

Gain Competitive Advantage with Knowledge Brokering

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What can companies do to stay ahead of the competition? Knowledge brokering – using old ideas as raw material to generate new ideas – can be one of the answers to accelerate innovation and enhance business processes. In one example, HMS, a top tier NASCAR racing team, used knowledge brokering to quickly and cheaply launch a dozen new ideas into development.

Knowledge brokering helps unlock innovation by capturing insights that would be unlikely to occur using more “traditional” methods. By importing outside specialists, conducting internal brainstorming, or adopting ideas from the workplace, this process helps release the collective intelligence that may be in places that you would not typically consider as a source of your innovative solutions.

The main tenets of knowledge brokering are:

Capturing good ideas: Knowledge brokers are very curious and constantly scavenge for promising ideas, looking at times in the unlikeliest places. They can see the use of old (and proven) ideas as a source of great value for their next solution.

Keeping ideas alive: To remain useful, ideas must be passed around, shared and played with, whether tactically or mentally. Effective brokers keep ideas alive by spreading information on who knows what and who has the best sources within the organization. Getting insight and feedback helps with the application process.

Imagining new uses for old ideas: This is where innovations happen and where old ideas are captured and plugged into new contexts.

Putting promising concepts to the test: Doing trial runs, prototypes and testing shows whether an innovation has commercial potential. This process generates valuable experience for the brokers even when an idea is a failure.¹

Innovation from the least likely suspects

Sometimes the best answers and solutions come from the least likely suspects. A historical example of how knowledge brokering can work comes from 1707 when a British Navy fleet ran aground and sank due to heavy fog and faulty navigation. The accident was disastrous and over 2,000 men died. This tragedy spurred the British government to pass the Longitude Act of 1714 and establish a prize of £20,000 (which would be approximately £8 million today) to be awarded to anyone finding an accurate method of measuring longitude. Many people believed that the problem was too difficult to solve, even though the scientific and innovative

minds of the day were impressive. It seemed likely that one of the following would come up with a solution:

- Sir Isaac Newton – A British physicist, mathematician and astronomer regarded as one of the greatest historical figures in science.
- Benjamin Franklin – An American scientist known for his discoveries and theories on electricity. Franklin was a major figure in the history of physics.
- Christopher Wren – A British architect and mathematician who became a Professor of Astronomy at Oxford. He was well known for designing many buildings after the Great Fire of London.
- Thomas Newcomen – A British ironmonger by trade who developed the steam engine and has often been called the Father of the Industrial Revolution.

However, the Longitude Prize was claimed by the largely unknown John Harrison. Harrison was a working class carpenter from Lincolnshire with little formal education. Yet, his navigational device, designed and fabricated in wood, displayed extraordinary mechanical insight and talent and was the precursor to the modern day chronometer.

Harrison's unexpected success is one of many examples which suggest that innovative ideas may come from many places, not always from the expected experts or industries. Modern-day knowledge brokering allows organizations to cast their net beyond their industry to generate new ideas and apply old ideas in new ways. New ideas for a given industry are what fuel most innovations. Generating these ideas can be done quickly and effectively by finding ideas in other industries and without waiting for the lone company genius in the ivory tower to come up with something new to the world.

The challenges of knowledge brokering

If knowledge brokering is so great, why doesn't everyone do it? Well, as with any business process, it takes effort, and when it's done incorrectly, it won't work. Knowledge brokering requires acceptance and cooperation from the people in the organization. Some important principles to keep in mind include:

Open it up: Casting the net beyond your industry and geography must be a well-thought-out process. This is a broadcast search. Asking the usual suspects will unlikely result in anything you do not already know. Ideally, the problem needs to be stripped down and taken out of context so that others can recognize a pattern and reply with an unbiased solution. At IMD, for example, we used knowledge brokering to help a client that had a queuing problem. We sent out the following message: We have a client that has a queuing problem – customers are waiting too long. What should they do? What industries are really good at this? By sending this message without a specific industry context, others from various industries could recognize a pattern and provide solutions they knew worked for queuing. In this instance, Walgreen's, Disney and Tesco shared their processes and our banking client found the suggestions invaluable. If we had started by saying a banking client has a queuing problem, the pattern would not have been as clear and the issue would have been classified as a financial services or banking specific problem when the root of the problem actually transcended industry.

Keep egos in check: Sometimes people think their business challenges, processes and industry are so complicated that no one but their own experts could understand them enough

to offer any insight. Share the glory – when you are knowledge brokering you must focus on the ideas *not* on getting fame or credit for inventing something. Also, there can be the fear that an idea taken from outside of your industry would not be considered good enough or credible – it would be subject to a bit of the “not-invented-here” syndrome, which causes people to reject new ideas that come from the outside – what we have to overcome is an “anti-innovation” mindset.

Capture and use: This process can lead to a lot of output. Capture as many possible answers as you can. Nothing productive comes out of the process if the output is not worked, shared and tested. Use a collective intelligence filter.

Develop the results: As ideas may come from unexpected sources, knowledge brokers need to fortify the results and develop them. The process must evolve – it cannot just be a “cut and paste” approach. You must convert the idea into a feasible solution for your situation.

Beware fear of losing status: “I’m the problem solver around here, and asking for help is like outsourcing my job and it dilutes my value.” On the contrary, you are adding value and competitive advantage if you are contributing innovative ideas more effectively and your company is gaining competitive advantage more quickly. Other unfounded fears can be that the knowledge brokering process alerts the competition and could jeopardize intellectual property – we have yet to see that happen.

Applying knowledge for continuous improvement

Andy Papathanassiou was an avid college athlete who competed in football, track and field, and rugby at Stanford, where he earned an undergraduate degree in economics and a master’s in organizational behavior. Determined to get into auto racing, despite having no real experience, Andy volunteered his help so persistently that he finally was hired. His first year in the industry was tumultuous, but in 1992 Hendrick Motorsports (HMS) approached him for a position that developed into NASCAR’s² first pit coach.

With 1,800 racing events on more than 110 tracks in over 38 states, as well as in Canada and Mexico, NASCAR has a spectator base of 75 million fans and attracts more money from Fortune 500 companies than any other sports or entertainment property in America. In 2004 Nextel, the communications giant, made a landmark sponsorship of \$750 million for NASCAR’s top series that would bear its name. Heightened sponsorship and increased popularity has intensified competition and increased the demand for winning pit crews.

At first, training for the HMS pit crew was held twice a week after working hours as most of the pit crew members had jobs elsewhere and their only free time to practice was in the evenings. Andy designed training to mimic race conditions, such as lifting and carrying tires. He continued to refine the athletic training program for HMS’s pit crews. By the mid-1990s, their pit times had dramatically improved. By the end of the decade, almost every NASCAR team had adopted Andy’s athletic training beliefs, and pit times dropped across the board, setting new industry standards.

Andy reflects on how the transformation began to take shape:

Because I didn’t have a lot of racing experience, the thing I identified with the most was the pit stop. It sort of looked like a football play to me. When I asked about getting involved with practices and the

team, I was told they didn't really practice much, if at all. I came at it from my collegiate sports perspective. That's when the light bulb went off. If you took the pit crew, practiced and trained them like athletes on a professional sports team, gains would be made in both speed and consistency. As simple as that sounds, this went against the conventional wisdom of the day, but times and results bore us out. The "breakthrough" that I saw was that going over the wall was more athletic than mechanical.

The next breakthrough

By 2006 Andy Papathanassiou was searching for the next breakthrough to improve pit crew performance. While the next improvement would most likely be less dramatic than the first, it would be no less important. Fractions of a second could give the competitive advantage that would determine whether a race was won or lost. As NASCAR continued to evolve and change the rules of the sport, finding the next breakthrough would be influenced by all the factors of an increasingly competitive industry and changing automotive technologies.

Andy's initial instinct was that an opportunity existed to improve performance within the matching process of assigning pit positions. Previous experience told him that the best answer would likely come from outside the industry. Andy needed to find another person like himself.

As in the past, he reverted to his academic roots, reaching out to a variety of experts whose different vantage points might provide new insights and trigger ideas on how to improve performance. His outreach efforts resulted in working with IMD on writing a case chronicling his innovation process and HMS's current search for performance improvement. The case would be used for a knowledge brokering exercise with IMD MBAs and other diverse groups attending executive programs. Andy knew someone else had the answer to his dilemma and they were not in his industry because if they were he would already have found them.

Andy's first visit to IMD was to attend an MBA operations class. IMD's 90 MBAs represent over 40 countries and come with a wide spectrum of professional experience, ranging from corporate marketing to venture capital. Andy returned a few months later to participate in IMD's Orchestrating Winning Performance (OWP) program. The NASCAR case was taught in a session on collaboration and knowledge brokering. Even though some of the participants had never heard of NASCAR and did not know what a pit crew did, once Andy had defined the operational context of the problem, the suggestions came racing in on how to make the next breakthrough in pit crew performance to lower pit times.

Overall, Andy's knowledge brokering efforts at IMD returned close to 200 ideas. He took more than a dozen back to HMS to begin testing on the track. Andy was impressed that non-industry types were able to identify some of the current things that HMS had been recently trying in order to improve pit crew performance.

When asked how these knowledge-brokering efforts were aiding his innovation process, Andy said, "Great ideas and energy come out when the group you are brokering with understands that the focus of the problem is a lot like their own problems, just in a different wrapper. As long as the organizational motivations and pathways are explained, others can apply their insights and experiences effectively."

Questions to ask

Innovation is essential for any company to remain competitive, yet many companies, paradoxically, do not adopt an innovative approach to innovation. If you are looking to

accelerate new product development or to improve business processes, consider the following questions:

- How will you and your company create its next innovation?
- What will be the key to gaining competitive advantage and what process will you use to find the next breakthrough?
- Have you considered knowledge brokering? How will you find your group of unlikely suspects to ask?
- How will you define your problem?

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Corey Billington is Professor of Procurement and Operations Management at IMD. He primary research focus on supply chain stems from a desire and ability to constantly innovate new processes, products, and business methods.

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¹ Hargadon, Andrew and Robert I. Sutton. *Building an Innovation Factory*. Boston: HBR OnPoint Enhanced Edition, 2001.

² NASCAR: National Association for Stock Car Auto Racing – the largest approved motorsports body in the US.