Concise Self-Assessment Guide to Environmentally Sustainable Commerce

West Michigan Sustainable Business Forum

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Concise Self-Assessment Guide to Environmentally Sustainable Commerce

Introduction

This guide has been developed by the West Michigan Sustainable Business Forum to be used by companies interested in the examination of environmental sustainability.

Environmentally sustainable commerce produces products or services without reducing the capacity of the environment to provide for future generations. This guide can help a company begin its journey toward sustainability.

The guide is a self-assessment tool. It is designed for the environmental leader to work with representatives from key areas within the company to identify ways to increase product and service efficiency, reduce energy demands, and reduce negative environmental impact. It helps to identify and to prioritize areas in each stage of the product life cycle where opportunities to promote sustainable development exist. It also is intended as an internal subjective analysis to help the company achieve continuous improvement.

This guide is divided into eight areas that affect a company's environmental performance: environmental management systems, product/service design, facilities, purchasing, operations, packaging, delivery/installation, and marketing/sales. Each area has a set of questions; responses are selected by circling one of the numbers next to each question. Choose the response that is most accurate for your company.

This guide is designed to be flexible enough to fit any company's business circumstances. Analysis can be done company-wide, plant-by-plant, or product line by product line. It is not a test and there are no right or wrong answers. If any question does not apply, it can be omitted without affecting the total score.

What do the Numbers Mean?

If you circle "N/A" it means that the question does not apply to your company.

If you answer the question "1" ❶ ② ③ ④ ⑤ it means that you feel this factor is being performed to a *very little extent*.

If you answer the question "2" ① ❷ ③ ④ ⑤ it means that you feel this factor is being performed to a *little extent*.

If you answer the question "3" ① ② ❸ ④ ⑤ it means that you feel this factor is being performed to *some extent*.

If you answer the question "4" ① ② ③ ❹ ⑤ it means that you feel this factor is being performed to a *great extent*.

If you answer the question "5" ① ② ③ ④ ❺ it means that you feel this factor is being performed to a *very great extent*.

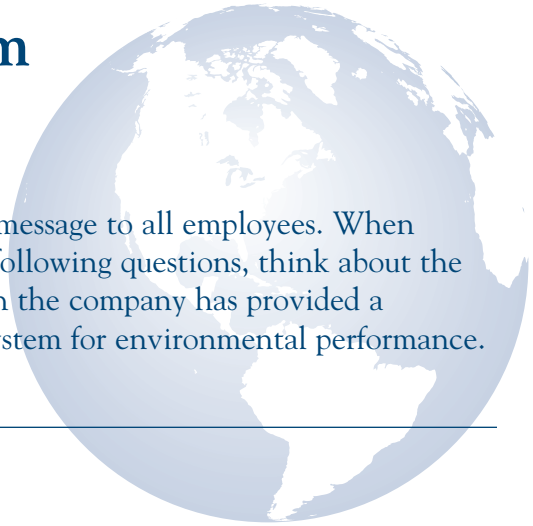
Scale:

❶	❷	❸	❹	❺
To a very little extent	To a little extent	To some extent	To a great extent	To a very great extent

Scoring

For each area, add the response numbers circled and divide the total by the number of questions answered. This will result in a number between one and five. Enter this number on the score sheet for each area.

Environmental Management System



ABOUT ENVIRONMENTAL MANAGEMENT SYSTEMS

Top management of each company bears the burden of providing strategy and direction for environmental compliance and performance. The commitment of officers to achieve a high level of sustainability communicates a performance and accountability message to all employees. When answering the following questions, think about the extent to which the company has provided a management system for environmental performance.

TO WHAT EXTENT . . .

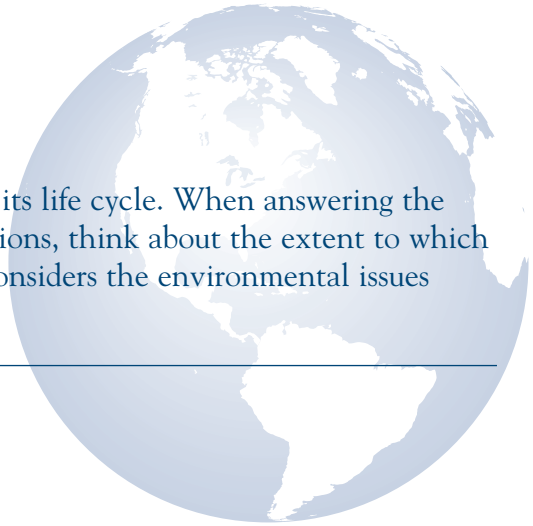
1. has top management developed a formal environmental management system?	N/A	1	2	3	4	5
2. has the company developed a formal environmental policy statement?	N/A	1	2	3	4	5
3. does top management give the same emphasis to environmental programs as it does to production, quality, cost, and safety issues?	N/A	1	2	3	4	5
4. does top management seek continuous improvement through periodic audits of environmental activities and guarantee corrective actions?	N/A	1	2	3	4	5
5. has top management designated a specific employee to coordinate environmental programs or initiatives?	N/A	1	2	3	4	5
6. does top management provide the resources required in order to meet environmental goals and objectives?	N/A	1	2	3	4	5
7. are policies, job descriptions and performance standards used to establish and maintain line responsibility for environmental compliance?	N/A	1	2	3	4	5
8. is environmental recordkeeping maintained and controlled?	N/A	1	2	3	4	5
9. are middle managers trained to understand environmental programs and policies in order to achieve the environmental goals and issues of their departments?	N/A	1	2	3	4	5
10. are environmental costs or credits allocated to the area where they are generated?	N/A	1	2	3	4	5
11. are employees at all levels educated concerning environmental awareness and sustainability?	N/A	1	2	3	4	5

Environmental Management System Subtotal ____

Scale:

❶	❷	❸	❹	❺
To a very little extent	To a little extent	To some extent	To a great extent	To a very great extent

Product/Service Design



ABOUT DESIGN

Industrial designers are usually the first to conceptualize how, and of what materials, new products will be manufactured. Therefore, they have the earliest influence on the sustainability of the product during its life cycle. When answering the following questions, think about the extent to which the company considers the environmental issues involved.

TO WHAT EXTENT . . .

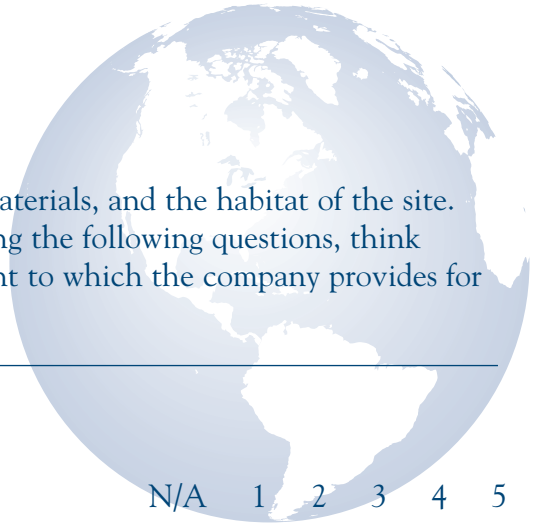
1. has the company developed a formal policy to reduce the dependence on non-sustainable natural resources in the design of its new products or services?	N/A	1	2	3	4	5
2. does the product concept consider the use of recycled materials?	N/A	1	2	3	4	5
3. will the product use sustainably acquired or renewable materials?	N/A	1	2	3	4	5
4. will the product or service include materials that require a minimum of energy use in their production?	N/A	1	2	3	4	5
5. will the product be made of materials that require a minimum of transportation?	N/A	1	2	3	4	5
6. will the product require a minimum of packaging?	N/A	1	2	3	4	5
7. will the packaging be recyclable at the end of its use?	N/A	1	2	3	4	5
8. is the product designed to produce a minimum of toxic emissions throughout its life cycle?	N/A	1	2	3	4	5
9. will the product or service be maintainable with non-toxic materials?	N/A	1	2	3	4	5
10. will the components be economically separable, reusable, and/or recyclable at the end of the products' useful life?	N/A	1	2	3	4	5

Product/Service Design Subtotal ____

Scale:

❶	❷	❸	❹	❺
To a very little extent	To a little extent	To some extent	To a great extent	To a very great extent

Facilities



ABOUT FACILITIES

Plant and/or facilities engineers and managers are concerned with facility construction and function. The environmental elements that affect a facility's operation involve energy consumption, construction materials, and the habitat of the site. When answering the following questions, think about the extent to which the company provides for these issues.

TO WHAT EXTENT . . .

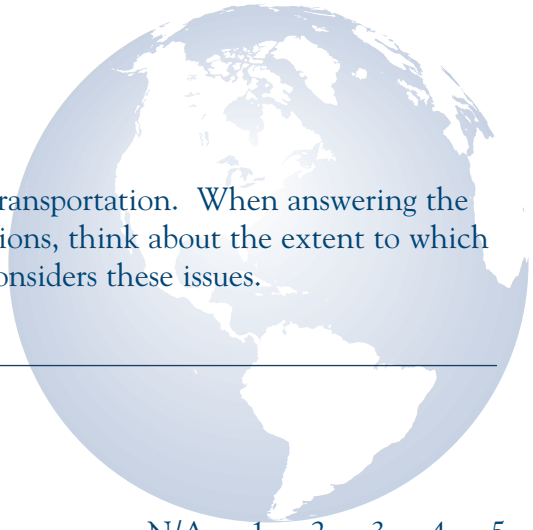
1. does the company track the reduction of energy use in its facilities?	N/A	1	2	3	4	5
2. does the company track the reduction of water use in its facilities?	N/A	1	2	3	4	5
3. does the company require the use of non-toxic and non-hazardous maintenance and janitorial supplies?	N/A	1	2	3	4	5
4. are building demolition materials recycled or reused?	N/A	1	2	3	4	5
5. are electrical, mechanical, and lighting fixtures chosen for energy efficiency?	N/A	1	2	3	4	5
6. does new construction site selection consider appropriate environmental use of land?	N/A	1	2	3	4	5
7. is the efficient use of energy, water, and other materials considered in the design of a new facility?	N/A	1	2	3	4	5
8. does the company specify the use of construction materials that contain recycled components?	N/A	1	2	3	4	5
9. is landscaping used to encourage and maintain the natural environment at the site?	N/A	1	2	3	4	5
10. does the company seek to promote biological diversity in the development of new facility sites?	N/A	1	2	3	4	5

Facilities Subtotal ____

Scale:

❶	❷	❸	❹	❺
To a very little extent	To a little extent	To some extent	To a great extent	To a very great extent

Purchasing



ABOUT PURCHASING

The purchasing agent has the opportunity to influence the selection of raw materials while considering environmental criteria. Elements to be considered include quantity, recyclability, toxicity, shelf-life, and transportation. When answering the following questions, think about the extent to which the company considers these issues.

TO WHAT EXTENT . . .

1.	has the company developed a formal plan to reduce its dependence on non-sustainable natural resources?	N/A	1	2	3	4	5
2.	does the company identify and purchase raw materials that are derived from sustainable resources?	N/A	1	2	3	4	5
3.	does the purchasing department seek coordination with design and engineering in the acquisition of sustainable raw materials and vendor parts?	N/A	1	2	3	4	5
4.	does the company have environmentally-oriented purchasing guidelines for supplier product specifications?	N/A	1	2	3	4	5
5.	does the purchasing department promote minimization of packaging from suppliers?	N/A	1	2	3	4	5
6.	does the company specify the use of recycled content in materials?	N/A	1	2	3	4	5
7.	does the company track its supplier's environmental performance?	N/A	1	2	3	4	5
8.	does the company give preference to suppliers who have demonstrated superior environmental performance?	N/A	1	2	3	4	5
9.	does the company educate and/or assist its vendors in meeting environmental goals?	N/A	1	2	3	4	5

Purchasing Subtotal ____

Scale:

❶	❷	❸	❹	❺
To a very little extent	To a little extent	To some extent	To a great extent	To a very great extent

Operations

ABOUT OPERATIONS

Production and/or operation managers are responsible for the actual manufacturing of the product and the resulting waste and/or emissions.

When answering the following questions, think about the extent to which the company considers these actions.

TO WHAT EXTENT . . .

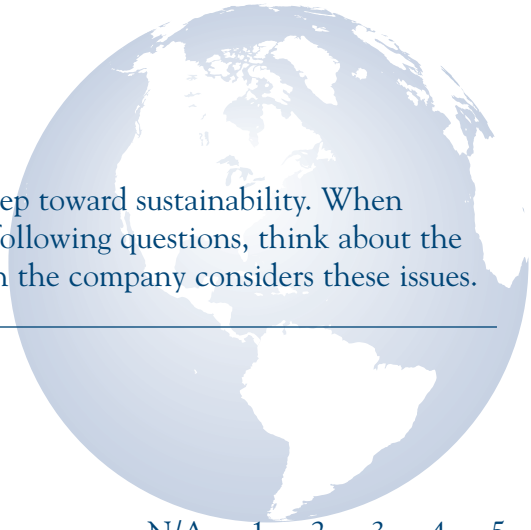
1. has the company developed a formal plan to identify, implement and/or redesign processes or procedures in order to improve environmental performance?	N/A	1	2	3	4	5
2. are environmentally responsible standard operating procedures developed?	N/A	1	2	3	4	5
3. has the company developed a pollution prevention program for its operations?	N/A	1	2	3	4	5
4. is waste minimization considered in all processes?	N/A	1	2	3	4	5
5. does the company require and/or promote recycling throughout its operations?	N/A	1	2	3	4	5
6. does the company track the reduction of its waste?	N/A	1	2	3	4	5
7. does the company explore the exchange of waste that is a raw material for another company?	N/A	1	2	3	4	5
8. has the company developed a system to identify, reduce and/or eliminate hazardous and/or toxic materials?	N/A	1	2	3	4	5
9. has the company developed a housekeeping program that reduces negative impact on the environment?	N/A	1	2	3	4	5

Operations Subtotal ____

Scale:

❶	❷	❸	❹	❺
To a very little extent	To a little extent	To some extent	To a great extent	To a very great extent

Packaging



ABOUT PACKAGING

The packaging used to transport products and raw materials can have significant environmental impact. The reduction and/or reuse of packaging materials is a step toward sustainability. When answering the following questions, think about the extent to which the company considers these issues.

TO WHAT EXTENT . . .

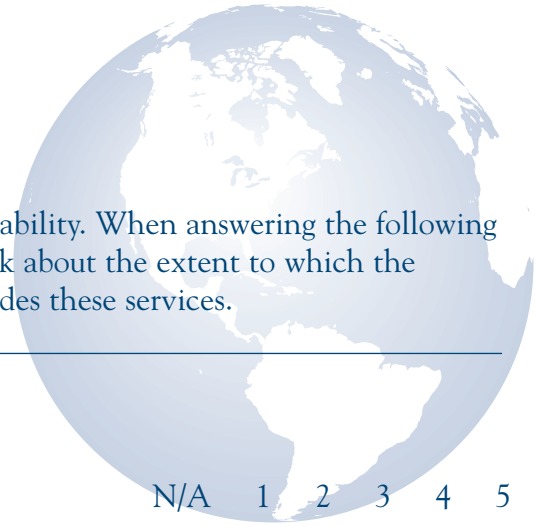
1.	has the company developed and implemented environmentally-oriented packaging guidelines for product specifications?	N/A	1	2	3	4	5
2.	does the company promote minimization of packaging?	N/A	1	2	3	4	5
3.	do packaging and purchasing departments coordinate to minimize packaging?	N/A	1	2	3	4	5
4.	is incoming packaging material reused/recycled?	N/A	1	2	3	4	5
5.	are goals set to increase recycled content of packaging?	N/A	1	2	3	4	5
6.	are goals set to decrease the waste content of packaging?	N/A	1	2	3	4	5
7.	do the packaging guidelines include post consumer packaging directions?	N/A	1	2	3	4	5
8.	are remanufactured pallets/skids utilized in shipping and manufacturing?	N/A	1	2	3	4	5
9.	are packaging guidelines incorporated in the design process to include minimization, recycled content, recyclability/reusability and reduction of transportation energy?	N/A	1	2	3	4	5
10.	does the company ship its products in returnable packaging?	N/A	1	2	3	4	5

Packaging Subtotal _____

Scale:

❶	❷	❸	❹	❺
To a very little extent	To a little extent	To some extent	To a great extent	To a very great extent

Delivery and/or Installation



ABOUT DELIVERY AND/OR INSTALLATION

Delivery and/or installation brings products or services into contact with customers. Issues like transportation and assembly methods impact the level of sustainability. When answering the following questions, think about the extent to which the company provides these services.

TO WHAT EXTENT . . .

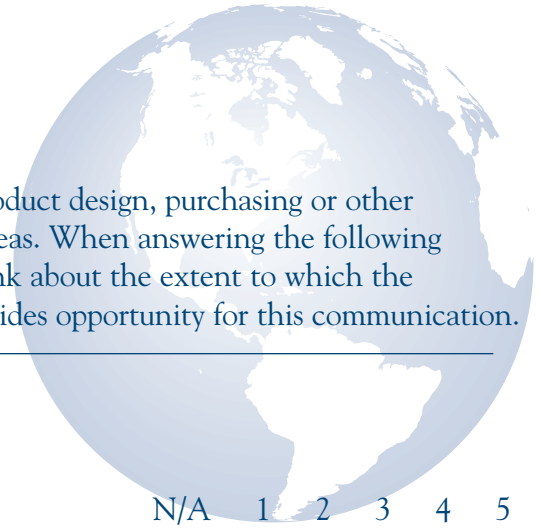
1.	does the company seek to minimize energy use in the delivery of its products and/or services?	N/A	1	2	3	4	5
2.	does internal distribution seek to minimize multiple handling and repackaging of product prior to shipment?	N/A	1	2	3	4	5
3.	does the company offer a direct ship option to customer locations?	N/A	1	2	3	4	5
4.	does the company use recyclable packaging materials?	N/A	1	2	3	4	5
5.	does the delivery or installation of the company's products or services reduce the waste burden for its customers?	N/A	1	2	3	4	5
6.	does the delivery or installation of the company's products or services minimize hazardous or toxic materials to be used or emitted?	N/A	1	2	3	4	5

Delivery and/or Installation Subtotal ____

Scale:

❶	❷	❸	❹	❺
To a very little extent	To a little extent	To some extent	To a great extent	To a very great extent

Marketing and Sales



ABOUT MARKETING AND SALES

Marketing and Sales activities often provide the best opportunity for intimate communication between manufacturers and customers. Recommendations to improve product or service sustainability should be directed to product design, purchasing or other appropriate areas. When answering the following questions, think about the extent to which the company provides opportunity for this communication.

TO WHAT EXTENT . . .

1. does the company measure its customers' demand for environmentally responsible products and/or services?	N/A	1	2	3	4	5
2. does the company promote products that are manufactured from sustainable sources of raw materials?	N/A	1	2	3	4	5
3. does the company solicit customer feedback concerning the cost of product disposal at the end of its useful life?	N/A	1	2	3	4	5
4. does the company communicate the product/service life cycle cost to its customers?	N/A	1	2	3	4	5
5. does the company offer its customers the option of refurbishing/refilling/reusing their products?	N/A	1	2	3	4	5
6. does the company offer an exchange program to accept old products when new products are purchased?	N/A	1	2	3	4	5
7. does the company provide a method for input exchange between sales/marketing and product design?	N/A	1	2	3	4	5
8. does marketing/sales communicate sustainability issues to customers?	N/A	1	2	3	4	5
9. does management evaluate marketing/sales performance using environmental criteria?	N/A	1	2	3	4	5
10. do marketing/sales literature and price lists use sustainable materials?	N/A	1	2	3	4	5

Marketing and Sales Subtotal ____

Scale:

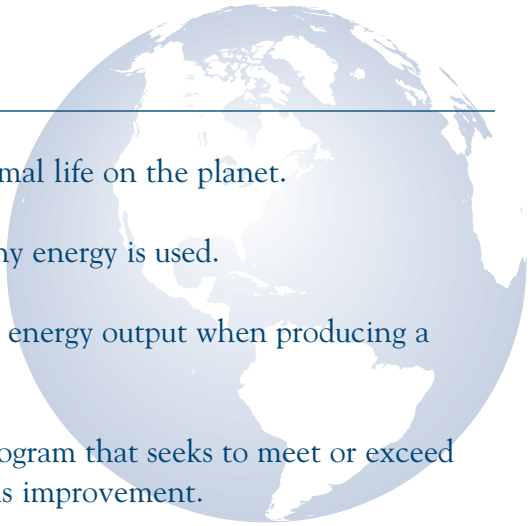
❶	❷	❸	❹	❺
To a very little extent	To a little extent	To some extent	To a great extent	To a very great extent

Score Sheet

Area	Subtotal Score
1. Environmental Management System	_____
2. Product/Service Design	_____
3. Facilities	_____
4. Purchasing	_____
5. Operations	_____
6. Packaging	_____
7. Delivery and/or Installation	_____
8. Marketing and Sales	_____
Total =	
Total divided by 8 =	

In order to understand the relevance of this score, multiply the final number by 20 which will convert the score to a percentage ranking of sustainability performance.

Glossary



Bio-diversity refers to the complex interdependency of all plant and animal life on the planet.

Energy Consumption means the rate, amount and/or extent to which any energy is used.

Energy Efficiency means the ratio of energy effectively used to the total energy output when producing a product, service, or effect.

Environmental Management System means a comprehensive, formal program that seeks to meet or exceed regulatory compliance standards and establishes objectives for continuous improvement.

Environmental Performance refers to the range of compliance and/or competency practices in any environmental area according to acknowledged or accepted standards.

Line Responsibility refers to the control or authority for environmental performance at each level of company activity.

Product Life Cycle refers to the range of product development from creation to disposal or reuse.

Recyclable means any product, or product component, which can be reprocessed for use.

Recycling is the process of creating raw materials for a product from used and/or discarded products.

Renewable Energy means a source of energy that is not depleted when used.

Source Reduction means decreasing the amount of raw materials used in manufacturing a product or creating a service.

Sustainability means "meeting the needs of the present without compromising the ability of future generations to meet their own needs." (World Commission on Environment and Development).

Sustainable Design refers to the process of developing a new product while considering its consequences to nature.

Sustainable Development means "adopting business strategies and activities that meet the needs of the enterprise and its stakeholders today while protecting, sustaining and enhancing the human and natural resources that will be needed in the future." (International Institute for Sustainable Development).

Waste Stream refers to any waste material or discarded product component from the point of generation to its final destination.

Additional Resources

WRITTEN MATERIALS

Business Strategy for Sustainable Development, Leadership, and Accountability for the '90s, International Institute for Sustainable Development, 161 Portage Avenue East - 6th Floor, Winnipeg, Manitoba, Canada R3BOY4, 1992.

Design for Recyclability, Rutger's Center for Packaging and Resource Recovery, (980) 445-3679.

EC's Eco-Management and Audit Scheme, Cutter Information Corporation, 37 Broadway, Arlington, MA, 02174-5539, 1993.

Environmental by Design, Kim Leclair and David Rousseau, Hartley and Marks Publishers; Vancouver, BC., 1993.

Environmental Resource Guide (AIA), John Wiley and Sons, Publishers; NY., 1996.

Sustainable Development: A Guide to Our Common Future, The Report of the World Commission on Environment and Development, The Global Tomorrow Coalition, Oxford University Press, 200 Madison Avenue, New York, New York, 10016, 1989.

Sustainable Development Report for 1995, Ontario Hydro, 700 University Avenue, Toronto, Ontario M5G 1X6.

INTERNET RESOURCES

Environmental Organization Web Directory. http://www.webdirectory.com

Environmental News Network. http://www.enn.com

Ecodesign Resources Society of Vancouver. http://www.ecodesign.b.c.ca./eco.html

Environmental Choice, Canada. http://www.ns.doe.ca/g7/eco-can.html

Green Apple Map. http://www.users.interport.net~webcrawler/resources.html

Michigan Department of Environmental Quality. http://www.deq.state.mi.us

National Pollution Prevention Center. http://es.inel.gov/new/contacts/pubtrng/ed2.html/#top

Rocky Mountain Institute. http://solstice.crest.org/rmi

Ecomall. http://www.ecomall.com

About the West Michigan Sustainable Business Forum

The West Michigan Sustainable Business Forum encourages the implementation of business practices that promote sustainable development. Its primary goal is to investigate ways to improve corporate profitability while enhancing the long term health of the environment. Chartered by the West Michigan Environmental Action Council and twelve founding West Michigan companies, the Sustainable Business Forum continues to explore environmentally sustainable commerce.

The Technical Committee of the West Michigan Sustainable Business Forum which has prepared this guide consists of the following members: Tony Gleason, Ann Kuzee, Clem Lay, Joe Manhart, Tom Newhouse, Susan Paauwe, Danielle Sieh and Bill Stough.

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