

# High Reliability:

Everyone, Everywhere, Can Do This

How to assist people and  
organizations to reach Reliability  
Seeking Behaviors

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# Constructs of HRO

Shoulder to shoulder, can we create a high reliability organization?

# Constructs of HRO

HRO as concepts and principles

Fulfilling?

HRO as behaviors

Functional?

How many gaps are there?

# Constructs of HRO

## HRO as attitudes

Breathing life to High Reliability

Attitude as favor and disfavor of objects by degree and dynamic

# Agenda

- I. How we see High Reliability
- II. Practices from our experiences
- III. The lessons we learned
- IV. Educational methods for reliability seeking behaviors

## I. How we see High Reliability

# HRO is about working in uncertainty

HRO was brought to the business community's attention from dynamic, high risk work

This produced the misconceptions:

- HROs are high risk (produces needless melodrama)
- HRO is a state of existence (which can be achieved)

I. How we see High Reliability

# Determinants of HRO

(Better is the Reliability Seeking Organization or RSO)

The environment

The person

The collective, system, or organization

# The Environment – Unpredictable to Stable

Uncertainty

(Unexpected is time-based)

Incomplete or imperfect knowledge and information

Acceleration of events

Complexity

Simple principles with nonlinear interaction

# The Environment – Unpredictable to Stable

## Deterministic Chaos (*Difference Calculus*)

Logistic equation (parabolic curve) is the feedback equation between two limiting factors

Constants (rates of change)  $> 3$  produce unpredictable outcomes

## Indeterminance

Outcomes with three dynamic variables cannot be predicted

First demonstrated by Newton with planetary motions

I. How we see High Reliability

# The Person –

We cannot impose thinking or behaving

Neuroanatomy

Reasoning

Attitudes

I. How we see High Reliability

# Neuroanatomy

Prefrontal Cortex – Executive Functions

Binary decision making

Abstract thought

Future and planning

Cingulate Cortex – Adaptive Functions

Adaptive decision making

Control of amygdala

Error recognition

Amygdala – Survival

Fight, Flight

[Freeze, Collaborate, Choke]

I. How we see High Reliability

# Reasoning

## Deductive Reasoning

Facts guarantee the hypothesis

## Abductive Reasoning

Rapid production of hypotheses

## Inductive Reasoning

Increasing strength of evidence increases strength of conclusion

Baye's estimation theory

I. How we see High Reliability

# Attitudes

Some form of favor or disfavor toward an object

I. How we see High Reliability

# The Collective

Team, System, Organization

Moves toward collaboration and self-organization

Communication

Acting

Team

Structure

I. How we see High Reliability

# The Collective

Communication

A behavior for information flow

Information + Relationship = Communication

Acting

Decision making

Authority migration

I. How we see High Reliability

# The Collective

Team by shared objective

Team by hierarchy is artificial

Structure

Command is that what you cannot delegate

Facilitates information flow and authority migration

[Leadership = responsiveness to environment + influencing nearby members]

I. How we see High Reliability

# Learning

The Reliability Seeking Organization  
constantly learns

Its members constantly learn

A robust system that allows the errors of  
learning

I. How we see High Reliability

# The Central Problem

Principles and Concepts (cognitions)

*what is taught*



Variables (situations and circumstances)

*what is learned*

*II. Practices from our experiences*

# How we do it

## Description

Objective – no individual intent

Articulate – builds a structure

Scene vs. Story

Succinct – Roman soldier's clothing

## Decision making

Loop Decision Making – adaptive

Algorithm – deterministic

Decision tree – based on future knowledge

*II. Practices from our experiences*

# How we do it

## Team formation

Shared objective

Sharing information

Collaboration

## Unrecognized fear

Self-preservation

Neurochemically mediated

Situational cognitive distortions

Anger

Frustration

Plausible avoidance

Freeze Choke

*II. Practices from our experiences*

# How we do it

## Identification, Interpretation, Translation

Covert, compensated state vs. Overt, decompensated state

Negative space

Situational awareness

## Engagement / Enactment

Duty to act

Learn what works through action

Constant creation of new realities

Goal is to change trajectory

Compare engagement (enactment) with structure-seeking behavior (rules or principles)

***High Reliability emerges from enactment***

*II. Practices from our experiences*

## How we do it

Don't follow the rules

(This is not a work around)

Identify when the rule does not apply

Rules may compete or conflict

*Are policies and procedures a brick wall that keeps reality out or a picket fence that lets reality through?*

*II. Practices from our experiences*

## How we do it

Shoulder to shoulder

*No isolation, no authority gradient*

*Shared experience*

*Time to connect*

# III. The lessons we learned

Describe better

Everyone Decides

Collaborate

The Importance of Attitudes

III. The lessons we learned

# Attitudes

Attitude toward High Reliability

Attitude toward Seeking Reliability

III. The lessons we learned

# Attitudes

## Weick & Sutcliffe's Five Principles

Necessary and sufficient attitudes for Reliability Seeking

### Attitude toward failure

Preoccupation with failure

### Attitude toward complexity and reductionism

Reluctance to simplify

### Attitude toward reading the situation, changing plans, information

Sensitivity to operations

III. The lessons we learned

# Attitudes

Weick & Sutcliffe's Five Principles

Necessary and sufficient attitudes for Reliability Seeking

Attitude toward errors, mistakes, error recognition and management, improvisation

Commitment to resilience

Attitude toward subordinates, local knowledge

Deference to expertise

III. The lessons we learned

# Attitudes

## Constellation of additional attitudes

Honesty

Reputation

Empathy

Motivation

Duty

Humility

Novice

Intimidation

Learning

Isolation

### Value Conflicts

Initiative vs. Obedience

Creativity vs. Conformity

III. The lessons we learned

# Attitudes

*Reliability Seeking Organizations are sufficiently robust to allow the opposing principles necessary for balance while moving through uncertainty*

III. The lessons we learned

# Attitudes

Learned, not taught

Degree of control vs. Span of control

Responsive and Preventative

Don't make the final decision, give that to subordinate

III. The lessons we learned

# Attitudes

## Communication

“That is what they told you; here is what we really do.” Anonymous subordinate co-opting the rookie

What I say

What they hear

What they use

III. The lessons we learned

# Attitudes

Doctors are taught to interview patients through the process and content of what is said and to create a climate of intimacy leading to honest information

*Doctors do not apply this to error investigation*

III. The lessons we learned

# Attitudes

Shoulder to shoulder

*What we do everyday we do in crisis*

## *IV. Educational methods for reliability seeking behaviors*

What *can* be taught?

What *can* be practiced?

What *must* be learned?

#### *IV. Educational methods for reliability seeking behaviors*

Reliability seeking behaviors create a system sufficiently robust to tolerate minor errors and produce a climate for learning.

From this emerges the reliability seeking organization responsive to the environment, is resilient, adaptable, and evolvable.

## *Reliability Seeking Organizations*

*For it is the most responsive to change  
(the fittest) that adapts and evolves.*

## *Reliability Seeking Organizations*

*For it is the most responsive to change  
(the fittest) that adapts and evolves.*

Shoulder to Shoulder