



## Case Study

### How Many Calls Does It Take to Change a Light Bulb?

The phone was ringing. Again.

The tonal buzz was insistent and, at 5:15 p.m., was not likely to be good news. Abel Wallington, the director of engineering for a 1,000-room downtown hotel, hit the save hotkey on the report he was preparing for his general manager. Maia Bounacas, the general manager, had asked him to detail the benefits the property had been experiencing since installing the new computerized maintenance management system. A sister property was considering installing the same system and Abel wanted to help them make the most of it.

He picked up the phone and had barely gotten out his greeting when the strident voice of Daphne Remonstra, the front office manager, interrupted him. "Is anyone working down there? Abel, what is going on in your department? This is the fourth time this week that we're sitting on forty-eight out-of-order rooms right before the height of my check-in time. I've got a convention coming in and they're all going to be sitting in the lobby waiting for rooms. Our coat-check room is full of luggage and our bell attendants can barely move in it."

Abel clicked onto the work order system, grateful that the system put the status of all work orders at the tips of his fingers. "I couldn't have done this six months ago," he thought to himself. "Of course, six months ago, we weren't having these problems."

He quickly sorted the work orders and saw that thirty-nine of the forty-eight out-of-order rooms were due to burned-out light bulbs and that his only electrician was currently working on them.

"We should be getting them in pretty quickly, Daphne," he said. "But you know Maia has a zero-tolerance policy on burned-out light bulbs and won't let us release a room until they're changed."

"What I know is that I've got to comp drinks for a lobby-full of weary travelers!" Daphne said as she slammed the phone down.

Abel sighed and set aside his report to go help his skeletal evening staff replace light bulbs and get the rooms back into order more quickly. Ninety minutes later, he was walking back to his office with his swing shift engineer, Vernon.

"I dunno, boss," Vernon said as he shrugged into his jacket and punched his passcode into the system to clock out. "Days like today are becoming awful common. It's slow for hours and then we get slammed with more work orders than we can turn before check-in time. Sure would be nice if we could get the orders a little earlier in the day."

"That it would," Abel agreed. "Have a good night and I'll see you tomorrow." He went into his office and pulled up his report again.

The maintenance software allowed room attendants to call in requests directly to the work order system. The automated response walked them through the reporting process in the language of their choice. The hotel had installed modules for English, Spanish, Chinese, French, and German. The system then generated a work order, prioritized it, and sent it to the alphanumeric pager that each engineering department employee carried. They knew they'd get a lot of great

benefits with a computerized work order system, but this went far beyond their expectations.

Abel quickly reviewed the system's other features:

- It creates a history of closed work orders.
- It allows assignment of work order priority.
- It tracks "who, what, where, and when" for each work order, including who identified the problem, whether a guest initiated the request, who corrected it, time reported, time closed, where the order was initiated from, and where the deficiency was.
- It allows for all employees to call in work orders with simple codes from any in-house phone.
- It sorts data by room, floor, and building.
- It records labor and materials costs on each work order.
- It can view open, overdue, and on-hold work orders for any asset.
- It creates data tables for employee records.
- It creates a variety of reports based on user-input sorts.

He'd already detailed the benefits for the first two features in his report and had just started on the third one when he'd been interrupted. He re-read the paragraph he'd just finished:

Tracking data has allowed us to do things we've never been able to do before. For example, by sorting orders according to repeat calls, we discovered that the bathroom ceiling in Room 455 had been re-painted six times in one year. Each time a different maintenance employee had performed the work and no one realized that this was a repeat problem. This data raised a red flag for us. We investigated and found that the real problem was a slow leaking toilet in a low-occupancy room above it. This time, we fixed the real problem instead of applying a Band-Aid.

Abel consulted his outline. In his report he wanted to address four additional issues of how the system had helped to change the way the department worked. His plan was to write about how the system helped them to:

- Evaluate a proposed incentive program for the engineering and housekeeping departments.
- Benchmark their performance against other properties of their size within the chain.
- Identify tasks that could be cost-effectively outsourced.
- Prepare a budget for property operations and maintenance costs and a staffing guide.

As Abel began a new paragraph, Vernon's parting words suddenly struck him and he again pulled up the work order system. He quickly reviewed the data for the past week, sorting work orders by the time of day. Things were starting to

become much clearer. He shot an e-mail off to the executive housekeeper Amber Limpieza, asking for fifteen minutes of her time the next morning. He then decided to call it a night.

At 8:30 the next morning, Abel sat down in Amber's office. "I'm hoping you can help me solve a problem we've been having. Lately we've had a lot of rooms that are still unavailable at check-in time. This creates a back-up at the front desk as well as greater-than-expected numbers in the lounge as they are serving comped guests." He took out a spreadsheet and set it in front of her. "Take a look at this, Amber. It's all the work order requests called in by housekeeping. Notice that 85 percent of the calls are coming in at either 11:30 A.M. or at 3:30 P.M. This means my staff has little to do for hours and then they get hit right before their lunch and right as most of their shifts end."

"Well, of course," she said. Abel waited for her to explain further. Amber sighed and rolled her eyes, "That's when the room attendants go on break or end their shift."

"I still don't get it," Abel said. "Why would we get more calls when they're on break then when they're working?"

"Because that's when the room attendants give their floor supervisors the list of all the out-of-order items," Amber replied, as if stating the obvious.

Abel was dumbfounded. He sputtered for a moment and then asked, "Why are they doing that? Why don't they just pick up the guestroom phone and call it into the system themselves?"

"Come on, Abel," she answered. "Most of my staff has been working here fifteen years or more. Do you really think they're going to change the way they do things? Besides, most say they don't understand how to use the system."

### Discussion Questions

1. How does the issue of having all the work orders hit the system at once affect both internal and external customers?
2. What is the root cause of the problem and what other factors contribute to it?
3. What are some of the ways the problem can be solved?
4. How can a computerized work order system provide information to address the four issues Abel mentions in his report:
  - Evaluate a proposed incentive program for the engineering and housekeeping department.
  - Benchmark their performance against other properties of their size within the chain.
  - Identify tasks that could be cost-effectively outsourced.
  - Prepare a budget for property operations and maintenance costs and a staffing guide.