

WHO USES workplaces and WHY?	<i>Individual goals</i>	<i>Organizational goals</i>	<i>Societal goals</i>
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WHAT IS a workplace — and how does it work?	<i>Desired products and achievements</i>	<i>Organization</i>	<i>People (skill, talent, knowledge)</i>	<i>Resources</i>	<i>Environment (place, tools, equipment)</i>
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What makes a workplace GOOD?	<i>Helpful</i>	<i>Dependable</i>	<i>Satisfying (aesthetically, emotionally)</i>	<i>Fair</i>
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III: WHAT MAKES A WORKPLACE "GOOD?"

"We built this facility in 1982. Planned it for 130 workstations, which we thought was pretty reasonable. Then the State shifted two new departments under our jurisdiction, and we got 40 new employees almost overnight. The building was only five months old, and we were over capacity. Now we've got 184 full-time workers in this building, and we're trying to lease some office space. That's what we were trying to get away from when we built this place." -- a regional program manager on his "state-of-the-art" building.

It is unfortunate but true that almost all of the current research into the state of the modern workplace is centered around a great number of specific problems. This makes some sense, of course; applied research has most often been thought of as a problem-solving activity. The collective body of research has allowed us to make an almost inexhaustible list of things which we know make workplaces *bad*, some of which are:

- Uncomfortable
- Outdated technology and infrastructure
- Poor indoor air quality
- Visually inappropriate (aesthetically or historically)
- High employee turnover and absenteeism
- Gaps in communication
- Unprepared for emergencies
- Fragile or non-durable
- Unusable and unhealthy by-products
- Non-responsive to their larger community
- Unsafe
- Inflexible
- Improper size
- Inequitable
- High risk
- Confusing
- Low morale
- Inaccessible
- Non-productive
- Wasteful

As valuable as this exercise may be in organizing current research, it is of little enough help in assisting us with making workplaces *fundamentally better* at their task of allowing people to convert resources into desirable goals.

We could flip this list around and look for the opposite of each of these conditions as requisites for a good workplace, but this strategy also has its drawbacks. First, it is almost inexhaustible, offering an immense number of criteria. But worse, it encourages an incremental and segmented approach to improved environmental quality, and offers the potential danger of increasing certain problems in the effort to eliminate others. A prime example of this segmented, non-integrated approach is the current concern with indoor air quality. This problem was almost unheard of twenty years ago. Since the 1970s, however, energy conservation has been a strong goal, and buildings have been increasingly "tightened" against unwanted outside air infiltration to make them more efficient. While the energy savings have been significant, we have discovered that this strategy has often resulted in higher concentrations of airborne gases from building materials and of biological hazards such as bacteria and viruses. We have also discovered that building occupants are frequently dissatisfied with non-operable windows, in terms of temperature, air flow regulation and perceived control over their spaces. The singular pursuit of one good environmental feature -- energy efficiency -- has resulted in the deterioration of other conditions -- indoor air quality and worker satisfaction.

What we need, then, is an overarching definition of what a good workplace ought to be. This is analogous to the recent search in medicine for a definition of "wellness" rather than innumerable definitions of illnesses. In order for us to create a similar definition of "workplace wellness" or *environmental quality*, we must return to our concern with workplace goals.

A good workplace will help to attain desirable goals of all sorts, from good wages and high worker satisfaction to solid profits to culturally valued products, services or knowledge. A good workplace will be flexible enough to continue producing those goals even in the face of shifting amounts and types of resources. There are many ways to model or categorize the ways that physical environments such as workplaces provide the means to achieve our goals. In architecture, one of the most trusted historical models for looking at buildings maintains that there are three essential qualities of good environments — *firmness, commodity, and delight*. Originally conceived by the master builder Vitruvius during the middle Roman Empire and rediscovered in the 17th century, this model still provides a good starting point.

- Historically, workplaces have always had to be stable or structurally sound (that is, to provide *Firmness*). Today, the idea of long-term stability goes beyond just structural issues to include mechanical, electrical and communications systems, for example, as well as issues of sustainability and resource conservation. Underlying all of these is the need to rely upon workplaces for long-term day-to-day operation. That is, the workplace has to be *dependable*, even in the face of uncertain and shifting resources, able to perform its conversion functions consistently.
- Workplaces, however, must go beyond just dependability. They must also actively assist in the achievement of goals: from making a profit and providing a service to developing new ideas and enhancing our communities. We need workplaces which do more than passively accommodate our activity (that is, to provide *Commodity*); we need workplaces which are actively *helpful* tools in the system.
- Built environments, including workplaces, should also please us aesthetically (that is, to provide *Delight*). This category, however, has to be viewed in broader terms than just those of visual aesthetics. Today's workplace must be *satisfying* to us on several aesthetic and emotional levels, from the individual pleasure of the five senses to a sense of organizational elegance and corporate image to even higher levels of social and cultural achievements (as, for example, in our current cultural focus on "excellence").
- Finally, work is an activity imbedded in social systems with laws, moral values, and associated cultural constraints. Perhaps in Vitruvius' time it was taken for granted that built environments fit the social system of the Roman Empire. Today, with increasing social and cultural diversity, it is important to state explicitly that workplaces should be *fair*, that all of the participants — individual, organizational and cultural — must benefit from its operation, that one must not be penalized in order that another might gain, that the levels of resource required from each participant are proportional to the benefits received.

In folding these four criteria into our concern with the goals of a specific workplace, our most basic question is, "In what ways does the physical environment, interacting with the people, organization, resources, and expected achievements, **Help** society, the organization and the individual participants achieve their desired actions and goals?" After answering questions of helpfulness, we ask, "Whatever this place does to be helpful, does it do it all of the time, without fail, without worrying about it? Can you **Depend** on it?" A third question for environmental quality is, "Whatever this place does to be helpful, is it at the same time **Emotionally Satisfying**? Does it make us feel good about ourselves and our role within this place?" And our final question is, "Whatever this place does to be

helpful, does it do it for everybody? Is it **Fair**? Are some people asked to contribute too much or to receive too little?"

By framing all of the diverse research in environmental quality problems through these four larger criteria, we can begin to see some common patterns -- both in workplace failures and in responses to them. These four criteria have been at the root of many concerns about the workplace, from indoor air quality to computer workers' repetitive strain injuries, from efficient work flow to enhanced communications, from energy efficiency to life-cycle equipment costs. We can say, then, that the underlying criteria for environmental quality in a sound workplace are that it be helpful, dependable, emotionally and aesthetically satisfying, and ethical.

The workplace environment, which we depend upon for assistance in achieving our goals, is itself the product of several creative processes. In order to meet our criteria for a good workplace, we must understand the ways in which the contemporary workplace is created, which leads to our next question: who makes workplaces, and why?