Making Better Use of Information:
Aiming Towards “True North”

Kate Lancaster, Assoc Professor, Accounting
Cal Poly, San Luis Obispo, CA

Bill Bellows, Process Leader, Enterprise
Thinking Network, The Boeing Company

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Introduction

- Result of our meeting during Welliver Fellowship
- Compared experiences in accounting and engineering
- Noticed similarities in views
- Both saw short shortcomings in present state of many organizations
- Paper is our effort at proposing a glimpse of an alternative future
Introduction

- Decision-Making Model has not Changed Despite Technological Advances

- Present State
  - Web of relationships overlooked
  - “Part” management
  - Intervention is common

- Future State
  - Better management of resources and relationships
  - Flexibility
  - Greater customer loyalty
Combining Two Bodies of Literature

- Systems Thinking

- Ecobusiness Thinking
Systems Thinkers

• W. Edwards Deming
  – Awareness of non-linear system dynamics
  – Learning model - Plan/Do/Study/Act
  – System of Profound Knowledge
  – Sense of unity, including:
    • Suppliers
    • Customer
    • Other stakeholders
Deming’s view of production system

Suppliers of materials and equipment → A → B → C → D → Production, assembly, inspection → Tests of processes, machines, methods, costs → Design and redesign → Consumer research → Distribution → Consumers
Systems Thinkers

• Edward de Bono
  – Water logic - a discussion of relationships, what could be?
    From Where? → This Part → Lead To?
    • What is this part of?
    • Where did this come from?
    • What will this lead to?
  – Rock logic - a discussion of parts, what is
Systems Thinkers

- **Genichi Taguchi**
  - Wood cutting example
  - Quality loss function

![Diagram showing cumulative negative impact to others downstream with LSL, Target, and USL labels]
Ecobusiness Thinkers

- **Tom Johnson**
  - Managerial accounting in present state contributes to linear thinking
  - Recommends abolishing most quantitative measures
  - Leaders are encouraged to nurture relationships
Ecobusiness Thinkers

• **Tom Johnson**
  – *Lessons from Manage by Means practices*
    • Are resources used parsimoniously?
    • Does work attend at all times to the relationship between company and customer?
    • Is money regarded as energy to fuel the union between company and customer, never merely as a commodity to be accumulated for its own sake?

Profit Beyond Measure (2000), p 163
Ecobusiness Thinkers

- **Amory Lovins**
  - Providing the right products
  - At the right time
  - In the right amount
  - Using the right processes and materials
  - To customers
Ecobusiness Thinkers

• Amory Lovins
  – Four types of capital
    • Financial
    • Physical (manufactured)
    • Intellectual
    • Natural
Ecobusiness Thinkers

• Allan Savory
  – Holistic Resource Management
  – Flaw in decision making process
    • Disregard for resource base needed to sustain quality of life envisioned
    • Solved by asking seven questions to ensure decision is economically, environmentally, and socially sound
    • Provides compass for process
Ecobusiness Thinkers

• Karl-Henrick Robert
  – The Natural Step
  – Identify a sustainability framework
    • Apply systems thinking to all decisions
  – Compass
Ecobusiness Thinkers

- **William McDonough**
  - Redesign design process
    - Waste must equal food (input or biodegradeable)
    - Shift to consuming current solar energy rather than stored
    - Respect diversity (biodiversity)
Toward Better Decision Making
Kaplan & Norton’s Balanced Scorecard

• **Performance Metrics**
  - Non-financial
  - Forward-looking
  - Measures that are necessary for ensuring long-term growth
  - Traditionally four measures
    • Financial
    • Customer
    • Internal business processes
    • Learning and growth
  - Additional measures
    • Environmental
    • Societal
Toward Better Decision Making
Allan Savory’s Decision Model

Holistic Management Model

WHOLE UNDER MANAGEMENT
Decision-Makers - Resource Base - Money

HOLISTIC GOAL
Quality of Life - Forms of Production - Future Resource Base

ECOSYSTEM PROCESSES
Community Dynamics
Water Cycle
Mineral Cycle
Energy Flow

TOOLS FOR MANAGING ECOSYSTEM PROCESSES
Human Creativity
Technolog Rest Fire Grazing Animal Impact Living Organisms Money & Labor
Toward Better Decision Making
Allan Savory’s Decision Model

TESTING GUIDELINES

<table>
<thead>
<tr>
<th>Cause &amp; Effect</th>
<th>Weak Link - Social</th>
<th>Marginal Reaction</th>
<th>Gross Profit Analysis</th>
<th>Energy Money Source</th>
<th>Sustainability</th>
<th>Society Culture</th>
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MANAGEMENT GUIDELINES

<table>
<thead>
<tr>
<th>Learning &amp; Practice</th>
<th>Organization &amp; Leadership</th>
<th>Marketing Time</th>
<th>Stock Density &amp; Herd Effect</th>
<th>Cropping Burning</th>
<th>Population Management</th>
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PLANNING PROCEDURES

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<tr>
<th>Holistic Financial Planning</th>
<th>Holistic Land Planning</th>
<th>Holistic Grazing Planning</th>
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FEEDBACK LOOP

Plan (Assume Wrong) → Monitor
Replan → Control

(Reprinted with Permission, Allan Savory, Holistic Resource Management)
Toward Better Decision Making
“Managing Variation as a System” at Boeing

Major Rocket Engine Component
628 Braze Joints (Posts & Holes) - 1256 Fillets

Before:
- Rock Logic
- Focus: “good parts” (tolerances)

Results:
- Two braze cycles
- $30,000

After:
- Water Logic
- Focus: relationships (targets)

Results:
- One braze cycle
- $9,000
Summary & Conclusions

• New technology has created more information
• Better decisions require *better thinking*
• Systems thinking & Ecological thinking
  – Seeing parts *and* relationships
  – Systems thinking *is not* systems thinking
  – *All* relationships matter
  – Is *ecology* part of the system?

• Individuals in “future state” organizations will use *better thinking* to aim towards “true north”