

PART ONE

DESIGNING THE FUTURE

In an age when the speed, intensity, and complexity of change increase constantly and exponentially, the ability to shape change — rather than being its victims or spectators — depends on our competence and willingness to guide the purposeful evolution of our systems, our communities, and our society.

Bela H. Banathy
*Designing Social Systems
in a Changing World*

CHAPTER 1

The Challenge of Design: An Introduction

The journey to a different future must begin by defining the problem differently than we have done until now....The task is not to find substitutes for chemicals that disrupt hormones, attack the ozone layer, or cause still undiscovered problems, though it may be necessary to use replacements as a temporary measure. The task that confronts us over the next half century is one of redesign.

Theo Colborn, Dianne Dumanoski, John Peterson Myers
Our Stolen Future

IN 1628, ONE OF THE GREATEST WARSHIPS ever designed, the powerful man-of-war *Vasa*, pride of the King of Sweden, abruptly sank at the beginning of its maiden voyage with a full crew and many noble and illustrious guests on board. It had suddenly reached the limits of its woefully inadequate design when hit by a squall while still in its home port of Stockholm. Despite the frantic efforts of its increasingly desperate crew, once the limits of the ship's design had been exceeded and overwhelmed, nothing that they could do in their frenzy would be sufficient to stop a disaster that could have been avoided.

Today, more and more people throughout the world are becoming concerned that the basic design of our entire industrial society is both faulty and inadequate for the long-term voyage that is the dream of humanity. The precious cargo of our family and friends, the multitude of other life forms, and all that we hold dear is in danger while we maintain our present course. From eminent scientists in leading research institutes with the most sophisticated global climate computer models to Earth-wise shamans embodying the collective wisdom of some of the planet's oldest surviving indigenous peoples, urgent warnings are signalling the approaching, yet still avoidable, collision with the limits imposed by the natural world.

THE NATURAL STEP FOR BUSINESS

Our industrial economy, indeed any human economy, is contained within and dependent upon the natural world. The natural world is not separate from the human economy. All of our basic life needs — breathing, drinking, and eating — are entirely dependent on the continuing capacity of the natural world to provide us with pure, uncontaminated air, water, and food. We are totally dependent upon what visionary businessman and author Paul Hawken and others call “ecosystem services.” These are the services valued at trillions of dollars annually, provided at no cost by nature, such as global oxygen production, regulation of climate, detoxification and recycling of human wastes, regulation of the chemical composition of the oceans, maintenance of soil fertility, protection against cosmic and ultraviolet radiation, and countless other services — none of which have adequate technological substitutes.

Unfortunately, the natural world is becoming more and more impaired everywhere on the planet in its capacity to continue to provide us with the vital services we need to exist and to thrive with dignity and pleasure. The reality is that in many parts of the world, and for vast and growing numbers of people, life no longer provides much dignity or pleasure. Evidence is mounting that living systems throughout the world are in increasing jeopardy. For example, Lester Brown and others report that “unless humanity stabilizes the global atmosphere that we have been steadily altering for more than a century, virtually every ecosystem on Earth will be at risk.”¹

Yet there is another way, a better way. The emerging conflict of humanity with the rest of the natural world need not be inevitable if we use our insight, muster forces globally, and act now. A small yet growing number of leading business people from around the globe have heard and understood the warnings of our cultural look-outs, those scientists, shamans, and other people of wisdom, whose vision can pierce the mists of the future more clearly than most of us. It is these perceptive business people who have made a remarkable discovery: if we align the business economy with the economy of nature, there are still great profits to be made — profits made in ways that enhance rather than endanger the future of life on Earth.

There need be no conflict or compromise between commercial profits and the environmental health and well-being of humanity and other life forms if the design of commerce is aligned with the inherent design of the natural world. Prominent architect and designer William McDonough and his colleague, industrial chemist Dr. Michael Braungart, express it this way: “If people are to prosper within the natural world, all the products and materials manufactured by industry must after each useful life provide nourishment for something new.... Products composed of materials that do not biodegrade should be designed as technical nutrients that continually circulate within closed-loop

industrial cycles — the technical metabolism.”² Humanity must rediscover its ancient ability to recognize and live within the cycles of the natural world. We have done this since the birth of our species, and it is only comparatively recently that we have veered off course.

The focus of this book is the insights of a passionate and dedicated cancer physician, Dr. Karl-Henrik Robèrt of Stockholm, and the application of his insights by leading-edge business people who have understood the urgent need to change the design parameters of our global industrial system. The Natural Step framework, created by Dr. Robèrt and subsequently endorsed by some of the world’s leading scientists, provides a comprehensive definition of an environmentally sustainable society that is easily understood and grounded in natural science. Implementing it on a corporate level, practitioners of The Natural Step employ methods similar to those of the quality movement and concepts from learning organization theory, both of which are respected by many business people.

This book does not have the space to adequately explore the topics of organizational learning and change, particularly the five learning disciplines as described by Peter Senge in his best-selling book *The Fifth Discipline* and further elaborated by Dr. Senge and his colleagues in the *Fifth Discipline Fieldbook* series. However, our research has shown us that for those business corporations that make the commitment to sustainable development, the understanding and practice of the organizational learning disciplines will be the indispensable prerequisite of a successful transformation to sustainability. We touch briefly upon the learning organization as a metaphor in Chapter 2; — for more in-depth reading, refer to the Resources in the back of the book.

This book does not describe at length the ecological drama that is now being played out in virtually every region of this planet. We assume the reader has some familiarity with the issues or can quickly gain it. There are many quality books and reports, far too numerous to list here, that describe and document the environmental, societal, and economic trends that are shaping the markets of the future. For example, refer to *The Ecology of Commerce* by Paul Hawken, *The Choice: Evolution or Extinction?* by Ervin Laszlo, *Our Stolen Future* by Colburn et al, the annual *State of the World* and *Vital Signs* series by the Worldwatch Institute, and to the books and websites listed in Resources.

What this book does deal with is the business journey to sustainability. The very concepts of “sustainability” and “sustainable development” are relatively new, and there is debate about their precise definitions. A consensus definition does not exist. A commonly cited definition came out of *Our Common Future*, the 1987 report of the World Commission on Environment and Development (the Brundtland Commission). According to the commission, development is sustainable “if it meets the needs of the present without compromising the ability of

THE NATURAL STEP FOR BUSINESS

future generations to meet their own needs.”³ The vagueness of this definition raises several questions: How are needs (present and future) defined? How are those needs prioritized? What about equity (now and in the future) and the just distribution of resources? Carl Frankel, in his insightful book *In Earth's Company*, explores the evolution of the concept, and finds that once we get beyond the Brundtland Commission's definition, sustainability is characterized in terms of harmonizing three elements: economics, environment, and social equity. As Frankel observes, “Growth is to be pursued in a manner consistent with long-term environmental protection and social fairness.”⁴

John Elkington, in his recent work *Cannibals with Forks*, cites Herman Daly's definition that to be sustainable, a society needs to meet three conditions: “its rates of use of renewable resources should not exceed their rates of regeneration; its rates of use of non-renewable resources should not exceed the rate at which sustainable renewable substitutes are developed; and its rates of pollution emissions should not exceed the assimilative capacity of the environment.”⁵ As is pointed out in the next chapter, the very concept of sustainability arose because of our growing awareness that human activities appear to be reaching thresholds that are unsustainable with respect to the natural environment that supports those activities. We are beginning to understand that crossing some of these thresholds may be irreversible.

The need to develop a more precise definition of sustainability and related concepts such as sustainable development and sustainable growth has been a driving force behind the work of Dr. Karl-Henrik Robèrt, his colleague, physicist Dr. John Holmberg, and other scientists and researchers affiliated with The Natural Step. As Dr. Robèrt has commented, “Everyone talks about sustainability, but no one knows what it is.” It is precisely this dilemma that he sought to clarify, a search which resulted in the identification of four “System Conditions” that define societal sustainability. The very issue of how we can clearly conceptualize a sustainable society is at the heart of The Natural Step framework described in Chapters 2 and 3.

Carl Frankel speaks of “the great divide”⁶ that exists between two categories of corporations in their attitudes toward “the environment.” On one side of the great divide are those companies and individuals who have come to understand that their relationship to the natural world affords a true business opportunity for the corporation, that properly approached, it can represent a source of new profits and creativity. On the other side of the divide are those companies and individuals who still regard the environment as merely a cost to the corporation, something to be dealt with through regulatory compliance and risk management surely, but rarely an opportunity for innovation and new revenues, with a kind of second-class status amongst the corporate echelons.

The central thrust of this book is to describe how four successful and dynamic companies, two of them global in nature, one principally European and one principally American — IKEA, Scandic Hotels, Interface, and Collins Pine — are learning to integrate sustainable development at both the strategic and operational levels for improved performance and profitability. These companies, described in Chapters 4–7, have shown marked improvement in each aspect of their relationship to sustainability’s triple bottom line: profits, people, and planet. For these corporations, the environment has attained first-class status within their organizations. These companies have crossed the great divide to the positive side, where sustainable development takes its place in the executive suite with the other core competencies of the corporations.

As we will examine in the chapters to follow, benefits to the companies that have integrated The Natural Step framework into the heart of their corporate strategy and operations include improved competitiveness, lowered costs, enhanced profits, greater resource productivity, enhanced new product innovation, improved staff morale, reduced staff turnover, lower environmental impact, and greater market share.

In the last section of the book, Chapters 8–10, we summarize the major lessons and tools that emerged from our research on these four companies. These chapters detail what we’ve learned, along with a vision of what corporations can become — and need to become — in order to contribute to the healthy continuation of the communities of which they are a vital part. We include here a very useful chapter written by corporate sustainability consultant Susan Burns that describes the relationship between The Natural Step framework and environmental management systems; this concept is gaining popularity worldwide as an effective resource for management in the movement toward corporate sustainability. In the final chapter, we explore what we mean by an evolutionary corporation.

A Synopsis of Our Argument

1. The whole structure of industrial society is based on a faulty design. Ours is a take-make-waste society that violates the conditions for sustainable human life on Earth. To understand the problem, we need to take a natural systems view of our society and its relationship to the environment.
2. Although the elements of the problem are complex in their many dimensions, the core issues are easy to understand through the intellectual framework developed by The Natural Step.
3. It is likely not too late for industrial society to take action, if we act now. There is no more time for business as usual. It is not necessary or

THE NATURAL STEP FOR BUSINESS

important to assign blame. It is necessary to take action, to change our present unsustainable course.

4. Humanity is now able to take its evolution into its own hands by conscious choice and design. This is a basis for hope. Some innovative people and companies are already taking conscious evolutionary action, and some of those are using The Natural Step framework in that process.
5. We can learn from these innovative people and companies to discern glimpses of the evolutionary path forward. The Natural Step framework can act as a kind of corporate compass to assist organizations in their voyages of discovery, the corporate odyssey which both Collins Pine and Interface describe as their “journey to sustainability.”
6. Companies that take on a higher purpose to their business mission create an empowered workforce of energized and motivated people, which makes the company stronger and more profitable. Those conscious, innovative companies that are redesigning the way they do business to include caring for the Earth are what we call “evolutionary corporations.”

The creative leading-edge businesses described in the following pages are creating the basis of real long-term wealth for tomorrow. IKEA, Scandic Hotels, Interface, and Collins Pine share their driving motivations and initial steps to a new form of business — “natural capitalism”, as Paul Hawken calls it. This book is also about leading thinking in the natural sciences and its integration into the practice of business by some of the world’s most progressive corporations. This is also about our culture, our evolution, and the very crucial juncture we have reached. Finally, this is a book about the power of the individual, the power of commitment, and the power of taking a stand for what you passionately believe.