

Intel's Workplace Environment Program: Confronting the Conflict Between Cost and Effectiveness

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Although most executives have come to recognize that retaining the best professional and managerial talent is critical to success, they also face relentless pressures to reduce costs. This conflict is especially acute when it comes to creating an effective work environment for high-end knowledge workers, since many leaders are unsure how to balance the demands for cost control against the needs for better retention and improved productivity. This research note describes the efforts Intel is making to confront the problem head-on by developing its Workplace Design Initiative in order to increase employee satisfaction and productivity, while also adhering to the firm's legendary norms of cost control. An important part of the initiative is the productivity model Intel is using to evaluate the impacts of new investments in workplace design and technology infrastructure.

Strategy Outgrows Workplace Design

Historically, Intel has pursued a "one-size-fits-all" approach to workspace design. To support its egalitarian culture, everyone got the same eight- by nine-foot cube. This approach worked well as long as the company's business was concentrated on designing and manufacturing microprocessors. But by 2000, Intel's product lines were becoming more diverse as the company moved into areas such as wireless communication and devices that support computer networks. This meant different types of workers performing a wider variety of tasks in very

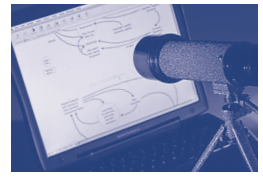
different settings. The company was also becoming more geographically diverse, and advances in IT were allowing employees to work more virtually. In addition, top management believed the cost of office space per employee as a percent of revenue was too high if Intel was to reach its growth objectives.

Thus, by 2000, management wanted to cut the cost of office space by moving all employees to smaller six- by eight-foot cubes. But, at the same time, company leaders also recognized the need to improve the performance of its work groups, which meant that employee satisfaction and the retention of its most valued technical and professional employees was critical.

Given these conflicting factors, it was clear to Mark Hutchins, Intel's strategic planning manager for real estate site development, that the firm's one-size-fits-all approach to workplace design no longer supported the company's needs. Thus, Hutchins began an initiative to create new corporate guidelines for workplace design. The goal of the Workplace Design Initiative was to create work environments that would improve retention and productivity, while also incorporating the smaller cubes to decrease the cost per employee of Intel's investment in office space. While the program would ultimately affect knowledge workers throughout the corporation, Hutchins recognized that the greatest benefits would come from improving the performance of the firm's high-end knowledge workers (HEKWs). "Targeting high-end knowledge workers keeps us focused on where the gains really matter," he says. "If the solutions we come up with help recruit and retain our principal scientists and engineers, that means more than if they satisfy administrative assistants."

Profiling Pilot Groups

An in-depth corporate workplace survey showed that the main problems for those working in traditional eight- by nine-foot cubes was the lack of privacy and difficulty in doing heads-down work. For employees who had already been moved to six- by eight-foot cubes the problem was worse. Not only was heads-down work more difficult, but collaboration was also hindered because informal meetings were more disruptive for those working nearby.



To develop new workplace design guidelines, Hutchins formed a cross-functional team that included representatives from HR and IT functions. Together they drew up a proposal on how to create a more effective work environment within the constraint of the smaller cubes. A key assumption was that the best contribution workplace design could make to improve knowledge worker effectiveness (and, indirectly, retention) was to remove barriers created by the existing work settings. To test their assumptions of what changes could have a positive impact on performance, Hutchins' team identified four very different pilot groups.

The first, the architecture lab, was staffed with engineers, sociologists, and product designers, who focused on new product design and manufacturing. The second was a manufacturing group based in Ireland. Because it was metric-oriented and driven by time-to-market goals, this group relied heavily on communication. The third, an eBusiness group consisting of programmers and systems analysts who developed tools and systems to support Internet commerce, had concerns about project management, cycle time, and quality. The fourth, a corporate services group that was part of an administration and planning function, included employees in finance, program management, and plant management. Each of the groups comprised about fifty employees, and they demonstrated different work styles. Employees in the manufacturing unit did no work virtually, while those in the architecture lab did some virtual work. The main concern of those in the lab was facilitating collaboration and new idea development in a team setting. On the other hand, for the eBusiness and corporate services pilot groups, telecommuting and virtual work were much more important.

With assistance from external consultants, Hutchins' team first used a method called functional profiling to classify the type of work done by each employee in the four units. Among the types identified were "sitters," who need to be in a specific location to work because they are tied to particular equipment, or because of the type of work they do, e.g., administrative assistants and some lab workers. "Walkers" are more mobile; it doesn't matter where they sit, and so most of their time is spent in places other than their office. Many engineers and product developers fit this category, as well as managers who traveled a lot. Finally, "teammers" are people who need to collaborate extensively to get their work done. Some engineers and strategic planners clearly fit this category. Of course, Hutchins admits, employees are often a blend of the different work styles identified by the functional profiling process.

Building a Productivity Model

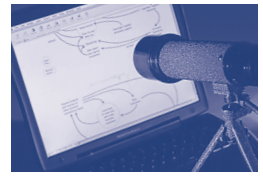
Developing the category of work types was critical for several reasons. First, it gave Hutchins' team the beginnings of a design vocabulary to define effective work settings for different types of employees. The profiles would be used in the pilots to determine what kind of IT and work space individuals needed to support their work. The profiles were also an essential step for building a Workplace Productivity Evaluation Tool that could quantitatively identify changes in worker productivity and evaluate them in terms of financial impacts.

The model included metrics that assessed individual and team productivity, as well as employee retention and the flexibility of work-space designs. Hutchins' team is using the model to evaluate the impact of different work settings designed to support particular work styles in all four pilot groups. For example, the project team initially found that employees in the eBusiness group did a combination of activities that included heads-down work, collaborative meetings, and travel. Hutchins' team argued that the design of the current work environment compromised each activity. There was no place for collaborative meetings in the cubes, which were also too noisy for heads-down work. With the workplace productivity tool the team could demonstrate to management that removing physical barriers would create a more effective workplace. For example, one of the measures the tool uses is the dollar value of time saved doing something, such as looking for teaming spaces. If a new work environment removed barriers to finding a meeting space, that could be translated into time and actual dollars saved, particularly for knowledge workers who were constantly setting up informal meetings.

Lessons Learned

Hutchins had already gained some important insights as the pilot groups began moving into experimental workspaces. In his words:

We're trying to set up working spaces that support the behavior of each pilot group better than their current space. But it's a paradigm shift for these employees, which means learning to use the new space is an iterative process. So we have to be ready to coach the groups when we move them into pilot conditions. There has to be a transition plan on how to use the new space and what to expect.



He is also clear that his team's ultimate goal is to change the way Intel does business by first reducing the overall office space used, and second by gaining acceptance of a new paradigm for how Intel's HEKW's use their workspace. But to gain acceptance long term, Hutchins knows that his pilot projects must demonstrate credible gains in productivity. The firm's CFO and other key decision-makers have indicated their support for the project. But Hutchins recognizes that if Intel is going to invest more in HEKW's work settings, the project team must convince senior management there will be meaningful productivity gains. "You can't just assume there will be a payback. You have to demonstrate it," Hutchins says. "There's a natural tension between effectiveness and cost, but they are really different ways of looking at Intel's competitive position. And, if we find the right solution between the two, we'll improve the company's overall competitive position."

Hutchins has learned some other important lessons from the Workplace Design Initiative:

1. **Workplace design guidelines must be aligned with your firm's overall business strategy, and this is an ongoing process.** With business strategies continually evolving, it is important to frequently revisit your organization's policies that shape the work environment for HEKWs. Are these policies aligned with your human capital needs for the future? Hutchins recognizes Intel is a very dynamic environment, so today's solutions may have to be changed again five years from now.
2. **High-end knowledge workers have a wide variety of work styles. Hence their needs for work space and technology infrastructure can vary significantly.** Executives need to understand these differences in order to make effective investment decisions that shape the work environment. The insights Intel has gained from functional profiling will help it more effectively remove some physical barriers to knowledge acquisition and transfer, while at the same time optimizing real estate costs.
3. **Improving knowledge worker productivity will have a much greater impact on the firm's performance than reducing the costs of office space.** Hutchins recognizes, as earlier studies have shown, that reducing square footage per employee saves the company some money, but the productivity gains produced by putting high-end knowledge workers in the right work environment can have a much greater long term effect on the bottom line.
4. **Be prepared to deal with skeptics because many people will tell you that changing how knowledge workers use space can't be done.** They will argue that it requires too much behavioral change. Persistence, patience, and sophisticated change management skills are essential. "As the team leader, my job is about 20 percent analytical problem solving and 80 percent communication," says Hutchins. "Plotting a course through the minefield, and getting buy-in from a wide variety of people will make or break a project like this."
5. **In addition to technical skills related to site development and technology infrastructure, without strong sponsorship and influencing skills, you're dead in the water.** Changing corporate policies around workplace design for HEKWs is a major political effort. Hutchins has been helped by having sponsors with diversified agendas. The general manager of Intel's Technology and Manufacturing Group is focused more on economics and cost control, while executives in HR and the Corporate Work/Life Effectiveness Program are concerned with employee satisfaction, retention, and morale. Having support from these executives creates a healthy tension, says Hutchins.

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