



Making Better Use of Information: Aiming Towards "True North"

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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

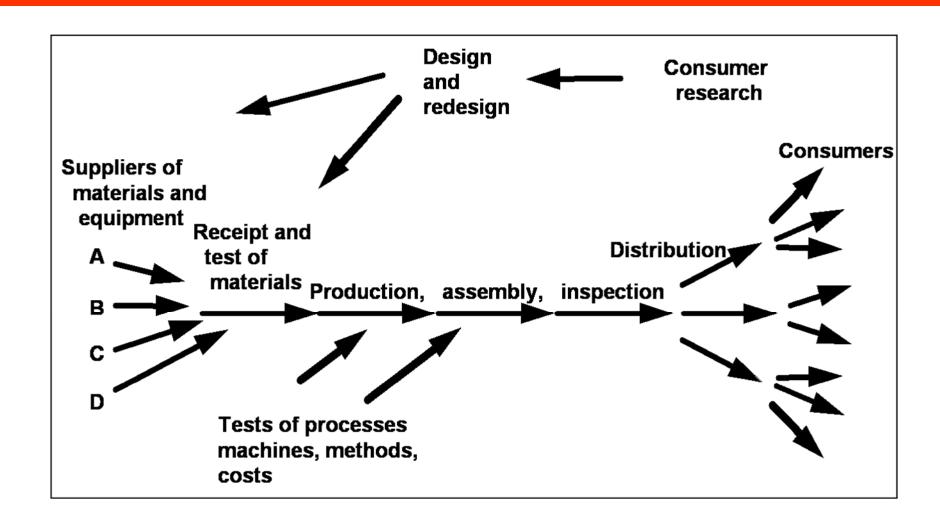


Systems Thinkers

- 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





Systems Thinkers

- Edward de Bono
 - Water logic a discussion of relationships, what <u>could be</u>?

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

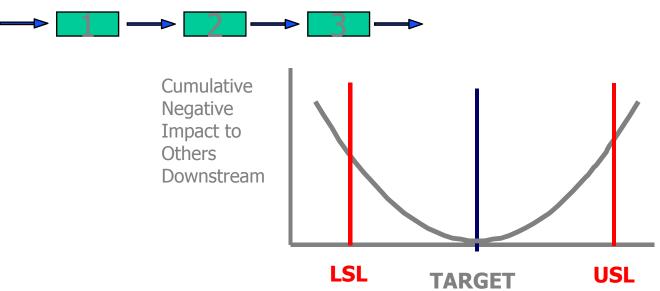


Systems Thinkers

- Genichi Taguchi
 - Wood cutting example



Quality loss function



Tom Johnson

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

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?

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

- Amory Lovins
 - Four types of capital
 - Financial
 - Physical (manufactured)
 - Intellectual
 - Natural

- 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

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

- 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

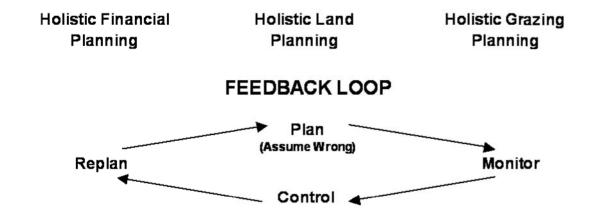
TESTING GUIDELINES

Cause	Weak Link	Marginal	Gross	Energy	Sustainability	Society
&	-Social	Reaction	Profit	1		&
Effect	-Biological		Analysis	Money		Culture
	-Financial			Source		

MANAGEMENT GUIDELINES

Learning	Organization	Marketing	Time	Stock	Cropping	Burning	Population
&	&			Density &			Management
Practice	Leadership			Herd Effect			

PLANNING PROCEDURES



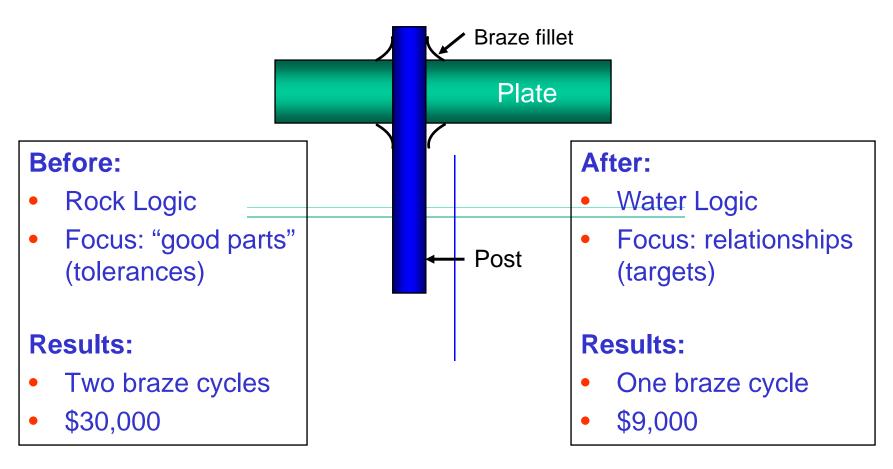
(Reprinted with Permission, Allan Savory, Holistic Resource Management)



Toward Better Decision Making "Managing Variation as a System" at Boeing

Major Rocket Engine Component

628 Braze Joints (Posts & Holes) - 1256 Fillets





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 <u>ecology</u> part of the system?
- Individuals in "future state" organizations will use better thinking to aim towards "true north"