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THE FUTURE OF THE MIDDLE MANAGER

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Executive Summary

What is the future of the middle manager? This was the question posed by the author in the beginning of this research effort. An exhaustive search of current journal articles and management publications, indicated that middle managers will be facing greater challenges in the future, than anytime in history.

Research indicates there will be a reduction, in the future, in the "hard" numbers of middle managers. This will be brought about for two major reasons:

1. Computerization of the work environment will lead to chief executives to directly access information which is more accurate and timely. The traditional role of the middle manager as an "information gatekeeper" will be impacted by this technology. By the year 2000, office automation will be at least two generations older than today, be less expensive and more sophisticated.
2. Participative Management, will be the norm for most organizations. Exhaustive writings today indicate that participation is not just a "quick fix" but rather a style which is proving itself capable of increasing productivity, employee morale, and is the ingredient needed to reach

Maslow's fifth plateau of self-actualization for the employee. This style of management tends to bypass traditional middle managers in favor of dealing directly with first line supervisors and line personnel via quality circles, ad-hoc committees, and autonomous problem solving units.

In addition to research of journals and management publications, this author conducted a Nominal Group Technique process using 21 executives from both the public and private sectors, the basic question posed was "What events do you foresee, within society at large, and within the organizational institution, which may impact the role/status of the middle manager in the future?"

Together this group of executives generated 91 potential events related to the future role/status of middle managers. Based upon these results, three scenarios were written by the author and included:

1. Increased unrest in the ranks of middle management due to reductions and perceived role changes.
2. Computerization, artificial intelligence and how they impact the future of the middle manager.
3. Middle Managers coping with change and the manager's profile in the year 2000, the future

middle manager will face a fast-paced, unstable social system, a more socially concerned, humanistic society, a service economy and a more knowledgeable society.

The third scenario included some profiling of future middle managers:

1. There will be more women middle managers.
2. A need for much more sophisticated understanding of automation technology.
3. He/she will need to be a generalist.
4. Decision making will be based more on direct participation and better information.
5. A growing concern for the quality of life will require more people-sensitive manager.

A transition management plan was written to provide today's executives with an outline on how to begin changing their organization and meet these possible future demands.

The author's intent was not to "light" and "sign post" the path to the future for each police executive in the state, but instead to heighten their awareness of this emerging trend, to educate executive's of the potential future so they may begin planning now. This issue will impact organizations differently based on several reasons including, organizational size, financial resources, growth vs. non-growth communities, in addition, to personal biases of executive managers.

THE FUTURE OF THE MIDDLE MANAGER

Every executive's primary concern should be the "bottom line", but it can only be attained through people within the organization. With the advent of high technology it appeared to me there would be a potential adverse impact on people in general, and within levels of management in particular. The way managers will be performing their jobs in the future may be the most important issue police executives face in the next 15 years. Of course high technology is not the only issue impacting the way organizations are managed today, according to the proliferation of "how to" management books on the market. It seems that both private industry and public sector organizations are going through a metamorphosis to become "lean and mean," to "get back to basics" as one popular book espouses. However you do not read a lot of information on how technology and the movement towards new management theories is impacting executive employees, especially the middle manager.

I decided, based upon my exposure to the material and instructors in the Command College, to delve deeper into what the future may hold for management personnel of organizations and, in particular, the middle manager. For purposes of this document, I define a middle manager as a person who supervises other supervisors, excluding the Chief Executive Officer, or in the case of police organizations, the Police Chief.

I began my research by conducting a study of current journal articles and contemporary books on the subject of the future of management personnel. Since I had already decided on what the issue was, I needed to obtain a flavor of what the current trends were in this area. One definite trend is there are fewer middle managers today than in years past and research seems to indicate this trend will continue. In a 1958, Harvard Business Review article Harold J. Leavitt and Thomas L. Whistler wrote, an article entitled "Management in the 1980's," they predicted accurately that "...within the organization...many middle management jobs may change in a manner reminiscent of (but faster than) the transition from shoemaker to stitcher, from old time craftsman to today's hourly worker...there will be many fewer middle managers."¹

According to one recent report in the Wall Street Journal, the United States economy is now creating enough managerial and professional jobs for only 44% of new college graduates. "One study of over 100,000 managers conducted by management consultants SMC Hendrick, Inc., based in Framingham, Massachusetts, affirms that a major change in job structures and responsibilities is now taking place at middle-management levels. The study found that, on the average, companies are paring their middle-management positions by one-third and will alter remaining middle management positions within the next two years."² Richard H. Jacobson, Vice-President of Administrative Services with Blue Cross and Blue Shield, states that "...all companies, not just Fortune 500, are thinning management levels and adding new responsibilities to remaining managers."³

Indeed, such authoritative sources as Fortune and Business Week have done major treatments of the shrinkage of middle management and the consequent effects on organizations. "The bureaucratic multi-layered organization, these and other business observers tell us, is a dinosaur, quickly being replaced by ad hoc task forces, project teams, and small autonomous business units."⁴ Of the 24,000 jobs being eliminated by AT&T Information Systems, 30% are management jobs; of 4,000 jobs "beleaguered" Union Carbide Corp. will be cutting in a recently announced reorganization, 15% will be middle management; at Ford Motor Company 10,000 middle management jobs are under the ax.

"A Michigan State University study found that 89 of the 100 largest United States corporations have reorganized to eliminate management layers and jobs."⁵ "It is not surprising, then, that even firms anticipating steady growth have trimmed middle management staffs; 15% at Alcoa, 20% at Firestone and Crown Zellerbach, and 40% at Chrysler, Texaco, Exxon and Mobil."⁶ This issue is not one localized to California or even the United States. "Recessions came and went, leaving management relatively untouched as the blue-collar workforce was built up or laid off. But suddenly middle managers across the globe also find themselves in trouble, suffering through a vast and unparalleled shakeout with long-range implications for their own job security. IIT in Europe, AEG in West Germany, ICL, ICI and EMI in Britain, Printemps-Prisunic and Rhone-Poulenc in France, Borg-Warner and Cockerill in Belgium, Sandoz and Hoffmann-LaRoche in Switzerland, Ford, General Motors, Chrysler, International Harvester, Weyerhaeuser, Goodyear and Sohio in the U.S. - healthy or unhealthy, by planned

strategy or by sudden, dramatic convulsion, a growing proportion of the world's largest companies are divesting themselves of substantial numbers of middle managers."⁷ Leland I. Forst, a principal at management consultants for A.T. Kearney in New York, is probably not too far off when he estimates that middle management positions around the world have declined by 15% on average over the past three years, and the worst may still be to come.

"An 'International Management' survey of companies and academics around the world confirms that the current decline in middle management numbers will spread and accelerate throughout the 1980's. Suddenly the corporate world has much less room for the middle manager."⁸ In general, all growth in the middle management area has stopped. Middle managers, as a group, are declining as fewer are appointed than the number that leave. U.S. futurologist Dr. Roy Amara, of the Institute for the Future in Menlo Park, Cal. predicts "that the decline in middle management numbers will continue until at least the end of this decade."⁹

D.P. Snyder in his article "Coming Decade Spells Changes in the Workplace", in Association Management states, "If it's not the clerks and secretaries who will disappear from the office setting, who will be eliminated? The answer is middle managers -- 5 million during this decade. The wave is well under way already, having begun in 1981. In April 1983, Business Week magazine surveyed the Fortune 1300 companies and found that in the preceding 18 months, 40% of them had eliminated at least one layer of management. Another study done six months later

by Ruder, Finn and Rotman found that more than 50% had eliminated at least one layer of management. Half of the baby-boom generation, especially those with college degrees--and that represents about 30% of them--are now at the first level of management. They see their opportunity and potential for advancement disappearing with every passing month."¹⁰

In the Winter 1985 edition of Sloan Management Review, John F. Magee reports, "The traditional management hierarchy is shrinking, and it seems evident that the shrinkage will be permanent. Large hierarchies have outlived their usefulness as a means of coordinating and controlling a complex, far-flung enterprise. Moreover, we have learned that too many layers of management impede effective management."¹¹ In Working Smart, 1985, CEO Robert E. Lamalie of Lamalies Inc. stated, "...the bad news: job prospects for middle managers continue to flag. The already well-pruned middle management ranks will probably absorb further shocks, narrowing profit margins will continue to exert pressure on companies to cut costs and streamline operations."¹²

In the October 28, 1985 edition of Fortune, John Nielsen in his article "Management Layoffs Won't Quit" said, "These should be the best of times for managers. The United States economy is entering its fourth year of recovery; unemployment is near a five-year low; interest rates have dropped; and inflation has been around 4% for more than three years. In such conditions, industry could be expected to add staff to accommodate rising demand. The last thing white-collar

workers should have to worry about is job security. Yet they have rarely felt more vulnerable. Company after company is "downsizing", sometimes right up to the executive suite, as though the recession were still with us. As corporate bureaucracies shrink, middle managers are the main victims."¹³ The author goes on further, "...the phenomenon isn't simply a case of trouble at the smokestack, of vanishing oil refineries, steel mills, or shoe factories; it cuts across industry lines. Over the past five years, United States companies have shed almost half a million managers--and the shedding continues."¹⁴ Managers are in a state of acute anxiety, according to Stanley Hyman, a Washington-area consultant to government and private companies. "More are being let go in the eighties than at any time since the depression."¹⁵

What are the reasons for this widespread reduction in the middle management ranks? One very obvious reason which came from research was the development and refinement of computers. For the first time, the reach of computer technology is extending beyond the ranks of clerks and secretaries and into the managers' working lives. These systems are reported to be changing the ways managers are communicating, increasing their spans of control, breaking down hierarchical barriers, and adding to their efficiency, perhaps to the point where business and government won't need as many middle managers. C. Lawrence Meador of M.I.T. states, "In the past, cognitive research suggested that a manager could have a maximum of seven subordinates reporting directly and still maintain effective supervision. If the number were much lower than seven, the manager

would be under utilized. If much higher the manager would be spreading him or herself too thin. Well, many now believe that, with the help of computers, those cognitive barriers can be broken. That with the help of decision support systems, executive databases, electronic mail and video conferences we may be able to break the cognitive constraints by which humans working alone are bound."¹⁶ Taking on new responsibilities is a major part of the current challenge to middle managers. This is brought on by a number of factors, including fewer managers performing jobs that used to be distributed over a greater number of people, demands for greater productivity and, perhaps most important, the arrival of office automation. According to Rourke of SMC Hendrick, "The whole reason for the pyramidal or hierarchical structure is control; now computers are diminishing the need for this hierarchical structure. As information can be transmitted instantaneously, not passed through layers of hierarchy, organizations will become flatter because of computers."¹⁷

Office automation expert John Connell of the Office Technology Research Group in Pasadena, Ca. agrees with Naisbitt's assessment that computers are leading to the demise of the middle manager. "If information becomes instantaneously available, then you have to ask why you need all those layers, if the answer is maybe we don't, then the impact will be on middle management."¹⁸ John Walsh in his article "Office Automation Thins Middle Management Ranks", says, "...increasingly, office automation technology is altering corporate organizational structures by eliminating a number of middle management roles and responsibilities."¹⁹ John Naisbitt, of Megatrends fame,

was quoted at a recent conference "computers are replacing middle managers faster than robots are replacing assembly-line workers".

John Walsh, published in "Today's Office," states, "Historically, the middle manager has been the conduit for information between the support staff and top management. The biggest chunk of the typical manager's time (26%) is spent in meetings. He spends the rest of his time on the phone (15%), writing (11%), reading (10%), calculating (5%), handling mail and searching for information (4%), dictating and scheduling (2%), and performing miscellaneous tasks (21%). By helping a manager to perform the majority of these jobs more efficiently, advanced office systems increase that manager's span of control..as a result, a computer assisted manager is able to produce the same amount of work as several managers who do not have computers."²⁰

Robert Goddard has written an article in Management World entitled "The Rise of the New Organization" in which he said, "...the number of electronic workstations has risen from 4 million to 25 to 30 million. This technological revolution is flattening bureaucracies, altering controls, and fundamentally changing the relationship between workers and their jobs, managements, and organizations."²¹ It seems that to a large extent office automation has usurped the role of middle manager, allowing both lower-level employees and top executives to access information directly. Suddenly, a number of middle managers are finding themselves out of work. The trend towards small business computers is reflected in the results of a recent survey conducted by

"Management World" which shows that 79% of a cross section of North American businesses are using, implementing or are considering using small business computers.

In an article called "Management in the Year 2000" in the Arizona Business Journal, Fearon, Reif, Ruch and Werther wrote, "Large scale organizations can be managed but not necessarily the same as in the past. One way to deal with the size and complexity issues is to rely more heavily on computer-based information systems. They will handle most routine or programmable decisions, many of which are currently being made by technicians and lower-level middle managers. Decision makers will have instant access to information needed for developing and analyzing alternatives for non-programmable decisions. Also, simulation models will be widely used by managers to "try out" decisions before they are actually implemented."²² One only needs to look to see that information and communications systems already have begun to replace hierarchy by supporting new management systems and organizing principals. When the automobile was first introduced, many people probably saw it as a convenient and less messy substitute for the horse. Now we can see the profound effect it has had on our lives, our culture, and the structure of our industry. Similarly, some people first saw computers as rather large, somewhat clumsy substitutes for adding machines. But we would all do well to reflect on the possible profound implications that information technology may have on the organization of our industries in the not too distant future.

In the April 25, 1983 edition of Business Week, a special report entitled "A New Era for Management" commented on computer technology in this fashion; "...as companies grew rapidly after World War II, middle management--whose function was to turn the policy decisions of top management into the dollars and cents of revenues--grew even faster, and their functions changed. More and more, they became collectors of information, which they then analyzed, interpreted, and passed on to top executives. The staff middle manager did not run anything. He was merely supposed to advise others on strategic planning, marketing, engineering, and manufacturing. But from that position he gradually came to dominate the line operations that produced and sold the goods and services that brought in the company's dollars. Suddenly, that is being turned upside-down. The onrushing electronics revolution is changing the role of the middle manager and forcing a radical restructuring of the corporations middle ranks, shrinking them drastically in the best managed companies."²³ It seems as more top managers see much of the information once gathered by middle managers can be obtained faster, less expensively, and more thoroughly by computers, they have started to view many middle managers as "redundant".

The technologies embodied in executive computer work stations are so new that only about 3% of all professional, technical, managerial, and administrative workers use them now. By 1990, however, that figure should climb to about 65% predicts David L. Terrie, Senior Office Systems analyst at International Data Corp. The advent of desk-top computers and other information tools, linked together by advanced

telecommunications networks that provide access to widely diverse sources of data, heralds a huge surge in productivity for the approximately 10 million managers in the U.S. Some of the wizardry is already in place:

1. Individual managers now make decisions by combining information developed within their companies with outside data bases, including economic and industry statistics.
2. New systems can turn reams of numbers into charts and colorful graphs that are easy for managers to understand.
3. Electronic mail allows reports, memos, and drafts to be transmitted simultaneously to a number of people within the company. Such systems greatly speed in-house communications. Managers can get signoffs on memos rapidly, making for faster decisions.
4. Voice store-and-forward telephone systems let users avoid time wasting rounds of telephone tag by recording and then sending phone messages digitally by computer to any number of recipients within the company.
5. Computerized scheduling systems make it possible to set dates for large meetings without consulting executives individually.

Those most supportive of this technological innovation point out that not only will organizations be able to eliminate many costly middle management jobs but they will also be able to make better decisions. Their reasoning is as follows: In the process of analyzing data and preparing reports of decision makers, some middle managers were ever mindful of the fate that befell the bearer of bad news. The result of their concern are reports in which the data have been massaged to the point that its true import was lost, as a series of hopeful assumptions or overly optimistic scenarios were used to dull the early warning present in the data. With a computer terminal present on every desk, decision makers will now have access to the data without the threat of distortion which existed when staff groups were asked to analyze the data and present it to management for decisions.

Another reason for the loss of middle managers stems from the management revolution which has brought about the participative management style attaining prevalence in today's contemporary writings on how to successfully manage people. According to the 4/25/83 Business Week article entitled "The Shrinking of Middle Management" the author states, "Rigid hierarchical structures have begun to crumble at the best-managed companies. Replacing them are leaner, more fluid organizations, with fewer levels of management and more direct lines of communications between the top and the bottom."²⁴ Tied with the use of computers what the author is alluding to is the demise of the "information gatekeeper", the managers through whom information is filtered up from below and down from above. Right now, a concerned executive can, with the right technology, easily go around such

gatekeepers to access critical information or receive information from and send information to the rank and file instantaneously. When the boss can access information at the same time that the field managers can, there is little time for the field supervisors to build up alibis. As the systems, and management style of participation is used more, they increasingly challenge the old organizational structure.

Robert Zager, Vice-President Policy Studies of Work in America Institutes, Inc. , says "...the participative management movement is also affecting middle management; there is more attention to pushing responsibility down the line. As these managers sense greater attention to the shop floor, they feel squeezed in the middle."²⁵ It appears that companies are beginning to invert their hierarchical pyramids, decentralize decision making, and move accountability to where the work takes place. According to R.W. Goddard, in "The Rise of the New Organization", "Managers are being encouraged to integrate the employee into the decision-making process, to share authority, to promote and use organizational structures and incentives that encourage workers to take responsibility, and to channel conflict to useful purposes."²⁶ He further states, "...companies are reducing management layers to simplify chains of command, slashing staffs as computers take over information gathering, pushing national inflation down, and generally slower economic growth that limits the development of new management opportunities."²⁷

Some additional trends uncovered via research indicate middle managers who do survive will have possibly more power, as defined in

today's organization and new employees who aspire to middle management positions will have less opportunity. The issue of power was addressed in 1960 by Herbert A. Simon who wrote "Management in Corporations, 1985": "There is reason to believe that the kinds of activities that now characterize middle management will be more completely automated than the others and hence, will come to have a smaller part in the whole management picture..."²⁸

What does the future hold? According to research of books and journal articles one trend according to AMS International President Jacobson is that "...people skills will be paramount as management is confronted with a changing workforce which will be more knowledgeable, better educated, and more responsive to psychological incentives and alternative work patterns. The status quo will no longer be tolerated, and managers will have to pursue opportunities to broaden their knowledge."²⁹ R. Goddard, writing in Management World, states, "With computers keeping track of company performance, managers are free to concentrate on planning, problem solving, and people."³⁰ It appears the middle manager of the future will become the teacher, consultant, counselor and facilitator, not an order-giver. "Everywhere, managers are beginning to see their function in terms of improving the human organization of their firms and coming to grips with their new, multifaceted leadership role."³¹ It also appears that managers are coming under increasing pressure to broaden their knowledge base. Tomorrow's companies will need generalists, not specialists. Ironically, the role of those middle managers who survive the unparalleled shakeout will be considerably more important; with this,

middle management will not only move on to new responsibilities, but may also enjoy greater power than ever before.

Roy Amara, writing in Technology Review, states: "Managers who weather this shakeup will have more autonomy, will oversee much smaller staff, be rewarded under compensation systems that swing with the results, operate under a work ethic with the sting of accountability, and be much more subject to retraining and relocation. An estimated one-half of middle managers also will be retrained as a human-resource pool to lead and support task forces and product development teams."³² Robert LePage, Senior Vice-President with Spencer Stuart Management Consultants NV in Brussels, also believes that the middle manager's role is improving. "Many companies," he says, "have already recognized their "organizational sclerosis" and are establishing much smaller, almost autonomous business units, largely in the hands of middle managers. At the head of these units you find a new breed of middle manager. Their function now extends to critical decision making within a given corporate context. Middle management has not only moved on to new responsibilities, but is clearly enjoying greater power than in the past."³³ The erosion will stabilize, he says. "You may find a new breed of middle managers with more technical appreciation, better able to control people, and in charge of larger sections of the organization. As they emerge, middle management will become a more desirable function and better paid."³⁴

Of course, some companies have recognized the problem and started to plan corrective action. At Ford in the United States for example,

the restructuring of middle management jobs is being planned to maximize the interest level. While taking away from middle managers administrative duties at the bottom through delegation, it is also trying to give them greater access to top management and push more strategic decision-making down.

The generalist approach seems destined to become increasingly common. The middle managers who survive, and those of tomorrow, will have to be considerably more adaptable and functionally competent than today's breed. In "Managing the Middle" Devanna and Warren write, "Part of the problem may well be one of definition—what do we mean when we talk about "middle management" jobs? Increasingly, "middle managers" do not manage people, instead, they manage information, they plan, or coordinate."³⁵

In this same article the authors go on to say "If we think about the typical managerial career progression in today's organization, it involves movement from first line supervisor through the middle management ranks and on to top management. Among the skills that are often stressed in this progression are "people" or interpersonal skills. Discussions centered on the effects of the technological revolution on skill requirements tend to agree that these skills will be much less important in the middle management ranks in the future. A computer does not have to be motivated to get the data prepared on time and rarely becomes counterdependent if the manager did not smile or say "thank you". The need for good interpersonal skills at the first line supervisor level and at the level of top management, however, remains strong. Thus, rather than seeing managerial career progression as a continuous flow in which interpersonal skills become ever more

critical, we are confronted with a discontinuous progression in which the people who make the best first-line supervisors will not necessarily make the best middle managers and the best middle managers will not necessarily make the best top level managers."³⁶

Futurists believe that the bureaucratic, multilayered organization is a dinosaur. They predict that a growing number of companies will turn to special units to attack markets, create ad hoc task forces to solve problems, and form new relationships that will enable groups of managers to work "inside and outside" the corporation at the same time. Many organizational experts see this issue as only an evolutionary step toward more flexible, decentralized, and undefined structure.

NOMINAL GROUP TECHNIQUE PROCESS

NOMINAL GROUP TECHNIQUE PROCESS

In an effort to obtain a greater perspective on this particular issue, that of the future of the middle manager, it was decided to conduct a Nominal Group Technique process. The results are summarized in this report. Attached for further examination are the worksheets from the process. In an effort to bring the broadest base group together, and not have the results "skewed" by using only public sector actors, the group make up dictated that at least half of the participants would be executives from the private sector. Chosen as representatives of the public sector were nine police chiefs who are known for their contemporary management styles, service orientation philosophy of delivering public safety services, and most important their reputations as future thinkers. They are also known to be proactive managers.

The group of executives from the private sector were chosen, with the assistance of Mr. John "Skip" Rhodes. I had conversations with Mr. Rhodes on this subject and he expressed a keen interest in participating in a N.G.T.; he indicated that he knew of other executives who would be ideally suited for this effort and expressed interest in the idea when he spoke with them. Based upon his recommendations and my limited knowledge of their reputations as forward thinking executives, they were invited to participate. It was also determined via interviews on the telephone they would probably interact well with the chiefs in this process. The participants from the private sector were:

Gary Brown, Division Manager Executive Recruitment, Ralph Anderson and Associates.

Skip Rhodes, Planning Consultant, Chevron Oil.

Richard Saalfeld, Executive Vice-President, Bank of America.

Nelson Weller, Vice-Chairman, S.G. Warburg, International Investment Service Company.

Jack Carlson, Retired President of Kaiser Steel, Kerns International, and Pinole Point Steel.

Tom Danhaki, General Manager Sales and Business Development, Chevron Overseas Petroleum Inc.

Len Bertain, Vice-President, Marketing, Computer Intergrated Management Inc.

Gaylord Burke, Vice-President, Senior Problem Loan Administrator, Problem Loan Administration, Bank of America.

Art Rutzen, Senior Vice-President, Security Pacific National Bank, Pacific Century Group.

John Michel, Executive Vice-President and Head of Global Consumer Markets-Strategic Planning and Marketing Services, Bank of America.

John Santana, C.E.O./President, International Marine Fuel of San Francisco, Inc.

Milt Kegley, Vice-President, Human Resource Development Dept., Safeway Stores Inc.

The Chiefs invited to participate were as follows:

Tony Guardino, Police Chief, Redwood City

Don Becker, Police Chief, San Leandro

Larry Marshall, Police Chief, Oceanside

Bill Eastman, Police Chief, Pleasanton

David Snowden, Police Chief, Baldwin Park

Leo Peart, Police Chief, Irvine

Mel Nelson, Police Chief, Livermore

Mike Manick, Police Chief, Union City

George Hart, Police Chief, Oakland

These executives were invited to participate in an early lunch in an attempt to have an informal gathering and allow time for introductions and initiatory conversation. After lunch the group assembled in a room designed to accomodate three tables with seven participants at each. The seating arrangements were established to bring together individuals of various personality styles, in an attempt to reduce the likelihood of a dominant personality taking control at any particular table. The scribes were chosen by this author because of their extensive experience as facilitators of group processes. The seating arrangements allowed for three police chiefs and four private sector executives to interact with each other at each table. Strict adherence to the N.G.T. process instructions were followed by this author who also acted as facilitator. Prior to beginning the process, participants were read short excerpts from the research to give a flavor of what the issue was and trends which seemed to be developing. This was done without giving any direction or cues to the group.

Three questions were developed, one for each table. The group seating arrangements and questions were as follows:

Table #1;

Gary Brown, Scribe

George Hart

Skip Rhodes

Mike Manick

Mel Nelson

Richard Saalfeld

Nelson Weller

Group one was given the following question, "What events do you foresee, within society at large, which may impact the role/status of the middle manager in the future?"

Table #2;

Leo Peart, Scribe

Jack Carlson

David Snowden

Bill Eastman

Len Bertain

Gaylord Burke

Tom Danhakl

The question given to this group was, "What events do you foresee, within the organizational institution setting, which may impact the role/status of the middle manager in the future?"

Table #3;

Larry Marshall, Scribe

Art Rutzen

John Michel

Don Becker

Tony Guardino

John Santana

Milt Kegley

The question given to this group was, "What events do you foresee, in society or the organizational institution setting, which may impact the role/status of the middle manager in the future?"

Each group was given five minutes to silently generate individual ideas. Although each group generated a number of quality events, there was some slippage of trends which did creep into the event statements. This was overcome somewhat during the second stage of the process where the groups placed the events in writing on flip charts and attempted to delete trends or place them in context as events.

After the silent generation of ideas, each group placed their ideas on flip charts with no discussion for clarification or debate. After each flip chart was filled with writing it was placed on the walls next to the tables to allow easy viewing by the group. The groups were then instructed to discuss each item, making sure each item received some attention. This allowed for clarification and debate between the members of the group. Because of the number of ideas generated by each group, they were asked to vote on the top eight events. The groups were then instructed on a voting technique in which 3 x 5 cards were used. It was decided, based on the results of the first vote, to allow further discussion on the events and a second vote was taken in which the groups were asked to vote on the five most important events.

Group number one developed a list of 30 events; after the first vote, the eight top events were identified as;

1. By the year 2000 most middle managers will have retired (mid.-45); will pursue other interests e.g. consulting, volunteerism, may opt for this due to burn out factor.
2. Insufficient monies to support municipal infrastructure.
 - not enough money to do all repairs
 - we look out for personal self interests
 - infrastructure will collapse
3. We will see increased unrest in workforce due to;
 - lack of respect for authority
 - increased interest in leisure activities
 - increased union unrest, management unrest
4. Elimination of affordable housing for managers and rank and file
5. Employees will demand to be more involved in decision making and less dependence on computers - will voice concern regarding keeping up with technological changes in Management Information Systems.
6. Executive demand for increased productivity - decreased costs and accountability increased.

7. 60% of the work force will be using drugs on a regular basis.

8. Increased average age of population worldwide.

The second vote reduced this list to the top five which were item numbers 2, 3, 6, 7, & 8. The event which received the most votes was number 6, (executive demand for increased productivity - decreased costs and accountability increased), and was followed closely by event number 3, (increased unrest in workforce due to lack of respect for authority, increased interest in leisure activities, union and management unrest).

This group went on to conduct an Event Evaluation Form; they felt event 6 would first exceed zero probability in 1986. By 1995 the probability would be 87.85% and by 2000 it would increase to 93.57%; the net impact on the issue area would be -.14, and the impact on law enforcement would be -.28. Event number 3, would first exceed zero probability in 1990; by 1995 it would be 72.85%, and by 2000 it would be 94.28%. The net impact on the issue area would be -6.57, and the net impact on law enforcement would be -6.71.

Group number two developed a list of 37 events. After the first vote the top eight were:

1. Greater reliance on computerization, technology, data and artificial intelligence.

2. "Me" generation will become middle managers and create organization goals and objectives, conflicts.
3. Increased specialization, for example medicine.
4. Greater concentration of industrial groupings
-fewer jobs, more competition.
5. Advanced technology will cause middle managers to earn less than their specialized subordinates.
6. Employees will demand greater "voice" in setting organizational goals and objectives
7. Greater technology equals greater need for "high-touch"
8. Reduced influence of "national" labor organizations on corporate philosophy.

The second vote reduced this list to the top five which were item numbers 1, 2, 3, 5, & 7. The event which received the most votes was number 1 (greater reliance on computerization, technology, data and artificial intelligence) There were no other events which came close to event number one.

The group conducted an Event Evaluation Form. Event #1 was felt to first exceed zero in 1986; by 1995 the probability would be 100%.

Consequently, it would also be 100% by 2000. The net impact on the issue area was +8.42, and on law enforcement it was +8.

Group number three developed a list of 24 events. After the first vote the top eight were identified as:

1. Tax revolt that could limit funds available for government support.
2. Baby boomers turning 40.
3. Availability of computerized information will eliminate need for middle management.
4. Technology in the home will make work at home common place.
5. Continued shift in mores, with more people concerned with independence and having money, more entrepreneurs.
6. Increasing employee rights.
7. Re-centralization of decision making.
8. Deregulation - laws will continue to change and be driven by the market place.

Again a second vote was taken to reduce the list to the top five, which were identified as item numbers 3, 4, 6, 7, & 8. The event which far and away received the most votes was event 6 (increasing employee rights). The event evaluation form indicated the group felt the year that probability would first pass zero was 1986. By 1995 probability would be at 92.14% and by 2000 it would be 94.28%. The net impact on the issue area would be -.57, and on law enforcement it would be +.42.

Together the three groups generated 91 potential events related to the future role/status of middle managers. Through event evaluation and cross impact analysis, this number was reduced to fifteen. This author presents three scenarios for consideration. I have selected an event from both group one and two. For the final scenario I took a number of events from each group and combined them into a scenario which deals with coping with change and the manager's profile in the year 2000.

SCENARIO: INCREASED UNREST

SCENARIO: INCREASED UNREST

P.O.R.A.C.M. (Peace Officers Research Association of California for Management) announced today they have successfully convinced State Senator Robert Crowley to introduce a number of bills which would, among other things, limit the use of office automation in police and sheriffs departments throughout California, return rights to middle management which were taken away when the Peace Officers Bill of Rights was amended several years ago, and reduce the workweek to a maximum of 32 hours for middle managers. P.O.R.A.C.M. has been attempting to have this legislation introduced yearly since 1993, and after five years of lobbying efforts they seem to have crossed the first hurdle. It is expected that if the bill does reach Governor Boehm's desk he will sign even though there is mounting pressure from the California Police Chief's Association, The California Sheriff's Association and the League of California Cities lobby groups to defeat this legislation.

The issue of computerization is only one of several reasons that middle management ranks from law enforcement have been as militant as they are today. For the past five years law enforcement has seen job actions by middle managers ranging from sick-outs and work slow downs to outright strikes due to issues being addressed in this legislation. Late in the 1980's the law enforcement profession started to see a proliferation of computerization infiltrating organizations. At first the idea of "high-tech" was enthusiastically embraced, not only by the chiefs and sheriffs, but also middle managers. Lieutenants, captains and deputy chiefs of various size organizations saw the technology as

making their jobs easier and increasing productivity, not to mention the assistance computerization gave to preventing crime and apprehending criminals.

By the early 1990's job roles had started changing for the middle manager. They found that Police Chiefs and Sheriffs could obtain information readily from computer terminals in their own offices, which had been traditionally done by middle managers. This was due to the increasing sophistication of Management Information Systems programs. By this time the computer had become so sophisticated that middle managers were mandated to carry the devices with them at all times while on the worksite. This has been the situation for line personnel for the past four years. Computers had been increased in power and downsized to the current I.B.M. model "Compaq 5000". This computer is the size of the pocket calculator which was popular in the early 1980's. Another major breakthrough was the microwave transmitting capacity of this computer; it sends all entry data to the agencies' mainframe via safe microwave technology. What this now means is that not only are the line officers entering all daily activity into the system, but more important, middle managers are required to input all their activity also, which now gives the Chief the ability to monitor productivity within the middle management ranks as never before. This also has increased the accountability of middle managers, who up to this time were able to "hide" some of their activities from executive management.

This issue has led to some subtle, and not so subtle, role changes for middle managers. To begin with it removed from the middle manager his role of "information gatekeeper". Chiefs had discovered what they long suspected, but could not conclusively prove, that is, middle managers had the capacity of, and were filtering information coming up to the Chief, and manipulating information from the Chief's office down to the line personnel. This was proved beyond a doubt when Chief Gary Johnson of the Walnut Creek Police Department completed his Doctoral Dissertation on Middle Management unrest. Chief Johnson reviewed retired Chief Karel Swanson's research efforts on "no votes of confidence" and found that many of the problems identified with the no vote of confidence lay squarely on the shoulders of middle managers due to their role of filtering information.

To increase the perceived problems, police chiefs and sheriffs have been increasingly successful in obtaining amendments to local Memorandums of Understanding which now contain provisions for pay based upon productivity for the middle manager and the sting of accountability. This issue had become a popular amendment to the Memorandums of Understanding with police officers and sheriffs deputies associations for the past several years, but is now becoming part of the contracts with middle managers. This has led to increased accountability which the middle manager is measured by, since the same computer in the Chief's office is capable of monitoring productivity of the managers within the organization.

The increased use of computers has also diminished the actual numbers of middle management positions. Today virtually all police organizations are designed with only two Divisions, (1) Operations, which directs the efforts of line personnel in Patrol, and Investigations and (2) the Computer Services Division. This second Division is responsible for all other support efforts which maintain today's modern police department.

Computerization has further changed the role of the middle manager since it now allows the chiefs to make immediate decisions previously made via consultation with middle managers. It has increased the effectiveness of line personnel, determines productivity, and in the more advanced departments, computer driven-decision making programs have been designed. These new programs are still relatively expensive, but it is predicted that within the next 3-5 years they will be available to even the smallest of law enforcement organizations. With the assistance of a computer making critical decisions as to life-threatening calls for service, the middle manager sees a further threat to his/her traditional role within the organization.

A second critical issue, from the point of view of middle managers, is the now universally accepted "participative" management style used by virtually all chief executives of California law enforcement agencies. Participative management is certainly not new in the private sector, but it was not until the late 1980's when it took hold and gained wide acceptance in law enforcement circles. There have been literally dozens of books and hundreds of journal articles written

by Chiefs and Sheriffs who have shared their success stories with their contemporaries on the far reaching benefits of this style of management. By now a person can count less than 20 agencies in the State of California which do not practice this style of management, although these agencies are under extreme pressure from local Police Officer Association's to amend current Memorandums of Understanding to include a procedure for implementation of a participative management practice.

What middle managers now find happening is not only a reduction in their "power" caused by computerization, but also they are being by-passed by the Chief in favor of direct contact with line personnel. Policy development is now occurring by use of ad-hoc groups or task force efforts. These groups are staffed entirely by line personnel and coordinated by first-line supervisors. Policy ideas are conceived, developed, written, implemented, monitored, and amended by these groups, with concurrence of the Chief.

An additional issue which further exacerbates the discontent of the middle manager ranks is they are often finding themselves earning less salary than the specialist officers and civilians they supervise. A new development found Police Officer Associations representing line officers had been successful in obtaining revisions to the Peace Officers Bill of Rights, which now mandates 32 hour work weeks for all line personnel and civilians. Back in 1991 The Chiefs' Association and The Sheriffs' Association were successful in legislative efforts to amend the Government Code to exclude middle and executive managers from

coverage under these statutes. These groups had successfully argued that managers and executives should not be accorded extra protection since their positions in organizations were clearly different from those of line personnel.

These changes in the law and other issues have resulted in a high degree of discontent within the ranks of middle managers. They feel their leisure time is as important as line personnel, yet by statute they have less. Today's middle manager has lost respect for authority, because of the situations described, and feels his only hope for salvation is the passage of the current legislative enactment sought.

SCENARIO: COMPUTERIZATION, ARTIFICIAL INTELLIGENCE

SCENARIO: COMPUTERIZATION, ARTIFICIAL INTELLIGENCE

The City of Tracy, once known in the mid 1980's as a city of approximately 25,000, and a suburb of the greater Bay Area, is now a city of 350,000 population. It is still considered a suburb but now of Manteca which has a population of over 800,000. Today in the year 2000, the entire central valley of California is almost one contiguous city from Bakersfield to Sacramento. This phenomenal growth was caused by the migration of people from the "snow belt", post industrial northeast and central states.

The computer and space industry moved into the area of Tracy beginning in 1988. This was caused by the high prices of housing stock and the over crowded conditions of California's Silicon Valley and the cold weather of Colorado where these industries first gave birth to the the computer revolution. Sociologists and demographic experts from the United States Census Bureau have been unable to explain why the same cost problems of earlier locations has not affected the Tracy area, but the fact remains a family can still purchase a 1200 square foot house with four bedrooms for only \$600,000.

Captain Mary Rodriguez sits at her computer terminal reflecting on her career, during a lull in activity. She recalls that while attending high school in Manteca, she worked almost exclusively with computers and upon graduation in 1992 she was awarded a scholarship to California State University, Sacramento, where she took her Bachelors, Masters and Doctorate degrees in computer science. She wrote her

dissertation on the development of artificial intelligence for the wallet size Apple XXI computer.

She recalls fondly being recruited by the Tracy Public Safety Department, and being subjected to three days of entry level computer testing. She was offered a position with the Department and advised that if she successfully passed the academy computer home study course she would be offered a contract as a Captain with responsibility for the Investigative Bureau.

She remembers talking with some of the "old-timers" and hearing about the strains of successfully passing the old "Police Academy" a 19 week course of study which was then required of all police applicants. The Commission of Peace Officer Standards and Training was challenged in the late 1980's as to the validity of this training, since the proliferation of computers made this type of training obsolete. Mary remembered that her academy computer home course lasted three and one half weeks and she passed the test on her first attempt with a score of 93%.

The idea of taking a battery of computer tests to determine career tracking was not new when Capt. Rodriguez was hired. This had been the accepted practice of most public safety departments in California for the past three years. Some agencies in the outlying areas still require an applicant process in the same manner as generations of previous police agencies. That is, one was hired as a police officer and assigned to patrol duty. As time progressed you participated in

promotional examinations to gradually work your way through the ranks, or you decided to remain in a line function and specialize.

Due to the numerous challenges to promotional testing which came from the San Francisco Police Department, and eventually permeated most law enforcement agencies in the State, P.O.S.T. obtained funding to develop a computer based testing process with a program designed to address any possible challenge. The final result of the study was a program that not only defined acceptable applicants to entry level positions, but also was able to define career tracks. It is accepted practice now in California that an applicant's career is decided after seventy-two hours of computer testing.

In the case of Captain Rodriguez, she was offered a Captain's position due to the results of her testing. Again, this is not uncommon now, but did meet with great opposition when the practice first began. Through legal challenges by the S.F.P.D. the courts agreed with the P.O.S.T. study as being valid and addressing concerns of all protected classes.

The standard now established is to require an applicant to successfully pass the entrance examination, agree with the career track dictated by computer testing, pass the computer generated academy testing and sign a contract. Mary's contract is the standard 15 year 50% retirement contract developed by P.O.S.T. and P.E.R.S.

Captain Rodriguez's position in the organization is similar to that of most departments. She is a Bureau Commander and performs approximately 60% of her work from her computer terminal at home. Her Bureau, which is Investigations, is small by comparison with the old days. There are five employees, all the rank of Computer Investigation Specialist. This rank is similar to that of the old Sergeants rank in the historical police agency. Today a criminal investigation is handled much differently than in previous years.

Now, when the victim of a crime notifies the Public Safety Department, it is done via a home computer which is networked with the agency's mainframe. The victim reports a crime such as a burglary, the agency's mainframe transmits a questionnaire to the home computer, and it is answered by the victim. With the dominance of computers, reading skills have diminished. Thus, all computers manufactured after 1993 are voice actuated and have near human quality voice synthesizers. This enables the victim to simply answer the questions asked and follow verbal directions. Loss identification is done via holographic photographs which are transmitted via the victim's modum. After they are received by the agency they are logged and then transmitted to the state and national holographic computer systems, where they are stored for later comparison with found property and property under observation. Photographs of the crime scene are accomplished by the victim's using an advanced VCR computer/camera. The victim simply scans the crime scene and the pictures are transmitted to the station again via the computer.

The newest development is the "latent identification print recorder" (L.I.P.R.). This device has been mandated to be in every household since 1998. It is simply a type of magnifying glass device attached to the victim's home computer. The victim scans the crime scene and the device will locate and identify any latent fingerprints left. It automatically excludes prints of the homeowner and his family, theirs had been entered into the system when they purchased their computer. The families' prints also act as the fail safe pass key into their computer system. The last item the victim sends to the Public Safety agency are the surveillance tapes which may show the suspect at the scene.

Mary now reviews the reports. Her first step is to classify reports which have no or a very low solvability factor. These reports are filed into a computer memory bank by M.O.. In the future if a suspect is apprehended with similar M.O. they will be cross checked. Next she sends any latent prints to the Department's latent print computer operators for cross checks with local, state, federal and international fingerprint banks. Surveillance photographs are also sent to a division which with the aid of computers will cross check the suspected photos with the National Personal Identification Bureau in Washington D.C.. It has been a requirement of federal law that all citizens have a photograph taken yearly when they are issued their yearly National Identification Cards. This law was passed in 1996 through the efforts of President Jerry Falwell, and has led to a 34% increase in crime clearance rates where surveillance cameras have been installed.

After Captain Rodriguez has completed the computer routings, she assigns the case to one of the Computer Investigations Specialist, who determines the identification of the suspect. They then generate a warrant via the court's computer systems and arrest the suspect.

Mary does spend approximately 40% of her standard 32 hour work week at the facility. This has been mandated by the Chief of Police, who is a progressive 29 year old and has been in Law Enforcement for the past six years. He realized the need for the "high-touch" side of his computerized organization and now requires all middle managers to be present on the job site to conduct face to face meetings with subordinates and attend the bi-weekly staff meetings.

Mary does not object to spending 12 to 13 hours per week at the station, she avoids the traffic grid lock of the community, since she does not have to be at the station until 10:45 a.m. and can leave at a time convenient to her. This time is also precious to Mary since her husband Conrad also works out of the house on a computer, and this gives her some time to be away from the family life, and enjoy other human contact.

Captain Rodriguez has not decided what she will venture into in the second trimester of her career. She is leaning towards developing a computer generated hair cutting salon where she will have more human contact, but that is still several years away, and anyway, she needs to get back to work on her computer solving crimes.

SCENARIO: MIDDLE MANAGERS COPING WITH CHANGE AND THE MANAGER'S
PROFILE IN THE YEAR 2000

SCENARIO: MIDDLE MANAGERS COPING WITH CHANGE AND THE MANAGER'S PROFILE
IN THE YEAR 2000

In times of uncertainty, especially over the past several decades, there is a temptation to peer hopefully into the future. This is especially true for practitioners of management. Therefore, it is admittedly a risky effort to describe the professional middle manager in the year 2000, how that role will evolve, and why such changes will reflect the basic social spirit of the next century.

Futurists, of course, are not always right. Predictions made after World War II missed the mark in a number of important areas. No one would have thought colonial government would have produced over one hundred new nations. This is not to say that great advancements have not been made—in management particularly—during the past 30 years. Then there was not much mention of computers, decision theories, and re-born management styles such as participation. One thing that can be said for certain is that the middle manager in the coming century will perform differently from today's middle manager.

What is the point to writing a future scenario? Herman Kahn in 1976 wrote: "Often contemporary issues are not fully understood until they have become history and can be seen in a historical context. To some degree futurology can furnish such a context now by giving us an artificial vantage point from which to look backward; examined in this long-run perspective, current issues look quite different and can be

better comprehended. Even if the actual future turns out to deviate from the one projected, the exercise will prove worthwhile for the new insights it provides."

No thoughtful forecast of changes in the discipline of management, or more specifically in the middle manager's role, can be made without considering the future global society of which corporations and other social institutions comprise only a part. Mere projections of today's business experience, albeit mathematically precise and rigorous but lacking gifts of clairvoyance, might produce a scenario totally different from tomorrow's reality..

The only certain thing we can rely on for the next twenty years is uncertainty. The essence of management in the year 2000 will be to deal with change—to manage change, including changes in the process of management itself. Modern technology is accelerating the rate of change. Therefore, the forward looking middle manager must look to technology, especially information technology, for the means of coping with change.

There will be three major challenges that can be expected to confront middle managers in the year 2000. The first will be changing technology. Computer development is proceeding at a pace even beyond the predictions of Naisbitt, when he said the computer generation is compressed into and changes every seven years. By 2000 anything in electronics one can imagine today will be available. Portable offices, tele-conferencing equipment, home computer terminals, robots and other

electronic innovations will change the role and status of the middle manager, and assign them possibly to remote, button pushing positions. Computer networks will in all likelihood lead to a decentralized operation and give middle managers greater local autonomy. Is it possible that Toffler's idea of the "electronic cottage" is closer than originally thought?

The second challenge which will be faced by the future middle manager will be the difficult and complex internal environment within which organizations must operate. Changes in the discipline of management are moving forward at a rapid pace, for example, mathematics, economics, and behavioral sciences. The middle manager in the year 2000 will have to do both old and new things differently. As day-to-day decision making increasingly is taken over by computers, the new middle manager should be able to devote more time and energy to unprogrammed activities such as developing subordinates and resolving human relations problems with the organization.

The future effective middle manager must strive to reduce tensions between the organization and the internal environment. The best scenario is there will be an absence of conflict between the goals of the organization and the interests of both employees and the community served. A growing emphasis will be placed on the quality of life inside the organization rather than on the quantity of services delivered. Working will be seen as a principal means of self-fulfillment. Therefore, the new middle manager will need a broader sense of the department's performance than merely delivery of

services. Apparently, middle managers of the future will have to re-think their role altogether, with different objectives and responsibilities. Take planning for example; today it too often has become a fashionable euphemism for setting goals and quotas, and creative thinking is usually buried under an avalanche of operating detail. Planning must be given higher priority if tomorrow's middle manager is to succeed and is to avoid early obsolescence.

A third major challenge of the future middle manager relates to the increasing complexity of the external environment. We will see increasing demands to protect the physical environment, equality of opportunity for all peoples, and an extension of demands in the area of human rights. These demands will add new and sometimes confusing dimensions to the concept of organizational social responsibility. These forces will impact directly on the future organizational social systems—and consequently on the practice of management—to create a world in the year 2000 which will be:

1. A fast-paced, unstable social system.
2. A more socially concerned, humanistic society.
3. A service economy.
4. A more knowledgeable society.

From the research conducted, and with the aid of the N.G.T. group, a profile of the middle manager in the year 2000 can be drawn with, in this author's opinion, a fairly high order of probability:

1. Many more women will be seen in the future ranks of middle management. Recent surveys agree that between 40% and 60% of all American families now have a working wife, and that some 60% of all new business positions presently are occupied by women. Advanced degrees awarded to women by business schools have escalated sharply in the past two decades.

2. The future middle manager must have a much more sophisticated understanding of new automation technology and must have much greater analytical ability than necessary today. The middle manager will likely be viewed as an information processor; he must be able to digest tremendous amounts of data due to an increase in the velocity of information flow from high speed computers. It will be a mandatory requirement that the middle manager's skills be adapted to highly mechanized, centralized, and computerized techniques.

3. The new middle manager will be increasingly involved with politicizing of organizational decision-making and must be more broadly gauged and more aware of the other institutions in the 21st century society. This may seem an anomaly in contrast to the above statement, in number 2, but these responsibilities call for a generalist, that is, a person well trained in political science, history, literature and other liberal arts. Such a middle manager will deal from a conceptual basis, and must have the capacity for systematic innovation, and will assist to manage an organization of highly educated employees whom Peter Drucker has labeled "knowledge workers".

4. Decision-making by the future middle manager will be based more on direct participation and better information rather than the traditional authority role. It will continue to become more difficult to hide behind vested authority for enforcement of decisions. In other words, participatory management will supplant present-day dogmatism. The myriad decisions on relatively minor issues and basically clerical chores, behind which many middle managers have in the past tended to hide, must give way to time better spent in communicating with employees and in other important functions.

5. A final point, the growing concern for the quality of life will require more people-sensitive managers in the future. The lines between employment and leisure will become more blurred than they are today. Work is likely to become both a source of creative fulfillment and a means of livelihood. The middle manager in the year 2000, therefore, must have unusual capabilities for satisfying two simultaneous and usually conflicting demands: improvements in the employee's standard of living and improvements in the quality of life.

We must realize for two reasons that the future is, in effect, with us now. First, most of the forces that will be predominate in the year 2000 already are emerging. They have been identified in this report. The form and momentum these trends and events take tomorrow largely will be determined by decisions made by contemporary executives today. Second, realize also that the senior executive of the year 2000, which is only 14 years away, are also with us now. They are the 28 to 38 year old men and women currently employed as middle managers.

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TRANSITION MANAGEMENT

TRANSITION MANAGEMENT

The question now becomes how do we and future police executives implement a transition management plan to address such a formidable task. Our first effort is to adequately diagnose the need for change. As indicated by the research conducted for the preparation of this report, it is this author's opinion that the role of the middle manager is going to change in the future. We will not only see changes in what middle managers have traditionally done, but there is a strong likelihood we will see fewer of middle managers in the future.

We can see by what has been occurring in the private sector a precursor to what may well eventually happen to law enforcement in the public sector. Computerization and the strong trend towards participative management have reduced and changed the role of the middle manager. One only needs to listen to a group of police chiefs to hear what is usually the dominant topic of conversation: what new computerization and computer programming is being installed, or planned, and additionally, the constantly reducing costs of such systems. It is also apparent that management styles within our discipline are changing towards the participative style. Simply read the most contemporary books and journal articles to see this is what the future holds. A final issue which has not been fully addressed in this research effort is economics. The simple truth is government leaders want more "bang" for the taxpayers' dollar. The days of bulging hierarchies are doomed in the vast majority of police organizations.

Once we have diagnosed the need for change, we then need to develop a change strategy to set clear and explicit descriptions of the desired state of affairs after the change has occurred. This is not a project which can be accomplished by the Chief of Police sitting in his office and dreaming of the future. It will take a lot of work, not only of the Chief, but also input from various levels of the organization, particularly the current middle managers and first line supervisors. The author will offer some observations based upon research, but the final decision rests with each chief executive. Middle managers will no longer be information points; in the future this function will be accomplished with office automation, via a computer in the Chief's office. Conception, research, development, implementation, and monitoring of policy will in all likelihood occur at the line level through ad-hoc task forces, and problem solving groups led by first line supervisors. Therefore, what will the role be of the middle manager? Possibly we will see an increase in responsibilities for strategic planning and human resource development. They will become trainers and counsellors, but not the order givers of the past.

In the transition state an apparently obvious, but very often overlooked question, is whether the leadership in the organization can decide whether to make a change or only how to make it. Before you, as a Police Chief, decide on any intervention strategy, you need to determine if you have any control or influence over the cause providing the stimulus for change in the first place. It is this author's opinion that you as a Chief do not exercise much in the way of

control over this predicted change. It is "pie in the sky" thinking that within the next fourteen years your organization will not have some type of computerization, and in all likelihood a comprehensive management information system. Also you will be faced with employees who are going to demand an ever-increasing amount of input into the management of the organization up to and including the organizational goals. Remember the employee you hire in 1995 will have been born in 1974, and raised in the 80's, and sired by parents who grew up in the 60's. We, in all probability, are going to see a completely different set of value systems in our employees, which is beginning to surface and become evident today. How many times have you been involved in a conversation with a peer group member and commented, "these kids today just don't have the same values and work ethics we had?" Another difficulty with any intervention strategy you select is you will be dealing with traditions, norms, and the way middle managers have worked for the past twenty years. These managers will have to be broken away from deeply held attitudes.

What intervention technology should you choose? There is a book, written by Beckhard and Harris entitled "Organizational Transitions: Managing Complex Change" published by Addison-Wesley, which I would suggest should be mandatory reading for any chief contemplating a major transitional change within the organization. Since today's chief will need to begin looking at his organization from a new perspective, that is, the possible reduction of middle managers and role changes due to issues articulated earlier in this report, you will need to develop some type of management mechanism for the transition state. I would

suggest you give serious consideration to what Beckhard and Harris call "representatives of constituencies". By this they mean the "change management structure" is a group that represents the major constituencies involved in the change. This should include you as the chief, your middle management staff, and your first line supervisors, since they will become the middle managers of the future.

This group will need to develop an activity plan, which in essence, is the roadmap for the change effort. An effective process plan has the following characteristics:

1. It is purposeful- the activities are clearly linked to the goals and priorities;
2. It is task-specific- the types of activities involved are clearly identified rather than broadly generalized;
3. It is integrated - the discrete activities are linked;
4. It is temporal - it is time-sequenced;
5. It is adaptable - there are contingency plans and ways of adapting to unexpected forces;
6. It is agreed to - by the top of the organization;

7. It is cost-effective - in terms of the investment of both time and people.

In order for the organizational change to be successful there must be commitment to the change effort and you must identify the "critical mass." These are the people whose commitment is necessary to provide the energy for the change to occur. There is not a magic number to the "critical mass"; it can be as small as one person, but for purposes of this case it would be the Chief, middle managers and first line supervisors. You should not overlook the line personnel, though. If you have "informal leaders" that function within the line, you may want to give serious consideration to including them within the planning function.

There is a distinct possibility that in the future your organization will have a new structure, due to the changing role of the middle manager. You could have new reporting relationships, different reporting lines, and new job classifications or descriptions. These will all cause new problems during the transition stage and, if not addressed they will be there when your organization has completed its change. There are a number of methods to resolve these problems. With group consensus you will need to write clear and concise job descriptions for each of middle management's positions within your organization. You will also need to do this for first line supervisors, since their roles will change along with those of middle management.

You could attempt to do this as the Chief of Police, but this would just exacerbate your transition problems. Therefore I would recommend the use of "Responsibility Charting." The following description indicates what the chart design consists of and how it is put into operation.

CODE: R - Responsibility (initiates)

A-V Approval (right to veto)

S - Support (put resources against)

I - Inform (to be informed)

ACTORS → DECISIONS ↓				

The "R" stands for responsibility to initiate action and to insure the decision is carried out. "A-V" indicates the actor must review the action and can veto or approve. "S" provides any logistical support or

resources, while "I" simply must be informed but cannot influence the action. You would list as the actors across the top of the chart those people who will be involved, for example; the chief of police, all middle managers, and first line supervisors, and any other actor who will participate in the transition. Down the left hand column you will list the decisions which will have to be made for the transition.

Each decision is considered and an "R" rating is given; a cardinal rule is there can only be one "R" per horizontal line. You cannot have two or more actors responsible for a decision. If the group who are participating cannot agree who should be responsible, there are three options:

1. break the problem out into smaller sub-units
2. move the "R" up one level in the organizations hierarchy
3. Move the decision about assigning the "R" up one level

You must be careful not to give too many "A"s within one decision, since this can cause problems with accomplishing the task. Depending on who is filling out the chart, you may end up with a skewing of "A"s under the Chief of Police. It is desirable to minimize this effect if you wish to accomplish the task. More specific information on Responsibility Charting can be obtain from Beckhard and Harris's book, which goes into great detail with respect to this process.

You will want to have an effective evaluation plan for the changes you will be making in the organization with respect to the new roles

and status of middle management. Too often evaluation of the change is glossed over; therefore you may want to exercise some of the following:

1. Total -system performance review. Has the desired condition which you want actually occurred? Are there areas which still need more change? What surprises have arisen which were not anticipated? What do the employees feel about what has been occurring? How satisfied are you, the Chief, with what has been occurring?

2. Monitoring the effects of specific interventions. It would be beneficial to monitor the key interventions and effects. If expected outcome and actual outcome differ widely, then immediate actions must be taken.

3. Energy and goal-directed tension. It is usually difficult to maintain a positive level of tension to produce on-going energy for the change effort. One method to insure sustained energy is to publish when, where and how evaluations of the changes will occur. This has a way of maintaining higher levels of energy.

How do you obtain the information needed to properly evaluate the changes agreed to? Some techniques include; interviews with personnel within the organization, observations you make yourself, records or the development of operations reporting forms to be completed by assigned personnel.

The fact remains, you will need some type of transition plan to accomplish the changes needed to keep your organization abreast with the times. As indicated earlier in this report, if we attempt to retain the "status quo" and ignore the fact of computerization, changing management styles, and changing values of employees, we will find ourselves with a militant group of middle managers. We must take steps now to insure they continue to occupy a critical position in the future organization. This will take new training techniques, new job descriptions, and most importantly the middle managers' involvement in the transition.

This document does not address some additional concerns due to time limitations and my attempt to leave open further questions for future Command College students. We should be taking a critical look at the expectations of new police candidates. If there will be a reduced number of middle managers, how do we deal with the upward mobility question of these new officers? Are the assumptions used in the drafting of this document correct? Will large agencies differ from their smaller counterparts? Only the future will tell. Remember "seek not the answer but to understand the question".

FOOTNOTES

- ¹ Martin Lasden, Computer Decisions (1983) p. 142.
- ² Lou Pilla; Joseph McKendrick; Janet Mason, The Challenge To Middle Managers (Management World 1984), p. 8.
- ³ Ibid. p. 9.
- ⁴ Ron Zemke, The Case Of The Missing Managerial Malaise (Training Journal 11/1985), p. 30.
- ⁵ Ibid. p. 31.
- ⁶ Joseph McKendrick, The Generalist: Trends Shaping The Management Profession (Management World, 8/1984), p. 19.
- ⁷ David Clutterbuck, The Whittling Away Of Middle Management (International Management 11/1982), p. 10.
- ⁸ Ibid. p. 10.
- ⁹ Ibid. p. 14.
- ¹⁰ D.P. Snyder, Coming Decade Spells Changes In The Workplace (Association Management, 9/1984), p. 167.
- ¹¹ John F. Magee, What Information Technology Has In Store For Managers (Sloan Management Review, Winter 1985), p. 49.
- ¹² Robert E. Lamalie, (Working Smart 12/ 1985), p. 5.
- ¹³ John Nielsens, Management Layoffs Won't Quit (Fortune 10/28/85), p. 46.
- ¹⁴ Ibid. p. 46.
- ¹⁵ Ibid. p. 52.
- ¹⁶ Martin Lasden, Computer Decisions, (1983) p. 146.
- ¹⁷ Lou Pilla; Joseph McKendrick; Janet Mason, The Challenge To Middle Managers (Management World 1/1984), p. 10.
- ¹⁸ Ron Zemke, The Case Of The Missing Managerial Malaise (Training Journal 11/1985), p. 30.
- ¹⁹ John J. Walsh, Office Automation Thins Middle Management Ranks (Todays Office 8/1985), p. 17.
- ²⁰ Ibid. p. 18.

- 21 Robert W. Goddard, The Rise Of The New Organization (Management World 1/1985), p. 8.
- 22 Harold Fearon; William Reif; William Ruch; William Werther, Management in the Year 2000 (Arizona Business Journal 4/1981), p. 20.
- 23 Anon., Special Report, A New Era For Management (Business Week 4/25/1983), p. 50.
- 24 Martin Lasden, Computer Decisions (1983), p. 142.
- 25 Lou Pilla; Joseph McKendrick; Janet Mason, The Challenge To Middle Managers (Management World 1/1984), p. 9.
- 26 Robert W. Goddard, The Rise Of The New Organization (Management World 1/1985), p.10.
- 27 Ibid. p. 10.
- 28 Martin Lasden, Computer Decisions (1983), p. 142.
- 29 Lou Pilla; Joseph McKendrick; Janet Mason, The Challenge To Middle Managers (Management World 1/1984), p. 10.
- 30 Robert W. Goddard, The Rise Of The New Organization (Management World 1/1984), p. 8.
- 31 Ibid. p. 10.
- 32 Roy Amara, Management In The 1980s (Technology Review 4/1981), p. 10.
- 33 David Clutterbuck, The Whittling Away Of Middle Management (International Management 11/1982), p. 16.
- 34 Ibid. p. 16.
- 35 Mary Anne DeVanna; Kirby E. Warren, Managing The Middle (Human Resource Management Spring/Summer 1983), p. 173.
- 36 Ibid. p. 175.

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APPENDIX I

NOMINAL GROUP TECHNIQUE PROCESS
3/7/86

February 25, 1986

To Participant
Organization
Address
City and State

Dear,

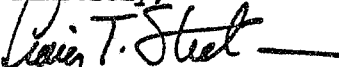
Thank you for agreeing to participate with me in defining the role of the middle manager in the year 2000. We will meet at the Airport Hilton Hotel in the dining room at 11:30 AM on March 7, 1986, to have lunch together which is on me. The formal process will begin at approximately 1:00 PM and conclude no later than 4:30 PM.

There are 21 participants in this effort; approximately one half are executives from the public sector and the remainder from the private sector. It would not be appropriate at this time to discuss how the process will work, just suffice it to say that Nominal Group Technique is a formal, structured type of brainstorming session, which is designed to deal with the future.

For those not familiar with how and why this project came into being please read the attached letter from the Commission on Peace Officers Standards and Training. I chose as my topic for research "The Role of the Middle Manager in the Year 2000". This is the topical area which we will be dealing with in this process. Each of you were selected and requested to participate because of your position within your respective organizations and your past experience as executives.

I would request that you be at the hotel by 11:30 AM on March 7, 1986 and, additionally, please bring a copy of your latest resume. I will need this to be part of the final document so that the committee who reviews my project will have an opportunity to understand the level of expertise we used in obtaining the results of the N.G.T. process. If you have any questions please call me at (415) 420-3011.

Sincerely,


Craig T. Steckler
Chief of Police

List of Participants

Gary Brown
Division Manager
Executive Recruitment
Ralph Anderson & Associates

George Hart
Chief of Police
Oakland Police

Skip Rhodes
Planning Consultant
Chevron Oil Corp.

Mike Manick
Chief of Police
Union City Police

Leo Peart
Chief of Police
Irvine Police

Jack Carlson
President Kaiser Steel (Ret.)
President Kerns Int. (Ret.)
Pres. Pinole Point Steel (Ret.)

Tom Danhakl
General Manager Sales and
Business Development
Chevron Overseas Petroleum Inc.

Richard Saalfeld
Executive Vice President
Bank of America

Larry Marshall
Chief of Police
Oceanside Police

Art Rutzen
Senior Vice President
Security Pacific National Bank
Pacific Century Group

John Mickel
Executive Vice President
Bank of America
San Francisco Headquarters

Donald Becker
Chief of Police
San Leandro Police

Mel Nelson
Chief of Police
Livermore Police

Bill Eastman
Chief of Police
Pleasanton Police

Tony Guardino
Chief of Police
Redwood City Police

Dave Snowden
Chief of Police
Baldwin Park Police

John Santana
C.E.O./President
International Marine Fuel
of San Francisco, Inc.

Milt Kegley
Vice President
Human Resource Development Dept.
Safeway Stores, Inc.

Nelson Weller
S.G. Warburg, International
Investment Service Company

Len Bertain
Vice President, Marketing
Computer Intergrated Mgmt.Inc.

Gaylord Burke
Vice President
Bank of America
Problem Loans Administration

NGT GUIDELINES 3/7/86

1. Establish table sittings:

Table # 1 Gary Brown, Scribe

George Hart

Skip Rhodes

Mike Manick

Mel Nelson

Richard Saalfeld

Nelson Weller

Table # 2 Leo Peart, Scribe

Jack Carlson

Tom Danhaki

David Snowden

Bill Eastman

Len Bertain

Gaylord Burke

Table #3 Larry Marshall, Scribe

Art Rutzen

John Mickel

Don Becker

Tony Guardino

John Santana

Milt Kegley

I want to express my appreciation to each of you for attending today. I appreciate the sacrifice you have made to assist me in this workshop, and I welcome each of you warmly to this session.

In this process it is important that each of you fully participate. Indeed, success will depend on our equal and full participation. Each of you here are an important group resource. As you by now know there are 9 police executives in attendance, which represents the public sector. The chiefs were chosen because of my personal knowledge of their abilities as effective, progressive administrators who think in future terms and are proactive leaders. Likewise, there are 12 executives from the private sector, representing a varied group of disciplines. You were chosen because of your executive status, your reputations as acknowledged leaders of industry, and also because of your "futures" orientation. For the purposes of this process there is no status differences between any of the participants.

Our success depends on every member fully sharing the insight from his own administrative, professional or technical perspective. I appreciate, therefore, the willingness of every one of you to fully share your ideas and work intensely while we are together.

Notes to group:

1. (Explain) we are not looking for issues, since the issue is defined as the role of the middle manager, in the future.

2. (Explain) we are not looking for trends, since research which I have conducted indicates the trend is toward a reduction in numbers of middle managers, and role changes.
3. (Explain) we are looking for events, which may impact the issue and current trends. Events are discrete occurrences --they are things that either happen or do not happen--while trends are patterns of happenings over time.
4. The purpose of this process is to attempt to produce from you collectively and individually what events in the future you perceive may occur and how they will impact the role of the middle manager. For purposes of this process the term middle manager indicates a position which supervises other supervisors.

(GO TO TRENDS WHICH YOU HAVE DEVELOPED VIA RESEARCH)

STEP ONE: Hand out question to each table.

1. Hand out the question to each table.
2. I would like each of you to take five minutes to list your ideas in response to this question, in a brief phrase or a few words on the worksheet in front of you. Please work independently of other members in identifying these events.

During this period of independent thinking I ask that you not talk to other members, interrupt their thinking, or look at their worksheets. Since this is the opportunity for each of you to prepare your contributions to the meeting, I would appreciate intense effort during the next five minutes, I will call time and suggest how we can proceed to share our ideas. Are there any questions?

1. resist nonprocess clarifications
2. have the question in writing
3. sanction individuals who disrupt the silent independent activity.

STEP TWO: Share your ideas.

1. During the last five minutes each of you has used your worksheets to list events which may impact the role/status of the middle manager in the future. Now I would like to have each of you share your ideas with the other members of the group. This is an important step because your list of ideas will constitute a guide for further discussion, help us understand the richness of ideas we have to work with, and stimulate additional ideas.
2. In order to accomplish this goal as quickly and efficiently as possible, I would ask that you go around the table and ask individuals, one at a time, to give us one idea from their

worksheet, summarized in a brief phrase or a few words. After the entire list is on the board, we will have the opportunity to discuss, clarify, and dispute the ideas. I would ask that the recorders assigned to each table handle the task of writing the ideas on the flip charts.

3. If someone else in the group lists an idea which you also had on your worksheet, you need not repeat the idea. If, however, in your judgement the idea on your worksheet contains a different emphasis or variation, we would welcome the idea.
4. If you run out of ideas you may "pass", but feel free to come back into the process via hitch-hiking, that is riding in on the idea of another member if you envision a variation.

5. NOTE TO RECORDERS

- A. Record ideas as rapidly as possible
- B. Record ideas in the words used by the group member.
- C. Provide assistance in abbreviating only in special situations.
- D. Make the entire list visible to the group by tearing off completed sheets from the flip chart and taping them to the wall.
- E. If the idea is too wordy to put on board ask the member to condense the meaning.

F. This is not the time for debate, clarification, or justification, sanction the group member who attempts to act this way.

G. Number each item.

STEP 3: Discuss your ideas.

1. Now that we have listed our ideas on the flip chart, I want you to take time to go back and briefly discuss each idea. The purpose of this discussion is to clarify the meaning of each item on the flip chart. It is also our opportunity to express our understanding of the logic behind the idea, and the relative importance of the item. We should feel free to express varying points of view or to disagree.
2. We will, however, want to pace ourselves so that each of the items on the chart receives the opportunity for some attention, so you may sometimes be asked to move on to further items.
3. Finally, let me point out that the author of the item need not feel obliged to clarify or explain an item. Any member of the group can play that role.

STEP 4: (LOOK AT THE LISTS. IF THERE ARE MORE THAN 12 ITEMS THEN ASK THAT THE NUMBER OF CARDS GO TO 8)

1. We have now completed our discussion of the entire list of ideas, have clarified the meaning of each idea, and have discussed the areas of agreement and disagreement. At this time, I would like to have the judgment of each group member concerning the most important ideas on the list.
2. To accomplish this step I wonder if each of you would take 5 (8) of the 3x5 cards on the table. I would like you to select the five (8) most important items from your list. This will require careful thought and effort on your part. As you look at the flip chart sheets and find an item which you feel is very important, please record the item on an index card.
3. Please place the number of the item in the upper left-hand corner of the card. (GIVE AN EXAMPLE FROM THE EXISTING LISTS) then write the identifying words or phrase on the card.
4. Do this for each of the five (8) most important items from your individual lists. When you have completed this task, you should have five (8) cards, each with a separate phrase written on the card, and with the identifying numbers using the numbering system from your list of ideas on the flip chart.
 - a. do not rank-order the cards yet. Spend the next few minutes carefully selecting the five (8) cards. We will all rank order the cards together.

5. (Some members of the group will complete their selection much quicker than others. When the leader notes that several members have finished voting but others have not, a useful intervention is to say:)

a. Some of us have not yet completed our selection of the five (8) most important items. If you have already finished, please take time to recheck to be sure you have made the best selection. Also, let's not disturb those group members who are still making decisions.

6. Please spread out your cards in front of you, so you can see all five (8) at once. Looking at your set of cards, decide which one card is the most important, which card is more important than the other 4 (7) (GIVE THE GROUP TIME TO STUDY THE CARDS)

7. Please write the number 5 (8) in the lower right-hand corner of the card and underline it three times. Turn the card over and look at the remaining 4 (7) cards. Of the remaining 4 (7) cards, which is the least important? Write the number 1 in the lower right-hand corner and underline that number three times.

a. Do the remaining cards the same way, take the most important, then the least, then the most, then the least, until you have completed all the cards.

b. When the voting is completed, everyone passes the cards to the recorder, who shuffles them to maintain anonymity.

c. The leader then makes a ballot sheet on a flip chart, numbering the left-hand side of the sheet in accordance with the number of the items. He then asks one group member to read the item number and the rank number from the stack of voting cards.

STEP 5: (IF NEEDED) DISCUSSION OF PRELIMINARY VOTE, (CHECK HOW MUCH TIME IS LEFT....)

1. It may be worthwhile to briefly examine the voting pattern in front of you to see if there are any inconsistencies, surprises, or differences members wish to comment on.
2. The purpose of this discussion is not to pressure any member to change his vote. On the other hand, if we gain additional clarification, some members may wish to modify their original vote.
3. (Explain a vote difference, such as an item receiving three 5 (8) votes and four (7) one or two votes.)
4. Once again, the purpose of this discussion has not been to pressure you to change your original vote. Indeed, you should

think carefully before doing so. However, if you honestly have a new perspective as a result of the discussion, you should change your vote.

STEP 6: Final vote is done by use of the rating form.

1. Use of rating form:

- a. Choose the five (8) most important items from the flip chart, and list them in rank-order above.
- b. Identify the items by using the number and description from the flip chart.
- c. Rate each item in terms of its importance on the 0-10 scale, with 0 being unimportant, and 10 being very important.

EVENT EVALUATION FORM PROCESS

1. Each Table take its top five events which were identified and voted upon via the N.G.T. process. Write them down in the column labled Event Statement (show participants)
- 2 Each person provides estimates of probability and impact for each of the five events on his own copy of the form.
3. The "year that probability first exceeds zero". Indicate the year you feel this event will occur, for example ,1989, if that is the case. We want your individual best judgment.
4. In the column "by 1995", indicate on a graph from 0 to 100% your best judgment as to the percent of chance this event will occur, for example (CHOOSE ONE OF THE EVENTS FROM A FLIP CHART, THIS HAS A 30% CHANCE OF OCCURRING BY 1995.)
5. Do the same thing for 2000.
6. "Net Impact on the Issue Area" column, the issue is the role of the Middle Manager. In your best judgment, on a scale of -10 to +10 what will the net impact be?
7. Recorder collect all the responses and average them, write them on a flip chart and also make a master list on one of the forms. Label the form, "Group Consensus" (THROW OUT THE HIGH AND LOW YEAR OF PROBABILITY IF IT DISTORTS THE ANSWER TOO MUCH.)

Group Number #1, What events do you foresee, within society at large, which may impact the role/status of the middle manager in the future?

1. By the year 2000 most middle managers will have retired (mid-45); will pursue other interests e.g. consulting, volunteerism, may opt for this due to burn out factor.
2. We will have continued peace which will result in increased conservatism within the work force.
 - no wars (global)
 - work ethic (return to protestant work ethic)
3. Insufficient monies to support municipal infrastructure.
 - not enough money to do all repairs
 - we look out for personal self interests
 - infrastructure will collapse
4. Third world at war among one another - impact energy supplies, expansive military, decreasing social programs and continued U.S. deficit spending.
5. Formation of global village - free trade interaction, financial market.
6. 1997 - mass change of values in society.
 - conservative vs. liberal society
 - concern for world as a whole, opposite nationalism
 - increased expectations
 - service over products
 - quality over quantity
7. We will see increased unrest in workforce due to;
 - lack of respect for authority
 - increased interest in leisure activities
 - increased union unrest, management unrest
8. By the year 2000 comparable worth issues will result in open conflict between male and female employees.
9. Unions will collapse due to conservative mood of work force.
10. Day care facilities will be found in all organizations of any size.
11. Elimination of affordable housing for managers and rank and file.
12. All major production of automobiles, steel and computers will take place outside of United States.
13. There will be two major breakthroughs
 - space exploration

-oceanic exploration
these will affect the way we live and think

- 13a. By 2000 majority of people will be Hispanic, resulting in potential problems in organizations with Anglo managers.
 - language
 - culture
 - minority clustering
14. Breakthrough in genetic research which will impact health, and agriculture production.
15. By 2000, employee benefits will change dramatically.
 - lack of negotiations
 - more cafeteria plans
 - possible loss of benefits
16. Transportation gridlock in metro areas during daylight hours.
17. 75% decline in college students.
18. Average person will purchase goods/services from home personal computers.
19. Reverse locations of working - living population increase in urban areas.
20. Employees will demand to be more involved in decision making and less dependence on computers - will voice concern regarding keeping up with technological changes in Management Information Systems.
21. OPEC will regain control of oil pricing in the world.
22. Executive demand for increased productivity - decreased costs and accountability increased.
23. Unavailability of liability insurance/risk insurance will impact what services we provide.
 - managers will question whether it's worth it (punitive damages)
24. Two major disasters.
 - volcano/earthquake
 - seismic release
25. California earthquake will reduce gross national product by 10%.
26. 60% of the work force will be using drugs on a regular basis.
27. Increased average age of population worldwide.
28. Between 1 and 2 wage earners will support 1 retiree.

29. Passage of state laws abolishing all hazardous material.
30. Middle management associations will take on upper management and rank and file due to being the forgotten and neglected workforce in the organization.

Question #1

- | | | |
|----------------|-------------|---------------|
| 1. 2,8,8 | 11. 4,3,3,4 | 20. 6,3,5 |
| 2. | 12. | 21. |
| 3. 8,7,2,5 | 13. | 22. 7,6,6,7,3 |
| 4. 8,2 | 13a. 7,5 | 23. 6,1,4 |
| 5. | 14. . | 24. |
| 6. 8 | 15. 7,2 | 25. 6 |
| 7. 4,8,4,7,8,2 | 16. 3 | 26. 5,4,6,5,4 |
| 8. | 17. 3,2 | 27. 5,1,1,1 |
| 9. 1 | 18. 1 | 28. |
| 10. 3,5 | 19. 2 | 29. |
| | | 30. 6,1,7 |

A Rating Form for NGT Final Voting

No. Form
Flip Chart

Item Description

Relative Importance

Not Important

Very Important

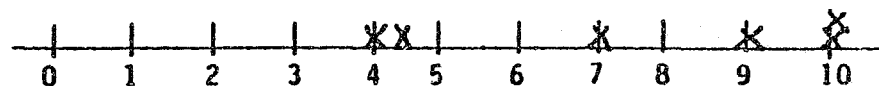
3

Insufficient monies to support municipal infrastructure.



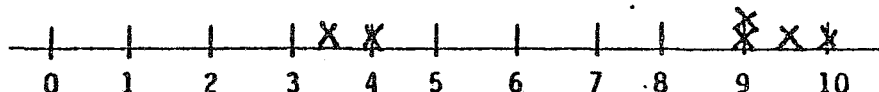
7

We will see increased unrest in workforce due to: Lack of respect for authority, increased interest in leisure activities, union & mgmt. unrest.



22

Executive demand for increased productivity, decreased costs and accountability increased



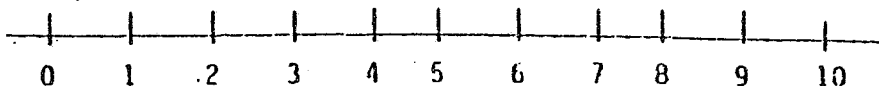
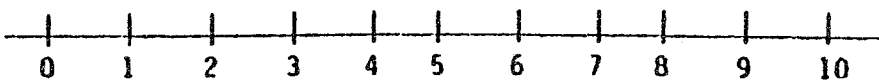
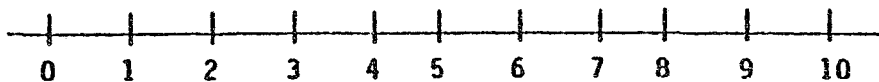
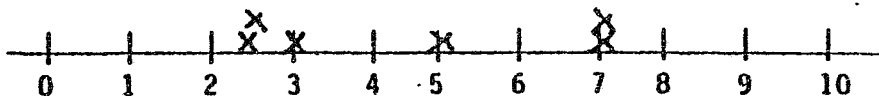
26

60% of the workforce will be using drugs on regular basis.



27

Increased average age of population worldwide.



EVENT EVALUATION FORM

EVENT STATEMENT	PROBABILITY			NET IMPACT ON THE ISSUE AREA (-10 to +10)	NET IMPACT ON LAW ENFORCE- MENT (-10 to +10)
	Year that Probability First Exceeds Zero	By 1995 (0-100)	By 2000 (0-100)		
#3 Insufficient monies to support municipal infrastructure - not enough money to do all repairs - we look out for personal self interests - infrastructure will collapse	1990	71.42%	90.71%	-6.57	-9.28
#7 We will see increased unrest in workforce due to; - lack of respect for authority - increased interest in leisure activities - increased union unrest, management unrest	1990	72.85%	94.28%	-6.57	-6.71
#22 Executive demand for increased productivity - decreased costs and accountability increased	1986	87.85%	93.57%	- .14	- .28
#26 60% of the work force will be using drugs on regular basis	1992	52.14%	71.42%	-5.82	-7.71
#27 Increased average age of population world wide.	1992	72.85%	89.28%	-1.57	- .57

Group Number #2 What events do you foresee, within the organizational institution setting, which may impact the role/status of the middle manager in the future?

1. Career paths will change dramatically.
2. Increase use of data gathering and analysis.
3. Dramatic changes in the "way" we do business.
4. Greater reliance on computerization, technology, data and artificial intelligence.
5. "Me" generation will become middle managers and create organization goals and objectives, conflicts.
6. Development of computer with intelligence and voice response.
7. Increase in specialization, for example, medicine.
8. More mobility among middle managers.
9. Greater concentration of industrial groupings
-fewer jobs more competition.
10. Dramatic changes in the "form" of government.
11. Dependence on centralized data bases.
12. Advance technology will cause middle managers to earn less than their specialized subordinates.
13. 50% of work force will work for government.
14. Reduced job security, as a result, each person or unit is responsible for their own growth and survival.
15. Training and educational preparation will be modified for mid-managers.
16. Increase of women and minorities within management professional pool.
17. Mandatory absolute equality and treatment of personnel.
18. Employees will demand greater "voice" of setting organizational goals and objectives.
19. Greater technology equals greater need for "high-touch" management.
20. Increased percentage of Hispanic workers and mid managers.

21. Event: collapse of "large" organizations.
22. Fewer promotional opportunities.
23. Reduced influence of "national" labor organizations on corporate philosophy.
24. Increase role of labor representation on "boards" of directors.
25. More women executives.
26. Middle management will be a career specialty instead of a road to top management.
27. More direct accountability for middle managers.
28. Increased foreign competition requiring more cost and quality standards.
29. Need to deal with increased public (outside) demands on organizations.
30. Less "risk-taking" by middle managers.
31. More dependence on behavioral "people skills" than on years of technical experience.
32. Technical skills will be increasingly important for middle management survival.
33. Career financial incentives will change for middle managers.
34. External influences such as legal, D.C. directive, juries, etc.
35. Greater self-destiny fewer quotas.
36. Middle managers will make more direct decisions.
37. Middle managers will exist in the organization in the year 2000.

Question #2

- | | | |
|------------------|-----------|---------|
| 1. | 13. | 25. 1 |
| 2. | 14. 4,3 | 26. 1,2 |
| 3. 5 | 15. 6 | 27. 3 |
| 4. 5,8,8,8,7,7,8 | 16. 7,5 | 28. 4 |
| 5. 4,4,7,6 | 17. 4 | 29. 6,4 |
| 6. | 18. 7,3,2 | 30. 6,3 |
| 7. 3,5,2,8 | 19. 5,8,6 | 31. 6,5 |
| 8. | 20. | 32. 3,4 |
| 9. 8,6 | 21. 5 | 33. 2 |
| 10. 2 | 22. 1 | 34. |
| 11. | 23. 1,1,2 | 35. 1 |
| 12. 2,3,7 | 24. | 36. |
| | | 37. 1,7 |

A Rating Form for NGT Final Voting

No. Form
Flip Chart

Item Description

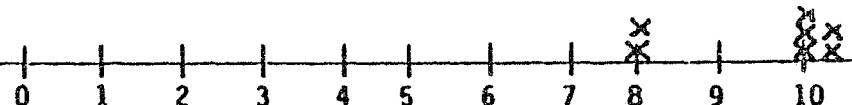
Relative Importance

Not Important

Very Important

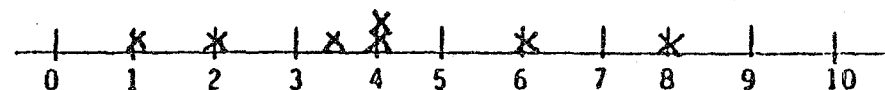
4

Greater reliance on computerization, technology,
data and artificial intelligence



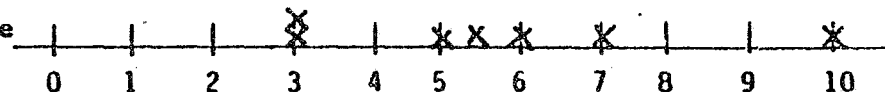
5

"Me" generation will become middle managers
and create organization goals and objectives,
conflicts.



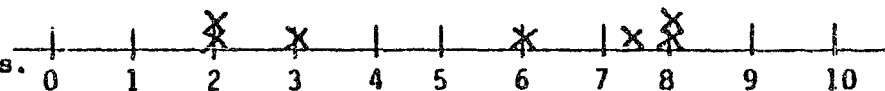
7

Increase in specialization, for example medicine



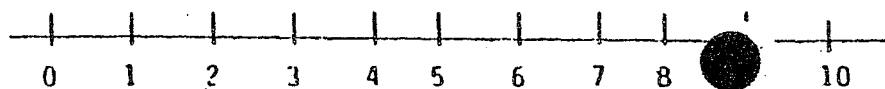
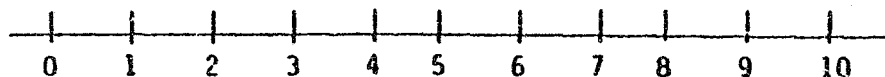
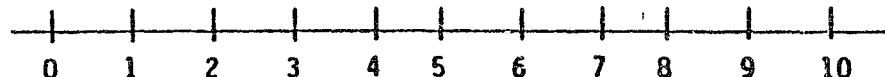
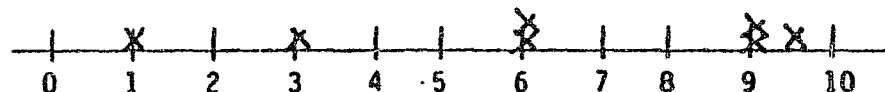
12

Advanced technology will cause middle managers
to earn less than their specialized subordinates.



19

Greater technology equals greater need for
"high-touch" management.



EVENT EVALUATION FORM

EVENT STATEMENT	PROBABILITY			NET IMPACT ON THE ISSUE AREA (-10 to +10)	NET IMPACT ON LAW ENFORCE- MENT (-10 to +10)
	Year that Probability First Exceeds Zero	By 1995 (0-100)	By 2000 (0-100)		
#4 Greater reliance on computerization, technology, data and artificial intelligence.	1986	100%	100%	+8.42	+8
#5 "Me" generation will become middle managers and create organization goals, objectives, conflicts	1988	78.57%	79.28%	-5.14	-6.71
#7 Increase in specialization, for example medicine	1987	91.42%	100%	+4.71	+4
#12. Advance technology will cause middle managers to earn less than their specialized subordinates.	1992	56.42%	67.14%	-3.71	-1.71
#19 Greater technology equals greater need for "high-touch" management.	1988	83.57%	96.42%	+4.28	+4.85

Question #3 What events do you foresee, in society or the organizational institution setting, which may impact the role/status of the middle manager in the future?

1. Tax revolt that could limit funds available for government support.
2. With realignments of corporation entities, requirements for middle managers will be grossly restricted.
3. Baby boomers turning 40.
4. More balance between women and minorities in middle management work force.
5. Availability of computerized information will eliminate need for middle management.
6. Technology in the home, make work at home commonplace.
7. Continued shift in mores, with more people concerned with independence and having money, more entrepreneurs.
8. Depression could force corporations to reassess staffing patterns.
- 8a. International terrorism affecting middle management mobility and location.
9. Increased multi-national business will result in increased middle management responsibilities.
10. Increasing employee rights.
11. Increased level of formal education.
12. Impact of changing labor laws.
13. Recentralization of decision making.
14. World is shifting to the Pacific basin; thus the arena is much more intense than in the past, therefore, bottomline profits are the absolute must.
15. Quality of research industries will increase with respect to replacement industries (commercial managers vs. scientific managers.)
16. Necessity for increased responsibility of business.
17. Intergration of work discipline could reduce need for middle managers.

18. Corporate relations change, competitors become buyers and sellers to each other.
19. Deregulation - laws will continue to change and be driven by market place.
20. The federal budget gets balanced.
21. The value status in the job.
22. Aging population plus increased life expectancy.
23. Erosion of the nuclear family.
24. Better educated consumer.

Question #3

- | | | |
|------------|---------------|-------------------|
| 1. 8,8,4 | 9. 3,3,3 | 17. |
| 2. 8,4,1 | 10. 6,6,5,8,2 | 18. 1,2,1 |
| 3. 5,7,2 | 11. 4,8 | 19. 8,7,1,4,4,2,7 |
| 4. 1,1,7 | 12. | 20. 5 |
| 5. 5,6,6,6 | 13. 5,4,5,7 | 21. |
| 6. 7,3,5,3 | 14. 6,3,3 | 22. 2,2 |
| 7. 8,7,2,6 | 15. | 23. 4 |
| 8. 1 | 16. | 24. |
| 8a. | | |

A Rating Form for NGT Final Voting

No. Form
Flip Chart

Item Description

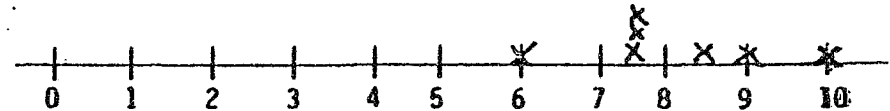
Relative Importance

Not Important

Very Important

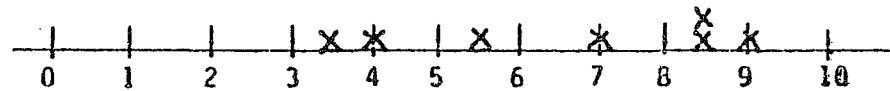
5

Availability of computerized information will
eliminate need for middle management.



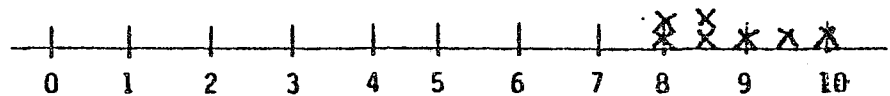
6

Technology in the home, make work at home
common place.



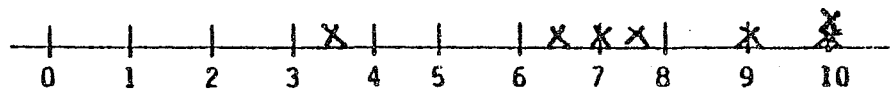
10

Increasing employee rights



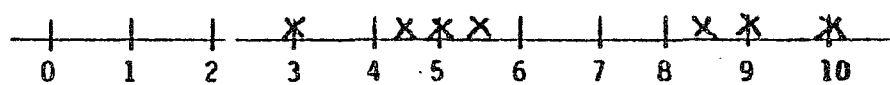
13

Recentralization of decision making.



19

Deregulation - laws will continue to change
and be driven by the market place.



EVENT EVALUATION FORM

EVENT STATEMENT	PROBABILITY			NET IMPACT ON THE ISSUE AREA (-10 to +10)	NET IMPACT ON LAW ENFORCE- MENT (-10 to +10)
	Year that Probability First Exceeds Zero	By 1995 (0-100)	By 2000 (0-100)		
#5 Availability of computerized information will eliminate need for middle management.	1989	81.42%	88.57%	-5	-2.14
#6 Technology in the home, make work at home common place	1992	60%	81.71%	+ .28	-1.14
#10 Increasing employee rights	1986	92.14%	94.28%	- .57	+ .42
#13 Recentralization of decision making.	1993	56.42%	73.57%	+3.28	+4.28
#19 Deregulation - laws will continue to change and be driven by market place.	1987	82.14%	86.42%	+ .28	-1.85

CROSS IMPACT ANALYSIS EXERCISE

1. In the first column on the left side of the page (SHOW GROUP) write the five most important events which have been decided by the group.
2. Across the top, write the same five events which you wrote down the left hand column. (NOTE THE LAST THREE COLUMNS HAVE THREE CURRENT TRENDS WHICH HAVE BEEN IDENTIFIED BY RESEARCH)
3. The second column from the left you should enter the percent of probability which you determined in the Event Evaluation exercise. (THIS WOULD BE THE AVERAGE FIGURE WHICH YOU DETERMINED FOR THE EVENT TO OCCUR BY THE YEAR 2000)
4. Each person now estimates the new probability of each of the impacted events, on the assumption that the impacting event has occurred first. (LEFT HAND COLUMN STATEMENT). Include probability what percent the impact is also on the trends indicated. The use of 0% is alright if there is no impact, negative numbers are also alright if the impact is negative and you want/need to give it a percent.
5. Recorder collect the data and average the answers, there can be positive or negative numbers in each column. Write the answers on the flip chart, and on a master graph.

CROSS-IMPACT EVALUATION FORM

Suppose that this event actually occurred with this probability How would the probability of the events shown below be affected?

							Trends		
		#3	#7	#22	#26	#27	Reduced # of Middle Managers	Expectation of entry level employ.	Role change of current Mid. Man.
#3 Insufficient monies to support municipal infrastructure	90.71%	X	+90%	+64.28%	-8.57%	+14.2%	-50%	-45.71%	-10.71%
#7 We will see increased unrest in workforce	94.28%	+50%	X	+57.14%	+42.85%	+12.85%	-5%	-32.85%	+2.85%
#22 Executive demand for increased productivity, decreased costs & accountability	93.57%	+32.85%	+68.57%	X	+41.42%	+6.42%	-37.85%	-17.14%	+15%
#26 60% of the workforce will be using drugs on a regular basis.	71.42%	+2.85%	+68.57%	+52.85%	X	-15%	-8.57%	-19.28%	-17.85%
#27 Increased average age of population world wide.	89.28%	-12.85%	+4.28%	-1.42%	0%	X	-10%	-9.28%	+1.42%

CROSS IMPACT EVALUATION FORM

Suppose that this event actually occurred with this probability How would the probability of the events shown below be affected?

							Trends		
		#4	#5	#7	#12	#19	Reduced # of Middle Managers	Expectation of entry level employ.	Role change of current Mid. Mgrs.
#4 Greater reliance on computerization, technology, data and artificial intell.	100%	X	-5%	+78%	+58%	+88%	-25%	-29%	0%
#5 "Me" generation will become middle managers and create organization goals and objectives and conflicts.	79.28%	+40%	X	+36%	-17%	+61%	-12%	+11%	-10%
#7 Increased specialization, for example medicine	100%	+74%	+33%	X	+28%	+58%	-16%	0%	-25%
#12 Advanced technology will cause mid. managers to earn less than their specialized subord.	67.14%	+44%	-12%	+17%	X	+29%	-10%	-6%	-16%
#19 Greater technology equals greater need for "high-touch" management	96.42%	+61%	+50%	+36%	+46%	X	0%	+22%	+31%

CROSS-IMPACT EVALUATION FORM

Suppose that this event actually with this probability occurred How would the probability of the events shown below be affected?

							Trends		
							Reduced # of Middle Managers	Expectation of entry level employ.	Role change of current Mid. Manag.
#5 Availability of computerized info. will eliminate need for mid. managers	88.57%	X	+56.66%	+5.83%	+30%	+16.66%	-55%	-32.5%	+13.33%
#6 Technology in the home, make work at home common place.	61.71%	+37.5%	X	-6.33%	+9.16%	-15%	0%	+8.33%	+2.5%
#10 Increasing employee rights.	94.28%	+3.33%	+6.66%	X	-26.66%	+7.5%	+6.66%	+23.33%	+5.83%
#13 Recentralization of decision making.	73.57%	-32.5%	+6.66%	+18.33%	X	+6.66%	-24.16%	-16.66%	-25%
#19 Deregulation-laws will continue to change and be driven by market place.	86.42%	-8.33%	-4.66%	-4.16%	+10.83%	X	-35.83%	+30%	-14.16%

March 10, 1986

Participant
Organization
Address
City and State

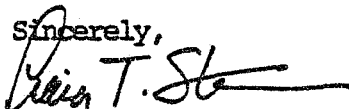
Dear Participant

I want to express my sincere gratitude to you for your efforts last Friday when you assisted with my Command College project. It was extremely gratifying to observe the active participation of everyone involved. I especially appreciate your intense efforts. Even though we did run over on time, you continued participating through the most important elements of the process.

I realize that you have a busy schedule, and by agreeing to assist you may have had to make changes. For this I am very grateful. Some of the process may have seemed confusing or unimportant but I can assure you that I received a vast amount of "raw data" pertinent to the issue which was exactly what I was looking for via this exercise.

As I indicated at the meeting, I now have to collate this information together with my current research in order to complete my project. Part of the information I need is your current resume, if you did not bring one to the meeting. I need this to show the level of expertise used to obtain the results of the N.G.T. process. Please mail me a copy, here to the Police Department attention "Chief Steckler". Do not indicate your salary; what I am looking for is the management experience and background you possess. Additionally, you will receive a copy of the final report after it has been reviewed and accepted by my committee. I would anticipate this should be sometime in late May.

Again, please accept my sincere "thank-you" for taking time to participate, and helping me with a project which in my opinion will have a definite impact on law enforcement in the future.

Sincerely,

Craig T. Steckler
Chief of Police

APPENDIX II

RESUMES OF NOMINAL GROUP TECHNIQUE PROCESS

ART RUTZEN
SENIOR VICE PRESIDENT
THE PACIFIC CENTURY GROUP

EDUCATION: Lehigh University - Bachelor's in Business
 Lehigh High University - Master's in Business
 Harvard University - Advanced Business Studies
 Stanford University - Advanced Business Studies

EMPLOYMENT HISTORY: 1984 to Present -- Senior Vice President
 The Pacific Century Group
 - Currently running 500M
 operation for financial
 group.

 1983 to 1984 -- Vice President
 Security Pacific National
 Bank

 1977 to 1983 -- Director of National
 Accounts
 Liquid Air Corporation
 - Ran 200M Operation

 1975 to 1977 -- Area Marketing Analyst
 Union Carbide Corporation

 1970 to 1975 -- Account Executive
 Merrill Lynch Corporation

HONORS/AWARDS: - Selected as part of Harvard's Case Study
 Group - 1978 - 1981 "Most Successful
 Marketing Corporations"
 - Three time "All American Wrestler"

ORGANIZATIONS: - Chairman, Piedmont Citizen's Task Force
 Against Crime.
 - The Family

THOMAS C. DANHAHL
GENERAL MANAGER SALES AND
BUSINESS DEVELOPMENT
CHEVRON OVERSEAS PETROLEUM INC.

EDUCATION: Kansas State Teachers College -
Pre-engineering (1954-1955)
Iowa State College - BS Chemical
Engineering

EMPLOYMENT HISTORY:

1985 to Present - General Manager - Sales & Business Development, Chevron Overseas Petroleum Inc. Manages, coordinates, and conducts the commercial and logistics activities of COPI, encompassing the disposition of COPI crude oil, natural gas and gas liquids; the interface with producing country governments on matters related to crude oil and product values, pricing and logistics; the development and analysis of special projects and business activities downstream of exploration and production. Responsible for the activities of COPI's Natural Gas Utilization and Sales Unit, the Crude Oil Logistics and Sales Unit, and the Business Development and Economic Analysis Unit.

1980 to 1985 - Manager, Sales and Special Projects. Responsible for coordinating with corporate departments and other operating companies or conducting activities involving the disposition of crude oil, natural gas and LNG. Also responsible for special projects and studies which are generally downstream of normal exploration and production activities.

1973 to 1980 - Senior Advisor - Special Projects, Chevron Oil Corporation. Assists, advises and counsels with, and as directed acts on behalf of the Vice Presidents - Foreign, the Vice President and Assistant Vice President - Amoseas, the Vice Presidents - Caltex, the Vice President Chevron Oil Europe and the Manager and Assistant Managers of Foreign Operations Staff on special projects pertaining to the Corporation's interests in the areas enumerated. Such projects may be varied in scope and duration but would tend to be projects of major significance to the Corporation and to require extensive periods of time in formulation, analysis, negotiation and implementation.

1971 to 1973 - Advisor - Chevron Oil Corporation. Functions as second man to Senior Advisor in the solution of problems applying to foreign areas of major importance to the Company. Coordinates and performs major business analysis within the assigned area of activities and recommends firm actions to the Senior Advisor or to the Vice President served. Relieves the Senior Advisor during extended absences of the latter.

HONORARY FRATERNITIES: Tau Beta Pi
Kappa Mu Epsilon

JOHN W. (SKIP) RHODES
CHEVRON CORPORATION
PUBLIC AFFAIRS

EMPLOYMENT HISTORY:

1985 to Present - Consultant - Public Affairs, Chevron Corporation. Define the Public Affairs issues likely to affect the Company, develop an appraisal on the possible impact, and plan an appropriate course of action. Survey the ongoing economic, political and social environment of the United States and the world to identify those public affairs issues that will significantly affect the Company and its operation. Coordinate the development of the Company response to identified issues, including statements of position, communications programs to government officials, and modifications in the Company's way of doing business.

1984 to 1985 - Manager, Legislative and Regulatory Evaluation, Chevron USA. Initiate and coordinate Marketing, Manufacturing and Supply activities on interfunctional federal and state legislative and regulatory matters. During March-April 1984 directed overall Company response to Federal Trade Commission request for production of documents required in the Gulf merger.

1979 to 1983 - Litigation Support Coordinator, Chevron Oil. Direct the overall Company activities in the defense of five major anti-trust cases assigned.

1977 to 1979 - Manager, Raw Materials & Products, Chevron Oil Corporation. Guide and coordinate all supply purchase, sale and exchange activity.

1971 to 1976 - Manager - Supply, Distribution and Traffic, Chevron Oil Corporation. Plan, coordinate and direct policies and procedures related to the Company's worldwide aviation and marine fuels, and lubricants supply, distribution and traffic activities.

PROFESSIONAL AND CIVIC EXPERIENCES:

Member City Council
Piedmont, California

March 1986 to Present

Director, Joint Operations Staff-West
North Atlantic Treaty Organization
(NATO) Wartime Oil Organization
(includes U.S., Canadian and European
oil industry representatives at
company President and Vice President
levels)

July 1985 to Present

Deputy Director, JOS-West - NATO

July '78 to June '85

Vice-Chairman, General Plan
Advisory Committee
City of Piedmont

Nov. '82 to Feb. '84

Bay Area United Way Campaign special
assignment to Chairman, Chevron Corporation
(Coordinated all fund-raising campaign
activities for 29 firms with
a total of 100,000 employees)

July thru December '83

President - Board of Directors
Carden Redwood School, Oakland, Calif.

July, '75 to June '81

M.K. (MILT) KEGLEY
VICE PRESIDENT
HUMAN RESOURCES DEVELOPMENT
SAFEWAY STORES INCORPORATED

EDUCATION:

Texas A&M College, 1941 - 1943
University of Omaha, Bachelor's in
Business, 1960
George Washington University,
Master's in International Affairs, 1966

MILITARY SERVICE:

U.S. Air Force, 1942 - 1971
Command Pilot
Navigator
Bombadier
Special Assignment for Legislative
Affairs, Secretary of Defense,
Washington D.C. 1968 - 1971
1969 - Teamed with astronaut Frank
Borman as Special Ennisary of
President Nixon to visit 14 countries
seeking assistance on behalf of U.S.
prisoners of war in Viet Nam

SAFEWAY HISTORY:

1971 -- Government Affairs
Representative, Washington D.C.
1974 to Present -- Manager, Management
Development Division
(renamed Human Resources Development
Division, 5/1/83)

HONORS/AWARDS:

Air Force Legion of Merit plus other
decorations and awards received during
service career.

CLUBS/ORGANIZATIONS:

1983 to present - Member, Piedmont
Planning Commission, Chairman 1985
1975 to present - Member, Oakland
Rotary Club
1978 to 1985 - Director, Oakland SPCA
Vice President '83-'85
1983 to 1986 - Member, Alameda County
Private Industry Council.

JOHN A. SANTANA
PRESIDENT FOUNDER
INTERNATIONAL MARINE FUELS OF SAN FRANCISCO, INC.

EDUCATION: A.B. University of San Francisco
(Political Philosophy) 1965
1966 - 1968 Peace Corps Volunteer,
Persia, Assigned to Community
Development Office, managed team of
17 Iranian Community Development
specialists.
A.B. 1971 Thunderbird Graduate
School of International Management,
Masters Degree Intl. Mgmt. 1971

EMPLOYMENT HISTORY: 1981 to Present

International Marine Fuels of San Francisco, Inc. Markets, as principal, a wide range of oil products such as vessel owners through out the free world. Subject has direct responsibility of directing the Management Team, i.e. Corporate Vice President, Corporate Counsel, Controller, Int. Marketing Manager. Each of these mentioned positions are responsible for their department's execution of Quarterly plans as they relate to overall strategies with respect to Oil Trading, Maritime Legal Affairs, Fiscal Management. A considerable portion of the Int. Marketing Manager's work is to supervise a core group of foreign sales/trading correspondents located in New York, London, Asia and Latin America.

ASSOCIATIONS: Petroleum Club of Los Angeles, 1979 to Present
Olympic Club, S.F. active member since 1983
University Club, S.F. active member since 1979
Oakland Hills Swim & Tennis Club, 1979 to Present

RICHARD SAALFELD
EXECUTIVE VICE PRESIDENT
NORTH AMERICA DIVISION
BANK OF AMERICA NT&SA

Executive Vice President Richard Saalfeld was named in February 1985 to head the North America Division of Bank of America's World Banking Division. He had served since 1983 as senior vice president in charge of worldwide Private Banking with responsibility for providing specialized investment, credit, trust, and financial planning services to international clients. He continues as a member of the bank's Management Advisory Committee.

Previously, Saalfeld was senior vice president and general manager of BoFA's United Kingdom, Ireland, and Nordic Area, headquartered in London, England.

Saalfeld joined the bank's MBA training program in 1969. He was appointed assistant vice president in the former National Division in 1971, becoming a vice president one year later. In 1974, Saalfeld was assigned to the London Branch as vice president and international credit officer, advancing in 1976 to head Planning and Services for the bank's Europe, Middle East and Africa Division. He was promoted to group vice president in 1977 and assigned to the San Francisco Corporate Services Office as head of lending for the General Industries Group. A year later, he assumed worldwide responsibility for International Treasury Services and Corporate Cash Management.

An economics graduate of the University of San Francisco, Saalfeld earned an MBA in investment finance from the University of California, Berkeley.

JOHN M. MICKEL
EXECUTIVE VICE PRESIDENT
STRATEGIC PLANNING & MARKETING SERVICES
BANK OF AMERICA NT&SA

John. M. Mickel is Executive Vice President and Head of Global Consumer Markets-Strategic Planning and Marketing Services at Bank of America. In this capacity, he is responsible for strategic planning, market research, market information, and new venture development.

He has held various positions in the Bank, including heading all marketing activities for the Retail Bank. Previously, Mickel served as Head of the Electronic Banking Division. His responsibilities included the development of the bank's overall capabilities in the electronics field, as well as planning, product development, operations and marketing for the bank's credit card division. In addition, he had responsibility for the activities relating to Centralized Systems and Data Processing Services.

Mickel joined BankAmerica Corporation in 1969 as Executive Vice President of Decimus Corporation, a BankAmerica subsidiary specializing in computer leasing and a wide range of computer services. He served in this capacity until 1978 when he was appointed to head Bank of America's Electronic Banking Services Division. Before joining Decimus, he was with International Business Machines Corporation.

Born in Omaha, Nebraska in 1939, he is a graduate of Northwestern University.

NELSON SANFORD WELLER
VICE CHAIRMAN OF S.G. WARBURG, ROWE & PITMAN, AKROYD INC.

Mr. Weller is Vice Chairman of S.G. Warburg, Rowe & Pitman, Akroyd Inc. which is the United States arm of a larger group of companies which provide bond market and corporate finance services to institutional, corporate and government clients around the world.

Mr. Weller joined the predecessor company, Rowe & Pitman, Inc. in the fall of 1970. Mr. Weller entered the financial industry as a security analyst in 1958 with a subsidiary of the Northwest Bancorporation.

In 1963 he joined Schwabacher & Company in San Francisco eventually becoming a general partner and director of equity research.

He served in the Armed Forces during the Korean Conflict. He is a graduate of the University of Montana and is a Chartered Financial Analyst. In 1983, Nelson Weller served as the President of the largest public forum in the United States, the Commonwealth Club of California.

JACK J. CARLSON
DIRECTOR AND PRESIDENT, PINOLE POINT STEEL COMPANY
MEMBER OF THE EXECUTIVE COMMITTEE

Mr. Carlson received his B.A. degree from the University of Chicago in 1940 and attended Northwestern Institute for Management in 1956.

Mr. Carlson joined Kaiser Steel Corporation in 1944 and held a variety of management positions including District Sales Manager, General Manager-Sales, Vice President General Manager Fabricating Division, Vice President Executive Division and President Kaiser Resources. Mr. Carlson was elected President of Kaiser Steel Corporation in 1969 and held the position of President, Chief Executive Officer and Director.

After leaving Kaiser in 1974, Mr. Carlson joined Kearns International, a group specializing as financial consultants, both domestic and international to corporations, individuals, and governments. Mr. Carlson held the position of President and Senior Associate to October 1978. In 1974, Mr. Carlson also became President of MRC, a trading company dealing in iron, ore and coal.

Mr. Carlson has been a director of American Iron and Steel Institute, International Iron and Steel Institute, Kaiser Resources, Kaiser Steel Corporation, and Kaiser Industries Corporation from 1969 to 1974. He was also a Director of Hamersley Iron Company, Pty, Ltd. in Melbourne, Australia from 1962 to 1974.

LEO E. PEART
CHIEF OF POLICE
CITY OF IRVINE

EDUCATION: Master of Science Degree/Criminal Justice
Administration, Cal State University San Jose '72
Bachelor of Science Degree/Criminology
Cal State University Long Beach, 1967
Associate of Arts Degree/Police Science
Long Beach Community College, 1964
Associate of Arts Degree/Liberal Arts
Orange Coast Community College, 1963

EMPLOYMENT HISTORY: 1974 to Present, Chief of Police, Irvine, Cal.
1973 to 1974 Chief of Police, Los Banos, Ca.
1969 to 1972 Police Lt., Palo Alto Police
1962 to 1969 Police Officer, Long Beach P.D.
1970 to 1982 Part-Time University Instructor

Chief Peart has over 22 years experience in the police career field.

In 1974, after completing 12 years work experience at different ranks within three police agencies, Leo Peart was selected and afforded a unique opportunity by the City of Irvine. He was hired to plan and implement a brand new municipal police department. Within a 7 month timeframe, the new department was organized and began responding to calls on July 1, 1975. The initial department had 43 employees.

The City has grown since that time from a residential population of 25,000 to a current population estimated between 80,000 - 85,000. The police department employs 168 full-time personnel with an additional part-time staff of approximately 75. The City of Irvine is a "master-planned" community that is one of the fastest growing communities in California. Businesses within the Irvine City limits employ between 70,000 - 80,000 people daily.

CONSULTING/RESEARCH EXPERIENCE:

During the last 11 years, Chief Peart has been involved in the research projects for several consultants on behalf of designated jurisdictions:

- A. 1979 Santa Fe Springs study of L.A. County Sheriff's services
- B. 1972 Master's Thesis "Team Management/Team Policing."
- C. 1977 Irvine P.D. implementation of Civilian Traffic Investigators (first in Orange County)
- D. 1976 - 1984 Principle assessor in approximately 50 assessment center assignments.

EDUCATION: 1971 Masters of Business Administration
University of California, Berkeley
1965 Bachelor of Arts - Economics
Colgate University

SERVICE: Active Duty, U.S. Navy, Lieutenant jg

GARY E. BROWN
VICE PRESIDENT
EXECUTIVE RECRUITMENT DIVISION
RALPH ANDERSON AND ASSOCIATES

EDUCATION:

1977 University of Southern California, Masters
in Public Administration.

1971 Sacramento State University, Bachelor's in
Government

1960 Mt. San Antonio, A.A. Police Science

EMPLOYMENT HISTORY:

1985 to Present - Vice President, Ralph
Anderson and Associates, Executive Recruitment
Division

1977 to 1985 Chief of Police, City of San
Clemente.

1976 to 1977 Chief of Police, City of South
Pasadena

1972 to 1976 Chief of Police, City of
Chowchilla

1970 to 1971 Crime Studies Analyst, State of
California Department of Justice

1968 to 1970 Special Agent, U.S. Naval
Investigative Service - USMC 11-PE

1966 to 1968 Administrative Sergeant, City of
Carpinteria Police Department

1960 to 1966 Training Coordinator, City of
Garden Grove Police Department

PUBLICATIONS:

"Transition in Blue," Police Chief, 7/75
 "Assuming Command of a Small City Police Department", Police Chief 1/76
 "Ladies, Commence Firing," Law & Order 4/76
 "What You Always Wanted to Know About Assessment Centers," Police Chief 6/77
 "Professionalism of Police: Proceed with Caution," Police Chief 11/79
 "The Police Chief - An Endangered Species," Western City 1/81
 "The Metamorphosis of a Police Executive," Police Chief 11/84

WILLIAM E. EASTMAN
CHIEF OF POLICE
PLEASANTON, CALIFORNIA

EDUCATION:

1977 Masters Degree Public Administration from
University of Southern California.
1974 Bachelors Degree Public Administration from
Pepperdine University
1971 A.A. Degree, Police Science, El Camino
College

EMPLOYMENT HISTORY:

1981 to Present, Chief of Police, City of Pleasanton
1967 to 1981 Captain, Lieutenant, Sergeant, Agent and Police Officer Culver City Police Department

PUBLICATIONS:

"Accreditation," Police Management Today, 1985
 "Will Accreditation Help California's Police Departments? No: It's a
 Costly, Unneeded, Make-Work Scheme," Western City 7/83
 "Report on the Commission on Accreditation for Law Enforcement
 Agencies," Journal of California Law Enforcement Fall 1982
 "The Culver City Police Organization Model - A Model for Community
 Service." The Administration of Justice System, 1977
 "Juvenile Delinquency and the Mass Media" Santa Monica Evening
 Outlook, 1971

AFFILIATIONS:

California Police Chiefs Association (Elected Secretary)
Alameda County Chiefs of Police and Sheriff Association (President)
CPOA
IACP
Boy Scouts of America, District Chairman 1984
Pleasanton Chamber of Commerce.

LAURENCE RICHARD MARSHALL
CHIEF OF POLICE
CITY OF OCEANSIDE

EDUCATION: 1980 Masters in Public Administration, Golden Gate University
 1956 Bachelors Degree in Public Administration from Cal. State University Sacramento
 1951 A.A. Degree from Palomar College, San Marcos

EMPLOYMENT HISTORY: 1981 to Present, Chief of Police, Oceanside, Ca.
 1971 to 1981, Undersheriff to County of Santa Barbara
 1957 to 1971, Rose through the ranks within the Garden Grove Police Department to become the Chief of Police
 1956 to 1957 Police Officer with the City of North Sacramento.

MISCELLANEOUS:

Salvation Army Advisory Board, Oceanside
Oceanside Boys Club Board of Directors
Oceanside Chamber of Commerce Crime Committee
Miramar College Advisory Board, San Diego
Rotary Club of Oceanside
Hancock College Advisory Board Santa Barbara
Exchange Club of Santa Barbara
United Way Allocation Committee, Santa Barbara
IACP
CPCA
CPOA

DAVID L. SNOWDEN
CHIEF OF POLICE
CITY OF BALDWIN PARK

EDUCATION: Graduate work in the Master of Public
Administration Program, Cal. State Fullerton
Bachelor of Arts, Criminal Justice, Cal.
State Fullerton

EMPLOYMENT HISTORY: 1980 to Present, Chief of Police, City of
Baldwin Park
1977 to 1980, Captain of Operations and
Administrative Services City
of Baldwin Park
1975 to 1977, Sergeant, Montebello Police
1966 to 1975, Police Officer, Sergeant with
City of Montebello

PROFESSIONAL ACTIVITIES AND MEMBERSHIPS

Advisory Board Golden West Police Academy
Advisory Board Rio Hondo Police Academy (Past Chairman)
American Bar Association
Cal. District Attorneys Association
C.P.C.A.
Committee for General Plan Review, City of Brea (Chairman 1979)
Country Hills Brea Homeowner's Association (Past President)
Criminal Justice Group-Los Angeles
Federal Law Enforcement Coordinating Committee
League of California Cities (President Police Dept. 85/86)
Los Angeles County Criminal Justice Coordination Committee
Los Angeles County Chiefs of Police Association

LEONARD BERTAIN
VICE PRESIDENT
SALES AND MARKETING
COMPUTER INTEGRATED MANAGEMENT

EDUCATION: BS Physics, Math and Philosophy St. Mary's College
PhD Physics University of Nevada
University of California

EMPLOYMENT HISTORY:

1985 to Present: Vice President, Sales and Marketing, Computer
Integrated Management, San Francisco, CA.

Developed the marketing and sales strategy for the company.
Identified market focus for the operation and brought in \$1 Million in
business during the first six months. The company sells systems to the
factory floor and is focused on developing automated systems for the
factory of the future.

1983 to 1985: Director of Marketing, Integrated Automation, Alameda,
CA.

Developed a \$6 Million market for high speed vision systems. Sold
solutions to Kaiser Aluminum to inspect aluminum at 1000 feet per
minute looking for .005 inch scratches, IBM to inspect printed circuit
boards for correctness of board etch, Kimberly-Clark to inspect
material moving at 3000 feet per minute, and others. Served as General
Manager for this newly developed business.

1978 to 1979: President, The Technology Connection, Oakland, CA.

Developed and sold computer systems to small business. Developed
a proprietary product to protect UNIX software from piracy. Initiated
a software distribution business using the piracy protection. Closed
operations due to lack of capital and slow market development.

1974 to 1979: Director of Operations, Intel, Santa Clara, CA.

Managed the operations for a \$100 Million business division within
the Intel organization. Responsible for all engineering, marketing,
and financing for the division. Participated in the growth of the
division from a \$10 Million business.

GEORGE T. HART
CHIEF OF POLICE
OAKLAND POLICE DEPARTMENT

EDUCATION: University of California (Berkeley) 1956,
AB in Criminology, with emphasis in Police
Administration.

EMPLOYMENT HISTORY: 1973 to Present -- Chief of Police
1968 to 1973 -- Deputy Chief
1966 to 1968 -- Captain
1962 to 1966 -- Lieutenant
1960 to 1962 -- Sergeant
1956 to 1960 -- Patrolman

Served in a wide range of assignments during
career, including the Jail Division, the Patrol
Division, Traffic, Criminal Investigation, Youth
Services, Planning and Research, Training,
Administration, Field Operations and Services.

Experienced in field law enforcement, personnel
supervision and management, resource allocation,
tactical operations, investigations, budgeting,
policy development, systems and procedure design,
training, meet and confer and contract
negotiations, and administration.

Instructor in professional schools, seminars and
conferences, with emphasis in supervision and
management techniques, performance evaluation and
appraisal, and motivation and productivity.

ANTHONY LEE GUARDINO
CHIEF OF POLICE
REDWOOD CITY POLICE DEPARTMENT

EDUCATION: 1980 Bachelor of Arts - Administration of
Justice, Golden Gate University, San
Francisco

EMPLOYMENT HISTORY: 1982 - Present, Chief of Police, Redwood City
1978 - 1982, Chief of Police, Pacifica Police
Department

1966 - 1978, Captain, Sergeant and Police
Officer Pacifica Police Dept.

CERTIFICATES: P.O.S.T. - Basic, Intermediate, Advanced,
Management, Executive Development

COMMUNITY SERVICE:

1981 to Present, Member San Mateo County Criminal Justice Council
1981 - 1983, Member, Board of Directors, Pacifica Community Television
Inc. (non-profit, local origination television station)
1976 - 1978, Member, Board of Directors, Pyramid Alternatives

PROFESSIONAL ORGANIZATIONS:

I.A.C.P.
C.P.C.A.
C.P.O.A.
Police Chiefs Association of San Mateo County
Peninsula Police Officers Association of San Mateo County

APPENDIX III

EVENT EVALUATION FORM

EVENT STATEMENT	PROBABILITY			NET IMPACT ON THE ISSUE AREA (-10 to +10)	NET IMPACT ON LAW ENFORCE- MENT (-10 to +10)
	Year that Probability First Exceeds Zero	By 1995 (0-100)	By 2000 (0-100)		
3 Insufficient funds infrastructure	1990	71.42%	90.71%	-6.57	-9.28
7 Increase investment in work force	1990	72.85%	94.28%	-6.57	-6.71
22 increase productivity	1986	87.85%	97.57%	-14	-28
24 change	1992	52.14%	71.42%	-5.82	-7.71
27 increase population	1992	72.85%	89.28%	-1.57	-57

EVENT EVALUATION FORM

EVENT STATEMENT	PROBABILITY			NET IMPACT ON THE ISSUE AREA (-10 to +10)	NET IMPACT ON LAW ENFORCE- MENT (-10 to +10)
	Year that Probability First Exceeds Zero	By 1995 (0-100)	By 2000 (0-100)		
INSUFFICIENT MONIES TO SUPPORT MUNICIPAL INFRASTRUCTURE	1988	80	100	-4	-10
INCREASE IN UNREST AND FRUSTRATION OF WORK FORCE	1986	50	90	-8	-8
EXECUTIVE DEMAND FOR INCREASED PRODUCTIVITY, DECREASED COSTS, AND INCREASED ACCOUNTABILITY	1986	85	100	+6	-6
MAJORITY OF WORK FORCE WILL BE USING DRUGS ON A REGULAR BDSN.	1990	75	80	-8	-8
INCREASED AVERAGE AGE OF POPULATION - WORLDWIDE	2000	30	100	-2	-4

Q.B.
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EVENT EVALUATION FORM

EVENT STATEMENT	PROBABILITY			NET IMPACT ON THE ISSUE AREA (-10 to +10)	NET IMPACT ON LAW ENFORCE- MENT (-10 to +10)
	Year that Probability First Exceeds Zero	By 1995 (0-100)	By 2000 (0-100)		
<i>Insufficient Funds</i>	1992	80	95	-5	-8
<i>Increased interest in labor force</i>	1995	50	80	-9	-5
<i>Accountability factor</i>	1990	40	60	+5	+7
<i>Drugs</i>	1990	40	50	-2	-4
<i>Aging Population</i>	1986	100	100	+6	+8

EVENT EVALUATION FORM

EVENT STATEMENT	PROBABILITY			NET IMPACT ON THE ISSUE AREA (-10 to +10)	NET IMPACT ON LAW ENFORCE- MENT (-10 to +10)
	Year that Probability First Exceeds Zero	By 1995 (0-100)	By 2000 (0-100)		
Insufficient \$ to support infrastructure	1990	80%	90%	-9	-9
Increased interest in Work force	1990	70%	90%	-9	-9
Exec demand for increased Productivity	1988	90%	95%	-1	-1
Work force on drugs	1990	50%	60%	-8	-10
Increased avg. age	1995	90%	95%	+1	-1

EVENT EVALUATION FORM

EVENT STATEMENT	PROBABILITY			NET IMPACT ON THE ISSUE AREA (-10 to +10)	NET IMPACT ON LAW ENFORCE- MENT (-10 to +10)
	Year that Probability First Exceeds Zero	By 1995 (0-100)	By 2000 (0-100)		
INSUF. MONEY TO FUND GOVT.	1986	100%	100%	-7	-10
WORKFORCE UNREST	1990	100%	100%	-6	-8
EXEC. DEMAND FOR INCREASE PRODUCTIVITY AT LOWER COST WITH ACCOUNTABILITY	1986	100%	100%	+2	+8
60% OF WORKFORCE WILL HAVE SUBSTANCE ABUSE	1998	0	50%	-1	-6
HIGHER AVERAGE AGE OF WORLD POPULATION	1986	100%	100%	-3	+7

EVENT EVALUATION FORM

EVENT STATEMENT	PROBABILITY			NET IMPACT ON THE ISSUE AREA (-10 to +10)	NET IMPACT ON LAW ENFORCE- MENT (-10 to +10)
	Year that Probability First Exceeds Zero	By 1995 (0-100)	By 2000 (0-100)		
3 Insuff money to support human structure	1996	0	50	-8	-10
7 Decrease unskilled labor force	1995	60	100	-7	-70
22 Excess demand or increased production	1986	100	100	+8	+8
26 60% of work force on drugs	1990	80	100	-8	-8
27 Decrease avg age of population	1986	100	100	-5	-6

EVENT EVALUATION FORM

EVENT STATEMENT	PROBABILITY			NET IMPACT ON THE ISSUE AREA (-10 to +10)	NET IMPACT ON LAW ENFORCE- MENT (-10 to +10)
	Year that Probability First Exceeds Zero	By 1995 (0-100)	By 2000 (0-100)		
<i>Insufficient monies to support ^{infrastructure} run</i>	1991	60%	100%	-5	-10
<i>Increased unrest in work force</i>	1989	80%	100%	0	0
<i>Executive demand for increased productivity, decreased costs, & increased accountability</i>	1986	100%	100%	-10	-10
<i>60% of work force will be using drugs</i>	1990	40%	60%	-4	-10
<i>Inc. average age of population</i>	1995	10%	30%	0	0

EVENT EVALUATION FORM

EVENT STATEMENT	PROBABILITY			NET IMPACT ON THE ISSUE AREA (-10 to +10)	NET IMPACT ON LAW ENFORCE- MENT (-10 to +10)
	Year that Probability First Exceeds Zero	By 1995 (0-100)	By 2000 (0-100)		
Insufficient Resources	1988	100%	100	-8	-8
Increased Unrest in Work Force	1990	100%	100	-10	-10
Demand for Increased Productivity	1986	100%	100	-8	-8
Increased Use of Drugs by Work Force. 60% of workforce	2000 1995	80%	100	-10	-10
Increased Abuse of Int Personnel Reducing upward mobility	2000 1995	80%	100	-8	-8

A Rating Form for NGT Final Voting

53

No. Form
Flip Chart

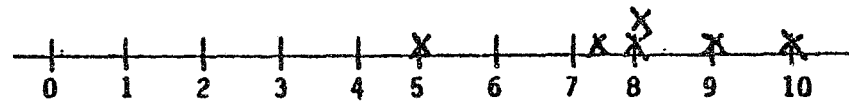
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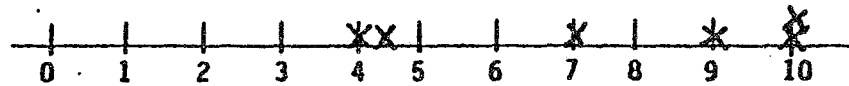
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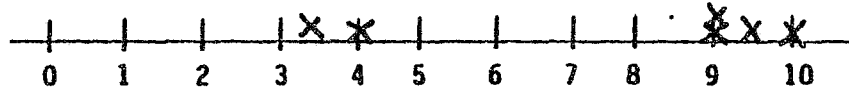


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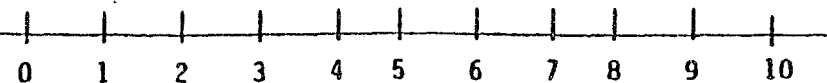
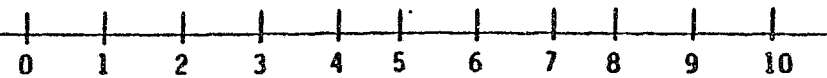
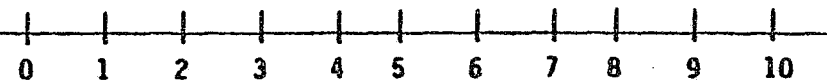
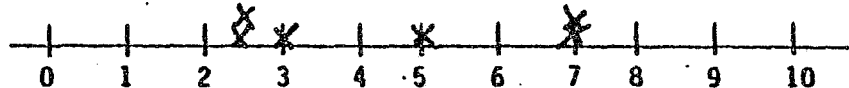
executive demand productivity
accountability



26



27



A Rating Form for NGT Final Voting

No. Form
Flip Chart

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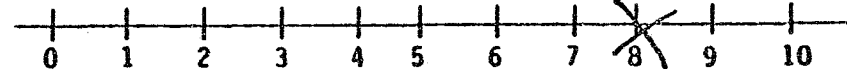
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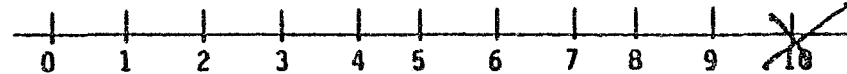
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Insufficient Resources



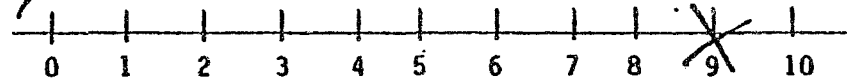
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Increased UNEMP in workforce



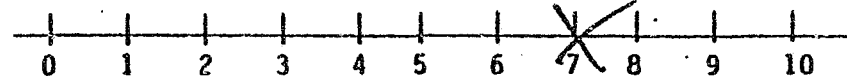
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Demand for increased productivity



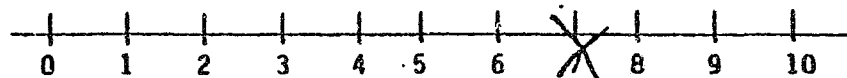
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*Increased use of drugs by workforce
860% of workforce*



27

*Increased Abc of mgt personnel
Reducing upward mobility*



A Rating Form for NGT Final Voting

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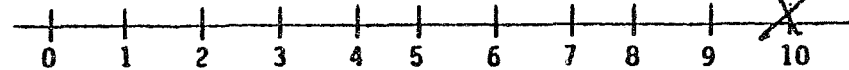
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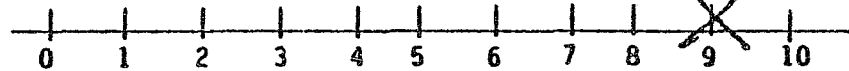
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INSUF. MONEY TO FUND
GOVT.



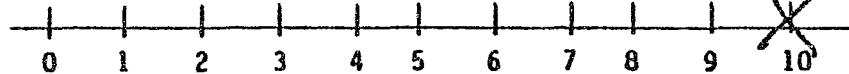
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WORKFORCE UNREST



22

EXEC. DEMAND FOR INCREASED
PRODUCTIVITY AT LOWER COST
WITH ACCOUNTABILITY



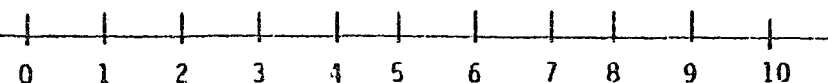
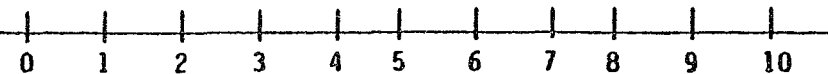
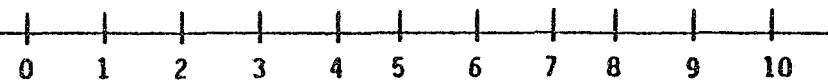
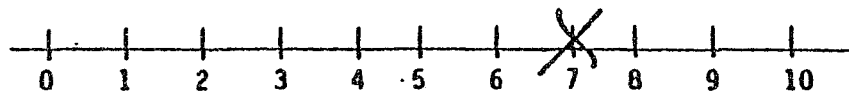
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60% OF WORKFORCE WILL
HAVE SUBSTANCE ABUSE



27

HIGHER AVERAGE AGE
OF WORLD POPULATION



A Rating Form for NGT Final Voting

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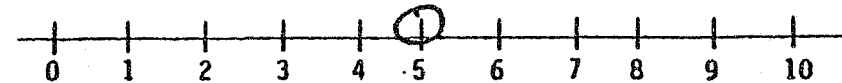
Relative Importance

Not Important

Very Important

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INSUFFICIENT MONIES TO SUPPORT
MUNICIPAL INFRASTRUCTURE



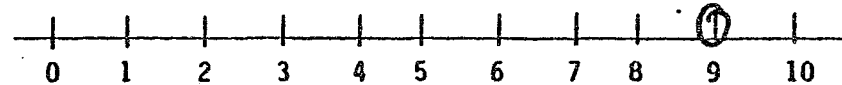
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INCREASE IN UNREST AND
FRUSTRATION OF WORK FORCE



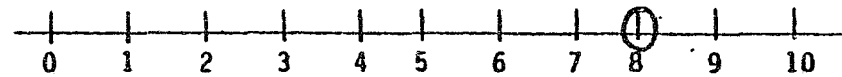
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EXECUTIVE DESIGN FOR INCREASED
PRODUCTIVITY, DECREASED COSTS,
AND INCREASED ACCOUNTABILITY



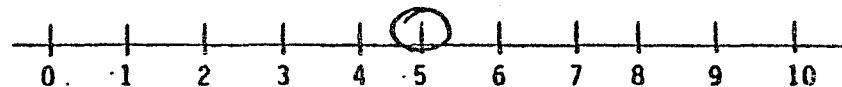
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MAJORITY OF WORK FORCE WILL
BE USING DRUGS ON A REGULAR
BASIS.



27

INCREASED AVERAGE AGE OF
POPULATION - WORKING



A Rating Form for NGT Final Voting

CB

No. Form
Flip Chart

Item Description

Relative Importance

Not Important

Very Important

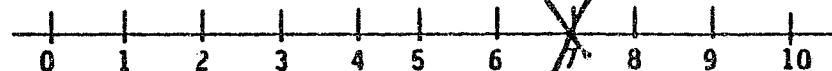
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Insufficient to support information



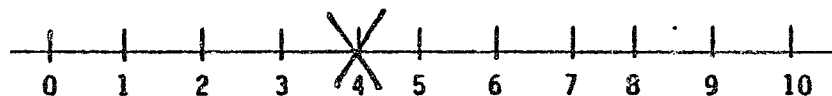
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Increased interest - work for



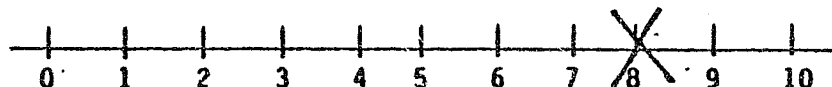
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Exec demand for increasing prod.



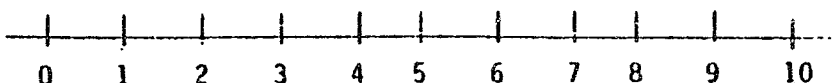
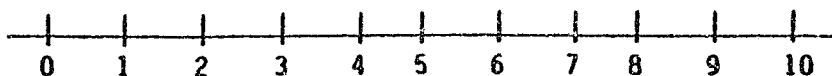
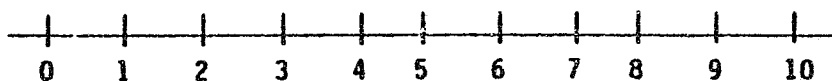
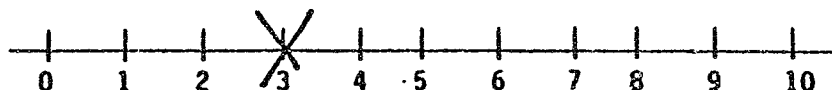
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Work pie on change



27

Increased AUG 28.



A Rating Form for NGT Final Voting

No. Form
Flip Chart

Item Description

Relative Importance

Not Important

Very Important

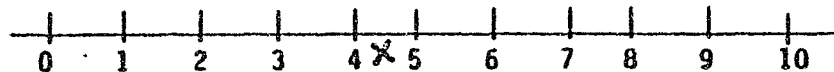
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Insufficient Funds



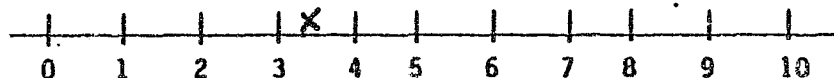
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Increased investment in local projects



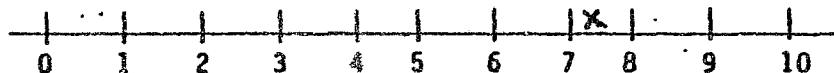
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Accountability factors



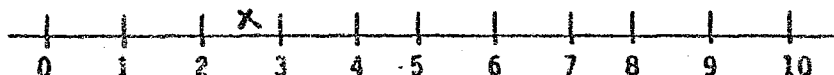
26

Drugs



27

Aging population



A Rating Form for NGT Final Voting

No. Form
Flip Chart

Item Description

Relative Importance

Not Important

Very Important

3 Insufficient money to support ^{infrastructure} ~~man~~ 0 1 2 3 4 5 6 7 8 ☒ 9 10

7 Increased unrest in work force 0 1 2 3 4 ☒ 5 6 7 8 9 10

22 dec. cost, & inc. accountability,
Executive demand for inc. prod. 0 1 2 3 4 5 6 7 8 9 ☒ 10

26 60% of ^{depts} work force will be using 0 1 2 3 4 5 6 7 ☒ 8 9 10

27 Inc. average age of population 0 1 2 ☒ 3 4 5 6 7 8 9 10

0 1 2 3 4 5 6 7 8 9 10

0 1 2 3 4 5 6 7 8 9 10

0 1 2 3 4 5 6 7 8 9 10

CROSS-IMPACT EVALUATION FORM

Suppose that this event with this probability actually occurred How would the probability of the events shown below be affected?

							Trends		
		#3	#7	#22	#26	#27	Reduced # of Middle Managers	Expectation of entry level employ.	Role change of current Mid. Ma
#3									
Insufficient Funds	90.71%		+90%	+64.28%	-8.57%	+14.2%	-50%	-45.71%	-10.71%
#7									
increased interest	94.28%	+50%		+57.14%	+42.85%	+12.85%	-5%	-32.85%	+2.85%
#22									
productivity	93.57%	+32.85%	+68.57%		+41.42%	+6.42%	-37.85%	-17.14%	+15.00%
#26									
dump	71.42%	+2.85%	+68.57%	+92.85%		-15.00%	-8.57%	-19.28%	-17.85%
#27									
increased age	89.29%	-12.85%	+4.28%	-1.42%	0		-10.00%	-9.28%	+1.42%

RV

CROSS-IMPACT EVALUATION FORM

Suppose that this event actually with this probability occurred How would the probability of the events shown below be affected?

							Trends		
		Funding	Salaries	Accidents	Drugs	Agony	Reduced # of Middle Managers	Expectation of entry level employ.	Role change of current Mid. Man.
Inefficient Exec.	91%	X	+100%	-50%	---	+20%	-50%	-75%	+0%
Increased unemployment	94%	+20%	X	+20%	+20%	-20%	+10%	+5%	+15%
Accidents	94%	-50%	+50%	X	-20%	---	+25%	+30%	+20%
Drugs	71%	---	+25%	-10%	X	---	+10%	+15%	---
Agony	89%	-40%	-50%	---	---	X	+40%	+40%	+40%

CROSS-IMPACT EVALUATION FORM

Suppose that this event with this probability actually occurred

..... How would the probability of the events shown below be affected?

							Trends		
		Insuff. monies avail.	Inc. unrest in work force	Executive demand	60% of work force	Inc. average age	Reduced # of Middle Managers	Expectation of entry level employ.	Role change of current Mid. Man.
Insuff. monies to support municipal infrastructure	91%	X	100%	100%	0%	0%	-40%	-60%	-50%
Inc. unrest in work force	94%	20%	X	100%	0%	0%	0	0	+30%
Executive demand for inc productivity, dec. costs, & inc accountability	94%	0%	20%	X	0%	0%	-60%	-10%	+60%
60% of work force will be using drugs	71%	0	80%	100%	X	0%	0	0	+10%
Inc. average age of population	89%	40%	10%	0	0	X	0	0	0

CROSS-IMPACT EVALUATION FORM

Suppose that this event actually occurred with this probability

..... How would the probability of the events shown below be affected?

							Trends		
		Increase in money	Decrease in money	Exact demand or in production	60% in days	increase in age of pop.	Reduced # of Middle Managers	Expectation of entry level employ.	Role change of current Mid. Manag.
Increase money to support basic structure	91	X	+100%	+100%	-10	-10	-100%	-50%	-50%
Decrease money in work force	94	+100%	X	+80%	+50%	-10	-50%	-50%	-50%
Exact demand of increased production	94	+100%	+100%	X	+70%	-10	-100%	-30%	-30%
60% in work force on days	71	+10	+80%	+100%	X	-10	-50%	-40%	-40%
Increase in age of population	89	+10	+10	+10	+10	X	-20%	-20	-20

G.D.

CROSS-IMPACT EVALUATION FORM

Suppose that this event with this probability actually occurred

..... How would the probability of the events shown below be affected?

							Trends		
		INSUF.	WORKFORCE	EXEC.	60%	AGE	Reduced # of Middle Managers	Expectation of entry level employ.	Role change of current Mid. Man.
INSUF. MONEY TO FUND GOVT	91% 100%	X	100% +80%	+75%	-90%	+70%	-50	-75	+90
WORKFORCE UNREST	94% +70%	X	X	+100%	+70%	+50%	+50	-10	+50
EXEC. DEMAND INCREASED PROP.	94% +50%	+75%	X	X	+90%	+75%	+30	+60	+80
60% DOPERS	71% -100%	+40%	+80%	X	X	-70%	0	0	+20
HIGHER AV. AGE	89% -100%	-80%	-90%	-10%	X	X	0	+50	0

GB

CROSS-IMPACT EVALUATION FORM

Suppose that this event actually occurred How would the probability of the events shown below be affected?

							Trends		
		Insufficient # TO Support Expansion	Increased Demand - Work Force	Excess demand for production	Wage Price on drop	Increased avg. age	Reduced # of Middle Managers	Expectation of entry level employ.	Role change of current Mid. Man.
Insufficient money to support expansion	91%	X	+100	+50	0	-10	-25%	0	20
Increased interest in work force	94%	+70%	X	-50	+50	10 0	-50	-20	25
Excess demand for increased productivity	94%	+50	+80	X	+50	-10	-20	-25	20
Wage Price on drop	71%	0	+80	-50	X	-50	-10	-20	50 20
Increased avg. age	89%	0	+50	-10	-10	X	+5	+10	-10

CROSS-IMPACT EVALUATION FORM

Suppose that this event actually occurred with this probability

..... How would the probability of the events shown below be affected?

							Trends		
		INSUFFIC. MONIES	INCREASE IN UNREST	INCR. PROD.	DRUGS	AGING	Reduced # of Middle Managers	Expectation of entry level employ.	Role change of current Mid. Mana.
INSUFFICIENT MONIES	91%	X	+100%	+100%	+50%	⊖	-10%	-10%	+10%
INCREASE IN UNREST	94%	+20%	X	+100%	+60%	⊖	⊖	-80%	+50%
INCREASED PRODUCTIVITY	94%	⊖	80%	X	80%	⊖	-80%	-95%	+60%
WORK FORCE ON DRUGS	71%	+100%	+100%	+100%	X	⊖	-10%	-40%	-50%
AGING OF POPULATION	89%	+50%	+20	+30%	+60%	X	-20%	-30%	⊖

6B

CROSS-IMPACT EVALUATION FORM

Suppose that this event actually occurred with this probability

How would the probability of the events shown below be affected?

							Trends		
		INSUFF. Resources	Increased Work	Probability Inc/Dec	USE OF DILLOS	Increased AGE of mgt	Reduced # of Middle Managers	Expectation of entry level employ.	Role change of current Mid. Mana.
Insufficient Resources	91%	X	+50	+75	+10	+70	-75 +75	-50 +50	-75 +75
Increased Work	94%	+50	X	+50	+50	+70	-25 +25	-75 +75	-50 +50
Increased Productivity	94%	+80	+75	X	+20	-10	-60 +60	-70 +70	-65 +65
Use of dillos in workforce	71%	+10	+75	+50	X	+25	0 +25	-50 +50	-50 +50
Increased AGE of mgt	89%	-50	+70	-50	-50	X	-75	-75	0

L.M.

EVENT EVALUATION FORM

EVENT STATEMENT	PROBABILITY			NET IMPACT ON THE ISSUE AREA (-10 to +10)	NET IMPACT ON LAW ENFORCE- MENT (-10 to +10)
	Year that Probability First Exceeds Zero	By 1995 (0-100)	By 2000 (0-100)		
#5 availability of computerized info. elimination.	1989	81.42%	88.57%	-5	-2.14
#6 Cottage industry	1992	60%	81.71%	+2.28	-1.14
#10 employee rights	1986	92.14%	94.28%	-.57	+4.42
#13 recentralization of decision making	1993	56.42%	73.57%	+3.28	+4.28
#19 Deregulation	1987	82.14%	86.42%	+2.28	-1.85

EVENT EVALUATION FORM

EVENT STATEMENT	PROBABILITY			NET IMPACT ON THE ISSUE AREA (-10 to +10)	NET IMPACT ON LAW ENFORCE- MENT (-10 to +10)
	Year that Probability First Exceeds Zero	By 1995 (0-100)	By 2000 (0-100)		
DEREGULATION - LAWS WILL CONTINUE TO CHANGE	86	100	0	8	2
INCREASING EMPLOYEE RIGHTS	86	100	0	+10	+10
AVAILABILITY OF COMPUTERIZED INFO WILL ELIMINATE NEED FOR MIDDLE MGR.	90	70	80	7	6
COTTAGE INDUSTRY	90	80	92	8	5
RECENTRALIZATION	95	50	50	9	8

EVENT EVALUATION FORM

EVENT STATEMENT	PROBABILITY			NET IMPACT ON THE ISSUE AREA (-10 to +10)	NET IMPACT ON LAW ENFORCE- MENT (-10 to +10)
	Year that Probability First Exceeds Zero	By 1995 (0-100)	By 1000 (0-100)		
Availability of Computerized info					
Cottage industry	1995	100	100	-5	-3
Increasing employee rights	1987	95	100	-3 #	-8
Centralization of decision making	2000	60	100	+5	+8
Deregulation	1986	100	100	-8	-1
Availability of computerized info	1990	100	100	-5	-1

EVENT EVALUATION FORM

EVENT STATEMENT	PROBABILITY			NET IMPACT ON THE ISSUE AREA (-10 to +10)	NET IMPACT ON LAW ENFORCE- MENT (-10 to +10)
	Year that Probability First Exceeds Zero	By 1995 (0-100)	By 2000 (0-100)		
Availability of computerized info elim need for mid mgrs.	1994	80	90	+5	+3
Tech in home media work at home comm place	1996	0	60	+2	0
Successing employee right	1986	100	100	-4	-4
Recent legislation of television making	1986	100	100	+5	+2
Deregulation	1986	100	100	+3	-3

211

EVENT EVALUATION FORM

EVENT STATEMENT	PROBABILITY			NET IMPACT ON THE ISSUE AREA (-10 to +10)	NET IMPACT ON LAW ENFORCE- MENT (-10 to +10)
	Year that Probability First Exceeds Zero	By 1995 (0-100)	By 2000 (0-100)		
#5 Burst of Computerized info	86	100	100	-2	-3
Tech in the home	98	10 ³⁰	70 ⁵⁰	-4	0
Inc. employee rights	86	100	100	-5	-5
Recentralization of decision making	93	50	80	-3	0
Deregulation - laws wot/change	86	100	100	+6	-2

EVENT EVALUATION FORM

EVENT STATEMENT	PROBABILITY			NET IMPACT ON THE ISSUE AREA (-10 to +10)	NET IMPACT ON LAW ENFORCE- MENT (-10 to +10)
	Year that Probability First Exceeds Zero	By 1995 (0-100)	By 2000 (0-100)		
Availability of computerized info will eliminate need FOR MIB MGT.	1995	100%	100%	+7	-10
Technology in the home makes work AT home common place.	1995	60%	70%	+5	-10
Increasing employee Rights	1990	50%	60%	-5	+7
Recentralization of Decision making	2000	50%	60%	+5	+7
Deregulation - laws will continue To change and be Driven by the market PLACE.	1987	70%	80%	+2	+1

EVENT EVALUATION FORM

EVENT STATEMENT	PROBABILITY			NET IMPACT ON THE ISSUE AREA (-10 to +10)	NET IMPACT ON LAW ENFORCE- MENT (-10 to +10)
	Year that Probability First Exceeds Zero	By 1995 (0-100)	By 2000 (0-100)		
Availability of computerized info will eliminate need for mid mgr.	1986	100%	100%	-8	-8
Technology in the home makes work at home commonplace.	1986	100%	100%	+4	0
Increasing employees right.	1986	100%	100%	-7	-7
Recentralization of decisionmaking	1990	60%	75%	+4	+5
Deregulation - laws will continue to change & be driven by the market place.	1986	100%	100%	-9	-8

LM

EVENT EVALUATION FORM

EVENT STATEMENT	PROBABILITY			NET IMPACT ON THE ISSUE AREA (-10 to +10)	NET IMPACT ON LAW ENFORCE- MENT (-10 to +10)
	Year that Probability First Exceeds Zero	By 1995 (0-100)	By 2000 (0-100)		
#5 AVAILABILITY OF COMPUTERIZED INFO WILL ELIMINATE NEED FOR MD MGR	1986	95%	50%	-5	-2
TECHNOLOGY IN THE HOME	1986	50%	100%	-8	0
INCREASED EMPLOYEE RIGHTS WILL DECREASE DEPENDENCE ON UNIONS	1986	100%	100%	+10	+10
RECENTRALIZATION OF DECISION MAKING	1990	95%	50%	-2	0
DEREGULATION	1995	5%	25%	0	0

A Rating Form for NGT Final Voting

Lyn

No. Form
Flip Chart

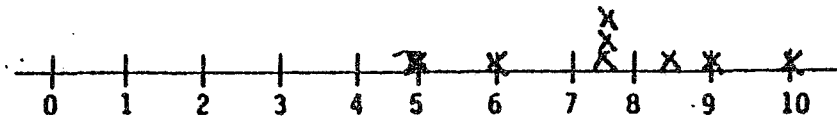
Item Description

Relative Importance

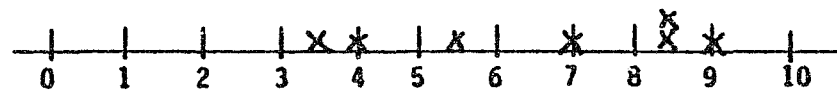
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Very Important

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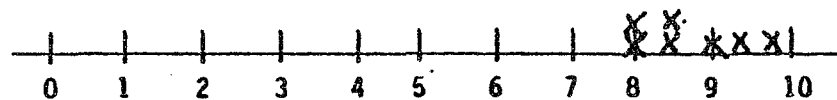


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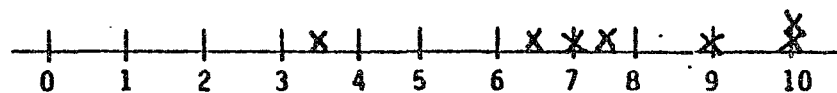


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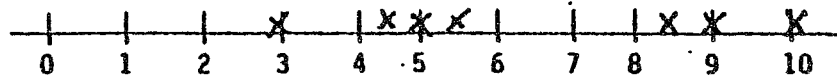
Increasing employee rights



13



19



A Rating Form for NGT Final Voting

211

No. Form
Flip Chart

Item Description

Relative Importance

Not Important

Very Important

~~19~~ 5 Availability of Computerized info 0 1 2 3 4 5 6 7 8 9 10

~~18~~ 6 Technology in the Home 0 1 2 3 4 5 6 7 8 9 10

10 Increasing employees rights 0 1 2 3 4 5 6 7 8 9 10

13 Decentralization of decision making 0 1 2 3 4 5 6 7 8 9 10

19 Deregulation. laws will change - 0 1 2 3 4 5 6 7 8 9 10

0 1 2 3 4 5 6 7 8 9 10

0 1 2 3 4 5 6 7 8 9 10

0 1 2 3 4 5 6 7 8 9 10

A Rating Form for NGT Final Voting

No. Form
Flip Chart

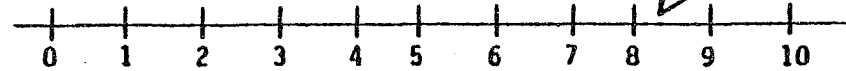
Relative Importance

Not Important

Very Important

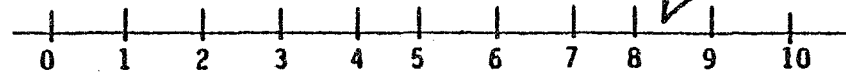
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Availability of computerized info
will eliminate need for mkt mgt.



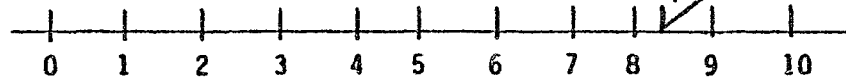
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Technology in the home makes
work at home commonplace.



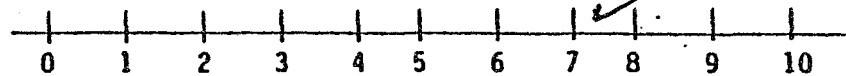
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increasing employees rights



13

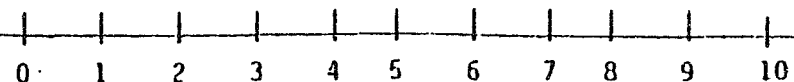
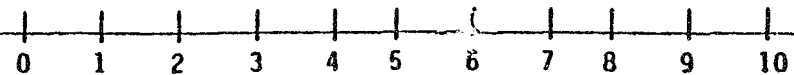
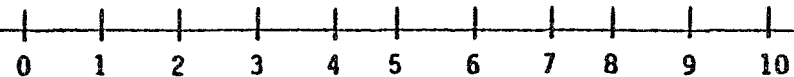
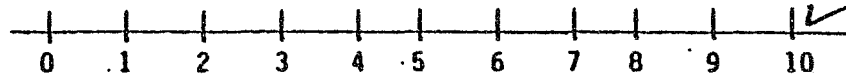
Recentralization of decisionmaking



- 34 -

19

Deregulation - laws will continue
to change and be driven by the
market place.



A Rating Form for NGT Final Voting

No. Form
Flip Chart

Relative Importance

Not Important

Very Important

5

Availability of computerized info
will eliminate need for M.D. H&A



6

Technology in the home makes work
at home common place



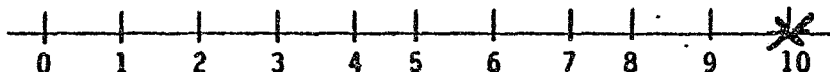
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Increasing employee rights



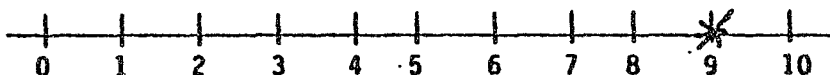
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Recentralization of Decision
making



19

Deregulation - laws will
continue to change and be
driven by the market place



A Rating Form for NGT Final Voting

L.M.

No. Form
Flip Chart

Relative Importance

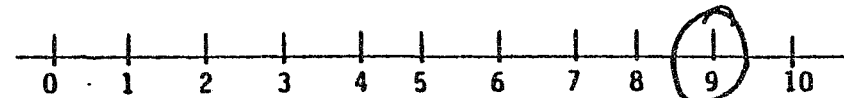
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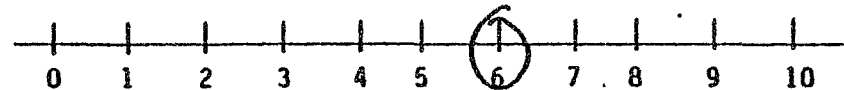
19 DEREGULATION - LAWS WILL CONTINUE
TO CHANGE =



10 INCREASING EMPLOYEE RIGHTS



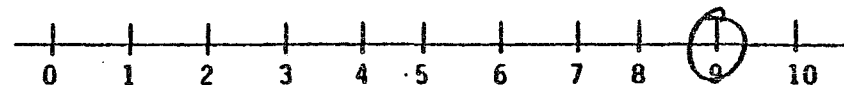
5 AVAILABILITY OF COMPUTERIZED
INFO. WILL ELIMINATE NEED FOR
MIDDLE MANAGER



6 COTTAGE INDUSTRY



13 RECENTRALIZATION



A Rating Form for NGT Final Voting

No. Form
Flip Chart

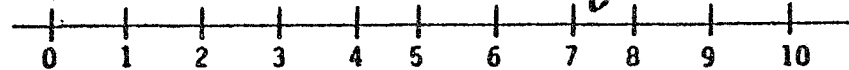
Relative Importance

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Very Important

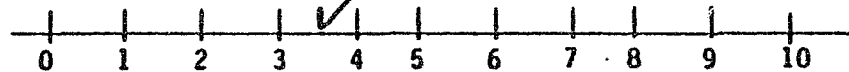
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AVAILABILITY OF COMPUTERIZED INFO
WILL ELIMINATE NEED FOR MD HGR.



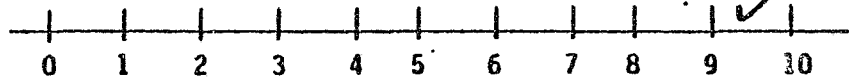
6

TECHNOLOGY IN HOME



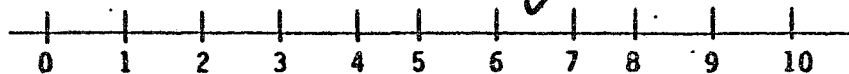
16

INCREASED ENV. RIGHTS WILL
DECREASE DEPENDENCE ON LOANS



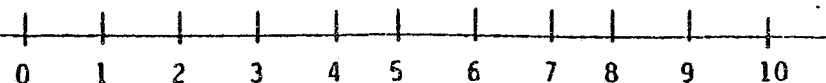
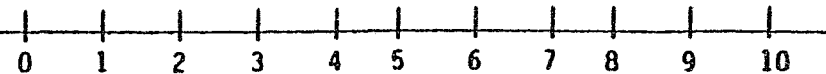
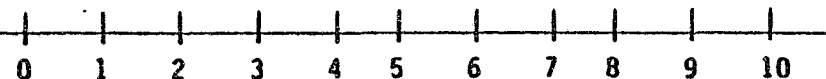
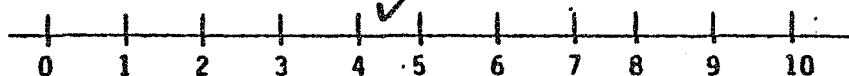
13

RECENTRALIZATION OF DECISION MAKING



19

DEREGULATION



A Rating Form for NGT Final Voting

No. Form
Flip Chart

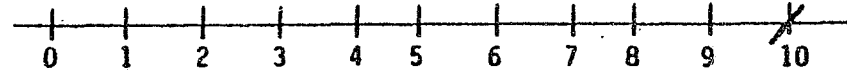
Relative Importance

Not Important

Very Important

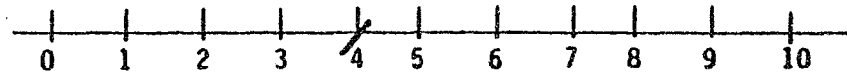
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Availability of computerized
info will elim need for
mid mgmt



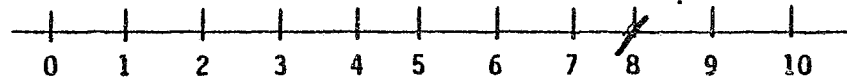
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Tech in work makes work at
home commonplace.



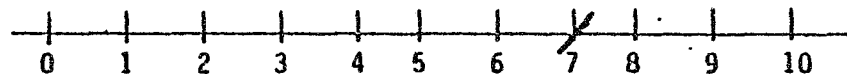
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Increasing employee rights



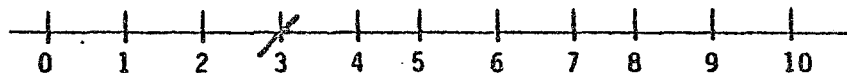
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Decentralization of decision
making



19

Self-regulation



A Rating Form for NGT Final Voting

No. Form
Flip Chart

Item Description

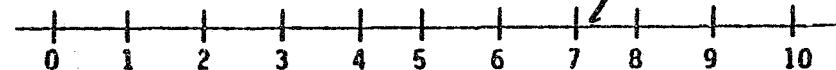
Relative Importance

Not Important

Very Important

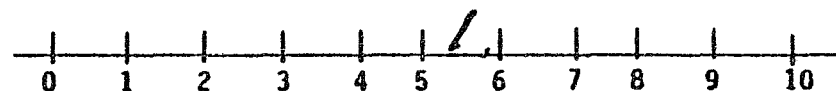
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Availability of Computerized info



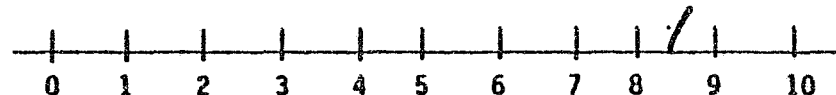
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Cottage industry



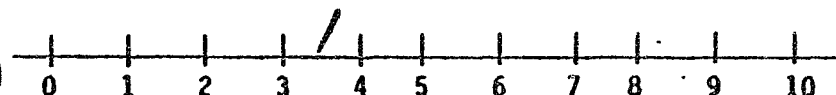
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Increasing employee rights



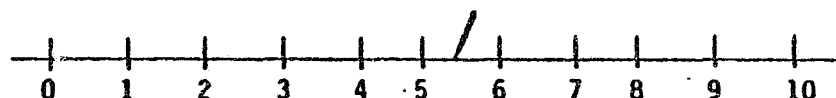
13

Decentralization of decision making



19

Deregulation



LM.

CROSS-IMPACT EVALUATION FORM

Suppose that this event actually occurred How would the probability of the events shown below be affected?

							Trends		
		5	6	10	13	19	Reduced # of Middle Managers	Expectation of entry level employ.	Role change of current Mid. Manag.
#1	88.5%	X	+56.6%	+5.83%	+30%	+16.66%	-55%	-52.5%	+13.33%
#6	81.7%	+37.5%	X	-8.33%	+9.16%	-15.00%	0%	+8.33%	+2.5%
#10	94.28%	+3.33%	+6.66%	X	-26.66%	+7.5%	+6.66%	+23.33%	+5.83%
#13	73.5%	-32.5%	+6.66%	+18.33%	X	+6.66%	-24.16	-16.66%	-25.00%
#19	86.4%	-8.33%	-4.16%	-4.16%	+10.83%	X	-35.83%	+30.00%	-14.16%

CROSS-IMPACT EVALUATION FORM

Suppose that this event actually occurred with this probability.....

..... How would the probability of the events shown below be affected?

							Trends		
		Probability info. client needed	Teach in home time	Screening employee right	Recent body decision making	Regulation	Reduced # of Middle Managers	Expectation of entry level employ.	Role change of current Mid. Mana.
Avail. of computerized info client need for mid mgmt.	81.4	X	+10%	0	-50%	0	-25%	-30%	+75%
Teach in home makes work at home commonplace	71.4	+25%	X	0	+50%	0	+25%	+25%	+50%
Screening employee right	94.3	0	0	X	-25%	+75%	0	+75%	-30%
Centralization of decision making	73.6	-50%	+25	-40%	X	+75%	-50%	-50%	-60%
Regulation	86.4	+40%	0	+40%	+75%	X	-25%	+70%	+40%

CROSS-IMPACT EVALUATION FORM

Suppose that this event actually occurred with this probability

..... How would the probability of the events shown below be affected?

							Trends		
		computer	costs	employee rights	regulation	Manag.	Reduced # of Middle Managers	Expectation of entry level employ.	Role change of current Mid. Manag.
availability of computerizing	81.4	X	+40	+20	+50	+40	0	-20	+50
Costs industry	71.4	-20	X	0	0	-10	-20	0	-10
Increasing employee rights	94.3	0	-20	X	-20	-50	-10	0	+50
Regulation of decision making	73.6	+40	-20	+40	X	+40	+10	0	+10
Deregulation	86.4	-40	0	-50	+20	X	-20	+10	0

CROSS-IMPACT EVALUATION FORM

Suppose that this event actually occurred with this probability

..... How would the probability of the events shown below be affected?

		How would the probability of the events shown below be affected?					Trends			
		AVAIL of computers info into STIMULUS	(B)	(C)	(D)	(E)	Reduced # of Middle Managers	Expectation of entry level employ	Role change of current Mid. Manag	
(A)	AVAIL of computers info into well elim. Need for MID MGT	81.4	X	+75%	+35%	0	+10%	-75%	-50	+100%
(B)	Tech in the home makes work at home commonplace	71.4	+60%	X	-75%	+15%	0	+85%	+95%	+100%
(C)	Increasing employee Rights	94.3	-20%	+100%	X	-45%	0	0	0	0
(D)	Decentralization of Decision making	73.6	+25%	+75%	+45%	X	+45%	+50%	-30%	-50%
(E)	Deregulation - Govt will continue to change and be driven by the	86.4	+95%	+45%	+65%	0	X	-10%	+15%	-45%

2111

CROSS-IMPACT EVALUATION FORM

Suppose that this event with this probability actually occurred How would the probability of the events shown below be affected?

							Trends		
		Computer Info	Tech in Home	True employee rights	Reevaluation of decision	Derogation	Reduced # of Middle Managers	Expectation of entry level employ.	Role change of current Mid. Mana.
Computerized info	91.4	X	+70%	0	+80	+20	-30	-40	+30
Tech in Home	71.4	+40	X	-50	+30	-30	+20	+10	-30
True employee rights	91.3	+40	-30	X	+20	-30	+10	+10	+40
Reevaluation of decision	73.6 81.4 80.4	-50	-20	-10	X	-20	-30	+20	+20
Derogation	96.4	+30	-20	-30	+20	X	+10	+20	+20

211

CROSS-IMPACT EVALUATION FORM

Suppose that this event with this probability actually occurred

..... How would the probability of the events shown below be affected?

							Trends		
		COMPUTER INFO CLIM MGR	COMPUTER IN MGR	EMPLOYEE RIGHTS	Deregulation	Decentralization of Decision	Reduced # of Middle Managers	Expectation of entry level employ.	Role change of current Mid. Mgr.
COMPUTER INFO CLIMATE NEED FOR MGR	91.4	X	+70%	-76%	0	+76%	-100	-75	-75
COMPUTER IN MGR	71.4	+75%	X	+75%	0	+50%	-50	-50	-75
EMPLOYEE RIGHTS	91.3	0	+56%	X	+10%	+56%	+50	+75	+75
Deregulation	86.4	-60%	+80%	+75%	X	0	-25	0	0
Decentralization of Decision	73.6	-76%	+50%	0	+56%	X	-50	-25	-50

CROSS-IMPACT EVALUATION FORM

Suppose that this event with this probability actually occurred

..... How would the probability of the events shown below be affected?

							Trends		
		Availability of Computer	Technology in the home	Increasing employee rights	Decentralization of decision making	deregulation - laws will change	Reduced # of Middle Managers	Expectation of entry level employ.	Role change of current Mid. Man.
Availability of computer Mfg will eliminate need for mid mgmt.	81.4	X	+75%	0	-100	-100	-100	-100	-100
Technology in the home makes work at home commonplace	71.4	+75	X	0	-100	-100	-60	-30	-20
Increasing employee rights	94.3	0	0	X	-100	0	-10	-20	-20
decentralization of decision making	73.6	-100	-100	0	X	-100	-100	0	-30
deregulation - laws will continue to change and be driven by the market	86.4	-100	-100	0	-100	X	-100	+30	-50

L/P

CROSS-IMPACT EVALUATION FORM

Suppose that this event actually occurred with this probability How would the probability of the events shown below be affected?

							Trends		
							Reduced # of Middle Managers	Expectation of entry level employ.	Role change of current Mid. Manag.
		4	5	7	12	19			
4	100%	X	-5%	+78%	+58%	+88%	-25%	-29%	0%
5	71.2%	+40%	X	+36%	-17%	+61%	-12%	+11%	-10%
7	100	+71%	+33%	X	+20%	+58%	-16%	0%	-25%
12	62.1%	+41%	-12%	+17%	X	+29%	-10%	-6%	-16%
19	96.7%	+61%	+50%	+56%	+46%	X	0	+22%	+31

CROSS-IMPACT EVALUATION FORM

Suppose that this event with this probability actually occurred

..... How would the probability of the events shown below be affected?

							Trends		
		Computer	Mid Generation	Specialized	Even Less	High Touch	Reduced # of Middle Managers	Expectation of entry level employ.	Role change of current Mid. Manag.
Greater reliance on computerization	100%	X	0	+100	0	+100	-50 -50	+50	+50
Mid generation	98%	+100	X	+100	-50	+100	-10	0	-10
Increased specialization	100%	+100	+100	X	-50 None	-0-	-50 -50	0	-10
Mid manager even less	68%	+100	-50	-50	X	+50	-50 -50	-50	-10
High Touch	100%	+100	+100	+100	+50 +100	X	0 0	+50	+10

L.P.

CROSS-IMPACT EVALUATION FORM

Suppose that this event actually occurred with this probability How would the probability of the events shown below be affected?

							Trends		
		COMPUTERIZATION	ME GENERATION	SPECIALIZATION	ADV. TECH	GREATER TECH = HIGH TOUCH	Reduced # of Middle Managers	Expectation of entry level employ.	Role change of current Mid. Manag.
GREATER RELIANCE ON COMPUTERIZATION	100	X	-25	+100	+100	+100	+50	-50	+25
ME GENERATION	98	0	X	-25	-50	+60	-50	+75	-50
INCREASE IN SPECIALIZATION	100	+100	0	X	+100	+100	+10	0	-20
ADVANCE TECH CAUSE MID MGR EARN LESS	60	0	-100	0	X	-25	+50	+50	-20
GREATER TECH = NEED HIGH TOUCH	100	+25	+25	+80	+80	X	0	+25	+50

LEP

CROSS-IMPACT EVALUATION FORM

Suppose that this
event actually
with this probability
occurred

..... How would the probability of the events
shown below be affected?

							Trends		
		GREATER RELIANCE ON COMPUTERS & OTHER MODERN TECH.	ME GENERATION STRUCTURE OF ORG. ...	INCREASE IN SPECIALIZATION...	ADVANCED TECH. WILL CAUSE LOWER PAY OF MGRS THAN SUBORDINATES	GREATER TECH. = MORE ADV. MGRS.	Reduced # of Middle Managers	Expectation of entry level employ.	Role change of current Mid. Manager
GREATER RELIANCE ON COMPUTERS, ETC.	100%	X	0%	+80%	20%	+100%	-50%	-50%	-30
ME GENERATION....	98%	+100%	X	+90%	-10%	+100%	-10%	-60%	-20%
INC. IN SPECIALIZATION	100%	+100%	-5%	X	-10%	+100%	-25%	-25%	-75%
ADV. TECH CAUSE LOWER PAY.	68%	+100%	+60%	+75%	X	+100%	-25%	-25%	+10%
GREATER TECH. = MORE ADV. MGRS.	100%	+80	-30%	+70%	-10%	X	+10%	+10%	+50%

CROSS-IMPACT EVALUATION FORM

Suppose that this event actually occurred with this probability

..... How would the probability of the events shown below be affected?

							Trends		
		Greater Reliance on computers	"me" generation - emphasis	Increase Complexity/specialization	Advance Technology - earn less	Greater Technology - high time	Reduced # of Middle Managers	Expectation of entry level employ.	Role change of current Mid. Man.
Greater reliance on computerization, etc.	100%		-10	+30	-30	+40	-50	+30	-20
"me" Generation will become mid-mgrs & create... conflicts	98%	0		0	+10	+30	+10	+40	+30
Increase of complexity/specialization	100%	+70	-10		+20	+30	+10	+40	+10
Advance technology will cause mid-managers to earn less	68%	+20	-50	0		-40	0	-30	-30
Greater Technology equals greater need for high time mgrs.	100%	+20	-20	-30	+50		+30	+40	+30

CROSS-IMPACT EVALUATION FORM

Suppose that this event actually occurred with this probability

..... How would the probability of the events shown below be affected?

							Trends		
		Comp	Mc Gen.	Specialization	Advanced Tech	Greater Tech	Reduced # of Middle Managers	Expectation of entry level employ.	Role change of current Mid. Manag.
Computerization	100%	X	10%	80%	100%	100%	-25%	-25%	-25%
"Me" Generation	100%	0	X	15%	15%	15%	0	0	0
Specialization	100%	0	80%	X	80%	60%	-25%	-15%	-30%
Advanced Tech	100%	0	80%	60%	X	60%	-25%	-15%	-30%
Greater Tech	100%	0	80%	60%	60%	X	-40%	-15%	+15%

No. Form
Flip Chart

Item Description

Relative Importance

Not Important

Very Important

(4)	GREATER RELIANCE ON COMPUTERS, TECH., DATA A.I.	0	1	2	3	4	5	6	7	8	9	10
5	WE GENERATION	0	1	2	3	4	5	6	7	8	9	10
7	SPECULATION	0	1	2	3	4	5	6	7	8	9	10
12	ANALOG.	0	1	2	3	4	5	6	7	8	9	10
19	HIGH-TOUCH	0	1	2	3	4	5	6	7	8	9	10
		0	1	2	3	4	5	6	7	8	9	10
		0	1	2	3	4	5	6	7	8	9	10
		0	1	2	3	4	5	6	7	8	9	10

A Rating Form for NGT Final Voting

LEP

No. Form
Flip Chart

Item Description

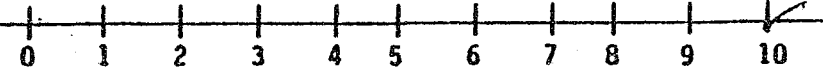
Relative Importance

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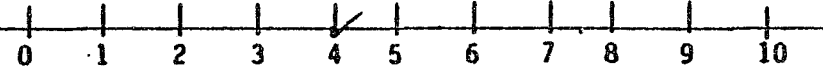
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GREATER RELIANCE ON COMP., TECH., DATA &
ARTIFICIAL INTELLIGENCE.



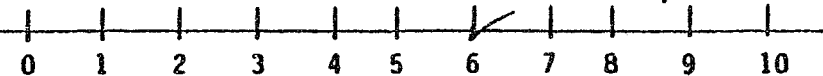
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ME. GEN. WILL BECOME MID-MGRS & CREATE DRG.
CONFLICTS.



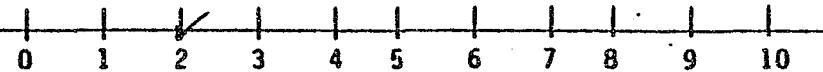
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INCREASE IN SPECIALIZATION



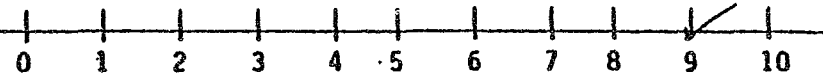
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ADV. TECH. WILL CAUSE MID-MGRS TO EARN LESS
THAN THEIR SPECIALIZED SUBORDINATES.



19

GREATER TECH. EQUALS GREATER NEED FOR
HIGH TOUCH MGMT.



A Rating Form for NGT Final Voting

No. Form
Flip Chart

Item Description

Relative Importance

Not Important

Very Important

4

Computerization reliance

0 1 2 3 4 5 6 7 8 9 10

12

mid-mgr earn less
~~high generation~~

0 1 2 3 4 5 6 7 8 9 10

5

"me" generation

0 1 2 3 4 5 6 7 8 9 10

7

increase specialization

0 1 2 3 4 5 6 7 8 9 10

19

"high" touch

0 1 2 3 4 5 6 7 8 9 10

A Rating Form for NGT Final Voting

No. Form
Flip Chart

Item Description

Relative Importance

Not Important

Very Important

4 Computerization 0 1 2 3 4 5 6 7 8 9 10 ✓

5 Me Generation 0 1 2 3 4 5 6 7 8 9 10 ✓

7 Increased Specialization 0 1 2 3 4 5 6 7 8 9 10 ✓

12 Advance Technology. 0 1 2 3 4 5 6 7 8 9 10 ✓

19 Greater Technology. 0 1 2 3 4 5 6 7 8 9 10 ✓

_____ _____ 0 1 2 3 4 5 6 7 8 9 10

_____ _____ 0 1 2 3 4 5 6 7 8 9 10

_____ _____ 0 1 2 3 4 5 6 7 8 9 10

A Rating Form for NGT Final Voting

No. Form
Flip Chart

Relative Importance

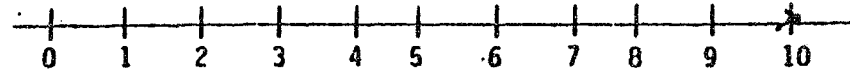
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Very Important

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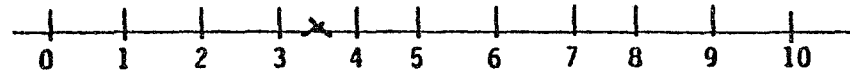
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Greater reliance on computerization,
technology, data, artificial intell.



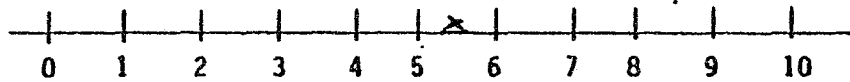
5

"Men" generation will become
mid-managers and create
org. goals & objectives that conflict



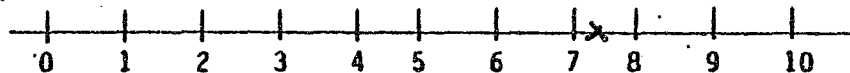
7

Increase of specialization



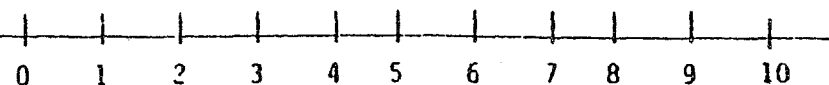
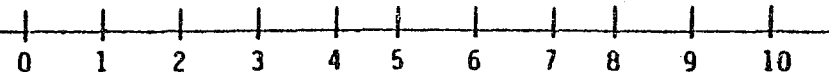
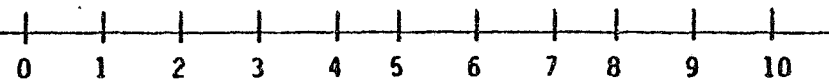
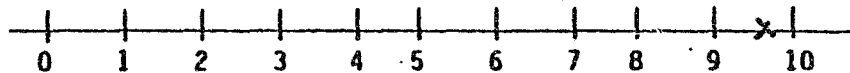
12

Advanced technology will
cause mid-managers to
earn less than their
specialist subordinates.



19

Greater technology equals
greater need for "High-
Touch" mgmt.



A Rating Form for NGT Final Voting

No. Form
Flip Chart

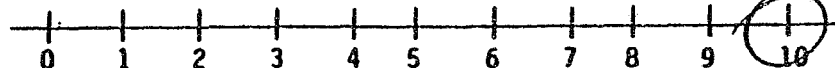
Relative Importance

Not Important

Very Important

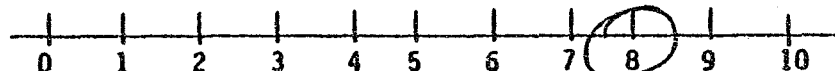
4

GREATER RELIANCE ON COMPUTERIZATION,
ETC



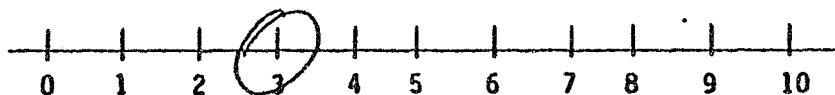
5

"ME" GENERATION



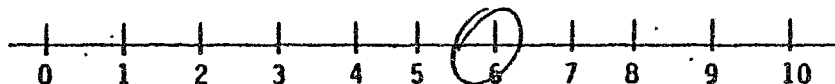
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INCREASE IN SPECIALIZATION



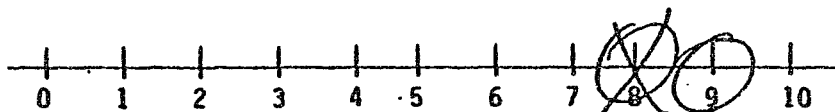
12

ADVANCE TECH WILL CAUSE MEERS
TO EARN LESS



19

GREATER-TECH = NEEDED MIGHT DOUGH



A Rating Form for NGT Final Voting

No. Form
Flip Chart

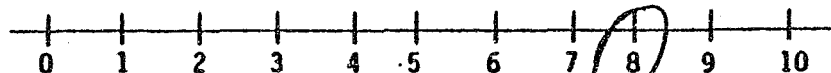
Relative Importance

Not Important

Very Important

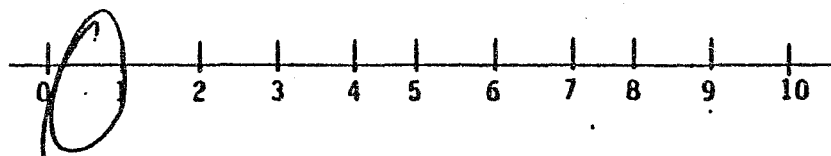
4

Greater reliance on computerization, technology, data and artificial intelligence



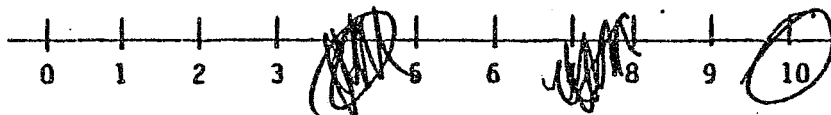
5

The generation will become mid-major and create org goals & objectives conflicts.



7

Increase of specialization



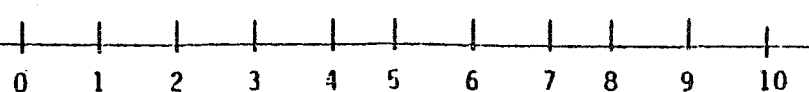
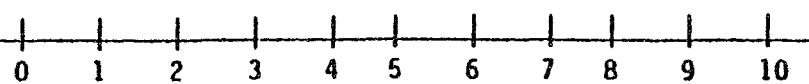
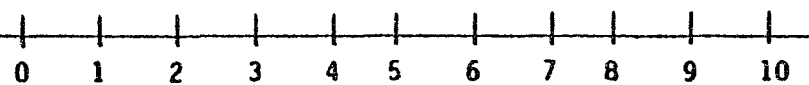
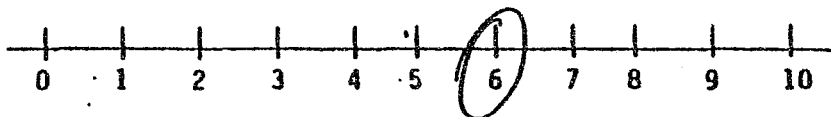
12

Advance of tech. will cause mid-major to even less than their specialized subordinates



19

Greater tech. equals greater need for "high touch" mgt.



A Rating Form for NGT Final Voting

No. Form
Flip Chart

Item Description

Relative Importance

Not Important

Very Important

4	Greater reliance on computerization, tech., data & artificial intelligence	0 1 2 3 4 5 6 7 8 9 10
5	"me" generation will become mid-managers & secrets --- conflicts	0 1 2 3 4 5 6 7 8 9 10
7	Increase of complexity/specialization of medicine	0 1 2 3 4 5 6 7 8 9 10
12	Advanced technology will cause mid-managers to earn less than subordinates	0 1 2 3 4 5 6 7 8 9 10
19	Greater technology equals greater need for high touch management	0 1 2 3 4 5 6 7 8 9 10
		0 1 2 3 4 5 6 7 8 9 10
		0 1 2 3 4 5 6 7 8 9 10

L.P.

EVENT EVALUATION FORM

EVENT STATEMENT	PROBABILITY			NET IMPACT ON THE ISSUE AREA (-10 to +10)	NET IMPACT ON LAW ENFORCE- MENT (-10 to +10)
	Year that Probability First Exceeds Zero	By 1995 (0-100)	By 2000 (0-100)		
4	1986	100%	100%	+8.42	+8
5	1988	70.57%	79.28%	-5.14	-6.71
7	1987	91.42%	100%	+4.71	+4
12	1992	56.42% 51.42%	67.14%	-3.71	-1.71
19	1988	83.57%	96.42%	+4.28	+4.85

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EVENT EVALUATION FORM

EVENT STATEMENT	PROBABILITY			NET IMPACT ON THE ISSUE AREA <small>(-10 to +10)</small>	NET IMPACT ON LAW ENFORCE- MENT <small>(-10 to +10)</small>
	Year that Probability First Exceeds Zero	By 1995 (0-100)	By 2000 (0-100)		
4 Computerization reliance	now 1986	100 40	100 40	+10	+10
12 Mid mgr earns less	now 1986	100 60	100 60	-8	0
5 "me" generation	now 1986	100 40	100 40	-6	-5
7 Increase specialization	now 1986	100 40	100 40	+6	+2
14 high touch	now 1986	100 40	100 40	+3	+2

EVENT EVALUATION FORM

EVENT STATEMENT	PROBABILITY			NET IMPACT ON THE ISSUE AREA (-10 to +10)	NET IMPACT ON LAW ENFORCE- MENT (-10 to +10)
	Year that Probability First Exceeds Zero	By 1995 (0-100)	By 2000 (0-100)		
Greater reliance on computerization, technology, data & artificial intelligence	1986	100	100	+5	+5
"me" generation will become mid-managers & create - - - conflicts	1986	50 100	50 100	-6	-9
Increase of complexity specialization e.g. medicine	1986	100	100	+3	+3
Advanced technology will cause mid-managers to earn less than subordinates	1986	10	10	-8	-9
Greater technology equals greater need for high level management	1986	50	75	+5	+6

EVENT EVALUATION FORM

EVENT STATEMENT	PROBABILITY			NET IMPACT ON THE ISSUE AREA (-10 to +10)	NET IMPACT ON LAW ENFORCE- MENT (-10 to +10)
	Year that Probability First Exceeds Zero	By 1995 (0-100)	By 2000 (0-100)		
<i>Greater reliance on computerization</i>	1990	100	100	+10	+10
<i>The generation</i>	1990	100	100	-1	-10
<i>Increase specialization</i>	1986	100	100	+8	+4
<i>Mid-Mgrs can lose their specialized subordinates</i>	1995	60	100	-5	-2
<i>High Touch</i>	1990	100 60	100	+2	+6

EVENT EVALUATION FORM

EVENT STATEMENT	PROBABILITY			NET IMPACT ON THE ISSUE AREA (-10 to +10)	NET IMPACT ON LAW ENFORCE- MENT (-10 to +10)
	Year that Probability First Exceeds Zero	By 1995 (0-100)	By 2000 (0-100)		
4 GREATER RELIANCE ON COMP, TECH, DATA & ARTIFICIAL INTELLIGENCE.	1986	100%	100%	+10	+10
5 ME GENERATION WILL BECOME MGRS & FUCK UP THE ORG.	1990	5%	10%	-5	-8
7 INCREASE IN SPECIALIZATION	1990	90%	100%	+6	+8
12 ADV. TECH. WILL CAUSE MID-MGRS TO EARN LESS THAN SUBORDINATES.	1998	0%	0%	-10	-10
19 GREATER TECH. EQUALS GREATER NEED FOR HIGH TOUCH MGMT.	1990	100%	100%	+10	+10

L.P.

EVENT EVALUATION FORM

EVENT STATEMENT	PROBABILITY			NET IMPACT ON THE ISSUE AREA (-10 to +10)	NET IMPACT ON LAW ENFORCE- MENT (-10 to +10)
	Year that Probability First Exceeds Zero	By 1995 (0-100)	By 2000 (0-100)		
GREATER RELIANCE ON COMPUTERIZATION	1986	100%	100%	+6	+8
"ME" GENERATION	1990	95%	95%	-8	-10
INCREASE IN SPECIALIZATION	1986	100%	100%	0	+1
ADV. TECH WILL CAUSE MGRS TO EARN LESS	1995	75%	80%	-2	0
GREATER TECH = MORE HIGH TECH	1992	95%	100% 100%	-5	-5

EVENT EVALUATION FORM

EVENT STATEMENT	PROBABILITY			NET IMPACT ON THE ISSUE AREA <small>(-10 to +10)</small>	NET IMPACT ON LAW ENFORCE- MENT <small>(-10 to +10)</small>
	Year that Probability First Exceeds Zero	By 1995 (0-100)	By 2000 (0-100)		
<i>Greater reliance on computerization & technology.</i>	<i>1986</i>	<i>100%</i>	<i>100%</i>	<i>+8</i>	<i>+8</i>
<i>"Me" generation.</i>	<i>1990</i>	<i>100%</i>	<i>100%</i>	<i>-5</i>	<i>-5</i>
<i>Increase in Specialization.</i>	<i>1990</i>	<i>70%</i>	<i>100%</i>	<i>+5</i>	<i>+5</i>
<i>Advance technology will cause mid mgrs to earn less.</i>	<i>1995</i>	<i>70%</i>	<i>80%</i>	<i>+2</i>	<i>+2</i>
<i>Greater tech equals greater need for High Touch mgmt.</i>	<i>1986</i>	<i>100%</i>	<i>100%</i>	<i>+10</i>	<i>+10</i>

EVENT EVALUATION FORM

EVENT STATEMENT	PROBABILITY			NET IMPACT ON THE ISSUE AREA (-10 to +10)	NET IMPACT ON LAW ENFORCE- MENT (-10 to +10)
	Year that Probability First Exceeds Zero	By 1995 (0-100)	By 2000 (0-100)		
4 Computerization	1986	100%	100%	+10	+5
5 "Mc" Generation	1990	100%	100%	-5	0
7 Increased Specialization	1986	80%	100%	+5	+5
12 Advanced Technology	1992	80%	100%	+5	+5
19 Greater Technology	1990	80%	100%	+5	+5