

OFFICE DESIGN & PRODUCTIVITY

Derrick Van Mell (April 26, 2000)

The Scene

As a senior manager, you're sure to find yourself in this scene: the floor plans of your new offices are on your desk and, next to them, the unexpectedly high estimate. You've told yourself and heard from your designer and staff that the new facility will boost productivity. At some level, you know this is true: anything would be better than the cramped, outdated space you're in now. But how do you justify the big hike in annual expense to yourself, the board, and your lender?

Productivity measures in industrial businesses are clear: widgets per hour, percent of defects, direct unit costs, machine downtime, etc. But how do you measure the productivity benefits of an office?

The Income Statement

We'll start with a definition: *If office workers are more productive, sales increase faster than payroll and office expense.* No facilities decision should be made without projecting the income statement, particularly sales, payroll, facilities, and amortization.

You know that a 5% drop in productivity falls right to the bottom line. A poorly designed office leaks payroll dollars, recruitment costs, and all sorts of minor expenses. While attorneys and accountants can track billable hours, middle managers and web developers have no such easy statistic.

Frankly, there *is* no pressure gauge or mathematical ratio that definitively answers how one office is better than another. In addition, differences in corporate culture make any formula impossible. So, what's the answer?

You *can* make a confident decision by asking good questions about the four elements of office productivity: individual productivity, teamwork, recruitment and retention, and overall morale. In the end, you'll see that your improved understanding will allow you to use a collection of familiar ratios - suggested throughout this article - to help you make your final decision with confidence.

Break the Problem Down

Individual productivity in an industrial setting like a machine shop is simply the output of a single machine like a lathe, mill, or polisher. In an office, individual productivity is basically the work each person does at his or her desk. Some measures, though imperfect, include:

1. Billable hours
2. Total hours worked
3. Lines of (bugless) code written
4. Meeting individual project deadlines
5. Units of works processed (forms completed, pages typed, sales calls made)

Again, there's no tool or calculation that will precisely correlate office design and, say, potential billable hours. However, you're now equipped to ask your staff, "How do *you* think your billable time (or overall hours or deadline performance) will improve in this new setting?" As a manager, of course, you'll need to temper their response with your own judgment, but you now know the questions to ask.

You know that each person and job is different. Some people need the quiet setting of a private office; others doing the exact same job produce more in a crowded coffee shop. Some want both: this article was written both in the office and in a Starbucks under Chicago's El tracks. Ask yourself - and everyone else - to talk about the workspaces in which they work best. While you cannot accommodate everyone, you will have taken the first step toward learning what mix of offices, open plan, and team spaces fits your culture.

In our machine shop analogy, *team productivity* is how a group of machines work together and their productivity depends on having a smooth workflow to avoid bottlenecks and breakdowns. A team of office workers can consider these statistics to gauge their productivity:

6. Patents created
7. Total team billable hours
8. Total team hours worked
9. Meeting deadlines
10. Number of significant innovations

If these statistics still seem unsatisfactory, try this: Ask the teams themselves to compare the current and new office designs and challenge *them* to determine how best to measure productivity gains. In this way, you'll get closer to your answer *and* you'll have got them to set new standards of work. Ask your designer to sketch some radically different alternatives. As with the individuals, a unique pattern will emerge that reflects your firm's particular style.

Workplace design preferences differ greatly from firm to firm and even from team to team. We see web development companies, for example, in all

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kinds of settings: one large room, all private offices, all open plan, and some aren't together at all. How to pick? Remember that teamwork is about sharing ideas and information creatively, not about simply sitting close to one another.

Look deep into the nature of your work: if people don't need to share ideas face to face every hour, it's probably better to give them as much privacy as you can afford. Of course, everybody needs a change from time to time, and everybody's ability to concentrate is different. But most office workers spend the bulk of their time working on their own and, particularly if they're on the telephone a lot, should have real acoustical and visual privacy.

Don't be swayed by the hype from the systems furniture industry. Survey after survey shows that office workers want these three things:

- A nice view
- Comfortable heating and air conditioning
- Cleanliness

Don't try to increase productivity by buying expensive cubicles. *Dilbert* is popular for a reason.

Retention and recruitment are part of productivity, too. If we want to keep a machine in our machine shop running (retention) or if we need to add a new machine (recruitment), productivity will drag. If your office design is uncompetitive, you'll lose both staff and recruits. Concern about the workplace is rising: some high-tech firms are putting videos of their offices on the "Careers" pages of the web sites.

You need to know what kinds of spaces your competition is providing. European and Asian businesses have long put a higher priority on workplace design - creating pressure on US firms to follow along. But it isn't necessarily true that you need fancier space; cultural differences may override the need for glitz.

We knew an organization that officed in a ramshackle two-flat and, when given the choice of a new building and a sensible layout, rebelled loudly. The quirkiness of their setting glued them together and the staff had the sense not to change. Similarly, a very successful biotech firm passed on building

private offices, preferring to have everyone in the open, working off of cheap folding tables. Because their roots were in a university, they'd gotten used to a highly collegial, old-shoe atmosphere. No recruit expecting a corner office would ever have fit in. The measures to spotlight here are:

11. Turnover
12. Average recruitment time
13. Average recruitment cost
14. Average length of tenure

Finally, Morale

The fourth and final perspective on an office's productivity is *morale*. Industrial engineering research proves that overall output and sales rise when each line (or team) is free from bottlenecks and conflict. The same is true in the office. A happy organization is a selling organization. Further, in a generally positive atmosphere, people will value the quality of their work experience higher than pay. The converse is true: if morale is poor, people focus on their money. The statistics to track, then, are perhaps the most important:

15. Revenue per person
16. Number of customers per person
17. Payroll as percent of revenue
18. Average hourly payroll cost
19. Facilities expense per person
20. Facilities expense as percent of revenue

If you are convinced that a better work environment will improve any of these last ratios even 1%, you'll be eager to launch the new project. By asking about each of these twenty statistics, you'll now be ready to project your income statement and compare each alternative project. Even if the numbers don't vary hugely, you'll have a keen sense of the underlying differences.

Pulling the Trigger

While there is a lot of static out there about the importance of furniture, decoration, and arrangements of open plan space, you're now equipped with insights, examples, and statistics for considering your own specific case. Winston Churchill wrote, "We shape our buildings; thereafter they shape us." The seriousness of this long-term decision shouldn't now keep you from making and defending your choice.