

# Synopsis

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For additional information contact:  
Rocky Mountain Institute  
1739 Snowmass Creek Road  
Snowmass, CO 81654  
970-927-3851, Fax 970-927-4510  
media@rmi.org

Rocky Mountain Institute



## *Natural Capitalism: Creating the Next Industrial Revolution*

by **Paul Hawken, Amory B. Lovins, and L. Hunter Lovins**

Previous industrial revolutions made people 100 times more productive when low per-capita output was limiting progress in exploiting a seemingly boundless natural world. Today we face a different pattern of scarcity: abundant people and labor-saving machines, but diminishing natural capital.

*Natural capital* refers to the earth's natural resources and the ecological systems that provide vital life-support services to society and all living things. These services are of immense economic value; some are literally priceless, since they have no known substitutes. Yet current business practices typically fail to take into account the value of these assets—which is rising with their scarcity. As a result, natural capital is being degraded and liquidated by the very wasteful use of resources such as energy, materials, water, fiber, and topsoil.

The next industrial revolution, like the previous ones, will be a response to changing patterns of scarcity. It will create upheaval, but more importantly, it will create opportunities.

*Natural capitalism* is a new business model that enables companies to fully realize these opportunities. The journey to natural capitalism involves four major shifts in business practices, all vitally interlinked:

- **Radically increase the productivity of natural resources.** Through fundamental changes in both production design and technology, farsighted companies are developing ways to make natural resources—energy, minerals, water, forests—stretch 5, 10, even 100 times further than they do today. The resulting savings in operational costs, capital investment, and time can help natural capitalists implement the other three principles.
- **Shift to biologically inspired production models and materials.** Natural capitalism seeks not merely to reduce waste but to eliminate the very concept of waste. In closed-loop production systems, modeled on nature's designs, every output either is returned harmlessly to the ecosystem as a nutrient, like compost, or becomes an input for another manufacturing process. Industrial processes that emulate the benign chemistry of nature reduce dependence on nonrenewable inputs, make possible often phenomenally more efficient production, and can result in elegantly simple products that rival anything man-made.
- **Move to a “service-and-flow” business model.** The business model of traditional manufacturing rests on the sale of goods. In the new model, value is instead delivered as a continuous flow of services—such as providing illumination rather than selling light bulbs. This aligns the interests of providers and customers in ways that reward them for resource productivity.
- **Reinvest in natural capital.** Capital begets more capital; a company that depletes its own capital is eroding the basis

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of its future prosperity. Pressures on business to restore, sustain, and expand natural capital are mounting as human needs expand, the costs of deteriorating ecosystems rise, and the environmental awareness of consumers increases. Fortunately, these pressures all create business opportunity.

The next Industrial Revolution is already being led by companies that are learning to profit and gain competitive advantage from these four principles. Not only that, their leaders and employees are feeling better about what they do.

Shortages of work and hope, of satisfaction and security, are not mere isolated pathologies, but result from clear linkages between the waste of resources, money, and people. The solutions are intertwined and synergistic: firms that downsize their unproductive tons, gallons, and kilowatt-hours can keep more people, who will foster the innovation that drives future improvement.

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