



NEW THINKING, NEW CHOICES

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As the Industrial Age worldview has expanded to draw in more and more of the world's people and resources, it has also created a level of interdependence that has never before existed. The average pound of food travels some 2,000 miles before being purchased by an American consumer. Many everyday products—from Nike sneakers made in China to Sony televisions made in Wales—travel as far or farther.

This is important for two reasons, one obvious, one subtle.

What is obvious is that our global economy is based on interdependence. Wealthy countries such as the United States and the European nations are dependent on people all over the world when it comes to producing the things we rely on in our everyday lives, and they in turn depend on us not only to buy their products but also to produce things they need.

But what many of us are unaware of are the invisible costs that come with this. The products we choose to buy affect people in distant places, not only through direct economic ties but through their side effects, such as CO₂ emissions and the depletion of natural resources. Our current methods of shipping and distributing food and other products over great distances consume massive amounts of increasingly valuable

fuel and create another source of greenhouse gases. One glass of orange juice, for example, contains the equivalent of two glasses of oil, if you include transportation costs. Global distribution systems generate almost 10 percent of today's annual CO₂ emissions (as reported by Mark Lynas, *Carbon Counter*, HarperCollins 2007, quoted in "Big Foot" by Michael Specter, *The New Yorker*, February 25, 2008, pp. 44–52).

As people gradually become aware of this interdependence, the immediate effects are disorienting and often frightening. This level of interdependence has never existed before, and it is catapulting us, as former World Bank vice president Mieko Nishimizu put it, into a world of "inescapable mutuality" and "a future that is truly *alien* to us."

We wrote *The Necessary Revolution: How Individuals and Organizations Are Working Together to Create a Sustainable World* (Doubleday, 2008) in order to share the stories of people and organizations embracing this interdependence as they search for solutions for a sustainable world (as opposed to allowing themselves to be immobilized by fear or worry), and the inspiration and insights these stories carry. In our experience, once people recognize and accept this interdependence, they are able to begin looking for longer-term and bigger-picture solutions. Whether focused specifically on the challenge of climate change or on other symptoms of the Industrial Age's imbalances, they demonstrate the same sense of urgency—and the sense of possibility this urgency opens up.

In people's stories, the same basic patterns repeat themselves time and again:

1. Thoughtful people see arising problems earlier than the rest of us.

2. They begin to understand how severe those problems are.

3. The combination of deep concern and sense of possibility for a better future causes them to think differently about the problems and how they are interconnected.

4. Different ways of thinking lead to different ways of acting. By focusing on long-term strategies, groups and organizations begin to take into account the larger systems in which they operate, instead of simply fixing isolated problems.

And there are thousands, probably millions, of such people searching for innovative ways to create a more sustainable world. To us, their work is the best evidence that a future very different from the Industrial Age is trying to emerge, and their actions are the best source of insight into how to help bring it into being.

Particularly, they demonstrate a mastery of three areas that have been core to our work in organizational learning over the years.

First, individually and collectively, they are continually learning how to *see the larger systems*—organizations, complex supply chains, industries, cities, or regions—of which they are a part. This gives them insight and perspective that shapes their strategies. They then work to design products, infrastructures, organizational and public policies, and business models that promote the health of these systems, rather than pursuing quick-fix solutions that often end up making the overall situation worse.

Second, they understand that it is crucial to *collaborate across boundaries* that previously divided them from others within and outside their organizations. Changing how unsustainable

TEAM TIP

Many teams take collaboration skills for granted, but developing them actually requires time and commitment. Building the capacity to collaborate is hard work and needs to be seen as such.

systems work cannot be separated from changing how we work. This starts with building relationships of trust and genuine mutuality among people who previously had little of either.

Finally, as people work together they also come to focus on what truly matters to them, and their thinking evolves from a reactive problem-solving mode to *creating futures they truly desire*. With this comes a level of commitment, imagination, patience, and perseverance far beyond what happens when we are just reacting to problems.

These three capabilities—seeing systems, collaborating across boundaries, and creating desired futures—must continually develop in institutions as well as individuals, for institutions, and the networks they create, shape how our present world operates and hold the greatest promise for systemic change.

Lastly, these capabilities must develop together. Without a creative orientation, there is no genuine commitment to longer-term visions, goals, and desired outcomes, and it is easy to ignore the challenging work of seeing larger systems and transforming relationships. Without skills in collaborating, people do not learn how to develop the collective systems intelligence to tackle complex problems. Without the capacity to see systems and their place in them, people and organizations will naturally focus on optimizing their piece of the puzzle rather than building shared understanding and a larger vision. In short, all three legs of the stool are needed for creating regenerative organizations, industries, and economies; take away any one, and the stool collapses (see “Learning Capabilities for Systemic Change.”)

1. Seeing Systems

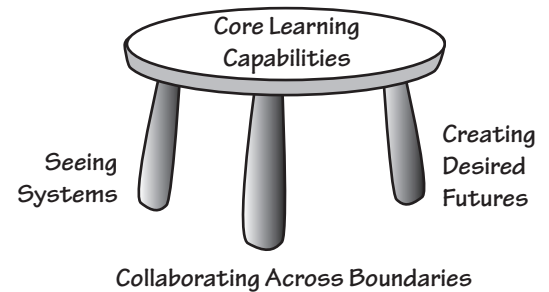
In a world of growing interdependence, it's more important than ever to learn how to expand the boundaries of normal management attention and concern in order to see the larger systems in which businesses operate. Failing to do so leads to policies and strategies whose side effects eventually sabotage the intended effects, as with the problems of growing waste and toxicity. Similarly, many regenerative resources, such as water, topsoil, and

fish stocks, are declining because businesses and communities followed strategies of maximizing short-term production without stepping back to look at the larger system and see whether they're consuming resources more rapidly than they are being replenished.

Many companies are beginning to understand the limits they face. Because aluminum manufacturing is a highly water-intensive process, Alcoa gradually began to see growing water shortages affecting its business in the mid-1990s. As Alcoa looked into the future, it realized that this would only get worse. In 1997, the company set a bold goal of zero net water discharges, and proceeded to rethink and redesign basic aspects of how its plants worked. Coca-Cola faced even more daunting water challenges. After several years of focusing on improved water efficiency within its plants, Coke's senior management gradually began to realize that it was the overall health of the entire watershed in which a bottling plant operated that really mattered. Coke entered into a five-year partnership with the World Wildlife Fund (WWF) to build the technical expertise to achieve a new aim of “giving back to nature” the water it extracts and to set up independent verification of progress.

Expanding management boundaries and anticipating limits that might shape the future means challenging established ways of thinking and unquestioned mental models. Organizations that fail to develop these abilities tend to react to growing problems with shorter-term fixes more within their control. There is nothing wrong with this; indeed, Coke's work on water efficiency began with helping managers understand the importance of not wasting water and the costs of doing so. But often short-term solutions become part of a strategy of consistently avoiding deeper problems. For example, many companies react to water shortages by simply moving to different countries with laxer government regulations. Before long, companies are spending more and more money on lobbying

LEARNING CAPABILITIES FOR SYSTEMIC CHANGE



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and burnishing their image, while underlying problems grow.

At a certain point, expanding boundaries and facing deeper problems opens people's eyes to totally new opportunities—for Alcoa, it meant innovating radically different processes for making aluminum without using water; for Coke, it meant becoming a positive force in global water management. But organizations that fail to look beyond traditional management boundaries will never achieve these kinds of opportunities.

Systems thinking is widely espoused today, but many organizations lack the capacity because they lack the commitment to build the skills and the tools to help them do so. Buckminster Fuller used to say that if you want to teach people a new way of thinking, don't bother to teach them. Instead, give them a tool, the use of which will lead to new ways of thinking.

We will explore different systems thinking tools below, but the journey starts with seeing patterns, even if it's something as simple as noticing the unintended side effects of a proposed “solution.” For example, companies cut customer service staff to improve profitability, but the unintended consequences of frustrated customers switching to competitors can cause profitability to fall even further. The pattern of unintended side effects is often part of a larger “Shifting the Burden”

pattern of focusing on quick fixes instead of pursuing deeper, more fundamental solutions.

When dealing with complex issues such as sustainability, it helps to have a “pattern language,” a way to visualize and talk about the deeper patterns. For example, companies can easily get into a “Shifting the Burden” pattern when facing an issue such as water scarcity. Relocating plants to an area with more water or less stringent water regulations might be fine unless you look ahead to determine that water will be becoming scarcer in general. If you do, you begin to consider a more fundamental solution: “Let’s work with the local community to better manage the watershed.” Being able to see this pattern—and especially how choosing the quick-fix symptomatic solution and avoiding the more fundamental solution may mean that the problems will come back, leading to yet more symptomatic fixes—can be a useful discipline to help management think more deeply about its choices (“Water Shortages: A Shifting the Burden Pattern”).

There is nothing magic about seeing larger systems in order to encour-

age strategic choices; the magic comes from people actually doing it, and truly learning how to think together in the process.

2. Collaborating Across Boundaries

In a world shaped by organizations and networks of organizations, individual systems thinkers are, ultimately, of little significance. History has seen many wise people. This age is no different. The systems intelligence needed to deal with the challenges we face as the Industrial Age comes to an end is collective and must be built through working together at many levels, within and beyond organizations, in teams and networks that span industries, communities, and global supply chains.

In recognition of this, a rapidly growing number of collaborative initiatives have formed over the past decades, especially within the business community, and more recently between business and non-governmental organizations. For example, the World Business Council for Sustainable Development claims that its corporate members represent over one-third of the world’s GDP. Ceres is a national network of investors, environmental organizations, and public interest groups that provide support for companies who understand and wish to address sustainability issues, and Business for Social Responsibility (BSR) provides such services to over 250 member companies and other enterprises. The Marine Stewardship Council (MSC) was founded by the World Wildlife Fund and Unilever to enable certification for sustainable fishing. Other collaborators focused on particular goals include the Green Power Market Development Group, created to promote the growth of renewable energy sources by guaranteeing large lead customers for green electricity, and the United States Climate Action Partnership, which promotes national policies for more aggressive greenhouse gas reductions.

But successful collaboration is easier to espouse than achieve, and many of these efforts have struggled to realize their founders’ goals. For example, the MSC has fallen far short of Unilever’s goals for certifying all major fish products around the world, and competing

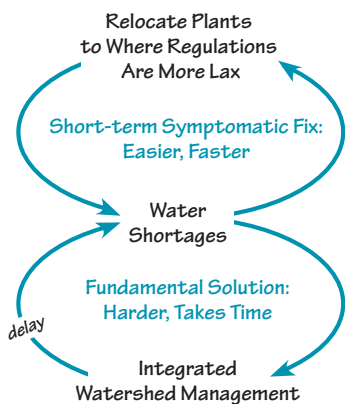
certification organizations have limited the spread of effective certification of forest products (for example, the Canadian Standards Association, the Forest Stewardship Council, the Programme for the Endorsement of Forest Certification, and the Sustainable Forestry Initiative Program have developed different forest certification schemes). Many collaborative initiatives produce lots of talk and little action. As one executive and veteran of many collaborative initiatives put it, “These groups can be incredibly frustrating. We all seem either to agree on everything or have entrenched and irresolvable philosophical differences.”

The problems come, in part, from underestimating the difficulties of learning among highly diverse groups. For example, in our experience in such settings, genuinely shared visions are rare. Far more often, one person’s or one small group’s vision is imposed, either subtly or otherwise, on others. Similarly, people know they need to learn together, whether in working teams or across complex supply chains, but they frequently avoid exploring difficult subjects because they want to avoid conflict. They know trust is important, but they often lack reliable strategies for building it. They may say they want to work collaboratively across boundaries, but ultimately provincialism prevails.

One reason for these shortfalls is that successful collaboration is often seen as a matter of good intentions rather than requisite skills. Our experience is exactly the opposite. Building the capacity to collaborate is hard work and needs to be seen as such. It takes time and a high level of commitment. Otherwise, well-established bad habits take over, such as avoiding conflict or launching into debates that merely reinforce previously held views.

These skills are all the more crucial given the challenging contexts in which these new collaborative initiatives are operating. The people involved often come from very different organizations and worldviews and have little history of working together. For example, leaders from businesses and NGOs often bring a history of combative relationships from the past.

WATER SHORTAGES: A SHIFTING THE BURDEN PATTERN



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Plus, when people care deeply about the issues on the table, their emotional convictions can make them less than open-minded.

But, all these difficulties notwithstanding, real progress is being made in collaborations of all shapes and sizes. No one should be surprised at the difficulties that arise. There are few if any precedents for collaborative initiatives of the scale and complexity of those being attempted today. The very fact that many of these collaborative efforts exist and continue is a great sign of hope. Businesses are working together on carbon reductions, green energy, and more comprehensive sustainability strategies. Fish and forest products are getting certified. The imperative to collaborate across boundaries around such issues has been established. Now we just need to learn how to get better at it, quickly.

There is no turning back. As André van Heemstra, former Unilever management board member and co-founder of the Global Sustainable Food Lab (a global alliance of more than fifty organizations, including some of the world's largest food companies and NGOs, working together to bring sustainable agriculture into the mainstream), says, "Creating sustainable agricultural models will require bringing parties together that normally do not cooperate. As hard as this is, there really is no option because feeding 9 billion people sustainably means changes that cannot be achieved by any sector alone."

3. Creating: Beyond Reactive Problem Solving

Problem solving is about making what you don't want go away. Creating involves bringing something you care about into reality. This reflects a subtle yet profound distinction that, we believe, will make all the difference for the future.

Creating draws its energy from dreams or visions of what people truly want to see exist, in concert with accurate and insightful understanding of what is. Reactive problem solving draws its energy from crises, usually driven by an underlying emotion of fear—fear of the consequences if we fail to solve the problems.

This is not a black-or-white dualis-

tic distinction. In the process of creating what we truly want, many problems will invariably arise, and effective problem-solving skills are vital to tackling them. The distinction lies in what is primary versus what is secondary. When problem solving is primary, we focus on figuring out what's wrong and avoiding outcomes we fear. When the creative orientation is primary, life becomes a journey

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of bringing into reality what you truly care about and addressing the many practical problems that arise along the way. Reality is no longer the enemy—indeed, understanding and reflecting on how different problems relate to one another, how they have come about, and how different forces contribute to the status quo are essential. But working with these forces is very different from reacting to what has gone wrong.

A sustainable future will entail collective creating of every imaginable sort. It will involve bringing into existence over time a new energy system, new types of buildings and transport, and new ways to dramatically reduce waste and toxicity—based on new products, new processes for making things, new business models, and new ways of managing and leading. It will require passion and patience, people working together toward aims that have genuine meaning for them and opening themselves to ideas that may seem foreign and even threatening. And it will require the courage to act without all the answers, moving beyond the comfortable approach of "figuring out the answer and then implementing it." The creative process is inescapably a learning process, which means venturing forth into diffi-

cult and uncharted territory with openness and humility, continually discovering our shortfalls.

Tapping and developing the potentials of people and organizations to create the future rather than react to the present rests on two foundations that have always been at the core of our work on organizational learning: visions for the future and an understanding of the present reality.

The power of genuine vision is understood in cultures around the world, as reflected in the biblical admonition "Where there is no vision the people perish." But just as important is the ability to see the current state of things as objectively as possible. This is often misunderstood by people who appreciate the importance of vision but would rather not look at difficult or painful aspects of the current situation, as well as by those who prefer to look only at the bad and not recognize what is positive about their current situation that they can build on.

In particular, seeing the present systematically is crucial to creating the future. Otherwise, people get so drawn into fragmented views of the "problem" that they often resort to superficial quick fixes. For example, people everywhere today are reacting to different facets of the sustainability crisis, but many of the efforts represent reactions to what are seen as separate and distinct threats—climate change, high oil prices, growing waste and toxicity, unhealthy food, water shortages, social and political instability—as opposed to a deep reflection on the interconnections between these different issues. In this sense, the ability to see systems and the creative process are natural and essential complements to one another, as suggested by the image of a three-legged stool on page 3.

Regardless of the words we use to describe it, many of us have felt the energy and passion of doing what we love—doing something because we want to, not because we have to. *The Necessary Revolution* describes different ways in which individuals, small groups, and larger networks of organizations gently yet persistently are cultivating this shift from reacting to creating. In each case, you can see how they move back and forth between encouraging visions

of a positive future and telling the truth about present reality.

There is an old saw that says there exist only two fundamental sources of motivation in human affairs: desperation and aspiration. In the absence of the creative orientation, desperation prevails. But it need not.

The guiding ideas and principles for life beyond business as usual are reflected in the vision, commitment, and actions of innovators hard at work bringing this new era into reality. Their stories and insights reveal that we all have one basic choice: to sit on the sidelines and wait for more like them to help in creating a different future, or to join them in the journey. ■

This article is adapted with permission from Chapter 4 of The Necessary Revolution: How Individuals and Organizations Are Working Together to Create a Sustainable World (Doubleday, 2008).

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NEXT STEPS

The Necessary Revolution offers a toolkit with specific strategies to help change how organizations think and act. While focused mainly on environmental sustainability, these practices, like the following one for starting a pilot project by engaging people within your organization, can be useful for any large-scale change initiative.

- Identify key areas where your innovation concept needs to be proven in practice.
- Then ask, "Who are the specific individuals or teams within the company who would want to find a way to make that innovation work—to prove it is possible?"
- Draw a "network map," starting with your core team and connecting out to others in your company who might be involved, with lines representing chains of personal relationships between your core team and these people. Are there other places where this network naturally extends to people beyond the boundaries of your company?
- Pick initial team members for prototypes carefully and define your job as their supporter.
- Continually make linkages to key organizational issues and goals.
- Avoid large-scale bureaucratic "rollouts" in this early stage. Your first goal is to demonstrate what is possible with highly tangible prototypes.
- Build contingency plans.
- Communicate while doing. Ask for help and build commitment and support when necessary.