

## ROPE Solutions, LLC

Rapidly Optimizing Performance & Efficiency



RAPIDLY OPTIMIZING PERFORMANCE & EFFICIENCY

Indicators of Performance in High Reliability Organizations

Are we good, or are we lucky?





#### Jim Gray

- Royal Marines Commando (21 years)
- Royal Naval College Greenwich
- Multiple combat tours
- Somali counter-piracy program manager
- Human Performance since 2014









#### Luck?

 Success or failure apparently brought by chance rather than through one's own actions



<sup>&</sup>lt;sup>1</sup> = Endsley, "A Taxonomy of Situation Awareness Errors"

#### **Human Performance in Practice**

#### Human Performance = Behaviors + Results<sup>1</sup>

- Results are measurable outcomes of behavior/work
- Behavior is observable/measurable what people do & say to achieve an end

Good results can be achieved with questionable behavior

Poor results can be produced despite compliant behavior

<sup>&</sup>lt;sup>1</sup> = Gilbert, "Human Competence, Engineering Worthy Performance"

### Leading Vs Lagging Indicators

#### **Leading**

Complacency
Communication/situational awareness
Cognitive Dissonance
Victory Disease
Cross-Checks
Oversight/Leadership
Procedural Compliance



**Lagging** 

Lost Time Incidents
Injury Free Operations Days
Non-Productive Time
Root Cause Analysis
Client?
Worker's Comp?

Leading indicators look forward, through the windshield, at the road ahead. Lagging indicators look backward, through the rear window, at the road you've already travelled.

#### How do we know it's Working?

A **leading indicator** is any measurable or observable variable of interest that predicts a change or movement in another data series, process, trend, or other phenomenon of interest before it occurs



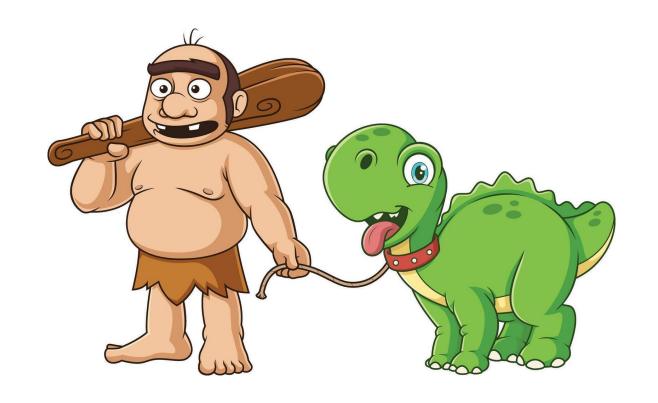
#### Complacency

Self-satisfaction, especially when accompanied by unawareness of or disregard for actual dangers or deficiencies



#### Planning for Complacency

- Complacency is normal
- Plan and predict



#### **Indicators of Complacency**

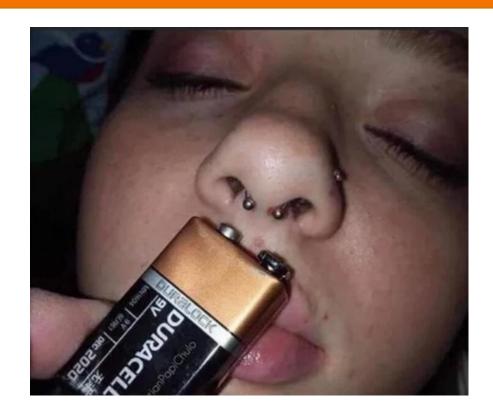
- 1. Behavioral Indicators.
- 2. Surveys and Self-Reports.
- 3. Risk Assessment and Decision-Making
- 5. Cultural Indicators Group Think



#### **Situational Awareness**

The degree of accuracy by which one's perception of the current environment mirrors reality.

Knowing what's really happening around you.



#### Situational Awareness

• 88% of human error can be attributed to a breakdown in Situation Awareness<sup>1</sup>



<sup>&</sup>lt;sup>1</sup> = Endsley, "A Taxonomy of Situation Awareness Errors"



#### Communication

The imparting or exchanging of information or news



#### Barriers to Effective Communication<sup>1</sup>

- I. Semantic barriers (language)
- 2. Psychological barriers (state of mind)
- 3. Organisational barriers (structure, rules and regulations)
- 4. Cultural barriers (lack of similarities)
- 5. Physical barriers (environment, technology)
- 6. Physiological barriers (speech or hearing)



#### **Cognitive Dissonance**

Group resistance to information that suggests change is needed. Resistance to outside observations and recommendations.





"We've always done it this way..."

A MAN WITH A CONVICTION IS A
HARD MAN TO CHANGE. TELL HIM
YOU DISAGREE AND HE TURNS
AWAY. SHOW HIM FACTS OR
FIGURES AND HE QUESTIONS YOUR
SOURCES. APPEAL TO LOGIC AND
HE FAILS TO SEE YOUR POINT.

- LEON FESTINGER -

## **Victory Disease**



## **Victory Disease**

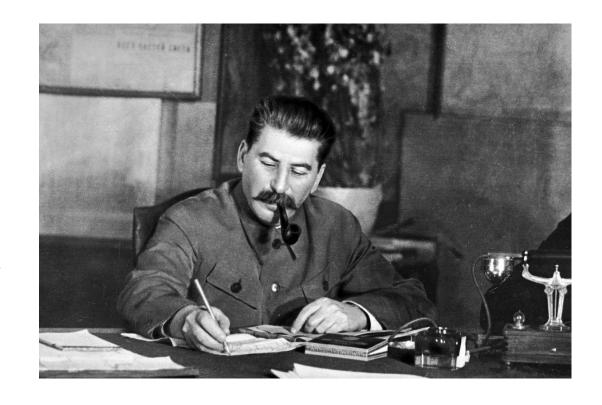


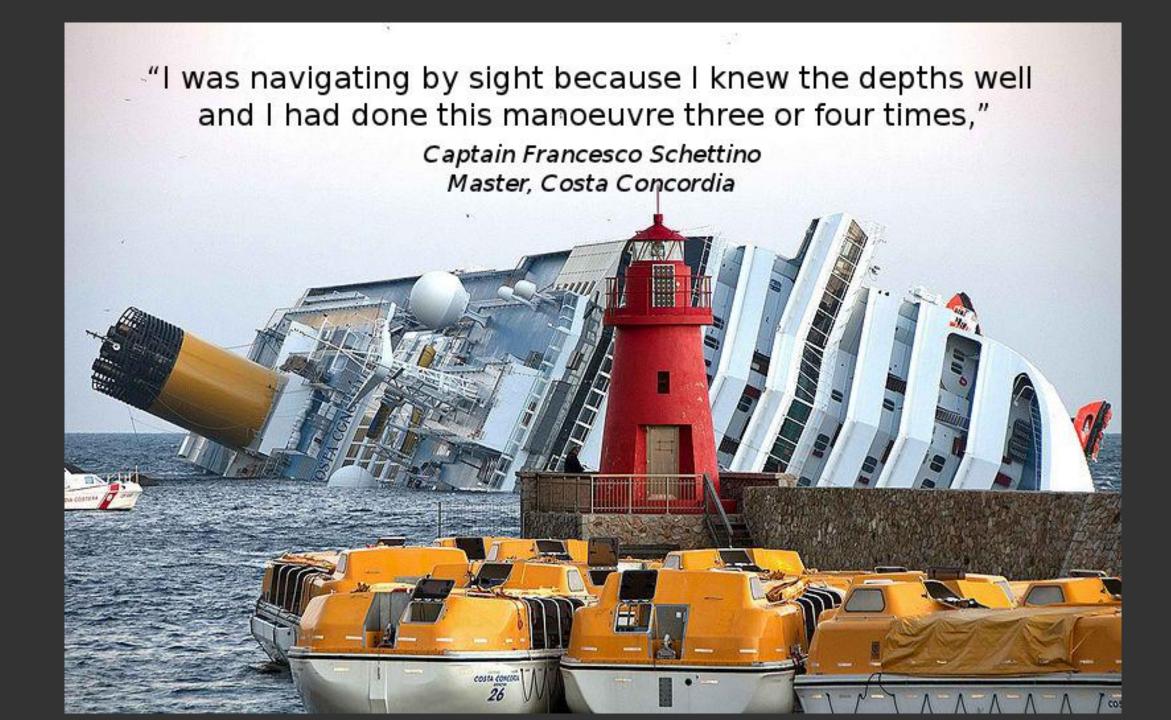


**Operation Barbarossa (Unternehmen Barbarossa)** 

## Victory Disease, why did Hitler do it?

- Stalin's purges
- Finland
- Blitzkrieg / Dunkirk
- Inevitable and the time was right
- Oil
- First few weeks halfway to Moscow





#### **Organizational Resilience**

"Everybody has a plan until they get punched in the mouth."

- Mike Tyson, youngest boxer to win a heavyweight title

- The time to be honest about our leading indicators is now.
  - By definition, cannot eliminate all risks eventually something will happen
  - Be prepared for a "brutal audit"



#### What does success look like?

#### **Lagging Indicators**

- Decreased Non-Productive Time / Down Time
- Increased productivity rates
- Performance recognition:
  - Safety Excellence
  - Operational Performance
- Reduced crew turnover
- Decreased Lost Time Incidents, Total Reportable Incident Rates





#### What does success look like?

#### **Leading Indicators**

- Material condition Facility Cleanliness / PM's complete
- Improved communications
- Quantity & quality of planning, briefs, debriefs
- Lessons learned resulting in improvements to:
  - Procedures
  - Hazard ID & mitigation (JSA's)
- Early deviation recognition
- Critiques
- Leadership environment
  - Morale
  - Mentoring
- Personnel advancement
- Performance metrics (time, variance, etc.)





# Look at Performance and Safety Differently

- Human Performance not a program but a way of thinking
- Need to operationalize HP so it means something to our people
- We need to look at what we measure
- When we measure the wrong things we impact behavior









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Final Thoughts / Questions?