

Open Plan and Enclosed Private Offices

Research Review and Recommendations

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The Debate Continues

Forty years after the introduction of the cubicle, the debate over its benefits continues. Open-plan offices have been found to have both positive effects (e.g., increased employee communication and interaction, flexibility, ability to house more employees, reduced set-up and renovation times) and negative effects (e.g., increased noise, distractions, perceived crowding, and decreased privacy) (Brennan, et. al., 2002; Maher and von Hippel, 2005).

We define “open plan” as an environment comprised of systems furniture and “enclosed private offices” as workspaces completely enclosed with dry wall and a door.



In this paper, we review relevant research on open plan and enclosed private offices related to a variety of behavioral and technical issues. We close this paper with design recommendations and a brief summary of the benefits of each of these approaches based on our research.

As part of this review we examine the following topics:

- ▶ How work style influences workspace preference.
- ▶ Workspace and job satisfaction.
- ▶ How workspace is evolving as an indicator of status.
- ▶ Effects of workspace type on collaboration.
- ▶ Workspace type and noise issues.
- ▶ Workspace for learning and mentoring.
- ▶ Cost and strategic implications of open and enclosed workspaces.

Work Style Influences Workspace Preference

In most industries and organizations, there are multiple work styles and preferences for different types of workspaces. Knoll research examined workspace type preferences of high technology workers and found that their preference for open or enclosed work environments was based on work style and the type of work the individual performs. Computer programmers, who tend to be more social and collaborative at work, preferred open plan workstations with “seated height privacy”; in other words, one cannot see over a panel while seated. Software developers and engineers, whose work tends to require higher levels of concentration and freedom from distraction, preferred a private office with a door. In the absence of a private office, they are willing to work in open plan environments that provide “standing height privacy,” meaning the ability to stand without seeing over the panel.

Workspace and Job Satisfaction

Yildirim, et. al. (2007) examined the impact of proximity to a window and open plan workstation partition height on employee satisfaction. The results indicated that visual access to a window from the workspace positively affected employee satisfaction. Satisfaction was even more enhanced for employees with 60” panel height workstations and a view to a window, presumably because that height partition optimizes visual privacy and minimizes distractions and interruptions.

Vietch, et. al. (2007) studied 779 open-plan office occupants from nine government and private sector office buildings in five large Canadian and US cities. They found that open-plan office occupants who were more satisfied with their environments were also more satisfied with their jobs, suggesting a role for the physical environment in organizational well-being and effectiveness.

Workspace as a Status Indicator

Even as organizations attempt to minimize the status implications of office type, more than half of the participants in another Knoll study reported that private offices communicate higher status than open plan workspaces. The research also showed that most employees moving from a private office to an open plan workstation perceive a loss of status and benefits. This, in part, explains the resistance organizations encounter when trying to migrate from enclosed workspace to open workspace standards. However, the emphasis on office type as a primary status marker is being eroded as highly mobile work styles become more common (thus de-emphasizing the importance of the individual office) and technology “toys” such as the Blackberry, iPhone and other devices rival or even replace the individual workspace as a status indicator.

Workspace Type and Collaboration

A seminal three-year research project conducted by UCLA revealed that companies who had modified their business processes to encourage collaboration and supported new work processes by moving from private spaces to open, collaborative environments realized performance increases (speed and accuracy of work) averaging 440 percent (Majchrzak and Qianwei, 1996). Research examining human resources, procurement, finance and other functional areas (O’Neill, 2007; Majchrzak et al., 2004) confirms the notion that workspace designed to foster group work has a positive impact on business process time and cost. O’Neill (2007) found a 5.5% reduction in business process time and cost for employees who moved from traditional enclosed office space into a mix of non-assigned and assigned open plan furnishings. While these results show quantitative improvements in work process efficiency related to use of open office environments, simply placing employees in a open environment designed for collaboration without training or re-designing work processes will not produce the best performance gains.

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Within an open plan environment, the type of workspace partition used may have an effect on communication and privacy. One study found an advantage for workspaces constructed using frame and tile partitions versus solid panels. In this study of 541 office workers in 14 US locations, those employees using frame and tile partitions reported significantly greater communication and privacy (O’Neill, 1998). However, there was no link between type of enclosure and performance or satisfaction.

A frame and tile workstation permits the possibility of open areas within a partition, or a “stepping down” of partition height across its length. Either of these conditions can permit the user to more effectively view the surrounding environment and control being viewed by others. The study suggests the benefits of the frame and tile design may be due to the greater control over visual exposure to others which thus permits better support for the conflicting needs of communication and privacy.

Workspace Type and Noise Issues

Armstrong World Industries conducted several studies to determine the acoustical effectiveness of dry wall offices compared to open plan workspaces. For the drywall offices, they assumed current construction practices, meaning that the walls do not extend through the ceiling plenum. The researchers found that dry wall offices, even with the door closed, only achieve 75% acoustical privacy compared to 8’x 8’ open plan offices with 60” high acoustical panels, acoustical ceiling tiles and sound masking which achieve 93% acoustical privacy. Research has found that software developers working in spaces in which noise distractions are reduced, performed significantly better than peers working in environments where they could be more easily interrupted by noise (DeMarco, 2002).

Workspace: Learning and Mentoring

Research suggests that younger workers, particularly Gen Y (born 1979 through 1997) are more interested in learning from their peers and more experienced workers than are older employees (Becker, 2000; Wymer, 2008). Thus, the workspace should be designed to support learning and encourage mentoring opportunities. The current practice of locating more experienced staff in enclosed private offices, while increasing their comfort level, could reduce learning and development opportunities for younger employees. While potentially increasing the comfort level of older workers reliant on private offices, this approach also carries the risk of allowing older workers' skills and development to atrophy if they lose the benefit of being pushed by younger staff to learn new skills and think in new ways about problems.

Cost and Strategic Implications

Today's workplace is characterized by high churn rates, a desire for high density, workers with different levels of mobility and work styles, and a sophisticated technology infrastructure. All of these are conditions that are addressed by open plan furniture solutions in a more cost effective manner than hard-wall interiors. Through the years, many organizations have demonstrated the business value of investing in open plan systems products because they greatly reduce the cost of change. Now, open plan offices can positively impact organizations in a broader manner by aiding strategic business issues such as attraction and retention, support for mobility and other needs related to high performing workers (Venezia and Allee, 2007). Other research suggests a shift by leading edge companies from a primarily "cost perspective" to a view in which the workspace is positioned as an investment in employee performance (O'Neill, 2007; Vischer, 1996).

Employee expectations and preferences related to workspace type are complex and continue to evolve.

Benefits of Open Plan and Enclosed Private Offices

Below we summarize benefits from a Knoll study "The Second Bottom Line: Competing for Talent Using Innovative Workplace Design," that examined employee perceptions arising from use of open and enclosed workspaces:

Open Office Space

- ▶ Most appreciate the sense of community that an open work environment can support.
- ▶ Open space allows for better communication and exchange of information among co-workers. It is easier to ask each other questions in an open environment.
- ▶ Some employees prefer being among other people, not wanting to feel "closed in" or "all alone."
- ▶ The open work environment allows some to know what's "going on" in the office – being "in the know."

Enclosed Private Office

- ▶ 90 percent of participants reported that privacy is the number one benefit of a closed space/work environment.
- ▶ The idea of having walls around you, keeping roving eyes from drifting over to your work and "your space" makes some feel more secure.
- ▶ Another key benefit of working in a closed space is the reduction in noise.
- ▶ For some, an enclosed space also translates into a larger amount of floor space which is seen as a perk.

Recommendations

The results of Knoll's research suggest that employee expectations and preferences related to workspace type are complex and continue to evolve. In this section we make recommendations on how to manage the change process and how to most successfully leverage the use of both open and enclosed spaces.

Manage Change

When employees transition from private to open workspaces they undergo a process of change that can affect their perceptions of the new space and the success of the move. Our experience and research data suggest that organizations planning a move from private to open workspaces should consider using a workplace change communication program to educate employees about the business reasons for change and the advantages of open office spaces. Consider conducting a “change readiness” survey to assess employee expectations and informational requirements for a change communication program, prior to a move.

Create Dedicated Collaboration Areas

Predominantly open environments should be complemented by dedicated, enclosed, sharable work space that groups of employees can use to work together with reduced distractions. These spaces should also prevent noise and visual distractions to individuals working nearby.

Promote Spontaneous Interaction

Facilities with predominantly enclosed offices are most effective when complemented by spaces that promote informal and spontaneous interaction. In order to draw people out of their enclosed offices, create spaces that act as magnets for informal collaboration, café areas, game rooms, tech labs, libraries. These spaces should have comfortable furnishings and should be located in open areas adjacent to private workspaces. The intention is to encourage and support spontaneous meetings in a more relaxed atmosphere than formal conference rooms (Heerwagen, et al., 2004).

Reduce Distractions

Include acoustic buffers (such as sound absorptive products that can be wall-mounted) or sound masking capability (such as white noise) when implementing open offices. Consider differences in job complexity and need to focus on work in distracting settings when allocating and determining the relative location of workspaces.

Balance Communication and Privacy

In open plan settings, select, design and orient workspaces to provide users with control over visual access by others. This control can be provided by considering the overall amount of enclosure in terms of panel height, number of sides, internal layout and the visual permeability of the materials surrounding the workspace.

Support Learning and Mentoring

The space should address the need of older employees to continue to learn and develop with the desire by younger employees to be mentored. One approach is to design office space that is more open and dense while also providing a variety of interaction spaces. Along with the open space, provide a adequate number of meeting spaces and other enclosed work areas such as study carrels, which will moderate the overall level of density. With wireless technology, employees can easily move to one of the enclosed spaces for a small group meeting or simply to work without interruption.

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