




HBR
LIST 2009

Breakthrough Ideas for 2009

Our annual
snapshot of the
emerging shape
of business

Caught between two elemental forces – one called Calamity and the other called Change – we launch our latest edition of breakthrough articles into the teeth of a gale. A new administration has taken charge in the United States at a time of major challenges on many fronts. The world economy staggers toward stabilization and whatever comes next. Business soldiers on, controlling what it can and coping with what it can't.

This year's HBR List includes ideas that we think are more useful than fanciful, more immediately practicable than speculative. Although we began compiling and winnowing contenders many months ago, we nonetheless did our best to anticipate the context in which you now read them. Thus some of the articles you'll find here comment directly on the economic crisis, but most of them address other matters that business leaders must contend with: strategic decision making, tapping new markets, finding and keeping top talent, harnessing network effects, dealing with disruptive technologies and business models.

As in recent years, we gathered ideas primarily from our editors' networks of expert authors. In addition, we held a brainstorming meeting in partnership with the World Economic Forum in New York last June. A good many worthy contenders emerged from that day-long session, and four of them made the final cut. (They are branded with a ) We look forward to your reactions to the List as a whole and to any of the individual articles.

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Vote on your favorite
breakthrough idea of
the year at thelist.hbr.org.

How Social Networks Network Best

BY ALEX PENTLAND The humble bee has much to teach us about the flow of information in our own organizations. Bees, like human beings, are social animals, and evolution has provided them with elegant approaches to group decision making.

One of the most important group decisions made by a bee colony is where to locate the hive. Bees use a kind of "idea market" to guide their discovery: The colony sends out a small number of scouts to survey the environment. Returning scouts that have found promising sites signal their discoveries with a vigorous dance, thus recruiting more scouts to the better sites. The cycle of exploration and signaling continues until so many scouts are signaling in favor of the best site that a tipping point is reached.

The bees' decision making highlights both information discovery and information integration, two processes that are crucial to every organization but that have different requirements.

A centralized structure works well for discovery, because the individual's role is to find information and report it back. In contrast, a richly connected network works best for integration and decision making, because it allows the individual to hear everyone else's opinion about the expected return from each of the alternatives. The bees' process suggests that organizations that alternate as needed between the centralized structure and the richly connected network can shape information flow to optimize both discovery and integration.

Recent studies at MIT reveal that this sort of oscillation may be characteristic of creative teams. One intriguing study tracked employees in the marketing division of a German bank by having them wear small sensors called sociometers for one month. Sociometers record data about face-to-face interactions such as participants' identities and the location and duration of the interaction. Analysis of the data showed that teams charged with creating new marketing campaigns oscillated between the centralized communication associated with discovery and densely interconnected conversations that were mostly with other team members. In contrast, the members of implementation groups showed little oscillation, speaking almost exclusively to other team members.

A second study demonstrated not only that creative teams had especially nimble social-communication networks, but also that the amount of oscillation correlated with how productive the creative group judged itself to be. In this study almost 40% of the variation in creative productivity could be attributed to an oscillating pattern of communication strategies for discovery and integration.

Delving deeper into the communication networks of several organizations illuminated the links between productivity and information flow even more. A recent MIT study found that in one organization the employees with the most extensive personal digital networks were 7% more productive than their colleagues – so Wikis and Web 2.0 tools may indeed improve productivity. In the same organization, however, the employees with the most cohesive face-to-face networks were 30% more productive. Electronic tools may well be suited to information discovery, but face-to-face communication, an oft-neglected part of the management process, best supports information integration – as bees already know. WEL | HBR

Face-to-face communication, as bees well know, best supports information integration.

