



# IAITAM ACE

May 7-9, 2024 The M Resort  Las Vegas, NV

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Brass Valley

Managing ITAD Risks: Strategies for High Reliability in  
Decommissioning Processes



*Finding your IAITAM Oasis*

## ITAD Risk Management

- My risk management story

## Overview

- Hidden Media & Attack Surfaces
- Incentivizing Proper Vendor Behavior
- Highly Reliability Organizations



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## Hidden Media

Our amazing discovery  
Where are we looking ?

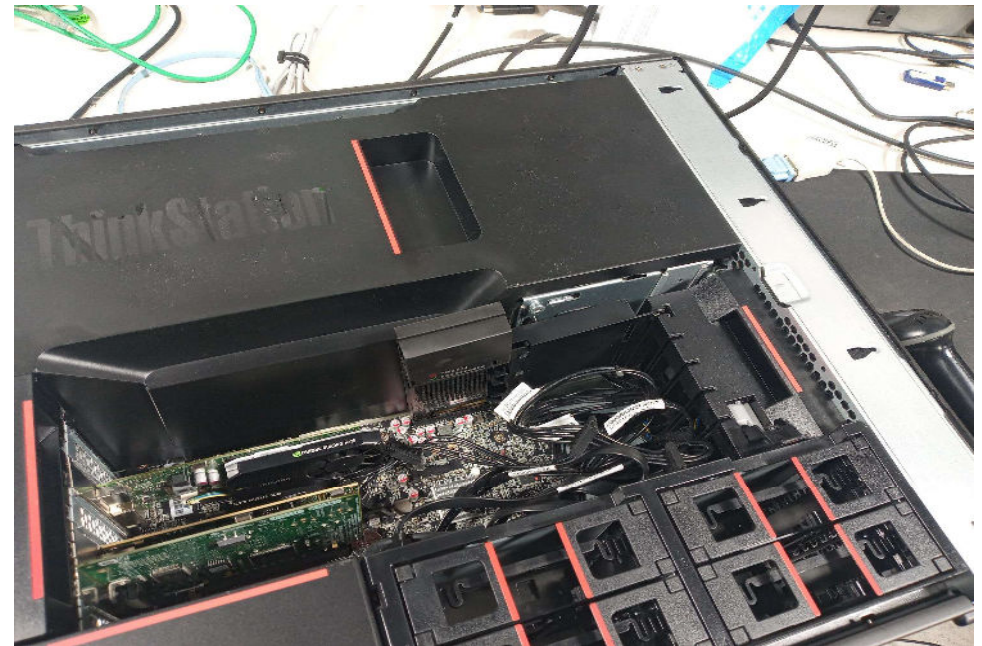


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## Hidden Media

### Desktop Example



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## Hidden Media

NVME



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# Hidden Media

## HP Server Example

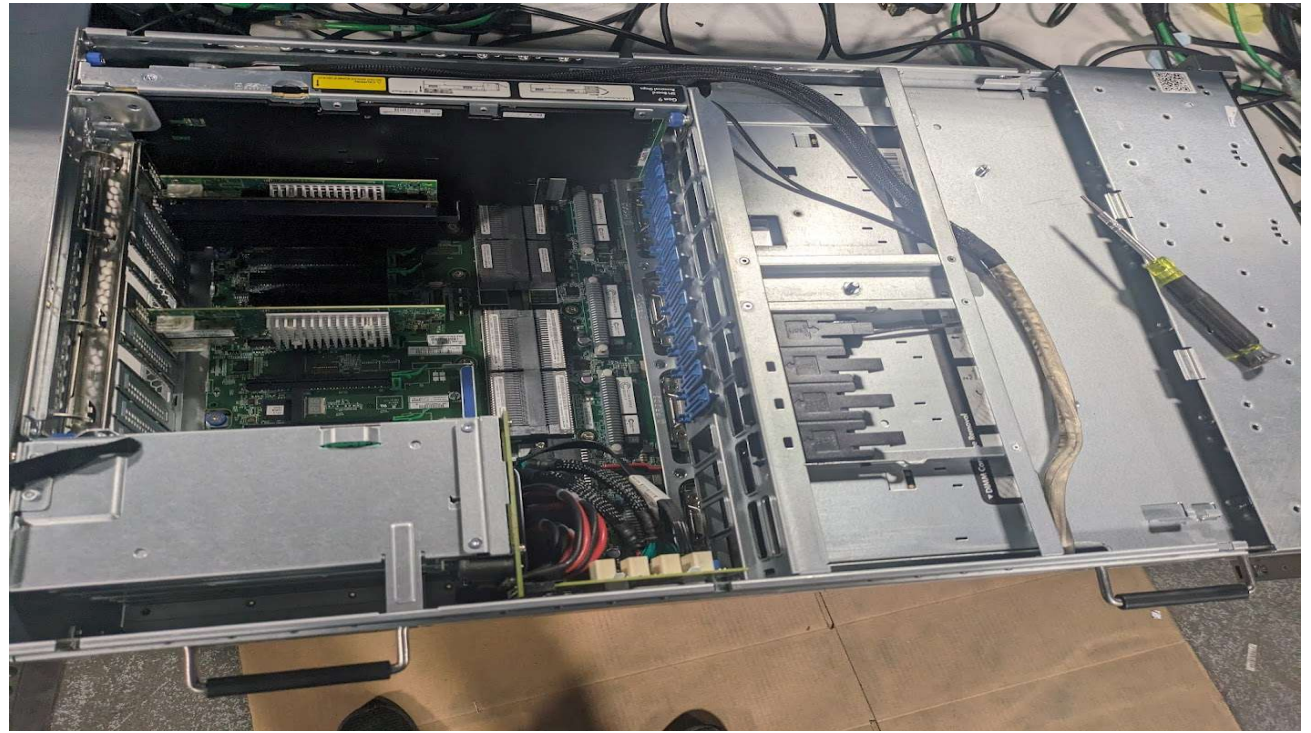


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## Hidden Media

### HP Server Example



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## Hidden Media

### HP Server Example



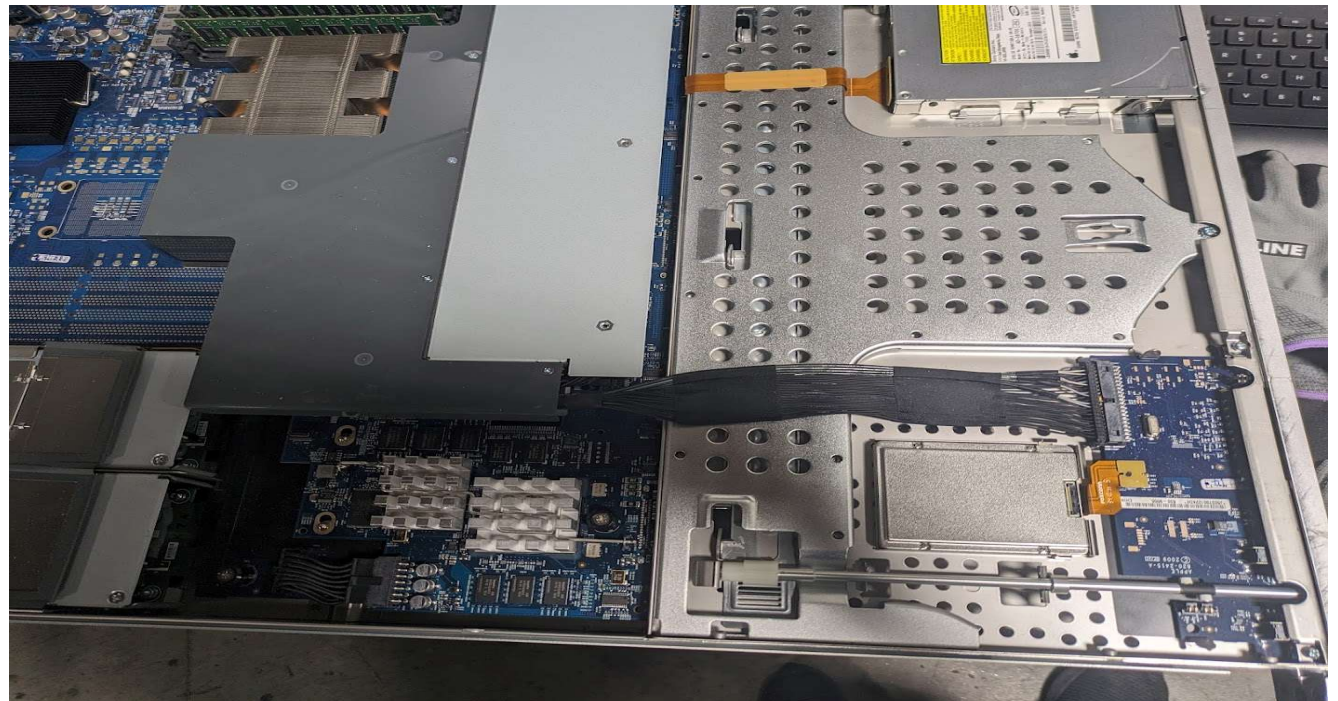
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# Hidden Media

## Apple Server Example

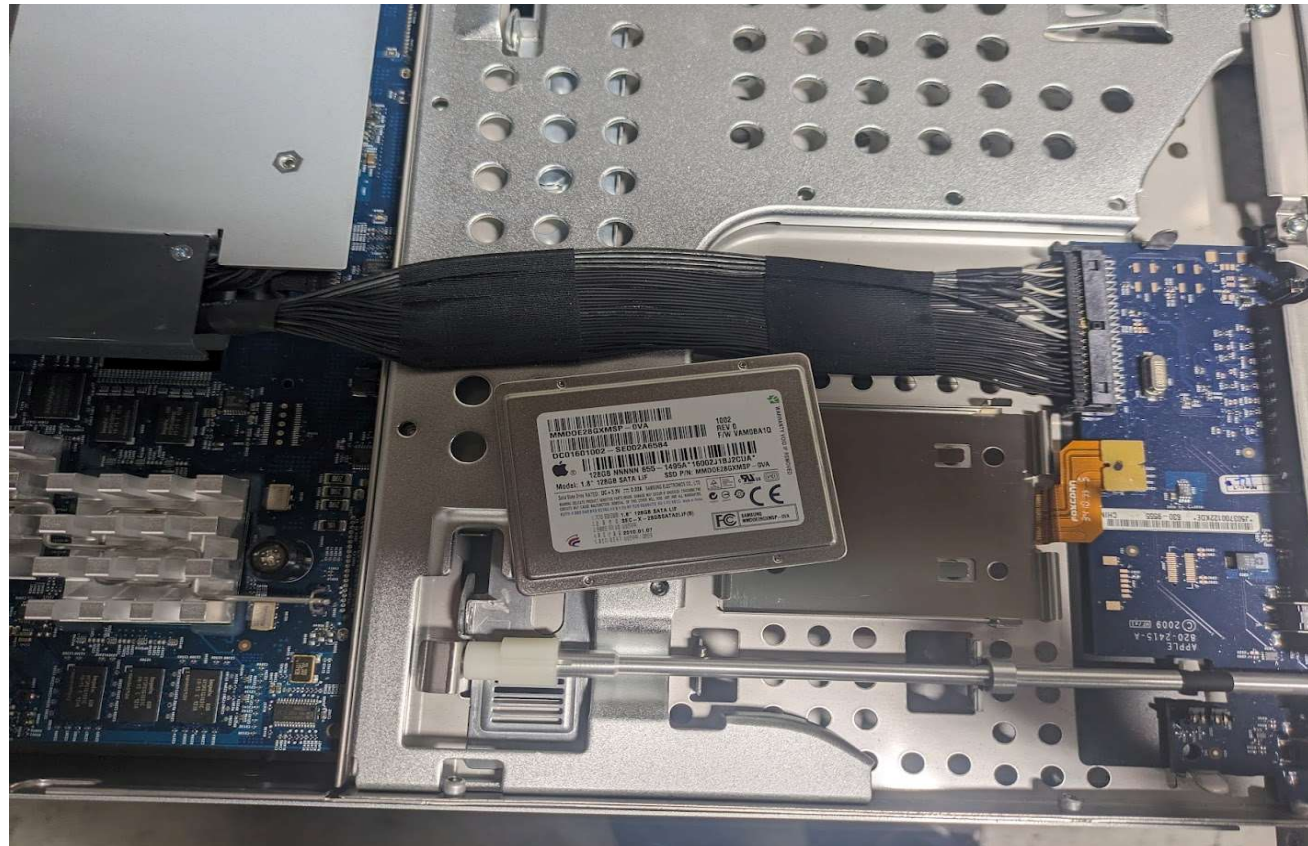


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# Hidden Media

## Apple Server Example



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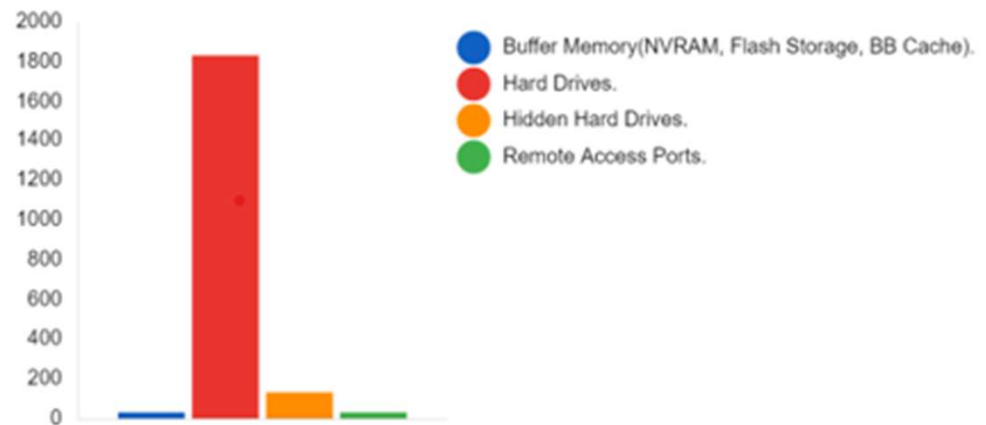


## New Reporting

Accounts for:

- Buffer Memory
- Hard Drives
- Hidden Hard Drives
- Remote Access Ports

Vulnerability Rating



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## Hidden Media

### Pro Tips

1. Think beyond the hard drive.
2. Look at your vendors COD's for information about attack surfaces and buffer memory.
3. Audit your own infrastructure to find any exposure.



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## Properly Incentivizing Your Vendor

### Key concepts

- Liability is non severable
- ITAD is a specialized service
- Insurance coverage is influenced by what is in the service agreement
- Data protection and environmental regulations do not necessarily prescribe methods or acceptable levels of performance.
- Acceptable performance is reverse engineered through litigation
- The Master Service Agreement (MSA) can be a window into a Subcontractor's capabilities and culture
- Value of the MSA vs. Certifications



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## MSA Concepts

Pay attention to definitions

- Make sure Apples = Apples
- Look for insight into the vendor's culture
- Uncommon definitions
  - Chain of Custody
  - Disaster Recovery
  - Hazardous Material



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## Indemnification

What you need to pay attention to

### What is covered?

Environmental

Data Incidents (Cyber Liability)

Theft

Damage

Injury

### Who is covered?

Additional insured



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## Indemnification

What you need to pay attention to

### Limits to coverage

To insurance limits

To Previous billings over time

Arbitrary Fixed number

### How does it activate? (**Key Words**)

Primary and Non-Contributory

Waiver of Subrogation



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## Incentivizing Your Vendor

### Pro Tips

- Master Service Agreement is the most important part of vendor relationship
- Use the MSA to get a window into the vendor's culture
- Don't overlook what indemnification really means



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## Highly Reliable Organizations



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## Highly Reliable Organizations

### Goal:

Learn how to be a highly reliable organization

## Objectives

1. Identify how errors occur and events happen.
2. Learn how to *prevent* errors.
3. Learn and commit to practicing Highly Reliable methods and habits.



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From Our  
Customer's  
Perspective

Fulfill my requests

Be honest with me

Be nice to me

*...in that order*



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## Harm in Healthcare

2-3 747 crashes per day

1999 Institute of Medicine report:

To Err is Human

44,000 to 98,000 Americans die annually  
from medical errors

98,000 = 268 people/day (Boeing 747)

44,000 = 120 people/day (Boeing 737)

2001-03: ~300,000 deaths (HealthGrades, 2005)

2007-09: ~240,000 deaths (Dept. HHS, 2011)



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## Safety is Everybody's Business

- Maintenance employees drained hydraulic fluid from elevators into containers used for surgical detergent.
- Not properly re-labeled or securely stored.
- Containers restocked and shipped as detergent back to hospitals.
- In 2004, the elevator hydraulic fluid was used as detergent in one step of a multi-step cleaning and sterilization process of surgical tools.
- 3800 surgeries occurred using tools that were cleansed with this product.



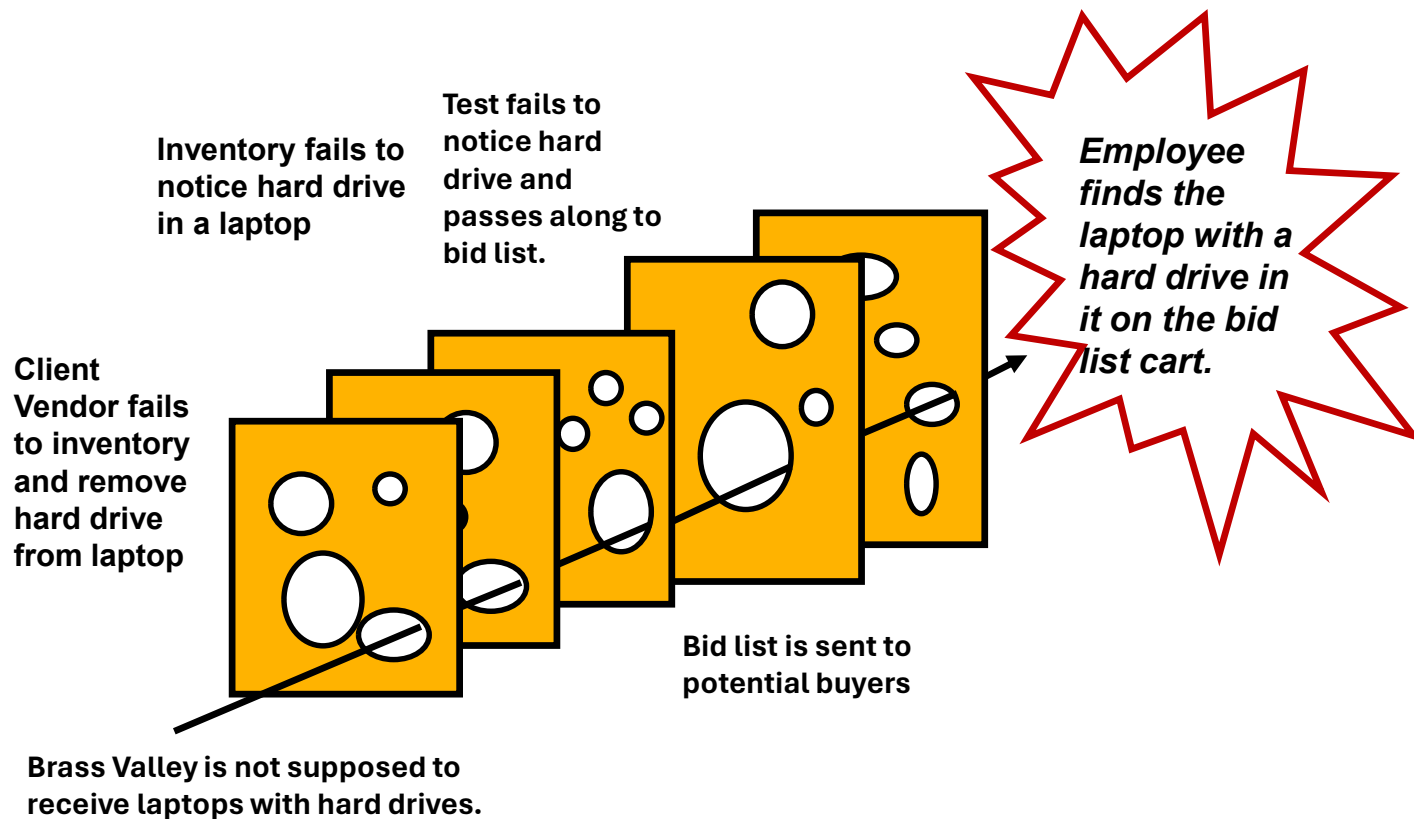
Photo Credit: Duke University Medical Center



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# Swiss Cheese Effect - Case in Point



## Common Causes of Past Events

### Common causes associated with our past events:

- *Lack of attention to detail*
  - *Failure to do double checks rigorously*
- *Poor communication*
- *Lack of questioning attitude or critical thinking skills*
- *Non-compliance with policy, procedure, or expectations*
  - *Including Normalized Deviance*



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## ***Changing Culture through Actions***

A Toolkit to Prevent Errors and  
Events of Harm

C.H.A.M.P



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# High Reliability Starts with Me

## C.H.A.M.P

### **C** - Communicate Clearly

Repeat Backs/Read Backs, Clarifying Questions and Phonetic and Numeric clarifications

### **H** - Handoff Effectively

SBAR

### **A** - Attention to detail

Self checking using STAR technique

### **M**- Mentor Each Other

200% accountability, Cross Checking and Coach Teammates and Speak up for Safety

### **P** - Practice and accept a questioning attitude

Validate and Verify and Stop the Line – “ I need clarity”



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# Closed-Loop Communications

Clear

Complete

Accurate

Sent and Received



"Ha ha ha, Biff. Guess what? After we go to the drugstore and the post office, I'm going to the vet's to get tutored."



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## 3-Way Repeat Back

**Sender initiates** communication using Receiver's Name. Sender provides a request or information to Receiver in a clear and concise format

**Receiver acknowledges** receipt by a repeat-back of the request or information.

**Sender acknowledges the accuracy** of the repeat-back by saying, **That's correct!** If not correct, Sender repeats the communication.

Train our ears to listen for "**That's Correct!**" – it's a codeword for "we understand each other"



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## Clarifying Questions

Ask one to two clarifying questions:

- In all high-risk situations
- When information is incomplete
- When information is not clear

Why

Asking clarifying questions can reduce the risk of making an error by **2½ times!**

How

Use the High Reliability Phrase:

**“Let me ask a clarifying question...”**



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## Phonetic Clarifications

For *sound*  
*alike words*  
*and letters*,  
say the  
letter  
followed by  
a word that  
begins with  
the letter...

<b>A</b>	Alpha	<b>J</b>	Juliet	<b>S</b>	Sierra
<b>B</b>	Bravo	<b>K</b>	Kilo	<b>T</b>	Tango
<b>C</b>	Charlie	<b>L</b>	Lima	<b>U</b>	Uniform
<b>D</b>	Delta	<b>M</b>	Mike	<b>V</b>	Victor
<b>E</b>	Echo	<b>N</b>	November	<b>W</b>	Whiskey
<b>F</b>	Foxtrot	<b>O</b>	Oscar	<b>X</b>	X-Ray
<b>G</b>	Golf	<b>P</b>	Papa	<b>Y</b>	Yankee
<b>H</b>	Hotel	<b>Q</b>	Quebec	<b>Z</b>	Zulu
<b>I</b>	India	<b>R</b>	Romeo		



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## Numeric Clarifications

For **sound alike** numbers,  
say the number and then the digits

15...**that's** one-five

50...**that's** five-zero

45...**that's** four-five

425...**that's** four-two-five

4 to 5...**that's** the range four dash five

...and **always** use leading zeros – as in 0.9



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## Handoff Effectively

*We provide effective handoffs of tasks and materials to ensure understanding and ownership*

### **Effective Handoffs:**

- involve **interactive, direct communications** between employees
- should **minimize distractions**
- should follow a **standardized process**
- should use a **checklist**



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## Effective Handoffs

### SBAR

#### (Fixing the Issue)

An outline for planning and communicating information about any issue or problem

First, introduce yourself and who is involved – the customer, the project owner, the employees. Then provide the following, ***ensuring you say the highlighted words:***

**S**ituation: The bottom line (problem)

**B**ackground: What do you know? (history, details)

**A**ssessment: What is happening now? (current findings, needs, concerns)

**R**ecommendation: What is next? (recommendation or request for assistance)

**Always check to see if any party has any questions.**



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## Attention to Detail

**What should we do?**

**Pay attention to the task at hand to avoid unintentional skill-based errors**

**Why should we do this?**

- To avoid those slips or lapses where the hand is operating before the head
- To reduce the chance that we'll make an error when we're under time pressure, distracted or stressed

**Error-prevention tool**

- Self Check Using STAR



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## Self-Check Using STAR Technique

**S**top     Pause for *1 to 2 seconds* to focus our attention on the task at hand

**T**hink     Consider the action you're about to take

**A**ct     Concentrate and carry out the task

**R**everview     Check to make sure that the task was done correctly and that you got the correct result

**STOP** is the most important step because it gives your brain a chance to catch up with what your hands are ready to do.



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**Add the numbers....**

**+ 1000**

**Say your answer out loud as  
a group:**

**+ 40**

**+ 1000**

**+ 30**

**+ 1000**

**+ 20**

**+ 1000**

**+ 10**



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And the answer is....

5000 ?

or is it...

4100 ?



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Let's Check It Out....

$$\begin{array}{r} + 1000 \\ + 40 = 1040 \\ + 1000 = 2040 \\ + 30 = 2070 \\ + 1000 = 3070 \\ + 20 = 3090 \\ + 1000 = 4090 \\ + 10 = \end{array}$$

4100



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## Visual Cognition



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## Mentor Each Other

200% accountability

### What should we do?

Look out for one another to catch each other's mistakes while building a greater sense of accountability for our actions.

### Why should we do this?

- To catch and trap honest errors before they reach our customers
- To hold each other accountable for meeting company expectations

### Error Prevention Tools

- Crosscheck and Coach teammates
- Speak Up for Safety/High Reliability: ARCC it up – "I have a Concern!"



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## Crosscheck = Watching out for each other

Peers check each others' work and **ARE WILLING TO BE CHECKED.**

*Look out for your team members...*

- Offer to check the work of others
- Point out work conditions (hazards) your team member might not have noticed
- Point out unintended slips and lapses
- Say **"Thanks for the crosscheck!"**



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## Coach Teammates

### ***Use 5:1 Feedback***

**Encourage** highly reliable and productive behaviors  
*5 times as often as you...*

**Correct** an unsafe and unproductive behavior

### **Tips**

- Be willing to give feedback to others...*and* be willing to have others give feedback to you!
- Provide feedback based on observations
- Use the “lightest touch” possible

### **Good Example**

Remember without saying a word  
what you permit, you promote.



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## Speak Up for Safety and High Reliability: ARCC it Up

A responsibility to protect in a  
manner of mutual respect – an  
assertion and escalation  
technique

**A**sk a question

**R**equest a change

**C**ommunicate a **Concern**

If no success, use the

**C**hain of Command

Safety/High Reliability Code  
Words – **“I have a Concern...”**



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## Practice and Accept a Questioning Attitude

Validate and Verify

Stop the line – I need clarity

### What should we do?

Think critically by questioning information we hear and see if it doesn't fit with what we know

### Why should we do this?

- To detect incorrect information and assumptions that can lead to erroneous decisions or actions
- To help ensure work activities are **stopped** when faced with uncertainty or unsafe conditions

### Error Prevention Tool

- Validate and Verify
- Stop the Line – “I need clarity”



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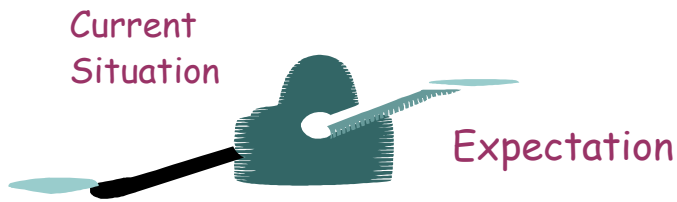


## Validate: *Internal* check

### Internal Smoke Detector

- Does this make sense to me?
- Is it right, based on what I know?
- Is this what I expected?
- Does this information “fit-in” with my past experience or other information I may have at this time?

Get in the habit of asking  
these questions all the time.  
It takes only seconds.



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## Verify External Check

When should you Verify?

- When your detector goes off
- In every high-risk situation
- When there is a change in the customer request or plan

**It's OK *not to know.***

**It's not OK *not to find out.***



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## Stop the Line – I need Clarity

Similar in concept to the **“Stop the Line”** or **“Stop Work Authority”** concept promoted by most high-risk industries – aviation, nuclear, healthcare.

If you are uncertain about what you are about to do...

If you have questions...

If someone raises a concern or question...

### STOP

- **Review** your plan
- **Resolve** the concern
- **Reassess** your actions



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## High Reliability Starts with Me

CCommunicate Clearly

HHand Off Effectively

AAttention to Detail

Mentor Each Other

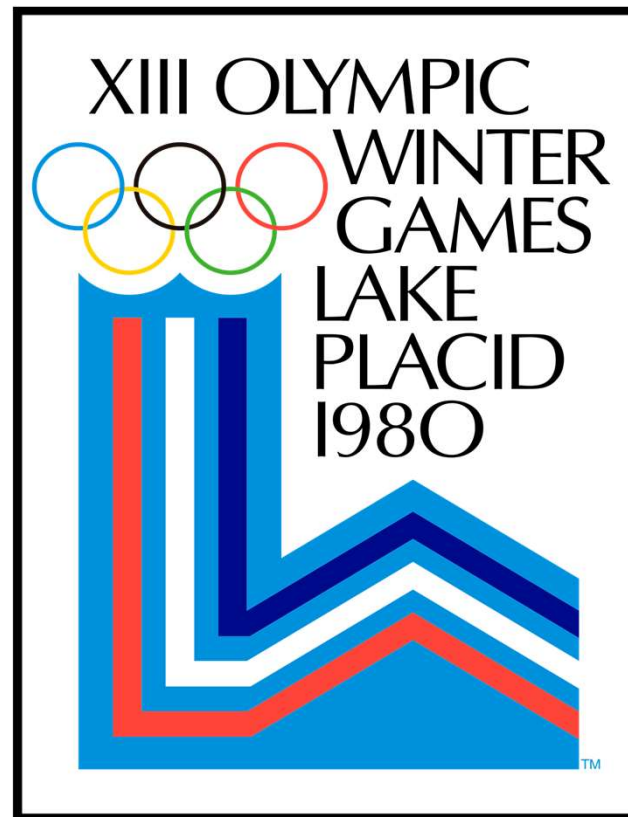
PPractice and Accept a Questioning Attitude



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Closing



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BRASS VALLEY

Closing



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## Closing



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# Connect with Me



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