The Costs of Suboptimization

An elderly lady recently arrived at a Florida condominium on a Friday evening to discover that the phone and the television were not working.

The New York based owner of the condominium makes a practice of calling arriving guests to make sure they have found everything to their satisfaction. When he was unable to get through by telephone on Saturday morning, he called Comcast, the provider of both services. He was told that a ticket would be created and that the problem would be addressed “within 72 hours.”

Knowing that the lady did not have a cell phone, and was therefore essentially incommunicado, the owner called Comcast repeatedly over the next few days in an attempt to improve Comcast’s response time. Early in the following week, he was informed that no one would be dispatched to repair the phone because a remote technical test showed that the modem in the condo was responding correctly, and it was up to the person in the condominium to ensure that the phone was plugged in and correctly cabled to the modem.

The owner asked the manager of the condominium association to check if the phone was correctly connected, which she did. It was. The manager also called a personal contact she knew in Comcast, who agreed that the company’s response was unacceptable and that she would escalate the matter up the management chain. This contact was able to report on Wednesday that a technician would be at the condo “between 3 and 5PM” on the next day—Thursday.

When the owner was still unable to call the condo on Friday morning, he contacted Comcast and was told that the repair technician’s visit had been cancelled. Why? Because no one at the condominium answered the phone when a Comcast computer called the condominium to confirm that someone would be in the apartment when the technician arrived.

When asked why the arrival of a technician to repair a non-working phone would be dependent upon a computer’s successful call to that non-working phone prior to repairing it, the Comcast representative said, “Because that’s our process.” When it was pointed out that this particular process was intrinsically nonsensical, the representative readily agreed, but repeated the mantra—as though that were Comcast’s institutional explanation of last resort.

To complete the story, the owner called the personal Comcast contact of the condominium manager, who later called back to report a commitment to send a technical specialist on Friday as long as there was some number that could be called to confirm that someone would be there to open the door. The personal number of the condo manager and the owner were provided, and a repairman named Dan arrived around 6:30 PM.

As soon as he did, the customer experience was transformed. Dan improvised his own process: he diagnosed and fixed the phone problem (which was indeed a Comcast problem):
determined that the television problem was due to a database error that resulted in Comcast forgetting that this condominium should be connected to its cable network; personally saw to it that the database was corrected while he waited; and then spent time teaching the lady how to use the multiple remotes that control the function of the television. He then called the owner to update him.

Dan’s process was not predictable, and will never be repeated. It was part of a higher-level ad hoc process that dynamically incorporated the condo manager, her personal Comcast contact, the owner, the lady, and who knows how many people inside Comcast. It may or may not have been the most efficient way to restore service, but it was unquestionably effective. The lady can now communicate by phone and watch television. And even better, she feels safer and happier.

Because Comcast is organized as a traditional bureaucracy, it is not difficult to create a plausible scenario for explaining why what happened did happen.

For instance, assume that in an ongoing quest to reduce operating costs, multiple functions and departments in Comcast have been given a “cost-reduction challenge” --or perhaps a plain old budget cut. This unavoidably invokes the suboptimizations that are so destructive of system-level performance, virtually guaranteeing that the recipient of that performance (in this case the elderly lady) will be less well served.

In bureaucracies, the explanation of poor enterprise performance is often this simple—suboptimization. This raises the question: Does management understand what “suboptimization” means – or even that it is a bad, rather than a good thing? (Many people appear to think that suboptimization means “not entirely optimized” rather than “optimization of the subordinate parts.”)

Suboptimization is a flagrant and serious violation of systems principles. But you don’t have to be familiar with systems theory to recognize how frequently in everyday life we improve something by making a part of it worse. For example, running a duct through a closet to install an air conditioning system makes the closet worse (less space to hang clothes) but the house better. In business, overrunning the logistics budget by 10% is a good thing to do if that reduces the cost of manufacturing by 2%.

These obvious and familiar examples are first cousins of much more complex and less intuitive choices that involve large numbers of interacting parts. But over the entire spectrum the same principle applies: never optimize the subordinate parts. When this happens, you get the result that IBM CEO Sam Palmisano described in a 2004 *Harvard Business Review* interview: a bid involving IBM’s suboptimizing hardware, software and services businesses that even IBM’s CFO couldn’t price as an integrated solution.

Returning to the Comcast scenario, assume that its process requiring an automated call to a customer 30 minutes prior to the arrival of a technician is the result of a careful analysis that determined a substantial reduction in technician service costs could be
realized by significantly reducing the number of “no one at home” incidents. It is a safe bet that this analysis was not a system analysis that incorporated the impacts on the other parts of the system affected: such as the cost of customer inconvenience; the risk and cost of a serious problem arising from an inability of the customer to contact police, fire, medical and other parties; the time lost by the condominium manager, the owner, the Comcast phone reps (was their time-on-phone cost also being suboptimized?), the time it took Dan to track down and solve non-telephone related customer problem, the personal Comcast contact (who happened to be on vacation during the episode, but involved herself anyway)……and so on and so on.

Of course there was no such system analysis. Any traditional organization would come to a screeching halt if operating decisions were burdened by such a requirement. The propagation of effects due to a change in one part of traditional organizations is mostly unknowable and unpredictable….so it is ignored.

That is precisely why the parts (roles) in an organization should be designed and measured only on the outcomes each role “owes” other roles. And that is only effective if the organization is designed as a system of roles and accountabilities in the first place. Because systems are designed in terms of interactions between roles, as opposed to the actions of roles, it is possible to trace the chain of impacts due to a failure or change in any specific role. This diminishes the chances of unintended consequences, and provides leadership with early heads-ups on roles that need attention.

If everyone is clear about their roles and the outcomes they are accountable to produce for their “customer” roles, the institutional mantra changes from "because that’s our process" to "because that’s my commitment to my customer.”