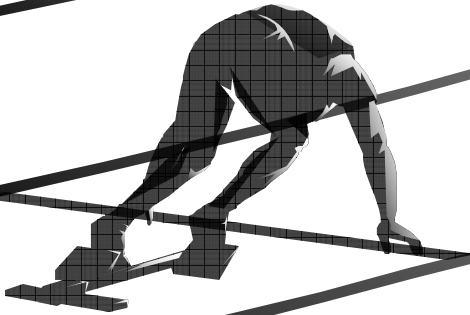


# Inventory Accuracy

*30 Days to a 40% Improvement*



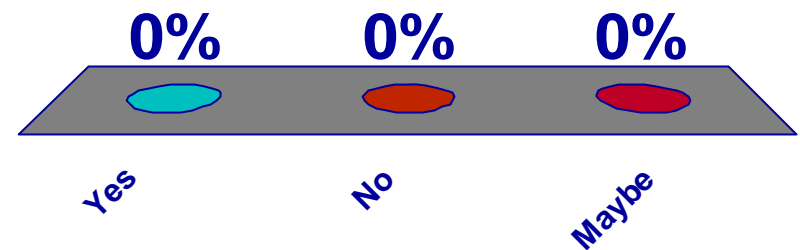
*By Howard Forman  
PIM Associates Inc.*

# Howard Forman

- **President of PIM Associates Inc.**
- **30 + years operations and supply chain experience**
- **Specialize in inventory reduction; SCM; demand planning/forecasting; lean; operation and business process improvement; and education and training**
- **Qualified APICS CPIM, CIRM, CSCP, Lean Enterprise Workshop and Global Sourcing instructor**
- **Frequent speaker at various APICS dinner meetings, seminars, workshops, and conferences**
- **Previously earned APICS CFPIM, CSCP and CIRM certifications**
- **Graduate of Fairleigh Dickinson University with a BS and MBA in Business Management**

# Does your company have an issue with inventory accuracy?

1. Yes
2. No
3. Maybe



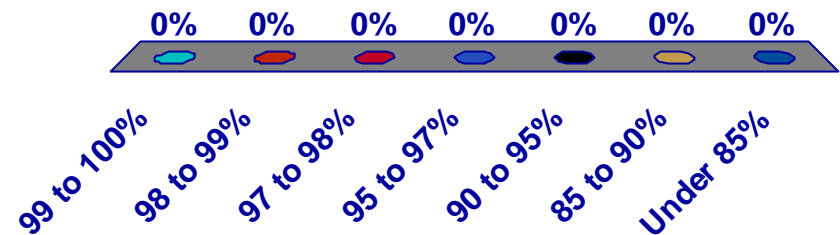
# Inventory accuracy goal

<b>Inventory class</b>	<b>Allowable tolerance</b>	<b>Level of accuracy</b>	<b>Level of control</b>
<b>A</b>	<b>+/- 0 %</b>	<b>100.0 %</b>	<b>Very tight</b>
<b>B</b>	<b>+/- 0.5 %</b>	<b>99.5 %</b>	<b>Moderate</b>
<b>C</b>	<b>+/- 2.0 %</b>	<b>98.0 %</b>	<b>Loose</b>

$$\text{Inventory accuracy} = \frac{\text{No. of hits}}{\text{No. of counts}} = \frac{350}{361} = 97\%$$

# What is your company's current level of inventory accuracy?

1. 99 to 100%
2. 98 to 99%
3. 97 to 98%
4. 95 to 97%
5. 90 to 95%
6. 85 to 90%
7. Under 85%



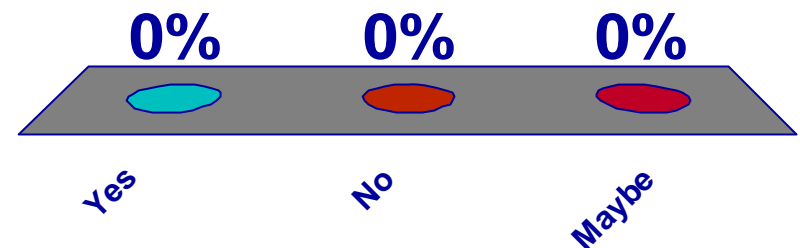
# Reason for poor inventory accuracy

- **Poor discipline / fear**
- **Untrained employees**
- **Delayed or lost paperwork**
- **Inaccurate quantity counts**
- **Poorly controlled stockrooms**
- **Incorrect identification of items**
- **Unrecorded issues and receipts**
- **Inadequate management attention**
- **Inaccurate recording of item location data**
- **Withdrawal of material by unauthorized personnel**



# Do you feel that your company can not achieve 100% inventory accuracy?

1. Yes
2. No
3. Maybe



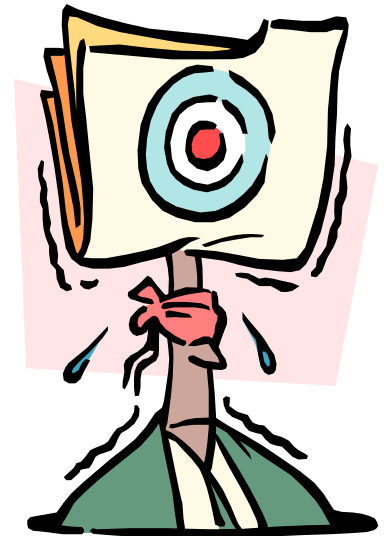
# Step 1 –benchmark and audit

- **IMBWA audit\***
- **Document conditions**
- **Current accuracy level**
- **Define goals & objectives\***



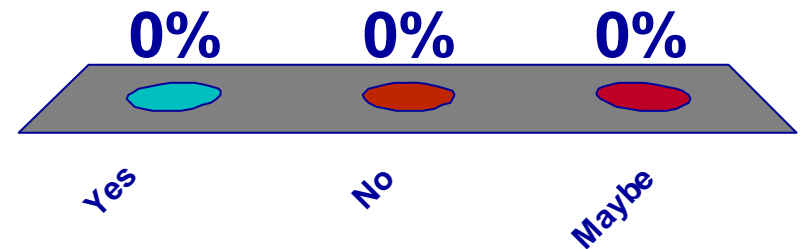
# Step 1a –IMBWA self diagnostic audit

- **PORK**
- **Rush orders**
- **Tropophobia**
- **Order staging**
- **Poor housekeeping**
- **Management attitude**
- **Poor cut-off and timing**
- **Informal system reliance**
- **Lack of training and education**



# If you go to a location and count the material does it match the system?

1. Yes
2. No
3. Maybe



## Step 2 - preparation

- 5 S\*
- Location audit
- Housekeeping
- Publish metrics
- Pareto analysis\*
- Labeling and positioning
- Standardize container size
- Segment and stratify inventory\*
- Identify unique unit of measures

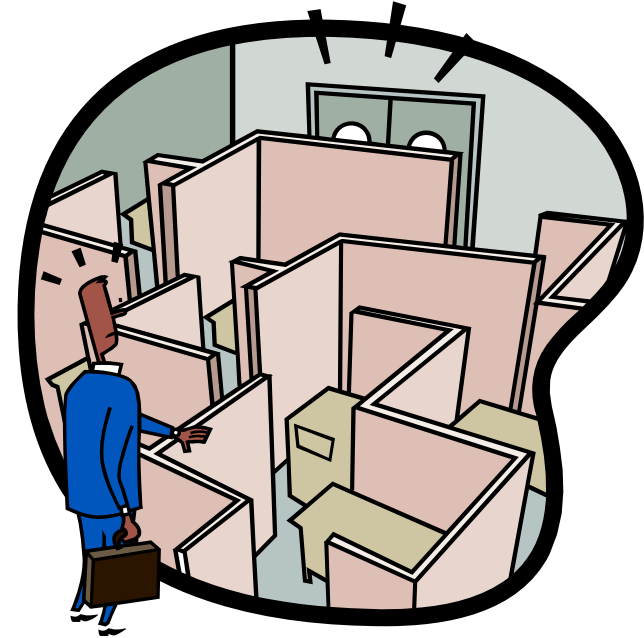


## Step 2a - preparation (buckets)

- **Consignment**
- **Customer material**
- **Engineering (R&D)**
- **Finished goods**
- **Floor stock**
- **In-transit**
- **QC hold**
- **MRO**
- **Obsolete**
- **On-order**
- **Receiving**
- **Rejected**
- **Return to vendor**
- **Rework**
- **Service**
- **Shipping**
- **Stores**
- **VMI**
- **Work-in-process**

# Step 2b - preparation segmentation and stratification

- **Inventory classification**
- **ABC**
- **SMO**
- **Transactional activity**
- **Prior issues**



# Step 3 - policies and procedures

- **Timing**
- **Ownership**
- **Accuracy rules**
- **Storeroom access**
- **Cut-off and timing**
- **Cycle count timing**
- **Transaction processing**
- **Off-hour material processing**



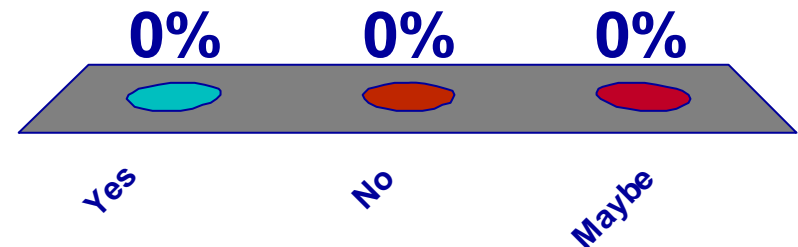
# Step 4 - training and education

- **How to write**
- **How to count**
- **How to use a scale**
- **Policies and procedures**
- **Put-away, store and pick**
- **Inventory management concepts**
- **ERP system transaction processing**



**If the total count is accurate, but the various location counts are inaccurate, is the inventory accurate?**

- 1. Yes**
- 2. No**
- 3. Maybe**



# Step 5 - control group establishment

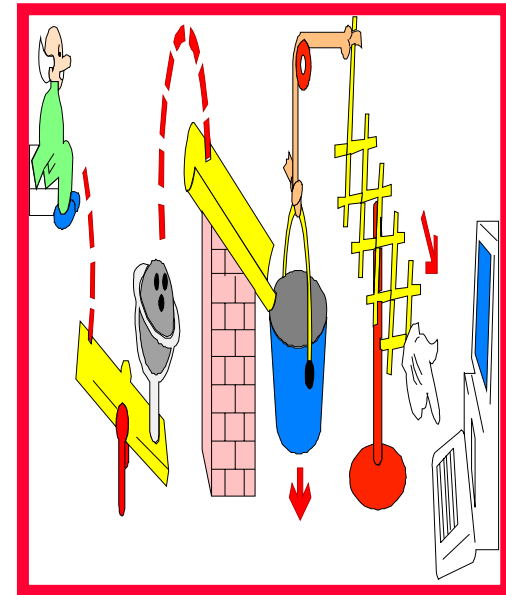
- **Size**
- **Expansion**
- **Count frequency**
- **Selection criteria**
- **Control group purpose**
- **Separate raw material / finished goods**

## Selection criteria

- **50% - high transactions**
- **25% - problem items**
- **10% - “A” items**
- **10% - UOM items not = EACH**
- **5% - “B” items**

# Step 6 - control group count process

- **Count every item, every day**
- **Record results**
- **Reconcile**
- **Resolve errors**
- **Repeat until no errors reported**
- **Move to next control group**



**Goal - identify and correct process errors**

# Step 7 - reconciliation steps

- Identify error
- Perform preliminary analysis
- Identify significant errors \*
- Perform detailed review of all significant error
  - Recount all locations
  - Validate part numbers
  - Analyze paper work
  - Clarify unit of measures
- Reconcile discrepancies
- Identify corrective action to detect error causes
- Input transaction adjustments
- Prepare statistics / measurements \*



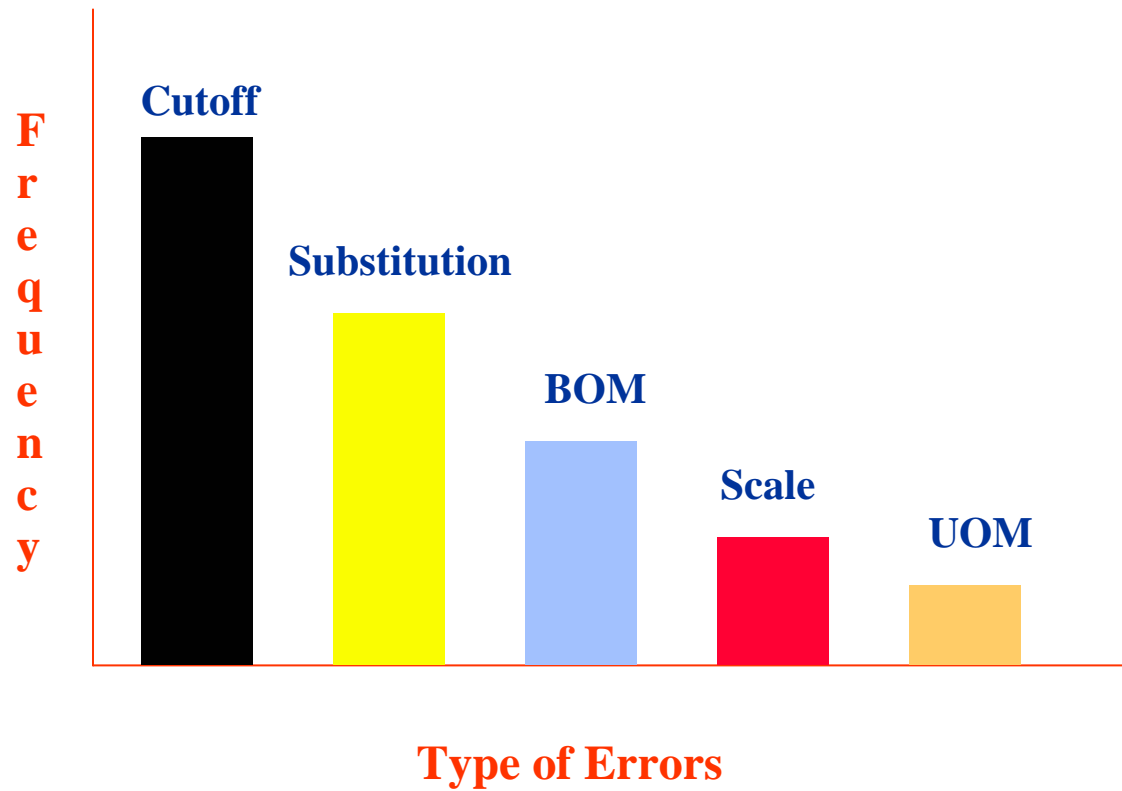
# Step 8 – reporting – measuring

Date	Items counted	Items with significant errors		No. of items with percentage error				
		Number	Percent	0 - 5%	5 - 10%	10 - 25%	25% - 50%	Over 50%
11-9	125	15	12.0%	19	2	2	1	1
11-9	125	10	5.0%	19	2	2	1	1
11-10	125	6	5.0%	19	2	2	1	1
11-11	125	3	2.3%	16	1	1	1	
11-12	125	1	1.0%	1				

# Step 9 – reporting analysis

Inventory Variance Causes	Frequency		Dollars		
	Current	YTD	Current	YTD	
<b>Identification Error</b>					
• Invalid part number or UOM		3	21	\$455	\$2,588
• Invalid storage location	→	14	114	\$1,399	\$9,543
• Invalid lot number	→	1	23	\$555	\$3,753
• Bad count	→	1	43	\$3,594	\$7,699
<b>Recording Error</b>					
• Material received less / more than recorded		3	41	\$245	\$2,343
• Material received/issued with incorrect UOM	→	6	73	\$973	\$6,554
<b>Reconciliation Error</b>	→	1	8	\$1,222	\$3,334
<b>Material Usage Reporting</b>					
• Inspection sample usage not reported	→	3	9	\$1,487	\$7,669
• Unauthorized usage of material					
<b>Total</b>		<b>34</b>	<b>380</b>	<b>\$10,423</b>	<b>\$48,366</b>

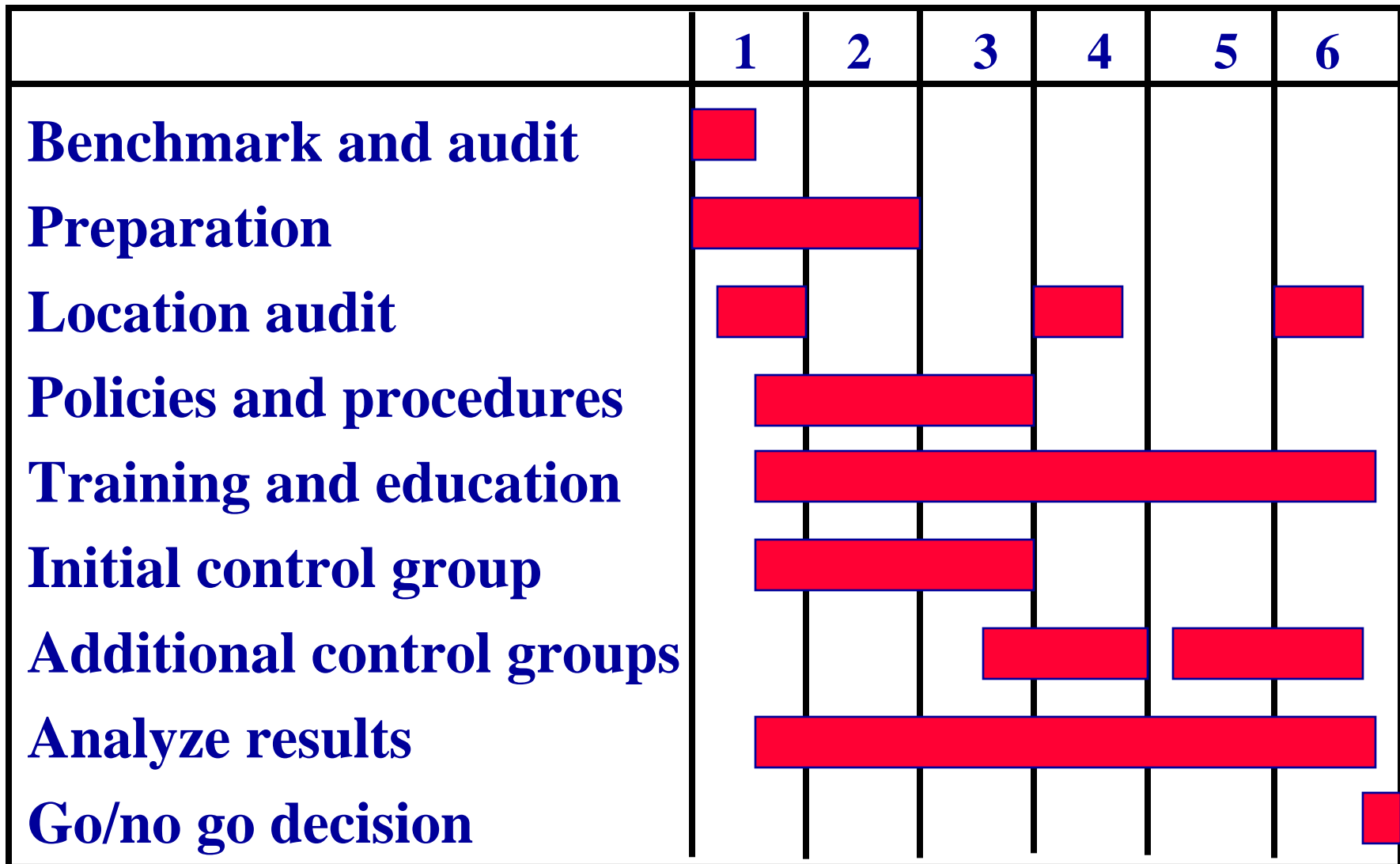
# Step 10 - corrective action



## **Step 11 - Repeat steps 6-10**

- **Expand control group by another 50 items**
- **Count all items with a zero balance**
- **Count all items with a balance between 1 and 10**
- **Perform a monthly location audit**
- **Repeat until errors eliminated**
- **Expand control group by another 50 items**
- **Repeat until errors eliminated**
- **Report finding to management**
- **Initiate normal cycle counting**

# Time Line



# Final thoughts on results

- **Management commitment**
- **Correct major error causes**
- **Establish process ownership**
- **Correct “C” and “D” items over time**
- **Don’t forget to recognize and reward**
- **Location audits track poor performance**
- **Reconciliation process focus on preventing errors**

# Questions

If you have any questions feel free to contact me at any time.

## Contact

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