Introduction

Business and industry — not just American business and industry, but global business and industry — must change its ways to survive ... And by survive I do not mean maintain identity and integrity within the context of a financial system in meltdown, either. By survive, I mean business must be steered through a transition from an old and dangerously dysfunctional model to a far better one that will operate in harmony with nature — thrive in a carbon-constrained world, and put down the threats of global climate disruption, species extinction, resource depletion, and environmental degradation. In a word, develop a business model that is sustainable.

— Ray Anderson, Confessions of a Radical Industrialist
Sustainability strategies give companies a sustainable competitive advantage. The business benefits are quantifiable and real — the return on investment from aggressively improving company-wide sustainable development knowledge and initiatives makes other traditional investment opportunities seem trivial. Whichever company captures these benefits soonest has a significant competitive edge. Companies that ignore this reality are squandering easily achieved bottom-line benefits. Sustainability is a race to the top.

Businesspeople do not have to be transformed into tree-hugging environmental activists to reap these benefits. They can remain just what their shareholders expect them to be — hard-nosed executives who evaluate proposals on their bottom-line merits. Saving the world and making a profit is not an either/or proposition. It is a both/and proposition. Good environmental and social programs make good business sense. Benefits from more aggressive and creative attention to environmental and social projects create a win/win/win approach for the corporation, society, and the planet.

Addressing environmental and sustainability issues in a systematic way provides new opportunities to focus on core business objectives such as reducing hiring and retention costs, improving productivity, reducing expenses at manufacturing and commercial sites, increasing revenue and market share, reducing risk, and increasing profit. That is why CEOs want to fully embed sustainability into their company’s strategies and operations, as shown in Figure 1.1. It is smart business.

One way to portray the evolution of company attention to sustainability is shown in Figure 1.2. Companies begin improving their legitimacy and image simply by ensuring they and their suppliers comply with human rights, environmental, and health and safety regulations in all their operations. Then they capitalize on eco-efficiencies to save money on their energy, water, materials, and waste bills. The exciting part is in the upper two quadrants. Companies practice disruptive innovation, reinvent their products and processes to improve their green attributes, and then take them to current and new underserved markets in the top right-hand quadrant.

In this chapter we expand these four quadrants into a more granular five-stage journey. First, we set the table for the buffet of sustainability benefits by clarifying terminology, frameworks, and our premise.
### Significant CEO Mindset Shift

<table>
<thead>
<tr>
<th>CEOs Agree /Strongly Agree that sustainability should be</th>
<th>2010 Increase Over 2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>… fully embedded into company strategy and operations</td>
<td>96%</td>
</tr>
<tr>
<td></td>
<td>□ 2010 □ 2007</td>
</tr>
<tr>
<td></td>
<td>72%</td>
</tr>
<tr>
<td></td>
<td>24%</td>
</tr>
<tr>
<td>… discussed and acted on by boards</td>
<td>93%</td>
</tr>
<tr>
<td></td>
<td>□ 2010 □ 2007</td>
</tr>
<tr>
<td></td>
<td>69%</td>
</tr>
<tr>
<td></td>
<td>24%</td>
</tr>
<tr>
<td>… fully embedded into subsidiaries’ strategies and operations</td>
<td>91%</td>
</tr>
<tr>
<td></td>
<td>□ 2010 □ 2007</td>
</tr>
<tr>
<td></td>
<td>65%</td>
</tr>
<tr>
<td></td>
<td>26%</td>
</tr>
<tr>
<td>… embedded throughout the global supply chain</td>
<td>88%</td>
</tr>
<tr>
<td></td>
<td>□ 2010 □ 2007</td>
</tr>
<tr>
<td></td>
<td>59%</td>
</tr>
<tr>
<td></td>
<td>29%</td>
</tr>
<tr>
<td>… the basis for industry collaborations and multi-stakeholder partnerships</td>
<td>78%</td>
</tr>
<tr>
<td></td>
<td>□ 2010 □ 2007</td>
</tr>
<tr>
<td></td>
<td>56%</td>
</tr>
<tr>
<td></td>
<td>22%</td>
</tr>
<tr>
<td>… incorporated into discussions with financial analysts</td>
<td>72%</td>
</tr>
<tr>
<td></td>
<td>□ 2010 □ 2007</td>
</tr>
<tr>
<td></td>
<td>51%</td>
</tr>
<tr>
<td></td>
<td>21%</td>
</tr>
</tbody>
</table>

Source: Adapted from UN Global Compact–Accenture, “A New Era of Sustainability,” June 2010, p. 32. Based on findings from a survey of 766 CEOs worldwide, including 50 in-depth interviews.

### Four Quadrants of Enterprise Sustainability

**Innovation / Repositioning**
- Clean Technology
  - Develop new competencies
  - Pursue disruptive innovation

**Cost and Risk Reduction**
- Pollution Prevention
  - Minimize process waste
  - Enhance resource productivity

**Growth Path Trajectory**
- Sustainability Vision
  - Meet unmet needs
  - Open new markets

**Reputation/Legitimacy**
- Product Stewardship
  - Lower life-cycle impact of products
  - Increase transparency/ accountability

Source: Adapted from Stuart Hart and Mark Milstein, “Creating Sustainable Value,” Academy of Management Executive, 17(2), 2003, pp. 56-69.

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**FIGURE 1.1**

**FIGURE 1.2**
The Premise

Our current economic model is unsustainable and is threatening our continued existence as a species. Governments have good intentions but are unable to lead — they are stripped of the needed tax revenues and are too beholden to status quo interests to be effective. Civil society has passion and good intentions but is up against huge vested forces that dominate communications channels. The only human enterprises that are large and powerful enough to effect the paradigm shift are enlightened businesses. More and more, business leaders influence world decisions. Without their support, restoring natural systems and healing social inequities takes longer and may be impossible. Time is running out. We need socially and environmentally responsible companies to be Trojan horses within the business community, leading the transformation to sustainability.

Because companies are “for profit,” they are required to ensure their bottom lines are healthy enough to allow them to continue operating. Executives who lose track of that reality in the game of business soon find themselves watching the game from the sidelines. We need to equip enlightened executives with compelling numbers that show that sustainability-related strategies are smart business — that the company can do better by doing good; that a more responsible form of capitalism generates higher profits. They know that superior environmental and social performance leads to more goodwill with the company’s important stakeholders listed in Figure 1.3. They also know that sustainability strategies improve revenue, reduce costs, and help them win the talent war, as highlighted in Figure 1.4.

To be convincing, we need to ensure we are talking the language of senior executives. We must quantify the benefits of a revolutionary transformation to a more sustainable and profitable business model in the new economy. We need to meet the executives where they are, use familiar frameworks to show the relevance of sustainability-related strategies to today’s priorities, and show how the company can position itself to capitalize on going further on its sustainability journey.

Laggard companies are missing a business opportunity. If their shareholders woke up to what was being left on the table by company executives who marginalize sustainability-related strategies, they would not be pleased. The time has come to dispel the notion that being green is bad for business. If saving the planet is not reason enough, there’s another incentive for companies to contribute to sustainable development — it boosts profits.
**Stakeholders Driving Sustainability**

Stakeholders who CEOs believe will have the greatest impact on the way they manage societal expectations:

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>2010</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumers</td>
<td>58%</td>
<td></td>
</tr>
<tr>
<td>Employees</td>
<td>50%</td>
<td>45%</td>
</tr>
<tr>
<td>Governments</td>
<td></td>
<td>39%</td>
</tr>
<tr>
<td>Communities</td>
<td>28%</td>
<td>24%</td>
</tr>
<tr>
<td>Regulators</td>
<td>26%</td>
<td>25%</td>
</tr>
<tr>
<td>Media</td>
<td>25%</td>
<td>24%</td>
</tr>
<tr>
<td>Investment community</td>
<td>19%</td>
<td>22%</td>
</tr>
<tr>
<td>Suppliers</td>
<td>15%</td>
<td>15%</td>
</tr>
<tr>
<td>NGOs</td>
<td>15%</td>
<td>15%</td>
</tr>
<tr>
<td>Boards</td>
<td>14%</td>
<td>16%</td>
</tr>
<tr>
<td>Organized labor</td>
<td>7%</td>
<td>7%</td>
</tr>
<tr>
<td>Other</td>
<td>6%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Source: Adapted from UN Global Compact–Accenture, “A New Era of Sustainability,” June 2010, p. 23. Based on findings from a survey of 766 CEOs worldwide, including 50 in-depth interviews.

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**Sustainability Drivers for CEOs**

Top drivers of CEOs’ action on sustainability issues:

- **Brand, trust, and reputation**: 72%
- **Potential for revenue/growth/cost reduction**: 44%
- **Personal motivation**: 42%
- **Consumer/customer demand**: 39%
- **Employee engagement and recruitment**: 31%
- **Impact of development gaps**: 29%
- **Regulatory environment**: 24%
- **Pressure from investors**: 12%

Source: Adapted from UN Global Compact–Accenture, “A New Era of Sustainability,” June 2010, p. 20. Based on findings from a survey of 766 CEOs worldwide, including 50 in-depth interviews.
Definitions, Terminology, and Frameworks

As sustainability champions, we are sometimes confronted by frustrated business people who ask what we mean by “sustainability.” What they really want to know about is sustainability’s relevance to them and their organization. Is it a threatening concept or a friendly one? Is it just a fancy, multiple-syllable word for something to which they are already paying attention?

As we attempt to clarify others’ perceptions and misconceptions, it is helpful to have a few definitions in our vocabulary to facilitate the discussion. Figure 1.5 shows the meaning of “sustainable development” provided by the 1987 Report of the Brundtland Commission, Our Common Future, as well as two more definitions which supplement that touchstone. The word “flourish” in John Ehrenfeld’s definition is uplifting and energizing. Chuck Hopkins’ four-word definition is wonderfully memorable and succinct. A Google search will find hundreds of other good definitions.

The foundation of sustainability is implied by the definitions: all human activity needs to stay within the ecological carrying capacity of the planet, and it must not consume natural resources in excess of the ability of ecosystems to regenerate them. Anything else compromises both the ability of the present generation to meet its needs and the ability of future generations to meet theirs. We have already exceeded the carrying capacity of the planet by 50% and counting.1 It is time to clean up our act.

The Natural Step, an international non-governmental organization, espouses four scientifically based system conditions that echo the fundamental components of sustainable development.2

• Nature’s functions and diversity must not be subject to increasing concentrations of substances extracted from the earth’s crust.
• Nature’s functions and diversity must not be subject to increasing concentrations of substances produced by society.
• Nature’s functions and diversity must not be impoverished by overharvesting or other forms of ecosystem manipulation.
• Resources must be used fairly and efficiently in order to meet basic human needs worldwide.

We are part of the whole, not separate from it. We cannot exist sustainably without the ecosystem services provided to us free of charge by clean air, clean water, clean soil, and fully functioning habitats. Preservation of those (even at current levels, as degraded as they are, based on what we know existed from historic record) is the big challenge that sustainable development attempts to address.
Definitions of Sustainability

**Sustainable Development (SD)**
Meeting the needs of the present generation without compromising the ability of future generations to meet their own needs.


**Sustainability**
The possibility that humans and other life will flourish on Earth forever.


**Sustainable Development (SD)**
Enough, for all, forever.

Definitions of a Sustainable Society

For years I have used the three-legged stool metaphor, shown in Figure 1.6, to illustrate the three dimensions of sustainability: economic, environmental, and social. (The three descriptors at the bottom of the figure are thought-provoking alternative labels for the stool.) The three-legged stool metaphor reinforces that society is unstable if one leg is weak. The downside of the metaphor is that it makes the economic, environmental, and social legs appear separate and equal.

Some sustainability champions use a Venn diagram of three overlapping circles to show sustainability, with circles representing the intersection of economic, environmental, and social factors. Depending on our mindset, we may resize the circles to show that one factor is more dominant than the other two. Unfortunately, a Venn diagram model implies that economic considerations should be “traded off” or “balanced” against environmental and social impacts, rather than “integrating” these three dimensions. The model also implies that the economy, society, and environment exist independently.

The three-nested-dependencies model in Figure 1.7 reflects a more interdependent reality. It depicts human society as a wholly owned subsidiary of the environment — without food, clean water, fresh air, fertile soil, and other natural resources, we are out of business. People in societies decide how they will exchange goods and services. That is, they create their economic models and change them if they find they are not working to improve their quality of life. To add another metaphor: society is the dog and the economy is the tail, not vice versa.

To be fair, the society–economy relationship is symbiotic. During the recent recession, the economic downturn had a significant impact on many people’s quality of life. Good jobs are so important to a vibrant modern-day society that sustainability champions who portray the economy as subservient to society are sometimes accused of being naïve about how the “real world” works. It might be useful to remind critics of the famous picture of the Earth taken from space. That is our real “real world.” The defining photo of our little blue home suspended in the universe shows just water, clouds, and land — the environment. People and the economy are invisibly nested within it.

The photo also reminds us of a stark reality: there is no umbilical cord going somewhere else, so we must live within the carrying capacity of the planet. Our continued existence depends on how well we steward our natural resources to ensure our social and economic sustainability. If we mess up, we are history. Not good.
Figure 1.6

Three-Legged Sustainability Stool

Sustainability

Environmental Leg
- No pollution and waste
- Enough energy and water
- Conservation
- Restoration

Economic Leg
- Good jobs
- Fair wages
- Infrastructure
- Fair trade

Social Leg
- Working conditions
- Health care
- Education services
- Community and culture
- Social justice

Quality of Life/Genuine Wealth/Genuine Progress

Figure 1.7

Three-Nested-Dependencies Model

Environment

Human Society

Human Economy

The three-legged stool metaphor applies to enterprises as well as to societies. In that context its legs are economic prosperity, environmental stewardship, and social responsibility, or Profit, Planet, and People, as illustrated in Figure 1.8.

The Profit element of the 3Ps is easily understood and accepted by companies — it is about the long-term financial health of the enterprise. The Planet dimension reminds companies to not only “do no harm” to the environment with their operations and products, but also to help restore the environment from harm already done. This requires reducing the amount of energy, water, and materials consumed in the manufacture of products, plus reducing waste and remediating contaminated sites. The People element encompasses how the company treats its employees, the working conditions and labor relations in its own operations and those of its suppliers, adherence to business ethics, and investment in communities it touches. The term “corporate social responsibility” (CSR) is rooted in this leg of the stool. However, in the last ten years CSR has become another umbrella term that recognizes the synergy of all three legs. Accordingly, it is often abbreviated to “corporate responsibility” (CR), embracing the social, environmental, and financial legs of the stool.

In business journals like *The Economist*, environmental, social, and governance (ESG) is the preferred label for the three-legged stool. Do ESG, CSR, CR, sustainable development (SD), and “green” all mean the same thing? Not quite, but they are close enough to capture the common essence of sustainability.

When we deal with hard-nosed business leaders, it behooves us to translate sustainability-speak into their business language of assets and capital, as shown in Figure 1.9. The use of business terminology helps companies recognize their direct or indirect dependence on natural capital for their energy, materials, food, and water. The term “natural capital” reinforces the wisdom of living off the Earth’s interest, not its capital. Human capital is the company’s engaged workforce. Social capital is the good reputation the firm has with its important stakeholders, like customers, communities, regulators, suppliers, and investors. By equating sustainability with asset management, we help connect the dots between smart business strategies (which foster the growth of all five capitals in Figure 1.9) and smart sustainability strategies (which do the same).

In this book, “sustainability” is our preferred umbrella term for the three dimensions of responsible companies. We occasionally use one of the other terms, just for variety.
Corporate Sustainability Three-Legged Stool

Sustainability = Sustainable Development (SD)
- Environmental, Social, Governance (ESG)
- Corporate Social Responsibility (CSR)
- Corporate Responsibility (CR) = Green
- Triple Bottom Line (TBL) = 3Es = 3Ps

<table>
<thead>
<tr>
<th>Economy/Profits</th>
<th>Environment/Planet</th>
<th>Equity/People</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth</td>
<td>Eco-efficiencies</td>
<td>Employees</td>
</tr>
<tr>
<td>Jobs</td>
<td>Eco-effectiveness</td>
<td>Community</td>
</tr>
<tr>
<td>Taxes</td>
<td></td>
<td>World</td>
</tr>
<tr>
<td>Products</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Services</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Smart Business Three-Legged Stool

Asset Management

<table>
<thead>
<tr>
<th>Economic/Financial capital</th>
<th>Natural capital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Built/Manufactured capital</td>
<td>Human capital</td>
</tr>
<tr>
<td></td>
<td>Social capital</td>
</tr>
</tbody>
</table>

Sustainable Value Creation
Our Unsustainable Take-Make-Waste Business Model

The game of business as we have played it for the last 150 years cannot continue. It has been fun, but if we keep playing the exponential growth game, everyone loses. Overconsumption and poor resource management have resulted in unsustainable use of natural and social capital. Climate change puts further pressure on natural systems, upon which all our social systems and economies depend. We have limited time to avoid a global tipping point that could impact all of humankind, including future generations, adversely and permanently.

As Figure 1.10 shows, today’s business model encourages companies to relentlessly deplete the natural capital that companies and communities require for their food, water, energy, and materials. Companies contribute directly or indirectly to systematic over-extraction and degradation of nature by physical means, such as deforestation, overharvesting of fish stocks, and depletion of farmlands. Nature is resilient and self-regenerative, but there is an ecological tipping point beyond which it cannot recover from this abuse. We are eating, and fouling, our own nest.

Excessive waste accumulates from things we dig up. Extractive businesses like mining and oil-and-gas companies notoriously leave tailings and other waste behind. Refineries, smelters, and manufacturing plants create more air, water, and soil pollution. When we burn natural resources for fuel, more waste is produced. Further, Earth’s air, water, and soil are treated as dump sites by companies and their customers. Nature cannot absorb our pollutants fast enough to avoid their buildup. We must do a better job of managing those waste thresholds or we risk drowning in our own garbage. To quote David Brower, “There is no business to be done on a dead planet.”

Finally, the current business model interferes with peoples’ needs being met. Many business models today contribute — directly or indirectly — to abuses of political or economic power that mean people don’t have access to the clean air, potable water, nutritious food, adequate shelter, and quality of life they need. Today’s business model encourages overconsumption by the haves at the expense of the have-nots. It is unsustainable.

To recap, today’s take-make-waste business model is no longer feasible. It violates all four of The Natural Step’s system conditions for a sustainable society. That contention is probably not the best conversation-opener with a senior business leader. But at some point along the line, sustainability champions should be ready to gently help executives break the hold of the unsustainable mental model of doing business.
Figure 1.10

Unsustainable Take-Make-Waste Model

- Degradation of nature by physical means
- Increasing concentrations of waste from extraction
- Overconsumption and undermining people’s ability to meet their needs
- Increasing concentrations of waste from manufacturing, use, and disposal

Elephant #1 in the Board Room: Growth

In today’s conventional business model, growth is a given, an imperative. “Grow or die” is the maxim of business leaders. The stock market punishes companies that do not meet growth expectations. Growth is good. Since growth is synonymous with progress and with winning in today’s game of business, we need to show how sustainability strategies are relevant and support companies’ growth goals.

Continuous growth is at odds with sustainability principles. We know that it is inherently unsustainable, given the finite carrying capacity of the planet. In medicine, continuous growth is called cancer, but this analogy is the elephant in many board rooms, something managers don’t talk about. Passionate, principled champions of sustainability find it repugnant to help companies grow, because it is against their core values to do so. That is why some shy away from the “sustainable development” label — development implies growth, and continuous growth is unsustainable. Ergo, “sustainable development” is an oxymoron.

Not necessarily. Sustainable enterprises decouple revenue growth from depletion of natural resources and creation of waste and pollution. Their products and services improve the quality of life for their employees, customers, and the communities they serve. They grow while decreasing their ecological and social footprints. Their rate of material throughput — the metabolism of the industrial system — does not endanger society, prosperity, and quality of life.

As I will show in this book, sustainable companies can nudge unsustainable competitors off the playing field because they spend less on resources and grow their revenue faster. That is a good thing. However, at some point even the continuous growth of more sustainable companies will be problematic. The planet cannot sustain the growing demand for its non-renewable natural capital nor can it continue to absorb more and more waste. Unless companies are resource, energy, and water neutral, and produce zero waste and zero pollution, we overshoot the carrying capacity of the planet.

Prosperity without Growth? was the title of a 2010 report from the Sustainable Development Commission that offers creative alternatives to continuous growth. As outlined in Figure 1.11, Peter Victor’s book Managing Without Growth shows how the growth imperative has failed us. Richard Heinberg’s book The End of Growth goes further and shows why continuous growth is blocked by resource depletion, environmental impacts, and rising levels of debt. That leads us to the second undiscussable elephant in the room: overconsumption.
Rich countries should turn away from economic growth as the primary policy objective and pursue more specific objectives that enhance well-being:

1. Continued economic growth worldwide is unrealistic due to environmental and resource constraints.
2. Rising incomes increase happiness and well-being only up to a level that has since been surpassed in rich countries.
3. Economic growth has not brought full employment, eliminated poverty, or reduced the burden of the economy on the environment.

Elephant #2 in the Board Room: Overconsumption

Consumption is the root cause of growth, since companies grow when the demand for their products grows. However, overconsumption is the second elephant that no one in the board room is talking about. A UN report warns that by 2050, humans could triple the amount of natural resources they consume unless economic growth is decoupled from resource use and current consumption rates.\(^6\) Warning that global population growth and rising economic prosperity could drive resource consumption far beyond what is sustainable on a finite Earth, the report states that nations must improve their rate of resource productivity — in other words, do more with less.

Excuses for rapacious consumption come in many guises. President Eisenhower encouraged consumerism as a way to address the 1950s recession. President Bush encouraged it after 9/11 as a patriotic duty to fight another economic speed bump. Increased consumption has become politicians’ panacea for economic slowdowns. If there is no consumer demand for a company’s goods and services, it stops producing them and lays off its workers. Laid-off workers cannot afford to buy goods and services, exacerbating the downward economic spiral.

We also justify consumption as a fun time-filler; a quest for social status; artificial fulfillment of psychological needs; a means of keeping up with the Joneses; or a way to reward ourselves for minor accomplishments. Whatever the reason, a want-borrow-buy mentality has given many consumers a severe case of “affluenza.” They are borrowing themselves into perilous debt. Our never-ending spending spree precipitates social and economic ruin.

When consumption takes on a life of its own, we risk overshooting the carrying capacity of the planet, as Mathis Wackernagel and William Rees argue in *Our Ecological Footprint*, illustrated in Figure 1.12. In part, this is because we do not really “consume” most goods. Rather, we use them and throw them away. The resulting buildup of waste is not sustainable. Annie Leonard’s *The Story of Stuff* video illustrates how overconsumption contributes to social and environmental degradation.\(^7\)

It is time we matured out of our unsustainable “gimme” culture. We need to shift our overconsumption mindset, portrayed by Ehrlich’s IPAT formula, to Ray Anderson’s version, as shown in Figure 1.13. We need a business paradigm that thrives on this more fulfilling need-save-buy approach to consumption of basic goods and services. Read on.
**Introduction**

**Figure 1.12**

**Overconsumption Leads to Overshoot**

![Graph showing the relationship between consumption, carrying capacity, and time.](source: Adapted from Mathis Wackernagel and William Rees, *Our Ecological Footprint*, New Society Publishers, 1996, p.54.)

**Figure 1.13**

**A Happier IPAT Formula**

**Ehrlich’s original formula:**

\[ I = P \times A \times T \]


**Ray Anderson’s “more happiness, less stuff” version:**

\[ I = \frac{(P \times a \times T_1)}{T_2} \]

- **I**: Impact on the environment
- **P**: Population
- **A**: Affluence driven by wants
- **a**: Responsible affluence driven by needs
- **T** and **T1**: Technology/stuff
- **T2**: Sustainable, renewable, recyclable technology

A Sustainable Borrow-Use-Return Business Model

It is one thing to criticize the dominant take-make-waste business model as unsustainable; it is another thing to design a model that is sustainable. As sustainability champions, we need to have a positive vision of the pot of gold at the end of a sustainability rainbow — a vision that does not depend on continuous growth and overconsumption. Here are five characteristics of a sustainable, cyclical, borrow-use-return business model that is better for the environment, society, and the company (illustrated in Figure 1.14).

1. **Radical resource productivity.** Companies stretch natural resources by increasing productivity for a given amount of a resource by factors of 4, 10, or even 100.

2. **Investment in natural capital.** Companies protect and restore ecosystems to sustain societal and business needs. They decouple economic growth from depletion of the global commons.

3. **Ecological redesign.** Companies eliminate human-made toxic chemicals from their production processes, minimize use of resources and energy, use closed-loop production systems, and decrease waste and harmful emissions.

4. **Service and flow economy.** When products become obsolete or unable to perform their intended service, the company takes them back and recycles or remanufactures the returned products.

5. **Responsible consumption.** Although it sounds like an oxymoron, responsible consumption reduces the demand for stuff and its associated pollution. Consumers make better-informed decisions based on a product’s place of origin, the labor conditions under which it was made, its ingredients, its packaging, its life-cycle ecological footprint, and other sustainability-related criteria.

New forms of company ownership and profit-sharing ensure company success is more equitably distributed. Resilient, locally owned enterprises are more accountable and devoted to serving community needs. Ethics, fairness, and transparency are baked into day-to-day governance systems, partnerships, community relations, and employment practices. Employees are treated like valuable contributors to the company’s success, and reward and recognition systems are aligned to encourage environmentally and socially responsible decisions and behaviors.

Such a model is a win-win-win for the environment, society, and the company. The company helps restore the economic, ecological, and social health of the planet. And it makes more profit. The business case for sustaining the planet is stronger than the business case for trashing it.
Sustainable Borrow-Use-Return Model

Investment in natural capital

Biomimicry/ Closed-loop production

Environment

Human Society

Human Economy

Use/ Manufacture

Use

Products’ services

“Waste”

Products

Rent/Lease

“Borrow

Renewables/ Non-renewables

Nutrients

Take-back

Nutrients/Recycle

Return

Radical resource productivity

Service and flow economy

The Five-Stage Sustainability Journey to a Sustainable Enterprise

As companies progress to become sustainable enterprises, we can position them on the five-stage sustainability continuum shown in Figure 1.15. Their business framework evolves from an unsustainable take-make-waste model in Stages 1, 2, and 3 to a sustainable borrow-use-return model in Stages 4 or 5. Executive mindsets, which in the early stages see initiatives labeled “green,” “environmental,” and “sustainable” as expensive and bureaucratic impediments to success, also evolve to recognize these initiatives as catalytic investments for competitive advantage.

- **Stage 1: Pre-Compliance.** The company cuts corners and tries not to get caught if it breaks the law or uses exploitative practices that cheat the system. It flouts environmental, health, and safety regulations. This stage is the norm in corrupt jurisdictions. Elsewhere, intelligent companies move quickly to Stage 2 in order to avoid fines, prosecution, and public embarrassment.

- **Stage 2: Compliance.** The business manages its liabilities by obeying labor, environmental, health, and safety regulations in the jurisdictions in which it operates. It has an environmental management system and company policies on environmental protection and human rights. It reactively does what it is legally bound to do while happily externalizing its ecological and social collateral damage. It installs pollution abatement equipment as end-of-pipe retrofits. Stage 2 is the baseline.

- **Stage 3: Beyond compliance.** A company voluntarily moves to Stage 3 when it realizes that it can save money with proactive operational eco-efficiencies, or at least avoid a public relations crisis and discourage new regulations. It reaps incremental “low-hanging fruit” by saving energy while reducing its associated carbon footprint; saving water; saving materials in its products and packaging; and saving waste costs.

  Stage 3 companies focus efforts where they can generate big results, fast. In Stage 3, sustainability initiatives are usually marginalized within specialized departments. They are tacked on as green housekeeping, rather than being institutionalized in the company’s governance systems.

  Companies in Stage 3 are not sustainable; they are just less unsustainable. Many Stage 3 companies have annual targets for further waste and electricity reduction and for the further elimination of toxic substances used in manufacturing, but the goals are increasingly difficult to meet. The law of diminishing returns inhibits further savings from eco-efficiency programs. A new phase must be entered. That is why companies aspire to Stage 4.
5. Purpose/Passion
   Align with founder’s/CEO’s values

4. Integrated Strategy
   Enhance company value/prosperity

3. Beyond Compliance
   Save with eco-efficiencies
   Avoid PR crisis
   Avoid threat of new regulations

2. Compliance
   Avoid fines, prosecution, bad PR

1. Pre-Compliance

Stages 4 and 5: Similar Behaviors, Different Motivations

About 90% of the behaviors of Stage 4 and Stage 5 companies look the same. Companies in both stages adopt a cyclical, borrow-use-return model of sustainable capitalism. They inject sustainability principles into their cultural DNA. Companies in both stages deploy business strategies that respect the environment, the community, and the ongoing business health of the firm. They unleash the untapped creative energies of all employees and managers, empowering them to suggest and implement sustainability-oriented expense-saving and revenue-growing opportunities. Sustainability expectations are aligned within the organization and across the entire value chain. Instead of seeing green costs and risks, companies in both stages see investments and opportunities. They make cleaner, greener products, and they embrace eco-effectiveness and lifecycle stewardship. They are sustainable enterprises doing no harm, doing good, and making more profit.

It is the motivations of companies in these two stages that differ, as represented by the dotted line between Stage 4 and Stage 5 in Figure 1.16. The means and the ends — the benefits and the co-benefits — of companies in the two stages are flipped. Think of Stage 4 companies as publicly traded companies that are chartered to put their shareholders’ interests first and ensure they reap competitive advantages from their sustainability initiatives. Think of Stage 5 companies as founder-owned companies with a priority on values-based corporate citizenship.

Many Stage 5 companies do not go through the first four stages. They start and end in Stage 5. Many of them are in the 98% to 99% of companies in the world that are small or medium-sized businesses. Some become famous (see Figure 1.17). Their company values mirror the values of their founders. If you were to congratulate CEOs of small Stage 5 companies for being sustainable enterprises, many would have no idea what you were talking about. They do not frame their strategies and behaviors in those terms. They just do it. Publicly traded companies may evolve to Stage 5 once the legitimacy of social and environmental purposes is embraced in the business community. Benefit Corporations (B Corps) embody this trend.

Does it matter whether a company is in Stage 4 or Stage 5? We would all like companies to do the right things for the right reasons, but Earth does not care. Our priority is to quickly reach the tipping point of a critical mass of sustainable firms to ensure a sustainable planet. Whatever convinces Stage 3 companies to aspire to Stage 4 will do. At Stage 4, they can see the wisdom of transforming to Stage 5 later.
Stage 5. Purpose/Passion
End: Contribute to a better world
Means: Be a successful company
Stage 5 companies do the right things because they’re the right things to do; they’re also good for the company.

Stage 4. Integrated Strategy
End: Be a successful company
Means: Contribute to a better world
Stage 4 companies do the right things because they’re good for the company; they’re also the right things to do.

Examples of Stage 5 Companies

<table>
<thead>
<tr>
<th>Company</th>
<th>Founders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ben &amp; Jerry’s Ice Cream</td>
<td>Ben Cohen and Jerry Greenfield</td>
</tr>
<tr>
<td>The Body Shop</td>
<td>Anita Roddick</td>
</tr>
<tr>
<td>Interface</td>
<td>Ray Anderson</td>
</tr>
<tr>
<td>Seventh Generation</td>
<td>Jeffrey Hollender</td>
</tr>
<tr>
<td>Patagonia</td>
<td>Yvon Chouinard</td>
</tr>
<tr>
<td>New Society Publishers</td>
<td>Chris and Judith Plant</td>
</tr>
</tbody>
</table>
The Four-Step Transformation from Stage 3 to Stage 4

Is it really possible for a for-profit company to become a sustainable enterprise — to make the radical leap from Stage 3 to Stage 4 on its sustainability journey? Yes, but it requires a significant transformation. Each of the four intermediate stepping-stones between Stage 3 and Stage 4 (shown in Figure 1.18) is designed to produce real business benefits.

- **Stage 3.0: Improve company eco-efficiencies and sustainability brand.** In this stage, the firm captures energy, water, materials, and waste handling eco-efficiencies within the company’s current internal operations and processes. Carbon footprint reductions usually accompany energy reductions in anticipation of a government-imposed price on carbon emissions. The company produces the same products and services and uses the same processes, but it does these more efficiently, passing the savings straight to its bottom line.

- **Stage 3.1: Improve supply chain conditions and footprints.** Acknowledging responsibility for the environmental and social impacts of its products throughout their life cycles, the company implements sustainable procurement practices. It works with suppliers to help them achieve the same eco-efficiencies that the company itself realized in Step 3.0. Suppliers are encouraged — or coerced — to clean up their acts or else risk losing the firm as a business-to-business (B2B) customer.

- **Stage 3.2: Create new eco-effective products, services, and leases.** The company redesigns its products and reengineers its processes to be radically more eco-effective, rather than simply eco-efficient. It co-creates new green products and services by collaborating with diverse stakeholders. Innovation abounds. The company reinvents itself, providing useful products and services in existing markets and in new, strategic markets. It leases products instead of selling them, and takes them back at the end of their useful life.

- **Stage 3.3: Embed sustainable governance.** The firm bakes sustainability into its decision making, its policies, and its culture. The company embeds sustainability principles in its financial measurement and management systems. It aligns its recognition, reward, evaluation, and remuneration systems to ensure everyone understands that sustainability considerations are important. Executive teams and boards revamp the company’s governance system to assess — and transparently report on — how the firm is contributing to a sustainable global economy, society, and the environment.

The four stepping-stones may be taken serially or in parallel. They may be looped, with more being accomplished on each step during each pass. The speed and sequence of the steps will vary. But they are all touched sooner or later.
Five-Stage Sustainability Journey

5. Purpose/Passion
   Align with founder’s/CEO’s values

4. Integrated Strategy
   Enhance company value/prosperity
   3.3: Embed sustainable governance
   3.2: Create new eco-effective products, services, and leases
   3.1: Improve supply chain conditions and footprints
   3.0: Improve company eco-efficiencies and sustainability brand

3. Beyond Compliance
   Capture eco-efficiencies; avoid PR and regulatory risks

2. Compliance

1. Pre-Compliance
The Need for a Relevant, Aligned Business Case

Though some companies recognize the opportunity and adopt some eco-efficiency initiatives in Stage 3.0, they do not fully exploit innovation, new market development, new services, and new technologies until Stage 3.2. One reason businesses do a slow-motion launch of sustainability strategies is that they lack an appropriate business case to quantify the benefit opportunities. Saving the world is a daunting agenda for any business, especially at a time when corporations are scrambling for market share in an increasingly competitive environment. Proposing a new direction that might put your company out of business in order to save the world is a career-ending strategy.

It does not help when occasional articles resurrect Friedman-esque anti-CSR proclamations that “the business of business is business.” For example, in his 2010 Wall Street Journal article “The Case against Corporate Social Responsibility,” Aneel Karnani declared: “The idea that companies have a responsibility to act in the public interest and will profit from doing so is fundamentally flawed.” Of course there was a flurry of rebuttals, rebuttals to the rebuttals, and so on. Usually the author finally admits that he was using terminology differently, or he was simply echoing the common misperception that doing good and doing well is an either-or proposition, or he was confusing means with ends. But by then the debate has resurrected the fear of deviating from the norm and has portrayed enlightened leaders as naive and misguided do-gooders. What nonsense.

The business benefits of sustainability initiatives need to be identified; they also need to be quantified and expressed in business language as bottom-line benefits relevant to the short- and long-term priorities of senior executives. If a strategy does not help the business, it is not going to survive on business leaders’ radar screens. The trick is to focus on “enlightened self-interest” and bottom-line benefits. Environmental and social co-benefits can be happy by-products; they don’t need to be the initial motivating rationale.

Money and numbers are the language of business, but most environmentalists know less about accounting than accountants know about the environment. Figure 1.19 shows the kind of metrics that will help convince companies that sustainability is a business opportunity, not an issue to be managed.

This book shows how big those benefits can be. It presents quantifiable evidence that investing in sustainable development pays off with real bottom-line benefits for those companies with the courage and foresight to embrace sustainability-related strategies.
Energy Savings at IBM

In 2010, IBM had 2,100 energy conservation projects at 299 locations that
delivered savings equal to 5.7% of the company’s total energy use versus the
corporate goal of 3.5%. These projects avoided more than 139,000 metric
tons of CO₂ emissions and saved $29.7 million in energy expenses.

Between 1990 and 2010, IBM saved 5.4 billion kWh of electricity consump-
tion, avoided nearly 3.6 million metric tons of CO₂ emissions (equal to 52% of
the company’s 1990 global CO₂ emissions), and saved $399 million through its
annual energy conservation actions.

To entice companies toward Stage 4, we need to show how sustainability-related strategies are relevant to, and help address, their current priorities. What are those priorities? Figure 1.20 shows business priorities in 2011 for a cross-section of 2,691 senior executives in Europe, North America, and Asia. At first glance, the list is disappointing to sustainability champions: improving sustainability is not a high priority for companies. In a list of the top 10 priorities for executives, it is in 10th place, trumped by revenue growth, customer retention, and cost cutting.

The phrase “Sell the sizzle, not the steak” is a common sales adage. When we buy a light bulb, we do not really want a light bulb; we want the light it provides. Similarly, when selling sustainability to for-profit companies, we need to position it as a set of strategies that enable existing goals, not as another goal to worry about. Corporate decision makers do not buy sustainability strategies to “improve corporate environmental sustainability and social responsibility”; they are attracted to them because they are levers to attain their other nine priorities sooner and better. They strive for Stage 4 on their sustainability journeys when their chartered corporate purpose is still to maximize shareholder value, but once they’ve achieved Stage 4, they realize it’s only a stepping stone to Stage 5, where the company’s purpose becomes maximizing stakeholder value, and where sustainability is seen as a goal in its own right rather than a set of enabling strategies.

To reach Stage 4 we need to link sustainability-related improvements to other business goals with a higher priority. For example, we need to show how sustainability-related strategies improve a company’s ability to acquire and retain talent (priority #7); lower the firm’s overall operating costs (priority #3); and help the company acquire and retain customers (priority #2). This book explains how to make those arguments.

This is the magic of the sustainability sale — it is not about sustainability. Sustainability is simply the means to high-priority business ends, not an end unto itself. To make it easy for executives to see the relevance of sustainability-related strategies and their benefits, it helps to map those benefits as enablers within familiar frameworks. We look at two next:

- The standard value chain framework, linking prerequisites to business success
- The standard income statement framework, used to calculate bottom-line profit

Later, in the chapter on risk mitigation (Benefit 7), we discuss a third framework for a standard business case that is used to make any business decision.
# Top 10 Business Priorities for 2011

<table>
<thead>
<tr>
<th>Category</th>
<th>Top Two Priorities by Category</th>
<th>Percentage Selecting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth</td>
<td>Grow overall company revenue</td>
<td>64%</td>
</tr>
<tr>
<td></td>
<td>Acquire and retain customers</td>
<td>54%</td>
</tr>
<tr>
<td>Efficiency</td>
<td>Lower the firm's overall operating costs</td>
<td>44%</td>
</tr>
<tr>
<td></td>
<td>Improve quality of products and/or processes</td>
<td>37%</td>
</tr>
<tr>
<td>Innovation</td>
<td>Improve our ability to innovate as an organization</td>
<td>32%</td>
</tr>
<tr>
<td></td>
<td>Drive new market offerings or business practices</td>
<td>28%</td>
</tr>
<tr>
<td>Talent</td>
<td>Acquire and retain talent</td>
<td>38%</td>
</tr>
<tr>
<td></td>
<td>Improve workforce productivity</td>
<td>31%</td>
</tr>
<tr>
<td>Transparency</td>
<td>Comply with governance regulations and requirements</td>
<td>14%</td>
</tr>
<tr>
<td></td>
<td><strong>Improve corporate environmental sustainability and social responsibility</strong></td>
<td><strong>10%</strong></td>
</tr>
</tbody>
</table>

Figure 1.21 shows a standard, generic business value chain. It is based on several other value chain frameworks and captures the most important elements from each. Its components are what it takes for any company to be successful. It is generic — it applies to any for-profit company, in any industry, anywhere. Do you want to start a company? Do you want it to be successful? Be good at each link in the value chain and you will succeed.

Following the chain from left to right, the company takes guidance from the market and develops the vision, goals, values, strategies, and systems that enable its success. If it is a manufacturing company, it makes quality products from raw materials, energy, and water. Companies in every sector want to attract, retain, and engage talented employees to produce and deliver their goods and services and to support customers. An unfortunate by-product of the company’s operations is waste. On the other hand, if the company’s products and services delight customers, the resulting revenue stream leads to the goal on the right-hand side — bottom-line profits.

Executives are continuously looking for ways to make the company’s value chain more robust and resilient. Smart sustainability strategies and programs can help strengthen key links in the chain. Each of the seven benefits associated with strategic sustainability programs can be arrayed beside the link in the value chain that it most promotes, as shown in Figure 1.22.

Aligning sustainability-related benefits with the value chain framework makes it evident how and where each benefit strengthens important links. Being able to relate the “so what?” of sustainability benefits to the standard value chain enhances their business importance. By showing how sustainability-related strategies lead to benefits that are helpful to key elements in their current business model, we gain executives’ support and accelerate their adoption of sustainability-based approaches. We make sustainability relevant.

Figure 1.22 reinforces a fundamental insight: social and environmental initiatives are not something a typical company pays attention to out of the goodness of its heart — they are business imperatives if a firm wants a winning value chain in today’s game of business. The benefit of sustainability initiatives is that they strengthen the links in the value chain. Their co-benefit is that they are also good for the environment and society.
Figure 1.21

The Standard Value Chain


Figure 1.22

Value Chain and Sustainability Benefits

Aligned with the Income Statement Framework

We need to make it easy for CEOs, CFOs, and other numbers-oriented executives in the C-suite to see how sustainability strategies contribute to the firm’s success. That is, we need to connect the dots between a typical financial statement and the benefits that can be realized from smart environmental, social, and governance (ESG) approaches and programs. Aligning sustainability benefits with income statement elements helps executives see how sustainability initiatives are relevant to their current financial priorities.

Figure 1.23 shows the basic elements of an income statement, also known as a profit-and-loss (P&L) statement. Accountants use three categories of expenses:

- Cost of goods sold (COGS), which includes the costs of acquiring and producing the inventory of goods/products that the company sells
- Selling, general, and administrative (SG&A), which include the costs of running the company
- Interest, tax, depreciation, and amortization (ITDA)

A manufacturing company would realize the biggest savings from sustainability initiatives in its COGS expenses, which include the cost of labor, energy, water, and material to acquire and produce the goods it sells. A services company would see most of the savings from sustainability initiatives in its SG&A expenses, since COGS are much less significant for a non-manufacturing company. For our purposes, we do not need to differentiate between COGS, SG&A, and ITDA, so we combine them into one group of “Expenses.”

Each of the seven benefits associated with smart sustainability strategies can be aligned with the element of the income statement that it most affects, as shown in Figure 1.24. The graphic makes evident how each benefit contributes to a more positive profit. Being able to relate the “so what?” of sustainability benefits to the income statement enhances the credibility of sustainability champions.

The income statement is the core framework that we use in the business case for sustainability. It determines the flow of the benefits that we examine. We start by looking at how sustainability strategies improve top-line revenue opportunities; then we monetize the benefits of reducing expenses and mitigating risks that might jeopardize profit.
**FIGURE 1.23**

**Income/Profit and Loss (P&L) Statement**

- **Revenue/Sales**

  - **Expenses**
    - Cost of goods sold (COGS)
    - Selling, general, and administrative (SG&A)
    - Interest, taxes, depreciation, and amortization (ITDA)

  = **Profit/Net Income**

**FIGURE 1.24**

**Income Statement and Sustainability Benefits**

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Income Statement</th>
<th>Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Increased revenue</td>
<td>Revenue</td>
<td>7. Reduced risks to revenue and expense</td>
</tr>
<tr>
<td>2. Reduced energy expenses</td>
<td>Expenses</td>
<td></td>
</tr>
<tr>
<td>3. Reduced waste expenses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Reduced material expenses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Increased employee productivity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Reduced turnover expenses</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

= **Profit**
The business case is about possibilities, not probabilities. We look at the potential benefits of employing best practices already used by leading companies. Real companies are already achieving each of the claimed benefits. We are simply projecting the potential profit improvements if a typical company decides to use the complete suite of best sustainability practices. We look at the bottom-line benefits that a company could achieve within three to five years if it commits to becoming a sustainable enterprise. Happily, most benefits flow sooner. A five-year horizon is strategically long enough to allow new initiatives to gain the necessary traction to yield the described results, but soon enough that it is within most companies’ attention span.

To illustrate the possibilities, we run the numbers for two composite companies at opposite ends of the company-size and materials-intensity spectrums. “Sam’s Solutions” represents a small company in the professional services sector. It doesn’t make products; it provides advisory, consulting, and professional services to other companies. Its product is expertise. “M&D Corp.” is a large manufacturing, retail, distribution, or wholesale corporation. Its product is goods. Using these two very different companies reinforces the fact that business case methodology is scalable and industry independent.

Figures 1.25 and 1.26 show the basic financial data for our two generic companies. The Sustainability Advantage Simulator at sustainabilityadvantage.com provides data profiles of four sample generic companies as starter sets with which to initialize the online simulator dashboard and worksheets. The financial data for the sample companies is based on extensive analysis of profiles of companies in the TSX 60, S&P 500, Statistics Canada, and BizMiner databases for different-sized companies in various industry sectors. Numerous conversations with business people confirmed the reasonableness of the normalized company profiles. Of course, if you have data for a specific company, use it to override the data for the sample company in order to see the potential benefits from sustainability strategies for your company.

All assumptions used in the benefit calculations are conservative. Why? Our low-ball assumptions generate profit improvements that are astounding enough. If we used more probable assumptions, we might strain the credibility of the methodology. As well, we would like executives to receive a pleasant surprise when they override the simulator’s starter set of data with their own company’s data; replace the simulator’s assumptions with their own experience, judgment, and gut instincts; and discover that the real business case is even more compelling than the simulator’s.
### Sam’s Solutions Profile

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
<th>Percentage of Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>$1,000,000</td>
<td></td>
</tr>
<tr>
<td>Energy expense</td>
<td>$20,000</td>
<td>2%</td>
</tr>
<tr>
<td>Materials and water expense</td>
<td>$50,000</td>
<td>5%</td>
</tr>
<tr>
<td>Total salary / payroll expense</td>
<td>$300,000</td>
<td>30%</td>
</tr>
<tr>
<td>Profit</td>
<td>$70,000</td>
<td>7%</td>
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<tr>
<td>Average salary, including benefits</td>
<td>$50,000</td>
<td></td>
</tr>
<tr>
<td>Number of employees</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

### M&D Corp. Profile

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>$500,000,000</td>
<td></td>
</tr>
<tr>
<td>Energy expense</td>
<td>$10,000,000</td>
<td>2%</td>
</tr>
<tr>
<td>Materials and water expense</td>
<td>$150,000,000</td>
<td>30%</td>
</tr>
<tr>
<td>Total salary / payroll expense</td>
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<td>30%</td>
</tr>
<tr>
<td>Profit</td>
<td>$35,000,000</td>
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</tr>
<tr>
<td>Average salary, including benefits</td>
<td>$40,000</td>
<td></td>
</tr>
<tr>
<td>Number of employees</td>
<td>3,750</td>
<td></td>
</tr>
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</table>