

8.7 Workplace design for profit

Perhaps you consider office space secondary to the nitty-gritty process of innovation. Well, at IDEO we consider it one of our premier assets. Creating great office space may be one of the hardest parts of the innovation puzzle. It doesn't happen simply by hiring forward-thinking architects or leasing cool buildings.

Tom Kelley

Key Resource Gérald de Kerchove has prepared a definitive paper on this chapter's topic, which can be downloaded in full from www.mqia.com. This chapter is an extract of his paper. – Ed.

Workplace design for profit by Gérald de Kerchove

Gérald de Kerchove founded PdK Consulting, which invented a performance measurement methodology to create performance enhancing workplaces for knowledge workers.

Tom Kelley, CEO of IDEO, in his book *The Art of Innovation*, describes ways that IDEO has adopted to create workplaces that work and look great. He talks about building neighborhoods, thinking in terms of teams, creating playful, flexible foundations that evolve, creating team icons, and telling stories about the workers and the company.

Kelley is at odds with the majority of business leaders who consider the workplace as strictly a source of costs. The prevailing workplace strategy is providing a place of work for every worker at the lowest possible cost. Workplace designers are viewed as suppliers of commodity services to be purchased at the lowest possible cost. However, there is as much as 16 times more profit opportunity from equal gains in performance than in cost reductions, because of the relative value of each component in the total cost of an employee.

In *Excellence by Design*, Michael Joroff describes the four critical dimensions of the workplace, noting that *conceiving the Workplace as a strategic element in the enterprise requires a shift in how we view the workplace itself*. He continues: *The workplace as a strategic element of the organization is more than this: it depends upon the internal compatibility – indeed, the active mutual reinforcement – of spatial, organizational, financial, and technological arrangements*. He states *these dimensions are interdependent and in a dynamic relationship with one another. A change in one demands change in others*.

Don Cohen and Lawrence Prusak in *In Good Company* make the case for the importance of 'Social Capital'. They add another key dimension to the successful workplace: *Space and time for people to gather and make connections with one another are the seedbed and sunlight of social capital*. Cohen and Prusak say *if you want people to connect, to talk, to begin to understand and depend on one another, give them places and occasions for meeting, and enough time to develop networks and communities. Social capital needs breathing room – social space and time – within work and surrounding work*.

The building of 'performance enhancing workplaces' that support innovation, encourage knowledge capital growth and stimulate social capital generation, require a multi-disciplinary approach.

Ethnographers describe the culture and analyze networks; sociologists identify communities of practice and social networks; organizational psychologists examine motivation and satisfaction; organization development consultants develop performance measures; workplace consultants sketch design strategies; and architects and designers transform the strategic designs into performance-enhancing workplaces.

All of these separate disciplines need to have their input integrated under a single, unified design umbrella.

Unfortunately, this fascinating data failed to prove that a better workplace would help people perform better — as it may only indicate that people who perform better tend to gravitate toward organizations that provide a better workplace.

Nonetheless, it provides us with the first empirical hint that the workplace might affect performance.

Does design affect the performance of knowledge workers? Empirical evidence emerges from an unlikely source. Tom Demarco and Tim Lister have focused their attention on software developers' performance as recounted in their book *Peopware: Productive Projects and Teams*.

Starting in 1984, they ran an annual survey as a sort of public competition in which teams of software implementers from different organizations compete to complete a series of benchmark coding and testing tasks in minimal time and with minimal defects. They call these competitions 'coding war games'. Over 600 developers from 92 organizations were tested over a three-year period.

Why are Demarco and Lister's findings interesting to designers? Simply that having identified these huge differences in performance, they became curious and tried to identify the factors that correlated with performance. They isolated a number of factors, which had no effect, or minimal effect.

The factors that *did* matter were the participant's organization and the workplace. The hypothesis is that the environment and corporate culture is attracting and keeping the best people and is making it possible for them to work effectively. They also hypothesized that many companies provide developers with a workplace that is so crowded, noisy, and interruptive as to fill their days with frustration.

To test the hypothesis that the workplace may have a strong correlation to developers' effectiveness, they gathered data on the workplace by having each participant fill out a questionnaire about the physical quarters in which they worked. Comparing the environment of the performers in the top quartile with those in the bottom quartile, they found that:

- ◆ The top quartile had an average of 78 sq ft of dedicated workspace vs. 46 sq ft for the bottom quartile.
- ◆ 57% of the top quartile participants found their workplace acceptably quiet vs. 29% for the bottom quartile.
- ◆ 62% of the top quartile found their workplace acceptably private vs. 19% for the bottom quartile.
- ◆ 38% of the top quartile were able to work without needless interruption vs. 76% for the bottom quartile.

Our own research, based on workgroups as diverse as software engineers, human resources specialists, and insurance underwriters, indicates that a true measure of the impact of the workplace factors on the firms' business results is between 10% and 15% as compared to 85% to 90% for non-workplace factors such as culture, management, and economic factors.

The methodology we describe in Chapter 8.8 yields performance-enhancing criteria that, in the hand of a skilled designer, can generate 5% to 10% improvement. Stated differently, changes in workplace design can provide between 0.50% to 1.50% net improvement in business results of the workgroup or profit.

Challenges for designers

Fundamentally, designers need to understand the social movement and the technology drivers of the future of work to, using a favourite cliché of the last decade, re-invent the design profession in order to deliver increasing value to the knowledge age, or even do I dare say, to join the knowledge revolution.

What does this mean to today's design firms? First of all they must realize that the workplace is primarily a tool supporting knowledge workers in creating and distributing knowledge.

Workplace design is one leg of a four-legged stool stimulating performance improvements together with technology, process improvements and behaviour changes.

What are the design requirements for performance-enhancing workplaces? Above, we suggested acquiring skills that are not traditionally associated with design professionals. We also suggest that traditional sequential design processes familiar to most designers will not work to achieve performance-driven design. Charles Grantham, in *The Future of Work*, notes:

The workplace is becoming more egalitarian and team-oriented and that is being driven toward collaboration as a way to get work done. The special, technological, and management practice manifestation of this 'egalitarianism' must be blended into design solutions.

The workplace is no longer an element distinct from other human habitations. The workplace, school, home, and community centre are moving closer together. When we embark on a workplace design process, it becomes a much larger enterprise. In order to include these subtle social factors in the design process, one must use the participatory design process. Techniques exist that involve users in the design process itself – not as observers or bystanders but as full participants, equal with designers and developers. Ideally, users begin working with technology creators at the conceptual stage of development.

The heart of the participatory process is that each step is interactive, jointly involving the designers and the end users. It is far more intrusive than bringing in end-user groups, showing them an existing product, and asking for input. Participatory design means just that: users of technology have roles as equal partners in the design process. Myriad techniques to facilitate group interaction can be used in the process, depending upon group characteristics, history of interaction, and time constraints. What designers often miss is the human interaction of the process of work.

Preparing people for organizational change is part of the process of using new technologies.

Designers need to team with technologists, process engineers, organizational psychologists and sociologists, thereby creating 'communities of practice' to provide integrated solutions linked to business results.

de Kerchove's research and recommendations are similar to those reached by Davy and Harris in moving toward *collaborative* design.
– Ed.

To be comfortable members of those communities of practice, designers must develop methods of learning and becoming familiar with the basics of sociology, information systems, organizational psychology, process engineering, just as they have in the past teamed with electro-mechanical and structural engineers.

To enhance that basic familiarity, they also need to establish strategic alliances with experts in those fields to provide fully complete service packages to their clients.

Designing for profit

Consider this example: A software company adopted the methodology we describe in Chapter 8.8 to design a new workplace for its 1,600 software developers. It saw its annual profit increase by \$3,045 per developer, nearly \$ 5 million. The ROI for the new workplace exceeded 131% with a payback of less than 10 months.

The empirical evidence linking design to performance, while convincing, requires further refinements as well as proof of replicability to be fully accepted.

We estimate the impact of high-performance workplace design in today's US economy to be as much as \$150 billion annually. Is our estimate close? We think so, but to make it stand, more research is needed.

Traditional corporate real estate executives are used to managing their operations based on reduction of cost per square foot as a key metric. This won't work any longer in our new economy. Corporate real estate executives need a 'value added' metric to show how their efforts are creating value for the company – not just conserving resources.

