

# INFORMATION RESOURCES ∞

*Resources and Reviews For  
Leaders of Technological  
Innovation*

*In this space, we offer a series of summaries on key topics, with pointers to important resources, to keep you informed of new developments and help you expand your repertoire of tools and ideas. We welcome your contributions, in the form of suggestions for topics and of column submissions.*

## **The Revolution Will Be Shared: Social Media and Innovation**

Many executives still hear only the “social” in “social media”—and think “recreational time waster.” But social media has a place in the business world, and that place is much bigger than LinkedIn and extends far beyond the marketing department. From CEOs on Twitter (see <http://twitter.com/theceodaily> for a nice round-up) to corporate Facebook pages, social media has decidedly grown up and gone to work. But what does all this mean for the R&D department? Can social media energize your innovation pipeline?

For most of us, social media means Facebook, Twitter, and maybe LinkedIn. But social media extends far beyond the Facebook profile to include wikis, blogs, sites for sharing pictures or bookmarks, and a host of other focused applications. Users of social media don’t consume content or even interact with it. Instead, they generate content, collaboratively creating, editing, sharing, tagging, and organizing information, reshaping the contributions of others and engaging in peer-to-peer discussion. These are emergent technologies, meaning that structure and content and even application emerge with use, from the needs and activities of the users.

The most obvious uses of social media for innovation fall under the broad umbrella of “open innovation.” While open innovation includes a whole host of efforts to reach beyond the corporate firewall, social media can leverage a previously difficult-to-reach source of new ideas—the public. And, as James Surowiecki argued in his 2004 book,

*The Wisdom of Crowds*, the public can be surprisingly smart. A crowd that is made up of independent members with diverse opinions can yield shrewd judgments and creative solutions, given appropriate mechanisms to aggregate and feed back inputs and opinions. The act of accessing the “wise crowd” for ideas and solutions has come to be known as “crowdsourcing,” a term coined by Jeff Howe in a 2006 article for *Wired* magazine, “The Rise of Crowdsourcing.” (Howe followed up the article with a 2008 book, *Crowdsourcing*.)

Several efforts in this direction have already been undertaken: GE’s Ecomagination Challenge (<http://challenge.ecomagination.com/ideas?randomtokenforcache=1288026338557HuuZl>) asked participants for ideas to help build the next-generation power grid, and Procter & Gamble’s Connect + Develop program (<https://secure3.verticali.net/pg-connection-portal/ctx/noauth/PortalHome.do>) invites visitors to submit their ideas for improving P&G’s products or developing new ones. InnoCentive (<https://www2.innocentive.com/>) allows companies, nonprofits, and government organizations to submit challenges to its community of “solvers,” who compete for cash prizes. All one needs to join InnoCentive’s solver community is a valid e-mail address and a desire to participate. Quirky.com (<http://www.quirky.com>), a small consumer-products company, is built entirely on crowdsourcing; the company generates its product line from ideas that are submitted to its site by

hopeful inventors and critiqued by community members, who continue to participate through the development process. Although they focus on the crowd inside the company, IBM’s Innovation Jams, which collect ideas on a theme during a defined time period, operate on a similar principle.

But social media is not just a new technology tool, but a revolution in the role that technology plays in our lives and in the way we think both about technology and about the world around us. It’s not another way to use the Internet, but an entirely new kind of network, with its own version number: Web 2.0. And it’s not another communication medium or document-sharing tool or knowledge management system. Rather, as Andrew McAfee argues in his seminal 2006 article, these “new technologies are significant because they can potentially knit together an enterprise and facilitate knowledge work in ways that were simply not possible previously” (22). They make it possible for companies to “make visible the practices and outputs of their knowledge workers” and to share those practices and outputs in ways that have never been available before (23).

McAfee goes on to detail the many ways that the various social media tools work and to posit a model for what he calls Enterprise 2.0. For McAfee, the successful Enterprise 2.0 platform incorporates six key elements, captured in the acronym SLATES:

- Search—users must be able to find what they are looking for;
- Links—a dense, user-generated link structure points users to relevant connections;
- Authoring—users can contribute content, either individually via a blog or similar structure or as a group via a wiki;
- Tags—users can categorize content by adding tags, creating an emergent categorization system;
- Extensions—automated pattern-matching and categorization utilities lead users to content they might appreciate based on each user’s behavior; and
- Signals—users can choose to receive alerts to relevant new content.

Above all, these platforms must be easy to use and they must not impose on users structures that reflect preconceived notions about what work is to be done or how it should be done. McAfee elaborates on the model further in his 2009 book *Enterprise 2.0*.

McAfee's realization of the potential power of social media in the business world reflects a larger rethinking around the social and cultural implications of the rise of Web 2.0. In *Here Comes Everybody* (2008), Clay Shirky shows how social media are enabling the formation of new kinds of groups, groups that have real impacts in the real world. The Internet puts us in touch with people and ideas we would otherwise be unlikely to encounter; with social media, groups can form spontaneously around topics of interest and dissolve just as quickly and painlessly. Howard Dean's short-lived presidential campaign and Barack Obama's more successful one both benefited from this phenomenon. Other recent publications make similar arguments; see Don Tapscott and Anthony Williams's breathlessly optimistic *Wikinomics: How Mass Collaboration Changes Everything* (2006), for example.

What does all of this mean for innovation? Although it's not explicitly focused on social media, Keith Sawyer's *Group Genius: The Creative Power of Collaboration* (2007) offers one compelling answer. Sawyer, a professor of psychology at Washington University in St. Louis, explodes the romantic myth of the lone genius, showing how a network of contacts and discussion and inspiration underlay even the most startling discoveries. From Samuel Morse and Charles Darwin to the inventors of the ATM machine and open-source operating systems, Sawyer explores how innovation emerges from collaboration, not solitary effort. Building on his study of jazz and his work with Mihaly Csikszentmihalyi (the originator of the concept of "flow"), Sawyer offers advice for how to build an innovation culture and structure genius groups that can produce breakthrough innovation.

In organizations, those genius groups may well emerge from networks that form spontaneously. In *The Hidden Power of Social Networks* (2004),

Cross, Parker, and Cross show how the real work of an organization likely occurs not through the formal hierarchical structure but via informal

social networks through which people share knowledge. Although this volume is not concerned with social media, it's easy to imagine how these informal

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### Books and articles

Cross, R. L., Parker, A., and Cross, R. 2004. *The Hidden Power of Social Networks: Understanding How Work Really Gets Done in Organization*. Boston, MA: Harvard Business Press.

Howe, J. 2006. The rise of crowdsourcing. *Wired* 14(6). <http://www.wired.com/wired/archive/14.06/crowds.html> (accessed October 25, 2010).

Howe, J. 2008. *Crowdsourcing: Why the Power of the Crowd is Driving the Future of Business*. New York: Crown Business.

McAfee, A. 2006. Enterprise 2.0: The dawn of emergent collaboration. *MIT Sloan Management Review* 47(3): 21–28.

McAfee, A. 2009. *Enterprise 2.0: New Collaborative Tools for Your Organization's Toughest Challenges*. Boston, MA: Harvard Business Press.

Sawyer, K. 2007. *Group Genius: The Creative Power of Collaboration*. New York: Basic Books.

Shirky, C. 2008. *Here Comes Everybody: The Power of Organizing Without Organizations*. New York: Penguin Press.

Surowiecki, J. 2004. *The Wisdom of Crowds: Why the Many Are Smarter Than the Few and How Collective Wisdom Shapes Businesses, Economies, Societies, and Nations*. New York: Little, Brown.

Tapscott, D., and Williams, A. D. 2006. *Wikinomics: How Mass Collaboration Changes Everything*. New York: Portfolio Group.

### Online

Andrew McAfee's Blog: The Business Impact of IT  
<http://andrewmcafee.org>

The CEO Daily  
<http://twitter.com/theceodaily> OR <http://www.theceodaily.com>

Collaboration Continuum  
<http://www.iriweb.org/CollaborationContinuum>

Enterprise Web 2.0—Dion Hinchcliffe  
<http://www.zdnet.com/blog/hinchcliffe>

GE Ecomagination Challenge  
<http://challenge.ecomagination.com/ideas?randomtokenforcache=1288026338557HuuZl>

InnoCentive  
<https://www2.innocentive.com>

P&G Connect + Develop  
<https://secure3.verticali.net/pg-connection-portal/ctx/noauth/PortalHome.do>

Social Media Today  
<http://www.socialmediatoday.com>

networks could form via Twitter, Facebook, or an internal social media platform. And it's almost as easy to imagine that a well-designed, carefully deployed platform could become the venue for an evolving, shifting set of genius groups—some of them forming spontaneously around shared interests or compelling ideas—that produce a stream of breakthrough innovations.

The crux of the issue, of course, lies in the modifiers “well-designed” and “carefully deployed.” The definitive text on social media for innovation hasn't been written yet, but there are sources to find out what's happening now. IRI's research-on-research working group Collaboration Continuum (<http://www.iriweb.org/CollaborationContinuum>) is actively exploring how companies are deploying and using Enterprise 2.0 systems; the ROR report in the November-December 2010 issue of *RTM* (pp. 54–57) offers an overview of the group's work, and more detailed reports will appear as articles in future issues of *RTM*. Social Media Today (<http://www.socialmediatoday.com>) offers a collection of blogs on social media; although their reach is broad, there are frequent posts on social media for business and occasional discussion of innovation and social media. Andrew McAfee's website (<http://andrewmcafee.org>) includes a blog where he discusses current developments in Enterprise 2.0, and Dion Hinchcliffe maintains a well-regarded blog, *Enterprise Web 2.0*, where he explores social media for business with a focus on, as the blog description puts it, “leveraging the convergence of IT and the next generation of the Web.”

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## Reviews

### ***The Social Factor: Innovate, Ignite, and Win Through Mass Collaboration and Social Networking***

Maria Azua (*Upper Saddle River, NJ: IBM Press, 2010*)

Communications and computing technologies are the foundation for today's mobile, global, information-rich society. However, tools are just part of the picture. *The Social Factor* presents an engaging perspective on the evolution of both tools and teamwork styles. Maria Azua, vice president for IBM enterprise initiatives, founder of IBM's Technology Adoption Program, and prolific innovator, has worked with ten contributing authors to gather a collection of trends, tutorials, minicase studies, and managerial insights to help organizations leverage the new possibilities presented by social networking. As a developer and lead user of collaboration and social-networking technologies, IBM has a unique and valuable perspective to share. Aside from the few passages that advertise IBM solutions, this book offers a balanced perspective addressed to a broad base of readers and a handy introduction to Web 2.0 terms and concepts.

Arguing that “the Social Age fundamentally changes the way we communicate, socialize, and collaborate to create a better world,” Azua and her contributors present a series of chapters that each introduces a different thread in a patchwork quilt of collaborative and social technologies, beginning in the first chapter with a historical perspective that draws parallels between current developments and the arrival of railroads, telegraph lines, radio, and television. As the digital universe approaches three trillion gigabytes, Azua suggests that “social networking certainly contributes to the mind-numbing growth of information, but ironically, social tools are also the best way to deal with this explosion.”

In the Social Age, formal team leadership often plays a subordinate role to connectors, those who can facilitate communication and maintain network linkages. Chapter 2, “Social Age Organizations,” illustrates this point with a minicase describing a company that complemented its official structure with a virtual organization to improve recruiting, employee communication, and access to research information.

Wikis and tags and blogs, oh my! The following three chapters provide a thorough yet refreshingly readable

introduction to popular Web 2.0 technologies. In addition, they identify best practices and recommendations, supported by IBM's own experiences, for leveraging each approach to IT-assisted collaboration. Wikis, for instance, are especially useful for capturing tacit knowledge, and blogs offer a useful venue for pushing information to an interested community.

Beyond these basic tools and terminologies, *The Social Factor* also offers an introduction to some key concepts for understanding the universe of social networking. For instance, Chapter 5 “Tagging and Social Clouds” explains how communities can increase the value of content collections by interacting with them. Informal, collaboratively constructed taxonomies, known as “folksonomies,” have significantly increased search efficiencies and helped organizations locate human experts. The chapter on open-source software development and distribution describes how open software, especially the LAMP stack (Linux, Apache, MySQL, Perl/PHP/Python), is enabling next-generation software architectures that implement shared social spaces on top of data and tag clouds.

Azua also addresses management challenges that come with these new tools. Web 2.0 presents unmatched opportunities for gathering information, capturing tacit knowledge, building collaborative relationships, and making contact with customers and prospective customers. She also describes how these technologies can be used to gather ideas and jumpstart innovation. For example, IBM's Innovation Jams “reach out online to a broad group of people to help solve a problem” and have yielded as many as 37,000+ posts and 3,000,000+ views in about 72 hours of intense global collaboration. This result requires intense effort; Azua says that “a typical Jam requires between 6 and 16 weeks of preparation” and “four key elements are common to every Jam: online collaborative discussions, innovation events, jam hosts and facilitators, and real-time text analysis and data mining.”

These opportunities do not come without potential pitfalls. Organizations need to manage the “hype cycle”

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