Are you winning the global innovation game or are you being left behind?

Being successful at innovation today means changing the way you think about where critical knowledge comes from and how to use it.

How successfully firms innovate has long been a source of competitive advantage and as the world changes, so do principles about how best to organise for innovation. We have seen the customer put at the heart of the process with the concept of user-driven innovation and more recently the idea of achieving cost reduction breakthroughs by innovating in emerging economies was championed by the proponents of reverse (and of frugal) innovation. But these approaches to innovation fail to address the biggest challenge facing companies today: The capabilities, market and technological knowledge needed for innovation are increasingly dispersed around the world.

In my new book, "Managing Global Innovation: Frameworks for Integrating Capabilities Around the World" (Harvard Business Press, 2012), written with INSEAD senior researcher Keeley Wilson, we tackle that challenge head-on. Based on research at more than 50 global companies and a global survey in collaboration with Booz and Company, we argue that the only sustainable form of innovation is one in which distributed knowledge contributions from a variety of places are brought together in innovations.

This is a new model of innovation which takes new ideas and new technologies and new knowledge of markets from different locations, often at the periphery of an organisation, bringing them together and integrating and aggregating these ideas, technologies and market insight into innovative offerings, be it products, a new business model, a new growth platform or a specific solution for customers.

Traditionally, a company's country of origin was the main locus of its innovation activities. Even when companies have adopted reverse innovation practices, the innovation process has remained co-located - albeit away from the home base, typically in a lead market. This approach to innovation that is so strongly rooted in the ease of co-location is no longer sufficient. Instead, we argue that companies need to embrace the opportunity and the challenge to learn from the world: to seek out new perspectives, new technologies, new inputs and new customer requirements.

It's all too easy for a country with a colonial tradition like Britain and France, for instance, not to be fully aware of the benefits that can be gained from accessing sources of knowledge in Asia because of the legacy relationship. For innovation we are now talking about a network of equals: differentiated contributors of equal importance, no dominant location.

The Global Innovation Challenge

Even for companies from countries without such one-sided legacy relationships, the journey of transformation from co-located to global innovation is not without its challenges. Most companies tend to innovate at home and then farm out routine tasks such as testing, verification and adaptation for local requirements to their international networks. Part of the reason for this home-centric approach lies in the intrinsic difficulty of actually sharing knowledge – particularly complex knowledge that is context-dependent, tacit and collectively held. To illustrate this challenge consider the example of Cisco's "cities of the future " programme. Initially the project made little headway because the female engineers in Mountain View (California) didn't understand how Saudi women were using social media and the Internet as a tool of freedom in a very tightly controlled social environment. The complexity was in understanding both the similarities in human nature and the huge cultural and societal differences between the solution developers In California and the solution users in Saudi Arabia.

Our research shows that one of the key reasons companies fail to exploit opportunities for global innovation is because of the commonly perceived trade-off between complexity and dispersion (the solid concave curve on the diagram below). When knowledge is complex, difficult to move and share, the default position is to innovate in one place - the upper left of the curve. It's much easier to engage in dispersed innovation - lower right on the curve - only when the required knowledge is explicit, digital and nearly universal.

Source: Managing Global Innovation: Frameworks for Integrating Capabilities Around the World (Harvard Business Press, 2012)

Some companies have indeed been able to simplify and codify complex knowledge and so move down the curve towards a more dispersed model of innovation. Infosys for example structured and codified much of its system integration and facility management knowledge to develop a global delivery model serving a multinational client base. Simplifying knowledge isn't an option available to every company and even those who are able to do this still find themselves trapped by the limitation of the knowledge complexity trade-off curve.

The real value of global innovation comes from transcending the lower curve. From being able to access and integrate dispersed complex knowledge from multiple locations in innovations. Companies will only be able to flip the curve by developing new strategies and building new capabilities to optimise three key areas: the innovation footprint, communication and collaboration.

The Innovation Footprint

Optimising the innovation footprint means keeping things simple, minimising the challenge. Companies obviously need to access the best knowledge from around the world but this doesn't equate with having vast innovation networks. Aim to keep the number of places you draw from in your network for a particular innovation to as many as you need but as few as you can. The management and co-ordination costs of a global innovation network increase with every additional site and there comes a point at which these costs outweigh the potential value being created.

The Swiss pharmaceutical company Novartis provides a good example of an optimised innovation footprint. Their innovation network includes a large institute for biomedical research in Cambridge, Massachusetts with strong links to MIT and nearby research hospitals, an institute for tropical diseases in Singapore (where they also work with NGOs), a centre in California focusing on genomics technology and a lab in China specialising in manufacturing processes. "What they've done is look at where critical knowledge is in the world and then built their research and development network around accessing that critical knowledge as opposed to thinking, 'we're sitting in Basel, we'll develop drugs, and then we'll send them out to the rest of the world'," explains Wilson.

Communication and Collaboration

Global innovation requires an investment in communication to support collaboration. The type of investment the authors talk about goes well beyond buying ICTs (information communication technologies) to creating a range of communication channels suitable for each type of knowledge being shared. This includes capturing codified knowledge in workflow systems, establishing communities of practice to connect knowledge holders for problem solving, adopting common development languages across different contexts and allowing for periods of temporary co-location to build trust in dispersed teams.

Companies should use the same criteria when thinking about communication and collaboration between their own sites as they use when working in strategic alliances with external partners. Time needs to be spent planning internal collaboration, the strategic rationale for the collaboration has to be clearly articulated to everyone involved and senior management has to play an active role in driving the collaboration, resolving potential conflicts and being responsible for quick decision making.

Finding the Right People

But all the best-laid plans will go nowhere without the right people in the right places: bi-cultural managers with a deep understanding of more than one culture can play a vital role in global innovation. These people are able to understand complex knowledge in one location and translate how it might be used in another. They are the bridges between different contexts, cultures and value systems.

To understand the role bi-cultural managers play, Wilson cites the example of HP Labs in Bangalore. Although established to develop radically different products and solutions to meet the needs of developing economies, the lab had to work with HP's business units around the world to co-develop innovations. One of the directors of the lab was an Indian lady based at HP's headquarters in Palo Alto California. An American HP veteran, with a lot of international experience, was based in the lab in Bangalore as was an Indian director who had extensive contacts and a very strong reputation in the Indian administration and science community. Between them, these three provided the bridges between the different contexts of HP's home base and India, HP's global business groups and the Indian lab and the local Indian environment and HP.

The importance of these bi-cultural managers isn't in doubt. "Our survey, found a resounding consensus that companies found bi-cultural people were very much better at working across cultures, absorbing new knowledge and integrating knowledge from different places." Wilson explains. "But despite this, very few companies were doing anything to build a cadre of such people." This isn't something that can be taught in a classroom. It has to be practiced. For our MBAs and executives in seminars, the very broad mix of nationalities and cultures, and the emphasis on teamwork so typical of INSEAD offer a learning context where working across cultures is practiced, not just talked about.

It's clear that after decades of co-location companies will have to learn new capabilities to compete in an era of global innovation. It's also clear, that failing to meet this challenge isn't really an option if companies wish to remain competitive.

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