



HOUGHTON™

Indicators of Performance in Health and Safety Management

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What is to come

- Why bother with indicators
 - what use are they ?
- The main types of indicators
- Pros and cons of some well known indicators
- Presenting data and benchmarking
- Health and Process Safety
- Summary

But Before I start

Where is North ?



What are Indicators of Performance for ?

- Why Bother ?

- to monitor how well the business is performing (to show the right direction)
- to raise awareness or to focus attention on a particular issue
- to be used as part of an incentive programme
- to educate staff

Each of these purposes will require different characteristics

Using Indicators - Monitoring

- Linked to activities
- Looking for trends
- Moving annual totals
- Rates
- Yardstick – good or bad





Using Indicators

Creating Awareness / Focus

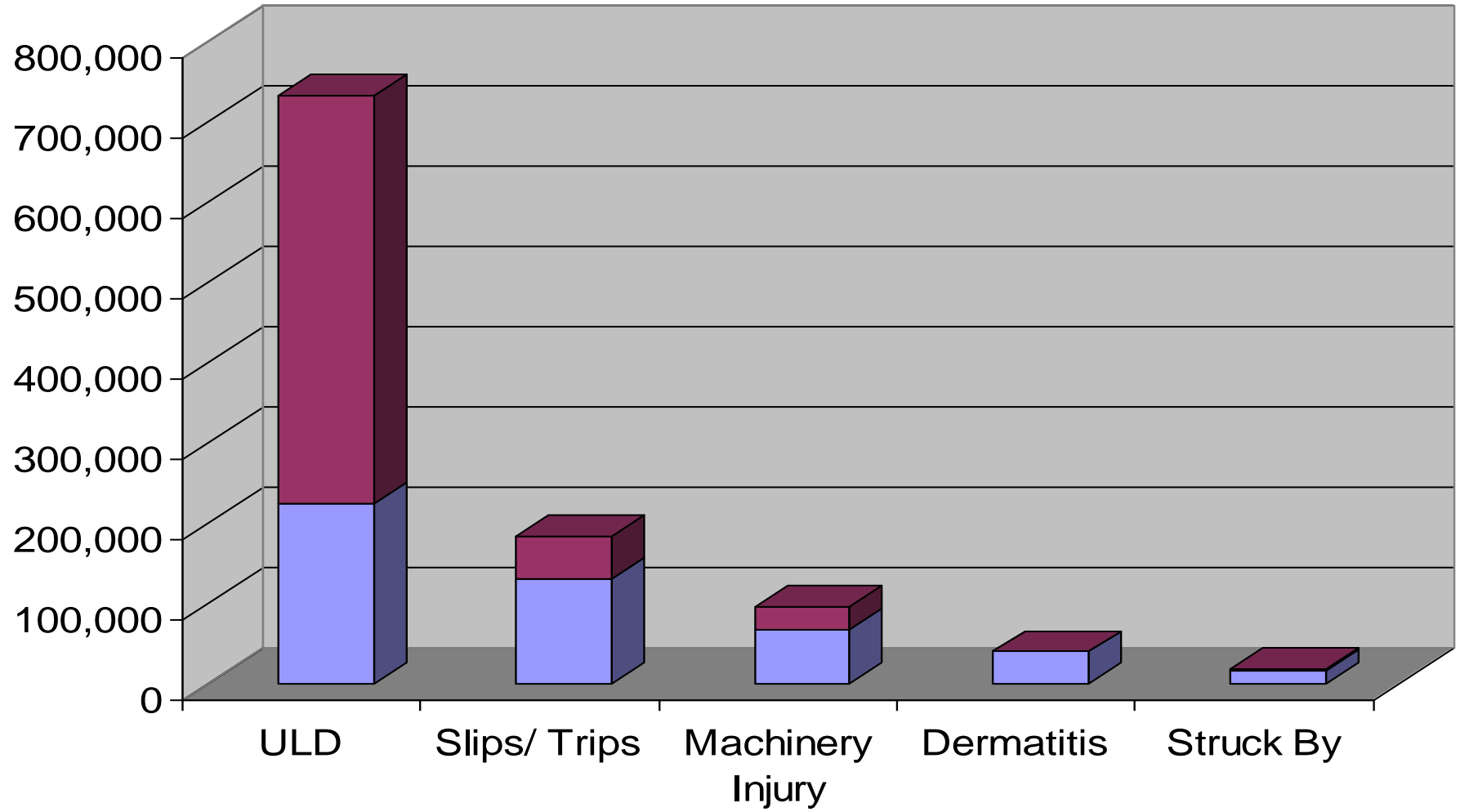
- Frequency of report
- Focusing a spotlight on an issue
- Comparison
- Understand ability

What would you estimate
the top ten insurance issues
to be for an Engineering
Company ?

Group Issues

			Costs	No of Cases	Cost per Case
Deafness			2500	6	417
Cuts			9421	10	942
Slips Trips and Falls			82394	32	2575
Trapping			37893	14	2707
Burn			32979	8	4122
Dermatitis			59530	11	5412
Asthma			38250	5	7650
Manual Handling			146629	16	9164

Total Insurance Costs By Category



Getting the Priorities Right !



ALSO, THE BRIDGE IS OUT AHEAD

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Using Indicators – Incentives / Bonuses

- Suppression
- Definitions
- Manipulation
- Lost time incidents
- You get what you incentivise



OUR GOAL THIS
YEAR IS ZERO
DISABLING
INJURIES.



INJURIES

0

LAST YEAR OUR GOAL
WAS TWENTY-SIX
DISABLING
INJURIES.



IN RETROSPECT,
THAT WAS A
MISTAKE .

26



WE HAD TO INJURE
NINE EMPLOYEES
TO MEET THE
GOAL.



Using Indicators - Education

- Relevance to audience
- Sufficient detail
- Prevention

Types of Indicator



Leading Indicators

Can be measured without an incident, accident or property damage occurring

Are useful in being able to predict or prevent future events.

Often are linked to processes or targeted activities

Lagging Indicators

Are indicators that show the number and or severity of events which have occurred.

Types of Indicator



Leading Indicators

- Safety Audits
- Behaviour
- Attitude surveys
- Inspections

Lagging Indicators

- Lost time incidents
- Minor accidents
- Days lost
- Absence data
- Property damage

How Many Accidents, Near
Misses and Unsafe Behaviours in
this Clip ?



How Many ?

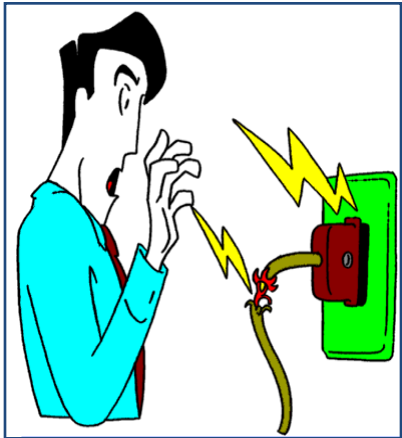
What does this illustrate ?

What is the Ideal Indicator?

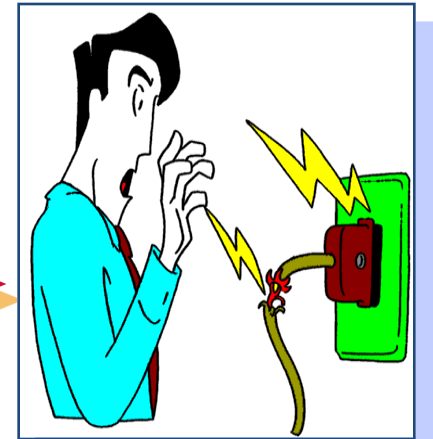
- ◆ Leading Indicator
- ◆ Be under the control of individuals
- ◆ Be positive
- ◆ Be easily understood
- ◆ Be relatively easy to collect.
- ◆ Consist of a large volume of data which can be fed back
- ◆ Reflect the current situation not historic ones



The Most Common Measure of Performance



**ACCIDENT
DATA !**



Accident Statistics

(Positive points)

- Absolute measure of performance
- Relatively easy to collect
- Allows Benchmarking
- Reporting rate can be verified
- Easily understood
- Focus for discussion
- Provide a basis for improvement
- Help to identify trends

Potential Pitfalls of Benchmarking

Example Lost Time Incident Frequency Rate (LTIF)

Most Common Definition in UK

Accidents per 100,000 hours worked

Approximately accidents in a working lifetime

OHSA Definition in US

Accidents per 200,000 hours worked

Approximately
emp
working for

will look twice as high

Other Common Definition

Accidents per 200,000 hours worked

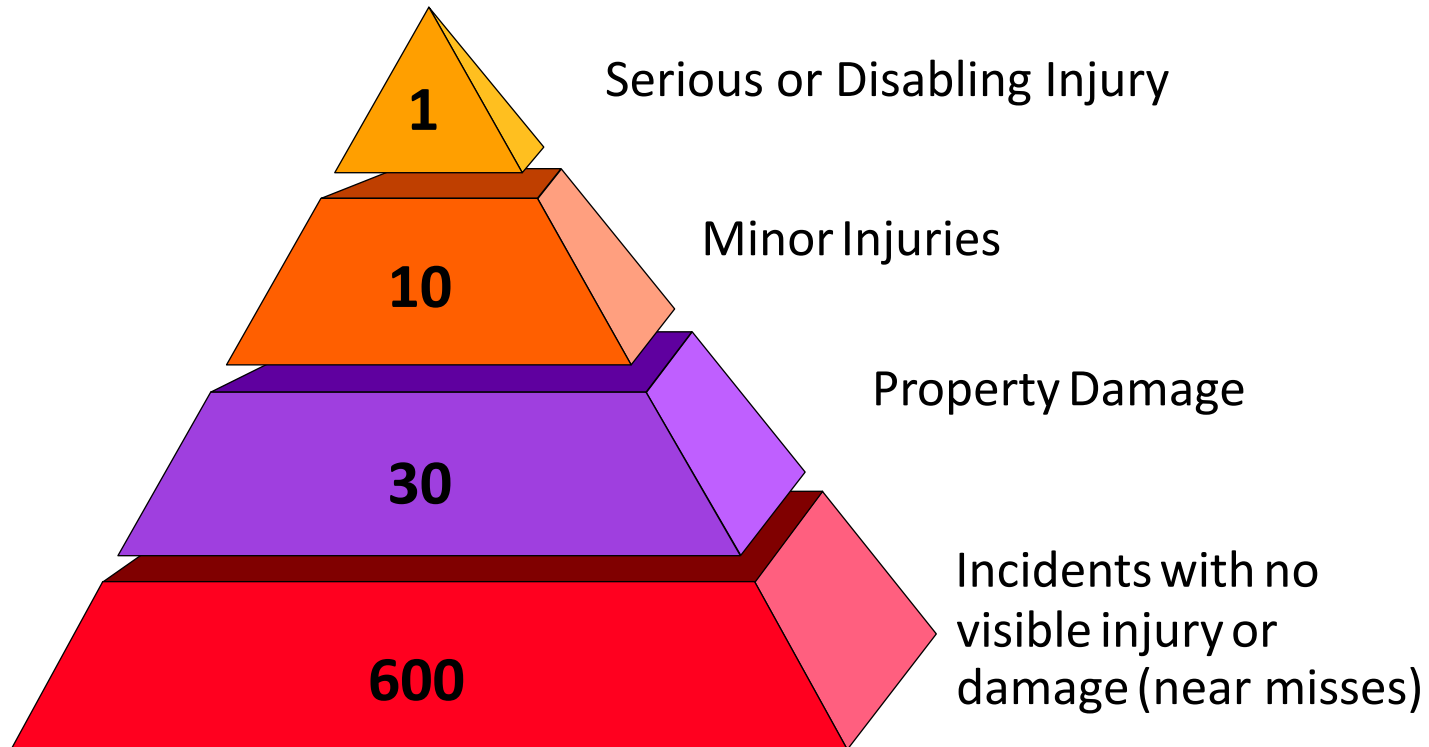
will look 10 X higher

If your rate is expressed as Accidents per 100,000 hrs

Accident Statistics (Potential issues)

- Downstream measure
- Historical perspective
- Poor predictor of future events
- Random statistical variation
- Level of safety awareness affects reporting rate.
- Measurement of failure not success
- Viewed as being out of the control of the workforce
- No mention of severity
- No mention of gradually developing diseases.

Bird's Triangle

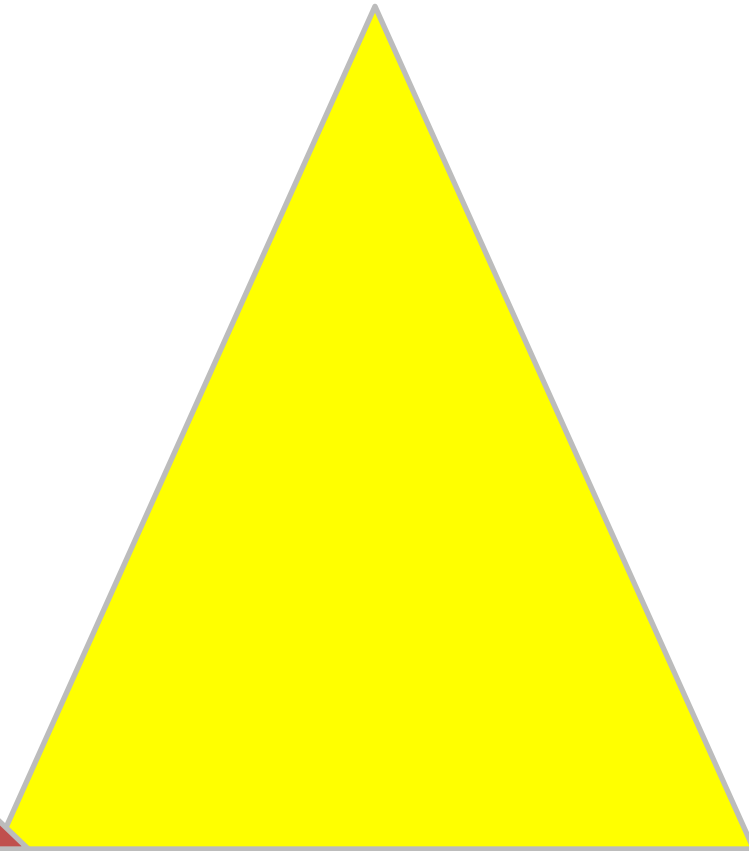
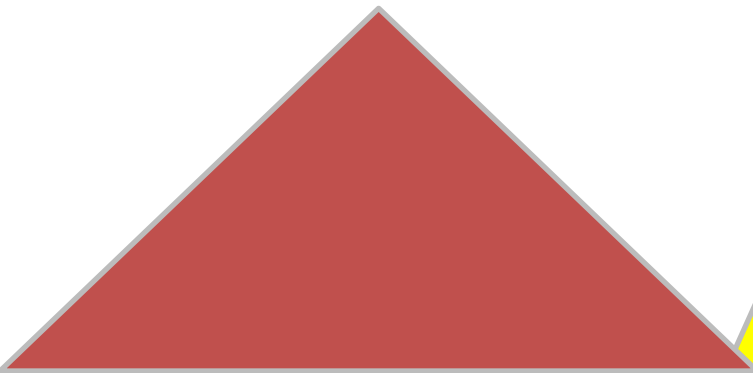


Texas City

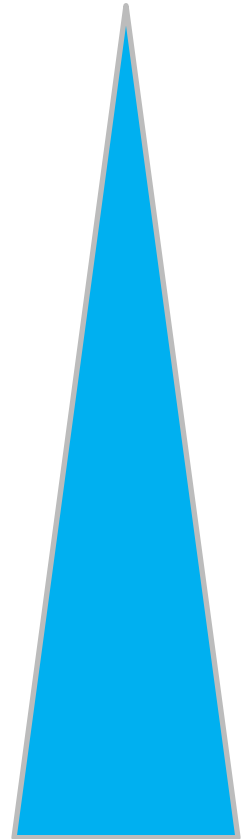


Bird's Triangle

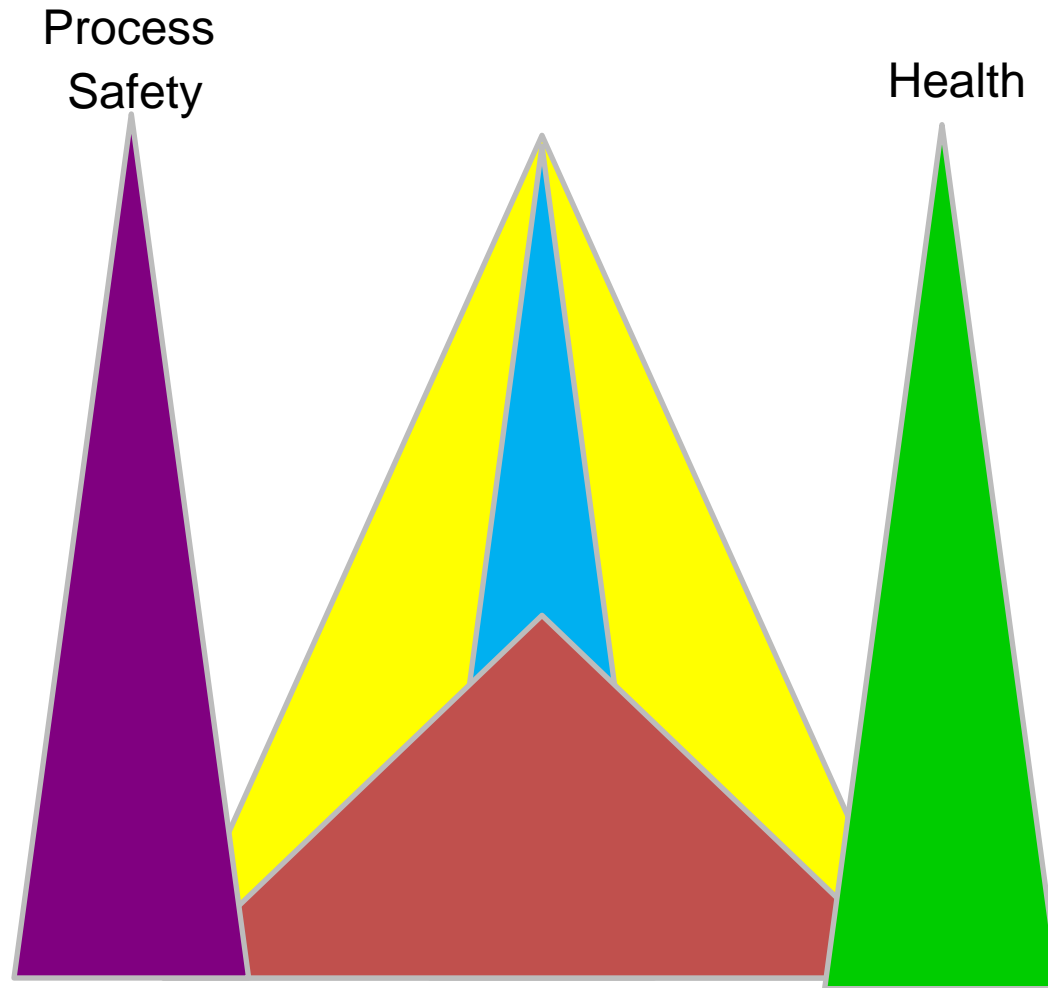
Low Potential
Accidents



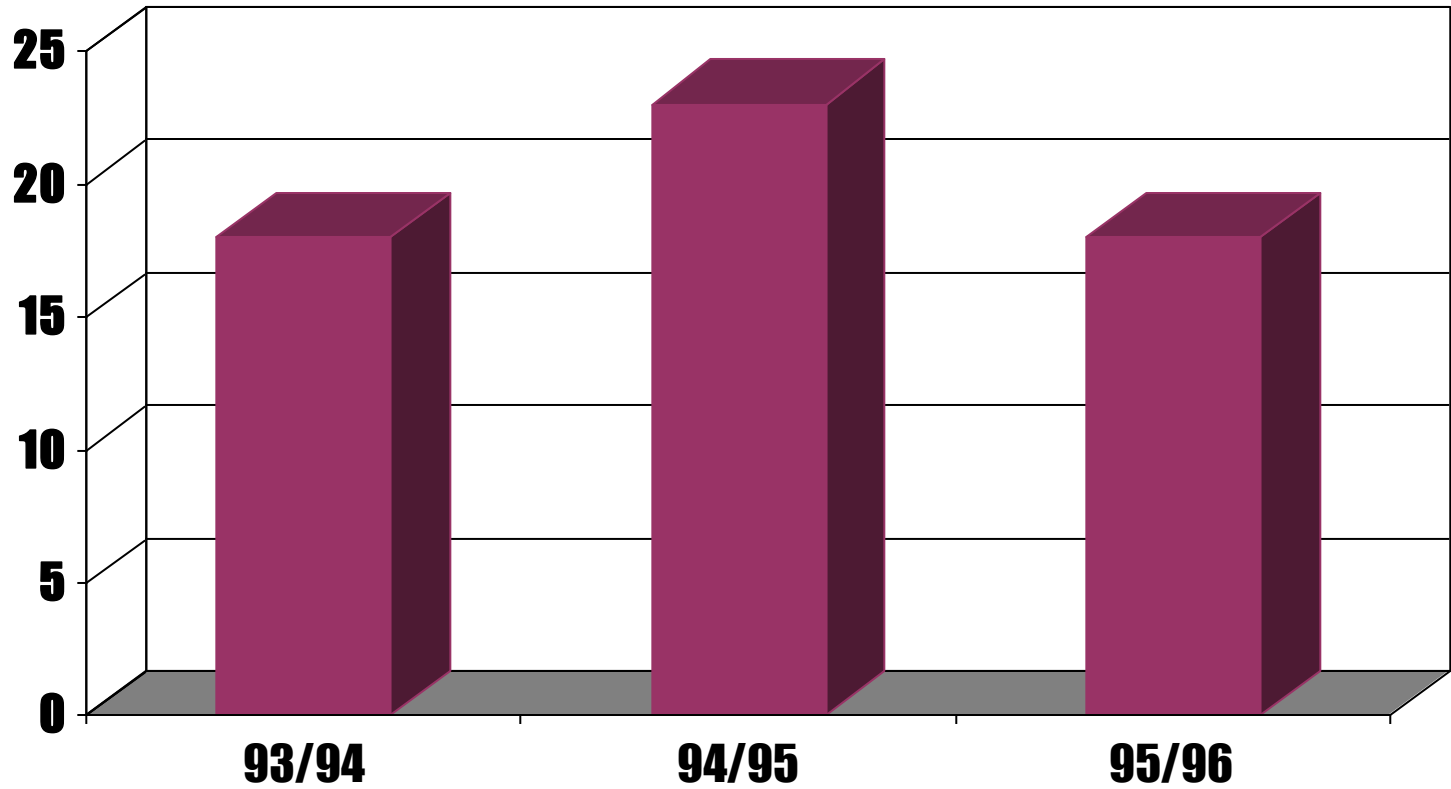
High Potential
Accidents



Bird's Triangle

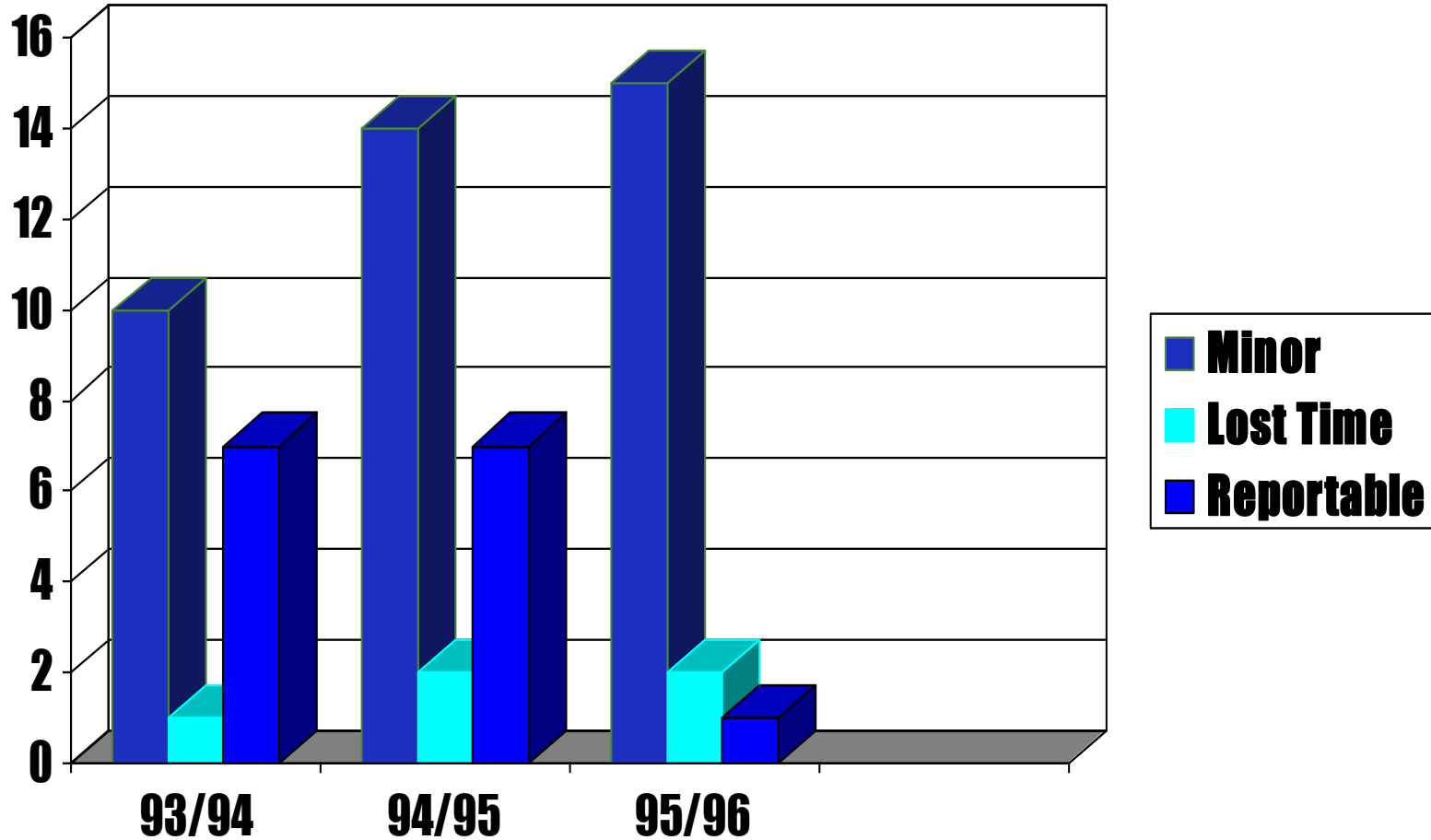


Did this intervention Work ?

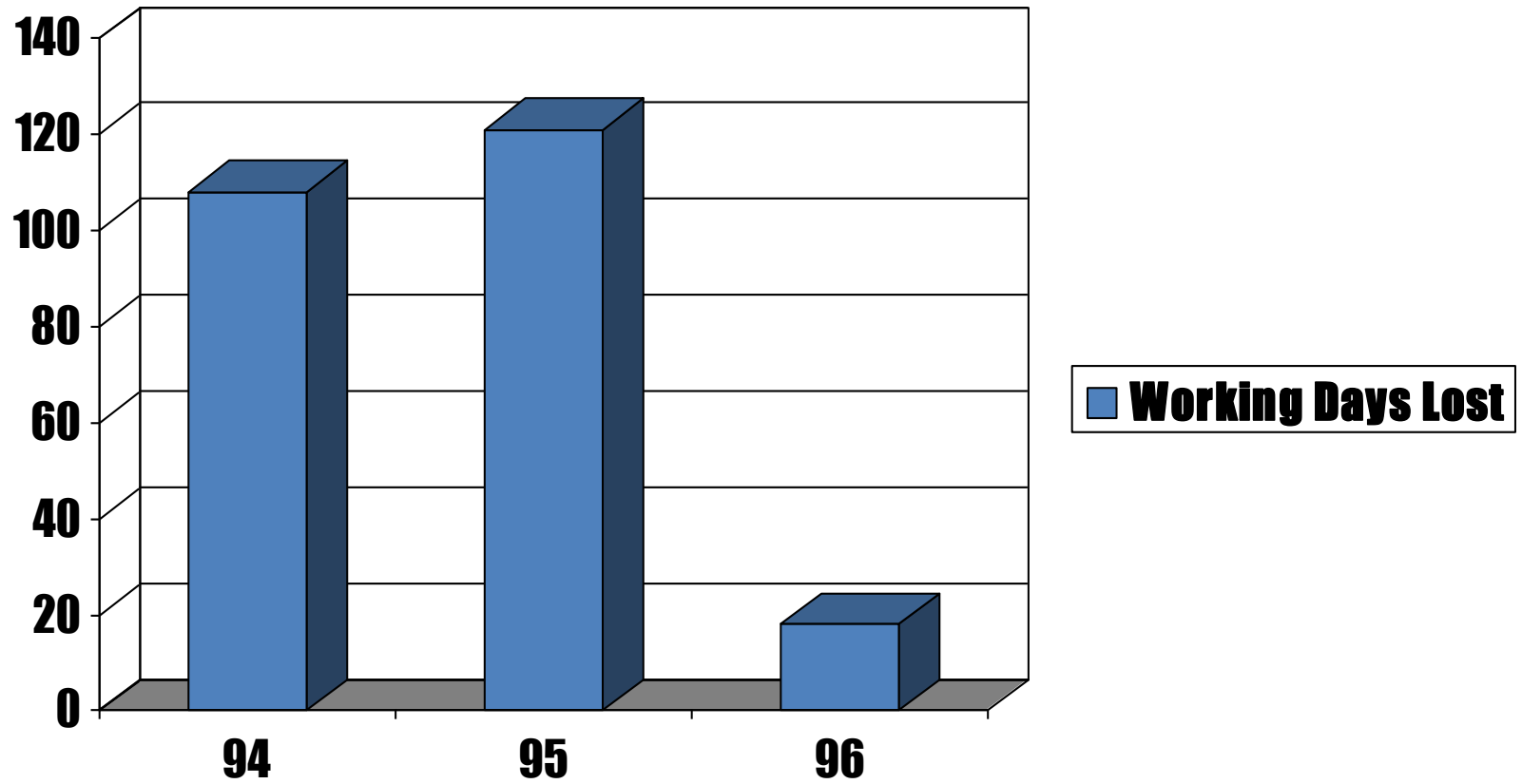


Accident Data 93-96

Accident Statistics



Number of Days Lost Due to Accidents



Cross Checking Reporting Rates

- First aid supplies
- Anonymous surveys
- Comparing Severity Rates (days lost per accident)
- Comparing accident triangles

Safety Audit

‘Subjects each area of an organisation’s activities to a systematic critical examination with the objective of minimising loss.

Every component of the total system is included’

Stranks and Dewis



Safety Audits

(Positive points)



- Leading indicator (Before an incident occurs)
- Compared to standard so variation obvious
- Selected items can be used in personal appraisals
- Comprehensive (covers all of management system)
- Visible show of commitment
- Companies familiar with other audits

Safety Audits

(Potential issues)

- If used too frequently can lose impact
- No reds culture
- Organisations face many audits (financial, quality etc...)
- Reports can sound negative
- Not easy to benchmark
- Do audits adequately address the human factor?
- Do audits correlate well with actual performance?



Inspections/ Sampling

(Positive points)

- Workforce involvement helps ownership
- Visibility
- Provide snap shot of current status
- Quantifiable

(Potential Issues)

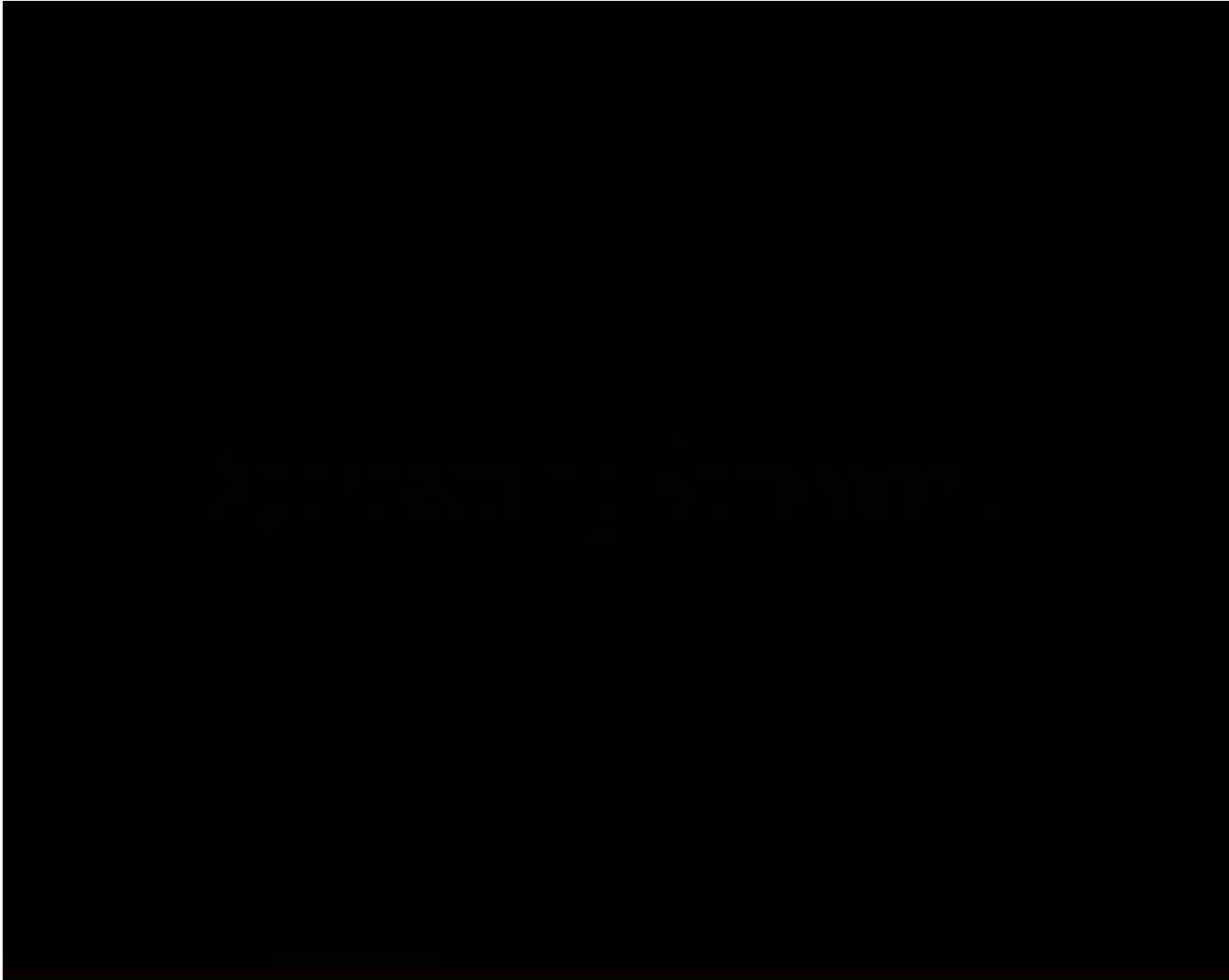
- Items of strategic importance ?
- Sufficient time allowed ?
- Consistency

How Can Inspections be Improved

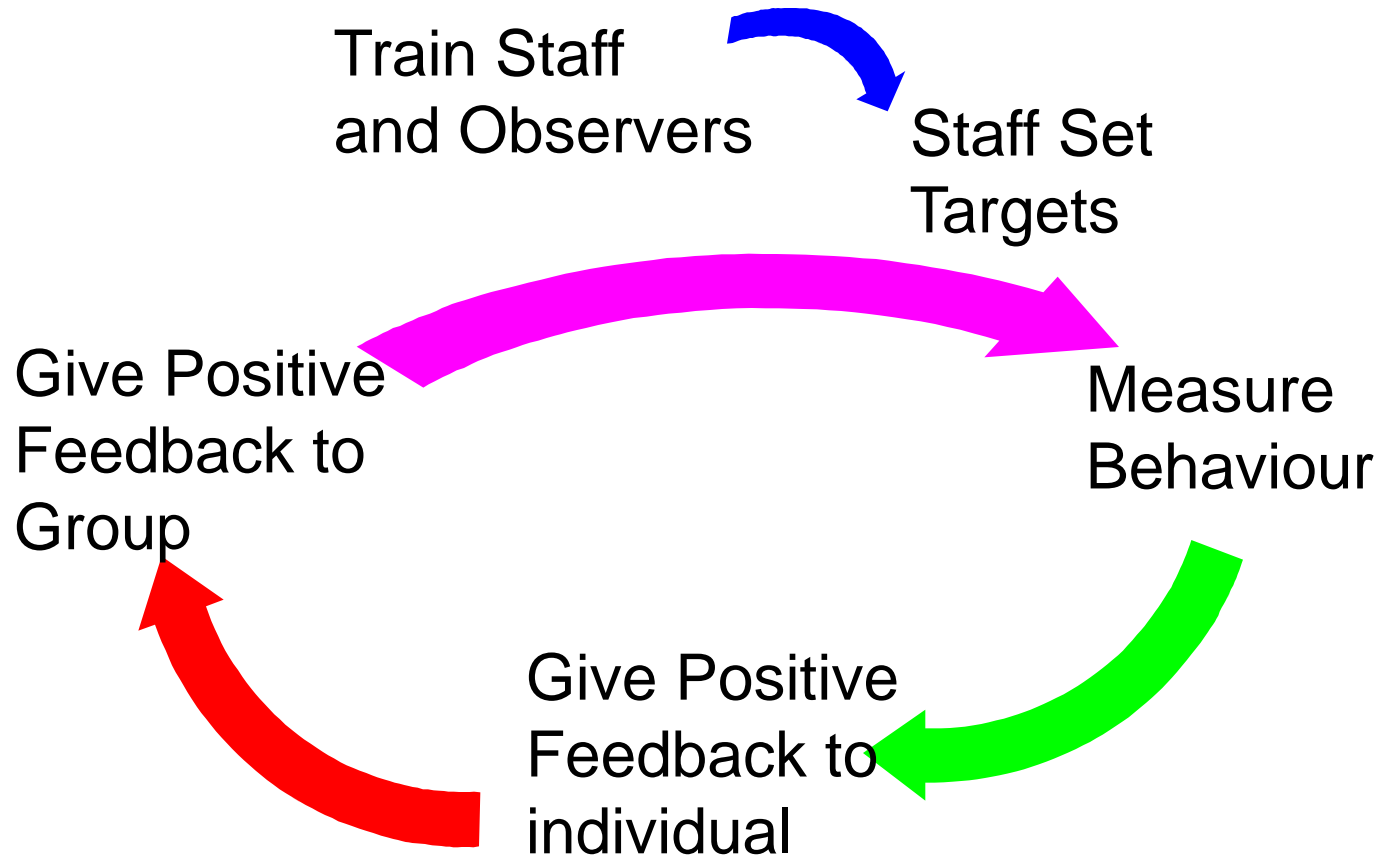
Training of inspectors

- What to look for
- Agree consistency
- Strategic items
- Taking responsibility – not walking past issues
- Soft Skills
 - How to get below the surface
 - Asking, not just looking
 - What to ask
 - How to ask it

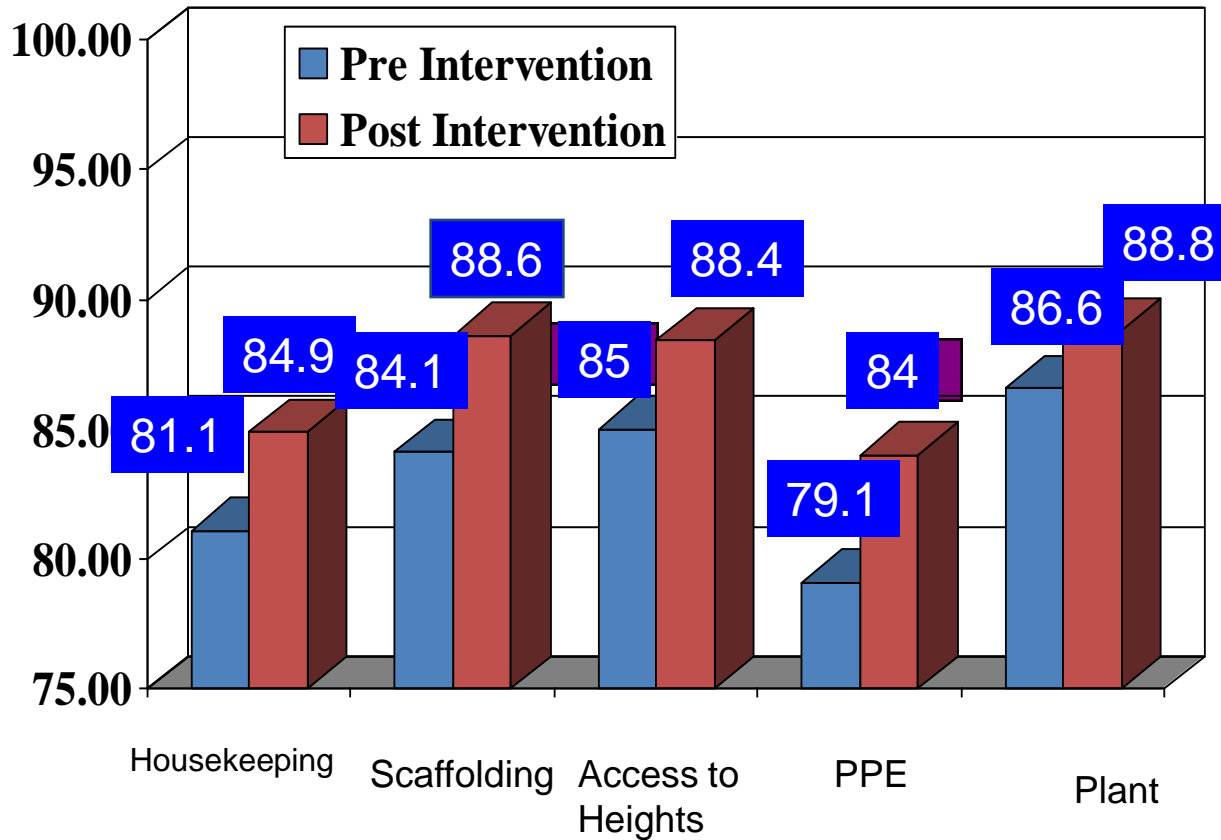
Soft Skills



Using Behaviour to Improve Safety



Results of UMIST/HSE Study



Behaviour

(Positive points)

- ◆ Good predictor of safety performance
- ◆ Perceived to be controllable
- ◆ Motivational (goal setting and feedback)
- ◆ Large volume of data
- ◆ Shows commitment
- ◆ Helps change attitudes ?

Behaviour

(Potential issues)

- ◆ Suitable behaviours need to be identified in detail
- ◆ Time and Effort, Time and Effort
- ◆ Sustainability
- ◆ Consistency
- ◆ Framework for communication

Attitude Measurement / Climate Measure

(adapted from RSSB web site)

Advantages

- Allows all the workforce's views to be considered.
- High profile
- Reveals current attitudes & perceptions
- Can clearly point to issues that need to be addressed.
- May identify issues in the safety management systems.

Limitations

- Will not identify all issues.
- High profile raises workforce expectations about responses
- High response rates required to ensure results fully reflect organisation's culture – this can be difficult to achieve unless implemented well.
- Results often do not directly identify underlying causes:

Key Performance Indicators

- They should be objective and easy to measure and collect
- They should be relevant to the organisation or workgroup whose performance is being measured.
- They should provide immediate and reliable indication of the level of performance
- They should be cost efficient in terms of equipment, personnel and additional technology required to gather the information
- They should be understood and owned by the organisation or workgroup whose performance is being measured.

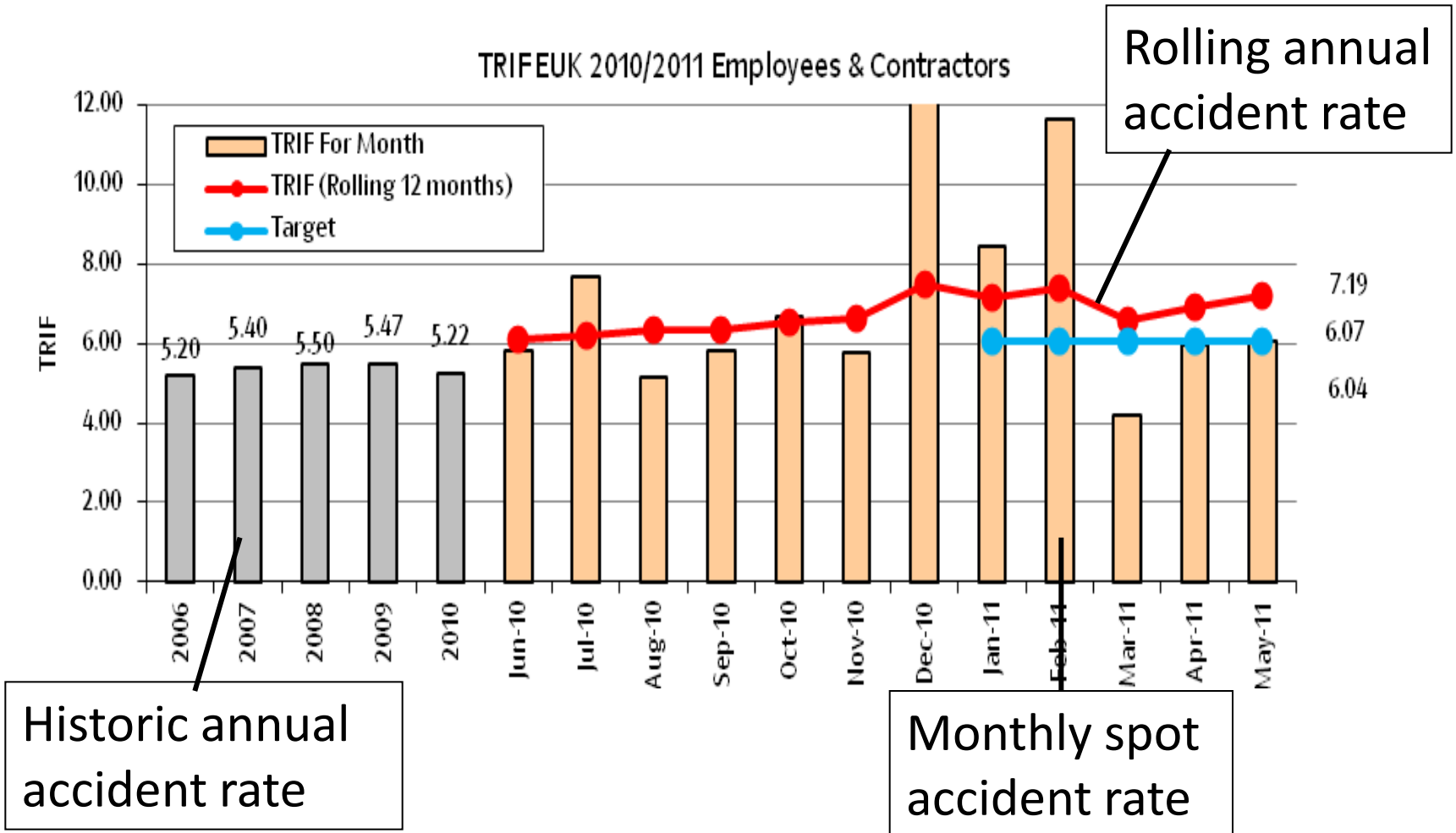
Examples

- Training delivered against plan
- Investigations closed within 14 days
- Number of senior management safety visits against plan
- Delivery against plan

Health Indicators

- Process effectiveness
 - Referral time
 - Completion of health surveillance
- Outcome
 - Attendance levels
 - Days lost per FTE
 - Number of specific illnesses
- Leading Indicators
 - Health Impact Index (developed by the Olympic team)

Presenting the Data



Making it Relevant to the Audience

LTIF - What does our performance mean?

What does an LTIF of 1 actually mean ?

It means during their working life on average every single member of staff will suffer an injury so severe that that they will have to take time off work



Score Cards and Basket Indicators

• Score Cards

- Consolidate key data in to one place
- All relevant graphs and indicators for several issues on one page

• Basket Indicators

- Attempt to combine all of the relevant data into a single score
- Each indicator is weighted and then they are combined through addition or multiplication
- Clarity ?

Questions ?

