Business as Unusual
(Shift From Big Problems to Great Opportunities)

Presented by Bill Bellows

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Abstract

Before his death in 1993, W. Edwards Deming provided “a map of theory by which to understand the organizations that we work in.” He was well aware of the challenges that organizations face, in their “Business as Usual” mode of operation. He shared simple explanations to challenge us to envision “Business as Unusual.” “Sure,” he said, “we have to solve problems. Certainly stamp out the fire. Stamp out the fires puts us back to where we were in the first place.” In practicing “Business as Usual,” resources are allocated to fire-fighting, attempting to lower Things...
Abstract

...Things Gone Wrong, such as medical errors in a hospital. Under such contingent circumstances (a problem has occurred), how much value is given to activities for preventive measures (a problem has not occurred), if not seeking opportunities for investment, wherein efforts to improve existing actions (those not considered current problems) will have a superior return elsewhere within the system?

Business as Unusual offers opportunities to both prevent problems and seek opportunities for investment.
Agenda

- Background
- Reflections
- Modes of Thinking
- Purposeful Resource Management
- Opportunities to Act
- Opportunities to Think
Background
Resource Management Model

Proactive

Reactive

Activity
Resource Management

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

Activity

Proactive

Reactive

Ownership

“Mine”

“Ours”
Product or Service Innovation

As Conceived

Replacing the screwdriver
Pilot holes
Hole saw
Drywall installation
Concrete
Product or Service Innovation

As Conceived

The top 5 uses:
1. Replacing the screwdriver
2. Pilot holes
3. Hole saw
4. Drywall installation
5. Concrete
Resource Management Model

Proactive

Reactive

Ownership

1: "Mine"

2: "Ours"
Product or Service Innovation

As Conceived

As Managed
In the late 1960’s, Frank Pipp, an assembly plant manager for an American automobile company, instructed his team to purchase competitor’s cars. His plan was to have the final assembly team disassemble these cars and learn first-hand how they assembled. At that time, if two connecting parts could be assembled in Pipp's plant without the use of a handy rubber mallet, then these parts were known as “snap fit”.
Inspiration

In Pipp’s experience, snap-fit was a rare occurrence. To his amazement, one competitor’s car was discovered to be 100% “snap fit”, for which his division GM replied, “The customer will never notice.”

Slowly, but surely, customers have noticed the assembly and performance results that Pipp’s team found in 1969, when they first examined a Toyota pickup truck.
Replication

Fast forward to 2014, when the financial advantages of 100% snap-fit hardware have been demonstrated and replicated within Aerojet Rocketdyne for over 18 years. We do so with an emphasis on “better thinking about thinking,” which shifts attention from a traditional focus on parts to the gap between the parts and, thereby, how parts integrate.
“Little progress can be made by merely attempting to repress what is evil; our great hope lies in developing what is good.”

Calvin Coolidge
Resource Management

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

Ben Franklin

“A stitch in time saves nine”

Francis Baily

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

Barack Obama
Perception & Thinking
“What we see depends on what we thought before we looked.”

Myron Tribus
Philip Crosby on Quality

- “Zero defects is another way of saying ‘do it right the first time’”
- *Quality* is defined as conformance to requirements

Source: Let’s Talk Quality, Philip Crosby, 1989
Imagine….No Problems

Beginning on Monday morning, all incoming material as well as all tasks completed internally, meet requirements and arrive on time, on budget…

What changes would begin to appear, within hours, days, weeks, and years?
Imagine….Replies

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
Actions & Interactions

**Actions - Parts**

**Interactions - Gaps**
“A system is never the sum of its parts. It is the product of the interactions of its parts. ……………. the art of managing interactions is very different indeed than the management of actions, and history requires this transition for effective management.”

Russ Ackoff
W. Edwards Deming on Quality

“A product or service possesses quality if it helps somebody and enjoys a good and sustainable market.”
Genichi Taguchi on Quality

“Quality is the minimum of loss imparted to the Society by a product after its shipment to a customer.”

Source: Introduction to Quality Engineering , Genichi Taguchi, 1983
How much time is spent discussing parts, tasks, activities, program milestones, etc. which are good and completed on time?

How much time is spent studying for the final exam, questions from weekly quizzes and the mid-term which were correct?
Time Management
Satisfaction

How important is customer satisfaction?
Expectation Management

Value

Expectation

Disappointment

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Buying Watermelons and Briquettes
Grades

What letter grade is required for all purchased parts and services, as well as tasks completed internally?
Task Flow

Handoff Requirements?

D → E → F

I ← H ← G
Task Grades

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Macro System Model
Macro System Model

Task Completion
- Step 1: Task A
  - GOOD
- Step 2: Task B
  - GOOD
- Step N: Task P
  - GOOD

Product Assembly
- Sub-Assembly 1
  - FIT
- Sub-Assembly 2
  - FIT

Final Assembly
- Product Assembly
  - WORKS

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Task Grades

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Interactions, not Actions

One inspiration for challenging the mental model of “good parts” is the 1983 discovery by Ford Motor Company of a dramatic difference in warranty claims between automatic transmissions designed by Ford and produced in two locations, one in Batavia, Ohio, the other by Mazda in Japan.
Interactions, not Actions

Much to the surprise of Ford’s corporate warranty office, the number of complaints associated with the erratic shifting of the transmissions produced in Batavia were a factor of 3 greater than the complaints against the transmissions produced by Mazda.
Interactions, not Actions
Interactions, not Actions

Upon close examination, Ford realized that their manufacturing focus was on the valve diameter and the bore diameter, taken separately.
Interactions, not Actions

Meanwhile, Ford learned that Mazda’s manufacturing focus was to actively manage the gap between the outer diameter of the valves within the transmission and the corresponding diameter of the valve bore.
In doing so, Mazda’s efforts realized the existence of an ideal gap, resulting from ideal (“target”) values for both the bore and valve diameters, with an awareness that variation in gap size matters.
On Bowling Balls
Examples of Action Management

- **BORE DIAMETER**
  - MIN
  - MAX

- **VALVE DIAMETER**
  - MIN
  - MAX

- **PAGE COUNT**
  - 20
  - 25

- **DISTANCE FROM THE DOOR**
  - 0 FT
  - 100 FT
Macro System Model
Action Management

HOLE DIAMETER
MIN
MAX

OUTER DIAMETER
MIN
MAX

PAGE COUNT
20
25

DISTANCE FROM THE DOOR
0 FT
100 FT
Macro System Model
Action Management

- HOLE DIAMETER
  - MIN = MAX
- OUTER DIAMETER
  - MIN = MAX
- PAGE COUNT
  - 20 = 25
- DISTANCE FROM THE DOOR
  - 0 FT = 100 FT
Micro System Model
Action Management

HOLE DIAMETER

MIN ≠ MAX

OUTER DIAMETER

MIN ≠ MAX

PAGE COUNT

20 ≤ 25

DISTANCE FROM THE DOOR

0 FT ≠ 100 FT
Resource Management Contrast

**BORE DIAMETER**

- **MIN**
- **MAX**

**VALVE DIAMETER**

- **MIN**
- **MAX**
Resource Management Contrast

BORE DIAMETER

MIND THE PART

MIN  MAX

VALVE DIAMETER

MIN  MAX

BORE DIAMETER

MIND THE GAP
Taguchi’s Quality Loss Function

“Loss to Society”

Lower Specification Limit

TARGET (desired value of parameter)

Upper Specification Limit

“Loss to Society”
Modes of Thinking
## Modes of Thinking

### Categories
- Absolutes
- Discrete
- Good vs. Bad, Smart vs. Dumb
- How many students at UCLA? How many faculty?

### Continuum
- Relative
- Wholeness
- Better/Faster/Cheaper/Smarter/etc.
- Students are different, faculty are different

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Modes of Thinking

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  - How many students at UCLA? How many faculty?

- Continuum
  - Relative
  - Wholeness
  - Better/Faster/Cheaper/Smarter/etc.
  - Students are different, faculty are different
Purposeful Resource Management
Resource Management Model

Proactive

Reactive

“Mine”

“Ours”

PURPOSEFUL

REALISTIC

EFUL

REFLEXIVE
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

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

Opportunities to Act
Opportunities to Act
(differences that make a difference)

- Category Thinking vs. Continuum Thinking
- Macro Systems vs. Micro Systems
- Attention to “Good” elements
- Manage interactions, not actions
Opportunities to Think
An InThinking Roadmap
AKA The Hotel California

- InThinking Together (9 hrs)
  (Formerly known as “ET” and “Understanding Variation”)

- The New Economics Study Session (14 hrs)

- Managing Variation as a System (9 hrs)

- Resource Leadership (8 hrs)

- Leading Systems (12 hrs)
  (AKA the “Organization Workshop”)

- Kepner-Tregoe (24 hrs)
  (Problem Solving and Decision Making)

- DATT (16 hrs)
  (Design of Experiments & Taguchi Methods – An Overview)

- Lateral Thinking (16 hrs)

- Understanding Taguchi Methods – Part 1 (40 hrs)

- Understanding Taguchi Methods – Part 2 (40 hrs)

- OD (ongoing discussion)
  (4th week, Th/Fri, 12-2pm PT)

- BTA…webinar
  (2nd week, Th/11:30-1pm PT)

Prerequisites

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An InThinking Roadmap

TARGET AUDIENCES: Members of management, individual contributors, suppliers, and customers who are providing leadership in InThinking activities. Family members, "members of the community" and students are welcome to attend. "Members of the community" are citizens who are involved full or part time, or in a volunteer capacity, in community related work. Examples include hospital employees, teachers, religious leaders, scouting leaders, and youth sports volunteers.
An InThinking Roadmap
AKA The Hotel California

Leading Systems (12 hrs)
(14 hrs)
(Previously known as “ET” and “Understanding Variation”)

Kepner-Tregoe (24 hrs)
(Problem Solving and Decision Making)

Six Thinking Hats (8 hrs)

Lateral Thinking (16 hrs)

Managing Variation as a System (9 hrs)

Resource Leadership (8 hrs)

Understanding Taguchi Methods – Part 1 (40 hrs)

Understanding Taguchi Methods – Part 2 (40 hrs)

Design of Experiments & Taguchi Methods – An Overview (16 hrs)

Distance Learning Opportunities

OD

Lateral Thinking (16 hrs)

BTA…webinar

Prerequisites

Distance Learning Opportunities

Distance Learning Opportunities

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Distance Learning Opportunities

Monthly Announcements

Better Thinking About...Web Announcement

Good afternoon from the Los Angeles campus of Aerojet, located in Canoga Park, California, on the western end of Fernando Valley.

In our third session of 2014, Elaine Johnson, from Lake Oswego, will present on Thursday, April 11th, from 11:30 to 1:30, a new focus area, “Better Thinking About How Literature Spreads Business.”

Elaine’s aim for this presentation is to show that literature and business succeed when business leaders enter a new world of information. She will discuss how the use of literature can enhance the way people think and impact the bottom line.

Ongoing Discussion Announcement

Good afternoon from the Los Angeles campus of Aerojet Rocketdyne, located in Canoga Park, California, on the western end of the San Fernando Valley.

Aerojet Rocketdyne’s InThinking Network welcomes Julie Goodfellow, from Abergavenny, Wales and Hugh McAllister, from Henderson, Nevada, to lead our third Ongoing Discussion conference call of 2014 on March 27th and 28th and also our 17th session since we began in January 2000. As for a topic, Julie and Hugh have selected “From My Seat in the Stadium Continued...”, in their first time with us as Thought Leaders.

(Please note: daylight saving time is in force in the USA)

Hugh has been a friend and thinking partner since 2013, when he worked in Los Angeles and joined the team for the In2:InThinking Network’s...
The In2:InThinking Network was formed in 2001 by a group of students of the work of W. Edwards Deming and related theorists, including Russell Ackoff, Edward de Bono, Tom Johnson, Peter Senge, and Genichi Taguchi. The aim of our network is to make thinking about sub-systems, variation, knowledge, and psychology, and their interaction – which comprises Deming's System of Profound Knowledge - more conscious. We believe that such thinking about thinking, which we call “InThinking,” will allow people to better perceive relationships and interdependencies in human endeavors, and consequently act to make those endeavors more valuable, more satisfying, and more joyful. The aim of our 5-day In2:IN 2014 Forum is to continue to elevate the consciousness of individual and collective thinking. Join us in learning, connecting, and improving how we can work, learn, and think together. Registration fee: $400, with a $50 discount for registering on or before May 7th.

Learn more about our 2015 Forum at our website at [www.in2in.org](http://www.in2in.org)
“Getting less of what you don’t want doesn’t get you what you want.”

Russ Ackoff
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