Rewarding Knowledge Worker Productivity Beyond the Corner Office

by: Jay L. Brand, Ph.D.
Much has been said and written about knowledge worker productivity since Peter Drucker coined the term at least three decades ago. While almost everyone has accepted the importance of knowledge workers, very few agree on how to measure what they do. However, well-accepted characteristics for good measures do exist and have been in use for centuries among scientists. Knowledge work also pre-dates the term’s application to business environments, and universities have been measuring the productivity of their professors for a very long time. Although the direction for learning can flow in either direction, in this case, corporations could learn a great deal from how universities capture and reward their knowledge workers. Such measures must be derived locally, be informed by what a particular corporation needs in terms of work outputs, and be customized to provide incentives that individual workers value.

Peter Drucker and several other management gurus have argued that organizations must learn to leverage their “knowledge worker” potential to remain competitive in the new millennium. Apparently organizations harbor vast, untapped resources of human productivity just waiting for the right organizational culture to blossom into extraordinary innovation and leadership. Several problems along this corporate highway to success have been addressed by others, but I wish to outline the basics of some of them here along with a possible solution.

INITIAL PROBLEMS

First, very few people agree on what the term “knowledge worker” means. If you ask individual employees of Fortune 500 companies, they all would claim to be knowledge workers. And if you ask their executives, they want all their employees to be knowledge workers. What is a useful definition? Essentially, knowledge workers are those employees who have the responsibility (or the luxury) of exploring and generating ideas and concepts rather than concentrating solely on implementing or managing existing processes or operations within the company. Project management typically begins and ends with them rather than from their superiors, although knowledge workers may reside in various organizational structures. The original “prototype” used by Drucker when he created the concept of “knowledge worker” was a MD/PhD developing new drugs for a pharmaceutical firm.

If we compare the corporation to a network, knowledge workers might represent individual nodes within this network. Much of the network involves hierarchical relations: Nodes at one level analyze information (e.g., process inputs, contents, or outputs) and delegate tasks related to that information to nodes at lower levels. In contrast, knowledge workers represent nodes that implement procedures and create knowledge for the company independently of their formal inputs. They do their own thinking and act on the resulting information, for the most part. They can be part of any group or department, but they tend to be part of R&D, management strategy, IS/IT, or design groups, and they typically have an advanced degree in their chosen field. They’re usually technology-literate and perhaps even technology-driven.

So first, there’s the obstacle of definition in trying to measure knowledge worker productivity. But another much more difficult problem for assessment involves the distinction between quantification (or measurement) itself and the goals and content of the work that knowledge workers produce.

Historically, measurement within corporate environments has followed the tradition of Frederick Taylor and his Principles of Scientific Management. Presumably, every worker’s job can be broken down into discreet behaviors or task elements, and these
behaviors must be segmented and integrated optimally to minimize the
time required to perform the overall activity or task. Henry Ford implemented
these principles on a grand scale in his assembly line manufacturing systems.

Virtually the same productivity model influenced early office environments as
well, and combined with econometrics (e.g., ROI, ROA), several measurement
models for office worker productivity have been developed. Unfortunately,
most of these have assumed that what office workers produce bears
a conceptual resemblance to what factory workers produce: Information,
knowledge and/or services, but outputs nonetheless that should be
amenable to measurement — just like the factory workers’ “widgets” per unit
time. Problems arise because unlike manufacturing, knowledge work does
not break down easily into constituent behavioral components that can be
timed to ensure the best segmentation and integration of task components.
Ideas do not map neatly onto a chronological time-line.

How do you measure the task of inventing a novel product solution and
procuring a patent for it? How do you break down the task of winning a design
award into its constituent elements (much less measure the marketing or
“branding” impact of such an event)? What are the behavioral components
of innovation or creating ideas? Should such things as job satisfaction or
environmental satisfaction be included in the evaluation of knowledge
workers? (Certainly absenteeism, sick leave, and turnover can be quantified
and their impact on the “bottom line” estimated.) Additionally, does
working collaboratively improve on the outcomes of individual knowledge
work? If so, how do you decipher and reward the contributions of individual
group members?

**MEASUREMENT DIFFICULTIES**

Add to this complexity of process for knowledge work the fact that good
quantitative measures must exhibit two characteristics: Reliability and Validity.
Essentially, this means that a particular measure must be repeatable and
actually represent what it measures. A ruler is reliable, since two people using
the same ruler to measure the same desk in meters will invariably arrive at
similar numbers. Eyeballing the desk would not be a reliable measure since
different people may come up with very different numbers. To be valid,
measures must faithfully represent what they claim to measure. A measure can
be reliable but not valid (measuring shoe size in inches as an indicator
of intellectual ability); presumably a measure cannot be both valid and
unreliable. (The latter assumes a degree of objective stability in what one is
measuring, but statisticians rarely explore this issue, since it relates to the
different assumptions of determinism.)

Does asking employees how productive they are adequately measure their
productivity? Are supervisors’ opinions an adequate guide when determining
employee productivity? What about measures of organizational
performance or group performance — do these reflect individual employee
productivity? Or should customer
evaluations ultimately be relied on? Such questions and others like them
represent concerns about the validity of measurement. Researchers typically
correlate the measures based on some
new assessment method with measures on a generally accepted method, and
if this correlation is high and positive, they argue for the validity of the new
measure. This only establishes validity if the “generally accepted” measure is also
valid — a particularly difficult version of “the-chicken-or-the-egg” problem.

Finally, in addition to the problems of deciphering the knowledge work
process and measuring it in a reliable, valid manner, knowledge work ideally
cannot be tied to a particular time
or place (or be demanded within a
given time period) as can factory or
other essentially routine, repetitive
work. Useful combinations of ideas
occur anywhere, anytime, and efficient
organizations must find ways to
encourage & leverage such serendipity.
Furthermore, measurement and
quantification rely on accurate, timely
recording of the salient raw data,
and this either requires an additional
employee layer (e.g., clerical, data-
entry) or the involvement of the
knowledge workers themselves, and
time spent documenting activities
certainly does not contribute to
knowledge worker productivity.

**ONE PROPOSED SOLUTION**

So, is there a solution? One tried
and true approach within facilities
management involves benchmarking,
which means capturing what works
(best practices) at another facility
regarding the problem addressed. Do
examples of adequate measurement
and reward exist for knowledge work? I
believe so — at Universities. University
professors have long been measured
and rewarded — essentially for
thinking. How have these contributions
been quantified? Interestingly,
almost every institution of higher
education — although there is some
uniformity across the campuses of
State universities (e.g., the UC system
in California) — has independently
developed and implemented an
evaluation procedure for assessing their
faculties’ contributions. These systems
accomplish at least three things: 1) they
enjoy contextual validity; 2) they enjoy
perceived fairness; and 3) they provide
a quantitative basis for evaluation and
reward of knowledge work.

Although, there are almost as many
evaluation and reward systems as
there are Universities, most of them
required a consensus at one time
among the existing faculty members
on the type of system developed and
implemented. Pertinent considerations
involve the degree of difficulty of
Whether or not some version of implemented throughout institutions be developed, agreed upon, and community involvement.

The point is that such metrics can be tailored to your organization, team or group performance represents an additional consideration that can easily be tailored to your organization, team or department.

Ultimately, measurable metrics for rank-ordering valued tasks, together with estimates of the time required to complete such tasks (with “points” or other merits awarded for partial or complete task performance) can be developed within any organization. For example, the mean of the distribution of time taken to develop and patent an idea at a particular company might be two years. More points could be rewarded for completing this process by one standard deviation below the mean. Further refinement of the measure (and points awarded) may involve the ultimate profitability of the patent. These measures combined with evaluation criteria for individual performance and a quantitative method for determining how these factors result in raises, bonuses, promotions, and other awards can form the basis for evaluating knowledge worker productivity in your organization.

Finally, companies should consider multiple ways to reward productive knowledge work. Facilities represents only one way, but traditionally the ultimate goal for ambitious professionals has been the “corner office.” This reflects the historical preoccupation with space and territoriality as indicators of influence and power. The more the company values a particular employee, the more willing they are to devote costly real estate (and other scarce resources) to him or her. However, knowledge workers tend to be a heterogeneous group; they may not value traditional modes of reward. Organizations must think creatively about integrating bonuses, vacation time, sick leave, access to communication and other technologies at home, flexible working conditions, hours, promotions, raises, benefits, stock options, profit-sharing and other incentives into personalized compensation packages for each highly skilled knowledge worker.

Regardless of how you measure their performance, knowledge workers perform best when their compensation plan reflects their own personal values. Perhaps an engineer might be motivated by reimbursement for taking a night class. A designer might enjoy...
tuition assistance for his child in college. A software designer might prefer an extra week's vacation for snow-boarding in Colorado. An R&D manager may relish the idea of company funds — based on her group's performance — being earmarked for projects in her community.

Obviously, such additional considerations would need to supplement more generally expected milestones such as raises & promotions. Any number of other personalized incentive systems could be created, but in the increasingly competitive game of employee recruitment and retention, these ideas will increasingly move from concept to reality. Facilities managers can facilitate this process by documenting the potential savings to the corporation of trading other incentives for valuable real estate, as well as the savings in the recruitment and retention of productive knowledge workers by tracking the costs associated with these activities. But ultimately, our society will be better off if we reward the human spirit in each of us and slow the trends toward needless quantification & record-keeping, mechanization, and the metaphor of workers-are-machines.

SUMMARY

To summarize, knowledge workers have become much more prevalent within office environments, but the complexity of their role within the organization has prevented adequate evaluation of and reward for their contributions. An outcome-based evaluation system — modeled on existing University systems — together with reward metrics informed by individual knowledge workers' personal values was explained and offered as one possible solution to this dilemma.

REFERENCE


For more information call 800.344.2000 ©Haworth, Inc 08.2005