The European Way to Lean Management

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Lean management is an integrated set of attitudes and decision and action methods with which a firm can achieve sustainable competitive advantages and increase its value in a turbulent environment. In 1992 lean management became a major priority for top management in German and Austrian firms. The article is written from the standpoint of strategic management and presents preliminary lessons to be learned from the experience in progress in leading European firms. © 1994 John Wiley & Sons, Inc.

JAPANESE AND EUROPEAN WAYS TO HIGH TECHNOLOGY AND LEAN MANAGEMENT

The Ford production system in the 1970s was the model generally adopted by European (Fig. 1), U.S. and Japanese firms for mass production; the model is based on standardized products, economies of scale, experience curves, rigid automation, unskilled labor force, and large factories. At the beginning of the 1980s two systems emerged from the Ford production system: the "Japanese way" and the "European way."

The Japanese way, typically the Toyota production system, emphasized the organizational and managerial aspects of mass production:

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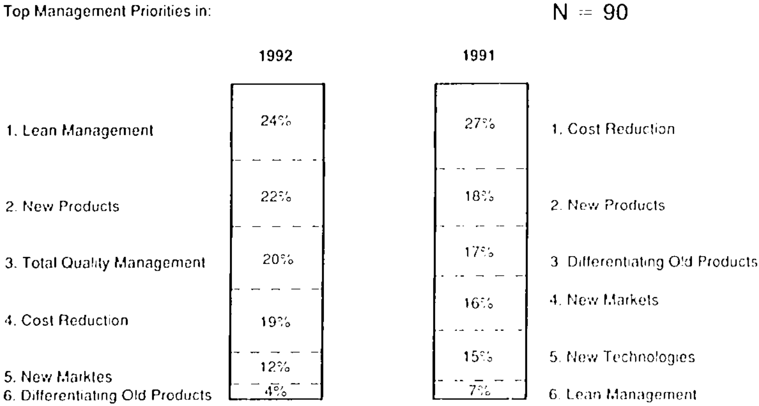

Figure 1. Top management priorities in selected German and Austrian companies *Source:* Institut für Unternehmungsführung (1993).

reduction of inventories and process time, just-in-time, continuous improvement, skilled labor force, and total quality management (TQM). The model works very efficiently under the conditions of an absolutely cooperative environment and a total dedication to work of all employees.

The European (and American) way is based on the idea that only through technological innovation can productivity and flexibility be increased. This idea turned out to be correct, but it was not sufficient to increase the quality of the production according to customer expectations.

Figure 2 shows that the Japanese derivation from the Ford production system is more a system of management than of technology; in contrast, the European system emphasizes technology over management. Both ways have as a goal the integrated factory, characterized by lean management and high technology.

The integrated factory, in which high technology and lean management build a coherent system for continuously improving productivity, flexibility, and quality for maximizing customer satisfaction, has rediscovered the central role of human resources, the delegation of authority top-down, the empowerment of flexible, multidisciplinary teams, process management, and the involvement of workers and employees in entrepreneurial decision making. In the integrated factory, flexibility is not the most important factor, as it is in flexible automation, but one out of several other factors to be harmonized with the rest and, in any case, to be subordinated to total quality. The European car makers, from FIAT to Mercedes, Volkswagen, and Re-

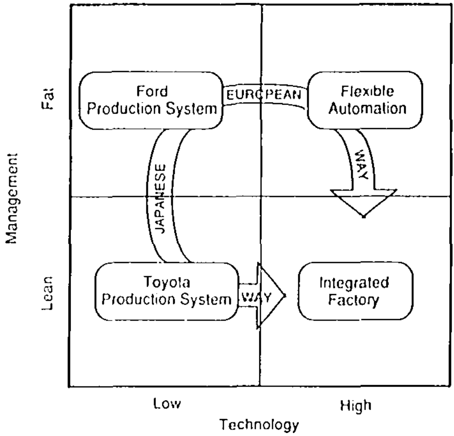

Figure 2. The European and the Japanese way to the integrated factory

nault, are moving from flexible automation, based on bureaucratic structures, to the integrated factory in which the obsessive dedication to work as practiced by the Japanese firms is an important, but no longer a critical, factor of success. All European car manufacturers are trying to reduce the gap between growth in turnover and number of employees (Fig. 3).

The aim, as expressed in Figure 4, is to reduce the break-even capacity, which at Volkswagen, for example, is in the magnitude of 95 percent.

This article explores the European approach to the integrated factory from the point of view of management. It provides an oppor-

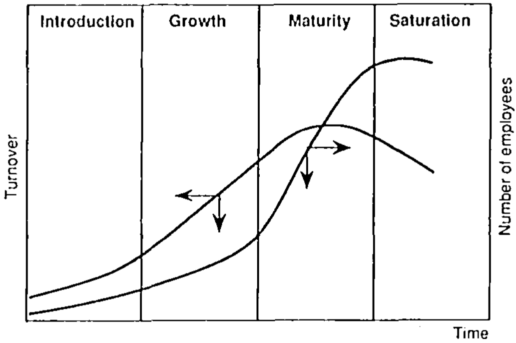

Figure 3. Turnover and number of employees

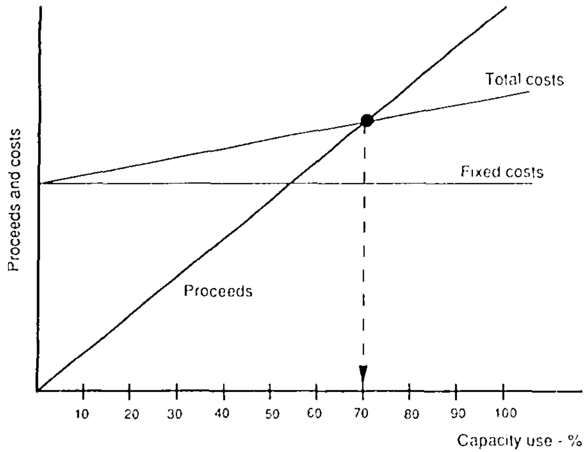

Figure 4. Break-even-capacity in the German automobile industry

tunity to study the response given by European culture and tradition to the Japanese challenge.

ADDING VALUE AND IMPROVING TOTAL QUALITY OF THE FIRM

Every function, every position, every level of responsibility and every regional unit must make a contribution to: (a) increasing the value, and (b) improving the total quality of the firm. The firm is to be understood as an "investment," the value of which is to be continuously increased and the quality of which is to be continuously improved. Adding value and improving the total quality of the firm means examining each strategic business unit in the value-adding chain (Fig. 5) and comparing it stage-by-stage with the performance of the strongest competitor or leading firm in the corresponding field. In this way, those functions, positions, levels of responsibility, or regional units that make no contribution to adding value and that do not improve the total quality may be identified and on this basis reorganized or, in special cases, dispensed with. In Europe, lean management means restructuring the value-adding chain in order to increase the value and improve the total quality of the firm (Hinterhuber, 1992).

Elements of the Value Adding Chain	Weight Importance for Added Value	Worse than the Competitors or Leading Reference Firms -2	-1	±0	+1	Better +2	weighted score	Leading Competitor or Reference Firm	Actions for Improvement
Recycling Secondary Raw Materials	5			●			+10	We	No Action, observe A
Applied Research	8				●		+8	C	Simultaneous Engineering
Product Process Development	10				●		+10	B	Simultaneous Engineering
Design	10					●	+20	We	No Action, observe B
Components Sourcing	10	●					-20	D	Priority No 1 Outsourcing
Production	10		●				-10	D	Priority No 2 Redesign of Production System
Distribution Logistics	8				●		+8	N	Learn from World Player N
Marketing	10					●	+20	We	No Action, observe A
Service Use	10					●	+20	We	No Action, observe D
Dismantling Waste Management	7					●	+14	We	No Action, observe B
Quality of Management	10			●			-	P, O	Learn from World Players P, O
Human Resource Management	10			●			-	P, O	Learn from World Players P, O
Weighted Score							+80		

Figure 5. The value-adding chain (example)

SATISFYING ALL "STAKEHOLDERS"

Lean management has obligations to all stakeholders who have identified their interests with that of the firm; it is important to satisfy customers, employees, shareholders, suppliers, society, and member firms in joint ventures. Shareholders are not in a privileged position, but, customer satisfaction is. In addition, different criteria are employed to measure the level of satisfaction of different stakeholders (Fig. 6). The customers, for example, are satisfied if the price is attractive, if service and quality are up to expectations, and product durability is satisfactory; the employees are, for example, satisfied if salary level is appropriate, wages are fair, the working environment is satisfactory, and there is a good team atmosphere. The individual criteria can be weighted according to their importance to the individual stakeholders and compared with the representative performance of the strongest competitors, reference firms, or one's own standards (Fig. 7). Using this procedure, priorities can be set for a program of improvement. Moreover, conflict will become apparent, when, for example, shareholders desire a high return on investment (ROI) but this desire brings the firm into conflict with the needs of customers. Top management must decide, and this decision will have implications for all concerned, whether ROI or the long-term interests of the

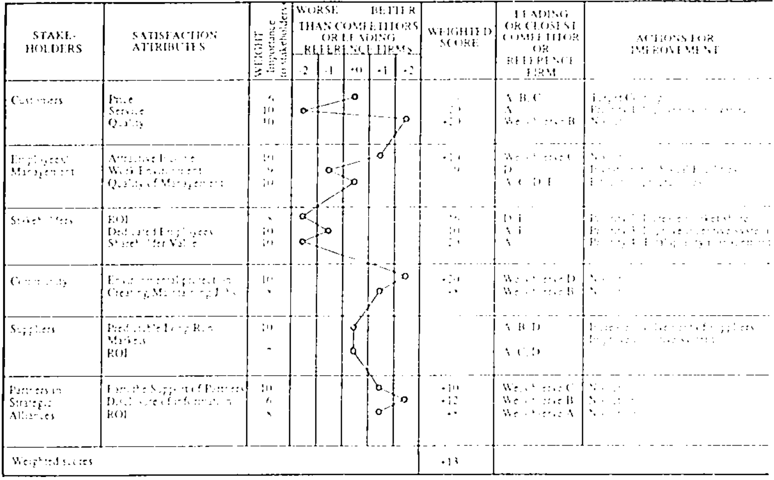

Figure 6. Determining stakeholder satisfaction: illustrative example

customers should be management's strategic priority (Ranganath, Drazen, and Kastner, 1992).

LEAN MANAGEMENT CONCENTRATES ON BUSINESS PROCESSES

A business process is the sum total of integrated multifunctional activities through which a product is produced and/or a service is provided that satisfies the needs of the internal or external customers. A business process has a measurable input and output, adds value, can be repeated, is initiated and coordinated by the "process owner," and aims to satisfy all stakeholders, not just shareholders (see Fig. 6). Examples of business processes are: the development of a new product, the introduction of a new system to ensure quality, the management of a factory, strategic business unit, or project, and so on. In all the examples, processes reach out horizontally across departmental boundaries and optimize the organization as a whole.

THREE PRINCIPLES OF LEAN MANAGEMENT

One of the objectives of European lean management is to prevent the loss of information that occurs in hierarchical structures (Fig. 8). Three principles of lean management are: closeness to the customer,

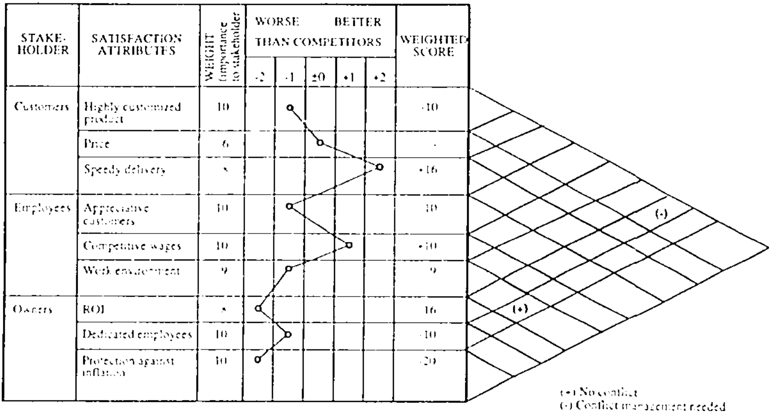

Figure 7. Trade-offs and conflict management required to satisfy stakeholders illustrative examples.

leadership communication, and teamwork. Closeness to the customer means understanding and implementing those desires that the internal and external customers possess but do not expect to see realized. By leadership communication, we understand the personal communication of management with employees and unions through which employees are informed of, and involved in, strategic aims and entrepreneurial decisions; the important point is that this communication instills a sense of purpose, releases the creative energy of employees, and directs it toward the realization of strategy. The managers of the

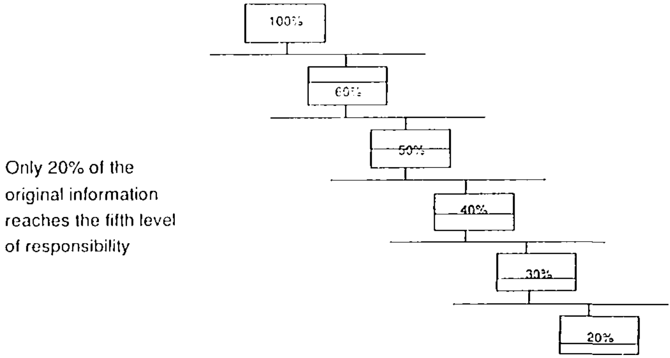

Figure 8. The loss of information in hierarchical structures

1990s will be valued less for their individual abilities and more for their ability to promote teamwork. Lean management relies on network structures in which interfunctional, empowered teams are linked together in open communication systems and bear responsibility for processes.

FLEXIBLE CONSTITUTED TEAMS

Once the business process has been defined, the important thing is to find the people who are best able to solve problems and "to exclude at the outset those who only see difficulties and have second thoughts" (Nicolas G. Hayek as quoted in Bentivogli, Hinterhuber, and Trento, 1992). Teams must be small. The teams should include members who come from outside, persons with vision, and persons who are empowered to commit their areas of work and are able to fight when the necessity arises to take unpopular measures. Management should be under the obligation to offer tangible rewards for the innovative performance of the team and should not punish those teams that fail but which nevertheless make well-conceived efforts toward innovation. Because career opportunities are limited in flat hierarchies, systems of incentives must be introduced that concentrate on non-financial rewards like professional growth and interdisciplinary and international experience.

SETTING PRIORITIES

Management must be responsible for specialist areas and for general leadership (Fig. 9). General leadership means motivating teams and individuals for strategies and business processes. It is not advisable to have too many business processes running at the same time. Sustainable competitive advantage can only be achieved by concentrating critical resources on a limited but strategically important number of business processes. For example, a German producer of electronic components with 600 employees coordinates 28 processes, from new product development to time reduction programs in accounting and control.

MANAGEMENT'S LEADERSHIP COMPETENCE

The flatter the hierarchy, the more employees will be reporting to one superior. Lean management means abandoning the traditional span of control over between six to eight subordinates and adopting

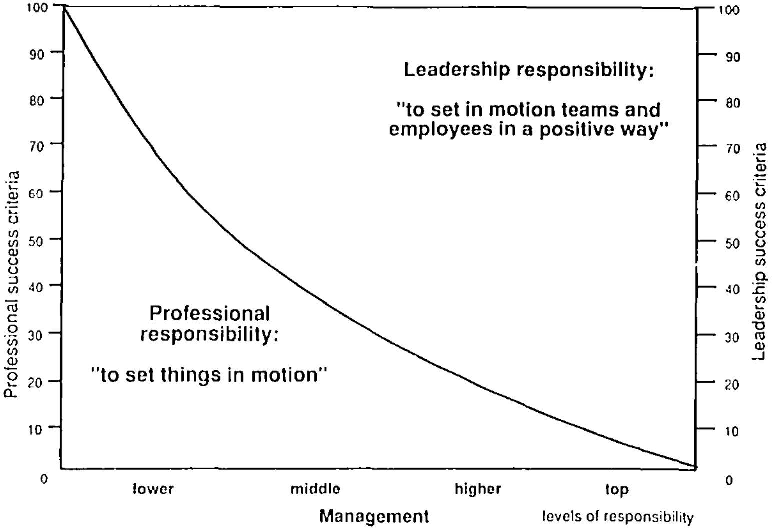

Figure 9. Leadership responsibility versus professional responsibility

spans of control involving 12 to 18 subordinates. Managers at Siemens and Montedison, for example, are coordinating 15 and more employees. This tests management's leadership competence. Management must be in a position to set guidelines and agree on goals that allow subordinates sufficient freedom and latitude of interpretation for them to be able to give expression to their own strategically directed constructive energies. Management must also master the instruments of strategic and operational control in order to be able to quickly and efficiently adopt integrative corrective measures when problems occur. This method allows everyone to make errors, although not too many, and allows discussion with management so that the learning capability of the organization can be improved (Hinterhuber and Popp, 1992).

RAISING EMPLOYEES LEVEL OF MATURITY

Lean management increases the dependence of management on their employees. It is, therefore, in the interests of management, as well as being a humanistically desirable goal, to increase employees' psychological and professional levels of maturity. A greater level of employee maturity makes possible a flatter organizational structure that increases the learning capability of the organization (Fig. 10).

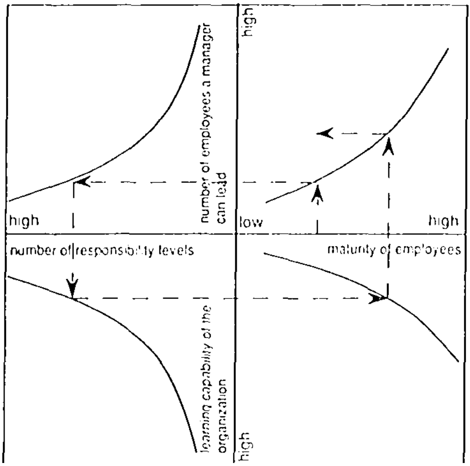

Figure 10. The critical success factors

ORGANIZATIONAL LEARNING

At a time when the only certainty is that there is no certainty and when product life cycles are becoming ever shorter, an organization's ability to learn becomes a key competitive advantage. Management is under pressure to design organizations that learn faster and are more innovative than the competition. Organizational learning is more than the sum of the learning abilities of an organization's members; it involves attitudes, knowledge, understanding, strategies, and values, shared by management and staff and inducing behavior oriented toward the completion of a process. The experience and know-how of individual employees is lost when they undertake other tasks in the organization or leave the organization altogether. Organizational learning occurs when networks are established in the organization not only among those with know-how in the different functional and regional areas, but also between the different cultures within the organization. Within these networks, an exchange of information takes place fostering management and employee behavior directed toward core strategies and their associated processes; at the same time, the organization gains know-how that does not disappear when individual members leave. In a military situation, every subordinate learns to make decisions compatible with the aims of superiors. In the same way, the management of a firm must conceive of processes that offer use and value to the stakeholders. At the same time, however, management must understand the firm as a system and take the consequences of its decisions for the other parts of the organization into account. Lean management presents a challenge to managers. It challenges their ability to promote organizational learning at every level of responsibility in the firm and in each of the firm's regional units so that previously unforeseen opportunities can be exploited quickly and/or badly calculated risks can be avoided.

A COMMON CORPORATE CULTURE

Lean management involves combining central direction in the firm with operational freedom for those responsible for strategic business units, regional units, and functional areas. The greater the number of markets in which the firm operates, the more difficult it becomes to direct everything centrally and the more the direct influence of top management decreases.

We may compare the present situation in the firm with the conduct of war in Napoleonic times. This comparison is informative because the Napoleonic times were also a time of transition. Napoleon himself admitted that his personal presence was necessary for victory. However, the theater of war in which his armies fought soon became so large that he could not personally supervise all those areas where victory was crucial. From this situation and the experience gained from it emerged the necessity for a general staff that was uniformly and thoroughly trained. The existence of this staff meant that when the commander-in-chief could not be present in person, he possessed in the general staff a body of generals that he could trust to understand his strategies and assist in their realizations.

In the world of business, the situation is similar. If men and women emerge from the senior and middle management positions of the firm, and if these men and women are able to take over the multiplicity of leadership positions in the regional and strategic business units of the firm, then one can be sure that one has created a well-functioning instrument of management on which one can rely. The leaders of these regional and strategic business units insure that the formulation and implementation of strategy take place within the framework intended by the top managers of the firm. If senior and middle management positions are systematically reduced in modern firms then the ideal of a uniform training for those managers from whose ranks future entrepreneurial talent is to be recruited can no longer be realized. The more the firm distances itself from those important individuals who are imbued with the firm's corporate culture, the more difficult the decentralized management of strategic business units and regional units within the global framework of the corporate strategy of the firm becomes.

SERVING RATHER THAN DOING

Lean management presupposes a move away from doing and in the direction of serving. Serving is characterized by:

- the ability and preparedness to put oneself in the position of the stakeholders;
- confidence in other people, but also in one's own ability to master new and unforeseen situations successfully;
- open communication and active listening;
- an effort to make others successful, to create values, to satisfy stakeholders, and to establish a listing of channels of communication with others;
- credibility, reliability, integrity, and work on oneself;
- the ability to be always prepared;
- discipline, not in the form of slavish obedience, but as voluntary subordination in pursuit of common goals;
- the attempt to achieve detachment and to solve every problem from the perspective of senior management.

Figure 11 points out the shift toward a new balance between doing and serving (Moser, 1991).

RECONSIDERATION OF PERSONAL TIME MANAGEMENT

Lean management places permanent time constraints on managers and presupposes a reconsideration of personal time management. With the help of the procedure outlined in Figure 12, every manager can divide up his or her free time on a percentage basis. Approximately 110 hours are available for:

- coming to grips with current management tasks;
- exploring future possibilities, changing and improving the firm's future and the manager's own personal future;
- family; and
- health.

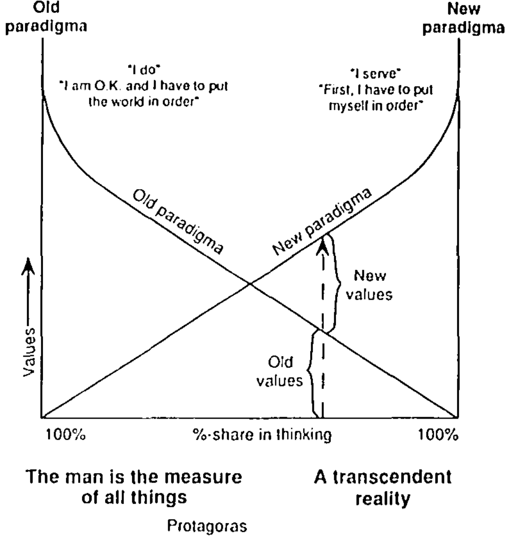

Figure 11. The paradigma of doing and the paradigma of serving. *Source:* Mosei (1991)

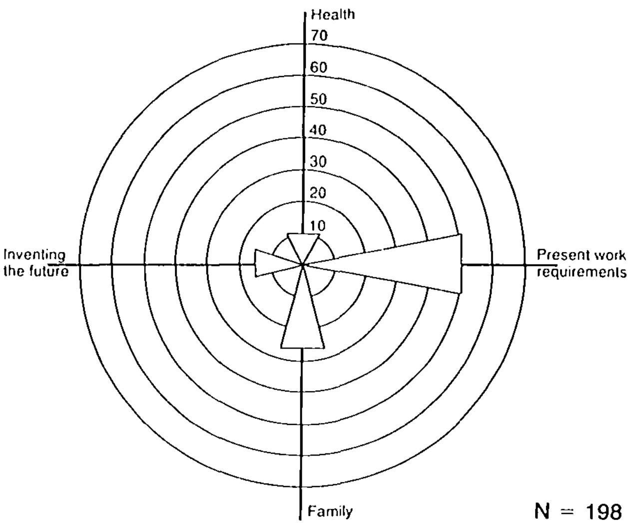

Figure 12. The organization of one's own time. *Source:* Institut für Unternehmungsführung (1993).

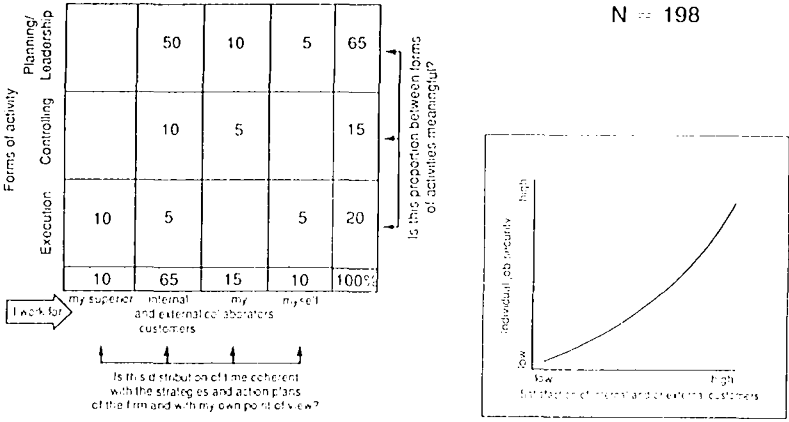

Figure 13. Job security and satisfaction of external and/or internal customers
Source: Institut für Unternehmungsführung (1993)

The figure shows how German middle managers allocate their time. In a turbulent environment, however, the time allocated for inventing the future, according to many managers, has to be dramatically increased.

The question remains, however, if the present apportionment of time is reasonable then how should time be managed in the future in the face of opportunities and threats with which the firm is confronted?

Figure 13 shows individual job security as a function of an individual's contribution for satisfying the needs and expectations of internal and/or external customers. The higher the percentage of time allocated for satisfying internal and/or external customers, the more an individual increases the probability of keeping his work under the conditions of lean management.

A GOOD EXAMPLE COMES FROM THE TOP

Lean management eliminates functions, roles, levels of responsibility, and regional units that contribute no value and that do not lead to an improvement in the general quality of the firm; it presents senior management with a considerable challenge. It involves developing a global understanding of processes in the minds of all managers and employees:

- How long does it take for our firm to develop and market a new product or service, and how long does our fiercest competitor need to do the same?
- How long does our firm need for a particular software development and how long does our fiercest competitor need?
- How does the quality of our products compare with that of competing products?

These and similar questions can assist in the setting of priorities for critical processes through which the stakeholders in one's own firm can be better and more readily satisfied than the stakeholders in competing firms. Continuous improvement is a necessary but not sufficient condition for success because the competition can, through technical or organizational innovation, alter the rules of the game to their advantage (as can be seen in many areas with the example of Japanese firms). In this way a competitor may be able to overtake our firm without ever having caught up with it. Good examples always come from above. Therefore, managers must display behavior that motivates employees to learn and innovate faster than the competition. In addition, the old structures must become more flexible. Interdisciplinary, empowered teams must be formed and the system of payments and rewards for teams and individuals reconsidered.

The success of lean management is dependent on how well-trained and motivated managers and employees in decision-empowered teams are. Firms in which ideas move from the top downward will probably not survive the 1990s.

PARABLE OF THE HIDDEN TREASURE

In Rumi's *The Mathnawi* (Rumi, 1982), there occurs the parable of the hidden treasure. A man from Baghdad has wasted his entire inheritance. In his poverty, he dreams of a treasure that is hidden in a certain place in Cairo. He goes to Cairo and looks for the treasure. While looking for the treasure, he is taken for a thief and arrested by the police. He tells the police officer about his dream. The officer reproaches him for his stupidity and tells him that he had a similar dream of finding a treasure in a particular house on a particular street in Baghdad. He even gives the number of the house. He had, however, always resisted the temptation of making a journey to Baghdad. The house mentioned in the officer's dream is the house belonging to the first man who goes back to Baghdad and actually finds the treasure in his own house. The moral of the story is that we should look for the real treasure in ourselves. This discovery can, however, only be made when we have left our own house, looked for the treasure in another location, and had the help of a friend. Lean management is not a Japanese discovery. It can be realized in every firm on the basis of the values of our culture and tradition: entrepreneurial initiative, training, flexibility, creativity, and discipline. This realization will occur when entrepreneurial decisions are made by empowered teams consisting of outsiders and employees capable of unconventional and imaginative thought.

REFERENCES

Bentivogli, C., Hinterhuber, H.H., and Trento, S. (to appear) "The Watch Industry: A Strategic Analysis," *International Review of Strategic Management.*

Hinterhuber, H.H. (1992) *Strategische Unternehmungsführung,* 5th ed., Berlin–New York: W. de Gruyter.

Hinterhuber, H.H. and Popp, W. (1992) "Are You a Strategist or Just a Manager?" *Harvard Business Review,* 70(1), 105–113.

Moser, F. (1991) *Bewußtsein in Raum und Zeit,* Graz: Leykam.

Ranganath Nayak, P., Drazen, E., and Kastner, G. (1992) "The High Performance Business: Accelerating Performance Improvement," *Prism,* First Quarter, 5–29.

Rumi, J. (1982) *The Mathnawi,* Edited and Translated by R.A. Nicholson, Vol. VI, Cambridge: University Press.