

The Metrics Navigator™



GEMI®

What is the Global Environmental Management Initiative (GEMI)?

✦ **39 member companies:**

- **Representing more than 22 business sectors**
 - Annual Sales: almost \$1 Trillion USD
 - Global Headcount: more than 2.5 million
 - Number of Manufacturing Facilities Worldwide: more than 3,000

✦ **Non-profit 501(c)(3) organization**

✦ **Not an advocacy group**

Current GEMI Members



GEMI Vision & Mission

Vision:

To be globally recognized as a leader in providing strategies for businesses to achieve EHS excellence, economic success and corporate citizenship.

Mission:

Business helping business improve EHS performance, shareholder value and corporate citizenship.

What Makes GEMI Different?

- ✦ Work products/tools/reports
- ✦ Benchmarking
- ✦ Interaction and networking
- ✦ Cost savings
- ✦ Increased value to business
- ✦ Credibility
- ✦ Multi-sector responsibilities
- ✦ Members desire to be on the cutting edge

How GEMI Works

- ✦ Board of Directors from member companies
- ✦ Senior Advisory Council (SAC)
- ✦ Members provide “sweat equity”
- ✦ Year-round project activity
- ✦ Quarterly meetings
- ✦ Bi-annual conference
- ✦ Member companies provide financial support

GEMI Leaders

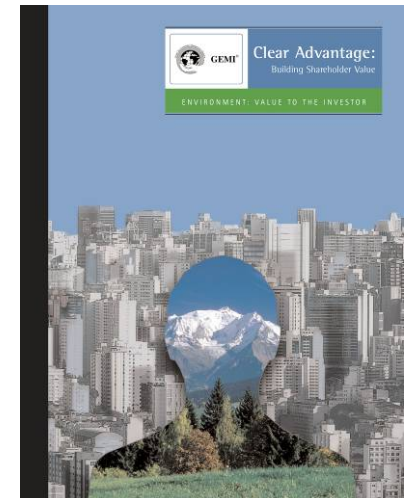
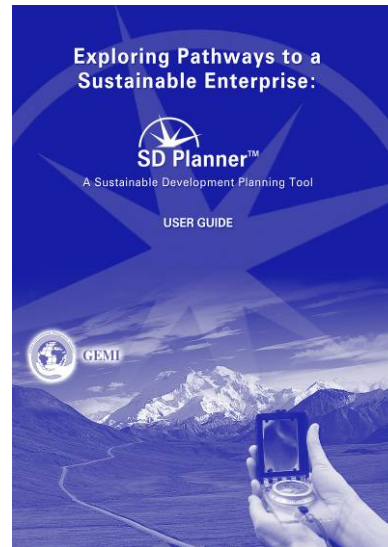
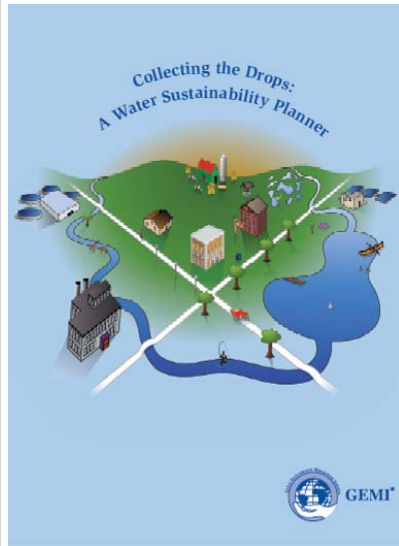
GEMI 2007 Board of Directors

- ✦ **Chair:** Stan Christian, Motorola
- ✦ **Vice-Chair:** Bob Accarino, Abbott Laboratories
- ✦ **Finance Chair:** Karl Fennessey, The Dow Chemical Company
- ✦ **Membership Chair:** Leslie Montgomery, Southern Company
- ✦ **Benchmarking Chair:** Mark Hause, DuPont
- ✦ **Tools Work Group Chair:** Moe Bechard, JohnsonDiversey
- ✦ **Communications & Marketing Chair:** Kelley Kline, Smithfield Foods
- ✦ **Senior Advisory Council (SAC) Chair:** Jack Kace, Roche
- ✦ **Chair Emeritus:** Mitch Jackson, FedEx

GEMI Management

- ✦ **Steve Hellem, Executive Director**
- ✦ **Amy Goldman, Director**

Recent GEMI Products



Current GEMI Activities

- ✦ Emerging Issues
- ✦ Communications & Marketing
- ✦ Business & Climate Change
- ✦ Information Management Systems (IMS)
- ✦ Metrics
- ✦ Strategic Futures
- ✦ Sustainable Development
- ✦ Tools Evaluation & Implementation Strategies
- ✦ Water Sustainability

GEMI's Metrics Work Group

✦ **History:**

- Work Group formed in 2005 to explore metrics. Three workshops with experts held between January and May 2006.

✦ **Objective:**

- To develop a process and planning tool to help identify and develop key material (i.e., relevant and substantive) metrics.

✦ **GEMI Co-Chairs:**

- Leslie Montgomery, Southern Company
- Jim Kearney, Bristol-Myers Squibb Company

✦ **Consultant:**

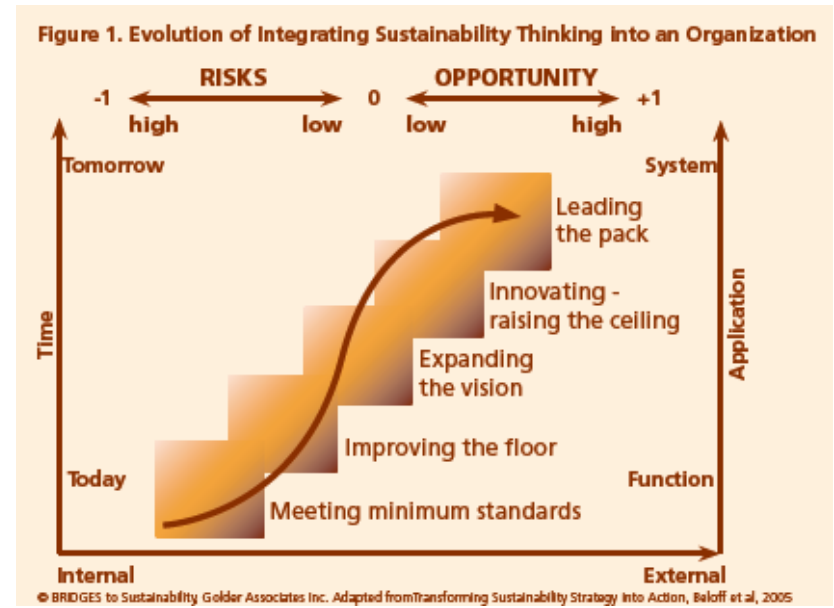
- Beth Beloff and team from Bridges to Sustainability of Golder Associates

✦ **Workshop Collaborators:**

- Diverse group of 25 organizations from both the US and UK

'Sustainability' as a Business Issue

- ✧ Business is evolving how it addresses the breadth & depth of 'sustainability' issues
- ✧ Potential stakeholders have multiplied and grown more diverse
- ✧ Difficult to address all aspects at same degree & same schedule
- ✧ Choices must be made & a strategic direction must be set



The Challenge / The Solution

✦ Metrics Need to:

- Inform strategy
- Provide meaningful information
- Support decision-making
- Complement traditional measurement systems
- Yield value to an organization

✦ GEMI Metrics Navigator™

- Roadmap to identify **critical few** metrics
- Six steps to develop the **right mix** of metrics
- Workbook to develop and implement metrics that:
 - Inform business strategy
 - Enhance decision-making
 - Measure what is right
 - Communicate effectively

Who Should Use the Tool?

- ✦ Any type of business
- ✦ Managers, EHS and SD practitioners
- ✦ Business schools
- ✦ Applied at any organizational level
- ✦ Process is flexible and can be tailored to meet specific needs

Value of the Tool

✧ Strength:

- A rigorous thought process

✧ Value:

- Helps think through the process and suggests methods to use or augment in-house approaches

✧ Principal benefit:

- Can advance business performance by developing and using non-financial measurements

Tool Overview

- ✦ A tool for management to help their organization develop an appropriate approach to metrics
- ✦ Outlines a 6-step process to assist with:
 - Determine what is material to your organization
 - Assess what and how to measure appropriate metrics
 - Assure effectiveness
- ✦ Includes 19 GEMI member case studies, 8 EAG perspectives, 10 worksheets and additional online resources

GEMI Case Examples

✠ FedEx

✠ 3M (3)

✠ Eastman Kodak Company

✠ Bristol-Myers Squibb Company:

✠ The Scotts Company

✠ Abbott

✠ DuPont (3)

✠ The Dow Chemical Company

✠ The Procter & Gamble Company

✠ Intel Corporation

✠ Southern Company

✠ Johnson Controls, Inc

✠ Johnson & Johnson

✠ Occidental Petroleum Corporation

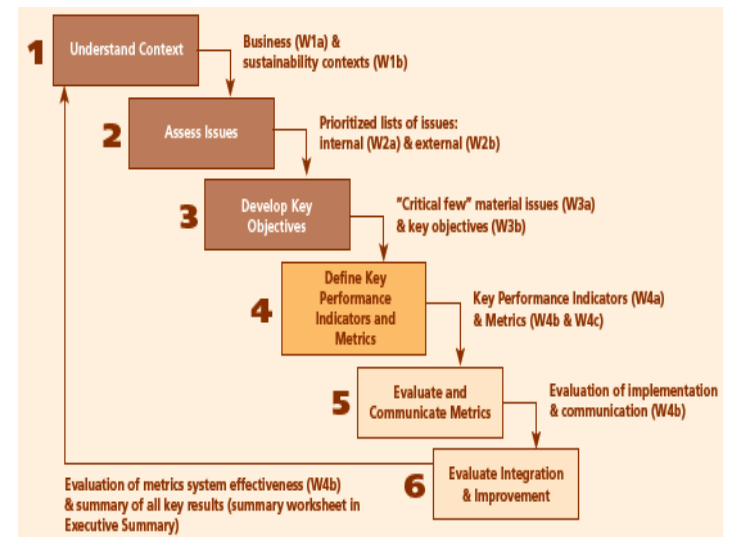
✠ Pfizer Inc

EAG Perspectives

- ✦ What is the measurement challenge? (Jim L. Ritchie-Dunham)
- ✦ What contributes to shareholder value? (Jean “Pogo” Davis)
- ✦ How can one develop ‘sustainability leaders’? (Paul Tebo)
- ✦ Are social goals relevant to business? (Kirvil Skinnarland)
- ✦ How can one align environmental, social and business values? (Paul Tebo)
- ✦ How can one form an effective ‘picture’ for different users of metrics? (Jim L. Ritchie-Dunham)
- ✦ What are the characteristics of a learning organization? (Eve Mitleton-Kelly)
- ✦ Do your metrics drive innovation? (Mark B. Milstein)

Process Overview

- ✦ Steps 1–3: What is Material
 - Identifies what is material (relevant)
- ✦ Step 4: What & How to Measure
 - Defines Key Performance Indicators (KPIs)
 - Sorts through possible metrics
 - Ensures validity of metrics
- ✦ Steps 5–6: How to Assure Effectiveness
 - Distills data into useful information
 - Critical assessment of metrics & the process



Step 1: Understand the Context

STEP 1

Expected Outcomes

- Understanding of the organization's business strategy and existing performance measurement systems
- Understanding of how the organization currently addresses environmental, social and economic aspects

WORKSHEET 1a: UNDERSTAND THE BUSINESS SUCCESS FACTORS <i>(XYZ Nutritional Beverage Example)</i>	
Organization: <i>The organizational unit under consideration for metrics development</i>	XYZ Nutritional Beverage (a division of XYZ Food Products, Inc.)
Mission: <i>The mission statement for the organizational unit (or its parent)</i>	Providing our customers nutritious food and beverage products of the highest quality that are produced in an environmentally-sensitive manner, while consistently exceeding shareholder expectation.
Core values:	<ul style="list-style-type: none">• Superior financial performance• Nutritious products of the highest quality• Safe and healthy work environment• Responsible environmental practices• Enriching the communities in which we operate
Vision for product / process:	Superior nutritional beverage brand which consumers embrace for its quality, taste and innovation.
Define the market environment:	Food and Beverage / Natural Foods Industry. Consumers fall into three categories: diet and healthy living, lactose alternative and organic.
Business objectives:	<ul style="list-style-type: none">• Increase market share• Increase revenue• Reduce cost
Business risks and opportunities:	Availability and consistency of raw product. Building relationships and partnerships with organic farmers. Focusing on emerging markets by building brand recognition and educating consumers on health benefits of nutritional beverage.
Business performance measurement:	Balanced Scorecard (financial, customers, business operations and learning and growth perspectives). Cascaded from corporate down to each business division and individual manager.

✦ Describe business success factors

✦ Summarize current 'sustainability' focus

✦ Offers methods to document current status and gaps

Step 2: Assess Issues

STEP 2

Expected Outcomes

- Identification and prioritization of issues from the perspectives of employees and key external stakeholders



Prioritize issues according to:

- Relevance to business
- Significance of impacts from the business
- Level of concern to external stakeholders
- Ability to control or influence

WORKSHEET 2a: INTERNAL – PRIORITIZE EMPLOYEES' ISSUES OF RELEVANCE TO THE BUSINESS (XYZ Nutritional Beverage Example)

INSTRUCTIONS: Plot the potential and current issues identified by employees. Rate each issue as High (H), Medium (M), or Low (L) according to the following considerations:

Organization's Impacts

- Do the organization's activities currently or have the potential to impact the issue?
- Are the current / potential impacts significant in comparison to other industries or peers in the same sector?

Importance to Business Success Factors

- Are there short- or long-term business risks or opportunities associated with the issue?
- Would addressing the risks / opportunities support the organization's business strategy and objectives?

VALUE CHAIN STAGES:

S = Supply; C = Company Operations; D = Distribution; U = Customer Use of Product / Service; E = End of Life

Importance to Business Success Factors	H	<ul style="list-style-type: none"> • Energy use (S, C) • Employee Health and Safety (C) • Impact on local communities (S, C) • Talent retention (C) 	<ul style="list-style-type: none"> • Water use (S, C) • Organic products (S, U) • Nutrition content (U) • Energy use (D)
	M	<ul style="list-style-type: none"> • Use of alternative energy (S, C, D) • Community outreach (C) • Education (U, B) • Local homeless population (D) 	<ul style="list-style-type: none"> • Local economic development (S, C) • Farming run-offs (S)
	L	<ul style="list-style-type: none"> • Transportation infrastructure (D) • Taxes paid (C) 	<ul style="list-style-type: none"> • Air emissions (D)
	L	M	H

Organization's Impacts

Issues (examples):

Energy use (D)
Energy use (S, C)
Use of alternative energy sources (S, C, D)
Farming run-offs (S)
Employee Health and Safety (C)
Local economic development (C)
Taxes paid (C)
Transportation infrastructure (D)

Reasoning behind Rating:

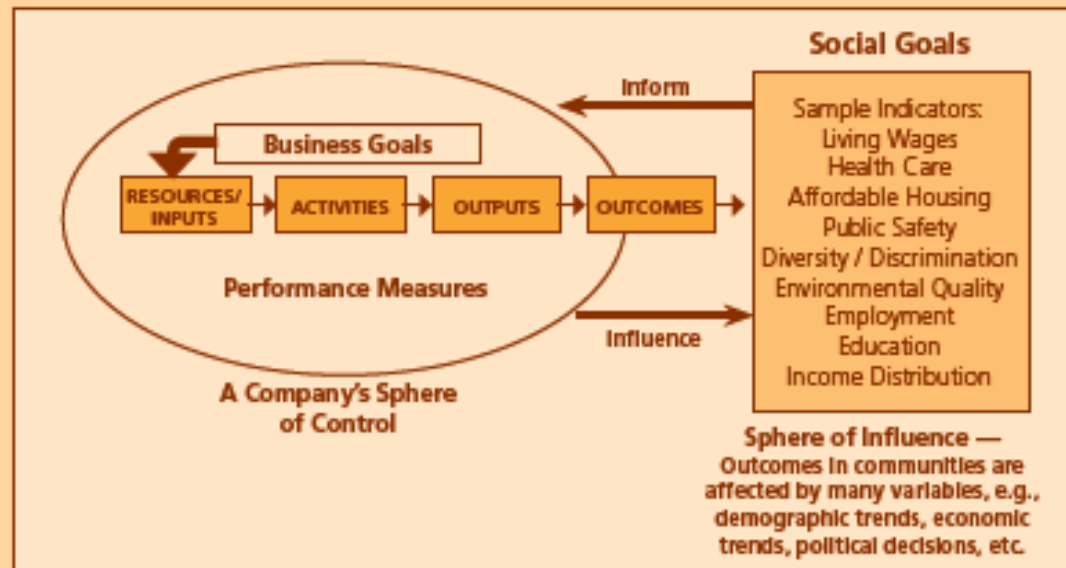
High impacts, distribution is major contributor to energy use and associated costs
Medium energy intensity in supply and company operations
Medium potential impacts and opportunity for industry leadership
Significant current impacts, medium business risk
Medium current impacts, but important as part of core value
Opportunity to integrate into local fabric, with high impact but medium importance to business
Standard business procedure
Relevant but not important to business, with limited organization's impacts

Materiality: External Perspective

EAG Perspective

Are Social Goals Relevant to Business?

Community indicator programs can provide insights into what is important to the local community. While social / community goals are typically outside a company's sphere of control, they are influenced by local business policies and practices (see figure below). Online at www.gemi.org/metricsnavigator, Kirvil Skinnerland of Sustainable Seattle and Trilogy, LLC, explores how community indicators can help inform a company in determining what is material and in shaping its business goals.



Bristol Myers Squibb Company: Reporting & Management of Metrics

- ✦ Began publishing environmental performance data in the 1990's to meet stakeholder expectations
 - Driver for extensive infrastructure, procedures and database to collect, manage, verify and report data
 - Ability to assess company's potential environmental impacts
 - Identification of cost-saving opportunities
 - Cross-functional involvement and company-wide awareness of sustainability issues
- ✦ System helps assess potential impacts, set performance targets, and measure progress of goals (2010 sustainability goals)
- ✦ Today, BMS tracks 60 environmental parameters in 50 facilities worldwide and has issued sustainability reports since 2001

Step 3: Develop Key Objectives

STEP 3

Expected Outcomes

- Material issues for consideration in developing metrics
- Critical few key objectives



Short list the most material issues



Select few critical key objectives based on:

- Business value
- Societal value of addressing the issues

WORKSHEET 3a: SELECT MATERIAL ISSUES (XYZ Nutritional Beverage Example)			
INSTRUCTIONS: Plot the issues according to ratings received in Worksheet 2a (Relevance to Business) and Worksheet 2b (Significance of Concern). HH = H; HM = H; HL = L or M; MM = M; ML = L; U/L = L			
For example, Energy Use (S, C) was plotted in the dark-shaded area in Worksheet 2a and receives a high rating on the Relevance to the Business axis in Worksheet 3a. Energy Use (S, C) was plotted in the medium-shaded area in Worksheet 2b and receives a medium rating on the Significance of Concern axis in Worksheet 3a. The overall rating is high (dark shaded) in this combined worksheet.			
VALUE CHAIN STAGES: S = Supply; C = Company Operations; D = Distribution; U = Customer Use of Product/Service; E = End of Life			
Significance of Concern (Worksheet 2b)	H	<ul style="list-style-type: none"> • Immigration policy (C) 	<ul style="list-style-type: none"> • Community outreach (U) • Organic products (S, U) • Water use (S) • Impact on local communities (S, C) • Local economic development (S, C) • Farming run-offs (S)
	M	<ul style="list-style-type: none"> • Global security (S, C, D) • Animal rights (S) 	<ul style="list-style-type: none"> • Use of alternative energy (S, C, D) • Energy use (S, C, D) • Water use (C) • Employee Health & Safety (C)
	L	<ul style="list-style-type: none"> • Taxes paid (C) • Transportation infrastructure (D) 	<ul style="list-style-type: none"> • Local homeless population (D) • Talent retention (C)
		L	H
Relevance to the Business (Worksheet 2a)			

Step 4: Define KPIs

STEP 4

Expected Outcomes

- Established set of Key Performance Indicator (KPIs)
- Understanding of uses and users of metrics
- Measurements that define and support KPIs
- Clear targets for the metrics

- ✦ What are the objectives and targets?
- ✦ What are the uses
- ✦ Who are the users?
- ✦ How are the metrics defined and calculated?
- ✦ Where are the data?

WORKSHEET 4a: DEFINE THE KEY PERFORMANCE INDICATORS (XYZ Nutritional Beverage Example)

INSTRUCTIONS: Identify the drivers that affect the key objective and potential consequences (for the business and for society) in meeting the key objective. This information informs the decision as to what to track as KPIs. Indicate other measurement considerations related to the KPI that can be developed into metrics in later stages. Key Objectives were identified earlier in Worksheet 3b.

Material Issue	Key Objective	Drivers	Consequences	Key Performance Indicator (KPI)	Other Measurement Considerations
GHG emissions (S, C, D)	Reduce GHG emissions along value chain	<ul style="list-style-type: none"> • Energy efficiency • Use of renewable energy • Implementation of best practice technology and processes 	<ul style="list-style-type: none"> • Energy cost reduction • Innovations: technology & business model 	<ul style="list-style-type: none"> • Energy cost reduction • Innovations: technology & business model 	<ul style="list-style-type: none"> • Percent energy from renewable resources • Best practice implementation • Energy cost-saving
Organic products (S, U)	Increase organic product portfolio and sales	<ul style="list-style-type: none"> • New organic product development • Marketing of organic products • Relationship with organic farmers 	<ul style="list-style-type: none"> • Increased sales • Brand image • Driving more sustainable agriculture 	<ul style="list-style-type: none"> • Percent revenue from organic products 	<ul style="list-style-type: none"> • Implementation of organic farmers program • Customer perception • Avoidance in pesticide run-offs
Nutrition content (U)	Become provider of choice of balanced-nutritional breakfast products for children	<ul style="list-style-type: none"> • Children nutrition awareness campaign at schools • Nutrition content in products 	<ul style="list-style-type: none"> • Increased sales • Brand image • Contributing to children's health 	<ul style="list-style-type: none"> • School children reached in nutrition awareness campaign 	<ul style="list-style-type: none"> • Nutrition content

Metric Types

✧ Outcome:

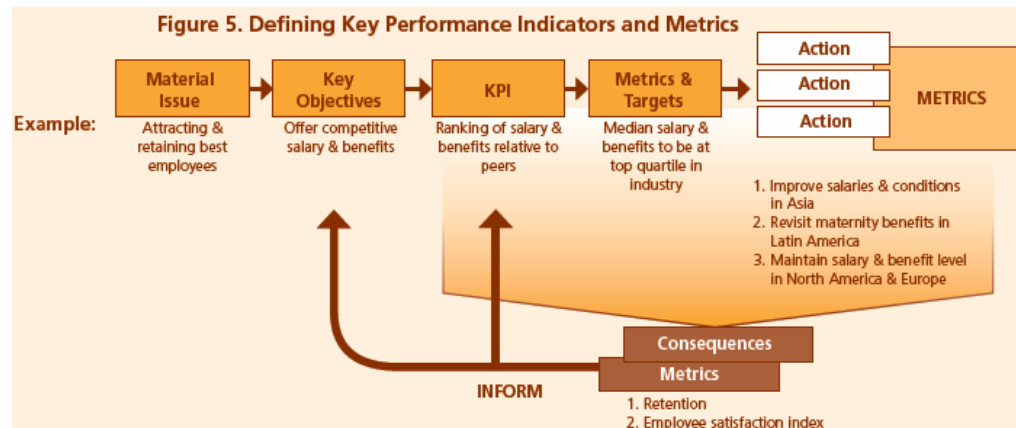
- One-dimensional (energy consumption per year)
- Cross-cutting (energy consumption per unit of value add)

✧ Process:

- Management and operations (# energy review activities per year)

✧ Consequence:

- Business (cost reduction from energy savings program)
- Societal (land area saved from raw material reductions)



Uses of Metrics

- ✦ Learning:
 - Benchmark internally
 - Evaluate alternatives
- ✦ Decision-making:
 - Identify improvement options
- ✦ Accountability:
 - Report to stakeholders
 - Track performance
- ✦ Demonstration:
 - Build the business case
 - Promote 'sustainable' initiatives



DuPont:

Metrics to Drive Sustainable Growth

- ✦ Different metrics can be appropriate for different uses
- ✦ “SVA/lb” (shareholder value add per pound of production)
 - Combines multiple dimensions into one number (pound of production as proxy for environmental impacts)
 - Useful for planning and strategic discussions
 - Operationally too sensitive to factors unrelated to environment (e.g., market fluctuations, acquisitions/divestitures)
- ✦ Marketplace and footprint reduction goals and metrics
 - Drive sustainable growth into operations
 - Drive same goals as SVA/lb
 - less sensitive to economic fluctuations
 - better address stakeholder concerns
 - Example: goal to nearly double revenues from non-depletable resources to at least \$8 billion by 2015

Step 5: Evaluate & Communicate

STEP 5

Expected Outcomes

- Regular communication and feedback based on performance against targets

- ✦ How to implement the metrics
- ✦ How to integrate into existing information management systems
- ✦ How the metrics can be presented to provide useful insights to audience










Southern Company: 'Target Zero' to Change Mindsets

- ✧ Set target: zero safety incidents
 - Beliefs
 - Expectations
 - Performance standards
- ✧ Principles: 'Believe it! Expect it! Live it!'
 - **Believe** all injuries and occupational illnesses can be prevented; all tasks can be planned and completed safely
 - **Understand** working safely is a condition for employment; managers, supervisors and individuals held accountable
 - **Commit** to health & safety rules, continuous improvement; leaders must recognize and reward success
- ✧ Results: improved performance (first year)
 - Recordable injuries reduced by 25 percent
 - Lost work time injuries reduced by 40 percent

Johnson & Johnson: Communicating Progress Toward Goals

- ✦ Dashboard displayed for employees and managers
 - Performance insights at multiple levels
 - Ratings use both process and outcome metrics
 - Composite indices combine multiple metrics/criteria into single score
 - Shown as 'on target', 'caution' or 'needs attention' (light/medium/dark shades used for green/yellow/red)

Johnson & Johnson Environmental Performance Dashboard (Example)

Next Generation Goal	Progress	Reasons / Comments
Compliance / Risk Management		3 Noncompliance events
Mgt Systems / ISO 14001		ISO certified, MAARS rating = 2, MAP not reviewed and signed, 100% of MAP items on time, CCO plan ongoing & on schedule
New Product/Process Review		100% of New Products/Processes/Packaging reviewed using the DfE tool or equivalent.
External Manufacturing		76% EM with EHS contract language, 40% EM audits on schedule, 100% EM audited before use, 0 unacceptable EM, 0 Marginal EM
Energy Use		93% Enhanced Best Practices Implemented
Water Use		81% Best practices implemented. Cumulative PBA = 7.15, Water Usage = 502,386 m ³ , Avoided = 35,897 m ³
Raw Material Use		Total avoidance: 1,589,456 Total usage: 53,165,445 (PBA: 3.0)
Packaging Use		Packaging avoidance = 726,489 Packaging Use = 13,592,000 (5.4 PBA)
Waste Reduction (NPO)		1. Non-haz NPO avoided = 1,275,194 Total Non-haz NPO = 81,095,432 (1.57 PBA) 2. Haz NPO avoided = 14,146,302 Total Haz NPO = 109,443,578 (12.9 PBA) 3. Toxic NPO avoided = 1,914,000 Total Toxic NPO = 32,403,396 (5.9 PBA) 4. Use of Preferred Waste Mgmt Method = 16% decrease from 2000

Step 6: Evaluate Improvement & Integration

STEP 6

Expected Outcomes

- Assessment of how metrics are driving improvement and organizational alignment and creating business benefits

✦ Analyze the business value that has been achieved through the metrics development process

Evaluation

✦ Do the metrics...?

- Inform business decisions, promote learning and demonstrate the business case
- Support the business strategy
- Engage employees and external stakeholders
- Respond to issues identified by stakeholders
- Change the behavior of individuals
- Help integrate sustainability thinking into the organization's culture
- Reflect business values and yield business benefits

Summary Worksheet

- ✦ Captures critical conclusions from each step
- ✦ Provides a logical framework for communicating the 'what' and 'why' of metrics
- ✦ Can summarize the metrics development process for senior management

WORKSHEET: SUMMARY OF KEY POINTS	
What is material	Key business objectives (from Step 1)
	Environmental, social and economic elements support business objectives (current and future) (from Step 1)
	Key employees and external stakeholders in this effort (from Step 2)
	Critical few material issues (from Step 2)
	Key objectives which relate to the material issues (from Step 3)
What and how to measure	Expected uses of the metrics and by whom (from Step 4)
	KPIs and related metrics, what they are and how well they meet the criteria (from Step 4)
How to assure effectiveness	Degree of integration of metrics into management systems (from Step 5)
	Effectiveness of metrics communication to users (from Step 5)
	Expected organizational behavior (from Step 6)
	Expected change in personal behavior (from Step 6)
	Use of metrics to support the business case and refine business strategy (from Step 6)
	Expected business value (from Step 6)

In Conclusion

- ✦ Regardless of how this tool is used, it should generate meaningful conclusions
- ✦ This tool does not recommend specific metrics
- ✦ The tool provides:
 - a framework for identifying and managing environmental, social and economic issues
 - a process for developing the critical few metrics which measure performance
- ✦ Additional resources to support the tool are online at www.gemi.org/metricsnavigator

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