



Can Your Firm Develop a Sustainable Edge? Ask John Hagel and John Seely Brown

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John Hagel III, a former McKinsey consultant, and John Seely Brown, former chief scientist of Xerox, are focusing these days on a question that CEOs often ask themselves: How can their companies develop a sustainable competitive edge that can keep them ahead of the competition? Their answer, which they discuss in a new book, involves ideas that enable firms to step up the pace at which they develop new capabilities. Hagel and Brown will speak about these issues at [Supernova 2005](#), a conference of technologists and business leaders to be held in San Francisco later this month. [Kevin Werbach](#), a professor of legal studies at Wharton and Supernova's organizer, spoke with them about sustainable advantage, capability building, process networks and several other themes that will be highlighted at the conference.



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Werbach: You have a new book out, *The Only Sustainable Edge: Why Business Strategy Depends on Productive Friction and Dynamic Specialization*. Let me start by asking what the only sustainable competitive edge is for business?

Hagel: It is the notion that increasingly executives need to think about strategic advantage in dynamic terms as opposed to static terms. While traditionally strategic advantage was based on geographic distance or core competencies, which were typically defined as static, increasingly the only sustainable edge has to do with the capacity to accelerate capability building. Companies must be able to build distinctive capabilities more rapidly than anyone else. What we focus on are management techniques that are emerging to help build that kind of dynamic strategic advantage.

Brown: It's not just management techniques but also a set of tools that can facilitate people at the edge being able to perform serious new work, because in this rapidly changing world, you need a constantly evergreen set of capabilities. Your sustainability depends on your ability to develop these capabilities before anybody else.

Hagel: In fact, the title has multiple meanings, as anyone who knows John Seely Brown and myself will appreciate. We are never content with a single meaning. "The only sustainable edge" certainly has to do with the notion of competitive advantage, but it also has to do with the view that the ability to develop capabilities involves operating at the edge. Of course, "edge" has multiple meanings as well. It means the edge of the enterprise, the edge of business processes, geographic edges in terms of emerging economies, demographic edges in terms of younger generations coming in with different mindsets - it's a whole set of edges that create the opportunity for accelerating capability building.

Brown: The point is that by being able to listen deeply and participate on the edge, you can pick up things before anybody else picks them up, and you can use that to accelerate your own capability building. This implies that it is not just corporate training that is important but rather rich participation with partners who are at the edge as well. One of the questions we ask ourselves is, how do you learn as much from a partner as you learn from creating something yourself. This puts a new spin on why

distributed collaboration around the world might be critical in creating this sustainable edge.

Werbach: Are there more edges today, or are there developments that make the edge of the organization more important?

Brown: My sense is that there are more edges today, and the edges themselves are also becoming more important. For example, suppose you want to be at the edge of where digital life is. Well, you are going to find out more about digital life by participating in Seoul, Korea, today than practically anywhere else. Likewise, if you want to understand cell phone use throughout Asia, or the whole notion of the mobile Internet, all these things are developing very rapidly in Asia. That is why having relationships and partnerships in those countries really helps.

Werbach: But that is the edge in the leading edge sense. I am particularly interested in the edge as representing the boundaries of organizations and networks of organizations. It seems to me that one of the issues you are addressing is that these connection points within organizations are also being spread out more.

Brown: One key notion in our book is the idea of process networks in terms of how you build longer term relationships. For example, we looked at how Toyota has worked with its supplier networks, and how the company has been able to turn these networks into sites of innovation. If you look at how any Detroit car company operates relative to Toyota, Detroit views suppliers as people who perform "to spec" rather than as major sources of innovation in their own right. But if you can figure out how to invert these supplier networks operating around the world into new nodes of innovation - how you can use an innovative insight here, rub it against another insight over there, and build productive frictions and compromises to be able to take an overall systems point of view of all these collections of ideas coming up - then we are into a whole new game.

Hagel: Just to add to that a bit, in terms of the overall requirement of adding more value to customers in an environment of intensifying competition, more edges are being created or managed actively at a variety of levels. At one level, a lot of activities that were typically done within the enterprise are getting carved out and performed on an outsourced basis with the rapid growth of process outsourcing. This is not just in administrative kinds of activities, such as payables management or human resource management, but it's getting into the core operating processes of the business. We have contract manufacturing activities, product innovation is being outsourced...those kinds of core activities are now at the edge of the enterprise. You have to manage those activities with your outsourced partners. Secondly, the broader notion of these process networks is that you are orchestrating or coordinating activity at multiple layers across a network rather than just your first-tier partners. And that creates more edges that need to be managed as well.

Werbach: Presumably these relationships are fractal in the sense that from your perspective as a node in the network you think you are orchestrating but everyone else thinks they are orchestrating as well.

Hagel: Yes. Certainly there are lots of overlaps in these networks, and certainly our experience has been that the most sophisticated orchestrators of these networks actually value such overlaps because it exposes their business partners to other companies and practices as well as their own.

Brown: It's a natural way to do benchmarking when one of your suppliers also works with a competitor. That's one way to understand how much on the edge they are. If your supplier gets picked up and increases work for your competitor, maybe it's a sign for you that your competitor might be better than you thought.

Werbach: So it's actually a good thing that your supplier is working with your competitor?

Brown: Yes.

Hagel: It also enhances the innovation process in terms of helping you increasingly position yourself in terms of flows of knowledge and practices as opposed to focusing on protecting your stocks of knowledge. The more participants there are in these networks, and the more partners they have, the richer the flows become and you get exposed to a broader variety of practices and opportunities.

Werbach: This links in with the other side of issues that we focus on at Supernova, which deals with the technology infrastructure that connects into all these things. You get value for the reason you describe, by having these extended process networks that include your competitors. But presumably you want the membrane to be semi-permeable, so that you are not just giving away the store to everyone in the network. There's a conceptual component to that, but you also need an infrastructure and service-oriented architecture that manages the information flows that way.

Brown: Absolutely. You use a good term, "semi-permeable." It's interesting to me that people keep thinking that PARC's failure was being too porous. But when an organization goes out of its way to make sure that no idea ever leaks out, the consequence often is that no idea ever leaks in either. It's a tricky balance. But going back to the infrastructure part, what we find interesting is not so much the "leak" issues as how you look at these process networks from the notion of productive friction. The issue is, how you actually take exceptional conditions or breakdowns that develop all the time and turn those into being more productive. This has led us to look at the composition of service-level architecture that is meant to take care of backbone streams or flows with social software augmenting this, such that when the rules of the business process break down because of an exception, that becomes an opportunity to use social software to bring people instantly together around this action point -- this particular breakdown -- and negotiate how to handle it. That allows the flow to continue. But it also provides a learning opportunity for how innovation could occur at that moment in time.

Hagel: This is a broad generalization, but you can view the evolution of technology that we are talking about as the shift from process automation to practice enhancement. In the past couple of decades, the primary focus of IT investment certainly by large enterprises has been to automate and standardize the core operating processes of the business. The net result is, if you look at where the headcount of the enterprise is focused, it is on handling exceptions that get thrown out by the automated processes, and that can't be handled by the rules or procedures that have been specified. The real opportunity for technology now is to help people to address the exceptions -- it's typically more than one person, and it involves finding the right people, bringing them together quickly, giving them the tools necessary to address the exception, and then, probably most importantly, to create a record of the exception-handling so that you can see patterns emerge of where these exceptions are occurring over time. That's a huge opportunity for technology. We see the emergence of an array of social software tools to address this challenge of exception handling.

Werbach: So what kind of systems would allow the exception handling to feed back into learning? You may have systems that may be effective at resolving the exception, but they may be designed to do just that and then go off as though nothing had happened.

Hagel: One of the big issues we see is that to date most of the social software tools we are talking about have tended to be one-off kinds of tools. You have instant messaging, Wikis, a whole array of collaboration workspaces that have been developed, but there isn't an operating environment where all these social software tools can come together in a seamless environment. Part of the opportunity here is that as you create these environments that are open ended so you can plug in social software tools as they develop and evolve, you can also create a record-keeping facility. By doing that, not only are you helping people to resolve the exceptions, but you are also creating a record of who came together over what kinds of issues, what was the context of the issue, and what was the resolution of the issue. That creates the basis for doing pattern recognition and dissemination of the learning to a broader part of the organization.

Brown: We keep talking about coupling this tool set of social software with the tool set of service-oriented architectures because the latter is already a more fluid tool. So unlike standard ERP (enterprise resource planning)-type systems, you can do incremental changes of the rules. It is much easier to constantly evolve the processes and practices of the organization with the kind of inherent agility that service-oriented architectures in principle provide you. But this also puts a new spin on how you want to design your service-oriented architecture. This looks like how do you capture the context of a breakdown between enterprises. The focus is on architecture that works between enterprises rather than architecture that works within an enterprise.

Werbach: So in addition to service-oriented architecture we need social-oriented architecture.

Hagel: Yes, exactly. One of the limitations we have seen of service-oriented architectures is that most of the investment and thinking around this has been very enterprise-centric. But if you look at where most of the exceptions emerge, they are in the business processes that span multiple enterprises -- in supply-chain activities or customer relationship management, or the coordination of distribution channels or channel partners. That requires a very different lens for viewing IT architectures. It has to start from the outside and moves back into the enterprise. This contrasts with the traditional IT architecture, which typically moves from the glass house out to the edge of the enterprise and ultimately, if you're lucky, beyond the enterprise.

Brown: This reflects an evolution of our thinking over the past few years about service grids. This is a different take on what a service grid could be -- it's a service grid for a process network.

Werbach: You talk about how IT architecture traditionally has been about process automation. Even with web services, people think of it as further automation because you are commoditizing everything. You seem to be jumping off in a different direction and focusing on things that can't really be automated but could be used productively instead of destructively.

Brown: In a way, the shift has to do with giving up the obsession with efficiency to focus on the acceleration of capability building.

Hagel: And paradoxically, in contrast with the perspective that some observers have been articulating, rather than IT diminishing the opportunity for strategic advantage, we see these new generations of IT as dramatically expanding the opportunity for strategic advantage. This is precisely because of the ability to help people build capabilities more rapidly through more productive handling of these exception-generating conditions.

Werbach: If you invest in the right kind of architecture and tools.

Hagel: Exactly. But a new generation of architectures and tools will be required to harness this opportunity.

Werbach: Do these changes that you are talking about change the relationship of the individual to the firm? Or do they primarily change the relationships of firms to each other?

Hagel: Ultimately what we see is the re-conceiving of the role of the firm. Traditionally the role of the firm has been to increase the efficiency of transaction costs, whereas we see more and more that the firm has to provide opportunities for capability building of the people within the firm. If the firm cannot do that, people will leave and seek out environments that can help them accelerate capability building better. It's a very different way of thinking about what the firm

needs to provide to its employees, and the role of the employees within the firm.

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