How to Increase Productivity through Influencial Leadership

INTEGRATING
TECHNICAL
EXPERTISE
AND BUSINESS

BEST SELLER SUCCESS
BEST SELLER

Gwen Acton, PhD

Integrating Business, Science and Technology

How Influential Leadership of Scientists and Engineers Improves Results **Gwen Acton, PhD**

Life science and technology companies – by definition – require technically trained experts and business professionals to work together effectively in order to be successful.

But technical experts and business professionals often have different cultures, jargon, communication styles, and training. These differences can reduce productivity if they are not recognized and managed effectively.

Many companies are wasting resources, losing opportunities for innovation, and frustrating their most specialized workers because they are applying the wrong leadership approaches to these issues. Fortunately, solving these problems usually does not require a greater financial investment by organizations, but better use of those resources through the implementation of influential leadership.

Influential leadership is an effective method for the science and technology industries because it relies on motivational approaches to getting work accomplished, rather than forcing behavior through power and authority. Influential leadership focuses on articulation of clear visions, alignment of individual and group goals, and strengthening of relationships throughout the organization.

Consequently, companies that understand the challenges of integrating business, science and technology, and invest in developing appropriate influential leadership can achieve large returns on their investment and out-compete others in their industry. Organizations that manage technical experts in a way that complements their natural skills are more successful because they:
- Waste fewer resources
- Achieve more innovation
- Attain greater levels of productivity
- Have better employee commitment

Why I wrote this report

As an MIT-trained PhD scientist with technical leadership experience, I am committed to ensuring that science and technology companies achieve optimum results, so that innovative science and technology ideas succeed in industry.

I wrote this report because too many companies lose value due to inadequate influential leadership of technical experts, and too many scientists and engineers are less productive and engaged than they could be.

For example, executive management trained in non-technical fields often has a basic misunderstanding of the culture of technical experts, and how they need to be led in order to be successful. At the same time, many scientists and engineers do not appreciate the context of the commercial enterprise in which they are working, nor how to advocate for their ideas.

The result is that the best technical and scientific ideas are often lost or undervalued because of inadequate integration of science and business within the organization. There is also less effective use of resources because those in charge of projects and teams do not know how to lead or manage using influence as effectively as they could.

The need for influential leadership at the intersection of science and business has become more important in recent years as the landscape of science and technology has become more complicated, with shorter timeliness, larger teams, and increased pressure for innovation.

> *THANK YOU VERY MUCH FOR THE WORKSHOP YOU DELIVERED TO MEMBERS OF OUR TEAM. THE CASE STUDIES WERE ON TARGET AND ALSO SHOWED THE ENTIRE GROUP HOW MUCH THEY HAVE IN COMMON WITH EACH OTHER, WHETHER IT'S MANAGING A SCIENTIST'S EXPECTATIONS AROUND A PARTICULAR REQUEST, ASKING ANOTHER FUNCTION FOR HELP WITHOUT AUTHORITY, OR DEALING WITH INTEGRATION CHALLENGES. WE ALL LEARNED SOMETHING ABOUT INFLUENCE AND ABOUT OUR COLLEAGUES IN THE BROADER ORGANIZATION TOO.*
> *--Director, Novartis Institutes for BioMedical Research*

1 Science and Technology Is More Complex

Work practices in science and technology are more complex than they were in the past. This is due to the growth in information and increasing complexity of the underlying science and technology. It used to be that scientists and engineers worked largely within their own discipline and could master their fields individually. Their organizations had a certain level of authority over their work since it could be accomplished without many outside resources.

But current science and technology endeavors involve bigger data sets, more interdisciplinary approaches, and greater resources. Leadership approaches that worked when the science and technology were more straightforward are no longer as effective in these increasingly more complex work situations.

For example, a majority of the scientists and engineers who I work with must collaborate with colleagues from other disciplines and departments on a regular basis. They also rely on ever-changing and increasingly-complex technology in order to do their jobs. Further, these technical experts often have limited authority over these other resources, and so benefit from good influence skills to get the information and commitment they need.

These evolutions in the practice of science and technology require more influential leadership to get work done since influence is particularly effective in achieving results in these complex situations. Companies can increase their productivity by implementing leadership development processes that emphasize influential practices.

> *VIVO GROUP DID A TERRIFIC JOB HELPING US TO BETTER UNDERSTAND 'SOFT' ISSUES AT OUR COMPANY. WE GAINED SOME VALUABLE INSIGHTS ON OUR CULTURE AND HOW IT IMPACTS OUR PRODUCTIVITY, AS WELL AS SOME USEFUL TOOLS THAT WE CAN APPLY TO IMPROVE OUR ROI NOW. –Executive Director, Pfizer*

2 Less solo work

In the past, technical staff often worked largely on their own as individual contributors. Now, however, scientists and engineers work almost entirely in teams on projects. They share data, instruments, information, and ideas within the teams. They must coordinate resources and timelines with others. This requires more influential leadership than in the past since more interpersonal interactions are required to accomplish tasks.

For example, a common frustration I hear from science and technology leaders attending my programs is that they are expected to lead inter-disciplinary project teams, but lack explicit authority over the people in their group. Further, the project leaders often manage team members who are more senior in the organization, or who have more technical expertise than they do. The project leaders often lack knowledge and confidence about how to be most effective in these situations.

When provided with training on influential leadership, these project leaders gain processes, tool-kits and strategies for handling these situations more effectively. As a result, they have more confidence, achieve better results, and build stronger teams.

Therefore science and technology leaders need to know how to get work accomplished through others when they do not have direct authority over them. In other words, they need to be able to 'influence without authority'.

> *GWEN ACTON DID A FANTASTIC JOB IN LEADING OUR SMALL ACADEMIC RESEARCH GROUP IN A RETREAT TO DEVELOP GOALS AND A STRATEGIC PLAN. GWEN WAS ABLE TO ELICIT KEY ISSUES FOR OUR GROUP THROUGH WORK DONE BEFORE AND DURING THE RETREAT, AND HELPED US IDENTIFY BARRIERS AND FACILITATORS TO MOVING FORWARD. SHE ENABLED US TO FOCUS ON ACTIONABLE ITEMS, AND WE CAME AWAY FROM THE RETREAT WITH A PRACTICAL, REALISTIC TO DO LIST TO HELP US MOVE FORWARD. IMPORTANTLY, SHE KEPT THE ENERGY POSITIVE, DREW OUT EVERYONE'S VIEWS, AND CREATED A COLLABORATIVE, COHESIVE PROCESS THAT LEFT THE GROUP FEELING ENERGIZED ABOUT WORKING TOGETHER TOWARD OUR NEW SHARED GOALS. —Associate Director, Harvard Medical School*

3 Fewer Hierarchies and More Matrices

In the past, most research and development (R&D) took place within the organization, and was often done in hierarchical structures. Bosses would tell their employees what to do, and they would do it. Now that work practices are more complex, companies have more complicated organizational structures. Therefore, simple power/hierarchical models do not work well in most situations.

Today, companies embrace a variety of leadership structures, such as matrixed organizations, multi-disciplinary project teams, outsourcing, and collaborations with academia — all of which can require a different style of leadership than found in traditional hierarchies.

For example, many companies outsource work, such as with Contract Research Organizations (CRO's), or Contract Manufacturing Organizations (CMOs). Although the "client" or "customer" organization theoretically has authority over the vendor or contractor, the reality is more complex.

Recently, I worked with one medical device company that was having problems with time delays from their vendors, which impacted their bottom line. Technical experts were managing the relationships with the vendors because of the complexity of the projects, and they expected the vendors to do what they wanted because they were the "customers".

While this attitude was factually correct, in practice it was not enabling them to be successful in their projects. I worked with company project leaders to build stronger relationships and better understand their vendors. This led to more collaborative interactions with the vendors and additional engagement from them. The result was greater influence over the processes and timelines, and more on-time results for the medical device company.

Therefore, as companies adopt more complicated organizational structures, such as matrices, outsourcing and collaborations to accomplish their R&D, they require more influential leadership skills both within the organization, as well as to manage the external partnerships.

4 The Science vs. Business Culture Clash

Life science companies require technically trained experts and business professionals to work together productively in order to be successful. But lab scientists and industry management often have different priorities and preferences. These cultural differences can negatively impact R&D productivity if they are not understood and managed effectively.

For example, R&D technical and scientific culture tends to place a large value on gathering data with as much certainty as possible, regardless of the time frame required to obtain it. In contrast, corporate management is usually under significant financial pressure that constrains the time frames in which they can pursue issues. Business leaders must often rely on their intuition to make decisions in complex situations without conclusive information, and have less familiarity with drawing conclusions from raw technical data.

Conflict between departments in the company can result from these different perspectives. For example, a common situation is when R&D staff discover interesting results they want to pursue further because of possible scientific importance. They may also continue to devote time and resources to achieving high accuracy or quality levels in their results – even if the basic "business question" has been answered satisfactorily.

On the other side, company executives are often baffled that their technical experts won't work on the goals that have been so clearly outlined for them. From their perspective, the scientists appear to be wasting time on frivolous projects, or in trying to make things perfect when they have already achieved results of acceptable quality.

5 The Culture Clash Results in Loss of Productivity

When organizations lack the influential leadership to effectively manage their technical experts, these cultural misunderstandings can have a direct impact on R&D productivity:
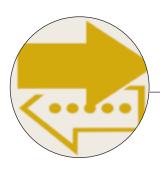
1 Failure to convey critical technical information for important decisions can influence the company's success in both the short or long term.

2 When technical experts pursue projects that are not aligned with company goals, their efforts waste valuable resources and affect timelines and milestones.

3 When scientists or engineers feel frustrated by corporate management, they have lower morale, higher employee turnover, and less motivation to work hard and creatively.

Influential leadership at the laboratory or company-wide level can help address and improve these cultural misunderstandings and improve R&D productivity. At the group level, technical leaders can build a more solid grasp of corporate values and priorities, and adjust their communications for greater alignment.

For example, one CEO I worked with was frustrated because his department heads, who were primarily of scientists and engineers, were not prioritizing business development as he hoped. The department heads, on the other hand, were confused because the CEO always seemed upset at their performance, despite their delivering well on technical objectives.

It simply did not occur to the CEO that his senior leadership team might not grasp the importance of business development, since it was so blatantly obvious to him. He also failed to understand that his team might have no skills nor experience doing business development, since it was such an intuitive and integral part of his own success.

I therefore worked with the senior leadership team to enable them to first fully understand the importance of business development and how to convey that understanding to the CEO. Second, we directly improved the teams' ability to actually do the business development through skills training and practice. The result was that the CEO now had a team that prioritized business development, and his company sales improved.

6 Business & Science have Different Communication Styles

Technical experts and business professionals have very different values, vocabularies, and training. Therefore they often miscommunicate with each other.

For example, I frequently hear senior leaders complain that their technical experts just 'don't get it' – they are working on tangents not closely aligned with corporate goals, and 'get lost in the weeds' by focusing too much on details

On the other hand, I also hear scientists and engineers working in industry who are frustrated that their management team just doesn't seem to understand their work – that they have unrealistic expectations, they don't understand the science, and they don't listen.

Another common situation occurs when scientists present important data they consider to be clear and conclusive to their management, only to feel like the facts are ignored or glossed over. Meanwhile, business professionals are often frustrated by technical staff who present them with "data dumps" that include too many details and without apparently understanding or appreciating the big picture context or business impact of what they are doing.

For example, one CEO of a small biotechnology company made the mistake of bringing a senior scientist with under-developed inter-personal skills to a meeting with her investors. After his presentation, the scientist proceeded to publicly mock one of the investors because he had mispronounced a technical term.

The CEO was mortified, but adopted influential leadership skills to successfully educate and motivate the scientist about appropriate communication with funders. When provided with these clear expectations for his behavior, the senior scientist avoided similar mistakes in subsequent interactions.

At the corporate level, companies can help improve interactions between different departments through facilitated conversations, and by forming cross-functional teams. Management can also invest in training and coaching individuals in all departments for better influence skills in order to better understand their counterparts in different disciplines and improve their productivity.

7 Managing Technical Experts Can Feel Like "Herding Cats"

Getting scientists and engineers to do something they might not want to do can feel like "herding cats" because, like cats, the experts can sometimes appear as if they are not listening and wander off to do what they want anyway. This can result in the technical experts working on projects that are not aligned with corporate priorities.

For example, I consulted with a team at a large pharmaceutical company that, as one of its responsibilities, needed to ensure that principle investigators (PI's) followed corporate safety and other procedures in their laboratories. The team members were deeply frustrated because they would have conversations with the scientist PI's, only to have them later break the rules. This put the entire organization at risk of regulatory non-compliance, and the department team in danger of looking inept.

I helped the team so they could more effectively influence the scientists – by better understanding the PI's priorities, and how to align what they needed them to do with what the company required. In addition, the team also began building stronger relationships with the scientists and looking for ways to help them so that they could have a strong working relationship in the future.

Science and technology companies can have more impact with their challenging technical staff by gaining skills and approaches to effectively influence them. The result is more productivity through alignment with corporate goals.

> *JUST WANTED TO SAY THANKS FOR THE TRAINING THIS WEEK. THERE HAVE BEEN LOTS OF POST-TRAINING FORMAL (DRIVEN BY MANAGERS) AND INFORMAL HALLWAY CONVERSATIONS AND DISCUSSIONS. AT MINIMUM WE HAVE GOTTEN FOLKS TO THINK ABOUT VENDOR MANAGEMENT OR RELATIONS AND TO CONSIDER IF WHAT THEY CURRENTLY DO WORKS AND IF THERE ARE TOOLS FROM YOUR TRAINING THAT THEY CAN INCORPORATE INTO THEIR PRACTICES. ALSO, SEVERAL FOLKS POINTED OUT TO ME THAT THE TOPICS DISCUSSED ARE APPLICABLE TO OUR WORK PLACE. —Quality Manager, Biotechnology Company*

8 Technical Experts Lead Projects and Teams

Science and technology companies differ from many other industries because a majority of the project and mid-level managers are technical experts. This is due to the fact that the work requires a great deal of specific knowledge in order to be successfully accomplished.

Scientists and engineers are usually promoted to supervisor or management positions because they are good individual contributors. They often have little to no experience in getting work done through others since they were selected and rewarded for individual achievements, not their group contributions. Further, they usually receive their technical training in academia where the styles of leadership that they observed and experienced are markedly different than those required in industry settings.

Therefore when scientists and engineers take over project teams, they experience a steep learning curve on how to manage other people. Sometimes the technical expert turns out to be a good leader and manager. These individuals often continue to be promoted to senior leadership positions.

But an all-too-common scenario is that technical leaders get stuck at this transition stage for long periods of time, or in some cases, never acquire the skills. One reason is that many of the same traits that ensure success as individual contributors can cause difficulty for leaders. For example:

- Outstanding technical skills can mean unrealistic expectations of others
- Focus on task rather than individuals can mean difficulty managing group dynamics
- Ability to do things by themselves can make it hard to delegate to others

The result is that the technical managers often feel frustrated and confused because what worked for them as individual contributors no longer seems to be effective for them as a leader/managers. The impact for their team and the company includes loss in productivity, reduced engagement of other staff, and less innovation.

9 Technical Experts
Learn Quickly

Fortunately for both the science and technology industries, technical experts are typically very quick learners when presented with a clear framework and process for achieving results. Therefore, companies can get a large return on a relatively small investment by improving the influential leadership skills of the technical experts who run their projects and teams. The result is more productive teams, happier scientists and engineers, and better employee engagement.

For example, I worked with one brilliant scientist with an excellent reputation as an individual contributor. She was largely introverted, and would work long hours until everything was completed. She was used to solving problems on her own, without the help of others, which resulted in her having some very creative scientific discoveries.

When she took over as a principle investigator (PI), she had no previous management experience. Within months, her situation quickly spiraled out of control. A scientist in the laboratory complained to senior management that she mistreated him, another researcher failed to show up regularly for work, a technician quit, and her boss questioned her ability to continue her position.

She was baffled, but was open to trying new approaches. After receiving brief instruction on influential leadership processes, she started doing a number of things differently, such as seeking help from mentors, meeting regularly with her team members, giving more regular performance feedback, and communicating better with her senior managers. The result was improved morale in her group, higher performance from her team, and greater support from the organization.

10 Improving Influential Leadership Is Cost Effective

If companies want to reach their maximum productivity, they need to ensure that both their technology and their leadership are solid. The technological side has components that are impossible to control – such as products failing due to inherent factors that were impossible to predict.

On the other hand, leadership is something that companies can reliably invest in for tangible returns. For example, organizational and leadership development services for technical experts can start with an investment of less than one half of 1% of their fully loaded annual costs, with returns that last for many years to follow.

Some companies are currently spending money in ways that might not provide them with maximum impact. For example, one common approach is to offer monetary rewards to incentivize better work, such as giving small amounts of money, such as $50 gift cards, in recognition of good work by their employees.

Interestingly, in my firm Vivo Group's surveys of hundreds of technical experts, they overwhelmingly report that the primary reward of these gifts is not the money itself (which is nice, but not significant to them), but rather the recognition for their work. Further, they report that their primary motivations include solving problems, continuing to learn, and career growth opportunities.

Therefore, companies need to ensure that their technical experts are receiving the appropriate types of influential leadership and rewards in light of their preferences. Approaches that companies can take to improve their influential leadership include:
- Improving management's understanding of their technical experts needs
- Facilitated discussions between business professionals and technical experts
- Providing influential leaderships skills development to scientists and engineers

Can I help you?

My firm Vivo Group and I specialize in improving the leadership and influence abilities of professional experts so that they can be more productive in organizations. I have expertise in developing the business, management, and communication skills of scientists and engineers so they can work more effectively in life science and technology industry R&D efforts. We also advise companies on how to manage and influence their smart, creative professional experts so that they can be more innovative and engaged.

Our services for Science & Technology companies include:
- Management Consulting for Senior Executives
- Interactive Workshops and Customized Programs including:
    "Influence Without Authority"
    "Herding Cats: Managing Scientists, Engineers and Expert Professionals
- Organizational Leadership Needs Analysis
- Facilitation of Strategic Planning, Team Building and Discussion Sessions
- Executive Coaching to Technical Leaders

To learn more go to www.VivoGroup.com

> *I WANT TO THANK YOU VERY MUCH FOR YOUR AMAZING COURSE ON INFLUENCE WITHOUT AUTHORITY. I HAVE ALREADY BEEN RECOMMENDING THIS TO MY COLLEAGUES AND FRIENDS. I PLAN ON STUDYING THE MATERIALS BOOK FOR A WHILE TO REALLY MAKE SURE I REMEMBER ALL OF THE DIFFERENT ASPECTS AND TACTICS YOU COVERED. IN GENERAL, I REALLY APPRECIATE THE WORK YOU AND THE VIVO GROUP ARE DOING WITH TRAINING SCIENTISTS HOW TO MOVE FURTHER UP IN LEADERSHIP AND BUSINESS. —Scientist, Genzyme*

About the Author

Gwen Acton, PhD, is an expert on strategic leadership at the intersection of science and business. She is CEO of Vivo Group, a firm that improves the business skills of scientists and engineers so that they can be more productive and innovative in the life science and technology industries. Prior to this, she served as Director of Scientific Development at the Whitehead Institute, where she established institute strategy for building long-term relationships with industry. Dr. Acton also ran the operations of the Functional Genomics Program, overseeing operations for a $40 million, 50-person sponsored research program related to the Human Genome Project, while successfully managing alliances with industry sponsors.

Dr. Acton received a doctorate in biology from M.I.T. where she worked in a Nobel-Prize winning laboratory. She next served as a faculty member at Harvard University in the department of Molecular and Cellular Biology. Dr. Acton recently led the non-profit group Women Entrepreneurs in Science & Technology (WEST), where she expanded membership and programming by over 10-fold. She currently serves as a Chair of the Board of The Bioscience Network.

Dr. Acton is the author of the book The Bluffer's Guide to Genetics, published by Oval Books. She has also authored industry reports published by the Cambridge Healthtech Institute, and has written over 50 freelance articles for organizations such as the Associated (AP), National Public Radio, and Technology Review Magazine. A popular speaker and facilitator, Dr. Acton is a member of the National Speakers Association.