



ALPHA MOTORS, LTD.: **Integrating Life-Cycle Environmental Concerns into Product Design**

For more than a decade, WRI's Sustainable Enterprise Program (SEP) has harnessed the power of business to create profitable solutions to environment and development challenges. BELL, a project of SEP, is focused on working with managers and academics to make companies more competitive by approaching social and environmental challenges as unmet market needs that provide business growth opportunities through entrepreneurship, innovation, and organizational change.

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We are continuing to adjust our environmental management systems to provide the proper tools and processes to ensure continuous improvement in our environmental performance. We are committed to a comprehensive system of environmental management in all of our business activities.

Dennis Minano
Vice President of Environment & Energy
General Motors

Mike Barns, environmental champion of Alpha Motors's product design group, was reading during lunch when a headline in *Automotive Weekly* jumped out at him: "A Volvo will be environmentally labeled before the year 2000." Volvo was using a new "life-cycle tool" to assess the impacts of its products on the natural environment and would produce its first 100 percent-analyzed car in only three years. Despite Alpha's environmental commitment, Barns expected that the automaker's progress would be incremental. His own decision to push Design for the Environment (DfE) had been timely: that day he would head up the first pilot project using life-cycle analysis in a product design decision. If the design team could demonstrate the benefits of DfE-oriented tools and procedures, management would likely make them a permanent aspect of the product development process. Barns felt confident that these tools would help justify environmentally preferable decisions.

This case was prepared by Sandra Rothenberg of MIT's Sloan School of Management, Michael Lenox of MIT's Technology Management and Policy Program, Benjamin Jordan of MIT's Department of Civil and Environmental Engineering, and Dr. Frank Field III of the MIT Material Science Laboratory. Special thanks to Professor Jake Jacoby for his comments and assistance and to members of the automobile community who provided information for this case and to Saturn staff for help in preparing the case. While inspired by experiences at Saturn, parts of this case have been significantly altered for educational purposes. This case is intended to serve as the basis of class discussion rather than as an illustration of either effective or ineffective handling of a product design decision. Copyright © 1998 World Resources Institute.