

Less Firefighting, More Business Value

Some Like It Hot

When we think about a residential building on fire, the mental image we immediately get is of professional firefighters rolling up in fire trucks and dousing the flames with water. Obviously, this is an important action, which saves lives and property on a regular basis.

But does the act of firefighting itself, even when done extremely well, prevent fires from happening in the first place? No. Would we be happy if our homes caught fire on a regular basis, but help came quickly every time to minimize the damage? Of course not.

The fire departments around the world know this, too. They undertake a variety of programs to manage fire on all fronts, from crisis management to prevention. IT production quality management is similar to the business of minimizing damage from fires. Even though IT production crews should strive for excellent response to incidents, the greatest way they can serve their customers is by taking actions that will, at a minimum, reduce the impacts of incidents when they happen and, at best, eliminate them altogether.

Firefighting

Firefighting is the act of managing a specific kind of crisis: fire.¹ This includes the acts of receiving a 911 call or an automatic alarm and responding by driving to the site of the fire. Once there, the firefighters simultaneously try to save anything of value (including people) and put out the fire.

¹ If you happen to be an actual firefighter, first of all, thank you, and second, this is only an analogy, so please don't be too critical of the details!

Table of Contents

- 1 Some Like It Hot
- 1 Firefighting
- 2 Getting the 411 on Your 911s
- 2 Prevention
- 4 Knowledge Is Power
- 4 The Culture of Self-Sustaining Momentum
- 5 The Fire-Resistant Pyramid

It may sound easy, but this is an area with many moving parts, and key decisions must be made quickly. While the predominant focus of this book is prevention, we do start with a chapter on crisis management (chapter 1). Good crisis management capabilities are a necessity, and it takes a select breed of individual to do this well.

However, firefighting doesn't prevent fires.

Getting the 411 on Your 911s

Implementing prevention measures intuitively makes sense. But until you know how you are faring today, it is difficult to know just how much improvement is needed or if certain preventive measures worked or not.

Every major city carefully tracks a core set of metrics related to fires that gives them an accurate assessment of how good or bad things are, such as how many calls the fire department responded to in a given month or year. Does your IT department track *all* its incidents? Cities know how many lives were lost and how many dollars of damage were done. Do you understand the business impact of all your incidents? For each incident, cities record how long it took to respond and try very hard to determine the root cause of each fire. Are you rigorously doing the same for your IT services? They also know how many firefighters they have, how many ambulances, how many fire engines, and how many fire stations. Does your organization know exactly how many resources are dedicated to incident response?

By tracking all of this data over time, cities can tell if things are getting better or worse. Applying the same approach to IT incidents can create a great foundation for prevention and improvement. In chapter 2, we uncover what the key metrics are for measuring production quality, and in chapter 3, we delve into how they can be measured.

Cities and government agencies also use this data, combined with investigative techniques, to understand causes of fires. In chapters 4 and 5, we uncover approaches to problem solving that leverage this data to put you in control of the situation and better equip you to take preventive measures.

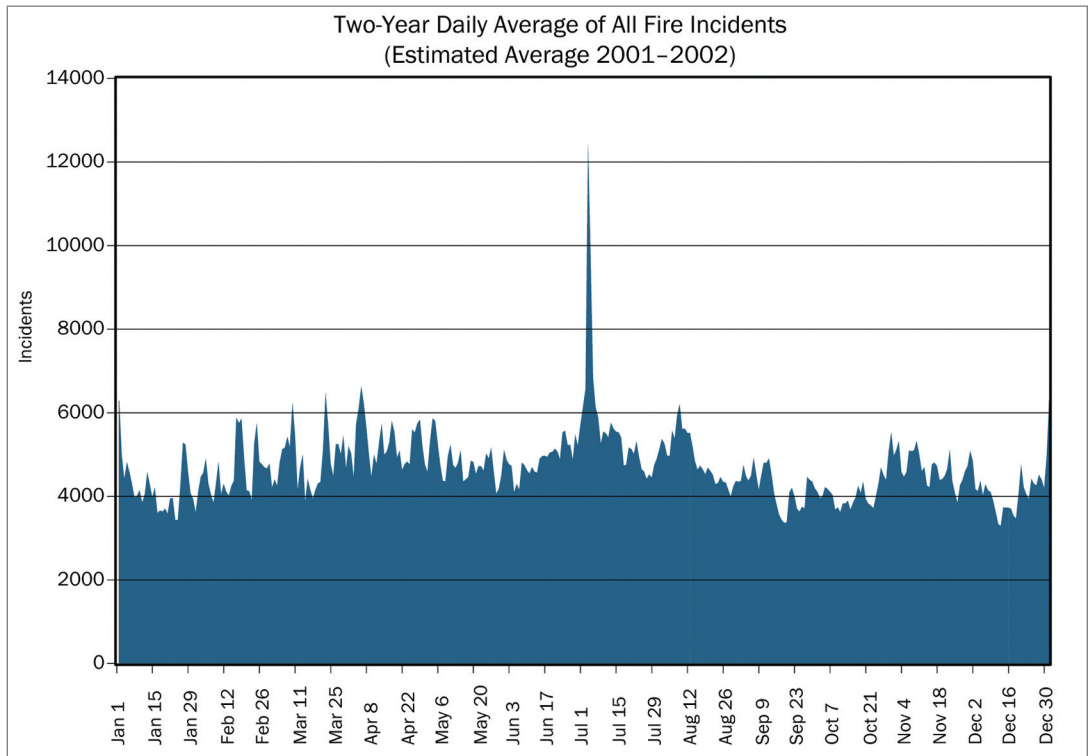
Prevention

When firefighters aren't actively working an incident, what do they do? How do cities try to prevent fires from happening in the first place?

There are literally hundreds of fire prevention techniques in use today. Smoke detectors are commonplace. Household goods are made from fire-resistant materials. Building codes and building inspectors make sure that all new construction utilizes the latest and greatest methods to avoid accidental fires. Cigarette lighters often have childproof ignition systems. In IT, we can learn a lot from those practices. If we

begin to think about each breach in service quality as equivalent to an incident the fire department responds to, and about what we can do to emulate all the prevention steps that go into fire prevention, we can leverage decades of best practices. Chapter 6 shows just how important prevention is for IT production quality.

In addition to taking preventive measures, fire departments and other organizations sift through all of the collected data to look for trends. A certain type of building material may be more prone to catch fire. Perhaps a certain model of kitchen appliance has caused an unusually high number of fires. There are a great many aspects of fire to consider.



Source: "The seasonal nature of fires" U.S. Fire Administration, January 2005
figure 0.1. Fourth of July fires

As an interesting example, a study by the U.S. Fire Administration has shown that more fires get started on the Fourth of July than on any other day (fig. 0.1). Armed with this data, officials can implement more targeted prevention programs. This kind of analysis applied to IT can help spot relevant problems. Once you know the trends, then you can act.

Knowledge Is Power

To be sure, a fire department could be successful by putting out fires quickly, recording its progress, and implementing any high-value prevention techniques they can think of. But there's still more they can do.

For one, they can formally document their findings. If, for instance, they put their key findings about the past year into a 10-page document, they can send it to the city council and the mayor's office to request additional budget for staff or particular equipment. If you've ever had to justify a request for funds or headcount, you know how much easier this is when your request is backed by solid data.

Fire departments can take that same document and circulate it to other fire departments as well, for the greater good. Neighboring cities and towns may very well benefit from learning about the challenges faced by another city's fire department and how they approached the problems. Similarly, all the various teams in your organization can learn from each other through knowledge sharing.

Similarly, some fire departments publish a newsletter to the communities that they serve with tips on fire extinguisher use, smoke detector battery replacement, and fire drills. In this way, they are able to approach fire prevention from another direction.

Lastly, fire departments benefit from diagramming any complex parts of their industry. They can chart the location of all fire stations by what capabilities they have. They can chart the location of fire hydrants by what water flow they are able to provide. They can detail the contents of each one of their vehicles. All of the diagrams serve to make key information easier to access so that many more people can leverage it to do their jobs better.

In our experience, diagrams and charts are underutilized communication tools that can help an IT organization build and run better-quality products. We cover this in more detail in chapter 7. We also have found that the right information published to the right audience at the right time can greatly enhance success. We discuss how in chapter 8.

The Culture of Self-Sustaining Momentum

The fire marshal can steer a great number of these activities. From his office, he can dictate that fire hoses be dried out a particular way, statistics be kept, reports be published, and make various other directives. If he makes the right decisions and gets his personnel to consistently perform in an effective manner, he will get better results than if he let everyone do their own thing.

But he can't make every single decision at every level. Nor can he make decisions while on vacation,² nor after he retires. What he can do is create a culture of constant

² Unfortunately, the BlackBerry may have changed this somewhat.

improvement. He can ensure that his people know that it is paramount to cut average response times from seven minutes to five minutes, and that no building in the city should be more than 75 yards from a fire hydrant. Then everyone on staff can make decisions about their work accordingly. By fostering such an environment, the fire marshal is leveraging the energy of his full organization instead of getting results through his own efforts only. This can be extremely powerful when used in any organization.

In chapters 9 and 10, we demonstrate how IT leaders can tap into the great pool of energy available to them throughout their IT department, and produce extraordinary results. In chapter 11 we share strategies for effectively putting this all into practice, even when the task seems insurmountable.

The Fire-Resistant Pyramid

Fire departments are not successful by just putting out fires quickly. As evidenced above, they must do a great number of activities in complementary areas to make a difference. Operating production IT systems effectively requires the same approach.

In this book, we show you how to undertake quality improvement activities that will make you better at crisis management (firefighting) and incident avoidance (prevention). We know that the more of these tactics and strategies you implement, the better your chances are to have stable, productive, and profitable production IT systems.

The advice starts off fairly straightforward, such as how best to resolve an incident quickly, what quality metrics are the most important, and what attributes to monitor on your servers. But tactics such as these, while powerful, will only get you so far.

In later chapters, the counsel becomes more strategic: we unlock the secrets of making your production systems run predictably to help your business see you as an enabler rather than just a cost center or order taker. We let you in on secrets such as how to detect and fix problems before they happen, how to get the most out of other departments, how to find the perfect person for your key operations roles, how to focus the central leadership message of your department, and how to leverage organizational design to get the most out of your own department.

To help organize all of this information, we utilize a hierarchical model represented by a pyramid (fig. 0.2). We like to think of this pyramid as fire resistant, because it acknowledges that fires do and will exist, but that doesn't mean you have to get burned. The pyramid is a depiction of the Production Maturity Model, or PMM. In the following pages, we will start with the foundation and work our way up.

The more tactical tips for success start at the bottom of the pyramid: In Level 1 (Crisis Management, a.k.a. firefighting), we focus on how to resolve a crisis quickly and efficiently. In Level 2 (Defining Quality), we uncover the four cornerstones of

production quality, how to measure them, and how to use the power of data to improve quality.

As you progress along, the more strategic material is located near the top of the pyramid. There you'll find Levels 3, 4, and 5. Level 3 (Prevention), focuses on activities that will minimize your chances of having to visit Level 1. Level 4 (Information Promotion), shows how documenting and broadcasting information in certain ways can take your results to a higher level. Level 5 (Perpetual Motion), discusses how you can direct organizational forces toward your quality objectives, effectively harnessing energy beyond your own.

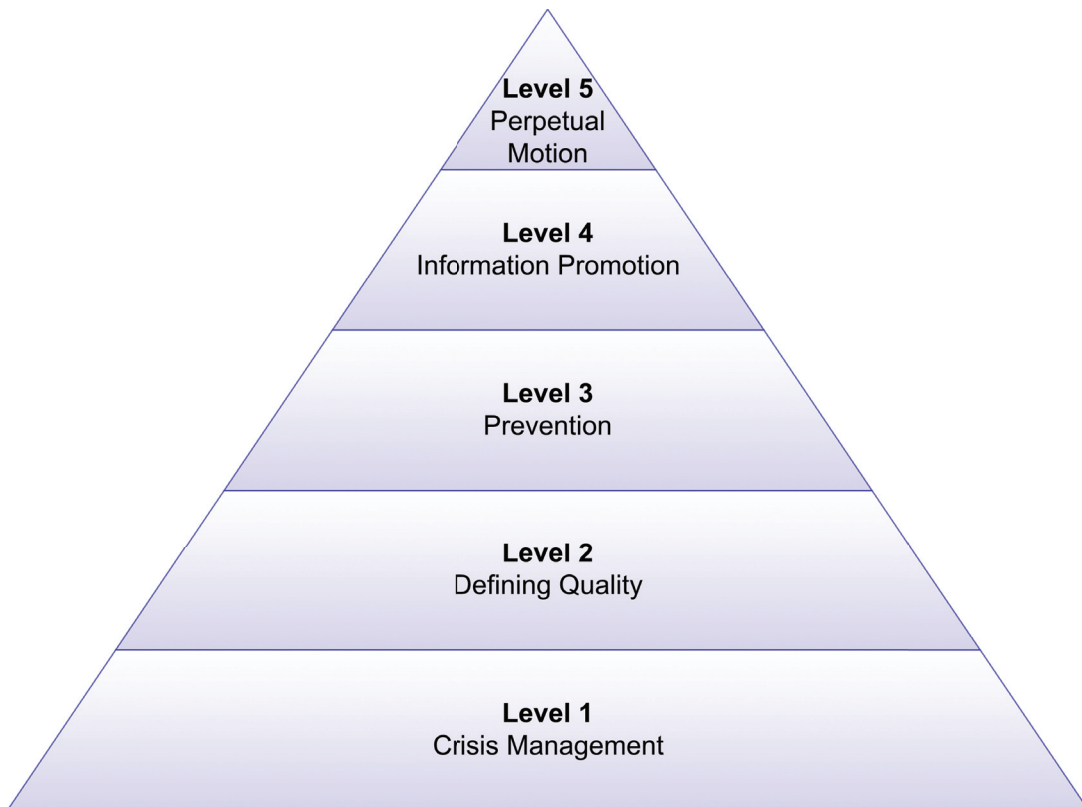


figure 0.2. The Production Maturity Model

The levels are not hard-and-fast rules about the order in which things must be done—though in many cases it would be difficult to proceed out of order (for instance, setting specific system quality goals without knowing the current state of the system). In many cases, though, it's entirely possible to selectively perform activities in the higher levels while simultaneously taking action in the lower levels. The

primary value of this pyramid is just as a framework for organizing hundreds of key thoughts and best practices. It is also an interesting way to do a rough assessment of your current situation. If you feel like your department has levels 1 to 3 covered, but it doesn't do much in levels 4 and 5, then you have a fairly good idea of where you stand.

One last piece of advice about digesting this material: while there are many tips here, you are probably already doing a lot of these things (and you should continue to do them!). And incrementally, over time, you can pick and choose what you like best to add value to your department, buffet-style.

Only you can prevent forest fires.