

Using the nationwide best-selling book In Search of Excellence: Lessons From America's Best-Run Companies, by Tom Peters and Robert Waterman, Jr. as a guide, we undertook an intensive study and survey over the intervening months to find out if the eight basic management principles that account for the success of best-run companies like IBM, Hewlett-Packard, McDonald's and 3M also account for the success of the best-run fire departments. (See box, "Management Principles.") The answer: most definitely yes. In the following article I will explain how the 25 excellent fire departments were identified, what measures were used to validate their first-rate status, what they are doing to maintain their position and why the chiefs of these departments think their organizations are excellent.

Excellence Based on Perception

The first step was to narrow down the 25,000 fire departments in the country to a manageable number. This process gives us our first insight into the concept of excellence. The idea of an organization being excellent is based on the perception of those doing the judging. Peters and Waterman used an "informed group of observers" to develop their original list of companies to be studied. My group of informed observers was made up of seven people.

The group included: a former commissioner of the Chicago Fire Department. deputy chief of the New York City Fire Department, the Kentucky State fire training director, the Maryland fire marshal, a training instructor, a National Fire Protection Association (NFPA) investigator, a college instructor. Together they have worked with thousands of fire departments around the country and also serve as full-time or adjunct faculty for the National Fire Academy. The members were chosen because of their different perspectives on what excellence means, based on their background, experience and education. (See box, "Informed Observers.")

Each was given a list from the NFPA Fire Almanac of 87 metro fire departments and asked to check off those they considered to be excellent—using whatever definition of excellence they had. A

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total of 38 fire departments were selected from the list. It was decided that for a department to be included, three or more members had to select it. Fourteen departments made the first step.

To be thorough, the group would need to study other than metro fire departments. Therefore, the members were asked to add to the list any fire department they considered excellent. Eleven formers in three or more of the categories. (See box, "Top Performers.")

Survey Methodology

Fire Loss. There are four measures of fire loss: death, injury, dollar loss and the number of incidents divided by the dollar loss to represent dollar loss per alarm. These data were collected over a five-year period from each department:

	Year		
Sample Fire	Death		
	Injury		
Loss Data	\$ Loss		
	\$ Loss/Alarr		

Year	'80	'81	'82	'83	'84
Death	14	6 7	5 Y	4 7	2 7
Injury	32	307	297	10 ₹	36
\$ Loss	1.080M	991K V	761K7	603K V	1.730K*
\$ Loss/Alarm	108	99 7	76 1	67 ₹	173

fire departments were named by the group. The metro list and the random list provided our sample list of 25 excellent fire departments. The study sample is very representative because it includes departments from 15 different states, all six regions of the country and paid, volunteer, combination, urban, suburban and rural fire departments. (See box, "25 Excellent Fire Departments.")

Measures of Excellence

The second step Peters and Waterman used was to devise a plan to define what is exactly meant by excellent. What do we measure to determine if a company is excellent? They used financial data to measure growth, long-term wealth, return on capital and sales. Fire departments do not have profit-and-loss statements or price earnings ratios, so we had to develop other measurable criteria.

This problem was presented to a group of 35 fire executives from around the country. The group of executives was divided into three small work groups. Each group was asked to "develop a list of six measurable criteria" they would use to determine whether a fire department was excellent. The result of the three groups were almost identical. The group identified six measurements of excellent performance over a three- to five-year period of time. To be excellent, a fire department must show a trend in six areas:

Decrease in fire loss
Decrease in firefighter injury
Financial responsibility
Increase in performance standards
Increase in amount and type of service
offered

Decrease in response time

To collect these data, we sent out surveys to each of the 25 fire departments. Twenty-one were returned in time to be included in the study. Each department's data were analyzed individually to identify trends, then the departments were compared to each other to identify top performers. This is a very rigorous evaluation method. The results show that 89 percent of the departments were top per-

The arrows indicate decreases from the previous year's number. If a fire department were perfect it would have 16 decreases. The actual number of decreases can be divided by 16 to give the department's fire loss "batting average," as in $13 \div 16 = .810$. It was determined that for a fire department to be considered a top performer in the fire loss category, it needed at least a .500 average.

Firefighter Injury and Death. The same averaging method was used to determine a fire department's trend in decreasing injuries. It is interesting to note that all fire departments surveyed had at least a .500 average.

Financial Responsibility. Two data items were used to identify financial responsibility cost per capita (CPC) to show cost effectiveness and percentage of fire department share of overall jurisdiction budget, to show financial support for the fire departments. The CPC was adjusted for inflation using the consumer price index for purchasing power. The first year numbers were compared to the last year numbers, and the percentage of change, plus or minus, was noted. For example, the CPC in 1980 was \$17.88, which equals \$7.26 when adjusted for inflation. CPC for 1984 was \$24.83; the adjusted CPC is \$8. This equals a 10 percent increase in the CPC over the fiveyear period. To be included in the top half, a department had to have a CPC increase of 10 percent or less over the evaluation period.

The number of times a fire department's percentage of the total jurisdiction budget increased was also measured. To be considered a top performer, the department had to receive a percentage increase at least half the time.

Performance Standards. The survey asks the department to give a narrative description of how the performance standards of its personnel have changed over the past five years. The number of changes listed by each department was counted. There was no attempt to weigh one change over another. As with the other measures, to be a top performer in

this category the department had to be in the top half, which meant nine or more performance standards changed over the five-year period. Grouping the changes gives us a clear picture of what the excellent fire departments are doing.

The overwhelming change is physical fitness, with the majority of the departments having mandatory physical fitness programs, including the Bloomington, Minnesota, Volunteer Fire Department. Some departments have been involved in fitness programs for a number of years. The Salt Lake Fire Department has been involved in long-term research with the LDS Fitness Institute and is presently developing a complete EKG treadmill test for firefighters. Departments are also beginning to be concerned about mental health issues. The Fort Worth Fire Department has a team of stress in-

Excellent departments are delivering fire prevention, emergency medical services, supervision.

tervention specialists to help firefighters and their families cope with job-related stress.

NFPA professional qualification standards were the next most often mentioned performance standard change. Firefighter I, II and III were identified as being used to certify personnel. About half the department also identified some level of officer training, certification and development program.

Very special programs were developed for firefighters in Texas, Virginia and California. The Dallas Fire Department has a Management Rotation program, in which all chief officers are rotated through other city departments. The Fairfax County Fire Department has a Foreign Exchange program, which allows firefighters to trade places with their foreign counterparts. A department-sponsored bachelor's degree program was established by the Los Angeles City Fire Department in conjunction with the University of Redlands.

The fire prevention division of the excellent fire departments are also getting a lot of attention. Personnel are being qualified under various local and state systems as prevention specialists and code enforcement officials. Fire prevention performance standards are being included at the company level because they are conducting more and more prevention activities.

Loss Decrease	Firefight- er Injuries *Decrease*	Stan- dards	Services Offered Increase@	Cost Per Capita ²	% Jurisdiction Budget*
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Finally, it is interesting to note that almost all the departments cited participation in National Fire Academy courses as a part of their professional development programs.

Services Offered. These were measured by counting the number of changes identified by the department. Again, there was no attempt to weigh the changes. To be a top performer, the department had to list 10 or more changes in this category.

What services are the excellent fire departments delivering? Most often, fire prevention activities, followed by emergency medical services and supervision.

Fire prevention activities accounted for the most change. The types of change included starting company level inspection programs and hiring fire protection engineers. Some of the unique changes include the following:

 The Miami Fire Department took over the city building and zoning department, which then created the Department of Fire, Rescue and Inspection Services.

- The Seattle Fire Department instituted a program of checking all businesses from the current business licenses during annual fire inspections. This service netted the city \$65,000 in uncollected business taxes the first year. Residential smoke detector programs were conducted by most of the departments.
- The Fort Worth, Texas, Fire Department participated in the installation of 9500 smoke detectors—just as impressive as the 24-member Charlotte, Vermont, Volunteer Fire Department visiting every residence in the community to be sure each had at least one smoke detector. Major increases were also made in public fire and burn education programs. The programs identified most often were Learn Not To Burn, Juvenile Fire Setters and Home Inspections.

EMS was the second biggest change area. These changes covered a broad range, which included starting a first responder program with an engine company, and testing new Advanced Life Support Equipment, as in the sophisticated emergency medical systems of Miami and Seattle.

The changes in EMS delivery seemed very diversfied and indicated an effort to deliver the desired level of service the individual community wants. For example, the Phoenix Fire Department has five paramedic rescue units and 13 paramedic engine companies. The Palm Beach Fire Department carries medical data cards for residents on its two medic units.

Finally, the overriding change in the suppression field was the creation of hazardous material response units over the past five years. Though it is last, hazardous materials are not taken lightly. According to Chief Manning, Los Angeles City: "Hazardous materials are the single greatest threat to the community."

Response Time. Unfortunately, not enough of the departments surveyed could supply the data needed to show changes in responses from time of ignition, so this category was dropped from the analysis.

Why Are They Excellent?

To answer this question, we conducted interviews with the fire department chiefs, asking them one question: "Why do you think your fire department is excellent?" Their responses were categorized under each of the eight principles. Five of the eight principles were given by all of the chiefs as the reason for their organizations being excellent. They also identified a new principle.

Bias for Action. Excellent fire departments are willing to try new things and new methods. They are change oriented and take risks. They are also supportive when things fail. Noted Chief McMillan of Fort Worth: "Fire departments need to change as the times change and the needs change." Chief John O'Rourke of New York City echoed this action-oriented approach when he said, "We don't stand still. We don't sit back on our laurels . . we try to move ahead by trying new things or taking a pragmatic approach."

The chief must have a personal commitment to this action orientation. Said Chief Tom Daily, San Clemente, "I think I have to keep an open mind on anything that is suggested by anybody...don't be afraid to try something new."

For this action bias to work, there must be support for it at all levels. Chief Roger Philips, San Diego, explained this support when he said, "There needs to be a willingness and a freedom to try new things and then, if they don't work, to not punish the person." Chief J. Taliaferro of Charlottesville explained the

Informed Observers

The following are the "informed observers" who worked on the "In Search of Excellence" project:

William R. Blair: Thirty years in the fire service, former commissioner of the Chicago Fire Department, retired assistant chief of Los Angeles City Fire Department. Presently in charge of the National Fire Academy (NFA) Emergency Incident Policy and Analysis program. A.A.S. in Fire Service.

Charles J. Burkall: Eight years in the fire service as firefighter, training instructor, EMS manager and safety consultant. Presently in charge of the National Fire Academy Education program. B.A. in Fire Technology, B.S. in Technical Education, M.B.A. candidate.

Steven W. Hill: Fourteen years in the fire service, former National Fire Protection Association (NFPA) investigator and Washington State assistant fire marshal. Presently in charge of the National Fire Academy Management Technology program. B.A. in Fire Protection.

Bruce W. Hisley: Twenty-four years in the fire service, retired fire marshal of Anne Arundel County, Maryland, Fire Department. Presently on the NFA faculty in the Community Research Preservation Program. Member of NFPA Standards Making Committee. A.A. in Fire Service.

Lucien P. Imundi: Thirty-five years in the fire service, retired deputy chief of New York City Fire Department. Former faculty member of the National Fire Academy Incident Command program. Presently founder and director of the National Fire Service Command Logistics Institute. B.S. in Behavioral Science. Jan D. Kuczma: Five years in the fire service, former chemistry teacher. Presently on the faculty of the NFA in the Hazardous Material program. B.A. in Chemistry/Biolo-

A. Don Manno: Eighteen years in the fire service, former director of Fire Training, Kentucky. Presently in charge of the NFA Community Resource Preservation program and member of NFPA, MAC Committee. B.A. in Psychology. support he receives from his city manager as follows, "He encourages you to be innovative, to take some risks, to try something different; at the same time, he supports you if things don't go right."

Listening to the Public. Fire departments belong to the public, so the public has a right and responsibility to be involved. Excellent fire departments seek involvement from the public and as a result have strong community support.

It is obvious why a business must keep in touch with what its customers need. But why would a fire department listen to the public? Chief John Olson, West Sadona, Arizona, gives the perfect reason. Says he: "When we put our organization chart together, above the elected officials is the electorate—they are in our chain of command." The responsibility to the public is summed up by Chief Roger Philips, San Diego, California: "That is the citizens' money we are spending. We must be concerned with balancing the budget and being cost effective."

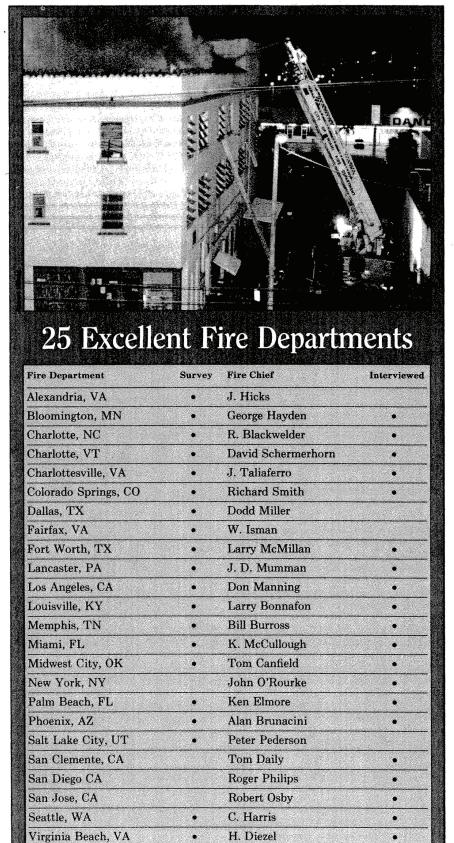
Close to the customer means being involved all the time—not just when the alarm bell goes off. Chief Tom Canfield, Midwest City, stays in touch with all that is going on in the city. "In my six years as chief I have attended 98 percent of the council meetings . . . 95 percent of the time there is no fire department business going on at all, but every time the council looks up it sees me—not just when I need something."

It doesn't matter what size the fire department is—it must listen to the public. In New York City, the department listens to its local neighborhoods through community boards. Chief John O'Rourke said, "When they [the neighborhood] tell us something that they want or need, we evaluate it and make every effort to give it to them."

Chief Bill Burross, Memphis, gave a clear example of how local involvement is a two-way street. He explained, "The whole neighborhood became involved in a fire station beautification project. They planted grass and flowers and shrubs. They feel it is their fire station; they want to be part of it and involved with it."

People: The Most Valuable Asset. A fire department is only as good as its people. Excellent departments believe this and do everything possible to develop and utilize their members' talents throughout the organization.

"Our people are not the enemy," said Phoenix Chief Alan Brunacini. "Our rival in the system is service delivery. It isn't the people, it isn't the Union, it isn't the city, it isn't the citizen. It's the fact that there are buildings on fire and there are people who are having various kinds of emergencies. That is what the challenge really ought to be."



John Olson

Excellent fire departments truly value their people. In San Diego, according to Chief Philips, "What we try to instill in everyone—secretary, mechanic, fire-fighter and deputy chief—is that his job is to serve the public, that all jobs are important to the overall effort of the fire department. It's appreciated and it's valued."

The chiefs expressed a sincere level of concern for their people. Chief Taliaferro of Charlottesville put it simply: "We try to put a lot of emphasis on the little things with our people—dealing with the little complaints that people have. It's the small things that make the difference." Chief Ken Elmore, Palm Beach, expressed his deep commitment to developing his people: "The way I get my kicks is seeing the department grow and improve. I'm not talking about bricks and mortar. I'm talking about people. That's what the department is. If they can grow and improve then that gives me my kicks and I have fun at it."

The excellent fire departments are committed to using their most valuable assets. Unfortunately, it is not always

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the case, according to Chief Larry McMillan, Fort Worth: "My concern throughout my fire service career has been the underutilization of its talent... my goal is to utilize that talent, put it to work and provide the service we are capable of giving."

Autonomy. Excellent fire departments realize that the person who knows how to do the job best and how it could be done better is most likely the person doing the job. Management must foster individual creativity and innovation. This translates into letting people do their jobs, delegating and realizing that the chief cannot do it alone.

"It's not a one-man show," said Seattle Chief Harris. "It's not really up to me to come up with all the creative and innovative ideas, but it is up to me to seek input from the rank and file . . . on how to do a better job." Chief Brunacini, Phoenix, says, "I'm the easiest person in the world to help."

The Charlotte, North Carolina, Fire Department puts the management responsibility where it belongs—with the company officer "that allows them to be (continued on page 82)

West Sadona, AZ

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the boss, to be the manager, to be the supervisor, to be the chief," says Chief Blackwelder.

Chief Elmore, Palm Beach, gives us insight into why we need to encourage autonomy. "They want to see their ideas work. That is what makes it work."

Values. The leadership of excellent fire departments, especially the chief, plays a

significant role in shaping the value system of the department. For better or for worse, the chief sets the tone for the attitude of the organization.

When asked what values they try to instill in their organizations, the chiefs gave predictable answers: honesty, loyalty, high expectations, pride, respect. But those were not the gut-level feelings that were evident in every chief. It was the joy, the enthusiasm, the excitement in their voices when they talked about their

departments during our telephone interviews. That is what they instill in their organizations. From the tone in their voices, they seemed to be a group of rookies on graduation day. These chiefs were at the beginning of their careers, not the end.

Training. Excellent fire departments encourage individual, group and organizational growth. They believe they can be better and know they must be better to meet future challenges.

The chiefs gave a lot of the credit for excellence to their training efforts in terms of quality, quantity and commitment. From basic recruit training to officer development, training was equated with excellence. Chief Elmore, Palm Beach, said, "We are not brick layers. We don't practice all our needed skills every day. We must constantly drill and train to stay competent." Noted Chief Don Manning of Los Angeles City: "I'm preparing the next chief to do a better job than me."

What Wasn't Mentioned. A very interesting fact is that none of the chiefs equated their fire department's firefighting capabilities with its excellence. Firefighting was never mentioned. The chiefs credited their excellence with their prevention program, EMS delivery, public education and community involvement programs. Chief Brunacini came the closest to mentioning firefighting when he said, "When the bell hits and it's showtime, the people perform." Chief Manning did talk about the LAFD's Incident Command System, but said that "the professional and personal care we give to the victims is what makes us outstanding." It may be that in the excellent fire departments, firefighting capabilities are a given. Excellent performance has become the norm.

Three of the principles identified by Peters and Waterman were not identified. First, excellent fire departments are not sticking to the knitting—they are becoming more and more diversified in an effort to meet the needs of the public. The next two principles dealing with form and loose/tight controls could not be identified using the interview technique; on-site observation would be necessary.

Conclusion

This, we feel, is an interesting and viable way to measure changes occurring in fire departments, not just for the 25 departments mentioned, but for all of us in the fire service. There is no magic to being an excellent fire department, because all of us can use these basic principles. A fire department's success is limited only by its personnel. And we all know that fire service personnel can do anything, if they want to.

Management Principles

"Our findings were a pleasant surprise. The project showed, more clearly than could have been hoped for, that excellent companies were, above all, brilliant on the basics. Tools didn't substitute for thinking. Intellect didn't overpower wisdom. Analysis didn't impede action. Rather, these companies worked hard to keep things simple in a complex world. They persisted. They insisted on top quality. They fawned on their customers. They listened to their employees and treated them like adults. They allowed their innovative product and service 'champions' long tethers. They allowed some chaos in return for quick action and regular experimentation." That's the conclusion Thomas Peters and Robert Waterman, Jr. came to in their bestselling book In Search of Excellence: Lessons From America's Best-Run Companies. You may notice a similarity in their book title and the title of this article. The similarity is not an accident, because the purpose of the research on which this article is based was to find out if the same basic management principles that account for the success of the best-run companies also account for the success of the best-run fire departments.

The Peters and Waterman book, which served as the basis for this article, concluded that the following basic management principles account for the success of the best-run companies:

One: A bias for action: a preference for doing something—anything—rather than sending a question through cycles and cycles of analyses and committee reports.

Two: Stay close to the customer—learning his preferences and catering to them.

Three: Autonomy and entrepreneurship—breaking the corporation into small companies and encouraging them to think independently.

Four: Productivity through people—creating in all employees the awareness that their best efforts are essential and that they will share in the rewards of the company's success.

Five: Hands-on, value driven—insisting that executives keep in touch with the firm's essential business.

Six: Stick to the knitting—remaining with the business the company knows best.

Seven: Simple form, lean staff few administrative layers, few people at upper levels.

Eight: Simultaneous loose-tight properties—fostering a climate where there is a dedication to the central values of the company combined with tolerance for all employees who accept those values.

"We [Peters and Waterman] should note that not all eight attributes were present or conspicuous to the same degree in all of the excellent companies we studied. But in every case at least a preponderance of the eight was clearly visible, quite distinctive. We believe, moreover, that the eight are conspicuously absent in most large companies today. Or if they are not absent, they are so well disguised you'd hardly notice them, let alone pick them out as distinguishing traits. Far too many managers have lost sight of the basics, in our opinion: quick action, service to customers, practical innovation, and the fact that you can't get any of these without virtually everyone's commitment."