



Stop Relying On Experts For Innovation: A Conversation With Karim Lakhani

*This article is by Saj-Nicole Joni, chief executive of [Cambridge International Group](#). *The Right Fight*, by Saj-Nicole Joni and Damon Beyer, is available in book, ebook and audio formats.*



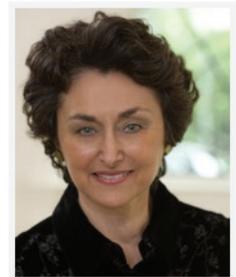
Karim Lakhani.

In the face of looming challenges like deficits, economic stagnation, environmental collapse, and soaring health care costs, most people believe that the world needs dramatic and sustained innovation. It's tempting to hope that we can innovate our way out of trouble, but we cannot unless we radically rethink our ideas about the relationship between expertise and innovation.

Traditionally, tough problems have been solved by experts, so we look to our top technical executives to organize teams of scientists and engineers to tackle our current problems. But in a world of ubiquitously connected people and ideas, this way of organizing may be backwards.

Leading the way in this “innovation inversion” is [Harvard Business School](#) Professor Karim Lakhani. I talked with him about this problem.

Saj-nicole: In your research you've been working with top scientists and engineers across the globe, looking for new ways to crack a wide range of very tough technical problems in realms from space exploration and drug development to food and communication. You point to the counterintuitive idea that even for complex science and engineering challenges, the experts may indeed not know best.



Saj-nicole Joni.

Karim: When we're faced with an innovation problem, the owner of the problem has a basic instinct, that the solution resides within the technical domain of the problem itself. This is often true, but when it comes to the really tough innovative puzzles that have impeded progress, our research shows that a domain-based solution is often inferior. Big innovation most often happens when an outsider who may be far away from the surface of the problem reframes the problem in a way that unlocks the solution.

For example, a toothpaste company found that in formulating a new product, the extra fluoride they had inserted into the paste was jamming up all their processing equipment. They spent a lot of time and money going through many different chemical and mechanical approaches to the problem, and they were still stuck. They then decided to work with InnoCentive, the online contest platform, to curate an innovation tournament that allowed anybody to participate in finding a solution. The solution actually

came not from a mechanical or a chemical engineer but from a physicist who basically said, “Instead of worrying about mixing fluoride based on the mechanics of chemical flows, we should just think about it in terms of particles to be charged. If you positively charge the paste and negatively charge the tube, you will have the movement of the molecules to the opposite charge, that is, into the tube. Then you remove the charges, and things should work.” This framework cracked open the problem.

At first glance, that sounds like the well-known argument for interdisciplinary problem-solving. What’s different?

What’s different is that the physicist wasn’t assigned to the problem and wasn’t asked by anyone to join a special or diverse team. He was just curious about the contest, and he wanted to use his untapped cognitive surplus on his own time. Thanks to today’s ubiquitous connectivity and tools for open platforms, he was able to try his hand at solving the problem.

So you are saying that, given our vast digital, physical, and logistical connectivity, we need to embrace the seemingly radical idea that the key to getting innovation and interdisciplinary insights is through this kind of self-selection?

Correct. We hire people for their knowledge and curiosity, but then we don’t let them apply their intelligence fully. Instead, we tell them what to do. We don’t think that their talents could potentially apply in other settings. It’s virtually impossible for a centralized planner to know what bits of knowledge individuals have and how this knowledge might apply. But when individuals are given the opportunity to apply their unique insight to a problem, they can solve it.

And the tipping point in our now ubiquitous connectivity now allows curious people to get involved across disciplines, time zones, geographic locations, and organizational boundaries.

Exactly. If companies really want to innovate, they need to radically invert their thinking regarding innovation processes and who works on what. You do this by making all the R&D problems transparent, visible, and accessible and by creating an environment in which anybody anywhere can have a look at the problem and participate in solving it. [General Electric](#) is finding access to unexpected sources of talent to solve problems

But how does this happen on a practical level? If everyone just self-selects to work on whatever they want, how do we ensure that all the parts of a large and technical project get done? After all, all work is not equal. Some work is more exciting, more rewarding, and more prestigious than other work. And to get all the necessary work done, people have to coordinate across many areas.

People have very different ideas about what’s exciting. I think companies don’t give enough credit to their own people, both in terms of their ability to decide what knowledge they have and what is interesting and not interesting to them and in terms of self-regulation. A big surprise for me is that in the open-source software world, this notion of self-selection takes center stage. You find that all the work, even the dullest work, gets done in the interest of finishing the project.

Valve Corporation, the hugely successful video game development and distribution firm, works on the basis of all its employees choosing the projects they want to work with. It follows a radical self-management model that seems to work quite well.

Every company thinks it is special and therefore outsiders can't fix its problems. Do you think, having seen this innovation inversion unfolding over the last decade, that this way of working produces more breakthroughs, better, faster, and cheaper?

Indeed I do. There are now enough proofs of concept across a range of activities—from graphic design for T-shirts, to scientific problem solving, to developing algorithms for big data analytics, to making cars—that we know that transparent opt-in processes for work tend to be higher-performing than every other system of management, especially when innovation is required to get the best results.

You make the case that unless we shift to transparent, opt-in methods, we are inherently killing vast potential for innovation. Yet it will take strong and committed leadership to make this change. What does an interested leader do to begin this daring and necessary shift?

The key management questions, I think, are the following:

- What areas of knowledge, expertise, and passion do people on my teams have that I might not even be aware of?
- How can I learn more about the full range of their cognitive surplus and associated passions?
- How can I create opportunities for them to opt in to use all that?
- How can I use the world as my laboratory and crowds as my innovation partner?

When you commit to allowing people to opt in and apply their full knowledge, insight, and intelligence, you will leapfrog competitors who remain stuck in the old mindset that the expert always knows best. If innovation matters to you, it's time to break out of this mindset and move into the future.

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