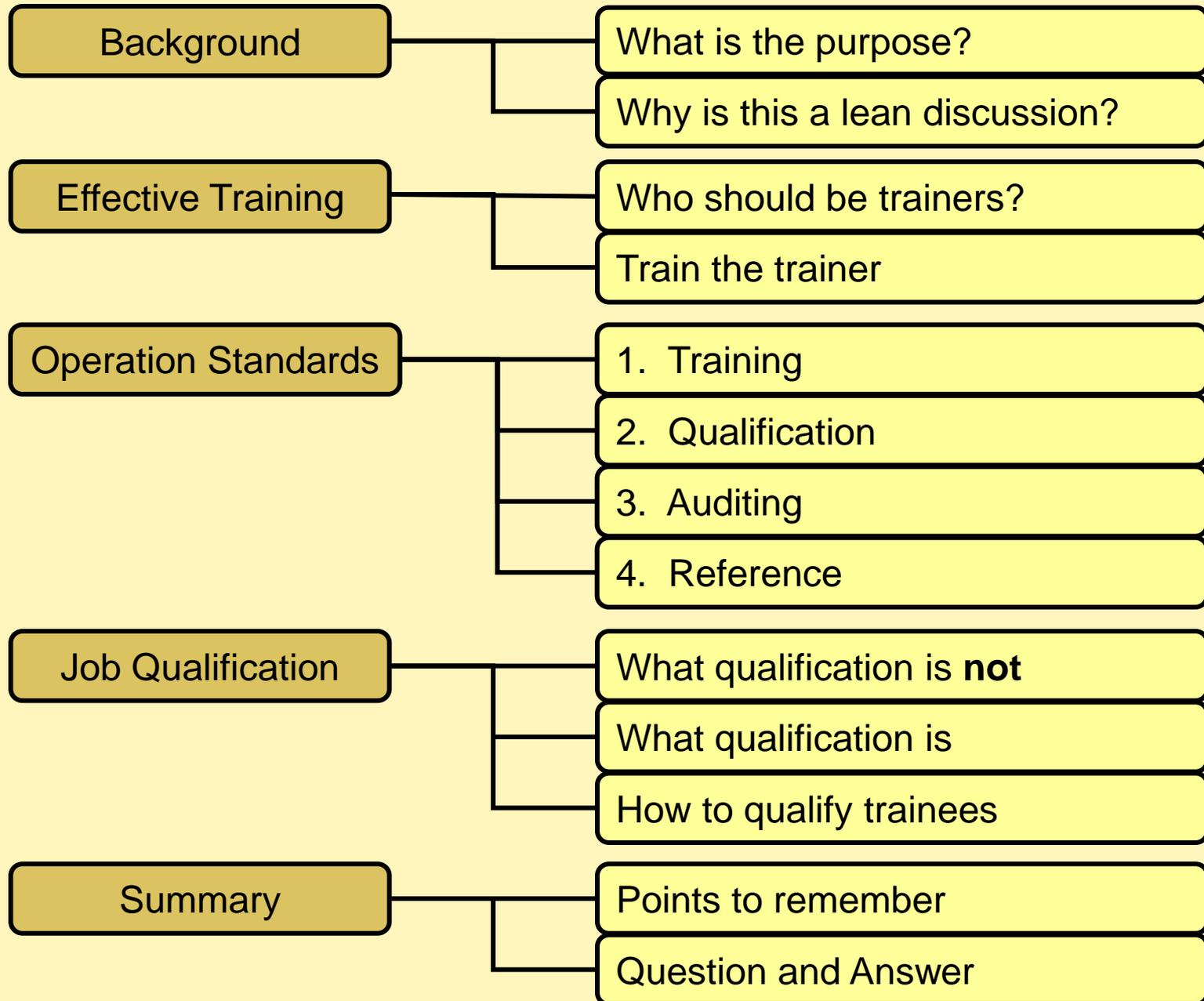


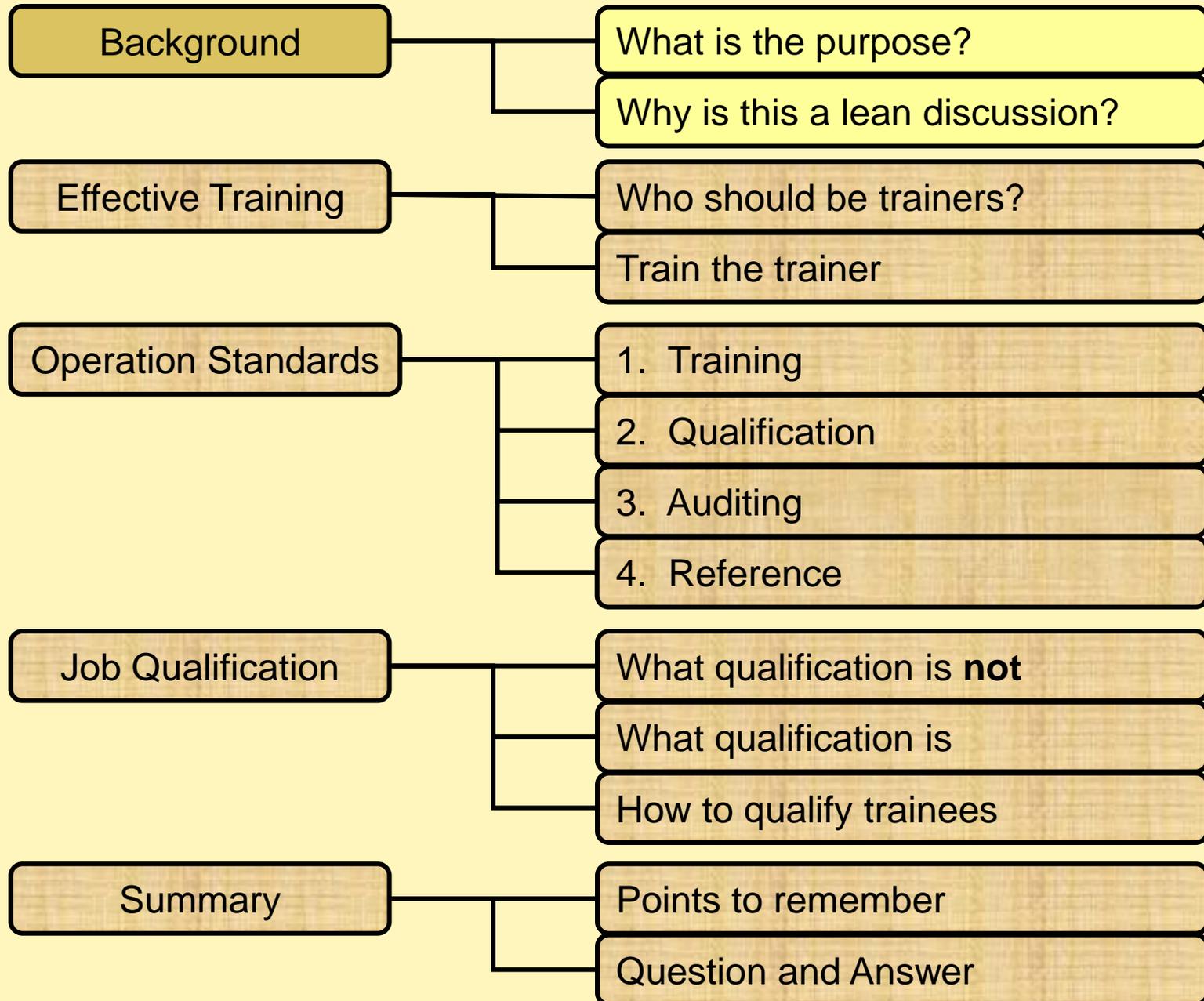
# Training...

**Is your Training System producing  
Lean results?**

**Richard White – Manager  
New Model and Quality Planning  
North American Purchasing**







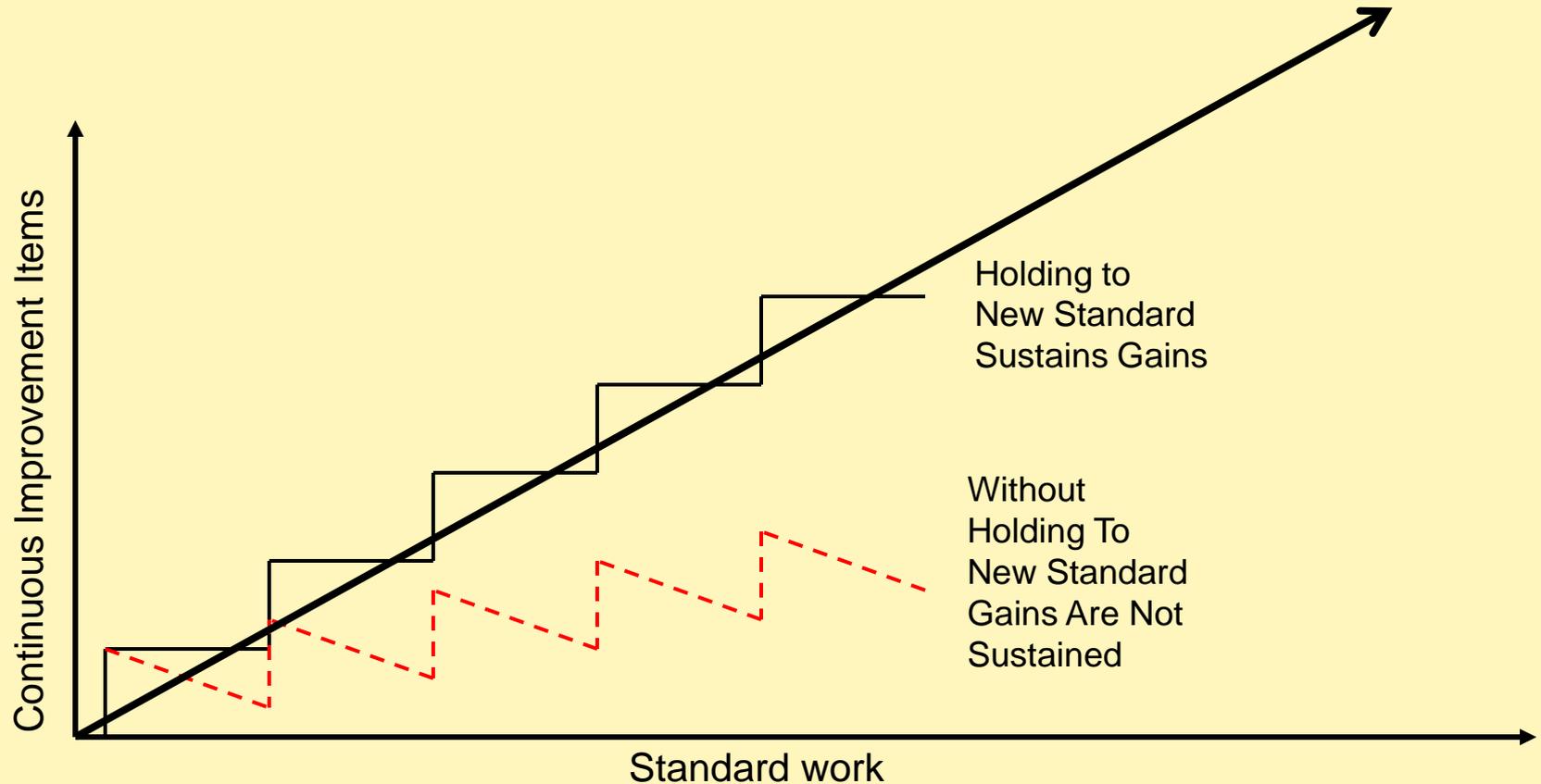
**What are we trying to achieve  
with a training system?**

# Standard Work!

## What is Standard Work?

- Standard work is the safest, highest quality, and most efficient way *'known'* to perform a particular process or task.
- Standard work is the *'only'* acceptable way to do the process.
- Standard work is *'expected'* to be continually improved, and in fact it is the foundation of continuous improvement.
- If the current process is not standard, then it will be:
  - Impossible to effectively experiment and test new ideas for improving the process.
  - Impossible to determine the impact of improvements upon process outputs.

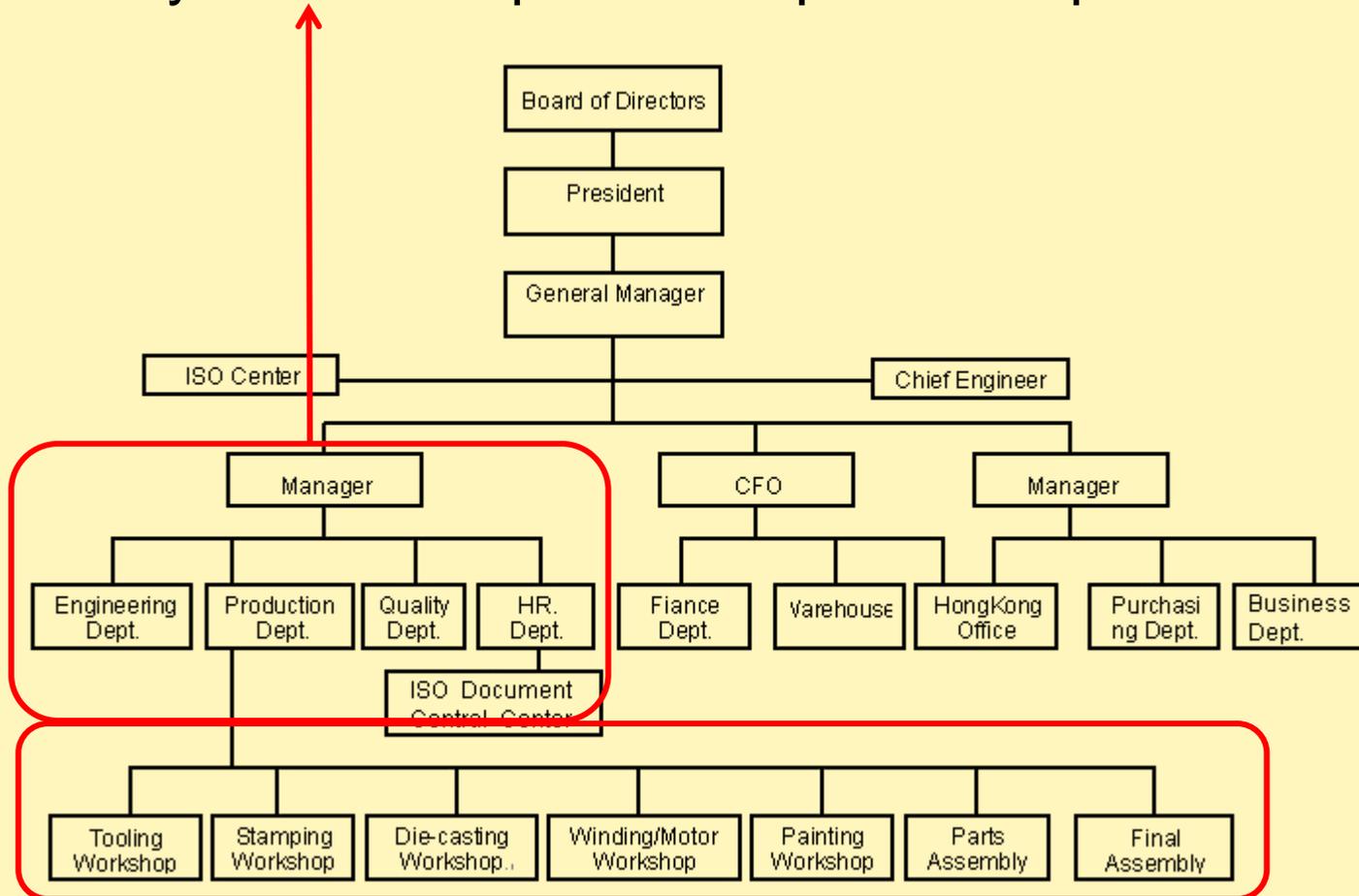
- Our nature is to make change... but if we don't change together...
- We fail to hold the gains from process improvements



**The benefits to having and holding to standard work**

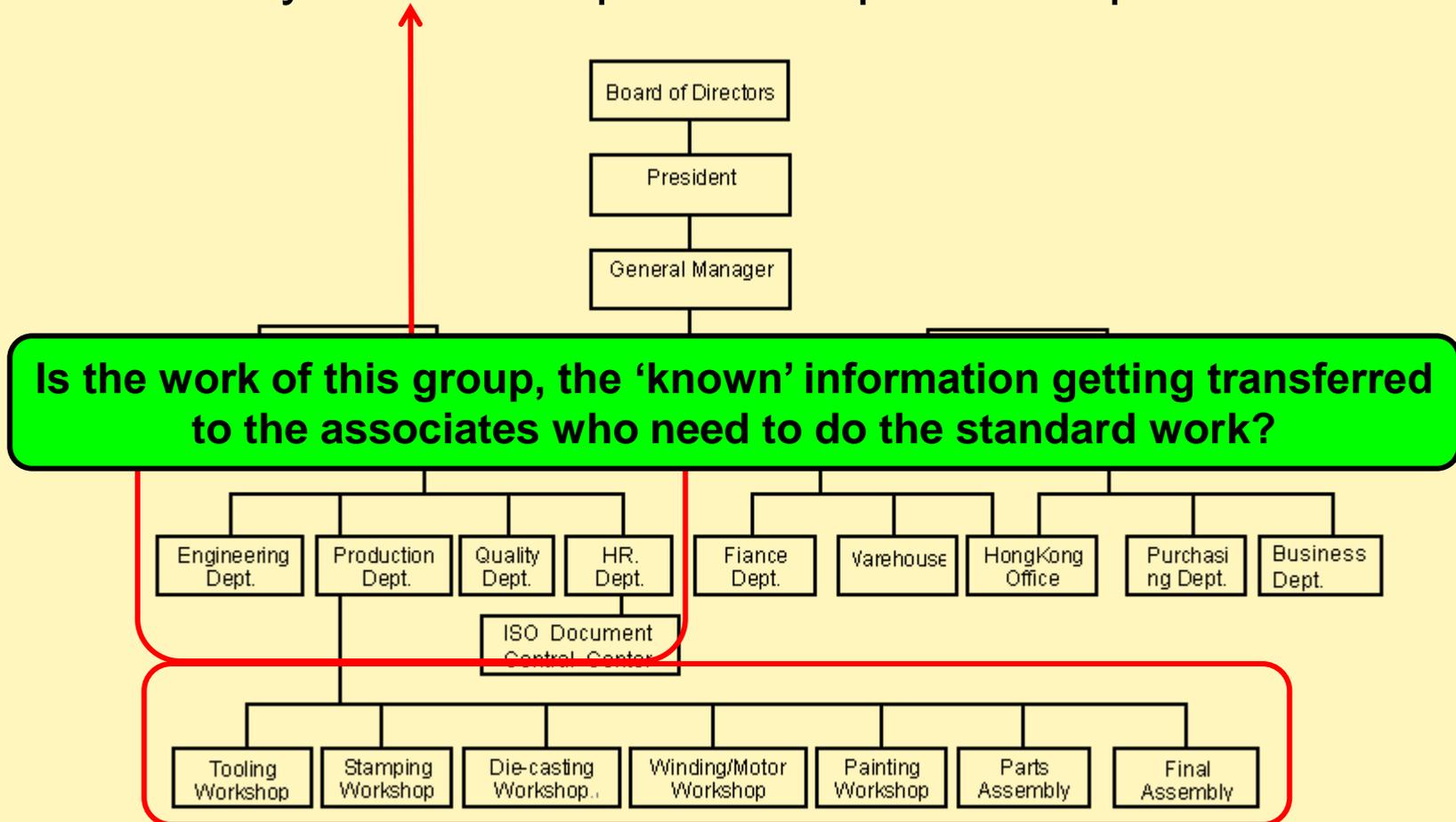
- Standard work focuses on the employee, not the equipment or materials (the human element).
- By standardizing and stabilizing work, safety, quality and cost is improved by removing much of the human variation from work processes.

- Standard work is the safest, highest quality, and most efficient way *'known'* to perform a particular process or task.



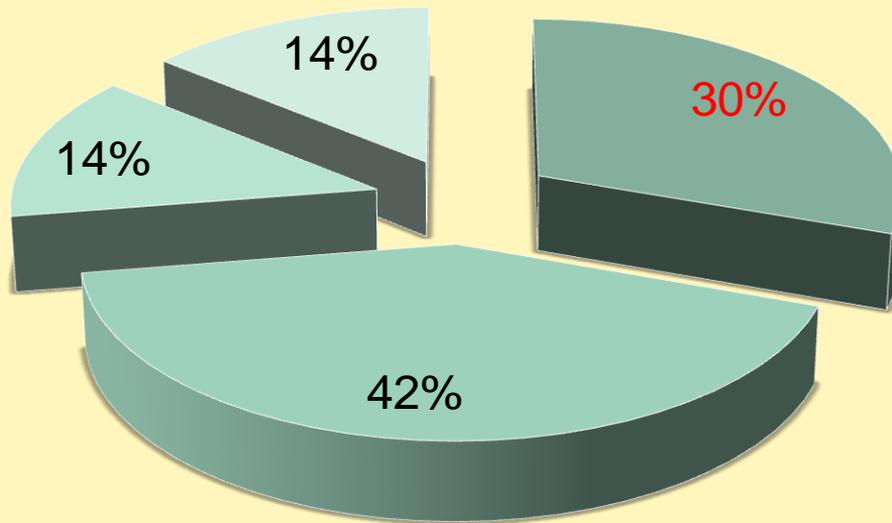
**This entire section of your organization is dedicated to the 'known'**

- Standard work is the safest, highest quality, and most efficient way *'known'* to perform a particular process or task.



**This is the measure of training effectiveness!**

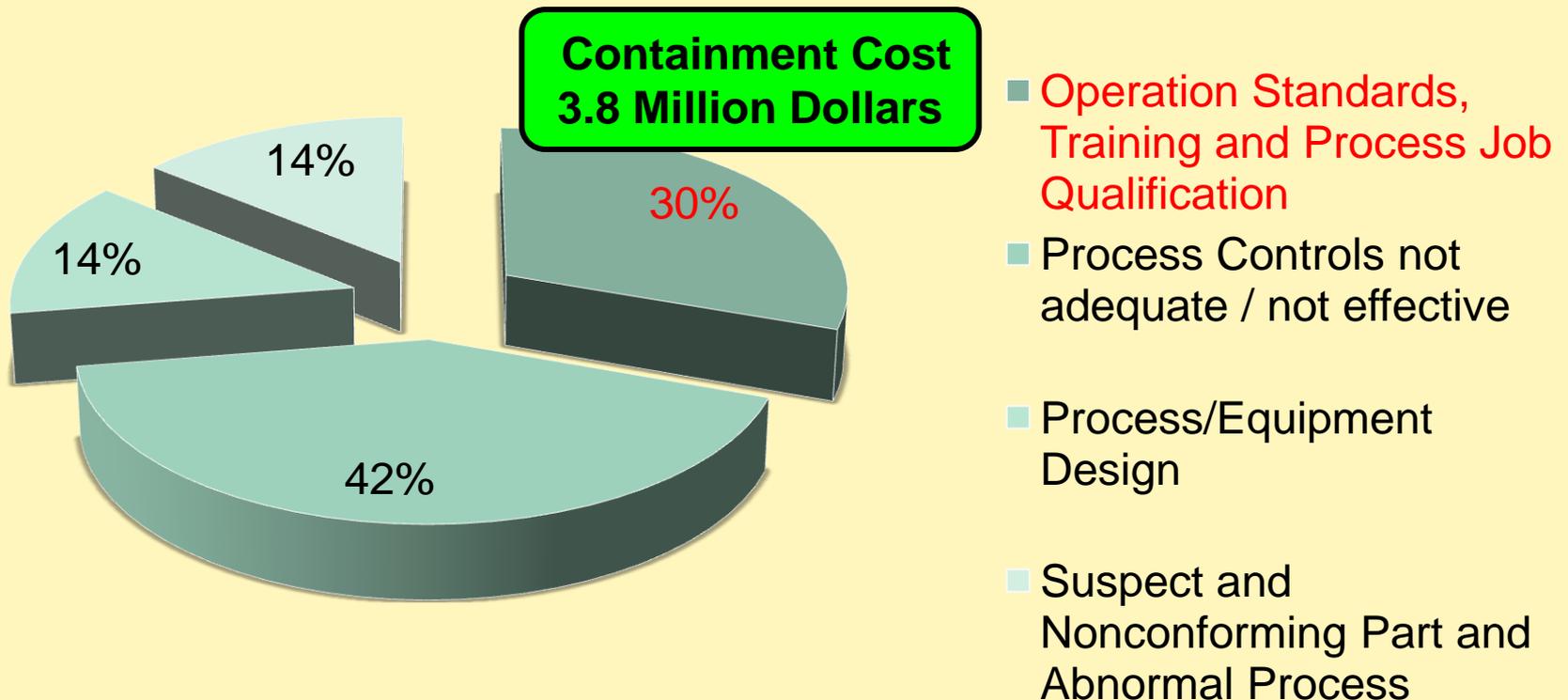
## Honda Trouble Report (19000+) Replies 'System Failed' Analysis



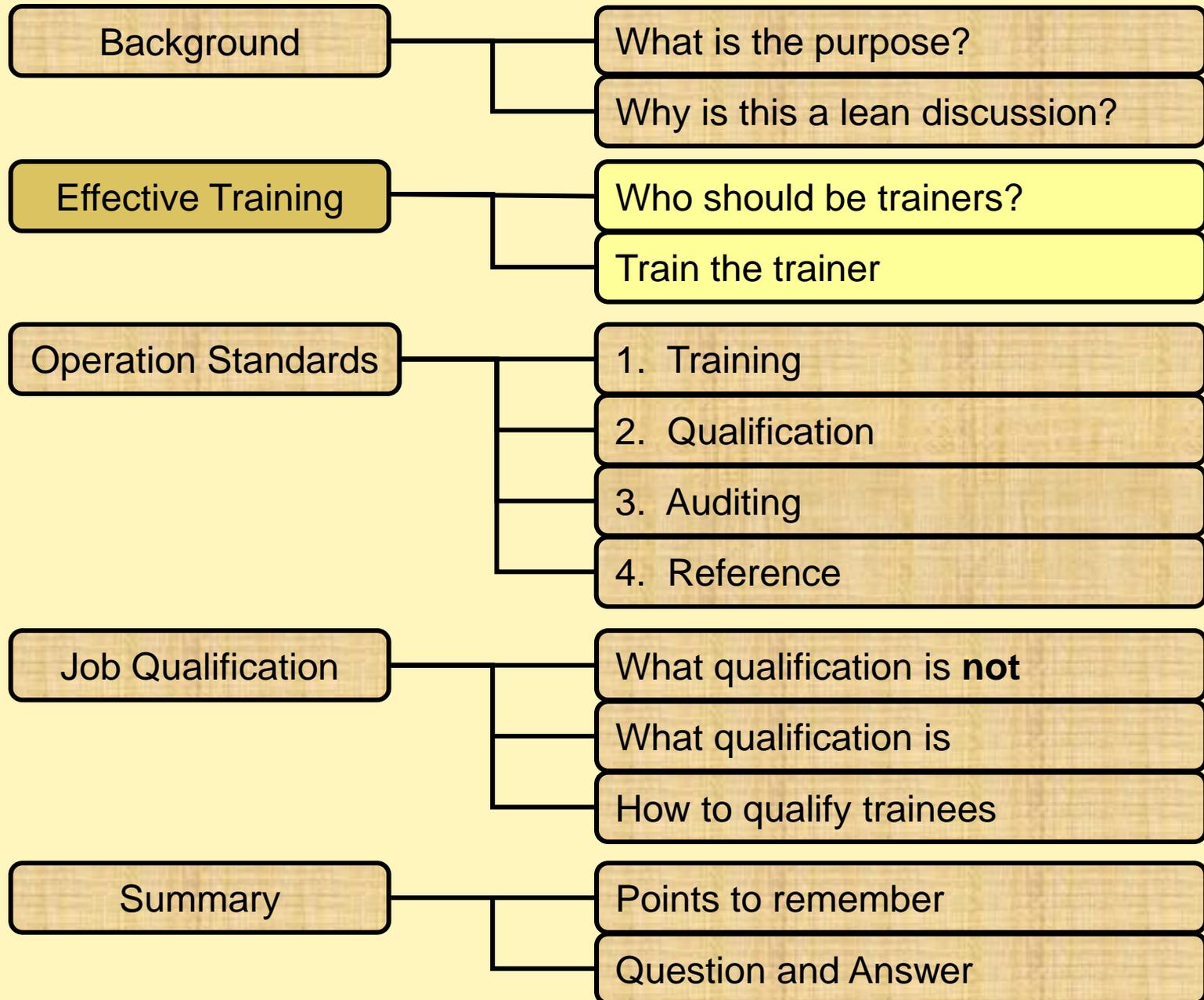
- Operation Standards, Training and Process Job Qualification
- Process Controls not adequate / not effective
- Process/Equipment Design
- Suspect and Nonconforming Part and Abnormal Process

**Training System failures are nearly 30% of received quality problems**

## Honda Trouble Report (19000+) Replies 'System Failed' Analysis

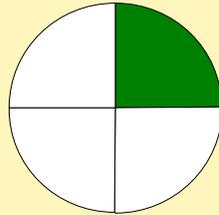


**Nearly 1/2 of the 30% required containment = Cost 3.8 Million Dollars (just containment not including scrap cost)**

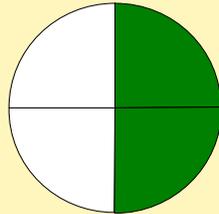


# Effective Trainers

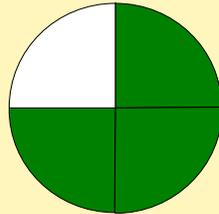
## Typical Training Matrix Levels:



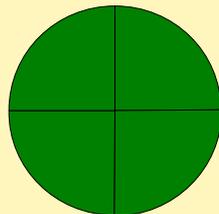
“Has read operation standard” or  
“Introduced to process”



“In training”



“Can run process”



“Can train process”

What determines this associate “can train process”?

**Your Grandma  
and  
Experienced Associates**

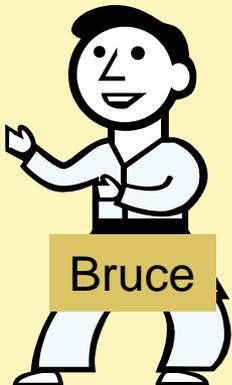
- **Some common pitfalls with experienced associates**
  - Forget what it was like to learn the job
    - Too many assumptions
    - Gloss over details
  - Poor communication skills
  - Teach from memory and not the standard +
  - Lack the desire to teach or train +
  - No specific methodology +

**Experience alone does not make one a good trainer**



10+ Years Experience

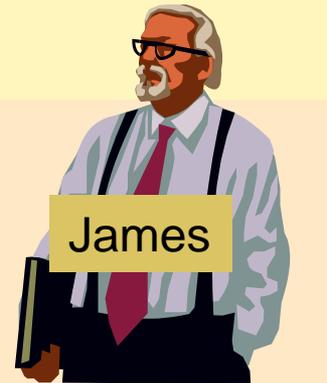
Excellent workers



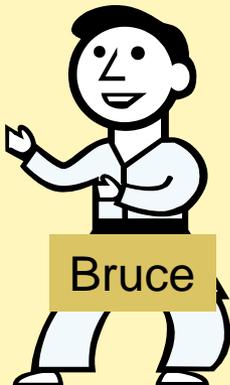
**We are all individuals – creative!**



Same  
Operation  
Standard



Same  
Operation  
Standard



Same  
Operation  
Standard

Direction is “please use operation std to train”

# Standard method will meet the needs of trainees



Same  
Operation  
Standard

**Train the  
Trainer  
Program  
(qualified)**

Standard  
Work

**Better Safety**



Same  
Operation  
Standard

Qualified  
as  
trainers  
to  
*Same  
Method:*

**Better Quality**



Same  
Operation  
Standard

Step 1  
Step 2  
Step 3  
Etc...

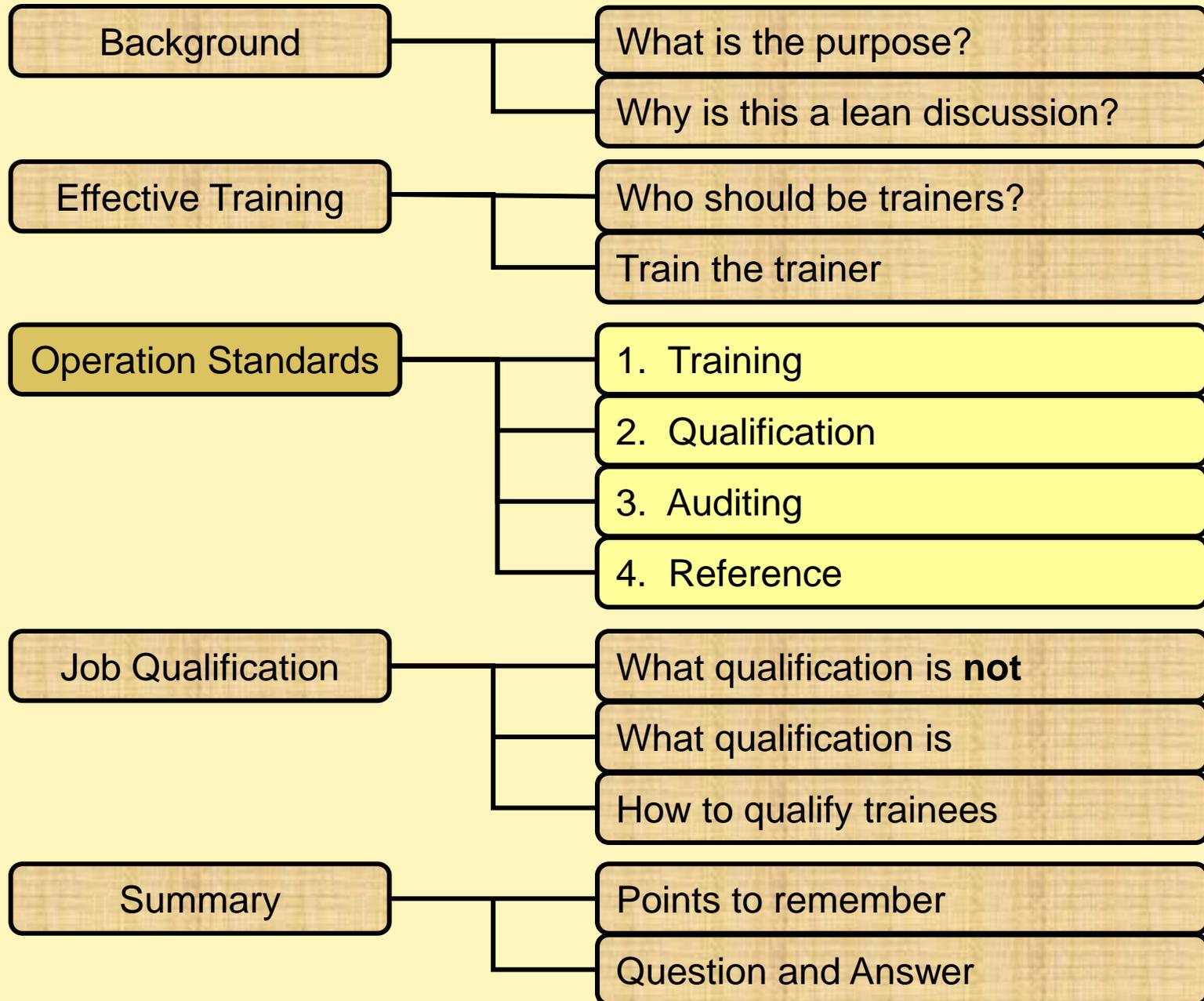
**Better Cost**

**Train and qualify these individuals as  
trainers = Standard Work**

- **Are the most experienced associates the best trainers?**

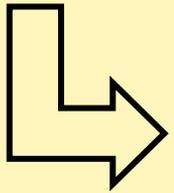
They can be if they are “Trained” and “Qualified” in a specific training method and they have the desire to be a trainer

**Trainers need to be ‘qualified’ as trainers – Job experience alone does not make one an effective trainer**

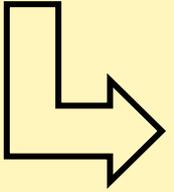


# Operation Standards

OPERATION STANDARD		
DEPARTMENT: Injection		Station 3
MOLD NUMBER: N/A		CAVITY: N/A
PROCEDURE		
Prior Revision: See Quality Instructions		
MAJOR STEPS	KEY POINTS DETAILS	REASONS
Used to train Standard Work		

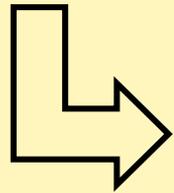


OPERATION STANDARD		
DEPARTMENT: Injection		Station 3
MOLD NUMBER: N/A		CAVITY: N/A
PROCEDURE		
Prior Revision: See Quality Instructions		
MAJOR STEPS	KEY POINTS DETAILS	REASONS
Used to Qualify Trainee		



OPERATION STANDARD		
DEPARTMENT: Injection		Station 3
MOLD NUMBER: N/A		CAVITY: N/A
PROCEDURE		
Prior Revision: See Quality Instructions		
MAJOR STEPS	KEY POINTS DETAILS	REASONS
Used to Audit for continued Compliance		

Layered Process Audits



OPERATION STANDARD		
DEPARTMENT: Injection		Station 3
MOLD NUMBER: N/A		CAVITY: N/A
PROCEDURE		
Prior Revision: See Quality Instructions		
MAJOR STEPS	KEY POINTS DETAILS	REASONS
Used for reference as needed		

**Standards have 4 Key functions – Form should support function**

- Easy to create
- Easy to maintain
- Easy to memorize (process associate)
- Matches the training methodology

**Why?**



Easy to create?

Easy to maintain?

Easy to memorize?

Is this effective?

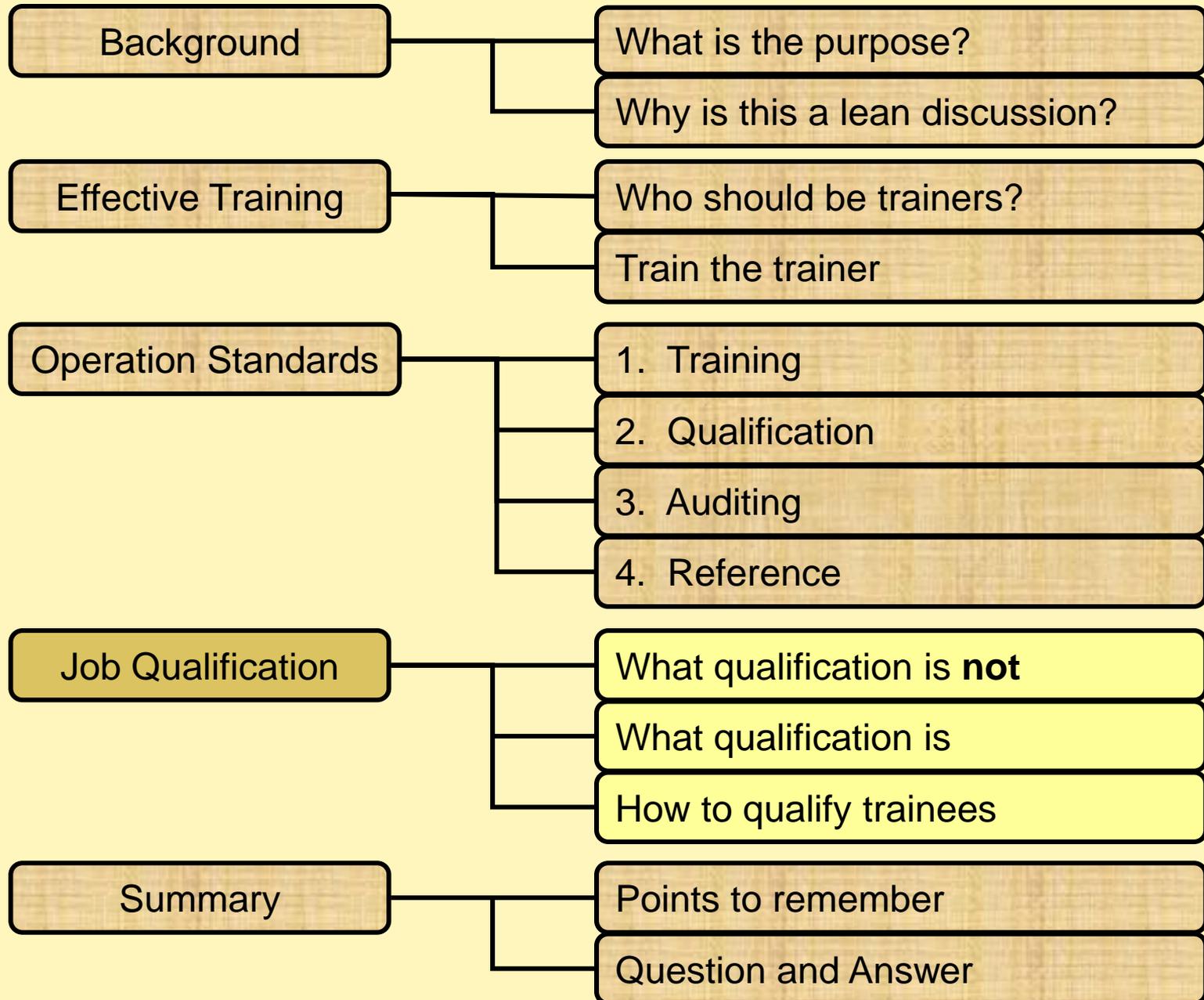
This supplier had the arbitrary rules:

1. Picture for every step (39 pictures)
2. Must fit on 11 by 17 paper
3. Must hang line side and part of changeover process

**Arbitrary Rules = Ineffective or inefficient Work Standards**

- **Other Pitfalls that effect lean:**
  - **Operation Standard includes everything**
  - **Operation Standard is too hard to access – all electronic so always up to date for an audit**
  - **Operation Standard review is too redundant**

**Operation Standard is for the associate = Standard Work**



- Operators sign the Operation Standard
- Operator and Team Leader signs training record
- Team Leader ask the *trainee* if he or she is *comfortable* doing the job (self qualification)
- *Team Leader* feels comfortable allowing the trainee to do the job independently
- Two weeks on the job
- One week without defects
- Able to meet all performance metrics (quality, cycle time)
- Pass written test with at least 80% correct

- Operators sign the Operation Standard
- Operator's signature doesn't prove anything
- Operator and Team Leader signs training record
- Team Leader's signature adds an informed opinion, but just an opinion
- Team Leader ask the trainee if he or she is comfortable doing the job
- A trainee's feeling of comfort doesn't prove competence
- Team Leader feels comfortable allowing the trainee to do the job independently
- Team Leader's feeling of comfort doesn't prove competence
- Two weeks on the job
- A few people might not ever learn some jobs
- One week without defects
- The absence of defects doesn't prove the job was done correctly
- Able to meet all performance metrics
- Meeting performance metrics doesn't prove the job was done correctly
- Pass written test with at least 80% correct
- What 20% of the job is it OK to not know?
  
- Therefore, Qualification isn't what we thought it was . . . .

## **Honda Supplier Quality Manual (QSR)**

2.2.3 Qualification to perform a specific production job process is to be based on the individual meeting **predetermined and objective criteria** that covers both the **content of the job** process and the **ability to perform within cycle time** required.

*What the operator is required to do is defined by the Operation Standard*

*Therefore, knowledge of the Operation Standard and the ability to execute according to it should be the criteria against which qualification is judged*

OPERATION STANDARD		
T.N.P.		Station 3
DEPARTMENT: Injection		Station 3
MOLD NUMBER: N/A		CAVITY: N/A
PROCEDURE: <small>For Revision: See Quality Instructions</small>		
MAJOR STEPS	KEY POINTS DETAILS	REASONS
<p><b>Used to train Standard Work</b></p>		

OPERATION STANDARD		
T.N.P.		Station 3
DEPARTMENT: Injection		Station 3
MOLD NUMBER: N/A		CAVITY: N/A
PROCEDURE: <small>For Revision: See Quality Instructions</small>		
MAJOR STEPS	KEY POINTS DETAILS	REASONS
<p><b>Used to Qualify Trainee</b></p>		

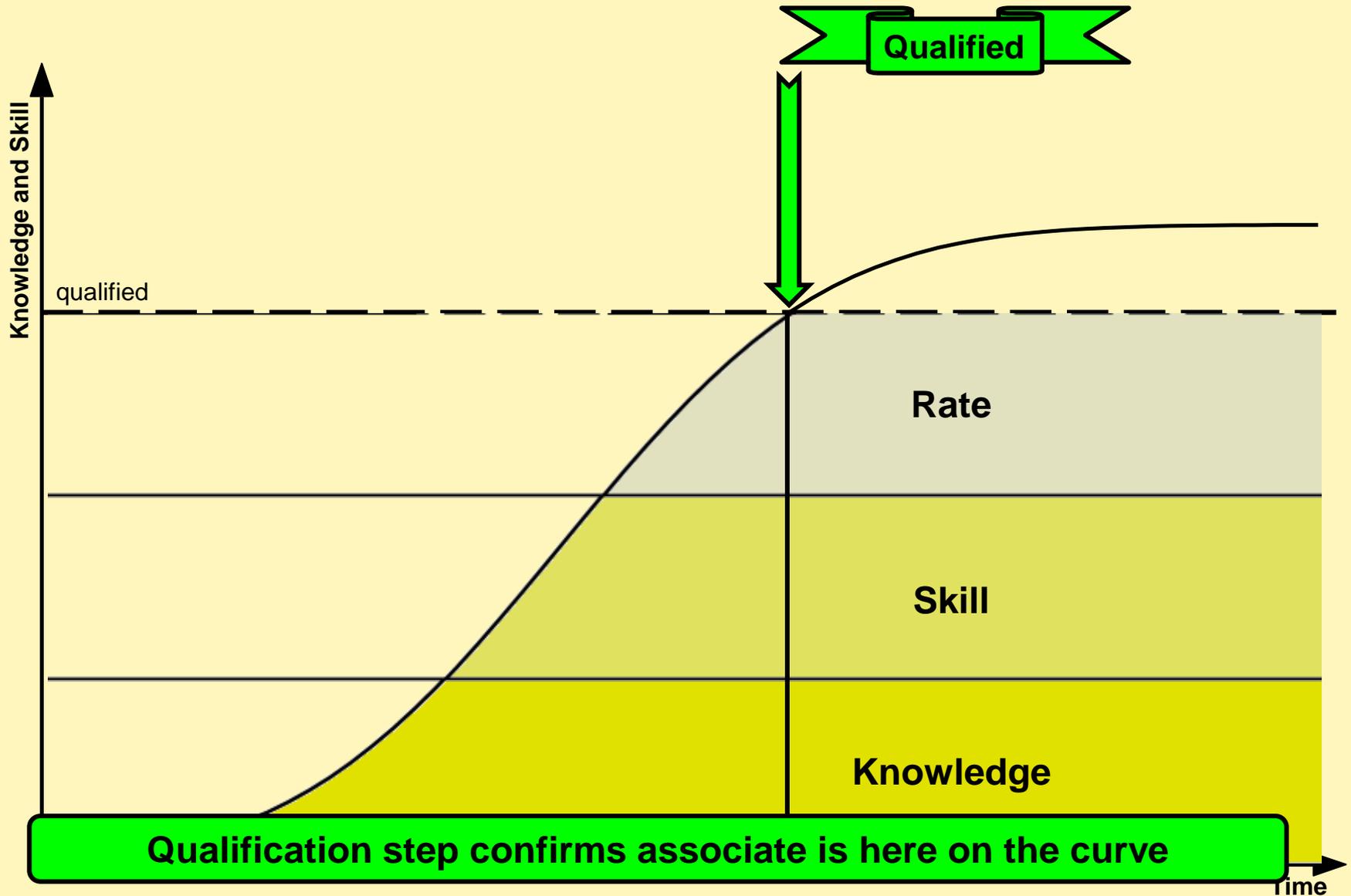
OPERATION STANDARD		
T.N.P.		Station 3
DEPARTMENT: Injection		Station 3
MOLD NUMBER: N/A		CAVITY: N/A
PROCEDURE: <small>For Revision: See Quality Instructions</small>		
MAJOR STEPS	KEY POINTS DETAILS	REASONS
<p><b>Used to Audit for continued Compliance</b></p>		

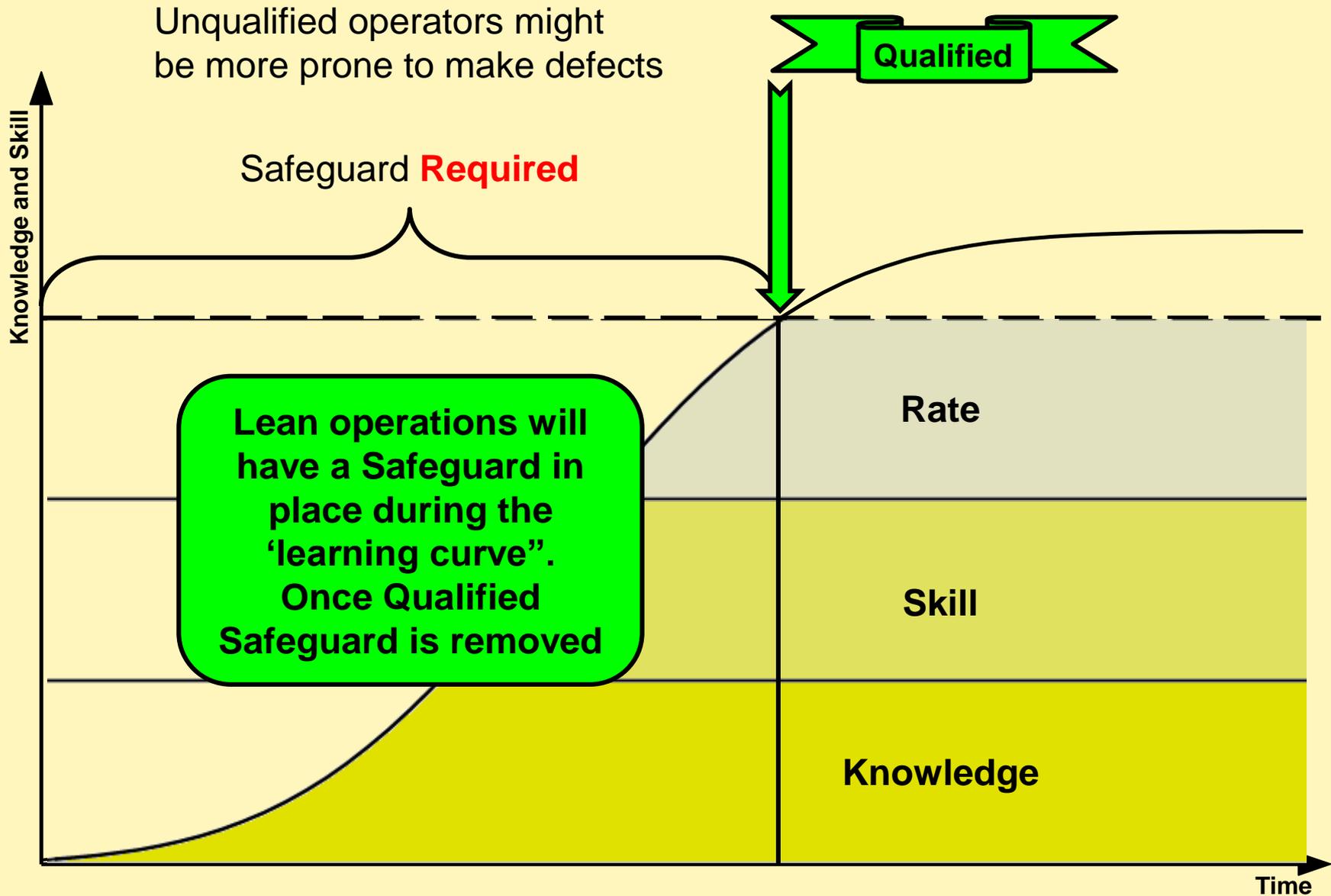
**Layered Process Audits**

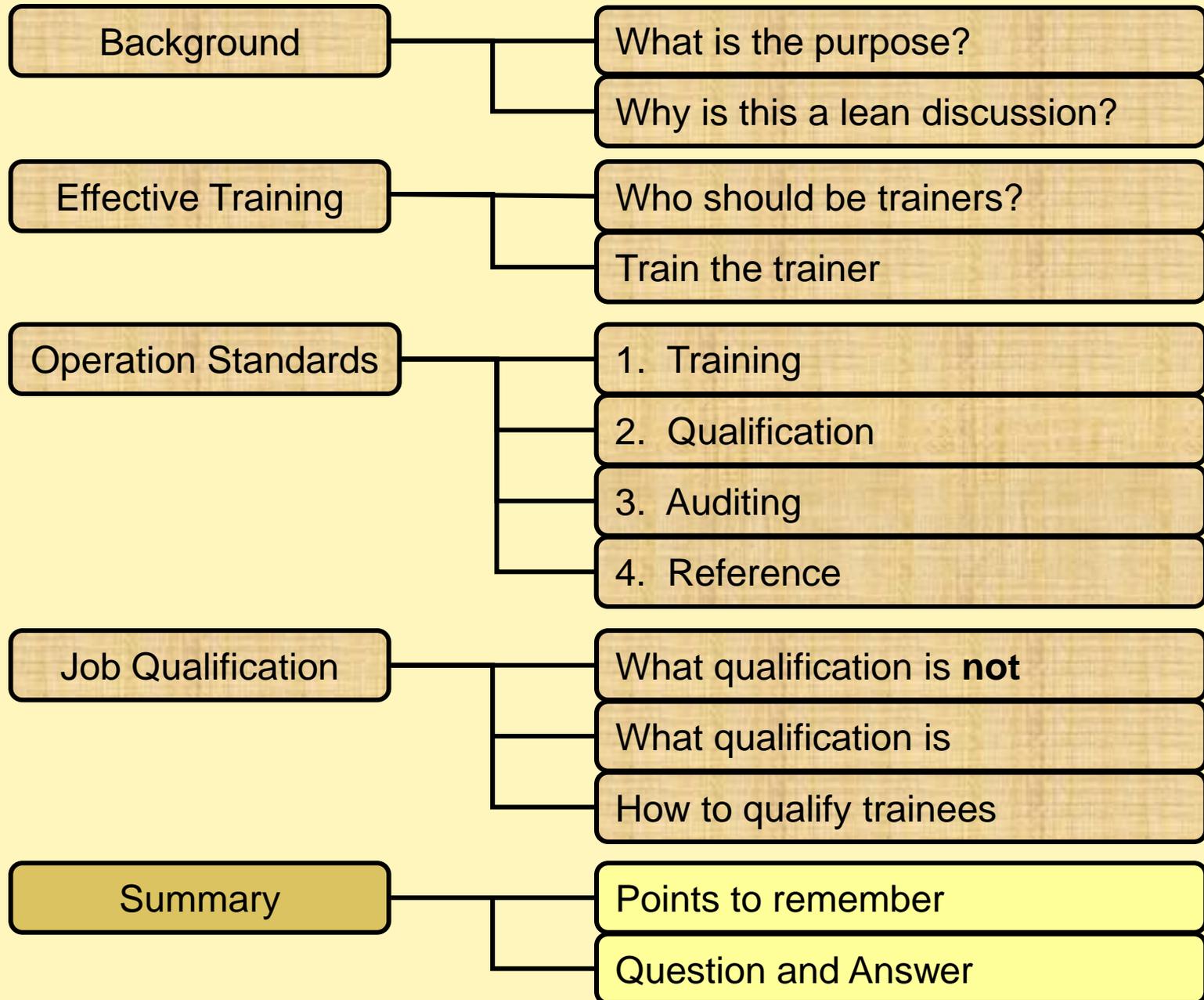
OPERATION STANDARD		
T.N.P.		Station 3
DEPARTMENT: Injection		Station 3
MOLD NUMBER: N/A		CAVITY: N/A
PROCEDURE: <small>For Revision: See Quality Instructions</small>		
MAJOR STEPS	KEY POINTS DETAILS	REASONS
<p><b>Used for reference as needed</b></p>		

**Operation Standard is the predetermined objective criteria**











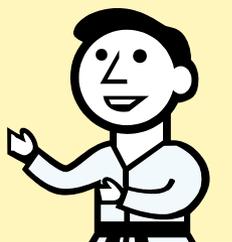
Qualified  
Trainer

Same  
Operation  
Standard



Qualified  
Trainer

Same  
Operation  
Standard



Qualified  
Trainer

Same  
Operation  
Standard

**Trainers need:**

- The desire to be a trainer
- To be willing to conform to a standard method of training
- Successfully complete your Train the Trainer Program(qualified)

Standard  
Work

Safety

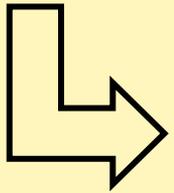
Quality

Better Cost

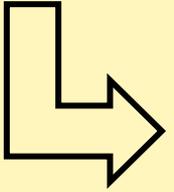
Step 2  
Step 3  
Etc...

**Selection and Qualifying Trainers is Key!**

OPERATION STANDARD		
DEPARTMENT: Injection		Station 3
MOLD NUMBER: N/A		CAVITY: N/A
PROCEDURE		
MAJOR STEPS	KEY POINTS DETAILS	REASONS
<p><b>Used to train Standard Work</b></p>		

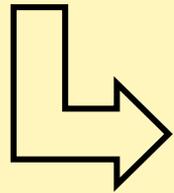


OPERATION STANDARD		
DEPARTMENT: Injection		Station 3
MOLD NUMBER: N/A		CAVITY: N/A
PROCEDURE		
MAJOR STEPS	KEY POINTS DETAILS	REASONS
<p><b>Used to Qualify Trainee</b></p>		



OPERATION STANDARD		
DEPARTMENT: Injection		Station 3
MOLD NUMBER: N/A		CAVITY: N/A
PROCEDURE		
MAJOR STEPS	KEY POINTS DETAILS	REASONS
<p><b>Used to Audit for continued Compliance</b></p>		

**Layered Process Audits**

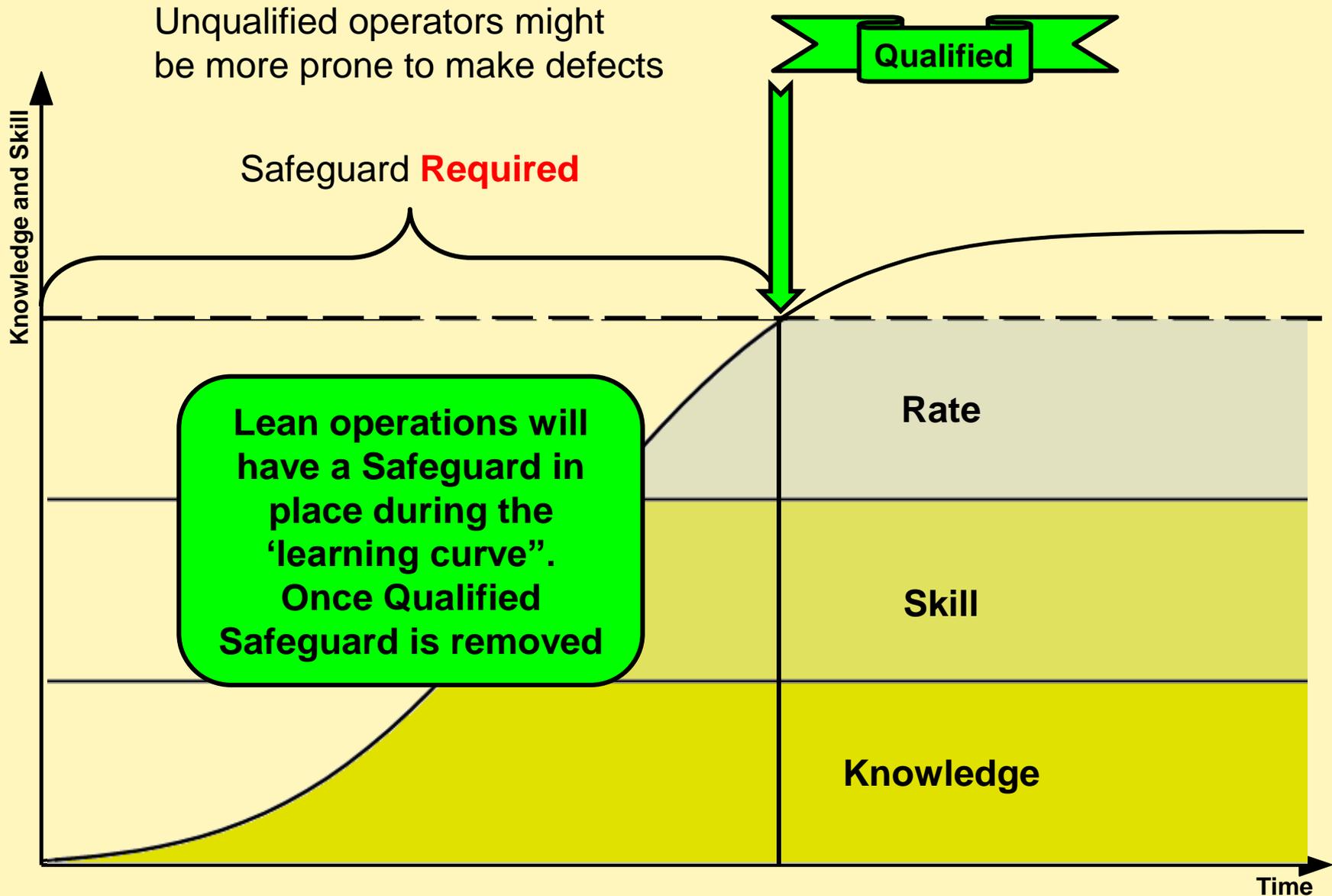


OPERATION STANDARD		
DEPARTMENT: Injection		Station 3
MOLD NUMBER: N/A		CAVITY: N/A
PROCEDURE		
MAJOR STEPS	KEY POINTS DETAILS	REASONS
<p><b>Used for reference as needed</b></p>		

- Easy to create?
- Easy to maintain?
- Easy to memorize?

**Standards have 4 Key functions – Form should support function**

# Learning Curve, Safeguards and Qualification





- Are our Trainers **qualified to a “method”**?
- Are the **written “work standards”** used to teach standard work?
- Are Trainees **“qualified” to the written standards**?
- Are **“safeguards”** in place **until qualified**?

**Containment Cost  
3.8 Million Dollars**

# Questions or Comments?