Locking in Safe Habits

Low Country ASSE PDC

April 26, 2018

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Safety@6σ

• Introduction to Safety@6σ
• Dissect The Moments Model and Discuss Behaviors
• Break
• Explain Behaviors & the Tool(s) to Change Them
• Finish Safety@6σ

Disclaimer:
You’ll, most likely, receive no new info from this session.
Introduction

Safety@6σ

There is still wide spread use of Six Sigma tools and methodology.

Why?
Introduction

Why 6 Sigma?

6 Sigma is equivalent to Near Perfect Performance.

And…
Safety@6σ aspires to achieve:

- 3ppm error ratio at
- 99.9996% performance

< 1 OSHA recordable
2 million work-hours
...One injury is one too many!
Goal of Safety@6σ -

Create the safest habits to achieve 6σ levels of performance
Introduction

Is S@6σ achievable?

*Some contend 3sigma is limit for humans
WHAT ARE THE FOUR THINGS YOU VALUE MOST IN LIFE?

1. ................

2. ................

3. ................

4. ................
Introduction

Behaviors ≠

This training explains why!
Introduction

More Questions...

Why is *BBS* so popular?
Introduction

OSHA SAYS:

“Behavior is the cause of 90% of all incidents and injuries”.

FAA SAYS:

“Behavior is the cause of 84% of all aircraft crashes”.

LOCAL NEWSPAPER PRINTS:

‘Car incidents happen due to alcohol, speed or reckless driving’, seldom do you read about defects on the car.
Introduction

At-risk behavior is the biggest contributor to injuries / incidents ...
Consequently, in this workshop we’ll attempt to understand...

**Behaviors ≠**

Work-as-imagined vs. Work-as-done
Various models explain behavior and controls.

To achieve $6\sigma$ performance we’ll use ‘The Moments Model’.
The Moments Model

Beliefs
Values
Life Experiences
Attitudes

Thinking or Levels of Awareness

More Awake/Aware

5 Unitive
4 Creative
3 Conscious
2 Sensitive
1 Automatic
0 Vital

Behaviors Actions Results

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Results

Dissection from R to L

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What “results” are we referring to in our Results Block?
Results
Uncontrollable Events
Uncontrollable Events

Behaviors

Control = 100%
Behaviors

We looked at some U.S. stats:

We’re not as interested in those statistics as we are in what’s going on specifically in YOUR environment.
Behaviors

In your opinion, what % of the incidents happening in your work environments are the result of human error / behavior?

<table>
<thead>
<tr>
<th>Percentage Score</th>
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<tr>
<td>100%</td>
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<td>65%</td>
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<tr>
<td>60%</td>
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<tr>
<td>50%</td>
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</table>
Spider Model

Some of the factors that might cause:

Team Exercise

Human Error
On The Job

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Some of the factors that might cause:

What’s the common denominator?
Spider Model

Some of the factors that might cause:

What’s the common denominator?

THINKING!
Is there a way to measure thinking (or Awareness)?
LEVELS OF AWARENESS*

LEVEL 5  UNITIVE (CONSENSUS)

LEVEL 4  CREATIVE

LEVEL 3  CONSCIOUS

LEVEL 2  SENSITIVE

LEVEL 1  AUTOMATIC

LEVEL 0  VITAL / TRUE SLEEP

*Developed by ADSI
Why is Awareness important?
Most incidents occur during which type of task?

- High Risk / High Frequency
- High Risk / Low Frequency
- Low Risk / High Frequency
- Low Risk / Low Frequency
Awareness Hurdle/Challenge

Types of Tasks

High Risk     /      High Frequency

Low Risk      /       Low Frequency

Averages

Low Risk     /     High Frequency

Low Risk     /     Low Frequency
Awareness importance
The Moments Model

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More Awake/Aware

Thinking or Levels of Awareness

Behaviors

Actions

Results
DO YOU REMEMBER THE FOUR THINGS YOU VALUE MOST IN LIFE

• Family
• Health

3. ......

4. ......

How did I know health & family would be in Top 4?
The essence of who we are...
our individuality.

Uniqueness
BREAK
LET’S REVIEW
What’s common...

The Moments

Understanding What Drives Behavior

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Understanding Behavior

Intellectual Moment

Where we want to be.

When we’re thinking about what we’re doing.

When our actions and behavior reflect what we value.

Often referred to as:

“Being in the moment.”

“Being in the zone.”
Understanding Behavior

Emotional Moment

The Moments

Love:

Fear:

Anger:

*IRRATIONAL Moment
The signal/impulse to rush or hurry when there is no outside pressure** to do so.

Are you familiar with any individuals whose ‘engine’ is always running at higher RPMs?

**Note: Perception is Reality

*IRRATIONAL Moment
Understanding Behavior

Instinctive Moment

The strong signal.desire to

• Eat when we’re hungry.

• Drink when we’re thirsty.

• Get out of extreme weather.

• Move quickly when startled.

• Conserve energy whenever we can.

Note: Strongest moment...virtually impossible to ignore.

*IRRATIONAL Moment
Irrational, Instinctive

Instinctive Moment* - provides signal to

- Conserve energy whenever we can

*Note: Strongest moment...virtually impossible to ignore.

Can we avoid dropping into Automatic mode, if, as human beings, we naturally receive strong signals from our Instinctive Moments to conserve energy?
Irrational, Instinctive

Instinctive Moment* - provides impulse to

• Conserve energy whenever we can

*Note: Strongest moment...virtually impossible to ignore.

Can we avoid dropping into Automatic mode, if, as human beings, we naturally receive strong impulses from our Instinctive Moments to conserve energy?

NO!
**Instinctive Moment** - provides impulse to:

- Conserve energy whenever we can.

*Note: Strongest moment…virtually impossible to ignore.*

Can we avoid dropping into *Automatic* mode, if, as human beings, we naturally receive strong impulses from our Instinctive Moments to conserve energy? **NO!**
Locking in Safe Habits

Safest Habits

What mode are you in when you’re performing a habit?...

AUTOMATIC!
Safest Habits + Awareness + Risk + Continuous Monitoring = Safety@6σ
The Moments Model

Beliefs
Values
Life Experiences
Attitudes

Thinking or Levels of Awareness

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Behaviors Actions

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Behaviors
Actions
Results

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Tools to change behavior
Tools to Change Behavior

Several Concepts & Tools to change behavior and lock in Safe Habits:

1. Job Criticality Scale
2. Observation & Feedback (Monitoring)
   - WAI/WAD & 3 Safety Obligations
   - 5S/6S, NYC Crime & Broken Windows
3. Mini-Investigation Model
4. Safety First (Safety vs. Production)
   - Cause for Pause & Partner
5. Moment & Awareness Quotient
Tools to Change Behavior

Job Criticality Scale
Job Criticality Scale

100% Highly Critical

- a chance for multiple fatalities if somebody makes a mistake
  Examples: Airline pilots, air traffic controllers

50% Moderate Criticality

- a chance for single fatality if a mistake is made
  Examples: Doctors, Surgeons, Pharmacists, etc.

0% Low Criticality

- nothing much happens if we make one little mistake
  Example: selling shoes at the mall
Job Criticality Scale

100% Highly Critical

Where does YOUR job fall on this scale?

0% Low Criticality
Tools to Change Behavior

Observation and Feedback
(Monitoring)
Accidents are just the tip of the iceberg.....

....Near Misses and At-Risk Behaviors are below water, invisible part of the iceberg
Observation and Feedback

What Observation and Feedback is:

• Systematic approach (Intent)
• Focused on behaviors
• Positive Reinforcement
• Collaboration Promoter
• Leading Indicator
Observation and Feedback

What Observation and Feedback is NOT:

• Judgmental
• Pointing at people
• Confrontational
• Looking for fault
• Disciplinary
Observation and Feedback

Three Safety Obligations:

1. **Work as safely as possible.**

2. **Encourage safe behavior in others.**

3. **Appreciate the concern of others.**
Tools to Change Behavior

5S/6S
NYC Crime & “Broken Windows”
NYC Crime (circa 80s/90s)

- 2,000 murders/year
- 600,000 serious felonies/year
- 20,000 subway felonies/year
- Fair-beating was costing $150M/yr
- All 6,000 subway car covered with graffiti inside and out
- 500 “red tape” areas on tracks
NYC Crime (circa 2000)

- Murders dropped by two thirds
- Felonies cut in half
- 75% fewer subway felonies by decade end
- Clean subway system pride of NYC

What Happened??
“If a window is broken and left unrepaired, people walking by will conclude that no one cares and no one is in charge. Soon more windows will be broken, and the sense of anarchy will spread from the building to the street, sending signal that anything goes.”

--Criminologists Wilson & Kelling
“Broken Windows Theory”

- Focused on misdemeanors & vagrants (e.g., “squeegee men”)
- Focused on subway graffiti
- Nabbed fair-beaters with undercover cops ($1.25 fair)
- Retrofitted city buses into rolling station house for arrests
5S/6S & Broken Windows

Any Broken Windows?
Safety First
(Safety vs. Productivity)
“A Cause for Pause & Partner”
Tools to Change Behavior: “Pause & Partner”

SAFETY vs. PRODUCTIVITY
What comes first?...
Tools to Change Behavior: “Pause & Partner”

SAFETY vs. PRODUCTIVITY
What comes first?...

Drive the car, then put on the seat belt.
Tools to Change Behavior: “Pause & Partner”

SAFETY vs. PRODUCTIVITY
What comes first?...

Drive the car, then put on the seat belt.

Lift the load, then test its weight.
Tools to Change Behavior: “Pause & Partner”

SAFETY vs. PRODUCTIVITY
What comes first?...

Drive the car, then put on the seat belt.

Lift the load, then test its weight.

Perform the task, then ask how to safely do it.
Tools to Change Behavior: “Pause & Partner”

SAFETY vs. PRODUCTIVITY
What comes first?...

Drive the car, then put on the seat belt.

Lift the load, then test its weight.

Perform the task, then ask how to safely do it.

Start producing, then check if it’s safe to produce.
Tools to Change Behavior: “Pause & Partner”

**SAFETY vs. PRODUCTIVITY**

*If there is a choice between safety vs. productivity…it’s a*

**CAUSE FOR PAUSE & PARTNER**

**SAFETY FIRST!**
Tools to Change Behavior

Mini-Investigation Model
Tools to Change Behavior

Mini-Investigation Model Exercise:

ALL THE FACTORS THAT MAY HAVE CONTRIBUTED TO:

CONDITIONS

THIS EVENT

ACTIONS OR BEHAVIORS

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Tools to Change Behavior

Mini-Investigation Model Exercise:

Incident Description:
Operator was pushing red roller box (with wheels) around the front of a twister. Hands were placed on the outside of roller box. When turning the box, the finger was mashed between the roller box and a stationary material tote. Result: Finger contusion, requiring medical treatment.

Immediate Causal Factors:
• Congested area.
• No Defined aisle.
• Area not 5S’d.
• Yellow tape (visual reminder) worn
• Hands were placed outside of roller cart.
• Deviation from JSA.
• Exposed hands to ‘Line of fire’.
Tools to Change Behavior

YOU CONTROL THE LAST DOMINO …
Tools to Change Behavior

Moment & Awareness Quotient
(A Dynamic Risk Assessment Tool)
Tools to Change Behavior: “What’s MY MAQ?”

A key tool to driving awareness up and risk down is…

‘dynamic’ risk assessment.
Tools to Change Behavior: “What’s MY MAQ?”

Routinely…STOP and ask yourself,

WHAT’S MY MAQ?

My Moment & Awareness Quotient
Tools to Change Behavior: “What’s My MAQ?”

**WHAT’S MY M.A.Q.? == MOMENT & AWARENESS QUOTIENT**

**Before/During each task...**

Where am I right now? – Moment & Awareness Level

Scale of one (1) to five (5)

<table>
<thead>
<tr>
<th>1</th>
<th>1-2</th>
<th>2</th>
<th>3</th>
<th>4 - 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automatic</td>
<td>Distracted</td>
<td>Some</td>
<td>Aware</td>
<td>Very Aware</td>
</tr>
<tr>
<td>Preoccupied</td>
<td>Tired</td>
<td>distraction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worried</td>
<td>Don’t feel</td>
<td>Indifferent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxious</td>
<td>good</td>
<td>Not</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mind Elsewhere</td>
<td>Other things on mind.</td>
<td>motived</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Head and hands not in same place.</td>
<td>Head and hands not in same place</td>
<td>Don’t Care</td>
<td></td>
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</tr>
</tbody>
</table>

“In the moment” – “In the moment”

Know what I’m about to do
Thinking about the task
Asking self questions

Familiar with task
Conducted a job analysis
Aware of hazards
Aware of coworkers
Tools to Change Behavior: “What’s MY MAQ?”

WHAT’S MY M.A.Q.?
(a dynamic risk (self) assessment)

• Only takes a few seconds.
• Refocusing raises awareness.
• Reduces mishaps and probability of injury.

How hard is that?
Wrap up

this is how I finish a presentation:
The Moments Model

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The Moments

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Behaviors Actions

Results
The Moments Model

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More Awake/Aware

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Thinking or
The Moments

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Actions

Results

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Wrap Up

Safest Habits + Awareness + Continuous Monitoring =

- Work Safely (as possible)
- Encourage Safe Behavior
- Appreciate the Concern

Safety@6σ
Wrap Up

Is 6σ achievable?

That depends on you…

What’s Your M.A.Q.?

What are your habits?
Wrap Up

Personal Plan

Safety @ Six Sigma Workshop
“What's My M.A.Q.?.” Personal Plan

All humans regularly experience momentarily lapses in awareness levels. Consequently, we must perform routine self-assessments to re-focus and return to the right “moment” - fully aware of our behaviors, to achieve Safety@6σ. So... What’s your M.A.Q.?

Behaviors to change - Habits to lock in*:

* ____________________________________________________________________________
* ____________________________________________________________________________
* ____________________________________________________________________________

Behaviors to monitor in myself and others:

* ____________________________________________________________________________
* ____________________________________________________________________________
* ____________________________________________________________________________

*Remember to tie a new habit to an existing one *(if possible), and ask others for support.*
Questions?
“Thank You!”

-- Alex