

Chapter 1

Houston, We Have a Problem

The U.S. is the third most populated nation in the world, behind only China and India, and is home to over 300 million people. The recent increase in population in the U.S. is due to immigration from many locations around the globe. The U.S. is third only to Russia and Canada in total land area, and still holds substantial natural resources including farmland, timber, metals, coal, and even crude oil. The abundant supply of useable raw materials has greatly contributed to U.S. prosperity for hundreds of millions of people for more than two centuries. Although the U.S. still has considerable poverty, crime, and economically depressed areas within its borders, the standard of living enjoyed in most U.S. communities is significantly higher than the day-to-day reality for billions of people throughout the developing world.

Over the past 200 years, our nation has developed an extensive industrial complex to provision food, transportation, shelter, and various industrial products for over ten generations of Americans. Today the U.S. accounts for approximately 20% of global natural resource consumption with only 4.5% of the world's population. In spite of some negative international sentiment toward America, many people from around the world try any means available to enter our nation and start a new life on U.S. soil. Even though many of these attempts are unsuccessful, desperate individuals repeatedly continue their efforts. In contrast, most Americans enjoy a high standard of living, and today few U.S. citizens choose to emigrate in search of more promising lives abroad. The U.S. has always offered exceptional quality-of-life opportunities for its residents that are unavailable in most other nations.

The continued expansion of the U.S. industrial complex over the past century has indeed provided the means for considerable

economic prosperity. The unique heritage of capitalism, democracy, natural resource availability, and diverse human spirit has enabled a standard of living envied by many around the world. This heritage includes an immense economy that today is targeted by most major international manufacturers and investors as a lucrative market for products and a reliable location for speculative ventures. But a complete accounting of our economic legacy also includes a dark side. Not only has U.S. industry provided a dependable stream of goods and services, but it has also contributed a laundry list of serious problems for humanity and most biota, including an increase of cancer and other major health threats, loss of domestic jobs, decreasing soil fertility, a variety of compromised natural systems, and global climate change (discussed in greater detail later). We shall see how these pernicious health, environmental, social, and economic realities that have accompanied industrial expansion are seriously regrettable and, for the most part, unnecessary.

1.1 Our Early Approach to Mounting Problems

By the middle of the 19th century, many American cities had become dirty, noisy, polluted, and congested places to live, work, and raise a family. Rural areas were also fraught with serious quality-of-life issues. By this time, agricultural soil fertility was decreasing and soil erosion was increasing, and not long after World War II ended, the new petroleum-based pesticides were touted as the linchpin of a productive agricultural system. During this period of increasingly apparent environmental troubles, a few ardent advocates organized and supported various causes including wilderness, wildlife, soil, water, forests, prairies, and pollution reduction. These early impassioned advocacy groups mostly acted independently of one another, championing their own single causes and finding only limited success influencing meaningful public policy changes that benefited their agendas.

In 1962, Rachel Carson's book *Silent Spring* was published, and it became a lightning rod for the myriad of environmental causes existing at that time. Her timely message, an indictment of the pesticide

industry as a major polluter, fused many independent advocacy factions into a single, cohesive, and identifiable “modern environmental movement,” allowing this new societal cause to quickly develop into a formidable force for change. A new appreciation and respect for nature began appearing in the public mainstream as did an increasing concern for how American urbanization negatively affects the health of humans and of the natural world. New champions of nature called “environmentalists” began to take a respected place within academia, government, and non-profit organizations. Grassroots movements led by these environmentalists flourished, and their ideals were even incorporated into national platforms of political parties. The original Clean Air Act, the Environmental Policy Act, and the new federal bureau called the Environmental Protection Agency were among the tangible results to surface in the early 1970s in the U. S. as a direct result of this robust environmental movement. The cause for *reducing* the harmful effects of business upon society and nature had now taken hold, and this commitment was illustrated by a number of regulatory attempts by federal and state government to *slow down* industry’s seeming indiscriminate efforts to increase its profits at the expense of environmental quality.

Historically, these environmentalists generally viewed leaders of industry as self-serving, dishonest, and dangerous; they lobbied state and federal lawmakers to legislate environmental policies that coerced business to conform to the environmentalist agenda. Business leaders, in turn, viewed environmentalists as impractical extremists, whose unreasonable demands would raise the costs of goods and services, thereby putting many companies out of business, increasing the U.S. unemployment rate, and lower the overall standard of living. Over the past 40 years, both sides have dug in their heels, resisted compromise, and operated within an evolving national environmental policy framework that has cost business and consumers billions of dollars per year but has not significantly mitigated the root problems. Despite many earnest attempts by legislators to craft effective U.S. environmental law since the 1960s, we continue (unnecessarily) to systematically poison ourselves (albeit at a slower rate), lose domestic jobs, and dismantle many of our once-thriving local communities.

1.2 Our Problems Continue

Since the 1960s, concerned U.S. citizens have generally looked to government to remedy this deteriorating quality-of-life situation, but our public servants have not been up to the task. One endemic but seldom cited hindrance is that our legislators and executive office holders are held accountable for their public service performance during relatively short terms of office and, not surprisingly, they routinely avoid tackling the core causes of problems that will provide the majority of benefits far into the future. Unfortunately in our political system, reactionary and short-sighted legislative action that generates headlines for the next re-election campaign is the more common reality. At the same time, Americans have tolerated this approach to issues by politicians and, for the most part, have not demonstrated a mandate for effective systemic change in this regard. We will discuss considerably more about government's role and responsibility in the sustainable business movement in Chapter 6.

In short, this insidious and protracted industrial tyranny shortens the lives of our citizens, undermines our economic stability, and continuously degrades the very natural systems upon which all life depends. Exacerbating the situation is an insufficient understanding and appreciation by most citizens of our reliance upon the natural world and the myriad of vital services that come from it. Most of us still envision a mythical inexhaustible supply of raw materials from nature and her limitless capacity for absorbing all the toxic punches we can throw at her. Unfortunately, today we find most K-through-12 school systems lacking comprehensive and integrated *environmental and social-based curricula*, and this deficiency fuels our disassociation of human prosperity and natural world health. Most of us simply do not recognize the irreplaceable benefits provided by only a healthy and prolific natural environment, such as oxygen production, climate stabilization, water purification, flood control, soil fertility, materials for our products, and aesthetic beauty. Anyone who has difficulty grasping this concept needs only to consider the single source of the oxygen in that last breath of air just inhaled (green plants).

When asked to describe our *community*, loosely defined as where we routinely get our needs met, we might include our town, neighborhood,

or section of city where we work and live, but rarely do we consider the surrounding natural world in this context. Particularly for those of us living in urban settings, nature is commonly viewed as a peripheral and non-essential part of our existence that we occasionally visit, sometimes only out of necessity to get to a destination, other times by choice for some type of outdoor recreational activity such as camping, hiking, or boating. In the mid-1940s, visionary Aldo Leopold wrote in the last chapter of his book *A Sand County Almanac* that the natural course for humanity is to expand our concept of community (and ethics) to include "... soils, waters, plants, and animals" Our continuing failure to recognize the significance and value of a healthy natural environment in our personal life and in business is myopic and dangerous. Since we tend to take care of only those things we value, our extended legacy of natural world destruction is not particularly surprising. Unfortunately, this prolonged oversight has placed all humanity in a seriously compromised situation.

Perhaps just as important, in addition to the lack of appreciation of the natural world by the average citizen, many environmental advocates have failed to recognize the importance of a vibrant and durable *industrial sector* to provide a high quality of life and a heritage of opportunity for future human generations. Aggravating the situation is the preponderance of business managers today who pursue this myopic quest to increase short-term profits, much to the detriment of long-term economic health and stability. A far too speculative mortgage market or the corporate takeover and subsequent dismantling of successful businesses are examples of this sort of near-sighted, self-centered behavior. Also consider that for the past several decades, U. S. manufacturing companies have continually increased the amount of foreign-made components in order to reduce production costs, and consumers consistently chase down low-priced foreign goods at corporate "big box" retail stores with little or no consideration of the comprehensive effects this purchasing pattern has on their communities.

When more local dollars leave a region for goods and services than come into that region, an insidiously negative trade-deficit result comes into play. When we patronize corporate restaurants, food producers, banks, fast food chains, or clothing stores for example, we

send our money to distant supply chains and profits to worldwide stockholders. This methodical loss of wealth sucks the life blood of jobs and financial capital from regions throughout the country. We unwittingly allow an economic pattern to continue where locally generated wealth exits a region unnecessarily. A better option is to become aware of some of the many outstanding locally owned businesses within your community and to patronize them frequently. In addition to enjoying establishments of unique character, product, and personal service, more of your money spent at locally owned businesses stays in your community to re-circulate. Studies suggest that out of every \$100 spent at locally owned businesses, at least \$25 more remains in the local economy when compared to businesses that are not locally owned.²

One of the easiest ways to begin to support local businesses while improving the value received is to patronize the variety of local restaurants available in a community. Often this interesting and ethnically diverse collection of eateries offers more appealing food, service, and total dining experience when compared to the chain establishments. Another way to support local businesses is to browse the local farmers markets and food cooperatives that are popping up all over the U.S. Similar opportunities to support local business exist in many communities for entertainment, business services, grocery, real estate, and retail clothing. Remember, too, that a marketplace with many small businesses encourages fair competition, innovation, and the best value for the consumer's dollars.

City, county, and even state governments have the opportunity to enact policy that incentivizes local and regional businesses and discourages the loss of local jobs and wealth. Unfortunately, many of our current economic policy makers still do not recognize the long-term value provided by a *locally owned and anchored regional business sector*. Often foreign-owned companies are seen by government as the brass ring to snare, and officials use huge tax breaks and public infrastructure improvements to try and lure these international facilities while upping the ante for other U.S. cities hoping to attract overseas

² See Cunningham, Houston, and Sheppard (2004).

businesses. However, the short-term political and social benefits of a new foreign facility is more than negated by the lack of tax revenues for the local school systems and the eventual loss of jobs from the corporation pulling up stakes when they find another location that offers them more favorable tax, wage, and infrastructure concessions. This scenario with its not-so-happy ending has played out countless times in recent decades in the U.S., and still, headline-chasing politicians continue to concentrate limited economic development dollars on foreign industry rather than on local community efforts. This dog-chasing-its-tail strategy is not part of the sustainable business movement. The role of government in advancing a transition to healthy and stable local economies is extensively discussed in Chapter 6.

1.3 Early Visionaries and the Resistance to Change

A number of astute authors as early as the mid-20th century, including Aldo Leopold and Rachel Carson, published works that identified parts of the unsettling trend previously described and suggested systemic changes in our approach toward business, community, and the environment. Other “outside-the-box” thinkers such as California economist Garret Hardin, in addition to acknowledging portions of the aforementioned problems, expressed serious pessimism about the possibility for significantly changing our course.³ In 1993, author Paul Hawken published the strikingly influential book *The Ecology of Commerce* in which he not only identified industry as culpable in our dire state of affairs but more importantly recognized the unique opportunity and power of business to lead meaningful long-term recovery rather than governments or non-profit organizations. Hawken deftly points out that our problems are entrenched throughout commerce and that a consequential solution involves a fundamental redesign by business itself. Later we will also discuss the original contributions to this movement from other visionaries such as Janine Benyus, Amory and Hunter Lovins, Sandra Steingraber, Michael Shuman, William McDonough, and Michael Braungart.

³ See Hardin (1968) for a harsh but convincing pessimistic argument.

The unconventional nature of the strategies covered in these chapters require considerable thought and time to process and integrate into our paradigm. On a personal level, many find the requisite professional self-examination particularly challenging in a number of ways. First, those who are professionally and personally successful are not always inclined to seriously reconsider basic components of their core belief system. The necessary open-minded self-scrutinizing re-examination is difficult and unpleasant, and so many of us avoid it. Second, after acquiring a basic understanding of the natural world and the adverse effects upon it and ourselves by business as usual, we often have difficulty accepting complicity of our own professional activities. We may discover an internal dilemma in admitting that we have spent a good portion of our lives indirectly weakening future prospects for the natural world and for our grandchildren alike.

The final requirement of a paradigm shift involves one's own personal time and effort, a most precious commodity. Most Americans lead quite busy lives integrating family, job, friends, and personal interests. Simply finding the time to read this book may be difficult for you, let alone finding the time to consider the far-reaching ramifications of its tenets and to apply them in your life. However, we do attend to the things that are most important to us, and you may find that the most onerous option will be to *not* follow your intuition and heart down this unsettled road of change. At any rate, we will fix only what we know to be broken, so let's go a bit deeper into humankind's situation.

1.4 Do Current Free-Market Mechanisms Help?

Today environmental scientists around the world constantly gather data and monitor various types of pollution, habitat degradation, and natural resource exploitation. Considering the enormity of our global industrial activities and the corresponding negative effects upon life on Earth, it is fairly easy to understand how business is often viewed by the investigator as the incorrigible ecological villain. The 1984 Union Carbide chemical plant disaster in Bhopal, India; the 1986 meltdown and explosions of the Chernobyl, Ukraine nuclear reactor;

and the 1989 Exxon Valdez oil tanker calamity in Prince William Sound of southeastern Alaska are three well-publicized examples of catastrophic industrial debacles.

For decades environmentalists and social reformers have pushed for a strong set of state and federal environmental regulations that *force* business to reduce the contamination of air, water, and soils and to limit the exploitation of limited natural resources. As discussed earlier, this approach simply has not worked well through time for the environment or for world citizens. Even with billions of dollars spent by government and business to mitigate these problems through a labyrinth of complex environmental regulations, each year the U.S. alone still releases millions of pounds of persistent toxins and generates thousands of tons of lethal high-level nuclear waste, some of which will require secure storage for tens of thousands of years.⁴ A closer look also reveals that many exploitive industrial practices continue, such as the indiscriminate harvest of tropical rain forest timber, that significantly weaken a variety of natural systems upon which humans and all other life depend.

In theory, both U.S. business and consumers rely on our modified market-based economic system to appropriately adjust prices and demand for natural resources. Commonly, when supplies of a particular resource dwindle and the price for this resource subsequently rises, we rely on technology advancements to improve our utilization efficiency, to locate a new source for that resource, or to discover a suitable substitute for that resource, all of which cause prices to fall back to lower levels. Unfortunately, a variety of free-market system defects exists in this scenario, including the following: people other than the buyer routinely pay part of the cost of goods or services because of the pervasive externalizing effects of pollution (electric bill), certain essential commodities have no substitutes (oxygen), most essential services have no substitutes (favorable climate), legal monopolies do exist (utility companies), government does regulate certain types of commerce (banking industry), government provides

⁴ See Walker, Hopkin, Sibly, and Peakall (2006) for this and other numerous pertinent pollution statistics.

billions of dollars in subsidies for certain types of resource extraction (metals and crude oil), and the value of natural capital (biodiversity) and natural services (pollination of crops) is largely unaccounted for and ignored by the market.

To further hamstring the effectiveness of our economic system, we monitor domestic financial activities using misleading indicators that do not scrutinize the long-term effects of industry on both human and natural communities. For example, our common economic indicators such as gross domestic product assume a dollar spent on our prison system provides the same value as a dollar spent on our educational system or a dollar spent on medical treatment of an ailment provides the same value as a dollar used for preventive health care. Our gross undervaluing of the natural world, the market failures of capitalism, and our inability to recognize and monitor useful economic information have put us in a situation where we covertly pass on harmful economic, environmental, and social consequences to people distant to us in both location and time, which is nothing short of a poignant non-stop dose of intergenerational tyranny. Ironically at the same time, we routinely allow short-sighted and relatively inconsequential issues to dominate mainstream media and public conversation while the issues of enormous repercussions described above remain on the sidelines.

Many well-intentioned social and economic reform efforts have historically focused on relieving the symptoms of our troubles rather than on an overhaul of the underlying systemic problems themselves. One example is the emphasis in our nation on combating illegal drug sales rather than on targeting the root causes for societal demand for such substances. Another example is government bailouts of failing industrial sectors such as the auto industry or commercial banking. These types of ill-advised policies squander billions of public dollars on symptoms of the problems without significantly affecting the core systemic issues that ultimately keep us permanently mired in the same untoward situations. If the same type of misdirected superficial approach is maintained for our current industrial dilemma, similar results can be expected. In short, nothing changes if nothing changes.

1.5 An Intelligent Beginning

Auspiciously, a fresh, systemic, solution-oriented approach has been quietly taking shape over the past couple of decades that leverages the inextricable links among business, society, and the natural world. Although this approach involves environmental themes, it is not merely a continuation of the well-intentioned but largely ineffective modern environmental movement. Rather than heavy-handed government regulators attempting to *coerce* business into specific actions or end results, this approach originates *inside business itself*. Instead of a bevy of regulatory requirements adding to the overall costs and complexity of doing business, this new strategy finds business, among other things, *improving* its economic performance. Leaders from all business sectors — extractive, processing, supply chain, manufacturing, service, and retail — and from all business sizes — sole proprietor to multinational corporations and for-profit companies to non-profit institutions — and even governmental departments have the opportunity to join their innovative and inspirational counterparts and begin the transformation of their own organization.

A word of warning to those whose interest is peaked: this movement is not about pulling the old recycling bins out of storage, turning down the office thermostat, or even meeting those government-mandated pollution and worker-safety regulations. As the coming chapters will explain, this movement involves a series of universal and sweeping changes in our approach to production and consumption of goods and services that will dramatically and positively affect the very core of business and society. Now let's review a bit of history concerning the evolution of our current *de facto* production systems.

The western industrial revolution began in northern England in the late 18th century and spawned new technologies that first produced textiles and later other goods in a superior fashion to previously existing methods. This new approach gradually proved to be a significant advantage over the simpler and less efficient technologies of the past and produced lower-cost goods that were then made available to a much larger market. But this revolution, led by early British industrialists, lacked an early long-term comprehensive design plan; the

major single short-term goal was to provide British commerce a major advantage over other exporting nations. This technological revolution did achieve that goal, and Great Britain used its superior navy to firmly establish trade relationships for its manufactured items. Soon, this fresh industrial technology spread across political boundaries to continental Europe and the new fledgling United States of America.

Unfortunately, the fossil-fuel energy choices, linear cradle-to-grave material strategy, and unsavory working conditions have combined to also deliver a legacy of pollution-induced illness, short supplies of key production materials, denuded global farmland, and Russian-roulette-style global climate change risks that we pass on to our children. Clearly, this catastrophic endowment was not part of a plan crafted by industrialists throughout the recent past. Rather, the snowballing deleterious effects resulted from a lack of thoughtful and intelligent planning early in the revolution. Had early industrialists set their sights on *an industrial system that could indefinitely supply mankind the goods and services for a high quality of life*, our need for such a drastic and immediate change in course would not exist.

The leaders of today's sustainable business revolution have the opportunity to avoid the devastatingly unfortunate blunder of proceeding without an inspired and intelligent design plan. Fortunately, various key instigators of this new movement have begun by crafting innovation components that are intended to deliver only positive long- and short-term outcomes for all world community members. Momentum within the movement provides a growing opportunity to re-invent business into not only efficient, profit-driven enterprises but also to design organizations that are intentionally innovative, that restore the natural world, and that grow the local community as part of their day-to-day operations. Indeed, if our commercial enterprises are to have the capacity to continually support all humanity through time, deep environmental and social considerations are requirements, not options, for this *second industrial revolution*.

Incumbent upon this movement is to — once and for all — design the provisioning of consumers so that *all* outcomes of industry are positive and supportive for *all* life on Earth. Today we find that our current production strategies do not acknowledge or approach

this criterion. For example, the production of common office white paper not only provides useful printing material but also requires the harvest of oxygen-producing, habitat-providing, and carbon-sequestering trees. The most common wood pulp bleaching process also emits into the air extremely dangerous carcinogens called dioxins and furans. Even the process for most white-paper reprocessing (generally referred to as “recycling” and considered environmentally friendly) unwittingly releases these same chemicals and uses fossil fuels to power the system.

However, the inadvertent but harmful consequences of white-paper production and reprocessing are not foregone conclusions. Chlorine-free processes exist today that do not emit dioxins while processing wood pulp or used white paper. Indeed, print surfaces exist today that use a reusable synthetic polymer material instead of a wood pulp base. These types of successful process innovation rely upon the creativity of savvy design teams who are committed to delivering high product performance at a reasonable price. Intelligently redesigned industrial processes provide value that will attract a broad base of consumers at the marketplace, particularly if the new product or service actually enhances product appearance and performance.

1.6 Are the Results Worth the Effort?

Many reasons exist for expanding our profit-driven commercial endeavors to include both natural world and societal considerations. In 1997, ecological economist Robert Costanza and a team of distinguished researchers documented the importance of the natural world as a fundamental form of capital for human society (and for the business of millions of other species as well).⁵ The term *natural capital* includes living and non-living components of the environment that work in concert to produce beneficial conditions for all life on Earth, including a favorable climate, productive soils, and a materials cycling system throughout the biosphere. Unfortunately, the capacity of natural capital to provide these vital services is continuously degraded by

⁵ See Costanza, *et al.* (1997) for a detailed accounting.

the many routine activities of industrialized man. Costanza and his research team recommend that business leaders recognize and acknowledge the value of the natural world and that industry actively engage the challenge of restoring and supporting all forms of natural capital just as business does with the more conventional types of capital such as its production machinery, office equipment, and buildings. Although natural capital is generally considered a *common property resource* (owned by no one but vital to all), clean air and clean water is just as essential to sustained positive business activity as privately held equipment or monetary wealth.

Another opportunity for substantial progress involves the treatment of employees and the relationship between employees and the organization. A growing number of business leaders have begun to recognize the direct payback for actively supporting their employees and communities in a variety of ways. Organizations typically invest substantial time and money to attract and continually train their staff, so long-term retention of skilled and satisfied employees in a productive work environment is a significant asset for business. Workers who are comfortable, properly equipped, and fairly compensated most often perform more productively and creatively and display loyalty to their companies.

Another opportunity for business involves cultivating interrelationships among the organization, its workforce, and the surrounding community. Movement-oriented business leaders have learned that circumstances benefitting their employees and communities also benefit their companies. They are finding that becoming more involved in the fabric of community life pays dividends in terms of recognition as solid community members and supporters of civic improvement. Another advantageous activity is cultivating mutually beneficial associations with other nearby businesses by combining resources for a common purpose such as group purchasing or by determining if one company's waste product could be an asset for another company. Chapter 4 discusses in detail business leaders that are particularly focused on developing strong support structures with their employees and the surrounding communities.

Philanthropic community involvement is a way that a business can improve the local living environment and its ability to attract and hold

top employees. Often locally owned businesses with deeply established roots have a history of investing in and giving back to local communities, and subsequently they enjoy the long-term benefits of a more stable and productive workforce. Conversely, because corporations have philanthropic restraints placed on them by their corporate charters, inspired leaders sometimes will establish foundations with the role of allocating sizeable financial resources toward a variety of national, state, and local causes. Creative minds in both sets of circumstances have devised impressive community partnerships that help all parties involved.

Today, numerous examples of benevolent projects exist that benefit society, nature, and the organization. An endowment scholarship fund for low-income students who enroll in an undergraduate sustainable business program is an example of a particularly effective hybrid initiative that provides a critical cutting-edge education experience to those who otherwise very likely would not have this opportunity. The underwriting organization would then have an opportunity to advance its own efforts toward sustainable practices by providing internships for these students and then hiring the most promising interns to participate in the company transition. In addition to providing real value to the participating business, this ingenious program also benefits the natural world and the human community, and it offers the disadvantaged but talented students the opportunity to apply sustainable business theory in a real-world setting.

Let us now briefly turn our attention to an opportunity for improvement of the durable goods manufacturing sector. Product demand volatility is a constant challenge for supply-chain manufacturers and big-ticket item producers as well. Drastically reducing the frequency and intensity of the product demand changes (both downturns and upturns) can help stabilize a company's business operation and the size of its workforce. Cyclical expansion and contraction of a company's labor force in order to align with product demand is an expensive proposition for business and a negative influence for communities. In the next chapter we will discuss at length one particular about-face strategy that, among other things, works to significantly reduce the oscillating demand cycle for products over time, lower

long-term production costs, decrease the extraction of raw materials, and stabilize community jobs.

For the past several decades, concerned citizens have looked toward government for relief from the litany of serious problems that accompany commercial endeavors, and most have been largely disappointed. A remaking of business by business with the outcome of simultaneously promoting profitability, people, and the planet is outlined in the following chapters. Today, manufacturing, engineering, architecture, construction, health care, and a variety of service sectors are already actively involved in the evolution of this movement. As we will see, government and our formal educational system also play important roles, and the *coordinated efforts* of all private, non-profit, and government sectors are needed to give this movement the best chance of lasting success.

Interestingly, sustainable business differs from previous social reform movements in that it lacks both a single visionary leader and a central location of origin; rather, it is inspired by an assortment of creative thinkers and doers throughout the western world and, in some ways, is linked to traditional Eastern thought. Many people from a variety of backgrounds and settings have started the ball rolling, and hopefully a much larger group will add to the current momentum of change and further champion this emerging revolution. But the maturation process of the movement is at a critical point in its early stage, and the next set of choices by engaged businesses will significantly influence the depth and intensity of these efforts.

We now face a sobering dilemma in the redesign process for commerce that most of us did not see coming. What guides do movement leaders use to ensure our best chance for success in this monumental planning process? Taking this question one step further and keeping in mind the track record of humanity the last few centuries, we ask ourselves if our best interests are served to assume that we have the ability to successfully transition to a thriving and sustainable society? The feel good answer may well be “yes” but is it the thoughtful and rational response? Our best and brightest minds throughout the first industrial revolution have brought us to our current situation, so do we reasonable expect drastically different results this next time

around? Any delay in hammering out and implementing our best possible approach could even further jeopardize our chance for success.

An existing model of flourishing long-term industrial achievement would be exceedingly useful for us to emulate, but is such a prospect available? If we are able to set aside our hubris and intensify our perception and open-mindedness, an opportunity does exist for all business to emulate an amazingly successfully production system that has incorporated all the necessary strategies required for continuous prosperity. We will now turn our attention to a surprising source of invaluable guidance for every step of this reformation of business and society.

Guide Point 1: Our conventional approaches for producing goods and services routinely include unnecessarily insidious and tragic consequences for future generations of all life.

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