

Natural Systems Mapping And Sustainable Business Practices: Converting EMS to SMS

A Presentation to ISIN 2003



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Overview of the Dialogue

➤ How SMS Differs from EMS

- × Prescriptive
- × Foundation is in substantive, not process, documents
- × Evaluates economic and social/ethical risks/aspects
- × Entire enterprise is “run on the SMS”

➤ Success Stories and Lessons Learned

- × Inadequacies of current Sustainability Models
- × Difficulties in Implementing the Idea
- × Case Studies of Success – Genencor and Designworks/USA

➤ The Next Everest – An Integrity Management System Guidance



The Emergence of SMS

Design Problems With ISO 14001

- Not “prescriptive”
- Public policy elements are optional
- Doesn’t force distribution of responsibility
- Excludes products and people
- ***Does not Implement Brand or Integrity***
- Leaves out 60-70% of the Enterprise

Designing and Building the SMS

- BMW Group – Maintain advantage that, from 1997-1999, EMS gave them
- Genencor International – Steal a march on their largest competitor and set foundation for entering DJSI
- Take ISO 14001, Agenda 21, GRI Phase I, DJSI Criteria, SA 8000, and Integrity Management tools, and mix well . . .

Summarizing Agenda 21

- Challenge from BMW Group and Genencor
– Make Agenda 21 a Business Tool
- Reinvent the way we audit and assess our progress
- Renew the metrics development process and improve on the GRI model
- Provide measurable competitive advantage in all three areas of Sustainability

The challenge of DELIVERING Sustainable Practices

➤ Typical Stage One Responses

- ✗ Programmatic Delivery (circumstantial sustainability)
- ✗ Agenda 21 Template (the Agenda is not enough)
- ✗ Scattergun approach
- ✗ Problem – these are all diffuse and non-systematic

Success Stories



Genencor International, Inc.™

Genencor International

- Develops biotechnology products for industrial chemicals, agriculture, and health care markets
- 1000+ employees
- 250+ products
- 3000+ patents
- Owned by Danisco, Eastman, and public shareholders
- Turnover of ~\$1 billion

Genencor Locations



Benefits

- Not designed for Registration – simple, flexible model, tailored to each site and culturally relevant
- Put 60% of all managers at sites within the system
- Changed the focus to People, Products, Planet
- Reinvented Auditing Model
 - × People, Risk, Change, and Decisions

Early Results - Ecology

- Substantial reduction in resources at manufacturing facilities and operating/variable costs
 - × Reduction in use of corn = 200,000 bushels per year (Elkhart, IN)
 - × 47% reduction in water use (Rochester, NY)
 - × 67% reduction in water use (Hanko, Finland)
 - × 74% reduction in steam use (Hanko, Finland)
 - × Electricity use reduced by 24% = 6M KWH (Elkhart, IN)
 - × Change from an acetone process to aqueous = reduction in waste/use from 5M liters/year to 0 (Brugge, Belgium)
- **Many more examples..... Estimated savings \$1.1 million over two years**



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Designworks/USA Sustainability Policy Statement:

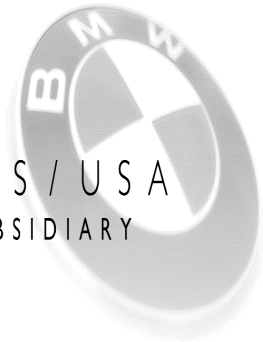
“We practice responsibility in all areas of human endeavor, by *pursuing services that positively affect the lifestyles of our clients and their customers.*”



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➤ We meet this goal by:

- ❖ Meeting or exceeding all [EH&S] legal requirements
- ❖ Delivering services that *incorporate our devotion* to responsible resource use, environmental protection, economic resilience, and social responsibility
- ❖ Building relationships with all of our stakeholders, including our suppliers and contractors, *to share our SMS goals, encouraging them to incorporate similar practices and goals into their own organizations, and working with us to improve the quality and effectiveness of our SMS*



➤ SMS Design

- ❖ Follow a bespoke Guidance Document
- ❖ Bake in core industrial design concepts
- ❖ Be true to Agenda 21 – Chapters 4, 28, 30, 37
- ❖ Implement BMW Group Environmental Guidelines in Central Functions
- ❖ Leverage DW's place in the market – move the needle with their clients

➤ *Answer the Question: What is a Sustainable Product?*



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➤ SMS Results (Redesigning the Marketplace/Changing Consumption Patterns – A21 Ch. 4)

- ❖ Supplier Management (Green Purch. vs. Sust. Purch.)
 - ❖ Marketing & Communications/Community Involvement
 - ❖ Operations
 - ❖ Engineering & Design (the E-Bin)
 - ❖ Human Resources
- ❖ Formal Registration 17 October 2001 – First Industrial Design Firm in the World to Achieve 14001 and first organization of any kind in the world to achieve SMS registration

3 Keys to Balanced Indicators

- Align leading indicators with trailing indicators
- Measure performance in more than one part of the enterprise
- Contribute to sustainability gains outside the four “walls” of the enterprise

Indicators That Meet These Criteria

➤ Environmental

- ✘ Contributions to environmental restoration
- ✘ Focus on sustainability indicators relevant in the geographies where key customers operate and use the products

➤ Economy

- ✘ # project starts vs. project clearances through S³ filters
- ✘ % stock held by SRI funds
- ✘ Stock valuation/employee vs. competitors

Indicators That Meet These Criteria

➤ Social/Culture

- × Speed of promotion
- × Hours worked (1) on projects; (2) on new learning; (3) on administration; (4) on community sustainability building
- × Creativity: #suggestions for business improvement; % time of delegations to duties outside assigned department; % time of delegations to duties in community or secondment to schools

Our Next Planned Revisions to SMS

- Ethical measures
- Indicators of brand alignment
 - × Products
 - × Brand
 - × Advertising
 - × Political activity
- Emergence of the IMS - Integrity Management System

Big Recommendations

- Don't rely on **theories** – trust *best practices and best known methods*
- Don't start from zero – use existing models that have worked, and build on them with sensible, practical innovations
- Don't underestimate the need to educate your stakeholders
- Don't underestimate the need to educate yourselves
 - ✘ The business of innovation is a moving target – make provision to keep yourselves current



More Big Recommendations

- Dream Big
- Start Where You Are
- Use What You Have
- Do What You Can

- *“The gross national product includes air pollution and advertising for cigarettes, and ambulances to clear our highways of carnage. It counts special locks for our doors and, jails for the people who break them.*
- *It grows with the production of napalm and missiles and nuclear warheads...*
- *And if the gross national product includes all this, there is much that it does not comprehend. It does not allow for the health of our families, the quality of their education, or the joy of their play.*
- *It does not account the beauty of our poetry or the strength of our love for each other, the intelligence of our public debate or the integrity of our public officials.*
- *It measures neither our wit nor our courage, neither our wisdom nor our learning.*
- *The gross national product measures everything, in short, except that which makes life worthwhile, and it can tell us everything about us-- except whether we are a good people. . . .”*

Robert F. Kennedy, May 1968, Chicago

Further Reading

- *Innovating Our Way to the Next Industrial Revolution*, Senge & Carstedt, MIT Sloan Management Review, Winter 2001
- *Agenda 21*, United Nations Conference on Environment and Development (New York 1992)
- *Biomimicry* (Wm. Morrow 1998) Janine Benyus
- *Where On Earth Are We Going?* (Texere 2001) Maurice Strong
- *What We Learned in the Rainforest* (Berrett/Koehler 2002), Shireman and Kiuchi
- *Creating a Framework for A Sustainable California* (Pacific Institute 2001), Andrea Sumits and Jason Morrison

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