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Call centers, making targeted improvements involving more cost-effective technologies, are finally saving money and improving revenues with IT.

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**Wayne E. Pietraszek and
Adesh Ramchandran**

Executives who have spent tens of millions of dollars on call-center technologies can be forgiven for being wary of big investments to overhaul their systems if they don't have a clear picture of the expected benefits. They are all too familiar with horror stories about large outlays that have yielded no returns—for instance, the tale of the telecom company that spent more than \$50 million on new customer-relationship-management (CRM) technology for its frontline agents but saw no improvements in revenue or customer satisfaction, because those agents ignored the system.

Nonetheless, executives know that strategic investments, when rolled out in waves and funded by the savings and extra revenues they generate, can deliver substantial improvements. What executives may not realize is that, in recent years, key technologies such as voice recognition (VR), interactive voice response (IVR), call routing, customer information management, middleware connectivity, and workforce management have become more powerful and less expensive. Companies that invest in these technologies are seeing their operational expenses tumble even as revenues grow. A transportation company, for example, invested less than \$5 million in VR, IVR, call routing, and workforce-management technology and managed to

boost customer satisfaction by 30 percent while saving more than \$20 million a year. Call-center outsourcers routinely use the technologies to cut the cost of operating customer facilities by 30 to 40 percent—and can pass on savings to their clients while making a healthy profit.

The high likelihood of significant returns on investments in these technologies should—but often doesn't—outweigh concerns about implementation. Many executives legitimately feel constrained by the complexity of their existing IT environment and the need for cross-functional organizational alignment when new IT systems are implemented. Further, the cost of completely replacing a legacy IT architecture is prohibitive, and incremental change can seem difficult and risky. Adding to the challenge, those involved in improving call-center performance may well work in separate functional areas (such as IT, marketing, customer service, or operations), pursue independent objectives, and be assigned to different budget areas.

The obstacles can seem daunting, but as leading organizations are demonstrating, the falling costs and greater power of new frontline-improvement technologies make confronting the challenges worthwhile (Exhibit 1). What's more, the difficulty of replacing legacy systems or reengineering cross-functional processes isn't new. As long as managers expect a sufficient return, they have every incentive to get the job done and the knowledge to go about doing it. We think it's time for executives to take a second look at these technologies.

Addressing long-standing problems

Companies have already achieved the easiest improvements in call-center productivity. Over the past decade, many call centers

EXHIBIT I

Worthwhile improvements for call centers

	Technology	Old	New
Automate where possible	Automated voice technology	Touchtone responses required, conversion of data to voice is awkward and limited	More effective voice recognition lets system handle more calls; easier to convert transactional data to speech
Fix at the front line	Better middleware and agent desktop	Agent's screen showed limited information; complex interfaces to different operational systems	Improved middleware delivers a simplified agent desktop, presenting relevant customer data during call
	Customer-relationship-management data	Incomplete customer information extracted from multiple systems	Integrated, prioritized customer information is presented to the agent when needed
Match staff with demand	Better call distribution	Hardware-based system to route calls between call centers using traditional telephone circuit switching	More sophisticated routing software balances calls smoothly across centers, while improvements in VoIP (Voice over Internet Protocol) technology lower transmission costs
	Workforce scheduling	Staffing projections for individual call centers based on historical call volume and handling time	New scheduling systems accept more variables to improve projections and schedule multiple call centers, including outsourced ones; allows real-time adjustment of staffing projections

have been outsourced (some offshore), and smaller centers have been consolidated into larger, more integrated facilities. Management techniques, which now focus more on frontline coaching, performance measurement, and tailored training, have been improved.

The next wave of improvements will probably come from using technology to automate contact with callers, to help frontline staff resolve calls, and to handle call volumes more efficiently. A careful analysis of which improvements are most likely to yield the highest returns can help executives prioritize these investments (Exhibit 2). Of course, such technologies will yield substantial benefits only if accompanied by the

necessary changes in management, incentives, and behavior.

Automate where possible

Transactions that cost \$2 to \$10 when handled by a live agent cost only 2 cents to 20 cents when automated. What's more, customers are getting used to automated transactions—in fact, some prefer them. Our research suggests that more than 60 percent of customers favor an automated option for many types of simple interactions (for example, balance inquiries or payments); the rest said they didn't mind being presented with an automated option as long as they could connect with a live agent if they wanted one. Sometimes a company prefers to put a real person on the call, especially when trying to win back a customer who

EXHIBIT 2

Which investments yield better returns?

\$ million

A typical project business case looks at costs of activities and returns by function separately . . .

Business case

Costs	60
Annual returns	10
Return on investment (ROI)	17%

Costs 60

Costs by activity

Analysis/design	12
Release 1 build	8
Release/test	4
Licenses	12
Hardware	8
Systems integration	16

Annual returns 10

Annual returns by function

Call balancing	5
Knowledge base	1
Customer self-service	3
Workforce management	1
IT architectural improvements	0

. . . but an ROI-based method considers costs and payoffs per function, allowing managers to prioritize investments better and substantially increase ROI

Revised business case

Costs	28
Annual returns	9
ROI	32%

Function

Costs by activity

Annual returns by function

Call balancing	16	5
Customer self-service	8	3
IT architectural improvements	12	0
Knowledge base	20	1
Workforce management	4	1

■ On the back burner

wants to discontinue service. But these calls are a small portion of the total.

Investments in new VR and IVR technologies can help automate an additional 5 to 30 percent of incoming calls while maintaining or even enhancing customer satisfaction and revenue. A major telecom company recently invested \$30 million in technologies that automatically handle additional transactions and allow callers to speak their answers instead of

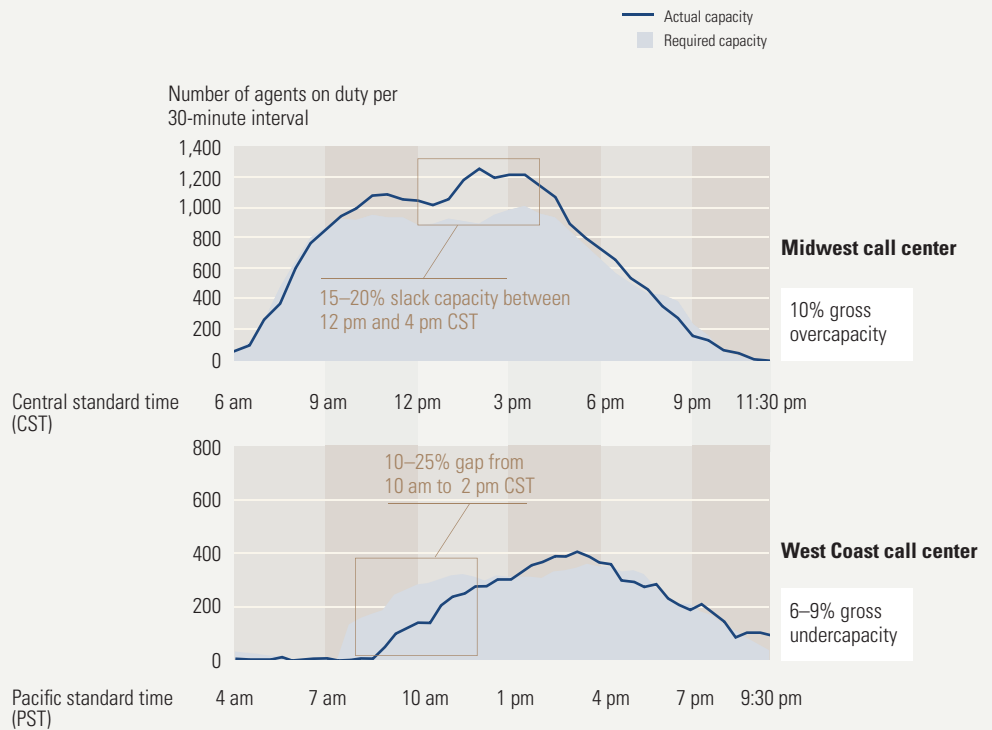
pushing buttons. The new systems are capable of handling 10 percent more calls, and executives anticipate saving upward of \$50 million a year.

[Help the front line resolve the issue](#)
 Customers like it when they get issues resolved on the first call; it's good for a call center's efficiency too. The keys to making the most of each call are knowing your customers and tailoring the service that each of them gets to his or her preferences

EXHIBIT 3

Hold, please

Required vs actual call-center capacity for disguised major airline



Source: Command center reports; McKinsey analysis

and value to the company. New targeted investments in technology can substantially improve the performance of call-center agents on both dimensions.

Fix it at the front line. Call-center agents can usually access back-office systems such as order entry, account maintenance, and billing. However, some capabilities are hard to reach or take too much time during a live call. If companies measure agents on their average handling time, they may try to end a call without fixing the problem. That hurts performance on other metrics, including first-call resolution and operating efficiency—not to mention customer satisfaction.

A solution comes from new middleware technology supported by a degree of process redesign. A transportation company, for instance, began solving ten times more problems during the first call after it made a modest investment in the interface of its billing system and restructured its work processes so that call-center agents could access billing data. Getting the company's billing department and call-center organization to integrate their work flow and authorization processes more closely was a quite difficult task but ultimately resulted in rather attractive payoffs: lower processing costs and increased customer satisfaction.

Know who's calling. A related improvement is designed to ensure that agents know which callers are critical and merit the most time. Companies have invested huge sums in CRM technology, but too often it has merely generated mountains of data too unwieldy to be of use. Sometimes the agent can't wade through the vast amount of information quickly enough, critical pieces are missing, or agents from different call-center groups must access the data in different ways.

To fill these gaps and derive value from vast stores of customer data, companies are implementing more effective information designs that deliver the right data to the agent at the right time. The keys to the new approach are prioritizing potential information by gaining a quantitative understanding of the value it can provide in customer interactions and then designing the minimum effective set of information for agents. We find, for example, that projected customer lifetime value, all by itself, is quite a powerful way of creating the right kind of interaction with customers. Often the implementation of the new targeted information flow requires only a modest investment in incremental data-extraction and -cleansing technology. A medical-services company, for instance, invested \$3 million to standardize the bank of relevant customer information its agents used and to make that information more comprehensive. The company was rewarded with a 10 percent boost in revenue, worth \$40 million a year.

Match staff with demand

Incoming call volumes fluctuate widely during the day and various times of the week. As difficult as it is to match the peaks and troughs with a workforce consisting of full- and part-time agents who have different skills, no company

wants its agents to be idle or callers to be on hold. New technologies can help call centers avoid both situations.

Upgrade call-routing capabilities. Customers hate long waiting times, so it's important for companies to pass calls to the appropriate available agent. But that's hard to do in companies employing thousands of agents in different places. One major US airline found that, in spite of a large investment in call-distribution technology, agents in a Midwest call center sat idle while customers waited three minutes or more to speak to identically skilled agents on the West Coast (Exhibit 3).

This company has taken advantage of recent developments in Internet Protocol (IP) telephony and automated-call-distribution technology that radically improve the delivery of the right call to the right agent at the right time across a number of call centers. A \$3 million investment in this new technology allowed the airline to manage calls more effectively and helped reduce operating costs by 5 percent, or \$7 million a year, while improving service to meet their preexisting targets.

Improve scheduling capabilities. Large organizations often have more than 1,000 call-center agents; a number have more than 30,000. Some agents work full time, others part time; some of them work for outsourcers (onshore and offshore); and they bring different skills to the task. The optimal approach to scheduling this workforce within and across call centers is complex. So is ensuring that customer service agents receive the right performance feedback delivered in the most effective way to improve their performance.

Almost all large organizations have invested in software to schedule the workforce, track

performance, and monitor quality. In many cases, however, these systems have proved cumbersome and have led to suboptimal outcomes. Newer systems let companies manage a call-center workforce with an approach closer to the theoretical optimum; for example, these systems make it easier to ensure that all teams, across a number of call centers, have the same capabilities.

Using similar techniques, a utility company recently improved its agent utilization by more than 10 percent while simultaneously boosting its overall customer satisfaction and quality scores. The company used a state-of-the-art workforce-scheduling system to rebalance the ratio of part- and full-time people and to improve coverage of peak calling periods. It also upgraded its call-monitoring technology to give agents more immediate feedback on the best way to handle customer requests. Agents improved their customer-handling skills even as they got busier.

The biggest payoff comes from integrating all of the new technologies. A wireless telecommunications provider implemented next-generation call-center technologies across its operations with an incremental capital investment of 5 percent, or \$7 million. For that sum, it improved its operating efficiency by 20 percent, worth \$25 million annually, and raised its customer satisfaction scores by 30 percent.

Redesign work processes

Executives know that upgrades in technology won't improve results unless companies also change the way their people—in this case, call-center agents—work. Consider the case of the telecom company whose \$50 million investment in


CRM technology had no impact on margins or customer satisfaction. The company discovered that its agents were ignoring the system's recommendations of high-value bundles because they felt more comfortable proposing modest sales of features.

To resolve this problem, the leaders of the call center, marketing, and IT cooperated to realign their metrics and goals fundamentally. The call center had to accept the longer average handling times required for a more extensive sales effort and to enforce sales discipline on a highly independent workforce. The CEO and CFO had to accept a bigger budget for the call center so that it could pursue the extra revenue. Marketing had to sharpen its offers to give them a high probability of success, which would in turn build up the agents' confidence; it also had to show increased revenue and margins that could justify the higher selling costs. IT had to implement the technology within its development budget and to fine-tune the system repeatedly in order to ensure the accuracy of data and the consistency of response needed to build its credibility. IT also had to track the business case for the new technology in order to prove that the overall investment made sense for the company.

As compelling as such remediation stories are, their lessons won't apply to all companies. Nevertheless, examples of good and bad implementation can guide managers as they plan how to make the new wave of IT-based improvements a success. Although the specific solutions will vary from one situation to the next, we find that implementing these new technologies requires a clear understanding of the anticipated returns, the support of senior business leaders, and a rigorous change-management program that alters the behavior of frontline employees.

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Another useful lesson: rolling out changes incrementally is more effective than a “big-bang” approach. One successful implementation model we’ve seen has a first wave lasting 3 to 6 months and sometimes costing less than \$1 million. The resulting savings, higher revenue, or both can finance a second wave over the next six months. Typical first-wave improvements include rerouting calls to balance call-center loads better, sending calls through less-expensive carriers, updating customer databases, and directing more calls to automated responses. In the second wave, companies address

the full range of opportunities but seldom replace more than 30 percent of the existing technology. Paybacks tend to come within 12 to 18 months. 

Wayne Pietraszek (wayne_pietraszek@mckinsey.com) and **Adesh Ramchandran** (adesh_ramchandran@mckinsey.com) are members of McKinsey’s global IT practice. Wayne, a principal, is an expert in service operations. Adesh, a consultant, specializes in using technology to improve the performance of service operations. Both are based in Chicago. Copyright © 2006 McKinsey & Company. All rights reserved.

