Knowledge problem? Go with the crowd

Opinion: Information technology applications are giving people more say in processes ranging from product development to government policy-making

BY JOHN PRPIC AND PRASHANT SHUKLA, SPECIAL TO THE VANCOUVER SUN JULY 9, 2013

New companies are springing up to help business and government manage their crowd capital resources.

As Metro Vancouver's municipal bureaucrats and politicians wrestle over transportation priorities in the Lower Mainland, it's clear that future projects — given their growing scope and cost — will require even greater consultation and public input than in years past. New bike lanes, bridges, and SkyTrain lines all tend to evoke robust and mostly informed debate.

The big difference today is how technology has changed the nature of these dialogues — making them more centralized, accessible and powerful. Increasingly, our government and business leaders are turning over more of their decision-making to the power of the digital crowd.

And new firms are springing up to give online crowds a bigger boost. Vancouver-based PlaceSpeak, a community consultation platform, is a powerful case in point. Working with different Canadian jurisdictions and companies, the website allows everyday citizens to influence the decision-making process — whether the issue is housing affordability or municipal transportation plans.

In government or business, the digital crowd wields more power than ever before.

Applications like crowdsourcing, citizen science, prediction markets, and Wikis all use IT to engage and access dispersed knowledge from a crowd, and organizations are using these IT applications to address their operating and innovation needs. Whether using a crowd as a labour pool or as a partner for collaboration, IT applications have made accessing knowledge previously inaccessible from crowds of individuals remarkably easier and efficient to obtain. And in the process this emerging paradigm has created a new potential resource for organizations: crowd capital.

Organizations can now engage crowds for their own idiosyncratic purposes (such as seeking research and development assistance), through an IT structure (like a website or mobile app), and by internally processing the incoming knowledge (perhaps by using a special team assigned to the task), to generate the new and unique crowd capital resource.

What we are observing today is that businesses and governments are systematically using IT in a new way — they specifically access crowds of individuals to address their own idiosyncratic needs. Along these lines, an entire ecosystem of crowd capital intermediaries has sprung up to provide businesses with these services: Innocentive, Kaggle, CrowdFlower, 99Designs, and M-Turk are a few prominent examples. Not only are some businesses beginning to augment their own resources with knowledge

from the crowd via IT, we are also seeing some IT organizations like Waze, or Wikipedia, who exist and survive solely on this new resource generated by engaging the crowd.

Crowds are not necessarily external to a business; the problem of dispersed knowledge exists inside organizations too. An organization's use of a Wiki to internally gather and store knowledge is very similar to a firm using Amazon's M-Turk to find workers for language translation: Both endeavours seek knowledge that they don't have, dispersed knowledge, and they do so through IT, and they come out of the engagement with a new knowledge resource.

The IT that is used to engage a crowd, as a part of a firm's crowd capability, can come in either episodic or collaborative form. For instance, IT applications like Google's ReCAPTCHA do not need a community of participants to interact with one another for Google to generate the crowd capital resource. Similarly, organizations employing citizen science applications (see famous examples like Fold.it or Galaxy Zoo) do not need collaboration among the participants to locate new galaxies or to fold proteins. This state of affairs is counterintuitive to the prevailing wisdom, where collaboration is thought to be the key to all crowd interaction. But when you consider that approximately 200 million ReCAPTCHAs are being typed everyday by users, equalling about 500,000 hours of work per day for Google, the crowd capital generated without a community of collaborators can be rather incredible.

However, this is not to say that collaborative forms of crowd capability are any less important or effective at generating crowd capital. At Wikipedia for example, a relatively small community of editors form the backbone of the organization — volunteering to monitor the content changes, and in the process ensuring the credibility and viability of the organization. Crowd capital is also a difficult-to-imitate resource. While a competitor may be able to reverse-engineer your product, or work around your patent, it is highly unlikely that they can duplicate your crowd capital. Even if you and a competitor both use the same crowd capital intermediary (like Amazon's M-Turk or CrowdFlower) to access some workers at the same time, for the same reasons and for the same rate of compensation; due to the idiosyncratic nature of the participants, and their self-selection to your cause, the raw knowledge, as well as the consequent crowd capital that you gain, is very unlikely to be the same. Furthermore, most organizations do not have the same innovation or knowledge needs to begin with — while some might want R&D, others might be looking for designs, ideas, problem solving and so on.

So what does the future hold for organizations in respect to the digital crowd? Given what we are seeing in today's business environment, it may be that we are on the threshold of a new paradigm of crowd engagement for knowledge, through IT. Further, governments are now getting into the act too — including Iceland, Finland, and elected representatives from the state of California — using crowd-engagement to generate knowledge from their citizens for policy, law, and constitutional issues.

This is not to say that crowd capital is some sort of magic bullet. Many organizations are hesitant to engage a crowd because of the uncertainties involved with respect to the co-ordination costs of building crowd capital. Just like any other form of capital, investment and reinvestment are required to generate crowd capital, though in this case, the potential dividends can be a tremendous addition to organizational functioning, bestowing inimitable advantages to the organization willing to enter the crowd fray.

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