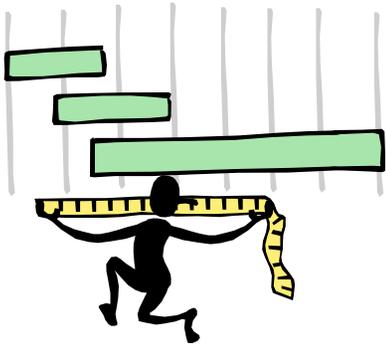


Identifying Measurable Safety Goals

Identifying Measurable Safety Goals:



A Practical Approach



WHAT Goals for Safety?

- **“Traditional Safety” is Compliance**
 - (Doing the minimum required to keep out of jail!)
- **VPP is about Excellence**
 - (How do you improve beyond regulatory standards?)
- **Continuous Improvement & the RIGHT GOALS will Break the “Boom and Bust” cycle of Safety.**

Chart 1:

The Classic " Boom and Bust" Cycle of Safety

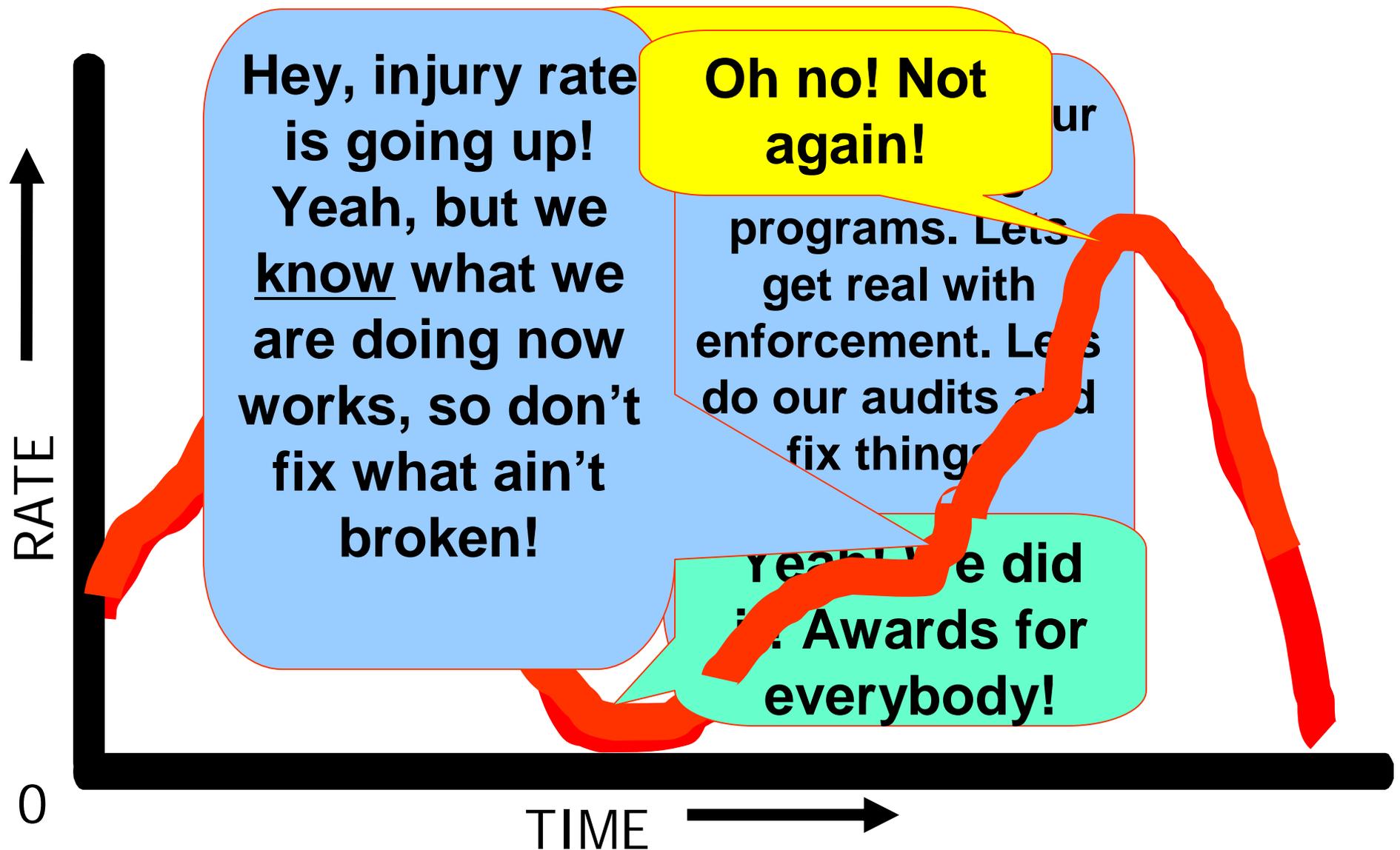


Chart 2:
"The Law Of Diminishing Returns"

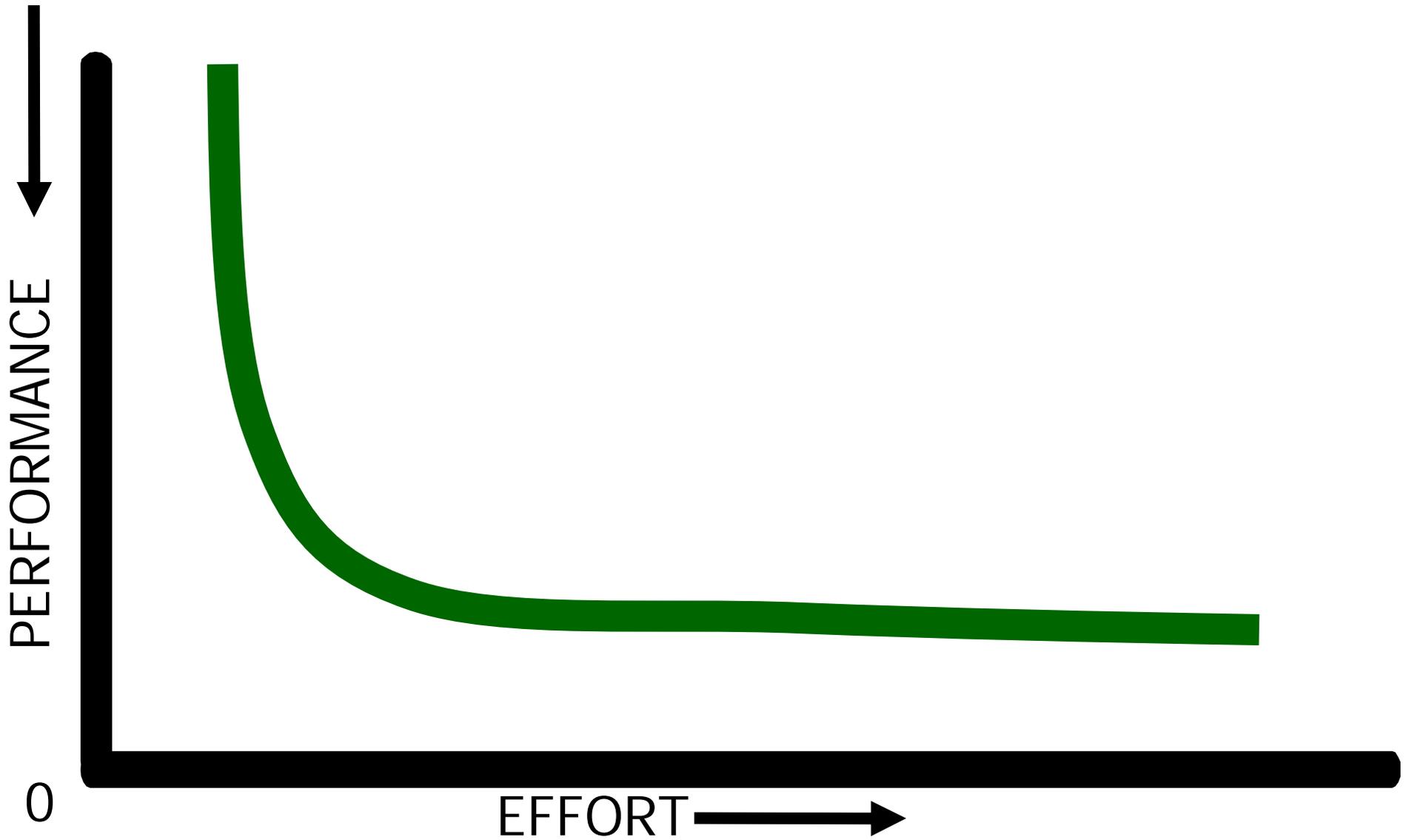


Chart 3:

The First Way to Break "The Law Of Diminishing Returns": Change the Paradigm

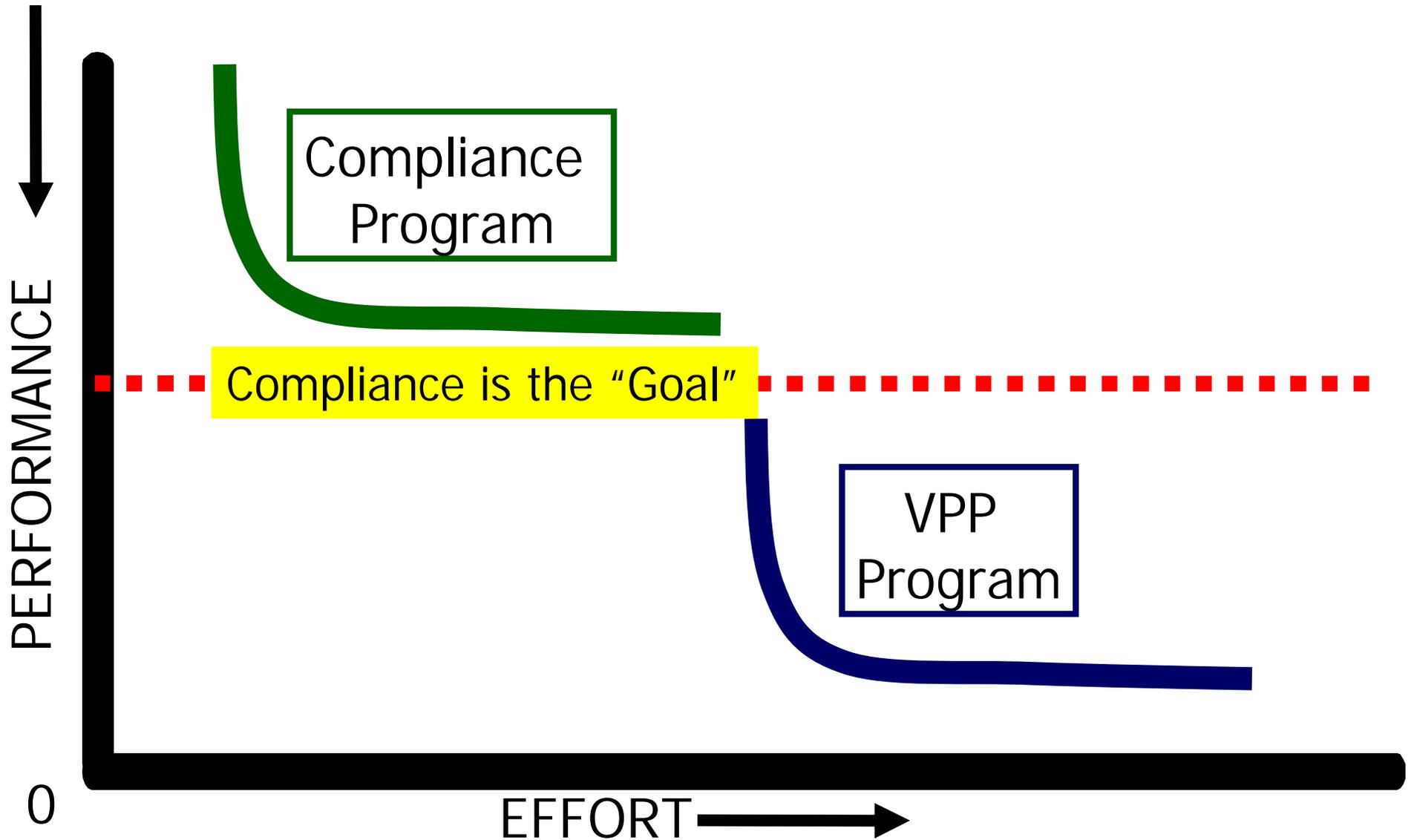


Chart 4:

Second Way to Break "The Law Of Diminishing Returns": Measure The Results

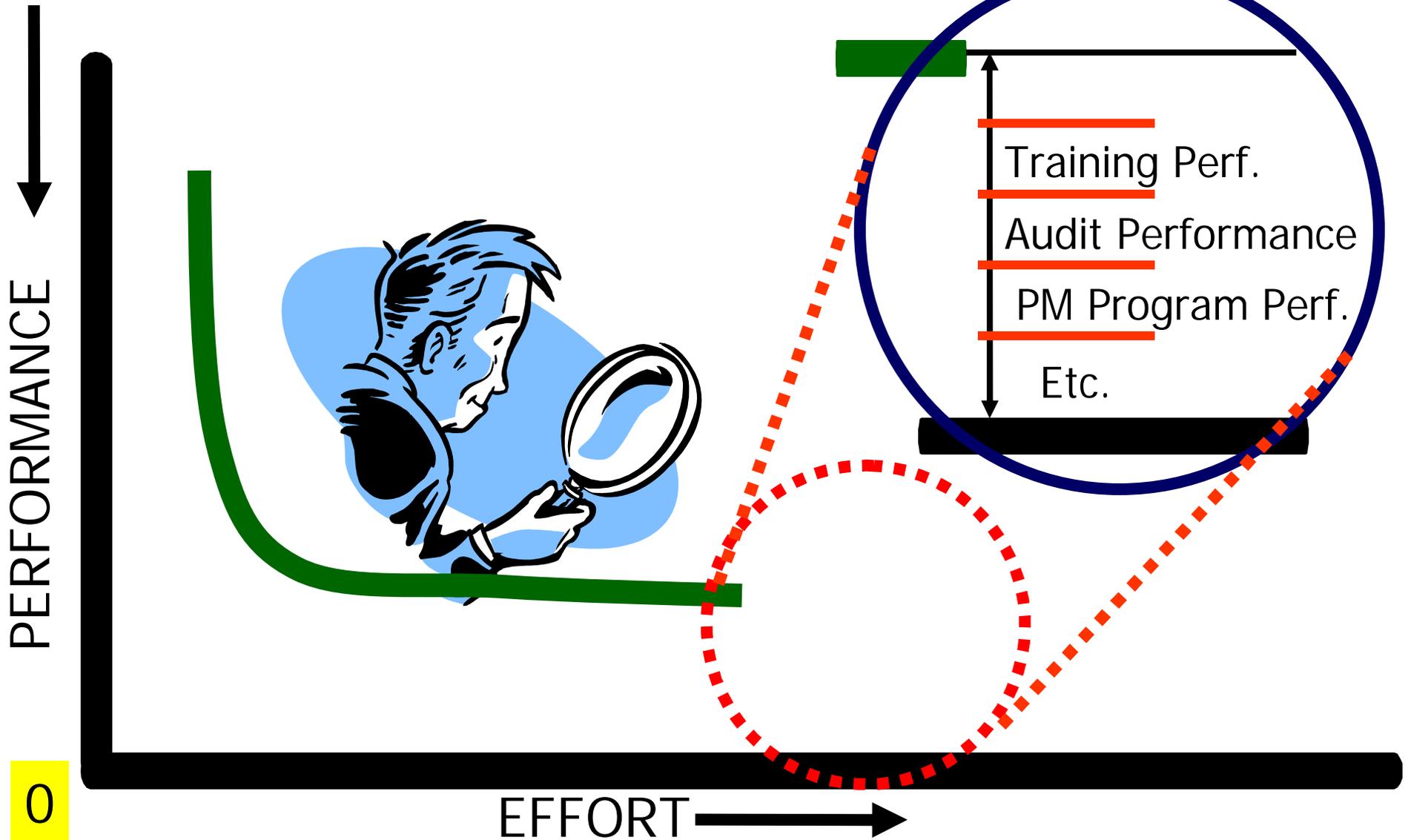
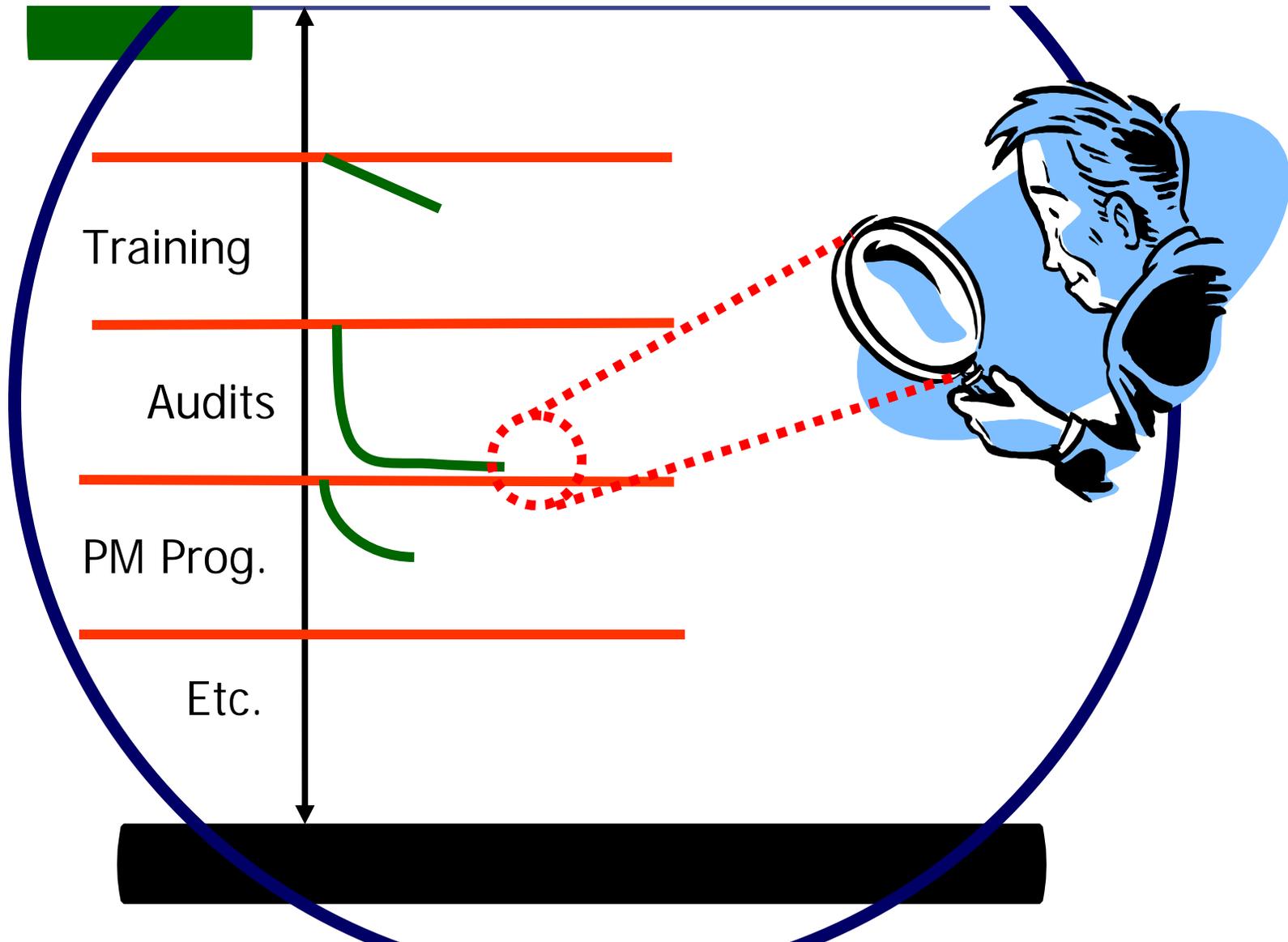


Chart 5:
Remember the "The Law Of Diminishing Returns":
**Once you are ~95+%, you need to take a closer look
and get new measurements.**



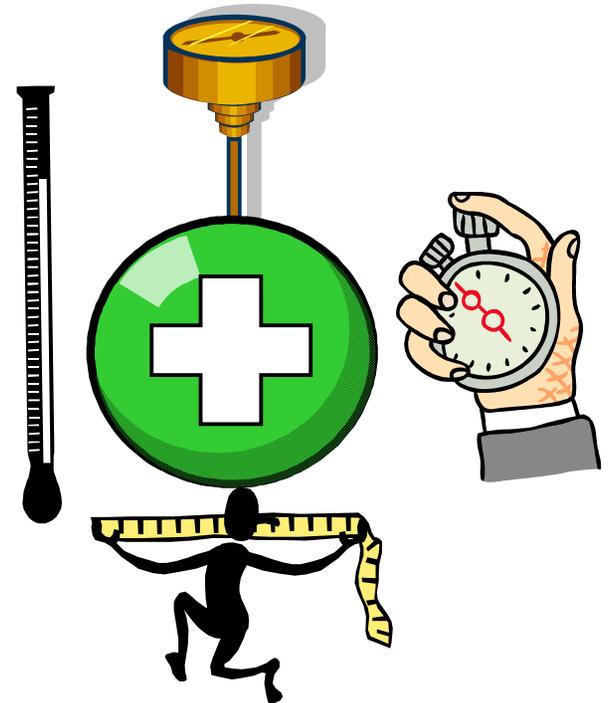
In other words:

- That same old training list and methods won't get you lower.
- But a more comprehensive list and more effective methods will.
- Measurement tells you what is happening. Goals are targets.

Turn Safety into a Respected Loss Control Tool in Your Organization:

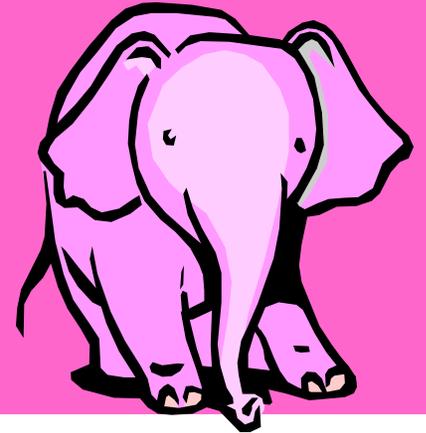
Measure it, make Goals and Continuously Improve

- Accounting systems aren't detailed enough to show the true financial results from Safety.
- But, Safety activity and performance can be reliably measured. "MBA types" do respect measurement, even if its not dollars.



Injury Rates:

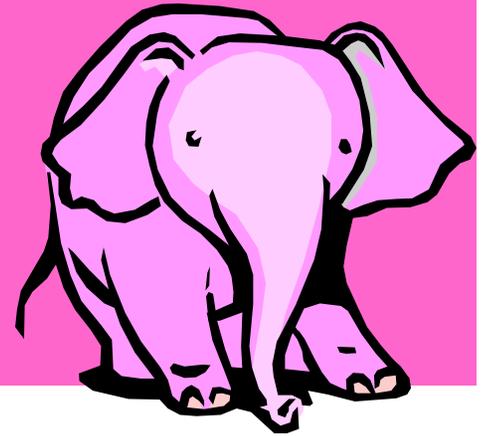
The "PINK ELEPHANT"
in Safety Measurement.



- Lets play a game. This room is a Small Country called "Safetytonia". I am "El Presidente" for Life. You are the Mayors of my cities.
- **I have decided *we must eliminate crime.***
- ***We will measure only the worst possible crime – cold blooded murder!***
- **You will measure this and report it to me.**

The "PINK ELEPHANT"

Safetytonia – cont'd.



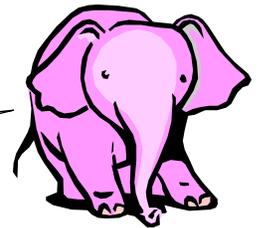
- If you have a LOW rate, you and your town will receive extra money – according to **HOW** low the murder rate is. Less Murder = More Money!
- If you **eliminate crime** in your city by having a Zero Murder rate, I will give you a huge bonus.
- One year later, what Murder Rates will be reported to me?

Traditional use of Injury Rates-

The Problem:

- If Injury Rates are the only “Measure” we give Management: Reduction goals are set with no thought as to how those goals will be attained. Supervision has no concrete means to reduce those numbers. Frustration sets in.
- Anger & Disrespect for the Safety Function and Programs that “Aren’t working”.

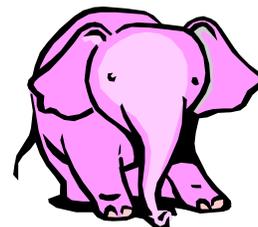
Working well enough to get me my bonus You mean!



Traditional use of Injury Rates-

The Problem:

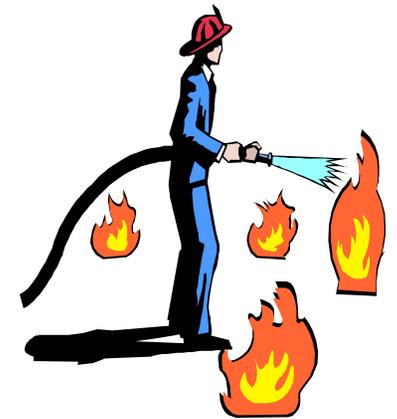
- With no actual way to reduce numbers, some explanation must be found.
- Its always easier to blame the employee than to blame yourself.
- Employees feel the heat, even disciplinary actions as **a direct communication: "Don't bring it to my attention, or you will suffer!"**



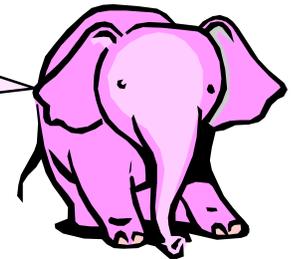
Traditional use of Injury Rates-

The RESULT:

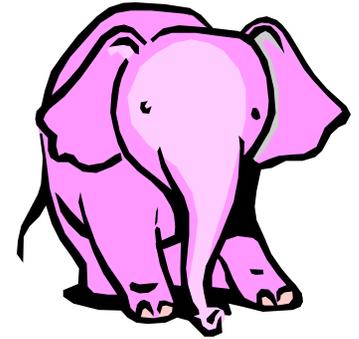
- Extreme pressure at every level to under-report.
- Problems become hidden. We spend our time putting out fires.
- Hidden Problems suddenly go "BOOM"!



I'm not
really
here!



"Zero Incident" Goals:

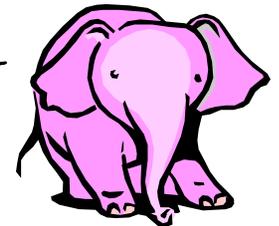


- **We don't expect perfection from machines!**
- No one chooses to be injured! You can only choose to hide injuries.
- Too often "Zero Incidents" becomes the Safety Program, not the goal.
- To solve a problem, you have to admit you have a problem.

Two Long Term End Results of Traditional “Injury Rate Goals”

- 1) **Reported rates become unrealistic.**
 - People’s bonus and performance becomes tied to how well they cover up, not how they benefit the organization Actual Safety efforts are reduced and unsupported!

Hello Enron!



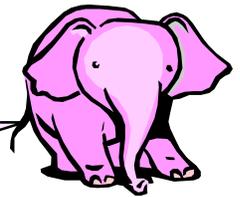
- 2) Alternatively- **Once an organizations ACTUAL rate is low, any injury bumps up the rate. Statistically this should be expected!**

- But people only see they aren't making their goal and become disenchanted with the Safety Program (Rather than remember how small the rate has become).

The Solution Is Obvious:

- Management is being held accountable for injury rates (which they have no immediate control over)

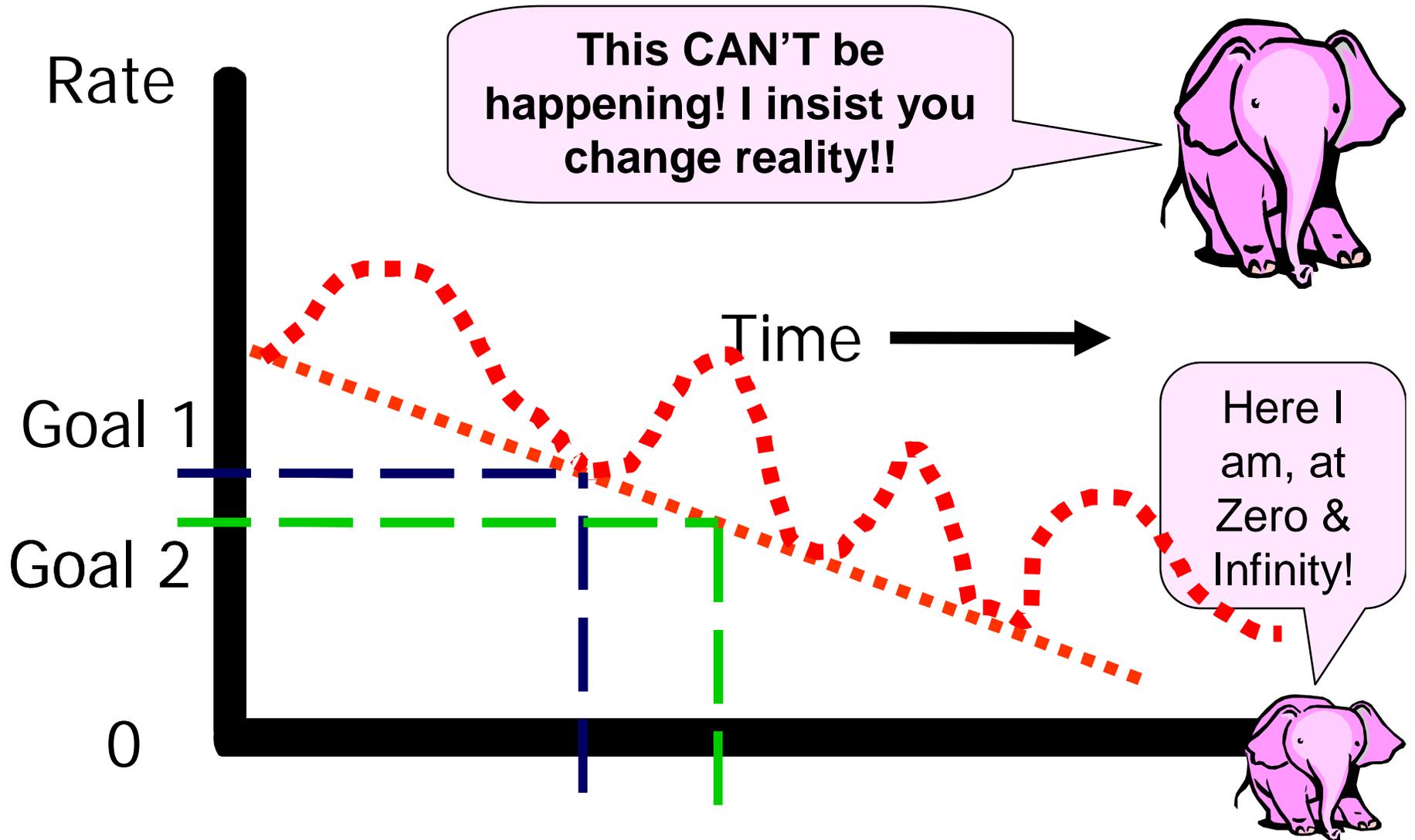
Don't look at that freight train heading right for you - Just look at me!



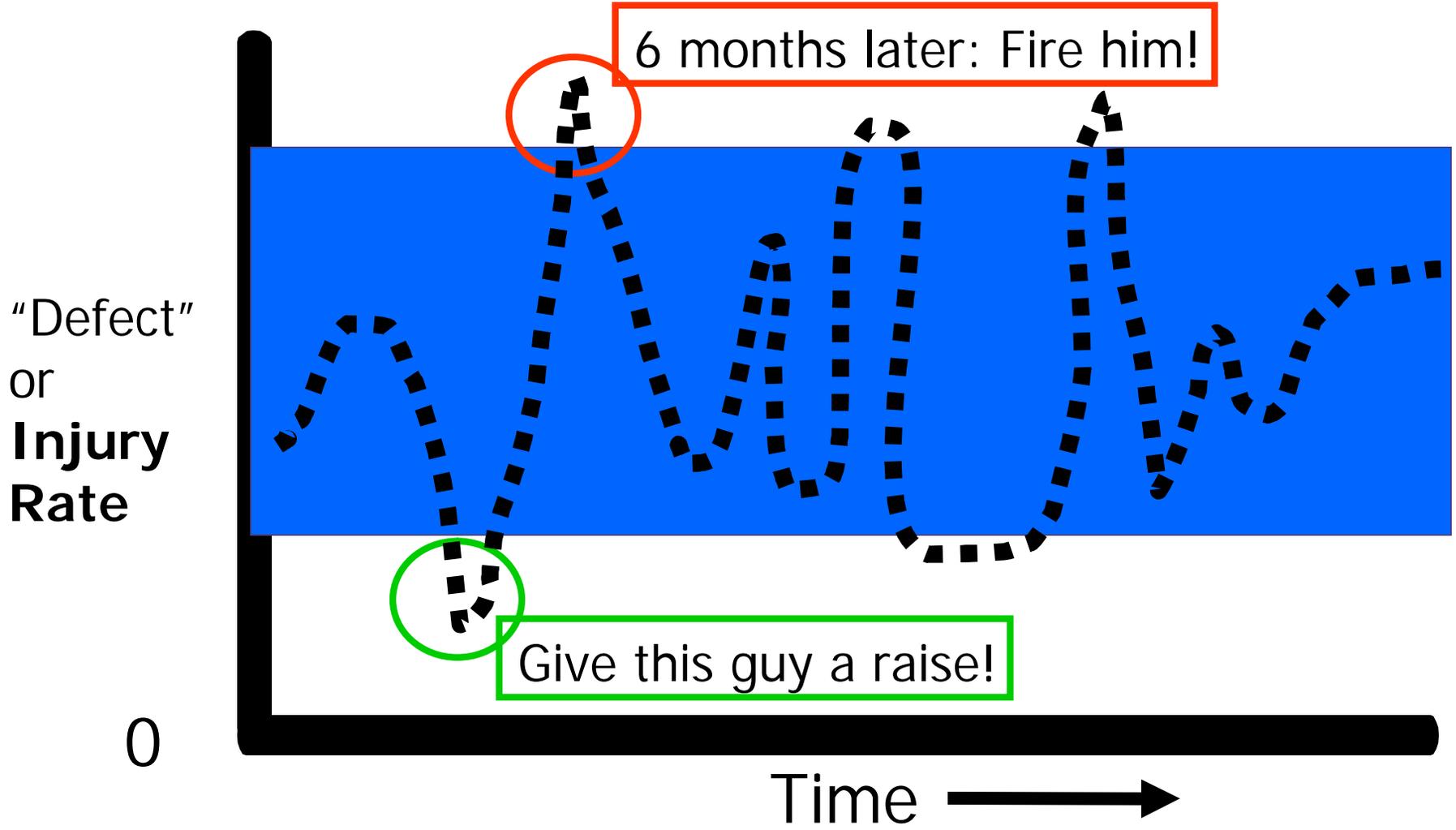
- But, Management is **NOT** held accountable for training, audits, etc. which they **DO** have direct control over!
- Hold the organization accountable for **WHAT WE TELL THEM THEY SHOULD BE DOING!**

Chart 6:

Injury Rates: Wishful Thinking Vs. Reality



W.E. Deming's "Red Bead" Experiment



W.E. Deming's "Red Bead" Experiment Applied to Safety:



- From Quality (W.E. Deming):
 - **“What gets measured gets done.”**
- Until the process is controlled, the outcome can not be controlled.
- So, measure Safety Process Improvements that reduce injuries.

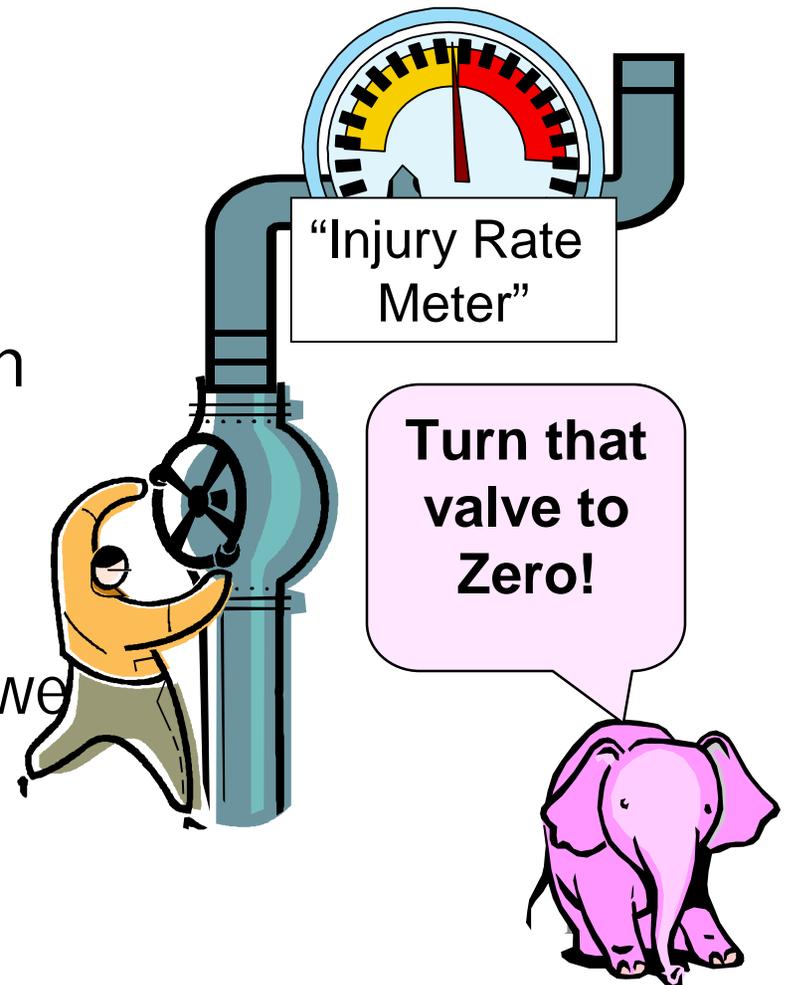
Choosing Good Goals

- **Goal: Low Injury Rate** 
- **Measurement:** You won't know when an injury happens unless they decide to report it, so the measure is 2nd-3rd hand, subjective and not accurate.
- **Group Pressure:** Some not to have injuries, possibly lots more pressure not to report injuries – “the easiest way to look good”
- **Goal: High Safety Glasses Use** 
- **Measurement:** They won't know when you decide to measure them, so measure is accurate, objective, and first hand.
- **Group Pressure:** Some not to get caught, probably more to wear safety glasses – “the easiest way to look good”

Injuries are DISCRETE Events –

Not Continuous Phenomena!

- MGMT: Reduce Injury Rate from 12.53 to 10.59!!!
- Organization: You bet!, I'll just turn this valve here, and PRESTO!
- The Implication is; we are actually letting some injuries happen that we could easily stop!

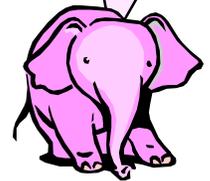


Goals must be easy to Comprehend –And- Call for action!

EXAMPLES:

- Injury Rate =23.4, up 1.6 from last month. Goals is 10!
- Eye Protection Use = 94%. Goal is 99%
- Training Attendance = 73%. Goal is 90%
- What does that mean? should they do about it?
- Is it clear what that means? Can they do something about it?
- Is it clear what that means? Can they do something about it?

Maybe you could feel guilty?!



What Goals for Your Group?

- Some goals everyone can use – training – inspections – PPE – maintenance, etc.
- What Safety Activities are meaningful in your organization?

Smart (Practical) Goals: Using What You Already Do

- **Your Training Data:** Already collected – Attendance, Subjects, and Expiration Date
- The product of these is = “% Required Training Performed”
- Split off manager & supervisor attendance (indicates support & involvement with safety program)
- **Your Audits:** % of audits done.

Adding New Measures/Goals (Without too Much Work!)

- Audit items: # open and time to close.
- “% PPE Compliance” – An unobtrusive spot check audit done each month.
- **“Employee Participation Rate”**

More Advanced Measures:

- IF you have a rigorous and systematic audit process:
 - **Graded and Handicapped “Scores” on Housekeeping & Safety Audits. (Allows fair comparison of different departments for competition)**
- IF you have GOOD (I.E. difficult) Training Tests and they are administered objectively to all:
 - **Training Comprehension**
- **Process Safety Program Measures**
- **PM and Maintenance Program Measures**

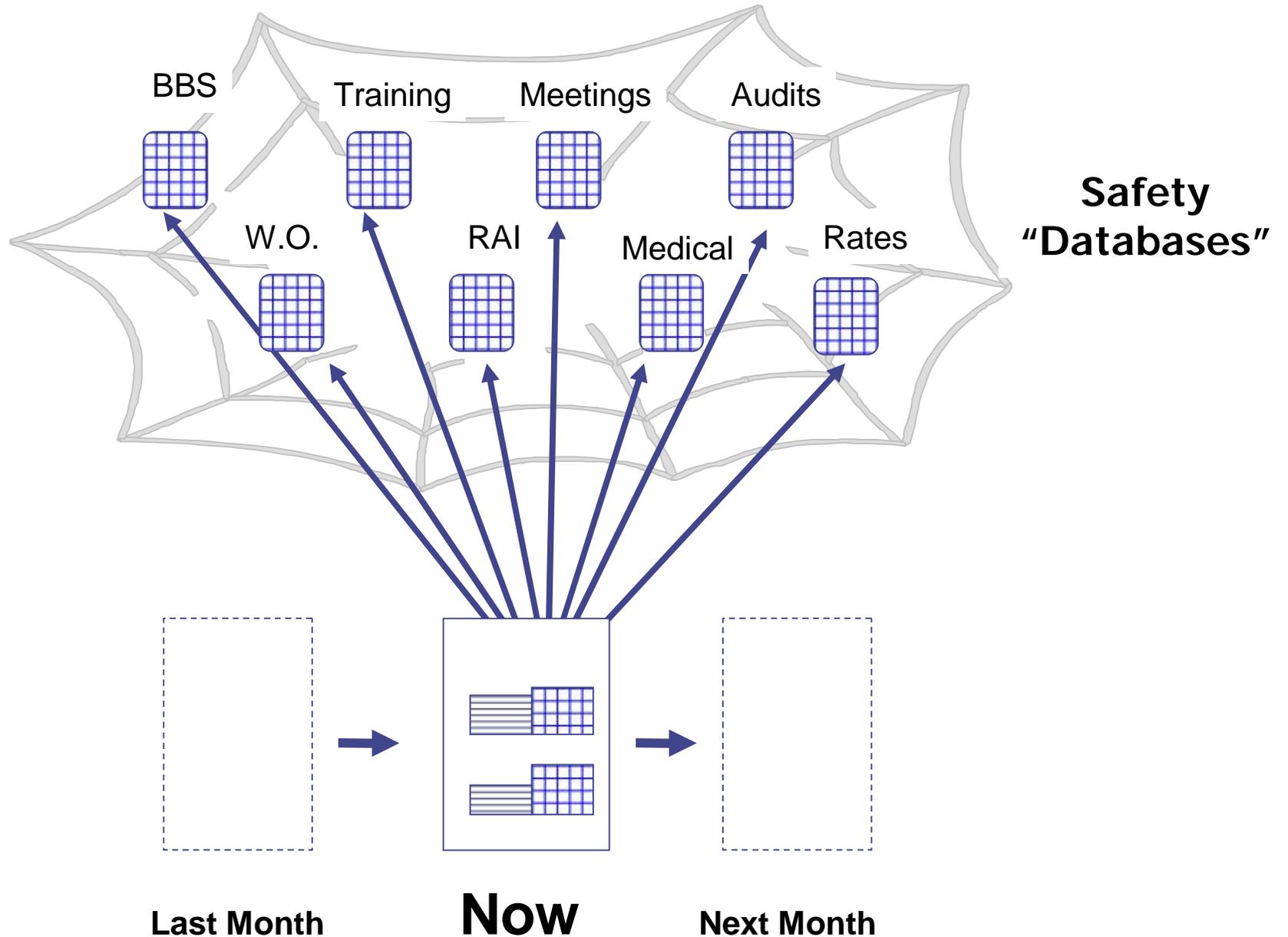
Goal Setting

- **Don't allow people unfamiliar with your process to set your goals!!!!!!!**
 - That means **you need to take the lead.**
- Goals must be realistic and achievable.
 - Unrealistic goals are not just unobtainable, they harm the program. (Disappointment after a big organizational effort)

Example Solution: A Monthly Safety Performance Report

- Gather all your Safety “Records” / Performance Measures into a simple one page report.
 - “Proactive” Measures (Directly affected by individuals.)
 - “Results” (Injury and Incident Rates)
 - Compare to historical results and target goals
- Why One Page? Avoid Information Overload!
 - The easier you make it for them, the more attention they will pay to safety.
- **It’s not what you know – it’s what they understand!!**

Monthly Safety Report- Conceptual Model



Example Report:

SAFETY STATISTICS: Highlights are as follows:

Injury Rates

| Oct. 2003 and YTD, vs. 2002 | Oct. 2003 | <i>Oct. 2002</i> | YTD 2003 | <i>YTD 2002</i> | YEAR END 2002 |
|--|----------------------|----------------------|---------------------|---------------------|----------------------|
| Total Case Rate | 18.1 | 25.6 | 12.4 | 13.9 | 10.9 |
| OSHA Recordable Rate | 7.2 | 12.8 | 6.4 | 5.8 | 4.9 |
| Lost Time Case Rate | 0 | 0 | 0.7 | 0.0 | 0.0 |
| Lost Time Day Rate | 112 | 0 | 35.9 | 0.0 | 0.0 |

Safety Training, Audits. And other Key Indicators

| <i>(September Records)</i> | Sept. 2003 | <i>Sept. 2002</i> | YTD 2003 | <i>YTD 2002</i> | GOAL | <i>Year End 2002</i> |
|---|-----------------------|-----------------------|---------------------|---------------------|-----------------------|--------------------------|
| Supervisors/Managers/Trainers Total Attendance, % | 75 % | 74 | 75 % | 76 | Requirement: 100 % | 73 |
| Employee Safety Training Attendance, % | 71 % | 20 | 70 % | 69 | Requirement: 100 % | 70 |
| % of Required Safety Training Performed (Average) | 135 % | 14 | 85 % | 73 | Requirement: 100 % | 79 |
| % of Monthly Safety Audits Performed | 50 % | 55 | 57 % | 37 | Requirement: 100 % | 34 |
| **'Silver Star' Audit Score | 73 | 77 | 74 | 80 | Goal: > 80% | 80 |
| * % All PPE Compliance | 97% | 96% | 95% | 97 | Requirement: 100 % | 97 |
| "Employee Active Participation Rate", % (Those who Directly Participate In The Safety Program) | 7 % | 5 | 13 % | 13 | Goal: > 10% | 11 |

Example Report:

Details are available by "clicking" on the hyperlinked numbers ([in blue](#)).

PROACTIVE MEASURES

| | | August 2004 | 2004 YTD | 2003 YTD | Target |
|---|------------------------|---|--|-------------|------------|
| Change in Number of BBS Observers | | 91% | 70% | 0% | 5% |
| Number of Observers | Number of Observations | 145 384 | 922 3531 | 392 1076 | 300 1200 |
| Mandatory Safety Training Completed | | 96% | 94% | 98.6% (Y-E) | 99% |
| Safety Meeting Attendance (Operations), % | | 37 | 58 | 66% | 85% |
| EH & S Audits / Inspections Done, % | | 36 | 87 | 93% | 100% |
| Safety Work Orders Closed | | 100% | 66% | 57% | 65% |
| PHA Recommended Action Items (#) | | 90 | 69 | 103 | 65 |
| Open Incident Reports (#) | | 17 | 34 | 92 | 55 |
| Medical Surveillance Completed | | 88% | 92% | 99% (Y-E) | 100% |

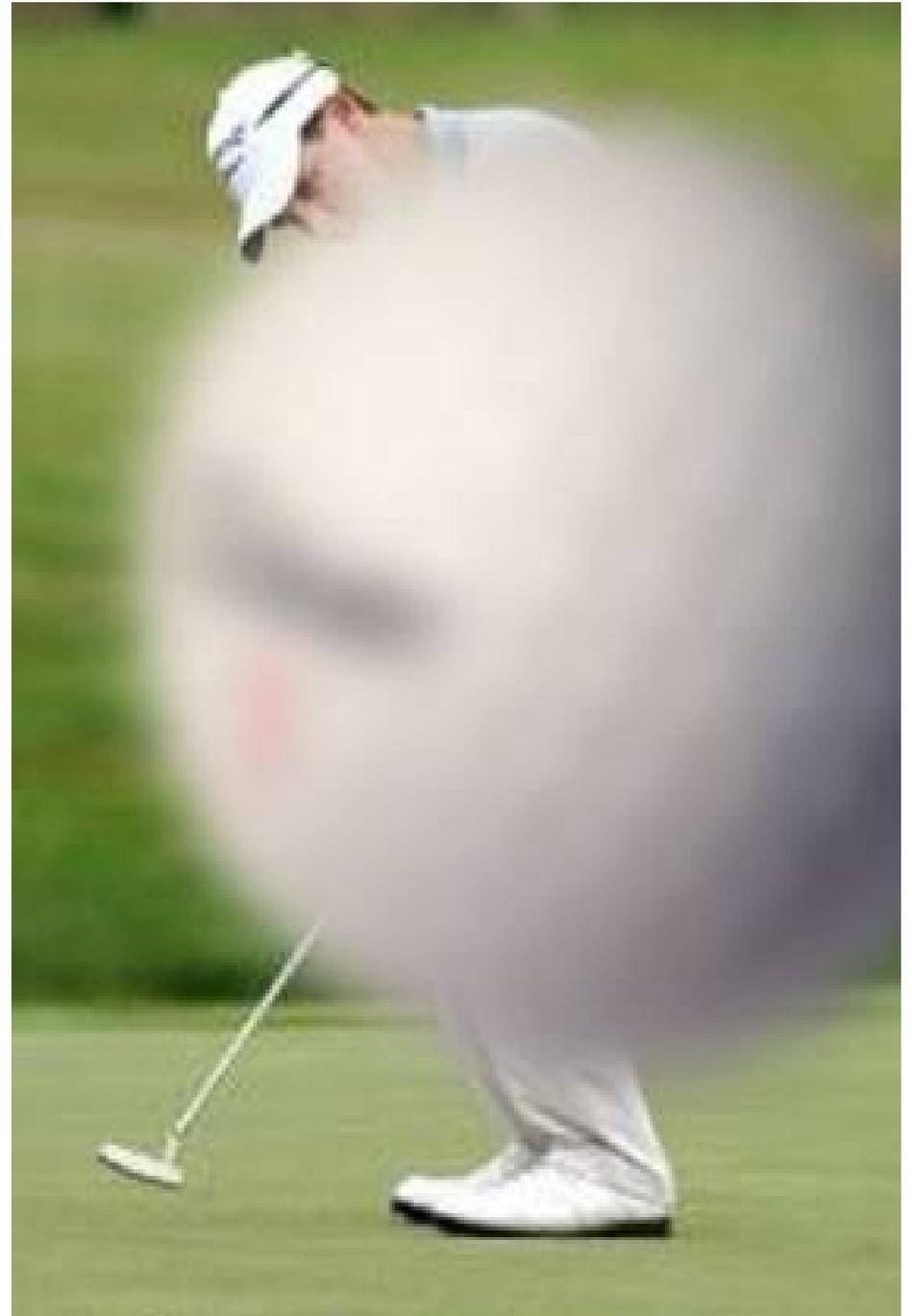
Example Report, Cont'd:

RESULTS

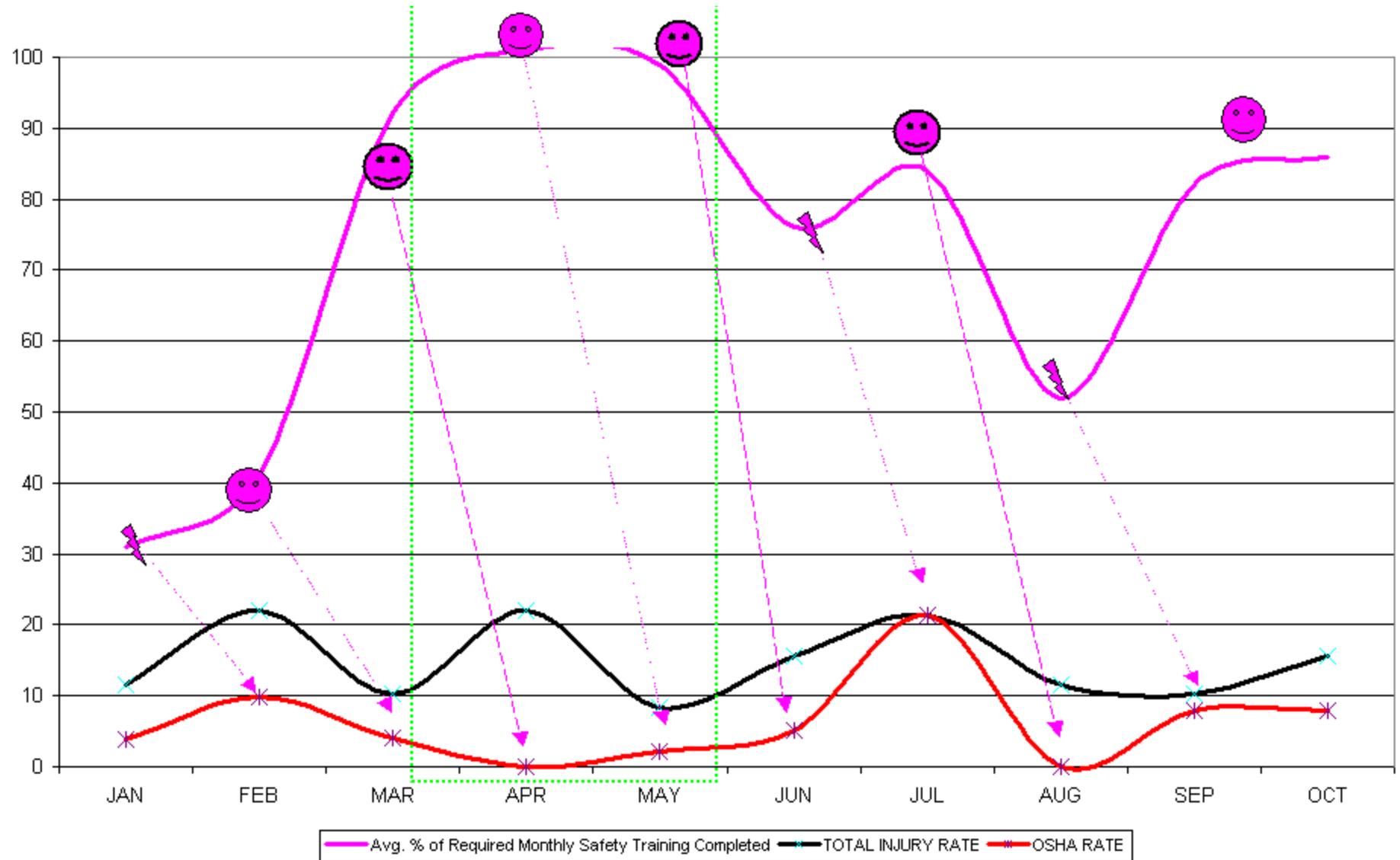
| | | | | | Contractors | | | |
|--|-----------|----------|----------|-------------------------|-------------|----------|----------|-------------------------|
| | Aug. 2004 | 2004 YTD | 2003 YTD | 12 - Month Rolling Avg. | Aug. 2004 | 2004 YTD | 2003 YTD | 12 - Month Rolling Avg. |
| First Aid Injury Rate (FAIR) | 2.01 | 2.69 | 1.59 | 3.30 | 0.00 | 5.19 | 10.3 | 2.06 |
| Total Recordable Incident Rate (TRIR) | 0.00 | 0.22 | 1.06 | 0.31 | 0.00 | 0.00 | 0.00 | 1.14 |
| Lost Time Incident Rate (LTIR) | 0.00 | 0.00 | 0.53 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Non-Injury Incidents Rate (Near Hits, Fires, Equipment Damage, etc.) | 10.0 | 18.2 | 13.2 | 15.3 | 9.9 | 5.0 | 4.1 | 7.3 |

Will You Be Able to See Problems Coming?

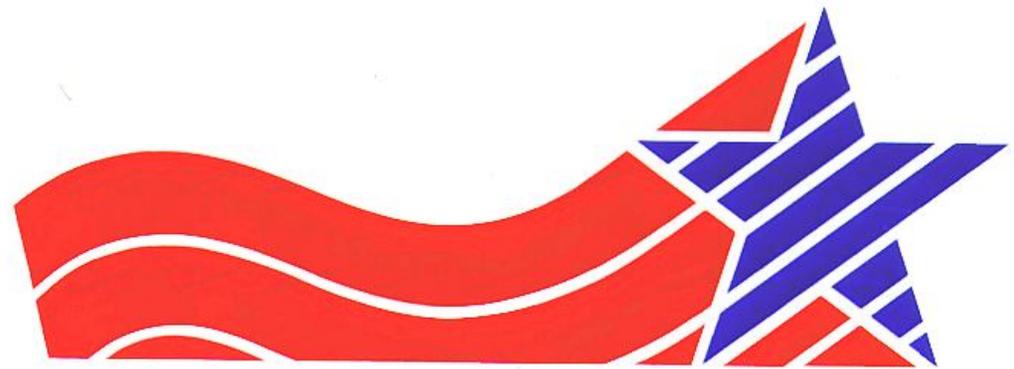
- 1) **Gather historical data**
- 2) **In a stable work environment and safety program,**
- 3) **The answer is Yes***



ACTUAL EXAMPLE: Training Rates as a "Leading" Indicator:



Clarification & Discussion



Michael Norder, safetyNhealthNorder@gmail.com

For Cal-OSHA VPP Meeting, April 2011