

Management Innovation in Improving Response Time at New York City's Fire Department (FDNY)

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1 The Relationship of Strategic Planning to Performance Measurement and Management

1.1 Defining Strategic Planning and Performance Management

This paper discusses the introduction of strategic planning and a more meaningful performance management system into the Fire Department of New York City (FDNY). Since the late 1970's all New York City agencies participate in the city's overall system of performance indicators and provide periodic reports to the Mayor's Office of Operations for publication in the Mayor's Management Report. However, as indicated in a post 9-11 analysis of management systems in the FDNY by the consulting firm McKinsey and Company, (McKinsey & Company, August 2002) the FDNY did not use these indicators to measure the accomplishment of strategic goals that were taken seriously by the Department. This paper discusses the process of bringing a meaningful strategic planning and performance measurement system into the FDNY.

We have written extensively on strategic planning and management, and define strategic planning as a process of setting goals and objectives in response to external demands and internal capacities and identifying a set of feasible activities that enable the organization to make progress toward goals. In our view, strategic planning is a regular part of organizational management where you systematically scan the environment, assess the organization's history, stakeholders, capacity and needs and routinely modify the organization's actions in light of changing goals. Strategic planning

involves tradeoffs and choices. When you decide what an organization is going to do, you are also deciding what it is not going to do. (Cohen and Eimicke 1998)

For goals to be meaningful, that is to say operational and resulting in actual organizational behaviors, they must be measurable. Unless you measure an organization's performance, you cannot tell if it is moving toward or away from the accomplishment of an organization's goals. Also, as Radnor and Barnes (2007) point out, the measurements should not only demonstrate that the goal is being achieved, but should also measure the quality of the goal being achieved (388). Goal accomplishment requires metrics as do the activities designed to accomplish those goals. A performance measurement system is the set of measures designed to determine if goals have been achieved and if activities in support of those goals have taken place. (Cohen and Eimicke 1998)

1.2 Setting Goals and Measuring their Achievement

The design of these measures is far from value free, and the collection, analysis and use of performance indicators requires a costly and continuous investment of organizational resources. The indicators chosen reflect the goals and mission of the organization. A commitment to using these indicators to guide behavior requires commitment from management and a willingness to manage against performance rather than out of habit, bias, or intuition.

A goal's degree of generality is a key determinant of the specificity of performance indicators. For example, a city might have a goal of making itself more attractive to businesses. This goal can be measured in a variety of ways: number of jobs created, number of businesses registered, sales tax collection, and so on. Of course, these objective indicators could be the result of a variety of other causal factors, such as the strength of the national economy. Success might be defined as limiting job losses rather than adding new firms. Taking a different approach, goal achievement could be measured subjectively via a periodic survey of the attitudes of local business leaders. The best measures of success would include both objective and subjective indicators. Kaplan and Norton (1992) explain the need for looking at subjective indicators like customers' perspectives and objective indications like financial performance. The measures should take into account complex intersections of performance data including "operational measures on customer satisfaction, internal processes, and the organization's innovation and improvement activities – operational measures that are the drivers of future financial performance," (71). The expense of such a system limits its feasibility.

When goals are set and success is defined, organizations tend to support goals that are easy to measure and that they have the capacity to achieve. Senior management sets goals by setting the performance indicators, "strongly affect[ing] the behavior of managers and employees," (Kaplan and Norton 1992, 71). Managers tends to seek indicators that will make them and their organization look good. However, it is not always easy to define and measure public sector success. Kaplan (2010) notes that

government's objectives, such as "reducing poverty, diseases, or school dropout rates, or improving health, biodiversity, education, and economic opportunities," (23) are difficult to measure. In some settings, the agency controls the definition of success and its indicators; in some it has input and influence; and in some situations the agency is essentially being evaluated by an outside body and has no influence on the measures. Outside assessments provide objectivity but can end up measuring the wrong thing due to a lack of understanding of the organization. Self-designed measures that are not subject to audit can often be manipulated and may produce more fictional than factual reports.

1.3 Politics and Goal Setting

Regardless of the organizational origin and relative objectivity of the performance measures, as long as the system is part of government, it is influenced by political factors. This is appropriate in a democracy since the organization's goals should be set by the public and its elected leaders. Goals and the corresponding measures should be carefully considered and well integrated into the public agency's standard operating procedures.

Many of the goals of public organizations are influenced by interest groups as well as the biases of elected and unelected government leaders. Goal setting involves operationalizing values and trading off benefits and costs. The United States Accountability Office provides guidelines for public organizations creating performance metrics, including a cost benefit analysis (USGAO 2005, 5). A police department has a

fixed amount of resources and must choose between violent crime, quality of life issues and terrorism. A fire department must decide on the balance between fire prevention and fire response. These choices are not made in a vacuum, but reflect the dominant social, economic and political paradigm of the moment.

1.4 Management and Goal Setting

In the end, management must read the political tea leaves and decide on the agency's operational goals. They may also need to "throw in" some symbolic goals to feed the political beast. For goals to be meaningful, they must influence organizational behavior. Goals that sit on a page, a screen or a poster are nice, but goals are only real if they result in action.

A key role of management is to define goals in consultation with those who must accomplish them and with the stakeholders who depend on their completion. This is a critical process that is a major function of management and is the very place where traditional notions of leadership and management meet. Goals should not be set in secret and should be subject to reality testing and mid-course correction.

1.5 Performance Indicators and Measuring the Achievement of Goals

Once goals are in place, management must ensure that the organizational capacity and resources are available to achieve them. In addition to this capacity, a set of performance measures must be designed to break the goals down into their key components. The design of these indicators is a key task of management. (Kaplan and

Norton 1992, 74). If there is no indicator for an activity that is needed to accomplish a goal, that activity will lose out in the competition for organizational attention and behavior. People gravitate to the work that is being measured (Cobbold and Laurie 2002). We often make the point that what gets measured is what gets done. Of course the opposite is also true; activities rarely get done when they are not measured.

In a management system where people and organizations are judged on the basis of their accomplishment of specific performance indicators, those indicators must be designed with great care. If an unimportant activity is measured, a lot of work is wasted. If a key task is omitted, it is likely that the goal will not be achieved.

2 Improving and Measuring Performance

The main purpose of a performance measurement system and of performance measurement in general is to understand and improve organizational performance. Even when a performance measurement system is in place, it can often be difficult to measure, communicate and improve performance.

2.1 Understanding current conditions

We begin with the need to understand current levels of performance. This requires an understanding of the organization's resources or inputs, its work processes, the outputs it produces and the outcomes of those outputs. It also requires an understanding of the organization's environment including the economic, social and political factors that influence its level of performance.

2.2 Improving Performance

Strategy is critical to defining improvement. This may seem straightforward, but it is not. Managers within an agency need to agree upon measures of the current level of performance. They need clear definitions of what activities they are measuring and what metrics can be used to determine degrees of improvement. While often agencies set targets for improvement, we tend to oppose the setting of numerical targets. No one really knows how much improvement is possible, since no one can predict the future. If the target is set too low, there will be a tendency to slow down once we are close to achieving it. If it set too high, we are inviting false reporting or what they used to call “storming” in Soviet factories as workers threw caution to the wind in a manic effort to reach the five-year plan’s target. Instead, we prefer the Total Quality Management (TQM) approach pushed by Deming (Cohen and Brand 1993). Under the TQM approach, managers measure current levels of performance and work to improve it. At the end of the period of measurement, managers measure performance again and see if it has improved. In a TQM framework, an organization can improve effectiveness and responsiveness with a focus on customer satisfaction (Radnor and Barnes 2007, 389). The focus is not on reaching an arbitrary target, but on understanding and improving the current level of performance.

2.3 Measuring, reporting and analyzing performance

The process of measuring performance and then communicating and analyzing performance data is not an automatic or even a well-defined process. For example, when police define a crime as a misdemeanor or a felony, there is also an initial judgment that contributes to the definition. Even when criteria are clear and well understood the facts of a case may be ambiguous. Organizational and political pressures may cause a report to understate or overstate a problem.

In the case of fire department response time, the issue of performance measurement is closely connected to the hot button issue of fire house closings. Many of New York's fire houses were built when the city's development pattern looked quite different than it does today. Some predate the invention of motorized fire trucks. But whenever the Mayor proposes closing or consolidating firehouses, he inevitably unleashes a fierce battle with community activists and the fire union. Despite the fact that fire houses were suggested to close based on lack of use (CBS 2011), Chief Cassano asserted that closing houses would negatively impact response time (NBC 2011). The concern is that the time it would take to respond to some fires would increase if fire houses were further apart than they are today. Response time measures could easily be biased by people who wish to demonstrate that fire house closings had great impact or by those seeking to prove its impact was trivial. Other issues in measuring performance may be more mundane, but no less important, such as: When does the clock start? When does a response begin? What constitutes a completed response? Both the start and end of this process must be clearly defined, reported and measured.

Another key issue is the reporting and analysis of performance data. As we noted earlier, government agencies do not perform in a vacuum. A fire truck may have more trouble getting to a fire through traffic when roads are being repaired or when it is rush hour and more people are on the road. A police department may report lower homicide rates not because shootings are down, but because emergency medicine is better than it once was. Performance management systems must be sensitive to these contextual issues and analyses must do more than simply provide longitudinal reports of data.

3 The Case Study: Improving Response Time at the New York City Fire Department (FDNY)

3.1 History of Performance Management at the FDNY

Organized firefighting in New York City dates back to 1648 when the first fire ordinance was adopted by the Dutch settlement of New Amsterdam, but it was not until after the Revolutionary War that the Department was incorporated as the volunteer Fire Department of the City of New York. It was not until 1865 that the Department became a paid, professional force in parts of Manhattan. By 1898, FDNY covered most of the current five boroughs, and a unified command under the first Fire Commissioner was created (FDNY 2011).

Today, the FDNY includes more than 11,440 fire officers and fighters, more than 2,800 emergency medical personnel, and 1,200 civilian employees (FDNY 2011). Over its

nearly 150 year history, the FDNY has often been celebrated as one of the largest, most active, and most effective fire departments in the world.

On September 11, 2001, the attacks on the World Trade Center tested the FDNY more than any other day before or since then. More than 2,800 people were killed. Three hundred forty-three FDNY personnel sacrificed their lives while saving others. Estimates of those safely evacuated from the towers range from 14,000 to more than 25,000 people, perhaps the largest rescue operation in the history of the United States (McKinsey 2002, Proulx and Fahey, 2003).

This extraordinary event compelled the Department to comprehensively reassess its mission, procedures, and performance (FDNY 2004). The first step in that reassessment process was an independent review of what had happened, what had worked, what had not, and what should be done to better prepare the FDNY for the 21st Century. At the request of the FDNY, McKinsey & Company conducted a pro bono study of the Department's response to the September 11th attacks and made specific recommendations to improve its capabilities and preparedness.

3.2 The McKinsey Report

After five months of study, including 100 interviews and more than 1,000 hours of research, the report made a number of very specific recommendations regarding operational preparedness, communications and inter-agency/intergovernmental coordination and cooperation. McKinsey also recommended that the Department

strengthen its planning and management processes through the establishment of a senior management oversight committee, the expansion of its Management Analysis and Planning group, the establishment of a formal senior management training program, and the initiation of the Department's first strategic plan (McKinsey 2002). Before the report was released, the FDNY began working with Columbia University and GE to establish a new management training program—the FDNY Officers Management Institute (FOMI).

3.3 FDNY Officers Management Institute (FOMI)

Initiated in 2002, the Fire Officers Management Institute (FOMI) is a six week long management seminar taught by faculty from Columbia University and carried out at GE's international residential training complex in Croton, New York (NYC Global Partners 2010). Over the past 11 years, more than 160 FDNY officers have completed the program and most have subsequently moved into the most senior positions in the Department, including the current Commissioner, Chief of Department, Chief of Emergence Medical Service, Chief of Training, Chief of Fire Prevention, Chief of Communications, and the Chief of Counterterrorism and Emergency Preparedness (NYC Global Partners 2010).

The FOMI curriculum was developed by then FDNY Counsel, now First Deputy Commissioner, Don Shacknai, and Bill Eimicke, then Executive Director of the Picker Center for Executive Education at Columbia University's School of International and

Public Affairs. The curriculum is focused on core management tools, particularly strategic planning and performance management (NYC Global Partners 2010).

It was during the first FOMI sessions in 2002-2003 that Chief Joseph Pfeiffer (incident commander at the World Trade Center on September 11, 2001 and now Chief of Counterterrorism and Emergency Preparedness) and Don Shacknai (with counsel from Eimicke) emerged as the advocates and leaders of the Department's first Strategic Plan. That first plan, covering the 2004-2006 period, focused on many of the recommendations of the McKinsey Report, including the creation of the plan, improving communications, expanding management training, and developing performance standards (FDNY 2004). Over the three-year life of the plan, the Department was able to accomplish many of the plan's key goals and objectives.

Following the implementation of the initial plan, FDNY leadership determined that strategic planning and performance management were keys to the future success of the Department. Therefore, the 2007-2008 Strategic Plan identified "an enhanced Performance Management System for mission-critical functions" as a top priority (FDNY 2007). To ensure the continued success of strategic planning and the effective launch of a new performance management system, Don Shacknai convinced Fire Commissioner Nicholas Scoppetta to create a new Deputy Fire Commissioner position for Strategic Planning and Policy and to recruit the Faculty Director for FOMI, Bill Eimicke, to take a leave of absence from Columbia University and fill the position

(FDNY 2007). Eimicke's first priority as Deputy Commissioner was to implement a performance management system for the FDNY.

3.4 The Performance Management System Task Force

Performance Management was not new to New York City or the FDNY. The New York City Mayor's Office of Operations has been compiling and publishing management indicators for every city agency since the late 1970's (NYC Operations 2012). While the public could monitor the performance of city agencies through the Mayor's Management Report, the City agency's leadership seldom used the indicators as a management tool to improve their performance. That all changed under the NYC Mayor Rudy Giuliani and his Police Commissioner Bill Bratton who initiated the now well-known Compstat performance-based crime reduction system (Buntin 1999).

Compstat not only transformed the NYPD, but it also helped transform New York City from one of the most dangerous big cities in the world to one of the safest. Twenty years later, Compstat is still an effective performance management system. Not surprisingly, Mayor Giuliani sought to replicate Compstat in other city agencies with limited success. The FDNY version of Compstat—FireMarc—was a complete failure (William Eimicke, personal communication, 2008).

FireMarc copied the Compstat formula, but it did not work well in the FDNY due to structural and cultural differences. Compstat succeeded because it focused on

indicators that everyone inside and outside the NYPD viewed as important—serious crime rates (murder, rape, assault, grand larceny). FireMarc focused on the crisis of the moment—exploding manhole covers, for example—important, but not core issues and ones that were often beyond the control of the Department (William Eimicke, personal communication, 2008).

Compstat also worked because the NYPD senior management had the power to hold precinct commanders accountable; they had the power to remove them if their crime statistics did not improve and often did so right at the accountability sessions in front of dozens of peers and subordinates. At the FDNY, the comparable management level of battalion chief is appointed through civil service testing, and they cannot be removed except in extraordinary circumstances. If FireMarc statistics did not improve, there was not very much the Fire Commissioner could do to reward good performance or hold managers accountable for poor performance (William Eimicke, personal communication, 2008).

Finally, there are major cultural differences between the NYPD and the FDNY. NYPD is very much a para-military, command and control hierarchy, with a great deal of tension between management and line personnel. Police officers work in teams of two, and it is often said that the only person in the NYPD you can trust is your partner. It is not an over-statement to say that the Police Commissioner rules with an iron hand. Compstat's strict accountability for precinct commanders fits the Police Department's culture.

The FDNY is a very different culture, with most of senior management filled with career uniformed personnel. Fire personnel work in teams of five or six with multiple teams sent to most assignments, and shifts involve living together in the firehouse for several days at a time. FDNY is more of a family culture in which the often highly critical tone of the Compstat accountability sessions was not acceptable to the membership. FireMarc sessions were often described as opportunities for civilian political appointees to embarrass uniformed officers.

As newly appointed Deputy Fire Commissioner Eimicke prepared to initiate the next generation of performance management at the FDNY, he realized he had a very difficult history to overcome. His first step was to seek the advice of then Chief of Department (now FDNY Commissioner) Salvatore J. Cassano. Chief Cassano was a FOMI graduate and Vietnam combat veteran, and a respected senior officer at the FDNY with 35 years of service to the Department. As Chief of Department, Cassano directly supervised all uniformed personnel in the Fire and Emergency Medical Service. Cassano and Eimicke quickly agreed that to be successful, performance management at the FDNY would have to be built from the bottom up with representation from the Emergency Medical Service, Fire and Civilian divisions.

To accomplish this, Cassano established a Performance Management Task Force in July 2007, chaired by Eimicke and including seven members from multiple ranks and locations—the Queens Borough Commander, a Deputy Assistant Chief from headquarters, Deputy Chiefs from Manhattan and the Bronx, a Battalion Chief from

Queens, an EMS Deputy Chief from Headquarters Operations, and the civilian Assistant Commissioner for Budget and Finance. Cassano directed the Task Force to submit a final report within 90 days with three major recommendations. These recommendations included the following: the system should have no more than six key performance indicators; the system should be governed by a detailed performance reporting and accountability process; and a publicly available set of FDNY workload statistics should be updated twice annually (Cassano, COD¹ July 2, 2007).

The Performance Management System Task Force Report, submitted in September 2007, provided the three sets of recommendations requested by the Chief of Department. FDNY Vital Statistics were developed rather quickly and have been available on FDNY's website and in hard copy since 2008. The accountability process took more time, but was well established as a quarterly process during 2008 and continues today. The focus of the case study presented in this paper—improving response time—was the key indicator identified in the task force report. The report concluded that response time was a well-established and understood performance measure in the department and in fact was the closest thing to a single measure of the performance in the FDNY. In addition, the report recommended a study and pilot test to determine whether the dispatch time to structural fires could be reduced (Eimicke, et. al. October 2007).

¹ COD refers to a Chief of Department Memorandum

3.5 The Decision to Focus on Response Time

The recommendations of the Performance Management Task Force were approved by the FDNY Commissioner on October 23, 2007. On November 14, 2007, Chief Cassano established an Implementation Task Force, also chaired by Eimicke, with six members similarly representing the field and headquarters, EMS, Fire and Civilian branches of the Fire Department. The primary responsibility of the Implementation Task Force was to identify both technological and operational opportunities that might enable the FDNY to safely reduce response times to all types of emergencies and reduce dispatch times to structural fires (Cassano, COD November 11, 2007).

The FDNY response time to fire emergencies has been significantly below national standards for many years. Nevertheless, since every second faster in response time increases the extent to which damage to lives and property can be reduced, lower response times are the “holy grail” of management innovation in the emergency response field.

One important aspect of the Fire Department Officer Management Institute (FOMI) is the free time at the GE Training Center, during which participants and faculty can brainstorm about ways to improve performance. Response time was frequently the topic of those discussions.

Discussions of improving response time often center on going faster from the fire house to the location of the emergency. Shorter routes using up-to-the-minute road and traffic

conditions have provided marginal improvements in large, well-established fire departments. Going faster is an obvious option but one that can increase the risk of accidents—FDNY vehicles were already going as fast as many thought to be prudent.

After much discussion at the Fire Department Officer Management Institute and later among the members of the Performance Management Task Force groups, it became clear that the best opportunity to reduce response time was to focus on dispatch time.

Response time is composed of two major metrics - dispatch time and travel time.

Dispatch time is the time from the moment the 911 call is received until the moment the dispatcher notifies a fire company (or companies) to proceed to the address of the emergency. Travel time is the time it takes from the notification by the dispatcher to the arrival at the scene of the incident.

Task force members knew that dispatch time for medical emergencies was considerably shorter than for fire-related emergencies (15 seconds for EMS; 66 seconds for Fire) but were not sure why (FDNY, MIRS CB Activity Report, January-November 2007). There was some speculation about the technology connection between the Police Department and the EMS dispatcher (a newer link than to Fire), but nothing was documented. So, most of the research of the Task Force focused on how fire dispatch time could be reduced.

Based on observations of Fire and EMS dispatchers and extensive interviews with both groups of dispatchers and their supervisors, the Task Force members concluded that

Fire dispatch time could be reduced. Fire dispatch protocols pre-dated the availability of cell phones to fire officers and were developed during the “Bronx is burning” era from the mid-1970’s through early 1980’s. At that time, New York City was slowly emerging from near-bankruptcy, real estate values in many parts of the City had reached historic lows, and arson for insurance or civil disobedience outstripped the FDNY’s capacity to respond.

In that context, fire dispatchers developed an elaborate protocol of questions to triage this mismatch between need and capacity, using the detailed information to decide where available engines and ladders should go first and which fires would wait for response. Today, real estate in New York City is typically too valuable to be burned for insurance money. The number of fires is down sharply, but the cultural impact of the fire crises of the 1970’s remains. On the other hand, the City’s Emergency Medical Service was not merged into the FDNY until the mid-1990’s. EMS never needed to prioritize response due to resource scarcity. EMS dispatchers simply confirmed the address and then dispatched immediately, gathering additional information after the ambulances and fire vehicles were already on the way to the scene.

The final report of the Performance Management Implementation Task Force to Chief of Department Cassano recommended that a “pilot test be initiated” to see if fire dispatch times could be reduced by more closely mirroring the EMS protocol (Eimicke et. al. February 2008). Based on research and recommendations presented, Chief Cassano

decided to test a new fire dispatch protocol. Cassano then moved quickly to implement a pilot study.

3.6 Implementing the New Dispatch Policy

Cassano decided to implement the pilot study in Queens, a large borough (county) with a variety of neighborhoods—some with high density similar to Manhattan and downtown Brooklyn, others with single family detached homes resembling Staten Island and other areas of Brooklyn and the Bronx. Queens also had some of the slowest response times in the City. The pilot began in February 2008, only a week after the final report of the Task Force was completed.

Under the new protocol, fire dispatchers would immediately assign fire units to an emergency once they confirmed the address and the type of emergency from the caller. Previously, dispatchers would seek more detailed information before assigning the unit such as the cross street, if there was visible smoke or flames, the location of the caller, and other details regarding the incident scene. Now, the dispatcher would continue to gather this information after dispatching the fire units and then call the company enroute via cell phone to communicate the additional information.

The new protocol, known as “Expedited Dispatch”, was piloted in Queens from February 2008 through mid-June 2008. Response time was reduced and so Chief Cassano and

FDNY Commissioner Nicholas Scoppetta implemented expedited dispatch citywide in mid-June 2008. As a result, FDNY's average response time to structural fires for 2008 was 15 seconds faster on average for 26,000 calls citywide (4:12 in 2008, compared to 4:27 in 2007)—the fastest response time in 14 years (FDNY press release, January 12, 2009).

3.7 Measuring the Results

Expedited dispatch was in effect for a full year citywide in 2009 resulting in measurable improvements. The citywide average response time to structural fires was 4:02 in 2009, 10 seconds faster than 2008 when expedited dispatch was in place for only part of the year, and 25 seconds faster than 2007, when expedited dispatch was not used. In fact, the 2009 response time was the fastest in the City's history, 6 seconds faster than the previous record of 4:08 in 1994 (FDNY 2010).

While correlation is not causality, the City recorded the fewest fire deaths in 90 years for 2009, 73, a 15% drop from 2008. New York City also had the fewest serious fires since they began keeping that statistic in 1996. Historical comparisons become much more difficult beginning in 2010 because the City implemented a new initiative, Unified Call Taker (UCT) with new protocols and technology. Under this program, police, fire, and EMS dispatchers were co-located, cross-trained, and provided with a new communications technology which has reduced response times even more.

As the two Performance Management Task Force groups conducted research on response times, the members determined that it was important to connect response time improvements directly to the FDNY core mission—protecting lives and property (FDNY 2011). The number of fire-related deaths and the number of serious fires are the traditional measures of success for the department.

Task force members also observed that there were two potentially important performance measures not currently reported—persons rescued and property saved. Faster response times should generally result in more persons saved and less property damaged along with more property saved. Task force members interviewed officers throughout the organization and in other fire departments to determine why these two measures were not widely used. They discovered that there are challenges in accurately reporting both measures—self-evacuation and rescue can be challenging to parse; property saved and property just not damaged can be equally hard to accurately differentiate and value.

To assist the FDNY in expanding performance measurement into these important areas, the Department in 2008 engaged Columbia University's MPA Workshop to conduct a study of the feasibility of implementing performance indicators on rescues and property saved. In 2010, FDNY began collecting and reporting rescues. The property saved indicator has proven more challenging to implement, but the Department is still working on developing it.

4.0 Lessons Learned

Among the key lessons learned in this case is the importance of connecting performance measures to an organization's strategy and to the organization's culture. Performance measures are highly contextual. They are imbedded in the organization's formal and informal structure, method of operation and definition of success.

The difference between New York's police and fire organizations is worth highlighting. The effort to replicate COMSTAT failed, but a system more focused on a single indicator succeeded. The attempt to add additional measures is taking a long time due to the Department's focus on rapid emergency response. The goals of rescuing people and property are more complex and multifaceted than response time, but should be the basis for clear, operational measures of success that need to be reported, analyzed and managed against.

The case also demonstrates the persistence of organizational culture and standard operating procedures. It is now over a quarter century since New York's housing was being abandoned and burned for insurance payments. Real estate in New York suffered a brief setback in 2008 and 2009, but is once again rising in value. Despite these changes, as recently as three years ago FDNY dispatchers still acted as if they had to triage fire response, even though the department rarely has to make such choices any longer.

Of equal importance is the impact of the FDNY's team approach to fire response, which contrasts with the quasi-military structure of the City's NYPD. The confrontational method of COMPSTAT implementation could not be exported into the FDNY.

Firefighters are on duty in shifts that extend over several days of the week. They cook together, eat together and share many hours of down time between rapid emergency deployments. Influencing behavior in FDNY requires different techniques than in the Police Department. We are certain that these cultural differences exist across organizations, nations and regions and must be understood before implementing performance management systems.

Finally, an emphasis on a single key indicator can work. FDNY measured response time, improved dispatch and improved response time. A focus on this single indicator allowed departmental management to overcome the impact of deeply ingrained standard operating procedures. A pilot test based on this indicator allowed a new, innovative dispatch standard operating procedure to replace one that was badly outmoded. Building on this approach, the Department continues to work, one indicator at a time, to improve its performance.

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