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How the best labs manage talent

The highest-performing labs use the best talent-management practices. That's no coincidence.

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Of the \$1.2 trillion spent globally each year on R&D across corporations and academia, 40 percent—much the largest share—pays for people. Our team interviewed and surveyed world-class researchers in academia and a range of industries to understand what drives research productivity in labs. We found that the best ones, regardless of specialty or industry, share a pattern of behavior across six key practices: talent, strategies and roles, collaboration, problem solving, portfolio and project management, and alignment with the needs of the business and the market. To understand what characterizes the best labs, we then studied 4,500 researchers in 260 laboratories in academia and research-based industries, including automotive, basic materials, high tech, and pharmaceuticals.

Our conclusion was that talent management, more than anything else, is what the best R&D operations consistently get right (Exhibit 1). While all the practices we looked at are clearly correlated with high performance in labs, talent is the most important driver of their productivity and shows the highest level of correlation. Interestingly, talent management is also the practice that has the highest opportunity for improvement. That makes this a tremendously powerful lever to improve R&D productivity, regardless of its current level (Exhibit 2). Strategy is the second most correlated practice, but here the respondents saw the least opportunity for improvement.

Top-quartile academic labs are five times more productive than bottom-quartile ones. Similar differences exist among industrial labs. Yet many research institutions don't understand how well they are doing, because the people who work there wildly overestimate their own performance: in our survey, 12 percent of them suppose that their own lab is in the top 1 percent, and 70 percent think it is at least in the top 25 percent.

Exhibit 1

Among practices that influence a lab's productivity, talent is the one most correlated with high performance.

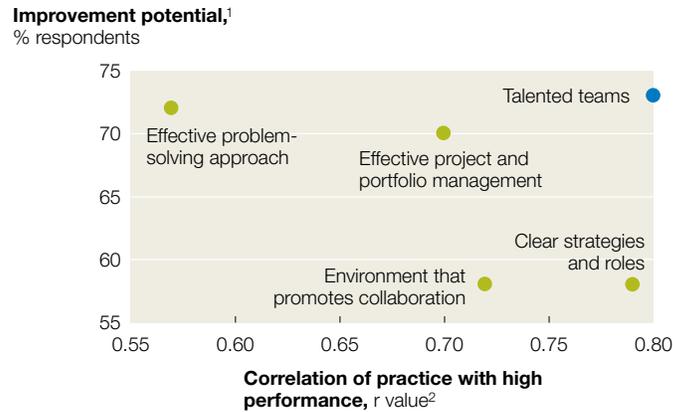
Practice ¹	Correlation of practice with high performance, r value ²
Talented teams	0.80
Clear strategies and roles	0.79
Environment that promotes collaboration	0.72
Effective project and portfolio management	0.70
Effective problem-solving approach	0.57

¹The practice "Alignment with the needs of the business and market" was excluded in this analysis because of insufficient data.

²Based on 99 labs comprising 2,276 researchers. The coefficient "r" is the measure of interdependence of 2 or more variables. A value closer to 1 indicates a high positive correlation; a value of 0 indicates no correlation.

Exhibit 2

Talent is the practice most correlated with success—and where labs have the greatest room to improve.



¹Defined as percentage of respondents within a lab who neither agree nor strongly agree that their lab is in line with the desired practice.

²Based on 99 labs comprising 2,276 researchers. The coefficient “r” is the measure of interdependence of 2 or more variables. A value closer to 1 indicates a high positive correlation; a value of 0 indicates no correlation.

Most researchers don’t know how productive great labs are or how they become great. In fact, most labs can assess how well they do only by basic output measures. A halo effect further distorts perceptions: researchers who think that their lab performs well assume that its talent-management practices are also strong.

What top labs get right

Talent management isn’t simply about hiring the best; not everyone can. It’s about managing talent appropriately through selection, recruitment, development, and rewards. Just about any lab can do so, yet many don’t. We looked at each of these areas, and while all are correlated with performance, some matter more than others (Exhibit 3).

Recruiting for potential

Managing talent appropriately starts with recruiting appropriate talent. The head of a top-ranking academic lab told us that “the most important intrinsic we look for is scientific curiosity.” Great labs such as this one evaluate the potential of researchers by appraising their basic intellectual ability, general problem-solving skills, and enthusiasm. They also test a candidate’s cultural fit, important to support teamwork and collaboration, which in turn drive productivity. Candidates may, for example, spend an afternoon devising answers to a specific question or working in the lab with the team. This approach helps labs assess a candidate’s social compatibility as well. Before making a decision on recruitment, the best labs also solicit the views of team members about each candidate.

Exhibit 3

Some behaviors are more important to high performance than others are.

Correlation with high performance for R&D labs, r value¹

By area	By behavior	r value
Recruiting for potential	Talent selected to ensure cultural fit	0.74
	Talent selected based on research experience	0.69
	Talent selected based on intrinsic qualities	0.68
	I am involved in decision to offer job	0.57
Nurturing people	Members are supported by structured mentoring	0.69
	Clear apprenticeship offered for new members	0.67
	Members have personal development plan	0.58
Recognizing success	Those who fail to deliver suffer consequences	0.68
	Celebration of achievements is central to lab culture	0.68
	Financial compensation is tied to performance	0.63
Building diversity	There is turnover in the lab team	0.64
	New members are from diverse professional backgrounds	0.58

¹Based on 99 labs comprising 2,276 researchers. The coefficient “r” is the measure of interdependence of 2 or more variables. A value closer to 1 indicates a high positive correlation; a value of 0 indicates no correlation. Only behaviors with values >0.55 are shown.

Average labs typically look mostly for specific technical proficiencies—say, the ability to use a piece of equipment or to run certain tests. Specific technical capabilities are sometimes required, but even when hiring for them, top labs want people who can adapt to new roles as the research evolves. Those new roles, especially in industrial settings, should include project management and business experience—something many labs overlook.

Nurturing people

Talent management doesn’t stop once researchers are hired. As an R&D executive told us, “Many of our research leaders don’t have the capabilities they need to succeed in senior positions in the organization. We are trying to give people more experience across the business to round out their future leadership potential.” A top lab, unlike a weaker one, actively supports its researchers’ development throughout their careers. Senior team members, for example, spend significant time in solo sessions with new researchers and mentor them continually. Year-end reviews appraise these activities. The most productive labs also require all researchers to develop annual personal-development plans.

Recognizing success

Many researchers crave recognition, and labs have a number of ways to provide it: public acknowledgement in meetings, awards, opportunities to present at conferences or to

attend symposiums. Even more recognition comes from giving high performers active opportunities, such as larger research budgets, leadership of bigger efforts, and part-time professorships. These incentives, our work shows, often inspire researchers more effectively than money does. They cut turnover significantly and almost always cost far less than financial compensation.

Although public recognition is important, it isn't everything: we found that researchers also want financial rewards for performance. In the best labs, such incentives are linked transparently to achievements or outcomes—great research, publication in a leading journal, the attainment of a milestone, or successful patent applications. One lab gives small cash bonuses to researchers chosen by peers for exceptional helpfulness. Another offers stock options for killing projects early, to avoid wasting money on futile or low-value efforts. Many academic labs, however, must rely more on nonfinancial motivators.

Not everyone succeeds in the laboratory. Obviously, failure should have consequences, but often it doesn't: in one research unit, the weakest performers were moved to another lab rather than counseled to leave. The best labs don't tolerate poor performance for long. If foundering researchers don't improve, they are asked to depart, which carries the added advantage of importing fresh talent and ideas.

Building diversity

Another driver of high performance is a diverse team of people with different backgrounds, specialties, and forms of expertise to help solve problems. The most important aspect of building such a team is encouraging turnover, not only by weeding out underperformers, but also by encouraging rotation to adjacent research areas, other geographies, different roles, or, for an industry lab, to the business side of the company. To help researchers better understand the needs of business and to create a greater appetite for career opportunities outside R&D, one commercial lab organizes regular presentations by former group members who have rotated into business positions.

Room for improvement

Of the six critical practices that influence a lab's productivity, the researchers we surveyed told us that talent is the one most in need of improvement. Even the best labs can raise their game in this area, and their research productivity can improve significantly even if executives are happy with its current level.

Given the importance of research for many (if not most) companies, these are clearly matters for the C-suite, not just research managers. Top executives should start by focusing on practical, tactical measures: inquiring about the research unit's diversity in background, experience, and capabilities; the ability of its culture to support innovation; the support researchers get for personal development; and the alignment between incentives and performance.

Related thinking

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Once research leaders accept the value of initiatives to improve talent management, they are easy to implement and have high impact. What’s more, their incremental cost is much lower than that of many other ways of making labs more productive—for example, reorganizing them or investing in new facilities.



Six key practices drive successful research organizations. Among these six, talent management is the one most correlated with high performance yet has the highest opportunity for improvement. No lab should neglect its people. [○](#)

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