



New Directions in Call Center Design

Demanding Challenges for a Complex Workplace



Today's call centers have evolved to become sophisticated, high-tech showcases of service, support, and sales. Meanwhile, the look and layout of call centers is changing to keep up with the new demands being placed on them.

Call centers are getting more respect as their image morphs from backroom to corporate centerpiece. No longer do executives dismiss their call centers as a necessary evil best operated on a shoestring. Instead, many progressive companies are coming around to the opposite view, one that recognizes the potential of call centers to have an unrivaled impact on the bottom line—for better or worse.

"The boiler room mentality is disappearing," says Laura Sikorski, managing partner of Sikorski, Tuerpe and Associates, a call center consulting firm in Centerport, New York. "Today, executives are realizing that the call center just might be their most important asset—and are treating it accordingly."

What's responsible for the elevated status of call centers? Mainly this: Nowadays, many companies interact with their customers primarily—if not solely—through their call center. In effect, the call center isn't just another department, it's the front door—often the only opportunity companies have to build a relationship with customers they'll never see.

"Call centers are increasingly the main point of contact between a company and its customers," says Roger Kingsland, managing partner of Kingsland Scott Bauer Associates, a Pittsburgh architectural firm that specializes in call centers. "And that trend will continue

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as the technology becomes more sophisticated and our economy becomes more reliant on information and services.”

Many, varied call center applications

After being introduced by the airlines in the 1970s, call centers soon became synonymous with the telemarketing industry, where their reputation languished for years. Today, there are tens of thousands of call centers in the United States—and seemingly as many reasons for their existence.¹

Yes, call centers are still used for reservations and telemarketing. But they’re also used for technical support, customer service, telephone banking, catalog sales, surveys, collections, and crisis intervention.

Call centers have become so complex they aren’t even sure what to call themselves anymore. “Call center” doesn’t seem quite right, especially for a place that’s as likely to communicate via e-mail and on-line chat as traditional phone calls. That’s why many companies prefer “contact center,” “customer care center,” or perhaps “help desk” instead.²

And what about the people who work the phones? Are they agents? Representatives? Technicians? Advocates? That depends on whether they’re making sales, assisting customers, resolving a technical problem, or attending to any of the dozens of other tasks assigned to modern call centers.

Then, too, advances in technology are expanding what call center representatives do. Many are using Voice over Internet Protocol (VoIP). It transmits voice through the Internet, putting all the information the agent needs on screen. That enables agents to provide a deeper level of assistance beyond, for example, what customers can get from the company’s website.

Big responsibilities for design and furnishings

As the role of call centers expands, so does the understanding of how they should be set up to best fulfill their potential. Technology that promises to increase agent efficiency often gets first consideration. But the look and layout of the physical space occupied by call centers merits equal attention.

Here are some examples of the heightened expectations surrounding call centers—and an inkling of how those expectations can better be met with proper design and furnishings.

A provider of dazzling service

The rationale here is simple: The better agents are treated, the better they’ll treat customers. Put

agents in a pleasant environment with comfortable furnishings and they’re more likely to maintain a patient, friendly attitude than if their workplace is hot, cramped, and depressing.³

A showcase for the corporate image

No department expected to serve as an organization’s front door can operate out of a back room. As call centers become central to business strategy—witness the number of ads and billboards featuring a smiling agent wearing a headset—companies are eager to show them off. Today, the impromptu corporate tour often winds through the call center—and it better look good.⁴

A collector of strategic data

Many companies use the information collected in their call centers to build databases that can be mined to improve products, strengthen customer relationships, develop advertising campaigns, uncover problems, and make better decisions. Chrysler, for instance, fields calls from mechanics seeking guidance on repairs, then electronically transfers the data to engineers who review it with an eye toward building better cars.⁵ By not skimping design and furnishings, companies can send a clear message to agents about how highly their work is valued.

Keeping agents comfortable and content

Aside from customers and the corporation at large, there’s another audience call centers need to serve—the people who work in them. Employees may well be the most demanding audience of all and unquestionably the one most influenced by how their workplace looks, fits, functions, and feels.

Call center agents vary greatly in income and skills. Years ago, call centers were staffed almost exclusively by low-paid workers required only to take orders, pitch products, or answer simple questions. Today, call centers are just as likely to need highly educated workers with a command of both technology and interpersonal communications.

But no matter where agents fall on the spectrum, they share one thing in common: They’re hard to find, especially for those call centers that need dozens or even hundreds of them. Why? Because call centers are tough places to work.

Agents are tethered to a workstation for hours at a time, obliged to stare at a computer virtually nonstop, and required to address repetitive—often negative—issues without losing their cool. And, they can expect their performance to be strictly monitored through systems that time their calls, count their keystrokes, and allow supervisors to listen in. Is it

any wonder working in a call center isn't everyone's idea of a coveted career?

Consequently, absenteeism tends to be high—making life even harder for the agents who remain—and turnover often runs at least 50 percent per year.

A comfortable, well-designed workplace won't eliminate staffing problems, but it can go a long way toward attracting agents and keeping them happy and on the job. Without one, top performers will have one more reason to go elsewhere. If times are bad and they have no choice but to stick around, they may unconsciously vent their discomfort on customers, which will end up costing far more than any investment in space planning and furnishings would have in the first place.⁶

"Call centers were traditionally designed as sardine factories, packing people in as tightly as possible. You can only imagine what kind of service that environment engenders," says Andy Feinour, senior director at Holder Properties, an Atlanta developer that has built several million square feet of call center space. "The challenge today is to incorporate those environmental enhancements that are needed to promote customer service and agent satisfaction without adding significantly to the cost."

One way new call centers can keep costs in check, Feinour says, is by adopting a prototype—a proven base design that can be customized, eliminating much of the expense associated with planning architecture and interiors from scratch.

"Most call center operators understand the value of proper design and furnishings," he says. "What many still need to learn is that it doesn't have to cost a fortune to get them."

The value of good design—for the space and its furnishings—is evident in the comfort it provides agents. They sit for hours on end, often in a high-pressure environment, making them prime candidates for aching backs, necks, and wrists. Aches and pains, in turn, can lead to absenteeism and costly injuries.

Ergonomic furniture that can be adjusted easily to support comfortable postures is critical. So is training on how to make proper adjustments. That's especially true for seating—the more you sit, the better your chair should be, which means high-performance chairs are justified in call centers more so than anywhere else.

Adjustable work surfaces, keyboard trays, and monitor arms are also important because they allow

agents to customize their workspace to their size and preferences. This flexibility becomes even more essential in multi-shift operations that require agents to share workstations.

Beyond the physical side, comfort also has a psychological aspect. Workers in all types of offices and job functions say they are happier—and more productive—when they have some control over their workspace. Take temperature control, for instance. Workers consistently rank it among the top 10 workplace qualities that have the strongest effect on job performance.

"There are many other things that affect satisfaction like job design and company culture," says Craig DiLouie of the Lighting Controls Association. "But when workers can adjust their offices to their individual styles and job requirements, they tend to be more satisfied and report higher productivity."⁷

The U.S. government's General Services Administration (GSA), which manages government facilities worldwide, confirms the importance of psychological comfort. The author of a recent GSA report says, "It is obvious that people who are constantly uncomfortable, or have to continually interrupt their work to make themselves comfortable, will be less productive than those who don't have to deal with such distractions."⁸

Measurable results from workstation design

For some corporations, the intelligent use of furnishings is actually increasing their effectiveness. Convinced that more open work environments—with their tradeoff between enhanced collaboration and reduced satisfaction with conversational privacy—are key to better performance, several have asked Herman Miller to quantify the results.

In one study for a financial services organization, Herman Miller studied nearly 1,000 employees. About half were part of a Control Group that did not move, and half made up the Experimental Group that moved to a more flexible and open work environment. Researchers collected data on agent behavior and performance from both groups four different times.

Data indicated "there was no significant difference in the number of calls taken, or in the time required to complete the work after the call was completed, between the two groups. However, employees who moved to the new work environment spent 37 percent more time on the call itself, interacting with the customer, than did employees who did not move."⁹

Seeking to finalize furniture standards, a telecommunications corporation asked Herman

Miller to evaluate two of its call centers and determine if there were any bottom-line differences between furniture types. One facility uses a frame-and-tile system, the other a pole-based system. The question was whether one might do a better job of promoting collaboration, a stated objective for this corporation.

In a survey of agents at the two facilities, Herman Miller found that agents working in the pole-based system reported greater satisfaction with ergonomics, less work-related pain and discomfort, more control over their environment, and better communication with coworkers.

What's more, the facility with pole-based workstations proved superior in two key measures of agent performance—After Call Work (the time it takes to complete wrap-up work after a call is completed) and First Call Resolution (the percentage of calls completed without being transferred to another resource). The pole-based system even came out ahead by delivering greater customer satisfaction with agent performance, fewer lost workdays, and lower workers' compensation costs.¹⁰

Granted, many factors contribute to those differences, but Herman Miller researchers were able to trace some of the variance to specific workspace attributes. The conclusion? Workstation design has a direct impact on how well call centers work.

Design dilemmas

Whether the job involves building new or overhauling existing space, call centers are arguably the most daunting environment to pull together, involving a combination of challenges found nowhere else. Among them:

- They're high density, dramatically compressing the ratio of square footage per employee, which affects everything from parking to acoustics to washrooms.
- They're stressful, employing workers who could benefit from a little environmental stimulation—not easy to provide when the starting point may be hundreds of people in a huge room with no interior walls.
- They're technically complex, requiring sophisticated computer and communications systems—and the ability to adapt quickly when something even more sophisticated comes out.
- They're hard to pin down, often required to adjust staffing levels, to provide shared workstations among multiple shifts, and to maintain a tricky balance between privacy and collaboration.

So how do dilemmas like these get resolved? Here are some strategies employed by call centers that work.

Planning for change

Volume in call centers can ebb and flow for any number of reasons: seasonal demand, a new promotional campaign, perhaps even a product recall or surprise media coverage. Also, as call centers become more complex, many prefer to assign their agents to teams to facilitate informal communication between and during calls, essentially supplementing classroom training with on-the-job collaboration.¹¹

Either way, it's important to design in the ability to move things around quickly, whether to bring in extra agents on short notice or restructure teams if a more efficient combination becomes apparent. Consequently, workstations should be easy to reconfigure—the fewer parts, the better—and voice/data cabling should be easy to access for quick change.

Unexpected growth is another consideration. "Whenever a call center opens, every marketing and salesperson thinks of another role it can play, so I encourage my clients to plan for at least 50 percent growth," says consultant Laura Sikorski. Without it, she points out, that carefully planned conference or training area might soon disappear under a swarm of new agent workstations.

Another way to plan for change is to think ahead about the possibility of shared workstations. With operations that are 24/7, it may be possible to have more than one worker use a workstation. The key is to choose furnishings that can accommodate a range of workers' needs—from personal storage space to a work chair that adjusts easily for correct fit. This approach offers an operation the flexibility to handle increased activity.

Integrating technology

Data and communications. That pretty much sums up what call centers are all about. While all workplaces pay homage to these twin gods of office technology, none are quite as subject to their whims as call centers. After all, the relentless quest to improve service and stretch the value of call centers means that any technology used in them today will have to be better and faster tomorrow.

It's critical, then, to plan call centers so that new and improved technology can be incorporated with little hassle and expense. Integrating technology in a way that doesn't hinder reconfiguration is equally important.

Raised floor systems are a popular choice in call centers because cables can be accessed by simply

lifting up the appropriate floor sections. While that makes for an easy initial installation, reconfiguration can be problematic because installers may need to move panel-system workstations off the floor sections before they can get at the cables underneath.

A better solution might be to invest in systems furniture boasting generous lay-in cabling capacity. Older systems that require cabling to be fished through the framework should be avoided, but most newer products feature easy-access trays that permit cabling to be laid in or lifted out with minimal effort.¹²

Even more flexible is an unfixed power-and-data distribution system in which cables run on the exterior of vertical poles and within overhead trusses that are independent of other workstation components. When freed of cable-management responsibilities, workstations are exceptionally easy to plan and change.

Considering configuration

Open, single-floor call centers work best because they provide installation economies of scale and simplify supervision. Designers typically allow for about 90 to 140 square feet per agent seat. Actual workstation size only accounts for perhaps one-third of that figure, leaving plenty of room for hallways, training areas, break rooms, and administrative space.¹³

The square footage allocated to workstations depends largely on how computer intensive the application is. Example: Order-entry agents who spend all of their time keying in data can get by with less space than technical service people who frequently need to access reference materials.¹⁴

One of the most striking trends in call center design is the movement away from rows of “ice cube trays” and toward a team-based work model that groups agents in small clusters.¹⁵ Clusters of teams can have many configurations. These depend on the role of the supervisor, the level of technology used, and provisions for handling expansion.

Organic design is becoming a popular way to arrange clusters. It departs from a rectilinear grid to create free-flowing layouts inspired by nature. (Think a path that wanders through a forest as opposed to a paved street.) Besides the interest this approach provides, it can also allow a higher density of workstations without sacrificing comfort.

Whatever the configuration, a team-based approach offers multiple benefits: 1) they help agents feel like they’re part of an intimate group, not one of a thousand; 2) they eliminate the maze effect that screams “call center”; 3) they make it possible to pair rookie agents with veterans to accelerate their development; and

4) they encourage the collaborative sharing of ideas and resources that is becoming so important as the complexity of agent responsibilities increases.

Regardless of configuration, however, maximizing density will always be an issue. Among the options for fitting the most agents in the least amount of space are so-called boomerangs—workstations angled at 120 degrees. When Bell ExpressVu, a Canadian satellite TV provider, opted for this setup, the company reduced square footage per workstation by nearly 30 percent, though agents consistently said the new arrangement felt roomier than the one it replaced.¹⁶

Seeing the light

Since computers produce their own illumination, many call centers are far brighter than they need to be. Harsh lighting creates monitor glare that causes eyestrain and headaches, lowering productivity and potentially increasing turnover.

One way to minimize glare? Indirect lighting that bounces off the ceiling instead of beaming directly down from it. To accomplish this, fixtures should shine upward, either by being suspended from the ceiling or attached to workstations. If agents frequently take their eyes off their monitors to refer to manuals and handle paperwork, they can be provided with adjustable task lighting that delivers extra illumination without contributing to glare.¹⁷

Natural light is also important to keep gloom down and spirits up. Recognizing this, Accor Economy Lodging in Dallas gave all of its reservations agents the perimeter space adjacent to windows and put its managers in the interior.¹⁸ If there aren’t enough windows to go around, skylights and low workstation panels or translucent screens also can help bring the outside in. Newer buildings designed specifically for call centers often use clerestory windows. Arranged in long rows near the ceiling, these windows afford light and a sense of day or night without the possible distraction of direct sight to the outdoors.

Hearing less noise

When a roomful of people all talk on the phone at the same time, it gets loud—potentially approaching the level of some power tools.¹⁹ The noise can fray agent nerves and jeopardize their productivity and composure. Worse, a hum of background chatter sounds unprofessional on the other end of the line.

High-performing call centers keep the racket down through a number of design techniques. Among them: sound-absorbing ceiling tiles, carpeting, and wall coverings; strategically located plants; and artwork that isn’t covered by reflective glass or plastic.

Staggering workstations so agents aren't directly opposite each other also helps, as does isolating copiers and other equipment away from agents. Also, improved headsets can dramatically alter the level of noise agents generate.

"White noise" is often used as an acoustical treatment. Typically generated through ceiling speakers, it masks a broad spectrum of sounds, including the frequencies of human speech, lowering the intelligibility of neighboring conversations by as much as two-thirds.²⁰ Even better are newer technologies that produce "pink noise" targeted specifically at voice-spectrum frequencies so that their sound masking can be operated at lower volume. These new systems offer an additional benefit if they can attach directly to office furnishings, making them easy to remove and reinstall if necessary.²¹

Fine points of furnishings

Call center agents sit, stare, and type for long stretches of time in a high-pressure environment, a combination of circumstances that makes them prime candidates for musculoskeletal disorders (MSDs) like carpal tunnel syndrome.

Dr. Alan Hedge, professor of ergonomics at Cornell University, refers to call centers as "white-collar assembly lines."

"If you experience constant stress, like people yelling at you on the phone, your muscles tense up, aggravating the risks of developing an MSD," Hedge says. "This doesn't occur to the same extent in other white-collar jobs."²²

Ergonomic furniture and training are indispensable weapons in the battle to reduce call center injuries, absenteeism, and turnover. For example, Verizon's call centers saw carpal tunnel disorders drop by 38 percent and worker's compensation claims plunge nearly \$200,000 in one year after implementing a comprehensive ergonomics program designed by consulting firm Humantech.²³

Here's a broad look at how call center furnishings can help support ergonomics, promote efficiency, and attract agents:

Seating. Chairs are the backbone of call center design. If agents can't get comfortable, any chance of running a high-performing call center vanishes. Adjustability is crucial—for height, obviously, but also for armrests, lumbar support, seat back angle, and seat pan angle. Controls should be easy to reach from a seated position.

For call centers that "hot seat"—that is, assign the same workstation to different agents on different shifts (one of whom could be 5'2" and the next 6'5")—adjustability becomes even more important. Also worth considering are specially sized chairs designed for people who are bigger or smaller than average.

Work surfaces. By pairing an adjustable chair with an adjustable work surface—and training agents how to use them both—call centers can eliminate the majority of ergonomic problems. Sit-stand work surfaces allow agents to occasionally conduct business while standing or moving about, a welcome break from the usual routine.

Though there are a variety of ways to adjust height—pin, electric, and crank methods, among them—torsion mechanisms are fast and easy to use and probably the most appropriate for call centers that hot seat or want to provide sit-stand capability. For extra comfort, flexible work surface edges are a plus, especially for call centers that don't use keyboard trays.

Keyboard trays. With adjustable chairs and work surfaces, agents can place their keyboard directly on their desktop and be close enough to their monitor so they don't have to squint or hunch. If keyboard trays are used (and often they're not, even by agents who have them), they should be adjustable so agents don't have to bend their wrists when keying or mousing.

Panels/screens. The trend is toward shorter panels and screens—42 to 48 inches. Low panels/screens facilitate collaboration by making it easy for agents to motion to a supervisor or lean over to ask a colleague for help. Plus, they create a sense of space even when workstations are small. Splitting the difference by using taller panels or screens to shield an agent's core work area and shorter panels elsewhere also is popular. Technology giant EDS, for example, installed stepped panels in its contact center in Nova Scotia to strike a balance between privacy and collaboration.²⁴

Monitors. Monitors should be height adjustable so the top of the screen is at or slightly below eye level. Also, larger is better because the more information that appears on screen, the less mousing is required.

Flat panel monitors are becoming more popular in new call centers because they use 60 percent less energy than conventional monitors and take up little space, allowing workstation size to be reduced up to 15 percent.²⁵ Equally important, their look appeals to prospective agents, especially those being recruited for high-tech applications.

Hardly an afterthought

For final evidence of how call centers are a breed apart from other corporate environments, consider the employee amenities they often feel compelled to offer.

In the 1990s, there was a movement toward on-site fitness centers, jogging tracks, game rooms, tennis courts—anything to offset the sedentary nature of the work. Conveniences like on-site day care, cafeterias, and grocery stores also began appearing to help attract employees.²⁶ Quiet, comfortable break rooms give agents a place to decompress.

Clearly, companies realize they can't afford to treat their call centers as an afterthought anymore. Strict attention to design and furnishings can pay big dividends by giving call centers the infrastructure needed to meet the new demands being placed on them.

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