



THE HUMAN SIDE

Gwen Acton and Tim Andrews

IMPEDING SCIENTISTS' PRODUCTIVITY

Life scientists are frustrated by aspects of their organizations that they feel make it harder to accomplish the goals for which they were trained and hired. They report unclear goals, communication silos, and insufficient time to do research as factors that reduce their ability to be innovative and productive.

These are the principal findings of our recent survey of 22 life science companies on the challenges that currently exist in the areas of productivity and innovation in scientific research and strategic alliances. We conducted in-person interviews with over 25 executives, managers and scientists directly responsible for the success of scientific projects. The participants represented a diverse set of companies, ranging from leading pharmaceutical firms to small biotech efforts.

Opaque Goals

In our survey, scientists said that either they or other scientists they knew were working on goals that they did not think contributed to ultimate value for the company. For example, we found several cases where scientists were being rewarded for producing more of something (such

as drug leads) that they thought likely to eventually fail further downstream, at much greater expense to the company.

Since these objectives typically were tied to compensation, scientists pursued them in spite of their knowledge that much of their efforts would yield nothing of value and were counterproductive to the company. Part of the problem, particularly in large firms, was the inability to relate local activity by scientists to global value production for the firm.

One variation of this issue occurred when corporate strategic goals shifted during a performance reporting period. Scientists and managers were sometimes unfairly punished because objectives were not realigned with new priorities due to the time lag between strategic shifts and the HR department's implementation of new objectives. Survey participants overwhelmingly felt that performance reviews were a "waste of time," but felt there were no alternatives. They often tried to "game" the system through strategic selection of their performance objectives.

Working in Silos

Scientists and managers at large firms often used the term "silo" to describe the department or area in which they worked, reflecting the intense specialization and narrowed focus of individual groups. There was also recognition at virtually all levels of the firm, from senior management to scientists on the bench, that cross-functional efforts were crucial to success. While silos were advantageous in certain respects, they could make cross-functional cooperation more challenging.

Within the research organizations, collaborative projects were often accomplished through matrix management arrangements that were unsupported with budgets and clear staff assignments. Further, participants' individual goals and objectives often did not include these collaborative efforts. Therefore, project managers in these situations become "tax collectors," using persuasion and influence to attempt to accomplish goals, and often

Gwen Acton is president of Vivo Group, a Concord, Massachusetts strategic consulting firm specializing in helping companies improve productivity and innovation in research and alliances. Prior to this, she served as director of scientific development at the Whitehead Institute, was a faculty member at Harvard University, and received a doctorate in biology from Massachusetts Institute of Technology.

gacton@VivoGroup.com; www.VivoGroup.com

Tim Andrews has over 25 years experience working at the intersection of technology, strategy and innovation to boost growth and value production, and currently is a principal at Vivo Group. Prior to this, he was chief technology officer of Viant Corporation, an internet consultancy practice, and vice president of technology at Computer Sciences Corporation, a management consulting firm.

andrews@VivoGroup.com

succeeding, but at a substantial cost of time and effort, for which they were not measured or rewarded explicitly.

We found that in large companies, research groups and supporting organizations (such as IT and QC departments) were often at odds due to the focus on "cost savings" in support organizations. This resulted in substantial productivity losses to the research organizations when scientists were prevented from doing their work. We also found that support organizations often lacked perspective on how the objectives of their group contributed to the overall performance of the firm.

In contrast, survey participants who had experience in small firms often reported a dramatically different cultural environment. Support groups were usually local and actually "supportive." There was little friction and great flexibility to get things done the way the scientific groups wanted. In many cases there were no rigid functions, so participants readily formed groups across the organization to accomplish strategic tasks.

Less Time for Science

A common challenge reported by scientists at large firms was insufficient time at the bench to conduct the research activities for which they were hired. For many, more than half of their time was spent in other activities, mostly meetings and paperwork. Further, participants at large companies felt that many of the meetings they attended were unnecessary to the success of their work and lacked any ultimate value for the company.

Culturally, large organizations have implicit rules about the importance of attending meetings, making it difficult to make clear decisions about which meetings a researcher or manager should attend. Many felt that it was safer to attend more meetings than less, though this reduced available lab time and resulted in frustration. We found that a common practice was to place artificial meetings on shared calendars to preserve research time.

Paperwork and email were cited by scientists at both large and small companies as secondary issues that reduced productive research time. Many scientists spent

There are substantial opportunities for improvements in productivity and innovation.

substantial amounts of time answering email and filling out paperwork for categories such as reimbursements, surveys, ordering, and security.

What To Do

It has been widely reported that the pharmaceutical industry is facing a crisis in innovation and productivity as measured by the number of new drugs produced every year, which continues to decrease despite increases in research spending. Our survey suggests that there are substantial opportunities for improvements in productivity and innovation in scientific research and strategic alliances that can be achieved by improving the productivity conditions for the company's ultimate source of new product development—its scientists.

Many life science organizations might be unwittingly inhibiting the abilities of their highly skilled scientists by impeding their abilities to communicate, failing to adequately consult them about how their priorities align with corporate goals, and burdening them with functions (such as excessive meetings and paperwork) that interfere with their ability to do science. The survey findings highlight the importance for companies to obtain a thorough understanding of how scientists currently accomplish their work in order to improve their productivity. ☺

Reprints

PEOPLE DILEMMAS FOR TECHNICAL LEADERS

Thirty-six problems in motivation, ethics, communications, and interpersonal relations from Gale Cutler's long-running series in RESEARCH • TECHNOLOGY MANAGEMENT's Human Side department are now available in paperback. To order, see inside back cover.

What Would You Do?

Who Would You Promote?

What Should Jim Do?

What Should Bill Do?

Stalled On the Dual Ladder

Did Jack 'Fake It'?

Bob Gets Blind-Sided

When a New R&D Head Takes Over

The Boss Was Out of Date

Pete Transfers Abroad

Ryan Goes Skiing

... AND MORE