uses performance measurement to track its activities. Training for staff in the centre has been focused on quality of service to clients. Other parts of the organisation take the call centre as a role model, particularly in performance management and focus on quality of service to clients. There has also been an increasing emphasis on coordination of care, which requires communication between employees and knowledge sharing. Staff perceive higher autonomy.	RDNS was shifted towards a new style of management and organisation with the appointment of a new CEO in 1996, and a new emphasis on strategic management and thinking. This is largely in response to rising demands for service, and a desire to maintain the quality of its service.
	Pharmaceutical firm		Basis of work organisation is a team-based system, with skill-based pay. This was a new development, as the company restructured to become more efficient and globally competitive. Teams seem to work effectively, with a strong emphasis on learning amongst staff to become more efficient. Learning is rewarded with higher pay via the skill-based pay system. Some initial problems with staff concerns about favouritism, but these have largely been resolved. There is a preference for permanent staff, but the company continues to employ up to 20 per cent casuals, due to fluctuating demand. A key aspect of the learning culture is that staff understand their role in the whole operation of the company. This does appear to be associated with knowledge sharing. No apparent roll-back or attenuation of practices.	Company is part of a multinational which spreads production across its facilities according to comparative advantage. Company is therefore driven by needs of global competition. Specialises in producing, packaging and distributing therapeutic pharmaceutical products.

Source	Study site	Timeframe	Work practices	Rationale for work practices
Johnston & Hawke (2002) (continued)	Poultry producer		Collaborative development of 'work instructions' for chicken processing workers has involved workers in participatory ways. Career paths identified and pay linked to achievement. Increased focus on training, assessment and certification. Claimed that this has increased skill levels, and improved employee relations with each other and with management. A focus has also been on recruiting 'right people'. TQM adopted in late 1980s, and continuous improvement models since then.	A poultry and egg producer that grew from a family company to be one of the country's largest producers. Has worked in recent years to establish a collaborative culture within the organisation.
	Local council	1997–2001, approx.	Staff organised into teams in the form of business units, with each developing a 'business plan'. Organisation provided support for staff to undertake formal training and informal learning. Staff took more initiative and worked more autonomously, which involved much more negotiation with other business units and external stakeholders. Staff therefore required new 'organising' and 'networking' skills; they developed these. Overall, the change in work organisation appears to have functioned well, although there were some difficulties: there were not always sufficient resources to support the changes; senior management did not always support staff when problems occurred; there was some resistance to change, especially to potential job loss.	Local council was under pressure to restructure due to funding cuts, impact of national competition policy and general pressure for public sector reform. The council undertook some restructuring involving some redundancies. It also shifted to a business model of local government administration.
Russell (2002)	Banking call centre	2000	Evidence of task multiplicity: employees must talk to customers on the phone and navigate and update computer databases 'all in one neatly seamless job action'. However, employees perceive that the work is routine, offering little variety or task discretion. Teams exist not to decentralise authority or share information, but to improve the 'sociability' of the work environment. Teams have little impact on the essentially 'individualistic' nature of the work in this environment.	The call centre is organised in a way that allows extensive control over timing and monitoring of work. Employees have quite narrowly defined roles, and expectations about the quantity of work to be performed in a fixed time. These norms are enforced by performance 'coaching', carried out where necessary by 'team leaders'. But call centre teams are unlike those in manufacturing: their primary functions are social support and discipline, not empowerment.
Kitay (2001)	Westpac	1991–2000	The first change involved more structured training practices instead of the previous 'piecemeal' system. Induction training was expanded for branch and call centre staff as part of this effort, with much of the focus on 'cross-selling' and encouraging customers to use lower-cost transaction options such as ATMs and internet banking. Recruitment into the bank has become much more concerned with psychological characteristics and aptitudes than any specific knowledge of banking. As employees acquire progressively higher skills, their pay rises, and job rotation becomes possible. Management has taken to heart the 'learning organisation' credo, and has adopted guidelines to achieve this through employee empowerment and teams. However, turnover remains a problem, and outsourcing of certain functions runs counter to otherwise well-developed internal training and promotion efforts.	Deregulation and privatisation, along with new technology, have increased the pressures to minimise costs and diversify the range of retail products which are actively 'sold' to customers. Where it was once possible for relatively young workers to acquire informal skills in the branch office and to ascend through a safe internal career, staff practices have become more flexible. And as the banking market has been 'segmented' into high- and low-value activities, so the functions within Westpac have become more specialised. The formation of skill is now a highly refined process. While this alone is in tune with the tenets of 'learning organisation', cost containment remains a central part of the banking culture, and contributes to ongoing problems with understaffing and staff turnover in significant parts of the business.

Source	Study site	Timeframe	Work practices	Rationale for work practices
Barry (2000)	Coal mine 1 (BHP)	Mid-1990s	BHP's strategy to combat falling coal prices was to take advantage of its prominence in the market and ability to sell its total product reliably on international markets. The increase in productivity was to be achieved principally through labour productivity growth, facilitated by a new continuous shift roster. Workers were to diversify their skills, allowing them to move more easily between roles, as required. But this posed several problems. The opportunity costs of training a large workforce, and then rotating workers geographically through different mines, proved excessive in terms of output foregone. In the process of accrediting new skills, corners were cut, and the support of frontline supervisors evaporated when it became clear that 'newly-trained' individuals often were not competent in their relevant areas once in the field. A return to task specialisation eventually occurred.	Training and reorganisation efforts at both these mines came in response to a 'crisis of profitability'. This had two proximate causes. The first was a decline price for coal on international markets, though this affected the first operator (BHP) more substantially than the second (Callide), which supplied the domestic market. The second was that many of the richest coal deposits close to the surface had already been extracted. In order to maintain past production, mining companies were forced to dig increasingly deeper into the earth, with consequently higher exploration and equipment operating costs (and risks to workers).
	Coal mine 2 (Callide)	Mid-1990s	Increased task flexibility was more successfully implemented in this second case. A smaller workforce meant it was easier to provide (and maintain) necessary new skills. Reorganisation at this site was also aided by geology. Where BHP was forced to locate its best miners at the least-accessible mineral seams, Callide found its coal at various depths, and could rotate workers through different sites as these came into operation. Finally, unlike BHP, Callide supplied to the domestic coal market. It could focus on decreasing unit costs of production rather than maximising total output. Because its viability was not directly affected by fluctuating international coal prices, 'continuous production' was not essential. Callide miners had more time to train in fewer areas, ensuring their operational readiness.	(See above)
O'Brien & O'Donnell (2000)	Commonwealth government agency		Work is apparently organised largely on bureaucratic lines, as previously. The implementation of performance appraisal and performance-based pay is said to be flawed. The changes led to lowering of morale as staff saw favouritism and political alliances being rewarded, rather than performance. Staff also adopted very strategic responses to the new systems, most of which did not produce rising performance.	Research focused on introduction of performance management via appraisal systems and performance-based pay systems in three Commonwealth Departments (Department of Finance and Administration, Department of Foreign Affairs and Trade, and Public Service and Merit Protection Commission). These changes were aimed at developing a culture of performance in the Departments to lift efficiency and productivity.
Murakami (1999)	GM Holden	1989-96	The first step in improving shopfloor relations was the establishment of a Site Committee, which then met regularly over industrial issues. The introduction of teamwork arrangements proved more difficult, because of differences in the preferred model. Unions proposed a participative and democratic 'group-work' system, while management favoured a more authoritative regimen of directed teams. After years of indecision, the union approach prevailed, and has remained.	Adoption of some form of team-working arrangement was originally suggested during wage negotiations, around the question of how to improve efficiency. These negotiations with trade unions generated 'a real and deep conflict' over how much authority management would cede to new shopfloor teams. A subsequent study (Lansbury et al. 2006) indicates that the union model of 'group-work' has survived, despite the difficulty of its initial implementation.

Source	Study site	Timeframe	Work practices	Rationale for work practices
Allan (1998)	Two private hospitals	1994	No evidence relating to teamwork or the other components of HPWS. The major shift documented in the hospitals is away from reliance on permanent staff to meet labour requirements. While consistent with evidence that employment is generally becoming more precarious, the form of 'flexibility' indicated here is not the task variety or multi-skilling thought to represent HPWS. These hospitals have confronted real difficulties in managing their contingent labour pools at low cost, while still maintaining satisfactory levels of patient care.	Reduce total costs of patient care by closely matching the demand for care to the supply of hospital labour. This has been achieved chiefly through the use of non-standard and contingent employment arrangements, although local labour market conditions appear to be central to whether such a strategy is sustainable in the longer-term.
Tutt & Chadbourne (1998)	Secondary school	1993-96	Concerned with moves to change organisation of teaching work in WA schools. Principals were in favour of various forms of change, including change in how students were grouped, time arrangements (start and finish of school etc.), and staff mix and deployment. Very little change actually occurred. The main changes were one case where a new centre for independent learning was to be open beyond traditional school hours, and an information centre that had strong cross-curricular (disciplinary?) inclinations. There is no information about the course of these developments.	The rationale for these changes is not very clear. The point of the article is that they were contemplated following the introduction of enterprise bargaining, which was thought to be a set of industrial relations arrangements that would assist principals in introducing workplace change. The conclusion is that IR changes alone are not enough to make this possible.
Park et al. (1997)	Automotive manufacturing industry	1996	Of 36 companies surveyed, half sought to introduce 'self-managed' teams. But at the time of study, with teams having been in place for an average 3 years, only 17 per cent had such team arrangements. More common were directed or 'semi-autonomous' teams. Other changes included development of multi-skilled rather than single-task jobs, and decreasing emphasis on individual rewards. But no clear signs that organisational structures became 'flatter' or power more equally shared. Senior managers and union leaders saw teams as beneficial for productivity and safety standards, but the only tangible indicator of employee perceptions was higher measured morale. Not clear whether teams could survive 'lean production' in the long-term.	Context for work practices involved increased global competition and falling domestic tariffs, following federal government determination to foster increased industry efficiency in the 1980s and 1990s. Ability to move the industry as a whole toward high-performance practices was partly contingent on the extent of union-management cooperation, although relations in this area were generally seen as positive.
van den Broek (1997)	Financial institution	1994-96	Work organisation and recruitment are characterised by: individual bargaining, selective recruitment and induction, direct communication between managers and workers, and the use of teamwork. Emphasis in recruitment is on securing employees who seem amenable to participating in the organisation's culture of achieving the company's goals. Researcher suggests this approach may be threatened if cost pressures rise, but there is no evidence presented of any change in work organisation. Performance-based pay is also important, with a component being on the basis of team input. Teams exist to motivate workers, by creating competition between them, and also to facilitate performance appraisal. This produced some feelings of favouritism.	The company is a client service company whose primary activity appears to be a call centre. The research appears to cover the period of establishment of the company in which it operated with an established model of employee recruitment and work organisation. One effect of the forms of recruitment and organisation used was to sharply reduce likelihood that employees would seek unionisation. Teams are used to build employee commitment.

Source	Study site	Timeframe	Work practices	Rationale for work practices
Simmons & Bramble (1996)	Electricity utility	1984–94	Introduction of teams, largely focused on quality circles in the TQM model. The organisation sought to increase vertical and horizontal knowledge sharing, and break down some of the barriers between engineers and other workers. It increased its spending and focus on training. At the same time, the permanent workforce was reduced by 44% during the period, with a large rise in the use of contractors. During the early period of reform (from 1984), employment insecurity increased sharply.	Deals with reforms to the organisation of SEQEB beginning in 1984, and prompted by a desire to make the organisation more efficient and more focused on customers. In the past, it had been focused on producing electricity. A new CEO in 1984 attempted to introduce Total Quality Management (TQM) reforms. He was not an engineer, and sought to alter the engineering dominated culture of the organisation. Following his departure in 1989, various of the reforms were attenuated.

Note: The studies are organised first by date of publication (in descending order), then by author (alphabetically), and finally by study site (alphabetically).

Appendix 2: Skills consortium publications

The following is the complete list of titles produced by the National Institute of Labour Studies, Flinders University and the Centre for Post-compulsory Education and Lifelong Learning, University of Melbourne, through the research project, A well-skilled future: Tailoring VET to the emerging labour market.

Forecasting future demands: What we can and cannot know

Sue Richardson and Yan Tan

Future skill needs: Projections and employers' views

Diannah Lowry, Simon Molloy and Samuel McGlennon

Demographic impacts on the future supply of vocational skills

Yan Tan and Sue Richardson

Skill acquisition and use across the life course: Current trends, future prospects

Bill Martin

What is a skill shortage?

Sue Richardson

Changing forms of employment and their implications for the development of skills

Sue Richardson and Peng Liu

Changing work organisation and skill requirements

Bill Martin and Josh Healy

Social area differences in vocational education and training participation

Richard Teese and Anne Walstab

Participation in vocational education and training across Australia: A regional analysis

Anne Walstab and Stephen Lamb

Current vocational education and training strategies and responsiveness to emerging skill shortages and surpluses

Jack Keating

Matching supply and demand: International perspectives

Jack Keating

Impact of TAFE inclusiveness strategies

Veronica Volkoff, Kira Clarke and Anne Walstab

A well-skilled future

Sue Richardson and Richard Teese



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The consortium, *A well-skilled future: Tailoring vocational education and training to the emerging labour market*, comprises researchers from the National Institute of Labour Studies in South Australia and the Centre for Post-compulsory Education and Lifelong Learning in Victoria. Its program of research aims to investigate future work skill needs and work organisation arrangements, and their implications for vocational education and training.

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