

Vol. 3, No. 1 ■

BURNOUT, ORGANIZATIONAL SLACK, AND IT CAPABILITY

At the US automaker where I once worked, assembly plant shifts were scheduled back to back. If one shift finished at 3:00 pm, another was hard at work by 3:30. The plants' managers pushed hard to meet production quotas while minimizing input costs by keeping the line going pretty much all the time. The underlying productivity arithmetic is basic to any manager's: maximize output (cars), minimize inputs (labor, electricity to run the machines, etc.).

Interestingly, the world's reigning champ of manufacturing, Toyota, doesn't follow this logic. At Toyota plants, shifts are often scheduled two hours apart. Employees remain after production has ceased, to communicate, figure things out, and solve problems. Built-in "slack" is a fundamental part of the Toyota Production System (TPS), which calls for solving problems as close as possible in time and space to when and where they arise. TPS abhors deferring the fix, living with it so you can keep the line moving and avoid disrupting your productivity equation. Toyota experiences short-term inefficiencies; they stop the line sometimes to fix a problem, then have to pay workers overtime to make up for the lost production. In the long term, though, they have many fewer problems in production, which translates into higher-quality products and greater efficiency than US companies can achieve.

This is just one more example of a somewhat obvious truth that we in American business, and to a greater extent in IT, seem to have forgotten: building organizational capabilities

depends on giving people room — slack if you will — to do the job right. This month's **CBR** could scarcely sound this message any more clearly.

In our first piece, Cutter Business Technology Council Fellow Ed Yourdon uses statistics to paint a dismal picture of IT workers as stressed out, overworked, demoralized, and cynical from being forced to do bad work. In the second piece, Cutter Consortium Fellow Bob Charette adds more statistics and interprets them in light of Cutter Business Technology Council Fellow Tom DeMarco's important book *Slack: Getting Past Burnout, Busy Work, and the Myth of Total Efficiency* (Broadway Books, 2001). DeMarco's ideas align with the general point that workers need slack to develop and sustain organizational capabilities. Finally, Cutter Consortium Senior Consultant Rob Thomsett offers actionable advice; the first line of his article frames the entire subject: "In more than 30 years of IT and business consulting, I have never encountered a more mean-spirited managerial environment than the one facing the survivors of the post-dot-com, post-Enron work world."

My own research has been suggestive on these points. In trying to understand differences between physical work and knowledge work, and how we should therefore manage them differently, I've focused on three characteristics of knowledge work that are less salient in physical work:

1. **Knowledge asymmetries.** In modern knowledge, work managers often lack the specialized expertise to do

what a worker is doing and therefore can't judge his or her performance very well.

2. **Reliably intrinsic motivation.** IT and other knowledge workers choose their professions because they are interested in the work and want to do well at it, almost regardless of traditional incentive systems.
3. **Skill differentials make a big difference.** Differences in acquired skills and rates of learning matter more in knowledge work than how hard people are working to produce output; working smart is more important than working hard.

Managing the short-term productivity equation does violence on all three of these dimensions. Thomsett lays this out nicely. It's insulting when senior managers provide negative feedback that reveals their ignorance of the work (knowledge asymmetries). More than anything else, IT workers want opportunities to do great work (intrinsic motivation). They want the time, equipment, and support necessary to improve their work, to learn (skill differentials). Imposing traditional frameworks that drive out slack are a mismatch with knowledge work. They force knowledge workers to do the work badly, and knowledge workers hate that. The resulting burnout and cynicism reduces the organization's long-term capabilities.

I once witnessed the oppressive logic of productivity maximization in compact action back in the assembly

plants. While I was standing nearby, the door of a partially assembled car drifted open and caught against a beam holding up the plant's roof. The line jammed; door metal groaned, bending. An alarm sounded. Fortunately, four burly autoworkers knew exactly what they were expected to do. They rushed down the line to the distressed car, physically lifted it, and cleared the door

past the beam, then shoved the car back onto the line, forcing the damaged door into place. They watched with satisfaction as the car moved back into the sea of cars moving toward meeting the daily quota. I wondered who would ultimately buy this car, what their ownership experiences would be, and how that would translate into long-term success for the company.

It's pretty silly when we do this in industrial settings. Must we transfer this flawed logic into the information age as well? You'll help decide. Enjoy this edition of **CBR**. I sincerely hope it makes a difference in your company.

— Robert D. Austin
Editor, **Cutter Benchmark Review**
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Technology Council

THE IT BURNOUT PHENOMENON

by Ed Yourdon, Fellow, Cutter Business Technology Council

The phenomenon of “burnout” is a familiar one within IT today — not just in the US and Canada, but also in Western Europe, Australia, Japan, Hong Kong, Singapore, and other industrialized parts of the world. But although most people would agree that it's pervasive, and that it has probably grown worse because of the recent economic downturn, it hasn't gotten much detailed attention. In late 2002, Cutter Consortium conducted a modest survey on burnout. The results were intriguing and also somewhat sobering. In this article, we'll look at prevailing attitudes about how bad burnout was last year, how bad it is likely to be this coming year, whether it has any organizational consequences, and what those consequences might be.

A wide range of people responded to the survey, as shown in Figure 1 — not

just programmers and technical personnel, but also project managers, senior executives, marketing representatives, and other types of knowledge workers.

And since some might assume that burnout is more likely to be associated with a specific company size or with certain industries, we asked the appropriate questions to confirm that we were getting a good cross section

of the economy — as illustrated in Figures 2 and 3.¹

With that as a background, let's look at the opinions about the burnout phenomenon itself. We asked whether people felt more burned-out last year than in the previous year; the

¹It is noted that there is a significant amount of small companies in this sample.

In This Issue

The IT Burnout Phenomenon by Ed Yourdon	2
Give Me Some Slack: Part I by Robert N. Charette	5
Give Me Some Slack: Part II by Robert N. Charette	7
Hitting the Buttons: Effective and Lost-Cost Techniques for Preventing Burnout by Rob Thomsett	10

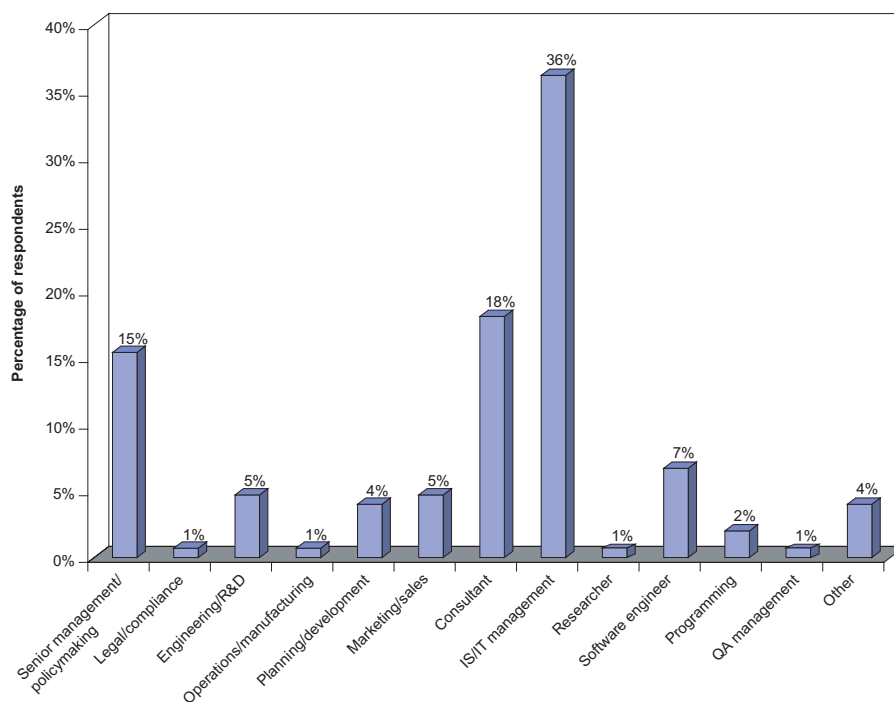


Figure 1 — Which of these best describes your role in your organization?

results, shown in Figure 4, speak for themselves.

It's no surprise that only a small minority (15%) feel that the burnout situation has improved; nor is it particularly surprising to see that an equally small minority (16%) feel that the situation is approximately the same. But it is sobering indeed to see that a large majority of respondents feel that burnout got either somewhat higher (39%) or much higher (30%) in 2002 than it was in 2001.

Yet what most of us are really concerned about is not just the situation today, but that of tomorrow. Should we expect the burnout phenomenon to improve this year, remain the same, or become even worse? Figure 5 illustrates what our respondents think.

Again, it's sobering to see that only a small minority (12%) believe that things will improve. The rest believe that it will either stay the same or become even worse — 21% think it will get *much* worse! From this perspective, the outlook for 2003 is definitely gloomy; the upbeat, wild-and-crazy “go-go” days of the 1990s seem to be fading away into an ever-more distant past.

Of course, our respondents don't have crystal balls that allow them to gaze into the future with any greater degree of accuracy than the rest of us; by early 2004, we may be able to look back and conclude that their perceptions were either excessively optimistic or pessimistic. And their feelings of optimism or pessimism could be influenced by a wide range of factors, none of which we explicitly asked about in our survey — e.g., the overall state of the economy; the prospects of war in various parts of the world; the increase or decrease in the IT budget in one's organization; the optimistic perception that if burnout has been bad in the previous year, then surely it will improve next year; or the pessimistic perception that if burnout

has been a problem in the past year, there's nothing to suggest that it will get any better next year.

At this point, some readers might be thinking, “I don't have time for all of this touchy-feely stuff. It's a tough, competitive world out there, and companies must focus on making a profit and staying in business. If it turns out that some employees are getting

ulcers and headaches from the stress, that's unfortunate but also unavoidable.” But the notion that burnout is a personal phenomenon that has no impact on the organization itself is almost unanimously rejected by our respondents, as shown in Figure 6.

What form does this organizational cost take? When we asked our respondents, we were surprised

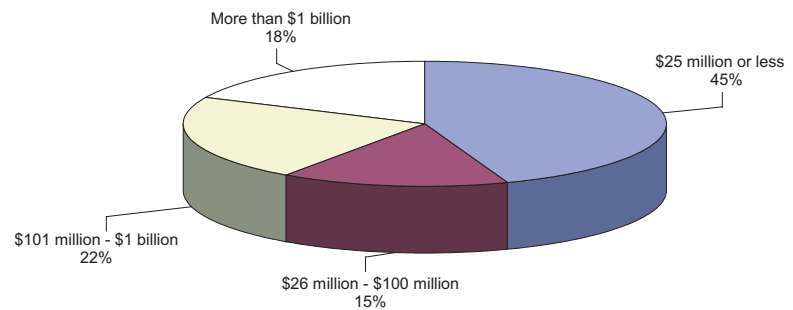


Figure 2 — What is your organization's approximate annual revenue?

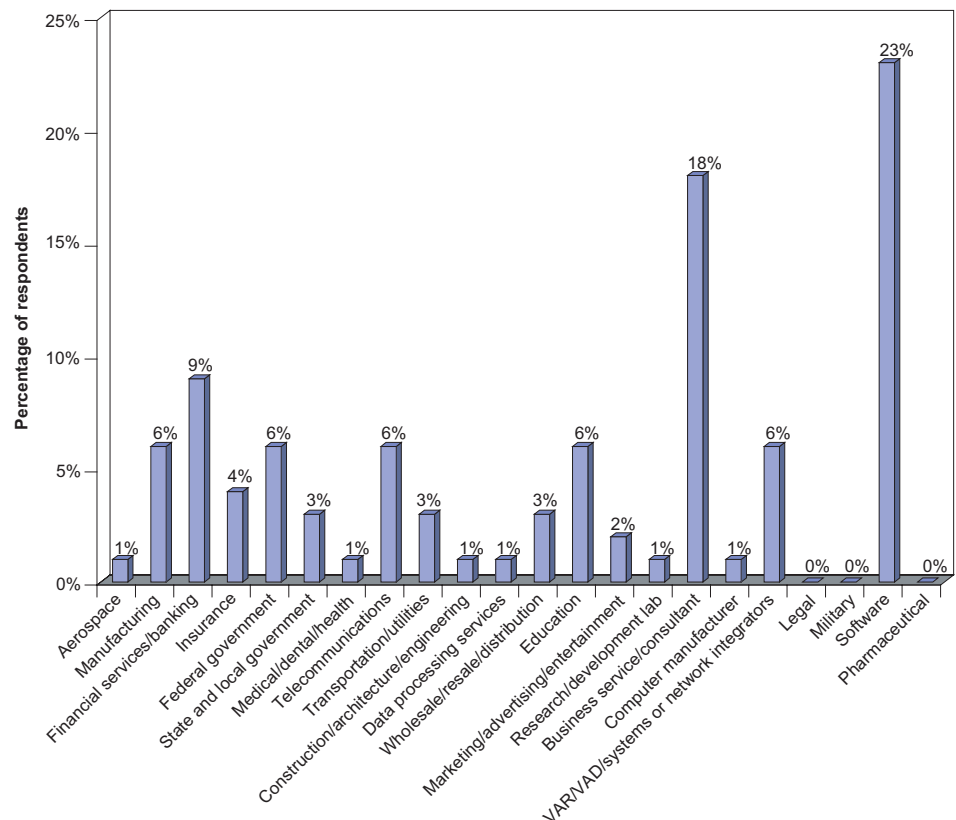


Figure 3 — Which of these best describes your organization's industry or function?

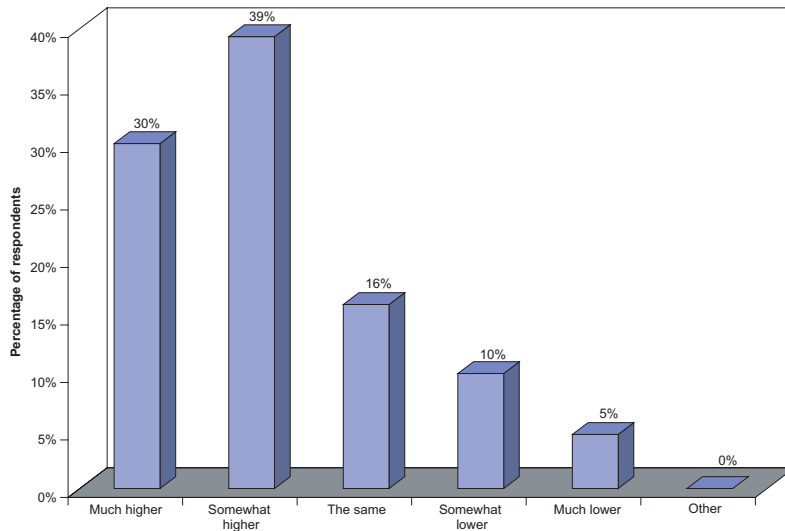


Figure 4 — How would you describe your level of burnout in 2002 as compared to 2001?

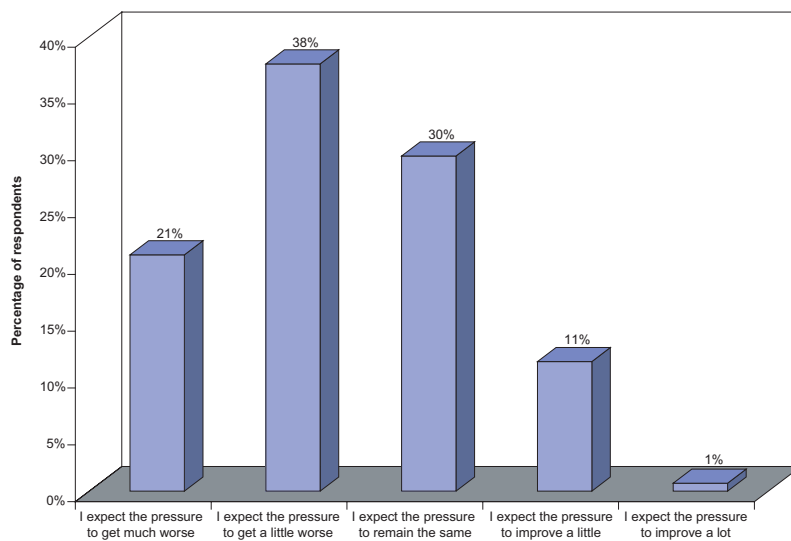


Figure 5 — Do you expect burnout pressures to decrease in the next six to 12 months?

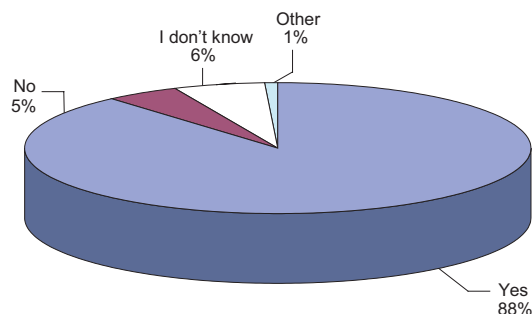


Figure 6 — Do you think there is an actual organizational cost associated with burnout?

to see the wide variety of answers — and the substantial consensus on many of the potential cost factors (see Figure 7). Yet there are two factors that are considered somewhat less important: only 27% of respondents feel that burnout is causing an overall bad attitude that employees might display toward customers and other outsiders, while a relatively modest 43% feel that burnout will lead to poor performance.²

But perhaps this is not so surprising. After all, IT professionals are less likely to come into contact with the organization's customers and outside business partners than sales or customer service representatives. And since burnout is often directly associated with substantial amounts of overtime, perhaps the respondents feel that poor performance is not a likely consequence — as opposed to productivity loss, which received the second-highest rating on this question.

Several of the cost factors identified in this question — productivity loss, project delays, intellectual capital loss, and turnover-related recruiting costs — can be quantified and reduced to dollars or euros or yen. But the factor that scored at the top of the list (at 74%) — loss of morale and company spirit — is one of those “touchy-feely” items that is generally regarded as qualitative rather than quantitative. One can certainly imagine that decreased morale throughout the IT organization will probably lead to productivity losses, decreased quality,

²There is a distinction to be made between poor performance and bad attitude: one could imagine a highly productive, hardworking person who is burned out and therefore has a chip on his shoulder and a hostile attitude. He gets the job done but is so unpleasant and aggressively hostile that no one wants to get anywhere near him. Such a person often makes his presence known in meetings, where every pronouncement by the manager is greeted with sneers, snide remarks, and the like.

and increased turnover, but the relationship is indirect and invisible.

There is no doubt that military historians can tell you about battles that were lost because one side's army was demoralized, but we would be hard-pressed to identify a company that suffered bankruptcy because its burned-out IT department was demoralized. On the other hand, it's also hard to imagine that an IT department can help its stakeholders create innovative, "insanely great" products and services if they're so burned-out that they're exhausted, demoralized, and utterly cynical about the work they're doing. There may still be some senior executives and project managers who exult in being "lean and mean," but it would be a good idea for them to study Figure 7 closely; burnout really *can* be an expensive proposition.

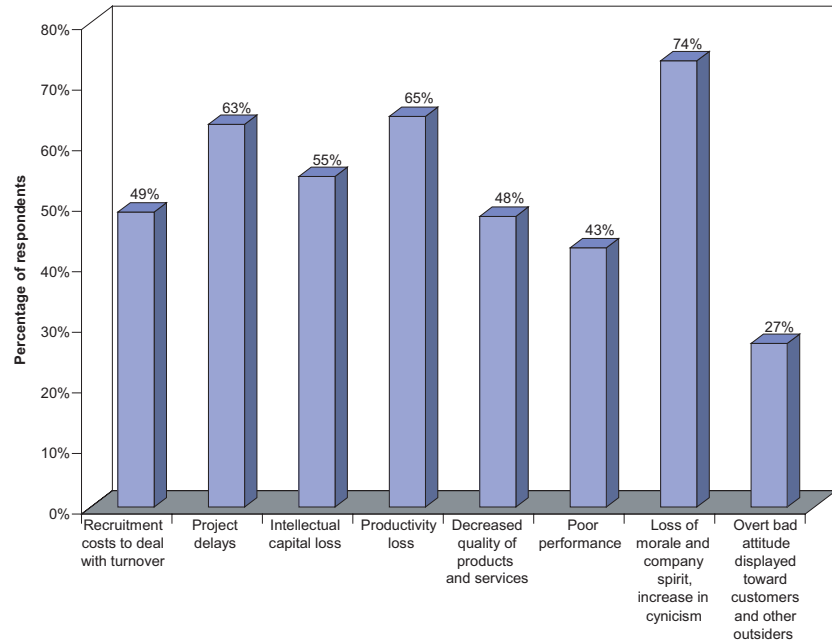


Figure 7 — If you think there is an organizational cost associated with burnout, please select the areas most impacted. (Respondents able to select more than one response.)

GIVE ME SOME SLACK: PART I

by Robert N. Charette, Fellow, Cutter Consortium

"The more efficient you are, the harder it is to change." In this article, Cutter Business Technology Council Fellow Tom DeMarco's adage will be our guidepost as we examine issues concerning IT and business, drawn from Cutter Consortium's surveys.

In his provocative book *Slack: Getting Past Burnout, Busy Work, and the Myth of Total Efficiency* (Broadway Books, 2001), DeMarco asserts that organizations are striving to increase their effectiveness by concentrating on becoming more efficient mainly through the elimination of "unproductive" overhead. DeMarco claims, however, that this policy is often carried too far, which causes the organization instead to become both inefficient and ineffective.

As organizations strive to reach the false totem of "total efficiency," DeMarco states that vicious cycles

are generated that create exactly the opposite effect as the one intended. For example, in an organization on its way to total efficiency, busy work starts to overtake effective work; e.g., highly skilled employees have to do their own copying because the support staff has been eliminated for efficiency (i.e., cost savings) sake. With time and money at a premium, "cheaper, faster, better" along with "do more with less" become operational mantras. The organization (over)commits itself to extremely aggressive (and risky) project-cost and schedule targets to "gain competitive advantage." Hence, employees need to work a lot of unpaid overtime, and they become highly stressed if not burned out, which creates waning organizational effectiveness. The organizational response to this situation is to increase pressure to increase performance.

Additionally, more cuts in support staff are made to make up for the unexpected cost increases. The deteriorating work environment leads to staff turnover, which adds more work to those who stay. Pressure increases on those left to do more with even less, and so on. I think you get the picture.

DeMarco argues strongly that a better way for organizations to become effective is for the organization to go in the opposite direction — instead of cutting perceived "slack," increase it. In essence, time to concentrate on the important instead of the trivial should be added to the workday. By adding slack, instead of always trying to reduce it, the organization will operate more effectively, retain more key personnel, invest more soundly in its future, increase its ability to take risks intelligently, and increase its agility and thus become more

competitive. To create the needed slack, support staff may have to be added, project schedules lengthened, time for learning (not training) provided, and so on. To say the least, reducing slack instead of increasing it is the current trend among most organizations.

In this article, we will look at a few of the slack-related issues based on the results of a survey of 69 IS/IT managers from large organizations.

STRESS

A main assertion of *Slack* is that employees are becoming increasingly stressed. So we asked our survey respondents some questions regarding their work environment. As shown

in Figure 1, 33% of our respondents agree that they are overworked by their organization, while 13% strongly agree that they are overworked. This amounts to almost half of the respondents. A very small minority (8%) don't feel that they are overworked at all.

Next, we asked about the average number of hours per week worked. As can be seen in Figure 2, the majority of managers, some 60%, work 40-50 hours per week. A small number of managers (4%) work less than 40 hours. However, a sizable minority work more than 50 hours per week — some 36% of our respondents work this much. This seems to support DeMarco's assertion that managers who put in a lot of regular

overtime are doing work that they should not be doing (i.e., doing the work of others).

To get a better feel for the possible effects of being stressed, we analyzed the responses of those who said that they agree or strongly agree that they are overworked versus those that said that they are mildly overworked or aren't overworked at all. Not too surprisingly, those that said they are overworked put in the most number of hours. Some 80% of those who said that they work 50-60 hours per week were also among those saying that they are overworked, while everyone who said they work more than 60 hours feels that they are overworked.

Interestingly, notice the 20% group of managers working 50-60 hours per week who said they don't feel that they are overworked. These managers would make me nervous as an employee, since the "average" workweek for these managers requires 10-20 hours of overtime per week. Only when overtime exceeds 20 hours per week are these managers more likely to complain. It would be interesting to ask these managers whether they could guess their employees' average workweek. My guess is that many of these managers would say that their employees should be able to complete their work in 40 hours, while a realistic accounting would show that 50-60 hours of effort would be required — or the same number as the manager works. As DeMarco points out, stress doesn't occur only from the sheer number of hours worked, but from the awareness of how much work you are expected to do in a given amount of time and how much work you can realistically achieve. Place any project under stress long enough, and the result will be reduced quality of the product, then personnel burn-out, and finally a large increase in staff turnover.

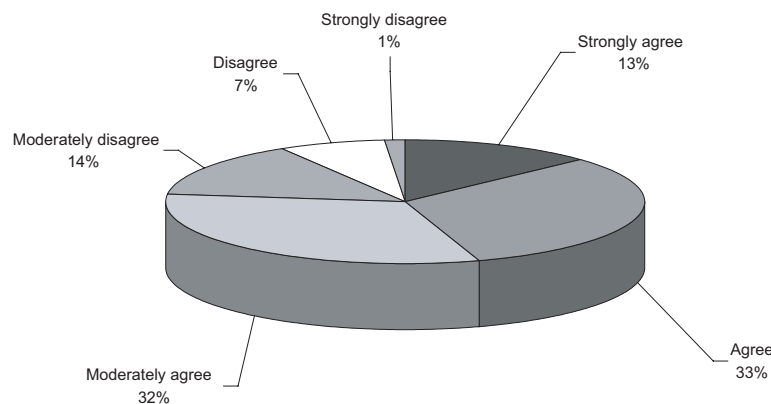


Figure 1 — How strongly do you agree with the following statement: my company overworks its employees.

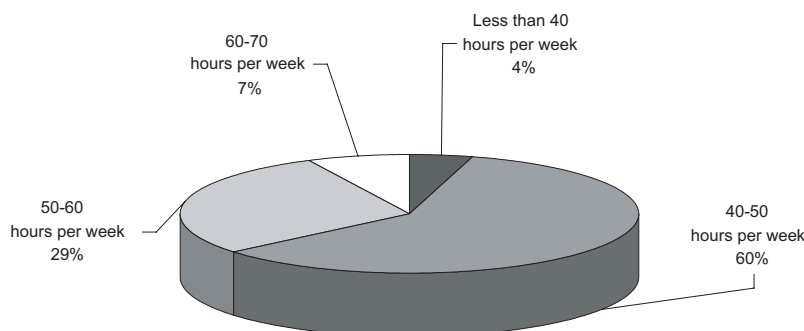


Figure 2 — In your department alone, what is the average workweek?

TASK SWITCHING

Another issue that DeMarco discusses in his book is the loss of effectiveness caused by “task switching” or the need to work on multiple tasks simultaneously. Moving to multitask individuals — usually by matrix management — has long been done as a mechanism to increase organizational efficiency. However, as DeMarco points out, every time you switch between tasks, you lose a little bit of time because you must stop what you are doing and then get up to speed on the new task. If you are doing something complicated that requires concentration, then the penalty incurred will increase. Further, if you have to switch among tasks often, you will get annoyed, and the penalty will increase more. DeMarco calculates a loss of about 20 minutes of effective work per switch a knowledge worker must make.

As shown in Figure 3, many of our survey respondents are doing numerous task switches: 32% are working on more than five IT projects, while 77% are working on three or more. If we conservatively say that our survey managers switch among each project once per day, and we figure DeMarco’s 20-minute penalty for every task switch, then most of our respondents are losing 40 minutes per day of effectiveness at a minimum. The managers with five or more projects are losing 80 minutes and upward per day.

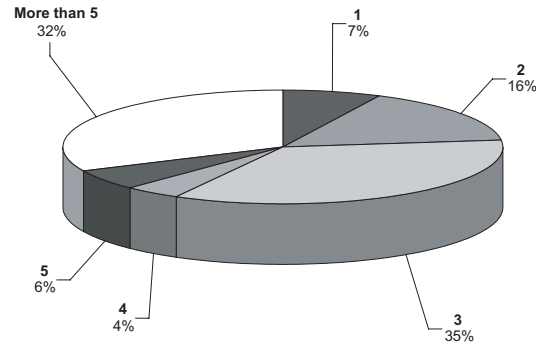


Figure 3 — On average, how many projects are your company’s IT workers currently working on?

Now imagine the loss of time when you add in meetings, work in a team environment, have to take telephone calls, and so on.

Interestingly, when we looked at our overworked managers versus the number of projects they were tasked, the spread doesn’t look so much different from the non-overworked managers. There are about the same number of overworked and non-overworked managers who work on three projects or more. However, we did find that non-overworked managers work on only one or two projects twice as much as overworked managers. This seems to imply that, for our respondents, although working on multiple projects may not be the primary cause of overwork, it seems assuredly to be a strong secondary cause.

The ineffective use of time during normal working hours seems to be a characteristic of project life today. The data on manager stress and task switching demonstrates how hard it is to get things done. Both of these are also root causes of why project costs and schedule estimates are so far off. When was the last time you considered the fact that you were moving from, say, managing two projects to three in the new project estimate? Did you look at the harmful effects not only on your new project, but on the two that you were already managing? If you are like most of the managers in our survey, I am sure you did, but you just decided to put in more overtime to handle the load.

In the next article, we will continue our look at the notion of slack and see why DeMarco is correct when he says managers need more slack, not less.

GIVE ME SOME SLACK: PART II

by Robert N. Charette, Fellow, Cutter Consortium

“Slack represents operational capability sacrificed in the interests of long-term (organizational) health.” So writes Cutter Business Technology Council Fellow Tom DeMarco in his acclaimed book, *Slack: Getting Past Burnout, Busy Work, and the Myth of Total Efficiency* (Broadway Books, 2001). In this article, we continue our

look at the issues related to slack, project management, and organizational survival drawn upon data from Cutter Consortium’s surveys.

In the previous article, we saw that, based on the survey of 69 IS/IT managers from large organizations, approximately 60% of them are

working up to 10 hours of overtime on average per week. However, more than a third of our respondents work 10-30 hours of overtime on average per week. Only 4% report not having to work any overtime. A reason for all this overtime appears to be that most managers are being overtasked. Almost four out of five managers in

our survey are involved in three projects or more, while one out of three managers are tasked to five projects or more! This problem of overcommitment appears to be the norm, as does another critical problem that DeMarco identifies in Slack — managers are doing work that they shouldn't be doing.

Here, we will continue our look at some of the issues raised in Slack, such as employee retention and how the issue of management's overcommitment affects an organization's ability to change in the face of competition. We will also cover what some managers think of slack.

RETENTION

In *Slack*, DeMarco argues that the true cost of losing key personnel is being severely underestimated, and thus, the push to gain efficiency is a false economy when it means losing good people. The cost, in terms of time, product quality, etc., rarely outweighs the benefit of squeezing out more organizational efficiency, DeMarco maintains. From this, we can get a feel for how important a priority the reduction of personnel turnover is for our managers' companies.

Figure 1 shows that reducing employee turnover is a top or high priority for 36% of the managers surveyed. For 25%, it is a low priority or it does not even appear on the organization's radarscope. For the rest, reducing employee turnover is rated as just an "average" issue of concern.

In Part I, we compared our over-worked and non-overworked manager groups to see whether any differences in corporate priority setting appeared. Somewhat surprisingly, we did not find any dramatic statistical differences between the two groups. About the same number of over-worked as non-overworked managers said they work for companies that have reducing personnel turnover as a top or high priority. In fact, this result held across both groups for every employee retention priority level listed in Figure 1.

What this indicates to me is that DeMarco is "more correct" than he knows: companies generally do not have a real understanding of the cost of losing key personnel or the effects of working people too hard to the point that they want to leave. If they did, I would expect to find a very different distribution, with far fewer overworked managers working for

companies with a high or top priority to reduce personnel turnover than our data indicates. As for companies that claim employee retention is very important, apparently for at least half of them, it is nothing more than lip service.

This seems to be supported by a related survey conducted by InsightExpress of 500 executives, which was conducted about the same time as the Cutter survey. Some 59% of executives reported feeling that laying off people would encourage remaining employees to look for new jobs, while 62% of the executives felt that customer loyalty to the company would be decreased. The disparity between the number of executives saying that it would have a negative effect and managers who said that employee retention was important to their organization was notably almost a 2-to-1 difference. This measure of organizational hypocrisy is unlikely to go unnoticed, and it can only add to the stress and pressure managers must be feeling.

Furthermore, the InsightExpress survey reported that most cuts in personnel came from operations, administration, and customer service. We can easily surmise that managers are having to perform a lot more overhead functions than they did before, which is also adding to daily workload and stress. Again, as DeMarco points out, all the slack is being squeezed out of organizations and along with it, the effectiveness of the organization.

REINVENTION

A major theme of Slack is that extremely efficient companies have a very difficult time changing into the organizational form that competition requires. As shown in Figure 2, our survey respondents were asked whether their organization can change and reinvent itself: 35% agree or strongly agree that their organization can, 28% mildly to

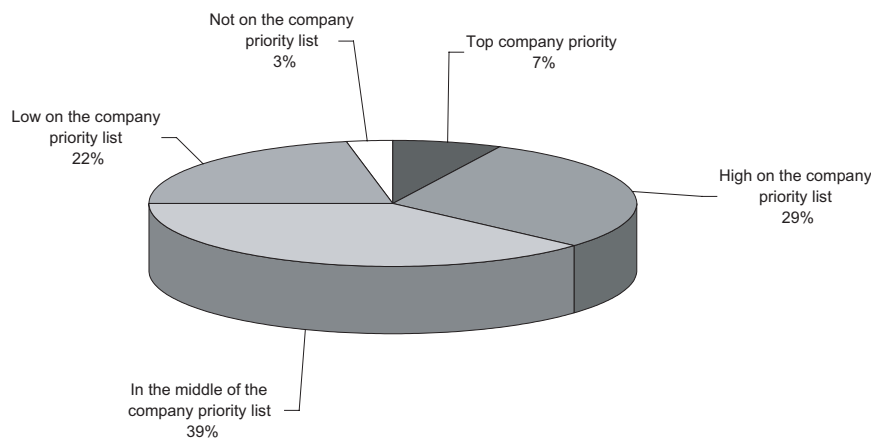


Figure 1 — How high a priority is reducing employee turnover at your company?

strongly disagree that their organization can, and 37% mildly agree that their organization can change and reinvent itself.

Once more, we looked at our overworked and non-overworked manager groups to see whether there were any differences in their perception concerning their organizations' ability to change. Again, surprisingly, there was no difference between the two groups, except for one category. Far fewer overworked managers than non-overworked managers said that their organization would have a very hard time reinventing itself.

This seems contrary to reason, since if a manager is already working 50-70 hours a week, where is the time (i.e., slack) to reinvent oneself going to come from? I suppose that maybe it is an expression of hope versus reality — I know that if I had to keep working 60 hours per week, week in and week out, I too would hope that my organization would reinvent itself, and quickly.

DeMarco probably stated it best when he wrote that when companies can't invent, it is usually because the managers are "too damn busy." What we seem to have here, at least sometimes, are managers who are too damn busy to even realize that they are too damn busy!

TRADING EFFICIENCY FOR AGILITY

In *Slack*, DeMarco argues that the trend to gain effectiveness through achieving greater organizational efficiency cannot keep going, with managers being overworked, stressed, and burned out. Something must give or companies will not be able to reinvent themselves to meet the ever-increasing demands of business competition. To survive, DeMarco claims, companies will need to become agile, which means

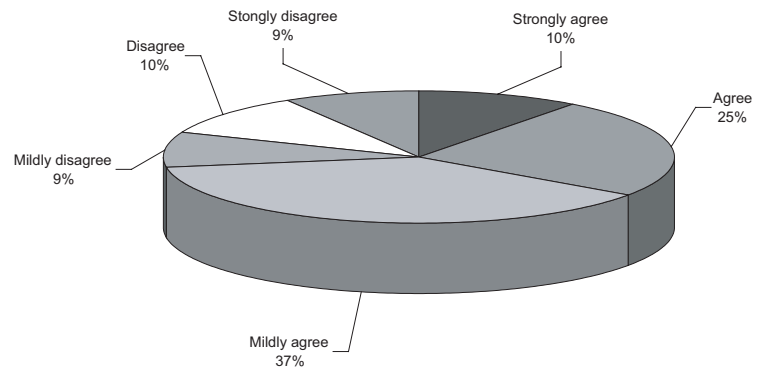


Figure 2 — How strongly do you agree with the following statement: my organization has the ability to change and reinvent itself.

managers will need time to respond quickly to new challenges. If the managers are constantly oversaturated with work, it is difficult to know that you even need to respond, let alone develop the correct response to handle changes in the company's operating environment.

In *Cutter Business Technology Trends and Impacts Council Opinion*, Vol. 2, No. 8, DeMarco asserts that:

The present trend toward responding to each new challenge by increasing the load (and work hours) of knowledge workers will not persist. The already evident stress on knowledge worker retention obliges companies to rethink how they use people — or use them up. Efficiency and productivity were the watchwords of the 1990s, but today the emphasis needs to be more on agility. The prescription for organizational agility is markedly different from the prescription for efficiency and productivity.

Managers were asked whether they agree or disagree with DeMarco's assertion. Most managers seemed to agree with DeMarco's assertion as being valid. However, many seemed to express doubts about whether agility really could be achieved

without maintaining a focus on efficiency and productivity. For example, one manager agreed with the assertion but argued that, with the current economic circumstances, calls for more efficiency and productivity can be expected. This will act to keep slack at a minimum.

Others, however, seem to have a hard time fathoming DeMarco's paradox that gaining more effectiveness and productivity comes by increasing slack instead of reducing it. For instance, one manager wrote that "agility without a watch on efficiency would be chaos," while another wrote that "organizational agility, efficiency, and productivity are priority goals together." This latter statement especially appears to me to reflect DeMarco's argument that companies don't understand how to become more effective. If becoming more effective requires you to "reduce" your efficiency — i.e., increase your slack — how is adding yet another priority objective (agility) to the mix going to help?

Another manager viewed agility as a detriment, writing that "agility to me implies excess capacity ... many businesses can't or won't afford that." The manager understood DeMarco's point but overlooked one aspect of it. Agility is indeed "excess capacity," which allows an organization to grow in new directions. Being agile means

not only being able to respond more rapidly, but to work in as highly a productive manner as efficiently as possible — the converse is not necessarily true, as DeMarco indicates. Further, by being agile — by having “effective slack” — an organization can not only react quickly to changes in the environment, it can also pursue new opportunities as well as create a new competitive environment. How is an overworked organization going to do any of these three things well?

What I think we see with the comments above and from the survey data is how pervasive the delusion is that you can simultaneously make

an organization highly efficient and highly effective, and how difficult it will be to change that way of thinking. Adding agility to the mix will only make things worse for companies if they don't understand the need for increasing slack. Knowledgeable companies understand that striving to become agile acts as a counterbalance to excessive efficiency, resulting in increased organizational effectiveness.

The great cyberneticist Stafford Beer once said that a perfectly efficient organization cannot learn. To be truly effective, you need to know many things, and organizations become

knowledgeable by constantly learning. However, learning is inefficient, often messy, takes time, and, in DeMarco's vernacular, requires slack. In today's working world, slack, as DeMarco says, is not being tolerated. So in their pursuit for efficiency, companies sow the seeds of their own demise.

I have only touched on a few topics DeMarco discusses in *Slack*. I believe that most managers would be well served to read DeMarco's book and take the time to ponder what it means, although I would venture that the ones that need it the most will be too busy.

HITTING THE BUTTONS: EFFECTIVE AND LOST-COST TECHNIQUES FOR PREVENTING BURNOUT

by Rob Thomsett, Senior Consultant, Cutter Consortium

In more than 30 years of IT and business consulting, I have never encountered a more mean-spirited managerial environment than the one facing the survivors of the post-dot-com and post-Enron work world.¹ In management and project management seminars that our group (The Thomsett Company) conducts worldwide, we constantly see the signs of a new and harder attitude toward people involved in projects:

- There is an expectation that those with a job will have to work harder and longer to keep the job. It is typical for us to meet project managers attempting to manage multiple projects.
- Quality is considered a luxury that companies are not

prepared to pay for in a time- and money-driven culture.

- As one project finishes, people are expected to move on immediately to another project.
- Effective resource (people) management, in which the *right* person is allocated to the *right* project (portfolio management), is compromised by lack of executive leadership and strategic planning.
- Companies consider professional training and education to be non-core activities that should be undertaken outside work hours.
- There is a belief that people can be sacrificed in a project to deadlines and budget constraints.

One of the metrics our group uses to measure project success is team satisfaction. That is, at the end of the project, how important is it to executives and stakeholders that the team

members are professionally and emotionally satisfied with their role in the project? In more than 90% of the hundreds of projects to which this measure has been applied, team satisfaction was not a significant success measure for the sponsor or stakeholders.

Although some of this attitude can be attributed to a backlash against the excesses of the dot-com boom, when project people could demand almost any personal requirements and companies were only too happy to comply, we believe that a larger issue is hidden underneath. Namely, that IT as an industry has never been focused on people issues.

While pioneers such as Gerald Weinberg [13] and myself [10] tried to raise the profile of people issues, our voices were generally lost in the noise surrounding the latest technological debate (relational versus hierarchical databases; is the PC a tool or a toy?; etc.). Even the more recent works of Cutter Business Technology Council

¹These views are supported in Jill Andresy Fraser's book *White Collar Sweatshop* [4] and in the cover story of the November 2002 issue of *Inc*, which contains an astounding quote from a software company CEO: “Burnout is a term I don't even recognize” [6].

Fellows Tom DeMarco and Tim Lister [3]; Larry Constantine [1]; and Jim McCarthy [7] have done little to focus the debates about object-oriented development, agile methods, and Extreme Programming (XP) on the critical cultural and people issues associated with effectively implementing these innovations.² As a result, most IT groups and, in particular, IT managers are poorly equipped to deal with the special demands facing their people today.

WELCOME TO “VIRTUAL TURNOVER”

Though there are many signs of burnout, the one that is most disturbing to us is the condition we call “virtual turnover.” People have, in effect, stopped working because they *want* to work for the organization and are now working simply to remain in the job. As one of our workshop participants put it, “My body turns up for work, and my heart stays at home.” These individuals are just waiting for the economy to improve so they can leave.

We first came across this syndrome in the post-1987 recession. For the first time in many people’s memories, organizations began laying off their professional people. As a result, turnover in the IT industry dropped from around 35% to less than 5% per annum. It is uncanny how history repeats itself. A decade later, the IT industry has again seen turnover rates drop significantly. If and when the economy and global conditions improve, IT turnover rates will soar almost immediately back to the 30%-plus mark. The true cost of burnout will then be realized in many companies with poor people management capability.

²A refreshing exception are the excellent *Cutter IT Journal* issues on “XP and Culture Change” edited by Kent Beck (Vol. 15, No. 9, September 2002; and Vol. 16, No. 2, February 2003).

THE WRONG REWARDS FROM THE WRONG PEOPLE

Burnout is not a motivational problem. In fact, it is because IT people *are* so highly motivated that burnout is a problem. Even after so many years of observing and working with IT people, their dedication to doing good work and willingness to work long hours with little recognition to achieve this never cease to amaze us.

Burnout is, instead, a cultural problem. It reflects a lack of organizational understanding of what “turns on” an IT professional. We have found that lack of effective recognition for good work and lack of effective rewards are the biggest causes of burnout.

In years of working with and concentrating on professional people working in IT projects, we have learned some truths that *differ* significantly from the more popular models of, and research on, other forms of work teams:

- The people that IT people work with are more important to them than other work factors such as rewards and working conditions. In study after study, we have found that the good relationships and camaraderie built between people in a team are the major turn-ons for IT people. By enabling teams (or at least some key team members) to move to new projects together, organizations will offer *real* rewards that give people a chance to learn new skills as well as continue working with the people who constitute a significant part of their motivation.
- Formal recognition programs such as “team of the month” are, at best, embarrassing for most IT people and, at worst, an insult.
- Gratuitous rewards such as gift vouchers or dinner at a restaurant are viewed with disdain.

THE COST OF BURNOUT

We undertook some research for a client company in 2001. In conjunction with their human resources people, we calculated the cost of finding an effective external replacement for an experienced professional project manager on a salary of US \$100,000 per year. With advertising; headhunting organization fees; and internal interview, processing, and training costs included, the total recruitment cost was \$50,000.

We then calculated the cost impact on a typical project (in fact, a group of projects) that this project manager would be managing. These costs were mainly due to project delays, and they ranged from \$50,000 to \$100,000. We did not include any calculation of loss of intellectual capital (which would be significant), nor did we factor in any of the costs of poor quality and rework that would be incurred both pre- and post-replacement. For “virtual turnover,” the costs mainly involve lost productivity and high levels of rework caused by long hours and poor focus.

- Feedback from senior management and others who are not aware of the detail of the project work is insulting.
- Lack of education, career planning, and growth are very significant demotivators.

IT’S THE JOB, THE WHOLE JOB, AND NOTHING BUT THE JOB

Developing on the original work of Frederick Herzberg and Abraham Maslow (presented in [12]) in the 1960s, J. Richard Hackman and Greg Oldham [5] analyzed the intrinsic motivational impact of jobs and job tasks. As shown in Figure 1, they developed the Job Diagnostic Model,

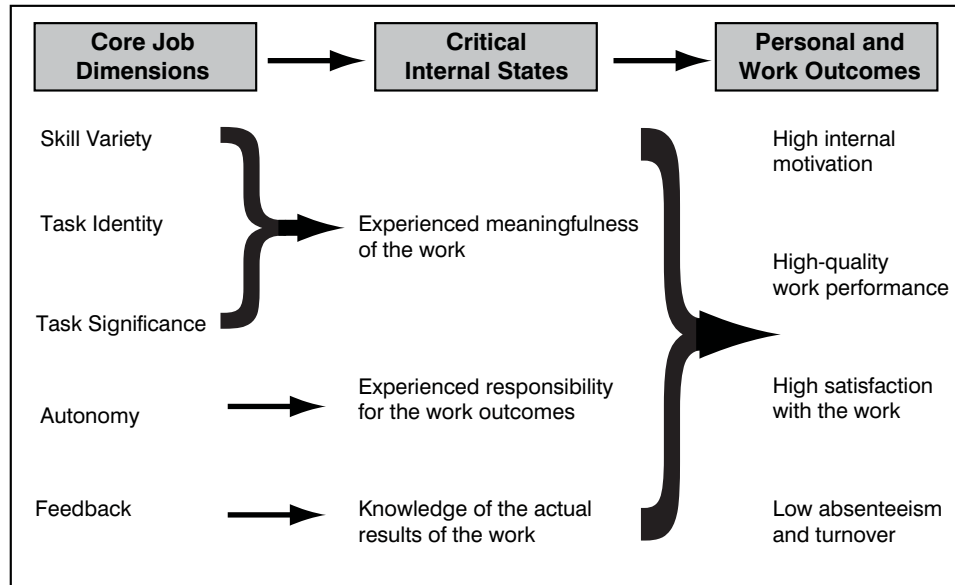


Figure 1 — Job Diagnostic Model [5].

which proposes that each job contains a number of *core job dimensions*. If these core job dimensions are improved, then the person undertaking the job develops an internal belief in the meaningfulness of the job and a responsibility for and understanding of the relationship between his or her effort and the results. These internal states lead to improved personal and work outcomes, such as high intrinsic motivation, high-quality work, and so on.

In effect, Hackman and Oldham provide a structured model for improving intrinsic motivation [5]. Their model has been validated in many organizations and by our own group working with computer and other project teams [9].

The core job dimensions are:

- **Skill variety.** Does the job require a varied mix of activities, skills, and talents for completion?
- **Task identity.** Does the job require completion of a “whole” and identifiable piece of work (end-to-end processes)?

- **Task significance.** Does the job have a substantial impact on the lives of other people?
- **Autonomy.** Does the job allow freedom, independence, and discretion in scheduling and determining techniques?
- **Job feedback.** Does the nature of the job provide the person with clear feedback and indications of the effectiveness of his or her performance?

Using the work of Maslow, Herzberg, and Hackman and Oldham, we can now propose a simple and powerful approach to avoiding burnout. This approach builds on the participative approaches to project management developed by our group over the past 16 years [11].

It is our experience that most computer people have their extrinsic needs (e.g., financial security, basic social needs, peer recognition) met by their jobs and that the key to motivating computer people is in the intrinsic needs arena. In effect, the project manager/team leader cannot directly motivate a team member, but by focusing on the nature of project

work, the project tasks, and the broader organizational environment of projects, the project manager can create a more motivating environment for teams. To put it simply, changing a person’s job changes that person’s level of motivation.

OUT OF THE PIT AND INTO THE LIGHT

In many organizations, there is a cultural and attitudinal gap between computer and other creative teams and the broader organization. As I discuss elsewhere [11], significant differences have emerged in the organizational culture and business focus of the computer and business areas.³

This gap has often meant that many business people perceive that their IT teams are nonresponsive, inward-looking, technology-obsessed geeks. The best way to deal with IT, this thinking goes, is for the business

³Of course, the tendency of many IT groups to use their expert power to dominate business people has not helped in bridging this gap.

people to develop their own business case and requirements for the project and to throw these documents into the “pit of technologists.” In many of our client organizations, the business experts are responsible for the development of the project’s scope, objectives, benefits analysis, costs, and so on, while the IT teams are simply seen as hands-off service providers. In many organizations, this gap is further widened through the use of business analysts, who are placed between the IT team and the business people, and account managers, who often are the managerial interface between IT and business.

In our work with both business and IT teams, our group has found that the existence of this gap has major impacts on the motivation of IT teams and the degree of burnout IT people experience. We have also confirmed that there are three levels of intrinsic motivation that apply to computer and other creative people. Each level of motivation is stronger and more significant than the level beneath it. We have discussed this model with more than 2,000 computer people, and all agree with its power and accuracy.

Level 1 Motivation: Technical Excellence

This level of motivation is the most common in IT teams. Since the IT teams are remote from their business clients and other stakeholders, they are forced to suboptimize their intrinsic motivation to the areas of skill variety, autonomy, and feedback (see Hackman and Oldham’s model [5]).

In effect, the project team member simply undertakes the project based on system specifications with a maximum of technical excellence (high feedback) and with the use of as many new techniques and technologies as possible (skill variety and autonomy). The feedback is generally from peers and is based

on the technical elegance and innovation of the solution.

Level 2 Motivation: Client Partnership

This level of motivation builds on Level 1 motivation. The project team member is “out of the pit” and is working in partnership with the business client and other stakeholders. At this level, the team is able to see the big picture, and thus the task significance and task identity become more important. Skill variety, feedback, and autonomy are also enhanced, as the team needs to learn and understand the business issues associated with the project and receives direct feedback from its business partners.

At this level of motivation, the team member will often choose different, less technical solutions (i.e., than those that would be chosen in Level 1) that are based on the business view rather than a purely technical view.

Level 3 Motivation: Adding Value

This level of motivation is the highest and builds on Level 2 motivation. The project team member is working in partnership with the business client and stakeholders, and they are all focused on the “added value” of the project. At this level, the task significance and task identity are optimized as well as skill variety, feedback, and autonomy.

At this level of motivation, team members are totally aware of and focused on the lifecycle impact and cost benefit of the product or system they are developing. The economic and organizational impacts of the project have been developed by all team members during the initial project planning sessions, and all team members (not just the project manager and project leaders) are committed to a successful project and subsequent lifecycle issues.

THE MORE THINGS CHANGE ...

In 1996, *Inc* magazine conducted a survey of US workers [8] regarding critical factors bearing on employee satisfaction and job performance. The results bear striking similarity to the studies of Herzberg [12] and Hackman and Oldham [5] of the 1970s and 1980s.

What turned on US workers in 1996 were:

- An opportunity to do what they do best every day
- A supervisor or a colleague who cares about them
- Having their opinions listened to and taken into account
- A job that offers opportunities for growth and learning
- That the mission of the employer makes the employees feel that their jobs are important
- Having the materials and equipment to do their job right

If the survey were done today, it would show the same results.

This concept of high-performance motivation is not only consistent with the theoretical work of Herzberg [12] and Hackman and Oldham [5], but it has also been validated by a number of our clients. Members of project teams that are “out of the pit” and working in full partnership with their business clients toward the realization of project benefits consistently report to us that they enjoy working in this manner and that they experience higher levels of motivation and lower levels of burnout.

SO ... HOW DO YOU PREVENT BURNOUT?

The answer is pretty clear. To minimize burnout, upper management, the project manager, and project leaders should focus on the following six actions (none of which require extra money, promotion, or other traditional rewards):

1. Share the Client

Management and the project leader must do everything they can to get the team members as close to their clients as possible. This is critical and will result in Level 2 motivation. Ideally, the IT and business group team members should be colocated, but if this is not possible, then the teams should meet together daily. The project manager and/or project leader should ensure that the team members share non-project-related activities as well as project activities. For example, if the business team members are

PROJECT X

One of our more radical clients recognized the impact of burnout and turnover. However, management could not use additional financial rewards and promotions as tools to address the problem, so it created a special category of project that it called a "Project X." These were fully funded three-person-month projects hidden in the standard project planning portfolio.

If a project manager or technical expert had done an exceptional job, he or she was allocated to a Project X for periods varying between one week and three months. While on a Project X, the individual could do anything he or she chose, including taking a break from work. Most Project X people chose to come to work to study, teach, or simply hang out.

attending a management briefing on a new business policy, the IT members should also attend. Simply, the more the business and IT cultures are shared, the better for motivation and energy levels.

2. Share the Project Vision

The project manager or leader must involve the project team and key business clients in all aspects of project planning. The process of participative planning has been well established and adopted by many leading Australian organizations [11]. The whole team — business and IT — develops the scope, objectives, risks, and, most importantly, the expected benefits and benefits realization process. The team must build to "project vision" to own it.

3. Share the Skills and Knowledge

One of the key intrinsic motivation factors for IT and other creative people is the need for learning and growth. Our experience, which is supported by research by J. Daniel Couger and Robert Zawacki [2], is that computer people have extremely high needs for growth and learning. The project manager must try to "vertically load"⁴ project management and other non-technical activities to the team. For example, instead of the project manager undertaking a project risk assessment, all the team members undertake the risk assessment process. In addition, by getting the IT team closer to the business team, all team members gain expanded skills and knowledge about the business and the technology. The use of team-based quality assurance techniques such as walkthroughs can also enable team members to learn technical skills from other, more experienced team members.

⁴Vertical loading is different from delegation. Delegation generally involves the leader giving the team the things that he or she does not want to do. Vertical loading involves the leader giving away what he or she likes doing.

4. Share the Success

Given the lack of access that most project managers have to financial and status-related rewards such as promotion, the project managers and team leaders should implement creative reward systems.

Some relatively low-cost rewards are:

- **Research and development "time-outs."** The team members are given time at work to experiment and learn new techniques and technologies. For example, after a project, team members can choose a new technology of interest to them (such as a new wireless protocol) and are given some support and time to learn about the technology (see "Project X" sidebar).
- **Share the learnings.** One of the most significant turn-ons for IT professionals is being allowed to teach others and to share the learnings gained. We have seen this work powerfully to both address burnout and enable the mentoring of new talent.
- **Feedback from the business management.** While many IT team members get valuable feedback from IT management, the project manager should arrange for the senior management of the *business* client area to offer feedback to the IT team. Surprisingly, this is more significant to many IT people than feedback from their own management.
- **Be there when it works.** Many IT and other project people want to see how all their work on a project ends up. "All I want to do is see one of my projects to conclusion" is a typical quote from project team members. Even if a team member has left the project to work on another one, the project manager should get

the ex-team member to be involved in post-implementation reviews and other activities that provide feedback on the project's success.

- **Actively support extra-curricular activities.** Many IT people are too busy to join specialist groups such as professional computer societies and the like. The project manager should see whether these societies can present sessions inhouse. Arranging subscriptions or enabling Web access to specialist journals such as *Cutter IT Journal*, *Harvard Business Review*, *Fast Company*, and so on — and encouraging teams to read and discuss them — can be extremely effective.
- **Encourage fun and play.** Excellent organizations such as Microsoft and the Distributed Systems Technology Centre in Australia encourage a sense of play and fun at work. In an exercise where teams are asked to choose attributes for an ideal leader, a sense of humor is a highly valued attribute. Without being too silly or obvious, the team leader or project manager should encourage any activity that the team sees as fun. When it comes right down to it, a team without a sense of humor and fun is not a motivated team.
- **Arrange for rotation.** Ask team members whether they would like to spend some time in other areas in the organization. For example, a team member may lack some PC skills and could learn a lot by working in the PC support area. Many IT people would choose to spend some time in business areas. After all, a change is often as good as a holiday.

5. Deliver Early and Often

The infamous mid-project slump has been well documented and often leads to burnout of key people in the project. The use of development techniques such as XP, agile methods, fast tracking, sequential releases, rapid application development, and highly concurrent development [11] results in delivery of system and product components earlier. Not only does this lead to higher levels of client satisfaction, but it results in the team getting clear and earlier feedback on its work effort. As users realize benefits from the early releases, the team should be told.

6. Raise the Team Profile

The project manager and team leaders should use any opportunity and/or technique to raise the organizational profile of their team and the work that their team is doing. The use of informal newsletters that detail the status of the project and any significant events or deliverables accomplished, formal briefing sessions for other projects and their team members, formal and regular communication with the project stakeholders, and so on can all result in higher team motivation and fewer incidences of burnout.

SOMETIMES THE JOURNEY IS BETTER THAN THE DESTINATION

Although some of these ideas may seem “low-tech,” the advantage is that you can start using them without any significant challenge to your prevailing organizational management and culture. Even if you don't succeed, we believe that the very fact that you tried will send a powerful and positive message to your team and colleagues. The message is that you understand the pressure they are under and that they matter enough for you to try to help. After all, isn't that what leadership is all about?

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