

1000 Points of Light

Presented by Dr. Bill Bellows

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Abstract

This session will delve into the application of W. Edwards Deming's 14 Points for Management to the pharmaceutical industry. In the first half of the session, Dr. Bill Bellows, a member of The Deming Institute Board of Directors, will provide a primer on Deming's 14 Points and the philosophy behind them.

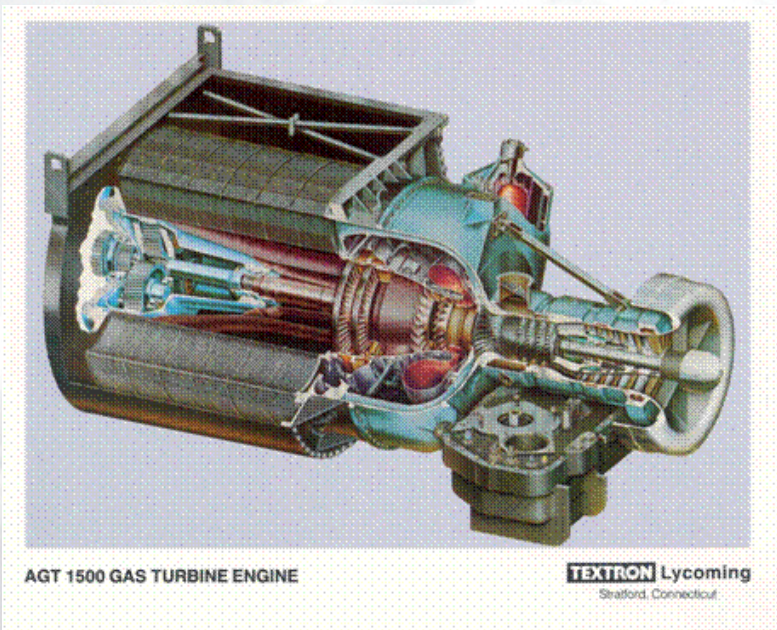
Agenda

- Thinking Together...
- W. Edwards Deming
- Insights
- Macro & Micro System Models
- InThinking & Reflexive Organizations
- Modes of Thinking
- *Present State Organizations*
- *Future State Organizations*





Tank Engines and Rocket Engines

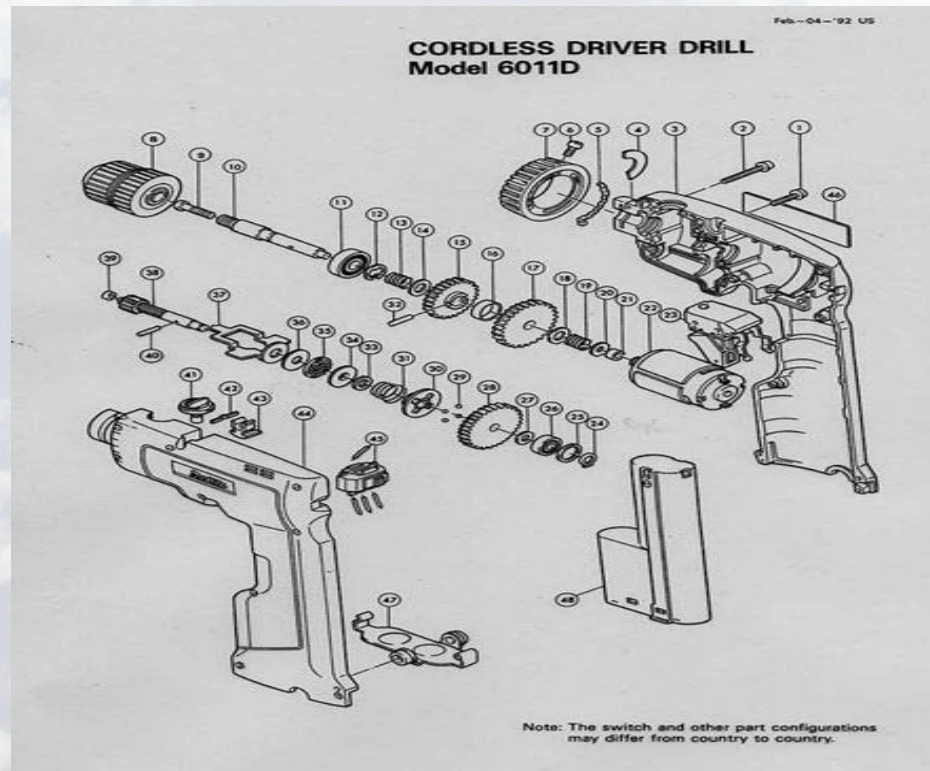


AGT1500



RS68

Part Management



Resource Management

A
c
t
i
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y

Proactive

Reactive



"Mine"

"Ours"

Ownership

Resource Management

Proactive – applying effort while “good,” “OK,” “well,” or “correct” is happening

Reactive – applying effort after “bad,” “not OK,” “sick,” or “incorrect” happens

Resource Management

“An ounce of prevention is worth a pound of cure”

“A stitch in time saves nine”

“Every dollar we invest in high-quality early education can save more than \$7 later on”

Macro System Model

(Part Work)

- Quality Focus: Conformance to Requirements
- Goal: Defect-Free Parts
- Activities: Assess Non-Conformances, Scrap and Rework
- Mindset: Reactive / Victim
- Skills: Fire-Fighting and Problem Solving
- Impact: No Improvement in Quality After Zero Defects, Temporary Solutions
- Attributes: Physical and Mental Handoffs (separation, blame)



W. Edwards Deming

W. Edwards Deming

1900 - 1993



W. EDWARDS DEMING. PH.D.
CONSULTANT IN STATISTICAL STUDIES

WASHINGTON 20016
4924 BUTTERWORTH PLACE

TEL. (202) 363-8552

11 February 1989

Dear Professor Fox,

I thank you for your kind invitation to speak to your classes. It would please me. I should be interested not only in your classes but a session with your teaching in the schools of business, engineering and psychology.

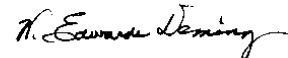
It is necessary for survival that a change of state take place from the economics of rugged individualism, win, lose, to another kind of economics, which I characterize as cooperation, win win, everybody win--not equally, but everybody win.

I wonder how many schools of business perpetuate the present system of management which has leveled off and led us to destruction. Changes must be made in the school system. The so-called merit system in business, government, and education, and the grading of children from toddlers on up through the university will for survival be abolished.

These thoughts form part of the content of my 4-day seminars, list enclosed.

The problem is to find a date. I have not a day in 1989. Some Tuesday in 1990 might be possible. You must tell me what you think would be good dates. I could come in the morning and stay through the day. You could not possibly pay to me my fee: I would do this as a public service, which is the motive behind my teaching--42 years now at New York University, and 5 years at Columbia University. I remain with appreciation

Sincerely yours,

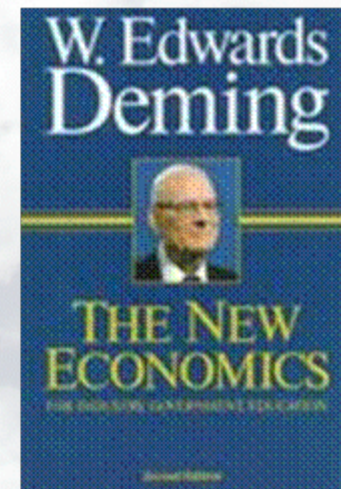


To Professor Douglas M. Fox
Western Connecticut State University
Ansell School of Business
Danbury, Conn. 06810

Powell, WY, 1904 - 1918



Yale and Beyond, 1928-1993



Deming and Toyota

“There is not a day I don't think about what Dr. Deming meant to us. Deming is the core of our management.”



These glowing words were spoken at the 1991 Deming Prize ceremony by Shoichiro Toyoda, president of Toyota Motor Corp.

Deming's 14 Points

1. Create constancy of purpose
2. Adopt the new philosophy
3. Cease dependence on inspection to achieve quality
4. End the practice of awarding business on price tag alone
5. Improve constantly and forever the system of production and service
6. Institute training on the job
7. Institute leadership
8. Drive out fear
9. Break down barriers between departments
10. Eliminate slogans, exhortations, and targets for the work.

Source: Out of the Crisis, W. Edwards Deming, 1986

Deming's 14 Points

- 11. Eliminate work standards. Eliminate management by objective
- 12. Remove barriers that rob the hourly worker of his right to pride of workmanship. Remove barriers that rob people in management and in engineering of their right to pride of workmanship.
- 13. Institute a vigorous program of education and self improvement
- 14. Put everybody in the company to work to accomplish the transformation. The transformation is everybody's job.



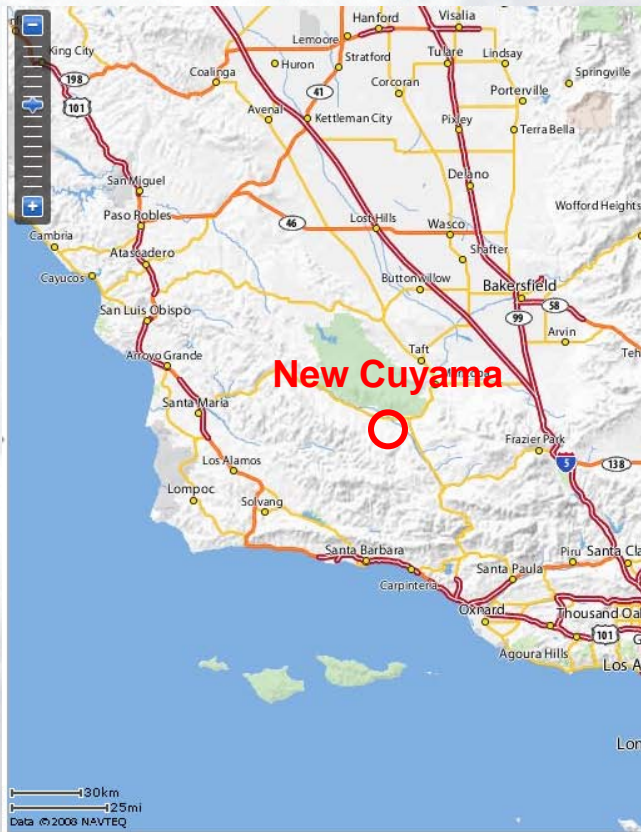
Insights

Perception & Thinking

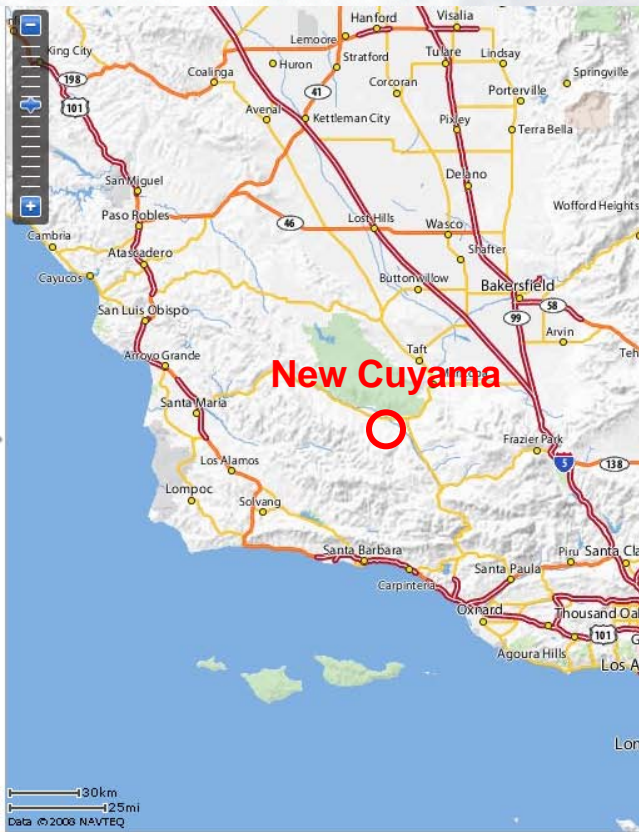
“What we see depends on what we thought before we looked.”

Myron Tribus

New Cuyama, California



New Cuyama, California



Perception & Thinking

“How the world we perceive works depends on how we think.

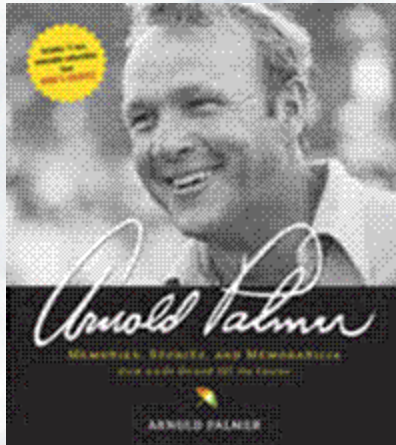
The world we perceive is a world we bring forth through our thinking.”

H. Thomas Johnson

Alligators

What is the leading use of alligator skin in the United States today?

Arnold Palmer



Time Management

How much time is spent discussing parts which are good and arrive on time?

Time Management



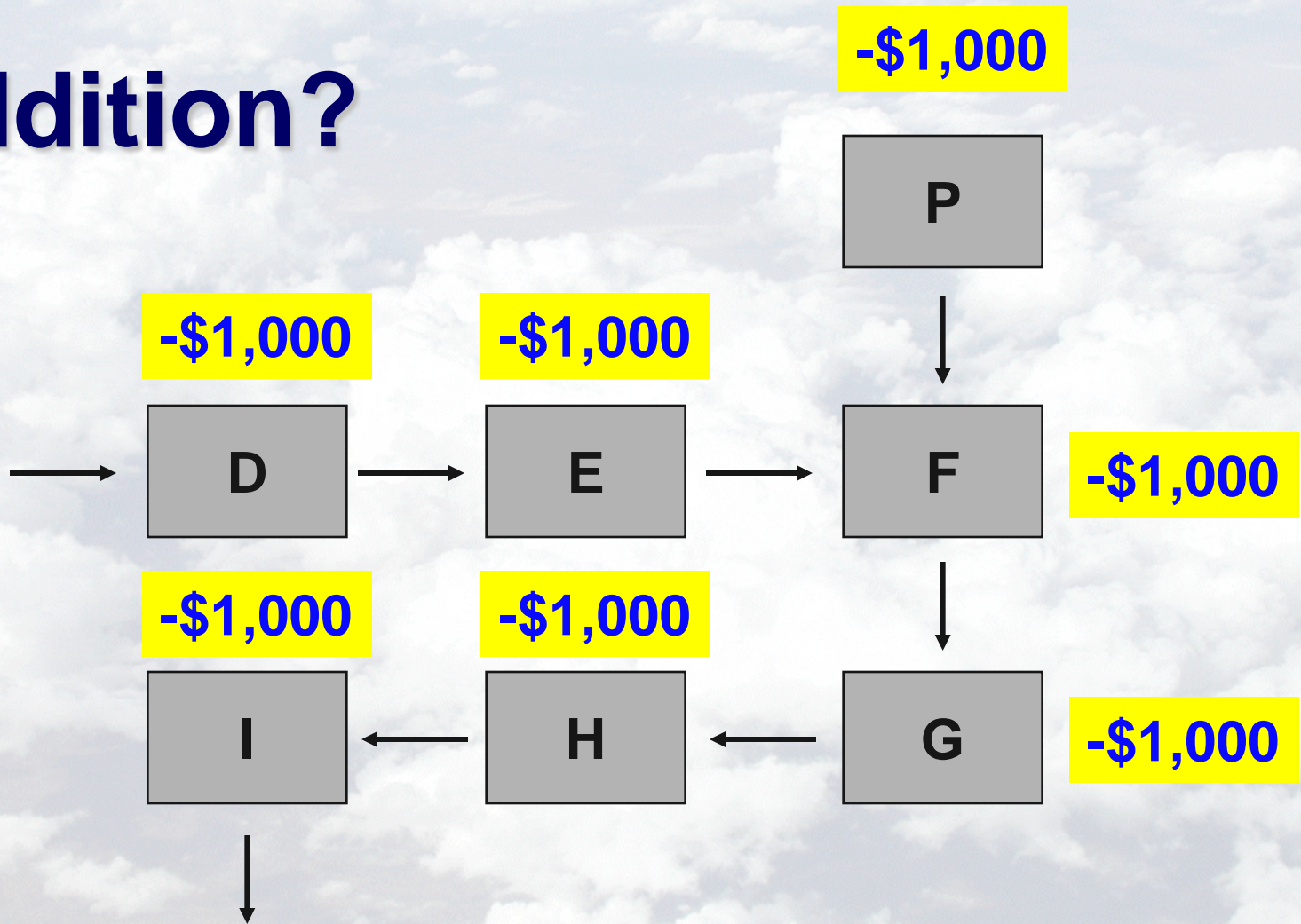
Addition

$$1 + 1 =$$

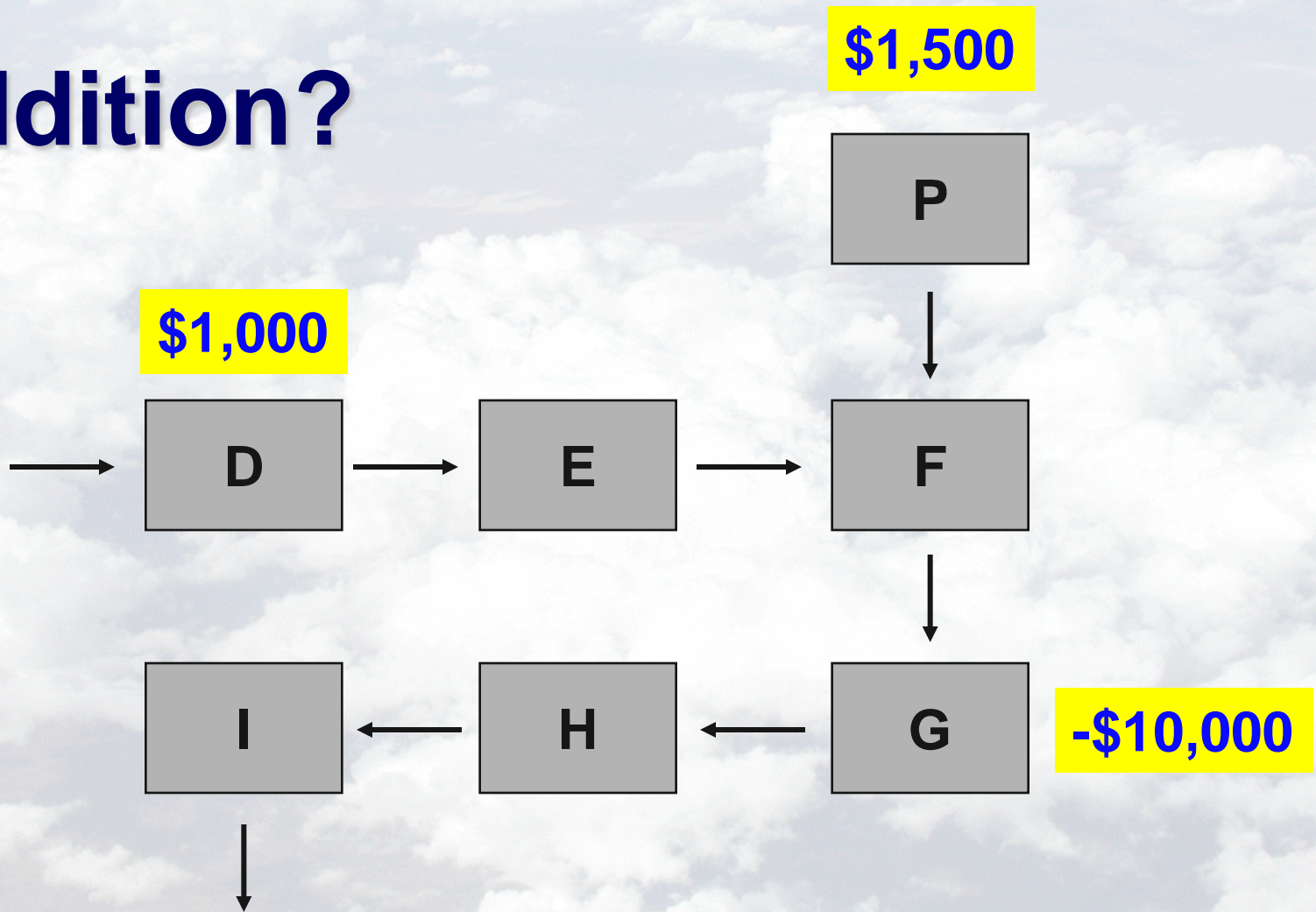
Addition



Addition?



Addition?



Addition

“You think because you understand one you must understand two, because one and one makes two. But you must also understand and.”

Donella Meadows

Satisfaction

How important is customer satisfaction?



Expectation Management

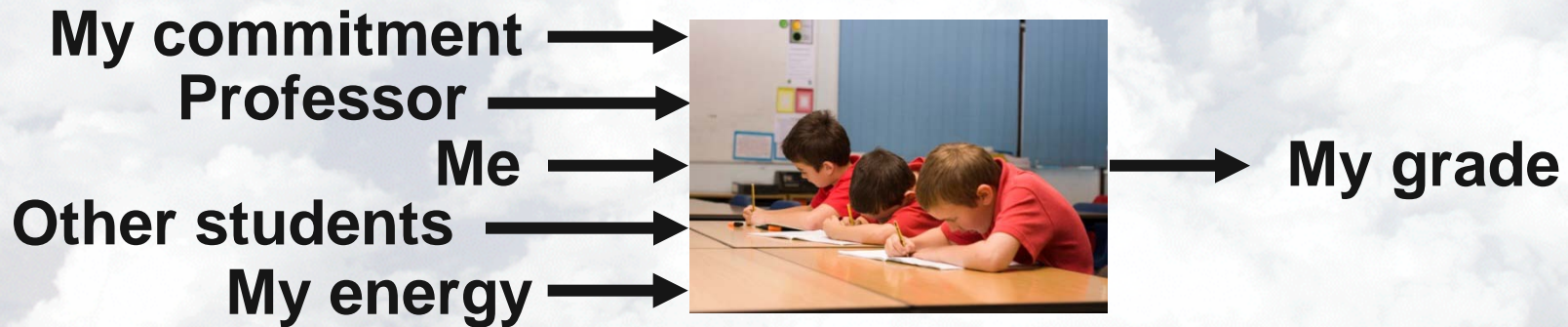
Value

Expectation

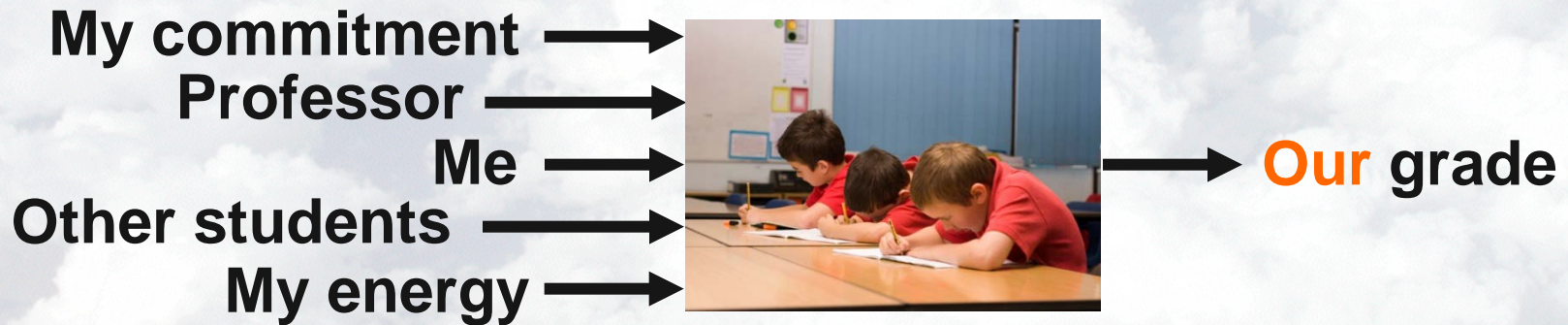
Disappointment




How did you do on the test?



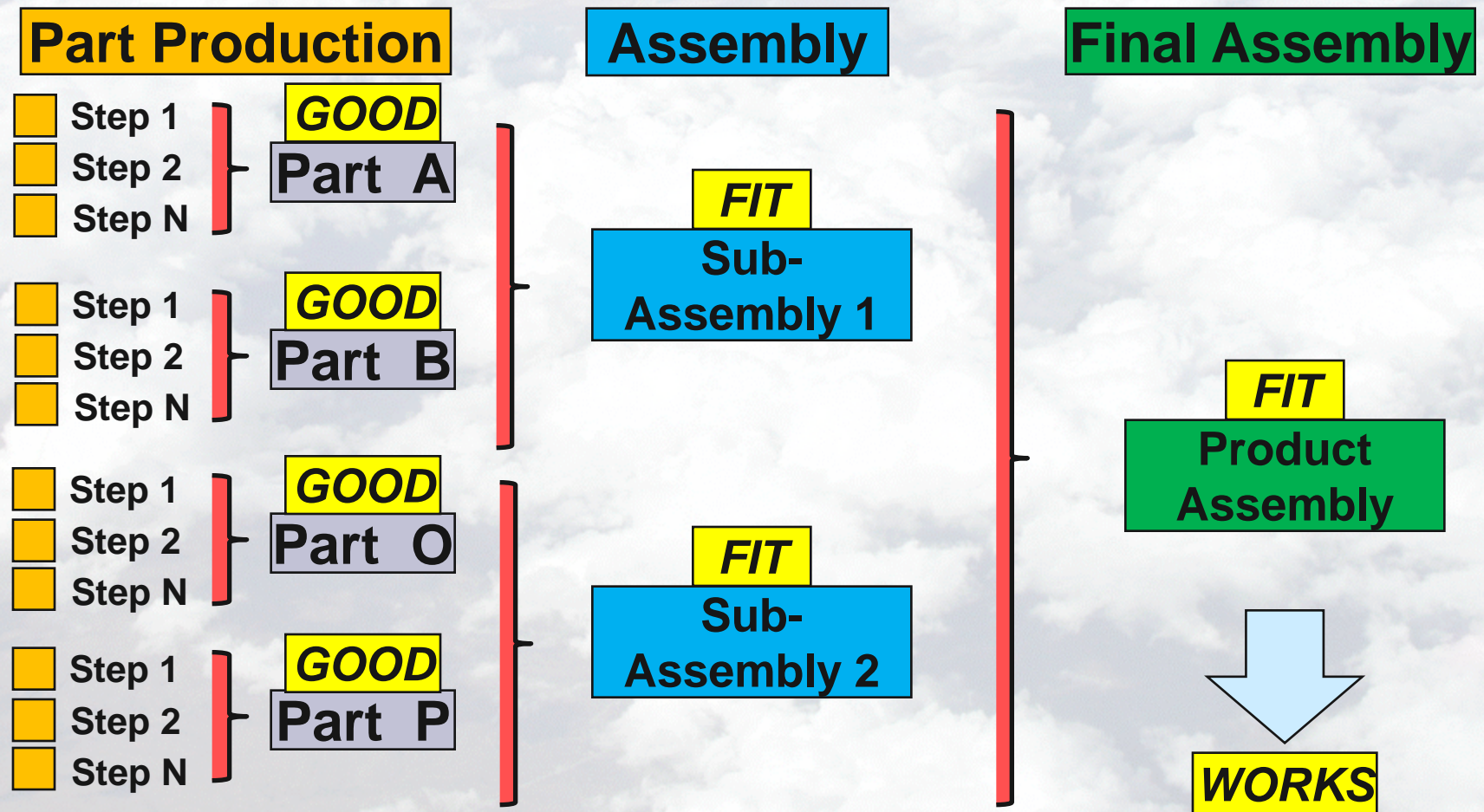
How did **we** do on the test?





Macro System and Micro System Models

Macro System Model



Cutting Wood

Given a piece of wood that will be cut into 2 pieces, how many lines will be drawn across the top face before the cut is made?



Cutting Wood

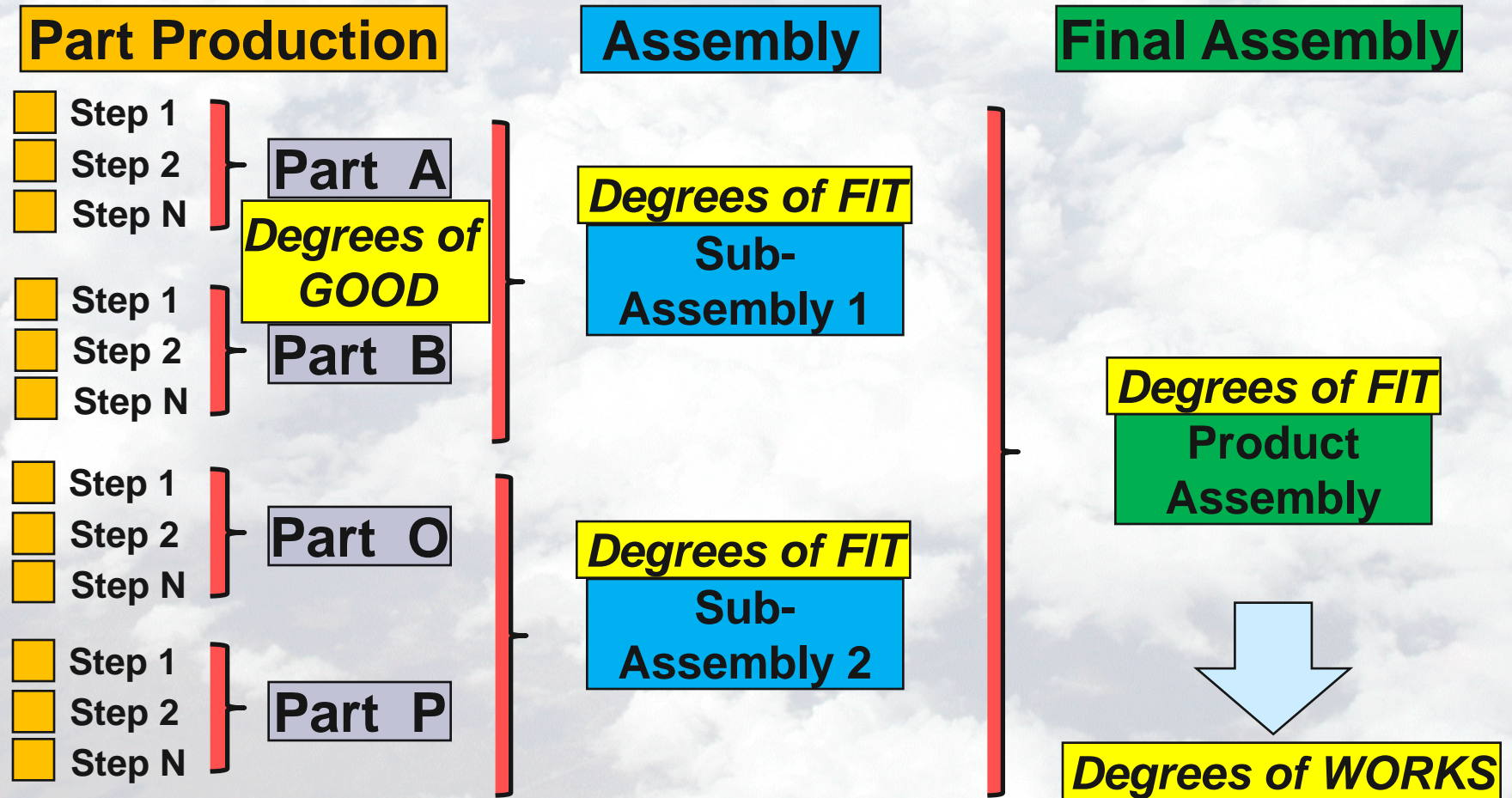


2 lines



target

Micro System Model



Examples of Process Management

HOLE DIAMETER



PAGE COUNT



OUTER DIAMETER



DISTANCE FROM THE DOOR





InThinking & Reflective Organizations

Trip Report

InThinking Organization	Reflexive Organization
(physical)	
(people)	

Trip Report

InThinking Organization

^{yoga class someone}
 no walls, clean & well-^(physical) maintained, well lighted & organized, good air, org. layout, not a lot of waste, ^{day care on site} material receiving area, bathroom facilities, break rooms, metrics

1-line thinking, highly ^(people) motivated, on the floor management, open lines of communication, attentive thinkers, enjoy working, part of the solution (not the problem), self-inspection of process or product, enjoy the people they work with, smiling people

Reflexive Organization

unorganized layout, not well-maintained, individual departments (walls), poor utilization of assets, separate & distinct work areas, outdated facilities, stoppy, candle lighting, "Quality" signs, scrap,

2-line thinking, slogans (empty), front office manager, someone always looking over their shoulder, dictatorial, unattentive, individualistic behavior, punitive, quota-data-gatherers, on a time clock, "go with the flow" type people

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Macro System Model (Part Work)

- Quality Focus: Conformance to Requirements
- Goal: Defect-Free Parts
- Activities: Assess Non-Conformances, Scrap and Rework
- Mindset: Reactive / Victim
- Skills: Fire-Fighting and Problem Solving
- Impact: No Improvement in Quality After Zero Defects, Temporary Solutions
- Attributes: Physical and Mental Handoffs (separation, blame)

Micro System Model (Team Work)

- Quality Focus: Relationships Between Parts (*Target Thinking*)
- Goal: Profit Beyond Measure
- Activity: Seeking Opportunities to Invest in Better Relationships between Parts
- Mindset: Proactive / Leader
- Skills: Process Control and Systemic Solutions
- Impact: Continuous Investment in Quality of Relationships, Long-Lasting Solutions
- Attributes: Physical Handoffs, without Mental Handoffs (no separation nor blame)

Macro System Model (Part Work)

- Quality Focus: Conformance to Requirements

Goal: Defect Free Parts



Quality After Zero Defects,
Temporary Solutions

- Attributes: Physical and Mental Handoffs (separation, blame)

Micro System Model (Team Work)

- Quality Focus: Relationships Between Parts (*Target Thinking*)

Goal: Profit Driven Measure



Quality of Relationships, Long-
Lasting Solutions

- Attributes: Physical Handoffs, without Mental Handoffs (no separation nor blame)



Modes of Thinking

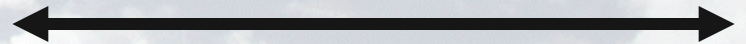
Modes of Thinking

➤ Categories

- Absolutes
- Discrete / Digital
- Black & White
- Good/Bad, Up/Down

➤ Continuum

- Relative
- Wholeness / Analog
- Shades of Gray
- Better/Faster



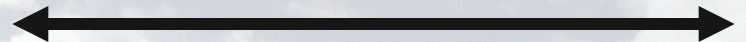
Modes of Thinking

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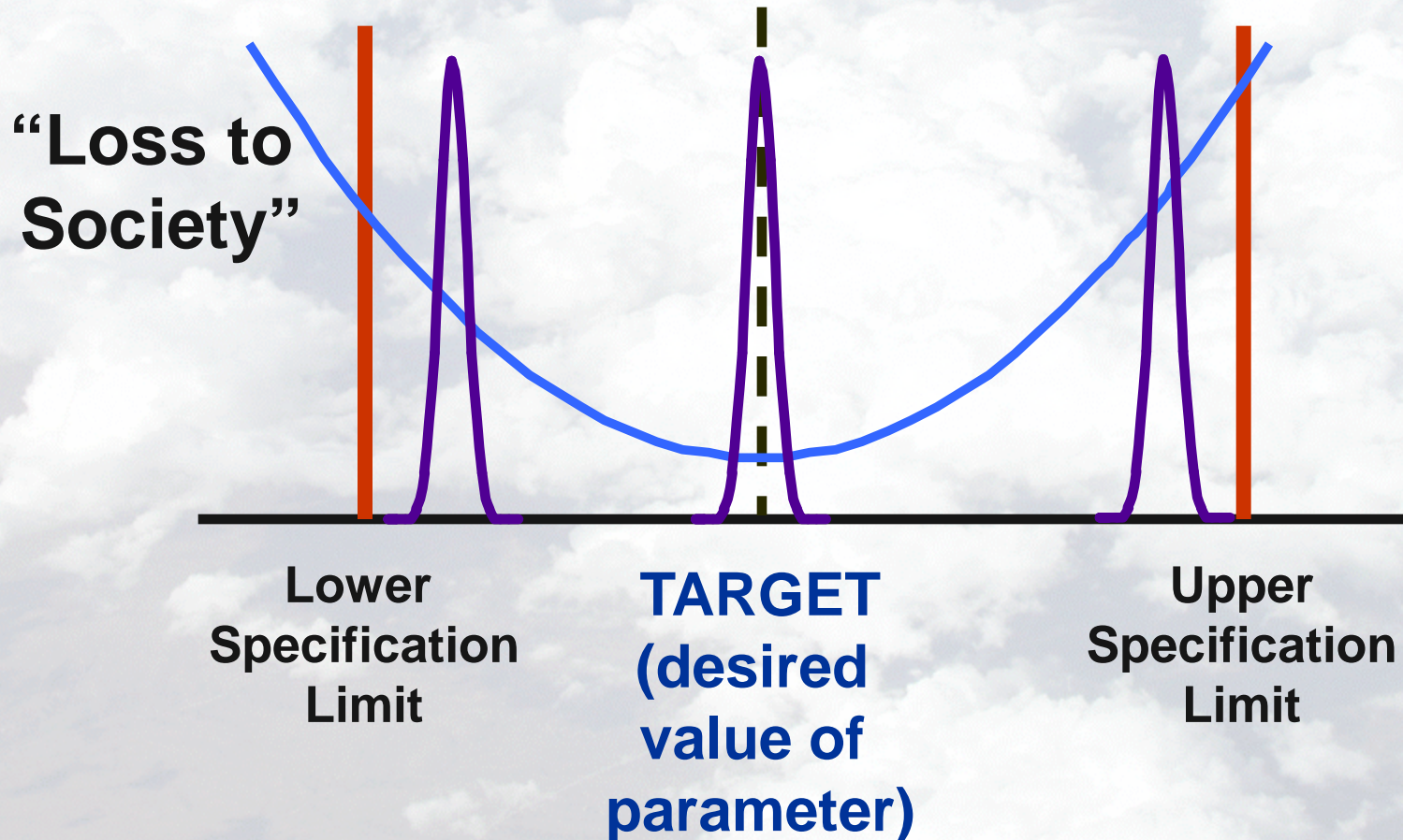
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Taguchi's Quality Loss Function



Reform & Transform

➤ Reform(ation) *(Physical Change)*

- Process Change
- Change in Requirements
- Relocation
- Renaming
- Rephrasing

➤ Transform(ation) *(Mental Change)*

- From Observer to Participant
- From Witness to Participant
- From *Part* to *Part Of*
- From *Spectator* to *Spect-Actor*



Present State

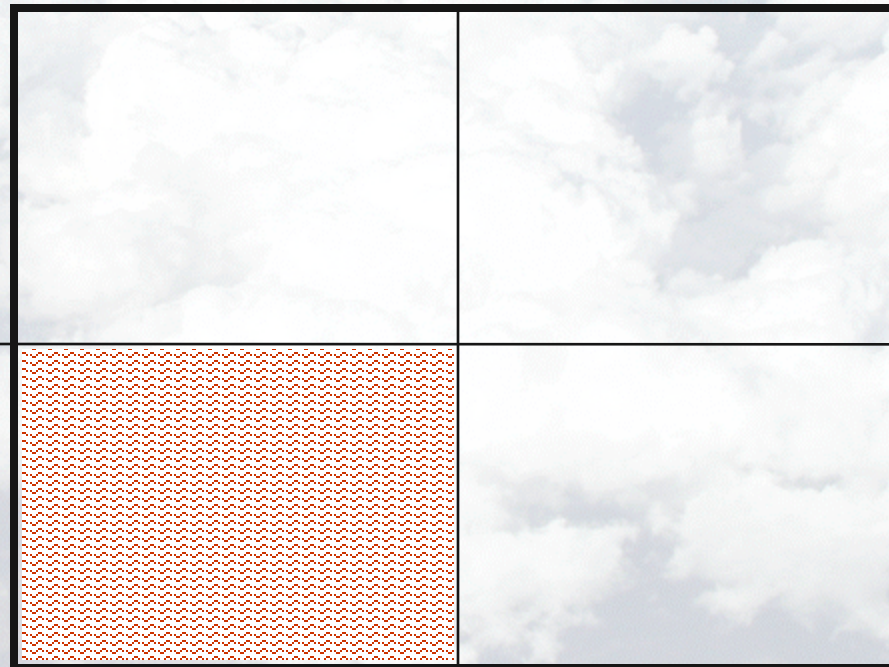
Reflexive Organizations

Resource Management

A
c
t
i
v
i
t
y

Proactive

Reactive



"Mine"

"Ours"

Ownership



Future State

InThinking Organizations

InThinking

The concept of “InThinking” derives from “*awareness* of our own *thinking* and the *assumptions* we make in how we act when we allocate resources, where thinking is defined as “a way of reasoning.” Fundamental to resource allocation is whether our activities are *proactive* or *reactive*, and whether the resources involved belong to the enterprise (“*ours*”) or to one's own department, function, district, part, etc. (“*mine*”).

InThinking...continued

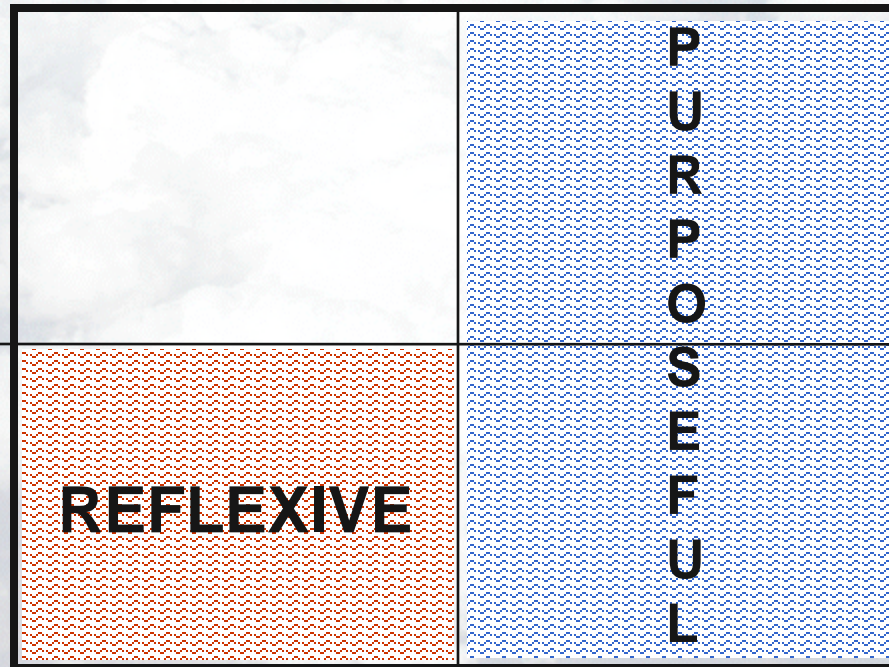
InThinking invites an individual to learn to perceive the patterns of interdependencies surrounding him or her and to reason and judge with new insight and thereby engage in the activities of *Purposeful Resource Management* and *Purposeful Resource Leadership* across their enterprise.

Resource Management

A
c
t
i
v
i
t
y

Proactive

Reactive



"Mine"

"Ours"

Ownership

Present State

- Driving Change
- Focus on Reformation (Reforming)
- Reducing Cost, Waste, Inventory, Variation, etc
- Talk about “Working Together”
- Striving for “Zero Defects”
- Striving for “Zero Waste”
- Striving for “Satisfaction”
- Continuous Improvement
- Using Metrics for Alignment*

*without a thinking transformation

Future State

- Leading Transformation
- Use of Reformation and Transformation
- Resource & Relationship Management (Striving for Balance)
- Thinking & Learning Together - Then Working Together
- Managing Customers' Expectations
- Continuous Investment
- Using InThinking for Alignment

Deming's 14 Points

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- 13. Institute a vigorous program of education and self improvement
- 14. Put everybody in the company to work to accomplish the transformation. The transformation is everybody's job.

System of Profound Knowledge

The outside view. The layout of profound knowledge appears here in four parts, all related to each other:

- Appreciation for a system
- Knowledge about variation
- Theory of knowledge
- Psychology

A Map of Theory

Aim of this chapter. The prevailing style of management must undergo transformation. A system can not understand itself. The transformation requires a view from outside. The aim of this chapter is to provide an outside view - a lens - that I call a system of profound knowledge. The system of profound knowledge provides a lens. It provides a map of theory by which to understand the organizations that we work in.

New Meaning

The first step. The first step is transformation of the individual. This transformation is discontinuous. It comes from understanding of the system of profound knowledge. The individual, transformed, will perceive new meaning to his life, to events, to numbers, to interactions between people.

Transformation

Once the individual understands the system of profound knowledge, he will apply its principles in every kind of relationship with other people. He will have a basis for judgment of his own decisions and for transformation of the organizations that he belongs to.

Optimization

One need not be eminent in any part nor in all four parts in order to understand it and apply it. The 14 points for management (*Out of the Crisis*, Ch. 2) in industry, education, and government follow naturally as application of this outside knowledge, for transformation from the present style of Western management to one of optimization.



*“All that we have comes from
people who are responsible only
to themselves.”*

W. Edwards Deming

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