

## What Went Right — and Wrong — in Three Real Cases of Uncertainty

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In many industries, uncertainty is the only thing you can count on. Businesses that operate in environments dominated by complex systems, fast-paced activity, and critical factors that cannot be directly controlled usually adapt to uncertainty by making it routine. These case studies show how expert managers get the job done — and what can go wrong when they don't.

### FedEx

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**What happened:**

Bad weather crippled a major city.

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**Goal:**

Overcome the chaos to keep package deliveries moving.

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**Outcome:**

Success

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When a massive snowstorm hit Seattle in December 2008, the city was so unprepared that it didn't even salt the roads. But FedEx's focus on communication helped the company weather the storm. Tom Campbell, FedEx's managing director for the Northwest region and a 20-year company veteran, explains how he got the job done despite the disruption.

- **A tested plan.** FedEx has a corporate-level plan to guide fleet managers who must deal with storms. All the company's managing directors are trained to use it. Because Campbell was prepared, he felt poised when it came time to deal with Seattle's storm. He knew he couldn't control the weather or truck delays, but he also knew what procedures to follow.
- **Jacked-up communication.** Good communication is repetitive and consistent, Campbell says. Throughout the storm, Campbell, who is based in Portland, Ore., and has an eight-person staff, increased daily conference calls from one to two per day. Each morning and late afternoon, senior managers from each facility in his region dialed in to share weather reports and details of truck arrival times.
- **Prioritization.** All FedEx packages in the Northwest are delivered to Portland, where they are separated and shuttled to places like Spokane, Wash.; Seattle; Salem, Ore.; and Everett, Wash. When a storm hits, the main highways from California are always the first concern, and the company stays in constant communication with drivers to track the progress of arriving trucks. The local effort focuses on knowing which streets are plowed or passable. Those perspectives enabled Campbell to focus his resources on areas that were passable, rather than trying to make deliveries to places that weren't.

- **Upward management.** After Campbell gathered data from his managers, he sent a full report by phone or e-mail to FedEx headquarters each day.

The end result? Some packages were delayed because of major highway closings, but all were delivered. Just as impressively, FedEx drivers reported no major accidents in Seattle because of the snow.

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## U.S. Forest Service firefighters

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### **What happened:**

A 2008 wildfire became uncontrollable.

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### **Goal:**

Contain the fire and keep fire crews safe.

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### **Outcome:**

Failure — four firefighters injured

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On June 11, 2008, a **wildfire in central California's Los Padres National Forest** provided a frightening lesson in what can go wrong for a crew of firefighters caught unprepared, under acute stress, and crippled by a lack of information. That day, a 1,500-foot tornado of fire called a “vertical plume” whipped across the district at 70 mph. Although several firefighters filmed the plume, no one warned the crew from Engine 71, which was assigned to keep the fire from crossing a particular road. Four firefighters sustained burn injuries.

Here’s what the group learned about the importance of situational awareness.

- **Perception and recognition.** Teams monitoring the fire saw the plume, but they weren’t in position to keep an eye on it effectively, says Ted Moore, training and branch chief of the Forest Service’s Rocky Mountain Region. (Lesson: Managers must always maintain awareness of critical factors in their environment.)
- **Comprehension and the limits of experience.** Firefighters didn’t have enough experience with plumes to understand how quickly they can travel. Plumes are relatively rare, so nearby crews underestimated the threat and waited 10 minutes to radio Engine 71, which was assigned to prevent the fire from crossing a road. By then, it was too late. (Lesson: Most decisions are based on past experience, which may not always provide sufficient insight to understand new threats.)
- **Learning from mistakes.** After this fire, an analysis team interviewed the crews to learn what went wrong, asking why best practices weren’t followed. The process was nonpunitive, focused on preventing the same mistakes from happening again, Moore says. In this case, Engine 71’s captain and several crew members had removed their gloves before the plume hit. Others failed to stay inside their fire engine; had they done so, they could have assessed the situation in safety

instead of getting trapped by fire and smoke outside the truck. (Lesson: Learn from mistakes and involve your team in a nonpunitive “what went wrong” process.)

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## ExxonMobil

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### **What happened:**

1989 Exxon Valdez oil-spill disaster

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### **Goal:**

Minimize fuel spills in the future.

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### **Outcome:**

Success

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Failing to manage uncertainty can tarnish a reputation in minutes, as Exxon (now ExxonMobil) learned during the [1989 Valdez oil spill](#) in Prince William Sound, Alaska. Yet, by radically changing its approach to worker safety and integrity, ExxonMobil says it has reduced spills by more than 50 percent since 2001. Here’s how the company did it.

- **Defining the stakes.** After the Valdez spill, an Exxon task force developed the [Operations Integrity Management System \(OIMS\)](#) to identify hazards and manage risk. OIMS includes 64 key safety factors that span everything from minimizing the risk of injury to controlling security breaches.
  - **Empowering operating managers.** Exxon’s Health and Environmental Department handed implementation of the program to its line managers. The department’s role is to advise and assist, but the larger goal is to give power to workers on the ground — the people who are best equipped to get the job done.
  - **Assessing progress.** Exxon evaluates every operating unit’s safety, security, health, and environmental performance annually. Every three to five years, a team of 10 to 12 employees — line managers and specialists — examines another unit. For example, the manager of a refinery in Japan might lead an assessment of a refinery in Italy. The company says the “cold eyes” assessments encourage managers to observe how others implement similar policies. Naturally, the process also encourages managers to learn from one another.
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