Formulating and Implementing Human Resource Strategy: A Model of How to Do It, Two Examples of How It's Done

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Business strategy is based upon a knowledge of markets and needs, an understanding of the strengths and weaknesses of an organization, and an awareness of the political, social, and cultural factors that shape strategy implementation. As managers adopt a strategic perspective toward human resources, they need to be sensitive to their labor market and employee's attitudes and needs, to the profile of jobs in their companies and jobholder's training and skills, and to key factors that will affect strategic management in their own firms. This paper identifies the factors companies need to consider when formulating human resource strategy and describes the implementation and monitoring of such strategies in two U.S. corporations: Caterpillar and Graphic Controls.*

Those who study patterns of human resource management in organizations suggest it can take 10 years or more for a new strategy and human resource orientation to take hold in a firm. As a point of departure, then, this paper focuses on the workforce of 1995 and the management challenges that will face Caterpillar and Graphic Controls in the next 10 years. The aim is to illustrate the factors that managers will be considering as they formulate human resource strategies in their firms. The paper begins with a look at the business futures of the two studied firms. Then it examines the contours of the 1995 workforce, in general and in the cases, to identify the needs of working people and what companies might do to meet them. Next it looks at the jobs of the future, what will be required of working people, and how they will be prepared to meet those job requirements. All of this serves as a prelude to two case examples of strategic management in action.

The Caterpillar case dramatizes the scope of human resource strategy

* Miles, et al., 1978; Porter, 1980; Tichy, 1983.

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formulation when line managers and staff gain input into a new plan and highlights the political dynamics of implementing a major change in the thrall of a business down-turn and competitive pressures. Cat strategists were also challenging nearly a century of paternalism in proposing changes in the way the company managed people. Graphic Controls launched its human resource strategy in the early 1970s. The GC case illustrates how the company monitored the results of its strategy and adapted it to changing business and organizational dynamics. Whereas the initial sections of this paper focus on the elements of human resource strategy formulation, the concluding sections show how firms pull these elements together and put strategy into practice.

ELEMENTS IN HUMAN RESOURCE STRATEGY FORMULATION

Figure 1 depicts factors relevant to human resource strategy formulation including employee demography, attitudes, and needs, levels of education and training in a workforce, the structure and distribution of occupations, and aspects of the business strategy, life stage, and culture of a firm. The choice of these factors rests upon the human resource management paradigm that calls for integrating the needs of people and the needs of an enterprise. An assessment of these factors can help a firm to understand its employees' needs and tailor programs to meet them and to project its performance requirements and what may be needed in the way of additional hiring, internal training and development, and, more broadly, programmatic change in the organization. The strategic thrust adds that

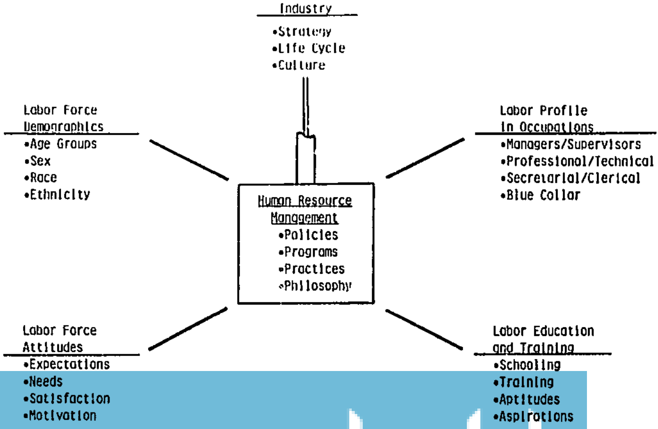

Figure 1. Factors contributing to human resource strategy formulation and implementation.

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this integration be based upon future as well as present needs and managed in light of a wide range of organizational and societal developments.

Projections as to the 1995 workforce used here come from the Bureau of Labor Statistics concerning labor force demographics (Fullerton and Tschetter, 1983), occupations (Silvestri et al., 1983), and industry employment trends (Personick, 1983). Speculations as to working people's attitudes and character in the future are based upon this author's and others' survey data. Forecasts about work and the workforce in the two studied companies come from internal records, employee surveys, in-depth interviews, and focus group discussions. Predictions as to business and employment trends in the two companies are based on company plans, interviews with key informants, and my own guesswork. Following is a look at the human resource management issues facing manufacturers in the next 10 years and the specific problems and opportunities facing Cat and GC.

Business Strategy—1995

To project an agenda for human resource management in the next decade requires some understanding of how industry and the economy will be changing. The post WW II period to the present has witnessed the growth of the service sector to the point that it is now larger than the goods producing sector in terms of employment and contribution to the gross national product. Since the most recent recession, moreover, the heavy manufacturing sector has experienced an actual decline in levels of production and employment. The future of this sector, which includes Cat and GC, will be the focus of consideration here.

Manufacturers are predicted to "rebound" in the rest of the 1980s but grow somewhat more slowly than the overall economy in the 1990s. Some 18.5 percent of all jobs are projected to be in manufacturing in 1995 as compared with 18.8 percent today (and vs. over 25 percent in 1960). Specific industries, such as the auto and steel industry, are not projected to regain their pre-recession employment levels.

Manufacturing firms, particularly those in smokestack industries, will face the challenge of renewal in the 1990s. Many of these firms matured and became "defenders" of their market niches in the 1970s. Some also harvested profits at the expense of quality assurance, research and development, and innovation in the human organization. The onset of foreign competition weakened performance in this sector and promises to shape manufacturer's strategy in the next decade (Abernathy et al., 1981). Manufacturing managers project a focus on quality, product performance, and timely delivery in the next years (Miller et al., 1983). Thus, innovations in inventory management, statistical quality control, and computer aided design, manufacturing, and scheduling can be expected to increase.

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Product cost will be a concern in selected industries. There the emphasis will be on productivity, cost reduction, and manufacturing flexibility.

The human resource management implications of these several manufacturing strategies are becoming clear. For one, there is expected to be a massive introduction of computers into organizations. Offices will be fully automated, communications will be directed through electronic mail systems, and robotic and cad/cam technology will revolutionize the factory. This will have direct implications for staffing in manufacturers. For example, there will be a need for many more technical and professional personnel by 1995. The ranks of computer specialists, notably programmers and systems analysts, are expected to increase by 80 percent in the next 10 years. At the same time, there will be less need for blue collar workers, particularly in the less skilled production jobs. Estimates are that at least half of the labor in small component assembly will be replaced by automation and that some 15 percent of all assembly systems will use robot technology.

Human resource strategies in the manufacturing sector will accordingly have to be geared toward the attraction and retention of engineers, technicians, and scientists and the retraining of blue collar workers. Inevitably, there will also be a need to attend to the outplacement of those no longer needed in production. Furthermore, there will be a need for plans and assistance in the introduction of computer technology into manufacturing. Help is needed not only in the training of computer users, at all levels in companies, but in facilitation of the overall change process. Already there is a growing number of cases of "implementation failure" when manufacturers neglect the human factor in the introduction of computer technology (Mirvis, 1984).

Second, many firms will be "downsizing" by reducing their managerial ranks and staff rosters. This will reduce managerial employment in some manufacturers. It also promises to alter manager's roles. The flattening of hierarchy and loss of staff support, for example, will increase the scope of manager's work. Efforts to push down decision making responsibility will change the skill requirements of their jobs. Development strategies will have to be aimed at increasing the general management orientations of tomorrow's managers and ensuring that they are skilled in more participative and coordinative management practices. One risk is that manager's may resist this transformation in their jobs. Thus, helping to guide this changeover is on the human resource agenda in 1995.

Finally, the thrust for improved productivity and quality in manufacturing will require continued development of motivational and involvement programs in firms. Current data show that many in manufacturing lack faith and confidence in their managements (Morgan and Schiemann, 1984). At the same time, only 22 percent in the overall workforce report that they are working to full capacity and 44 percent say that they give nothing more on their jobs beyond what is required (Yankelovich and Immerwahr, 1983). It is to be expected that innovations, like current

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quality circle and quality of work life programs, will fit into new organizational structures emphasizing project or product identity. R&D and customer service may become line functions and "intrapreneurship" will be promoted within firms. Companywide identity and loyalty will be developed through formal communication programs, health and recreation centers, and more contact across ranks within firms. In addition, gain sharing and stock ownership plans will expand. Presently, less than 10 percent of the workforce believes productivity gains will be of benefit to workers. Thus, programs that share the benefits will be essential for manufacturers hoping to meet productivity aims.

The business challenges facing Caterpillar are archetypical of those in the heavy manufacturing sector. Through nearly a century of technological innovation and profitability the company became a leader in the earth moving industry. Its strategic emphasis has been on the development of larger, higher margin equipment, on product performance in all climates and terrains, and on reliable service through an extensive service network. Now it faces a foreign competitor making in-roads into specialized market segments; demand has declined and factors such as currency valuation and energy costs have further depressed sales; for the first time ever the company is losing money. In the next decade, price will be important, factories will have to be automated, and labor and overhead costs will have to be made competitive.

GC has some of these same business needs. The company also has innovative tasks in developing new products that complement existing lines and in gaining market share in the highly competitive health care product industry. Partly a defender, in strategic terms, it is also a prospector and emphasis has to be given to product development and deployment of a new sales force. It is within this strategic context, then, that GC and Caterpillar will be managing human resources in the next decade.

The model of human resource strategy formulation contends that policies, programs, and practices pertaining to people in an organization need to be tailored to a firm's business strategy. Cat and key divisions in GC, therefore, have had to focus their human resource strategies on the tasks of downsizing, introducing new technology, and managing people more effectively. These strategic requirements are linked with the life cyle of industries. Both Cat and GC are mature industrialists. Their management task is to both maintain vitality in a more competitive and declining market and to develop new products, in the case of GC, in a new market niche. The model also shows that human resource strategies are formulated in the context of a company's culture. Lawrence and Dyer (1983) contend that manufacturers need to develop more clan-like cultures that bind members to a common purpose. The Cat and GC cases will show how much of a bane or boon company culture can be to the implementation of human resource strategy.

Of course, different industries, at different points of evolution, face

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different kinds of business challenges in the future. High technology firms must still prospect, coping with rapid product changes, reorganizing countlessly, trying to retain their best people and attract those holding the secret to the next generation of products. Financial service firms must become analyzers to cope with changes in their markets and to learn to manage in a new competitive environment. Human service firms have traditionally been reactors. They will be faced with the challenge of introducing financial discipline without sacrificing their unique organizational identities. The larger point is that business strategies, the life cycles they are based in, and the company cultures that sustain them will be incorporated into human resource strategies in the next decade. Such strategies will also have to take account of the characteristics of people in an organization, such as their age, sex, and gender, as well as their psychological makeup. How these factor into human resource strategy will be considered next.

Labor Force Demographics and Attitudes—1995

The demographics of a workforce are reflected in levels of skill and experience and, linked with attitudes, in what workers look for in their jobs, are willing to offer, and how they relate to fellow workers and their organization. Organizations are also demographic structures and the tenure of a workforce, the distribution of men vs. women, and people of different ages, educational backgrounds, and personality traits, all bear upon human resource management. While it is beyond the scope of this paper to preview the full contours of the 1995 workforce, some selected trends, particularly ones pertinent to the management strategies of Caterpillar and GC, will be noted.

One major shift in the workforce by 1995 involves the aging of baby boomers and their ascension into the ranks of leadership in organizations. Demographic projections show a dramatic increase in workers age 35–53 by 1995 both in terms of actual numbers and as a percentage of the workforce. Large numbers of these baby boomers have been classified as "expressives" in their work and life styles (Yankelovich, 1981). They seek personal fulfillment in work and yet want time free to attend to their families, recreation, and other personal pursuits. This cohort of workers also participated in the education boom. Its members want to put their minds to work on the job.

Clearly this age group has had its voice heard in organizations. The many job enrichment and involvement programs, plus exercise facilities and flexi-time arrangements, are directed at these baby boomer's needs. Will baby boomer's attitudes change by 1995? Some assert concerns over job security and upward mobility will refocus their attentions toward more material pursuits. My own analyses, however, show no abandon-

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ment of the "new breed" aspirations of this age group (Kanter and Mirvis, 1984). Yet this group will face increasing competition for advancement in the narrowing organizational pyramid and for wage increases in the glutted job market. More experiments with compensation that rewards education, such as skill based pay, or that offers time off in lieu of money, may be needed to keep this group motivated toward organizational goals and development programs that foster lateral movement may be essential to human resource strategies by 1995.

Both Cat and GC have many workers who will be 55 or older by 1995. How will they fit into their company's revitalization strategies? Data portends that those age 55 or more in 1995 are likely to carry their commitment to work and loyalty to their organization into their employment futures. A key concern is whether they will be able to put that ethic to work and whether their loyalty will be reciprocated. As an example, this group will have a lower level of education than those of other age groups by 1995 and less exposure to computer technology. Increases in the technical requirements of jobs and competition from younger computer-literate workers may leave them regarded as "dead wood" in their organizations. Already, large numbers of senior workers at Caterpillar and Graphic Controls risk such labeling. Both companies have devised plans to have these personnel fill mentoring or internal consulting roles in their organizations. Yet competing pressures to reduce staff ranks and "downsize" may make such plans untenable by 1995.

In addition, it is notable that despite a drop in proportional employment in this older age group, the numbers of workers age 65 and older is projected to increase by 1995. With a projected end to retirement laws in sight, this will make strategic management of a retirement program evermore important. Firms, for example, are developing more attractive "early" retirement plans to reduce their ranks of aging workers. A great many more men, than women, are choosing this option and anecdotal data suggests that many top performers, those firms might want to stay employed, are choosing to leave. Thus firms risk losing their most valued people.

The foregoing implies that firms will have to target their human resource management efforts to meet the needs of distinct age groups of employees. This is complicated when it comes to the next generation of workers. There will be fewer of them available for work and organizations will have to focus upon their attraction and retention. Yet gaining the loyalty of those age 25–34 promises to be a problem by 1995. One segment of this age group seems to fit the stereotype of the "me" generation. Its members, college educated and from affluent families, have the new breed aspirations but also a strong interest in material and self-gratification. More individualized career planning may be needed to gain their loyalty to an organization. By contrast, those with less education and from less affluent backgrounds in this age group report high cynicism and low

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involvement in their jobs and organizations. They threaten any effort to revitalize a firm. New entrants to the workforce by 1995, today's teenagers and adolescents, seem to also divide into these two camps.

This highlights how organizations are populated by distinct "psychological" subgroups. Attitudes in companies vary not only across age groups, but within the same age group according to collar color, income, function, and position. Caterpillar strategists, for example, found significant "communication" gaps between management and hourly personnel, between life and staff, even between people in different parts of the country as they sought to define a new human resource philosophy for the company. As the Cat case will show, only when the company found a way to air these divergent viewpoints could a common human resource philosophy statement emerge.

There are, of course, other distinct groups of workers within companies who also have distinct aspirations and needs. Nineteen ninety-five will see more women (from today's 43.3% to 46.7%) and more minorities (from 12.7% to 14.5%) in the workplace. Both Cat and GC launched affirmative action programs in the 1970s. Many more women and blacks in both companies have gained managerial, professional, and traditionally male blue collar jobs in the past 15 years. Such programs, in these firms and throughout the U.S., are testimony to the success of focusing human resource programs on particular groups of people. National survey data shows that women are now comparable to men in ratings of the fairness of advancement opportunities in employing organizations. Blacks hold, however, a less favorable view. Neither women nor blacks occupy the top rungs of power in Cat or GC and, nationally, they are underrepresented in these posts and significantly lag white males in income. Given their increase in "numbers" by 1995, it is to be expected that affirmative action will remain high on industry's human resource agenda.

There will be more single parents at work and more two-earner couples in 1995. There will be even less conformity to stereotyped male and female life and work styles. More Asian and Hispanic workers will be seeking employment. The broader point is that the workforce will be more pluralistic in 1995 in terms of its demography and worker's character. Companies that do not respond to this pluralism risk meeting their member's needs and may pit one group against another, particularly in the face of economic declines. Already this is evident in conflicts between white males vs. women and minorities in firms forced to reduce staff. By 1995 look for conflict between young workers seeking material advancement and baby boomers, retiring in record numbers, looking for generous benefits. Cleavages across racial, gender, ethnic, and even "psychological" lines could widen. Helping organizations learn to understand and manage pluralism, then, will be a central human resource management thrust in the next decade.

Human resource strategies will also be focused upon the design of jobs for the 1990s and ensuring that people can perform them effectively.

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Systems for recruiting, hiring, and placing personnel, for appraising and rewarding them, and for communicating with them and gaining their involvement in the enterprise will all have to be adapted to the new tasks of workers and the strategic requirements of the organization. These factors in formulating human resource strategy will be considered next.

Profile of Jobs and Education—1995

There will be some significant changes in the occupational structure in industry by 1995. The professional and technical ranks, for example, will grow by five million jobs. Both the need to attract and the difficulty of retaining these personnel in an organization has been noted. Managing professional and technical people also poses other challenges. One is that they become isolated from the other functions of an enterprise and, given the strategic importance of their work, that they adopt a kind of prima donna status. New organizational designs, such as project teams and matrix structures, will be needed to reduce their isolation and bring them into the mainstream of the firm. The creation of a "techno-service" role would also give them more contact with customers and market needs (Maccoby, 1984). A second problem is ensuring that professional and technical personnel can advance without requiring that they assume managerial responsibilities. More technical ladders can be anticipated that provide for their promotion within a solely technical function. Finally, it promises to be difficult to keep these employees current with developments in their fields. Look for increases in industry's training expenditures for technical education by 1995 and for more joint industry–university cooperative education programs.

Managerial ranks are expected to grow in proportion to growth in the workforce through 1995, but within firms like Caterpillar and Graphic Controls the management numbers will decline. Projected changes in the scope and skills of managerial work have been noted as has anticipated resistance to this by management. Some strategic and demographic factors, however, imply additional changes in the way managers do their jobs. For example, many more managers will be using computers by 1995. This will give them more access to shop floor production results and a greater capacity to relate production plans to profit-and-loss figures. There is a risk, however, that computers could generate too much information for managers to digest and that "canned" software packages would reduce the role of intuition and even experience in their decisions. Electronic mail systems will give managers increased communication ability. There is a risk that it will further isolate them from production and people and limit their inclinations toward "management by walking around."

There will be a glut in management by 1995 as baby boomers swell the ranks. More lateral movement will characterize the manager's career.

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To encourage this movement firms may develop compensation plans that reward the acquisition of skill and experience in different functional areas, much as skill-based pay at the hourly level rewards the learning of distinct job skills. Sabbaticals may also be more commonplace for executives. Such initiatives also serve the need to develop a more generalist orientation in management.

Both Cat and GC have to concern themselves with the management of white collar workers in the next decade. Cat's plans call for the development of technical ladders and professionals are already spending some time in company dealerships. GC has developed team structures to integrate functional managers in divisions and devotes considerable attention to individualized career development in the professional and managerial ranks. How this focus developed at Cat and how it is managed at GC will be considered shortly.

Managing the clerical workforce will pose special problems by 1995. Already clerical workers have education levels comparable to that of managers and supervisors. Surveys show, however, that the majority are "over-educated" for their job duties and job satisfaction has declined markedly for this occupational group. Advanced office automation may address some of the concerns of the clerical workforce. Available evidence suggests it reduces some of the routine in their work and can enlarge the scope of their duties. It also enhances their earnings and their job mobility. On the downside, computer skills, once mastered, can become elemental to clericals. Many also report that with computers they lose control over the pace of their work, are monitored more closely by superiors, and lose valued contact with coworkers (Sales and Mirvis, 1984).

Managing blue collar workers will also prove more problematic. This segment of the workforce will decline by 1995 and the wages of its members will grow much more slowly than in past decades. Again, automation will meet the needs of some members of this workforce. It promises to enhance the safety and comfort of heavy production work, for example, and will allow for the advancement of some blue collar workers into the more highly paid technical ranks. At the same time, it threatens to remove craftsmanship from blue collar work and to reduce the work of those who do not become programmers to that of material handlers and "button pushers."

Changes in the content and skill requirements of the manufacturing jobs of 1995 will also require changes in the education and training of jobholders. The computerization of work, for example, means that companies will have to offer training in relevant operating and programming skills. New entrants to the workforce in the decade will be from the computer generation and should have the background and experience necessary for learning specific applications. Large numbers of current workers, however, will have to learn these skills and some, particularly in blue collar jobs, will have to be retrained in new production modes.

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Companies will also have to get smarter about computerization. Few firms, to this point, have applied strategic analysis to the choice and allocation of computers. By 1995, managers will have to gain this analytic capability if technology is to be used to competitive advantage. Few have grappled with the human costs and gains of computerization. In the next decade there will be a need to apply "socio-technical" analyses to the implementation of new technology. This knowledge and skill will have to permeate organizations.

Changes in managerial and staff jobs will require that companies focus more attention on training and development. Already firms complain of MBAs lack of exposure to operations and people management in their curricula and to broader developments in the humanities and arts. Generalists need such exposure and companies will have to supplement university training through internal programs and outside seminars for managers. At the same time, firms have found a lack of writing, communicating, and problem solving skills in high school and college graduates. They may have to focus, as well, on remedial programs in these areas.

The push for productivity and employee involvement at the operational level in firms will have to be complemented with investments in training. Programs directed toward statistical quality control will stand alongside programs focused on managing multiculturalism in the workplace. Recent estimates are that 45 percent of the workforce participates in on-the-job training and that 34 percent attend specialized training or seminars every year (Chamber of Commerce, 1980). Those numbers will have to increase for firms undertaking massive technological, structural, and cultural changes in the next decade.

The broader point is that more and more workers will be "learning a living" in the next decade and that organizations will be making training and development a central part of their management strategy. In a sense, organizations will also have to become "learners" to manage the changes required by 1995. In this spirit we turn to the efforts of Cat and GC to learn to manage their human resources strategically.

HUMAN RESOURCE STRATEGY IN ACTION

That firms with distinct business horizons, occupations, and workforces will need distinct human resource strategies should be evident from the model of factors in strategy formulation presented in the first part of this paper. This section shows the application of that model in the case of Caterpillar and Graphic Controls. Cat undertook a worldwide human resource strategy conference in 1980 to define the needs of employees and the business and to chart a course for integrating them in the next decade. The case highlights the dynamics of strategy formulation in action.

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Graphic Controls formulated its strategy in the early 1970s and has monitored and adapted it ever since. Its case shows a firm putting strategic management to work.

Formulating Human Resource Strategy at Caterpillar

The roots to a redefinition of human resource management at Caterpillar can be traced to the early 1970s. Like so many mature industrial companies, Cat faced the challenge of managing a changing workforce. It had many of the younger, new breed workers, and many more women and minorities, some seeking to move up into management; its people were infused with new values emphasizing self-expression and entitlement to more from the company; its working conditions, leadership styles, and industrial relations emphases were not meeting the expectations of Cat people. Like so many industrials, too, Cat executives complained over the loss of the work ethic and hoped to wait out a period of instability and just plain craziness. By 1979, however, it was clear that this strategy was untenable.

Exhibit 1 presents a summary of Cat's innovative efforts to formulate a new strategy of human resource management for the next decade. It details phases of the worldwide strategy conference, whose recommendations are being implemented today. Several aspects of this project are notable.

First, the strategy conference was focused on the future as well as current needs of the business. In 1979 the UAW struck Cat, for the first time in its history, and the conflict in negotiations turned on noneconomic matters. Management simply could not respond to the union's concerns over the treatment and morale of the workforce. That same year productivity and profits declined in Cat and a competitor began making inroads into foreign and domestic markets. The company faced the strategic challenges outlined earlier. Personnel managers recognized that the company's needs to automate and reduce costs would require a change in its human resource orientation and management approach. A new relationship would have to be forged with the union. A personnel representatives meeting in 1979 outlined problems in the human organization and what Cat could do to fix them.

This highlights a second factor important to human resource management: a company's culture. Cat made clear distinctions between managers and nonmanagers and between the company and the union. There was a history of paternalism in the organization and labor was well compensated for its work. When the personnel representatives first reported problems in the organization, top management discredited them. The people at the top were "out of touch" with the changing workforce in the firm and Peoria, Illinois management thought that the changes sweeping the country were simply fads that would not endure. Only

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when a top company official validated the reports from the field were top managers ready to re-examine human resource policies and practices in the company.

In this sense, Cat's culture and track record of success were impediments to developing a new human resource strategy. A strong financial and operational focus had led Cat to dominance in its market. Reports from plant managers that the company was building "paper tractors" at the expense of product innovation and quality control called into question Cat's formula for success. Managers had grown comfortable with their authority and the perks of their jobs. Suggestions that they were out of touch with workers and seen as aristocrats challenged their legitimacy and self identities. Yet top management was pragmatic and persuadable. In light of the needs of the business and the urgings of one of their own, they gave the go-ahead to formulating a new human resource strategy for the next decade.

The strategy conference, as described in the exhibit, was the right vehicle for the job within Caterpillar. It was a familiar method for studying organizational needs and developing action strategies. A task force of line and personnel managers organized the conference and followed, in the early stages, the straight and narrow road. The first several modules had them projecting the composition of Cat's future workforce, focusing on demographics and occupations, the labor market, and educational trends. Age profiles showed that Cat would have too many older workers and too few young ones in the years ahead. Accordingly, proposals for developing early retirement plans and for aggressively recruiting and training younger workers were advanced. Plans for hiring and placing computer technicians, needed in large numbers, were developed. A need for university-based training for managers was identified. All of the recommendations from these first modules were sound, supported by extensive data, and linked with clearly identified organizational needs. They were consistent with Cat's current human resource thrust and the traditional personnel purview in the organization.

Module six, by contrast, delved into the depths of the organization. It was designed as a summative model, intending to summarize the expectations of the workforce and the company given foreseeable changes, and to propose strategies for integrating them. This module differed from previous ones in three respects. First, subcommittees were formed to study the expectations of distinct subgroups in the firm. These groups included women and minorities, first line managers and professionals, people employed at smaller facilities and dealerships, those who would be using computer technology, and those defined as having "special" needs. What emerged was a mosaic of human needs in the organization. Second, the subcommittees went to the source to learn about employee's expectations: they queried them through interviews, surveys, and focus group discussions. Over 5000 people were involved in fact finding as to their own and the company's expectations. Third, the module task force

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developed over 1000 recommendations and many went well beyond personnel's traditional domain. The module leaders identified many unmet expectations that could be traced to management's failures to communicate with workers, to offer them sufficient challenge in their jobs and participation in decisions, and to treat them with respect and dignity. A key finding was that the company was simply not asking enough of its people.

This module broadened the scope of the study—increasing its potential and increasing its threat. Top management sent signals that too many people, too much time, and too much hullabaloo were involved. The last module had the conference organizers taking steps to develop recommendations that offered mutual benefit to workers and the company and preparing top management for the many changes proposed. Significantly, recommendations were elevated to points of philosophy and strategic emphasis rather than programmatic implementation. The conference organizers hoped to oversee implementation through a companywide task force.

Cat's top management approved many of the recommendations of the conference and incorporated them into the company's strategic business plan. The company plans to undertake attitude surveys to monitor employee's expectations and attitude and has begun human relations training for supervisors to improve communication in the offices and on shop floors. Steps have been taken to develop an employee involvement program with the UAW and hourly workers. Perhaps most significantly, Cat's top management endorsed a company philosophy statement that committed them to integrating the needs of people and the organization.

In other ways, however, top management backtracked. Recommendations to form a task force to oversee implementation of new strategic initiatives were rejected. Cat's culture emphasizes the autonomy of local plants and top management felt an oversight body would threaten line control over operations. Plans to increase employee participation in decisions have, accordingly, been left to the local manager's option. Some plant managers have "run with the ball"—introducing new communication programs, creating teams to plan and implement technological changes, and simply spending more time on the tasks of working with people. For others, it is pretty much business as usual.

Cat's profitability has continued to decline; the company was again struck by the UAW; and massive reductions in force along with technological changes have slowed implementation of strategy conference recommendations. The conference organizers noted, most recently, "developing and approving strategies is easier than implementing them."

What else can be learned from Cat's case? As to strategy formulation, there are several lessons. First, the conference organizers found employees ready and able to talk about their needs as well as the needs of the business. An initial fear was that employees would have a "wish list"

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Exhibit 1. (continued)

and Dronan also proposed that a task force be commissioned to oversee implementation of strategic recommendations.

VIII. Backtracking. Many of the strategy conference recommendations were supported by top management. Yet it was decided that implementation would be left to the line organization. As a result, innovations in human resource management became localized. One plant established a communication system to inform employees about new products and developments throughout the company. Another undertook human relations training for supervisors. Still another involved workers in redesign of the production system.

IX. The Bumpy Road. Cat has faced a bumpy road the past few years. For one, business and profits have continued to decline. Competition and the escalating value of the dollar have hurt Cat sales abroad. Second, the UAW again struck Cat and workers were out for several months. Finally, the company has concentrated much of its innovative attention on the introduction of new manufacturing technology.

Nevertheless, seeds were planted in the strategy conference that are beginning to bud. Cat has developed a corporate philosophy statement that includes many of the key points developed in the conference and the personnel agenda for the next several years points to implementation of several of the conference recommendations. Cat has begun to make use of attitude surveys and more employee meetings to improve communication. Contracts with the UAW have been made with the intention of beginning a joint labor–management program. Bill Haws, personnel vice-president for the company, has made strategic human resource management his key priority for the rest of the decade.

completely divorced from the problems facing the firm. Worse, it was thought that they would expect the company to meet all of their needs as a result of having the chance to air them. Instead, it was found that most had reasonable expectations and were gladdened to have the chance to talk about themselves and their jobs. Second, the conference organizers saw benefit in focusing on the needs of subgroups of employees as well as the total workforce. An initial concern was that this would prove divisive and lead to "interest group" lobbying for the implementation of selected recommendations. Instead, it was found that employees had a broad common agenda and that, for the most part, the special needs of

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subgroups did not conflict with common aims. Finally, the organizers saw great value in formulating strategy via a conference. This legitimized the "study" of an organizational problem and under that rubric the emphasis was on fact finding rather than flank protection, on understanding rather than posturing, and on learning rather than knowing all the right answers (Mirvis et al., 1984).

There is much to learn about implementation here as well. The case affirms that strategy is limited by the vision of key executives and that recommendations for strategic change must take account of cultural barriers with a firm (Davis, 1984). It also shows that financially driven and bureaucratically dominated organizations, even when facing performance problems, resist making fundamental changes that threaten to alter power bases and complicate organizational goals (Lawrence and Dyer, 1983). Finally, the case illustrates how damnably difficult it is to change the course of human resource management in organizations. Yet this list concentrates on the limits of the human resource strategy conference. It did reach many in Cat, shifting their orientations to people and, more broadly, it mobilized the interest, attention, and energy of a large corporation to the task of managing people better. It did so, moreover, in the context of developing the firm's business strategy for the 1990s. By 1995, given the 10-year lag from formulation to full realization, human resource management may look considerably more progressive at Caterpillar. GC has been at this for more than a decade and its experiences will be considered next.

IMPLEMENTING AND MONITORING HUMAN RESOURCE STRATEGY AT GRAPHIC CONTROLS

Graphic Controls' approach to human resource management is more developed than that found at Caterpillar. Partly this is because the company is much smaller and nonunionized. Another reason has been its emphasis on building the business through the development of people. GC has a mature product line in recording charts and might be expected to simply harvest products in that line. Its market primacy, however, is based upon quality and product innovations and these aims depend upon a talented and motivated workforce. Diversification into health care has strengthened the strategic import of this emphasis. Finally, GC's top management has gone on record with its commitment to people.

Will Clarkson, the chief executive officer in 1970, set this tone in his management philosophy statement that was developed with his direct reports and made public to all GCers. The philosophy emphasized participative management in hierarchical groups and task forces, committed management to decentralization of goal setting and decision making, and gave employees input into selection and promotion decisions relevant

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to their work groups. This philosophy was inculcated into GC through team building at all management levels.

Lyman Randall, head of Human Resources in the 1970s, worked to bring his function into line with this philosophy and thrust. The function was quickly divisionalized and all staff were developed in not only personnel but also organization development skills. By 1975, Randall saw a need to develop a new compensation package in the company and wanted to base it upon individual and organizational needs. A multilevel task force was created to design the system and began by surveying people about their needs as employees.

Employees ranked a desire for fair pay and for a better understanding of the company's compensation system high on their list of needs. The task force used these data to justify publication of the company's pay plan and made adjustments in compensation based, in part, on employee's preferences. Significantly, employees rated as their first priority a need to do their jobs well. This conclusion matched the research at Caterpillar. Participation in decisions and good supervisory relations were also high on GC employee's rosters. Such data encouraged Randall to gain more information on how well the company was doing in meeting employee's needs. In 1977, the company undertook a first "audit" of its human resource management system. Data were obtained on affirmative action in hiring and promotions, on rates of accidents, on the distribution of wages across occupational groups, on absences and turnover. These data were combined wth survey measurements, taken from all employees, into a comprehensive report on work life in the company. This report was sent to all employees and to stockholders of the company (Lawler and Mirvis, 1981).

Exhibit 2 presents a capsule history of the monitoring effort in GC. Several aspects of this progression are notable and relevant to strategic human resource management. First, the focus of the surveys, since 1977, has been upon all aspects of the human organization that bear on performance and quality of work life. Employees are queried on the design of jobs, the functioning of their teams, supervisors and the management of their performance, the reward and communication systems in the company, even the division of authority and the functioning of divisions and top management. These are not morale or climate surveys, per se, rather they focus on factors integrating the needs of people and the organization (Mirvis and Lawler, 1984). The audit of personnel records adds to this substantive focus.

Second, the data are analyzed for the overall workforce and for selected groups of employees. Targeted programs emerge from these analyses. As an example, both personnel and survey data showed women as having less opportunity to advance than men and troubled by patronizing attitudes and stereotypes. The company then increased its emphasis on promoting women and launched a training effort to improve male–female

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understanding and communication. Another survey showed gaps in shop floor participation in decisions. Quality circles were undertaken in service of employee's needs to participate and the firm's need to maintain quality standards and automate some operations. Autonomous work groups are in place in one area as a further extension of this effort. Most recently it was learned that newcomers did not have much familiarity with GC's product line or philosophy. A new orientation program has been launched.

Third, the company uses its audits for both proactive planning and reactive sensing purposes. Whereas in 1977 employees were asked their preferences as to increases in their benefit and compensation package, in 1983 they were queried as to which benefits, if necessary, they would recommend be reduced or eliminated. During the recession they were asked about the fairness of their pay and of the management bonus system. When the company was acquired, employees were asked to rate how the acquisition was handled and how well informed they had been and when a new president was named they ranked their priorities for him. The GC audits are thus geared toward both human resource and top management planning.

This is a final feature of the measurement program. Top managers meet throughout the audit period, first to give their input into survey design, then to review the findings and develop action strategies, and, finally, to evaluate the implications for their own management and stewardship of the corporation. Meetings are then held in divisions that involve, eventually, every person in the organization. In this way, business and human resource strategy is joined for the company overall and for operating divisions. This past year GC's health care division has used a survey to design a compensation package for sales personnel to push specific products and yet ensure sales people equitable pay and long term income growth. Its main manufacturing division, by contrast, is querying people about "equality of sacrifice" in layoff and staff reduction decisions.

What distinguishes Graphic Controls' measurement efforts? For one, its culture and top management's priorities affirm the value of bringing human resource management to center stage in the firm's planning and control activities. The maxim "if it's important, it's measured; and if it's measured, it's important" fits the audits into the lifeblood of the firm. In addition, the close relationship between the human resource function and line management supports the strategic management of people at GC. The line managers "own" human resources not only in philosophy, but also in their goal setting and performance appraisals. Managers are expected to incorporate human resources into their strategic plans and priorities. Manager's bonuses are also tied to meeting objectives that serve both organizational and human aims. At the same time, human resource representatives retain their independent identification and the function has a voice in top management at GC.

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The measurement program has hit snags at Graphic Controls. GC moved slowly and limited the scope of its first studies. Still, there was skepticism amongst some managers over the value of a survey and worry over communicating the results to employees and the public. This increased to resistance in 1979 when the ratings of work life declined. GC published the results then and continues to publish them. Questions in the survey continue to focus on the issues that matter to people and to the health of the company, and employees all meet to talk over the results—whether favorable or not. The new Human Resource officer, Larry Drake, and a staffer, Jan Reicis, have taken steps to increase employee involvement in the focus and design of recent surveys and to ensure that survey feedback sessions are followed up by problem solving meetings throughout the firm. There will be some significant challenges to strategic management of human resources in GC in the next decade and to most other firms in the manufacturing sector. A look at strategic human resource management in 1995 will highlight the key considerations.

STRATEGIC HUMAN RESOURCE MANAGEMENT—1995

The Caterpillar and Graphic Control studies illustrate the formulation and implementation of human resource strategy in American industry today. Such efforts are likely to be commonplace by 1995. The next decade should, for example, see continuing emphasis on human resource management in industry and the fundamental tasks of planning human resource programs and linking them to the business thrusts of the organization will be of central concern to line managements. This will put a premium on increasing knowledge about the workforce and gathering data needed for its management. At the same time, it will be easier to assemble information about the human organization through human resource data bases and to conduct focused analysis and planning on personal computers. Employee surveys will be common and mechanisms for gaining employee input into organizational planning, such as Caterpillar's strategy conference and GC's survey planning and feedback meetings, may no longer seem esoteric or even exceptional. Indeed, the tasks of formulating, implementing, and monitoring human resource management could become standard operating procedure in firms by 1995. Cat officials were astounded by the scope and intensity of this work in 1980. GCers were, too, in the 1970s, but by now it is a programmed organizationwide activity.

There are, nevertheless, some real risks and impediments to strategic management of human resources. Human resource managers and theorists alike have been chided for lagging developments in their respective fields. The irony is that now that they have "caught up," the value of strategic management is being challenged. Business managers have criticized strategists for being ivory towerish and divorced from the realities

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of line operations. The statistical models and quantitative methods, they find, are not attuned to the dynamics of an organization and leave little room for judgment and strategic improvisation. General Electric has gone so far as to dismantle its corporate startegic function. On the academic side, strategists have been challenged for masking values in supposed "value free" option formulations and for ignoring the synergies possible when combining people into organizations. Certainly the factors central to human resource management presented in Figure 1 *can* be reduced to quantitative terms and modelled into abstract, strategy-oriented equations. Plans *can* be formulated for managing these human factors that promise optimal results and assume that the line organization will fall in line in their implementation. Significantly, however, neither Cat nor GC approach strategic human resource management in this spirit. They may be pointing, therefore, to a model of strategic management suited to the vagaries of human organization.

What is central to this model? For one, both companies have based their strategies on an overarching human resource philosophy. Their philosophy statements spell out corporate assumptions and values about people and the strategic aim of integrating human and organizational needs. These statements at both Cat and GC are the result of deep discussions throughout the organization. They focus strategic thinking and set the parameters for human resource planning. Second, both companies have based responsibility for human resource management in their line operations. GC built line ownership of human resources through a broad educational strategy and team building in management. It has reached the point where managers are now appraised and rewarded based upon their accomplishment of negotiated human resource goals. Cat has just launched this educational effort. Significantly, Cat's strategists went too far in their planning and were brought back into line! The broader point is that human resource strategy in both firms is based in clearly articulated corporate values and line managers are free to tailor initiatives to their particular needs.

Third, the human resource functions in each firm have two distinct planning modes. The routine tasks of recruiting, hiring, training, appraisal, compensation, promotion, and traditional personnel work are well established in both organizations. The human resource functions pride themselves on doing these basic tasks well. Making changes in these systems, introducing specialized programs, even proposing broader changes in management practice are undertaken in a quite different mode. Task forces and other mechanisms for broadening participation in strategy formulation are created; a project is undertaken under the rubric of a study to emphasize education and minimize resistance; finally, many new undertakings are launched as experiments so that the firm can learn from its experiences. This, of course, brings human resource management into the political mainstream of the organization, where promises

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Exhibit 2. (continued)

broad meaning of participation and quality circle teams were formed at some plants to extend participation further to the blue collar ranks.

1983. The survey results continued to improve in 1983. Follow-up also expanded. The company introduced quality circles in all of its plants, began experimenting with a gain-sharing system in one of them, and increased its emphasis on affirmative action. The company newspaper included more information of new products and development in the plants, in reponse to employee's interests, and GC undertook stress management and health education seminars.

The focus of parts of the survey shifted in 1983. Many questions concerned new products and business strategies and employees were queried as to their views of the new post-acquisition management team. This signalled a need for top management to communicate its new philosophy and values. The survey also focused on the needs of key groups in the company. Analysis showed that managers were lacking information on company priorities and that blue collar and clerical workers were lagging in their participation. Newcomers were not familiar with GC's management traditions. These data helped to guide and target the follow-up programs in GC.

1985. Nearly 80 percent in GC find the survey program to be useful. Over 90 percent complete surveys and participate in feedback meetings. The new survey, being developed, will focus on aspects of the new management philosophy, now being reviewed by employees, on the impact of the human resource initiatives in quality circles, gain sharing, and improved communication, and on QWL in the company. The program has become an integral part of human resource management in the organization.

really mean hopes and predictions rest upon the willingness of people to reach for them.

Numbers are only one language in this approach to strategic human resource management. Top managers at Cat are not comfortable with too much quantification in the human area. At the strategy conference, they pushed to gain an understanding of concepts. Now they are eager to see the results of companywide surveys. GC managers will pore over numbers, but then they meet at "blue sky" strategy sessions to discuss

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people management alongside other operational considerations. The broader point is that quantification and models do not drive human resource strategy in either organization. They are merely one input, into a constellation of numeric and experiential inputs, that shape business strategy. Human resource strategists will need a "feel" for their companies to decide how much modeling and quantification will help vs. hinder strategy formulation and to discern how it will play in the line organization.

There will be cross-currents as Cat and GC and other manufacturers implement their strategies for the 1990s. Computerization, for example, can centralize decisions and concentrate power in technical staff functions. This contradicts the need to decentralize and reduce functional isolation. Computers can increase productivity but also can deskill jobs and mechanize judgment work. Will this make the best use of our highly educated human resources? Could it turn people off? Business strategists predict that hardware and software decisions will soon be incorporated into management strategy. Human resource strategists will have to concentrate on "orgware"—the critical human and organization factors impinging on technological change.

Downsizing and cost reduction are imperative at Cat and GC. Reductions-in-force, however, can sabotage affirmative action programs, divide a pluralistic workforce, and sour morale. This threatens firms seeking to develop or to maintain "clan-like" human association. Unions, a strong force at Caterpillar, have their own strategic agendas and, in the face of downsizing, are likely to resist cooperative relations with management. A special edition of *Human Resource Management* has addressed models for managing organizational decline. Business and human resource strategists will be hard pressed to come to a common mind on managing downsizing in the decade ahead.

Innovation and greater productivity are needed in manufacturing. The current managerial calculus gives greater weight to investments in technology than in human capital. There is ample evidence that investments in people provide a significant payoff to a firm (Mirvis and Macy, 1983) and that technological change will require huge investments in training and staffing. Nonetheless, such investments are hard to justify in firms experiencing crises and looking for a rapid turnaround. Furthermore, investments in training and development will have to be weighed against expenditures to cushion the pain of those forced into early retirement or permanent layoff in declining industries.

All of this means that the road could be bumpier still at Caterpillar, the survey results could again decline at GC, and the tasks of human resource management could become ever more challenging in other manufacturers in the decade ahead. Will strategic human resource management be of help? The experiences at Cat and GC suggest that only when strategy is based in a corporate philosophy supportive of integrating

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human and organizational needs, only when responsibility is based in the line organization, only when human resource staff enter the political fray, and only when measurements and methods are matched to managerial orientations and commitments can a strategic mode add to management of the human organization. Cat strategists also talk about the need for patience and GCers speak about persistance in their work. They have a mission and still see themselves as the voice of employees and the conscience of the organization. Business strategists lack this mission and identity. This could make human resource strategy unique in the 1990s. It could also be essential to its survival—and that of the manufacturing sector.

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Exhibit 1. HR Strategy at Caterpillar

Caterpillar Corporation, a multi-billion dollar manufacturer of earth moving equipment, undertook a corporatewide human resource strategy conference in 1980 to redefine and redirect its approach to managing people. The conference proceeded through a number of phases, identifying the needs of workers and of the corporation and proposing changes in the organization to improve the fit between them. The phases of the program, in earth moving language, were as follows:

I. The Lay of the Land. A number of factors led Cat management to the need for rethinking its human resource strategy. A strike by the United Auto Workers lingered over noneconomic issues and only a minority of the workforce voted on the contract at all. This signalled deep discontent in the workforce. The company saw its productivity and profitability decline and a competitor, Komatsu, made major gains in the worldwide market.

II. Natural Obstacles. Still, there was resistance to a new human resource emphasis in the company. Personnel representatives met and described declines in motivation and morale throughout the company to top management. They placed particular emphasis on the changing needs of Cat's new breed younger workers. They were stigmatized as "choir boys" and their words "fell on deaf ears." Instead, management issued a pamphlet complaining of the loss of the work ethic and stressing the need for more training and investment in labor-saving equipment.

III. Surveying the Terrain. The personnel reps meeting did get the attention of some of Cat's officers. One, Roger Kelly, conducted a tour of Cat facilities around the world, scheduling one-on-one and small group interviews with employees at all levels, and meeting with regional officials. He found there was truth in the personnel rep's reports and prepared a list of problems in the human organization at Cat. Kelly had the credibility to awaken top management.

IV. The Right Vehicle for the Job. Cat had undertaken strategy conferences in the late 70s to develop plans for modernization of factories and servicing of parts. It was proposed that Cat managers throughout the world collaborate in defining human

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resource needs for the next decade and strategies for making changes in the company. The study was to be organized into six modules focusing on particular human resource issues.

V. The Straight and Narrow Road. The first five modules focused on traditional human resource planning issues. Module one projected the Cat labor force through 1990 focusing on its age, sex, race, and ethnic composition and on the occupational structure in the next decade. Module two analyzed competition in the labor market. Modules three through five covered education and training, unionization, and recruiting, staffing, and placement. Management teams in each module perused governmental reports, consulted with outside experts, and met with personnel reps in Cat to develop implications for change.

VI. Moving Earth. Module six was designed as a summative model. It was intended to define the expectations of Cat workers and of the company and to propose means to integrate them. Bill Dronan, an employee relations officer in Peoria, recognized a need to gather data directly from Cat people in this module. Several subcommittees were formed to assess the expectations of diverse groups of workers, to identify company needs, and to consider problems and opportunities posed by technology change and decentralization in the company. This author was commissioned to prepare a report on the workforce of the future and to brief the module six subcommittees. All told, over 5000 Cat employees were involved in fact-finding in this module. The committee prepared over 1000 action recommendations for top management.

VII. Backfilling. At this point, the project was outpacing the organization's capability to respond. Another project module was added to organize the recommendations and prepare top management. The roster of recommendations was pared down to 47 and grouped under themes. Major themes included proposals for improving communication, equal opportunities, employee involvement, human relations, and so forth. This list was further reduced and position papers were prepared on 18 key human resource issues.

Kelly and Dronan also met with top management and lobbied for their support. A report on company expectations of workers was prepared to ensure balance in the proposals and for specific recommendations, potential action steps were detailed. Kelly

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Exhibit 2. HR Strategy at Graphic Controls

Graphic Controls Corporation, a 1000 person manufacturing firm, has for ten years undertaken a program to measure its human organization and to improve it. The program involves biennial surveys of employee attitudes, feedback of survey data to work groups for problem finding and solving, and follow-up with companywide and divisional human resource initiatives. Highlights of the program over these ten years include:

1975. A task force was created in GC to study the existing pay plan and recommend changes. A research team was commissioned to survey employees on their attitudes about pay as well as other facets of job satisfaction. Results showed modest satisfaction with pay and employees suggested many changes in the benefit package. A new benefit package was implemented in 1976.

Overall job satisfaction in GC registered at 94 percent. Task group members and managers in GC found data on jobs in GC, training and development, and on employee's expectations, all ancillary to the first study, to be informative and useful. Plans were made to expand the scope of the survey two years later.

1977. This began measurement of quality of work life in GC. The survey focused on job satisfaction, using concepts based in Maslow's hierarchy of needs, on supervision, work groups, jobs, and communication systems, and on aspects of the company philosophy relating to participation, fairness, and personal development. Personnel records on safety, affirmative action, salary administration, and promotions are also audited.

Results showed very high ratings of QWL in GC. Some 92 percent reported high commitment to the company and turnover was at 12 percent. Following introduction of the new benefit plan, satisfaction in benefits increased from 69 to 90 percent. The great majority saw fairness in the company, felt satisfied with chances to participate in decisions, and gained job and personal development in GC. Nearly all reported satisfaction with their lives.

The QWL data were reported back to all GC employees in large group meetings. A report was sent to each of them summarizing the findings. In addition, this report was sent to all GC investors and the investment community. A follow-up

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Exhibit 2. (continued)

survey found that 80 percent of the recipients found this report useful in judging the company and two-thirds said other companies should issue them.

1979. The survey results declined dramatically in GC. Satisfaction with pay went from 70 to 55 percent and fewer than half saw pay administered fairly in the company. Chances to offer suggestions and express complaints dropped for 10 percent of the workforce. Ratings of communication, participation, and overall satisfaction dropped.

Many factors contributed to the decline. Implementation of the Carter Wage Guidelines hurt pay ratings, particularly since many other firms in the area did not adopt them. GC had also been acquired by Times Mirror during the period and management was focused on the integration of the firms. Turnover shot up to 20 percent and employees found the company less interested in their welfare and well-being.

A report was prepared and feedback meetings held for all GCers. The company initiated a new employee orientation, dropped the pay guidelines (as nearly all did in 1980), and trained managers in performance appraisal and salary administration—concerns expressed in the survey. Nonetheless, there was no major programmatic follow-up to the survey. Management was still addressing changes in the organization.

1981. This was a "rebound" year for quality of work life as ratings of satisfaction, communication, supervision, and of the company overall increased (though not back up to 1977 levels). Significantly, it was the first year of companywide follow-up to the study.

As an example, the personnel records and survey data showed problems in the areas of job safety and affirmative action. The company formed top level and divisional safety committees and an accident investigation function. A safety officer was hired and safety results were published throughout the company. The accident rate declined thereafter. The company also formed a task force on equal opportunity. This group sponsored seminars on male–female relations and included items on this in later surveys.

Company policies vs. practices were assessed this survey year. The results showed a gap between desired and actual levels of participation in decisions in the company and confusion over what participative management truly meant. The company newspaper included articles by top officers on the

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