Risktec
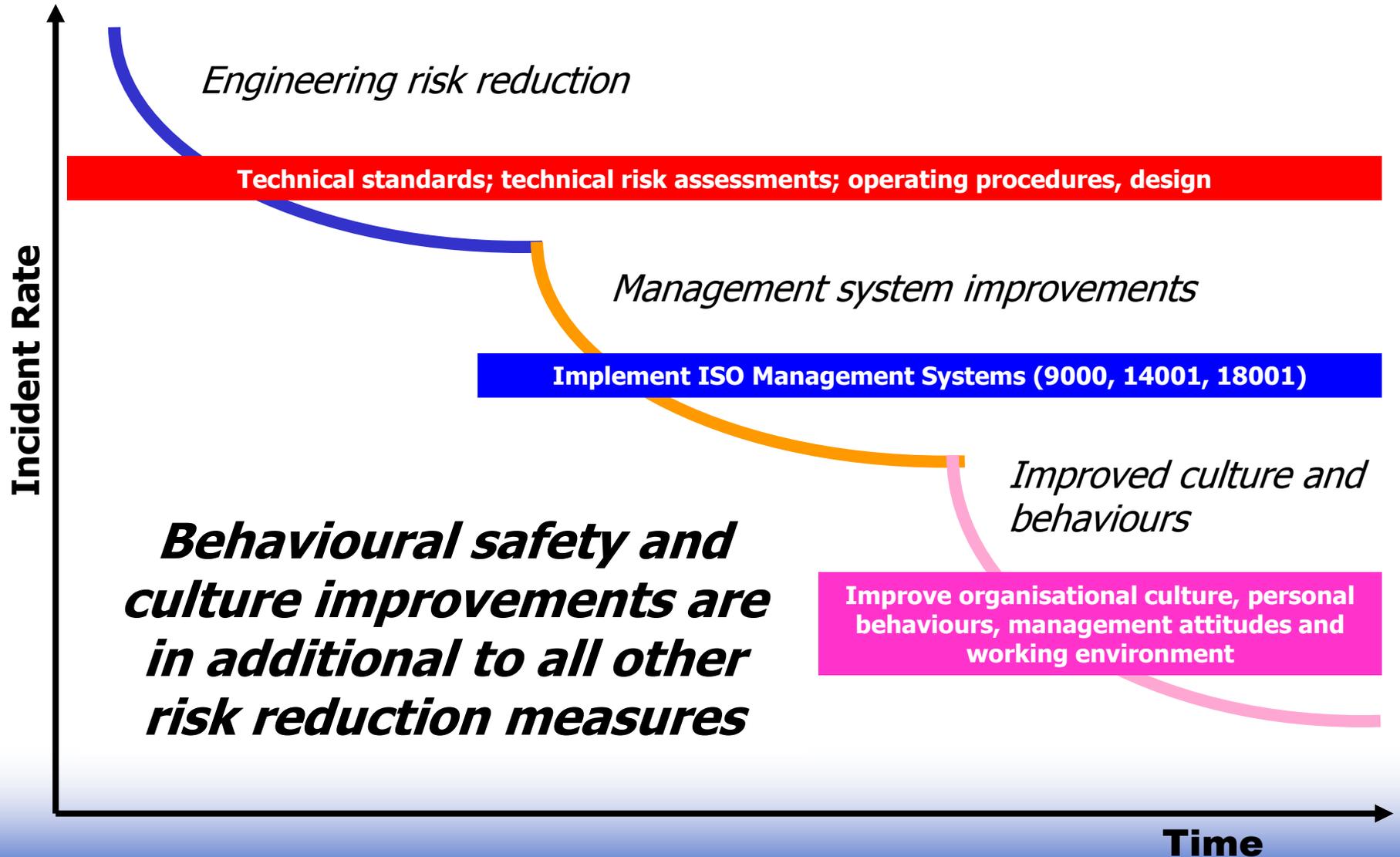
risk management and assessment for business

Making your SMS work for you

Getting Safe Behaviours Embedded

For

IOSH Rail Group

October, 2010

Getting Safe Behaviours Embedded

Final component of a SMS – People

- What do we mean by human behaviour?

- How can behaviour be influenced to improve:
  - Efficiency
  - Productivity
  - Safety

- Behavioural Safety

- Cultural and Behavioural Tools

Culture and human behaviour

Incident Rate (vertical axis) / Time (horizontal axis)

Engineering risk reduction

Technical standards; technical risk assessments; operating procedures, design

Management system improvements

Implement ISO Management Systems (9000, 14001, 18001)

Improved culture and behaviours

Behavioural safety and culture improvements are in additional to all other risk reduction measures

Improve organisational culture, personal behaviours, management attitudes and working environment

Human Behaviour

What do we mean by 'human behaviour'?

- Collection of motor actions, verbal statements, facial expressions, body language etc used to express ourselves

- Only observable output to indicate inner values and attitudes

- Develops and changes over time
  - Biology and psychology
  - Cultural influences
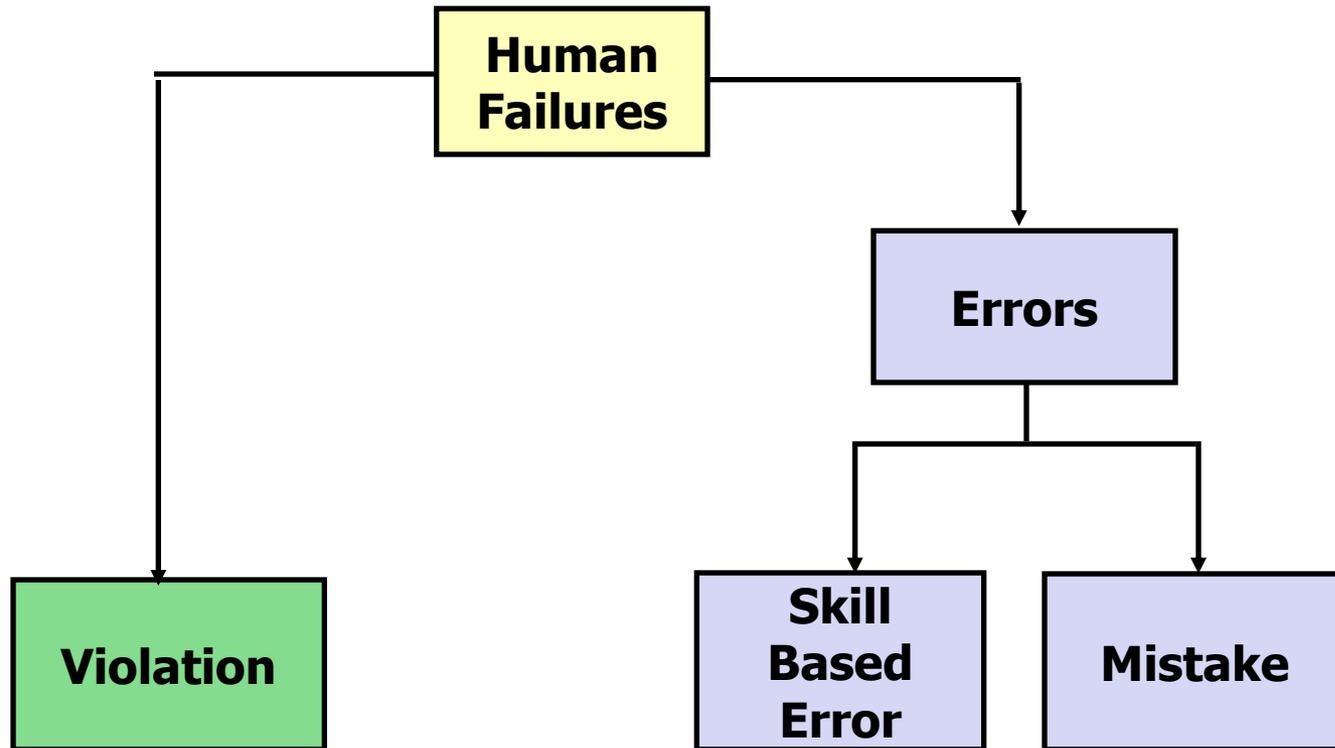 - Life experiences
  - Memories and learning

Human Behaviour

- We obtain information from the external world via sensory inputs

- Our experiences cause us to form 'constructs' or 'filters' through which we perceive the external world

  – Rapid and accurate processing
  – Rapid and accurate motor output
  – *But can cause* biased perception leading to
    - inaccuracies
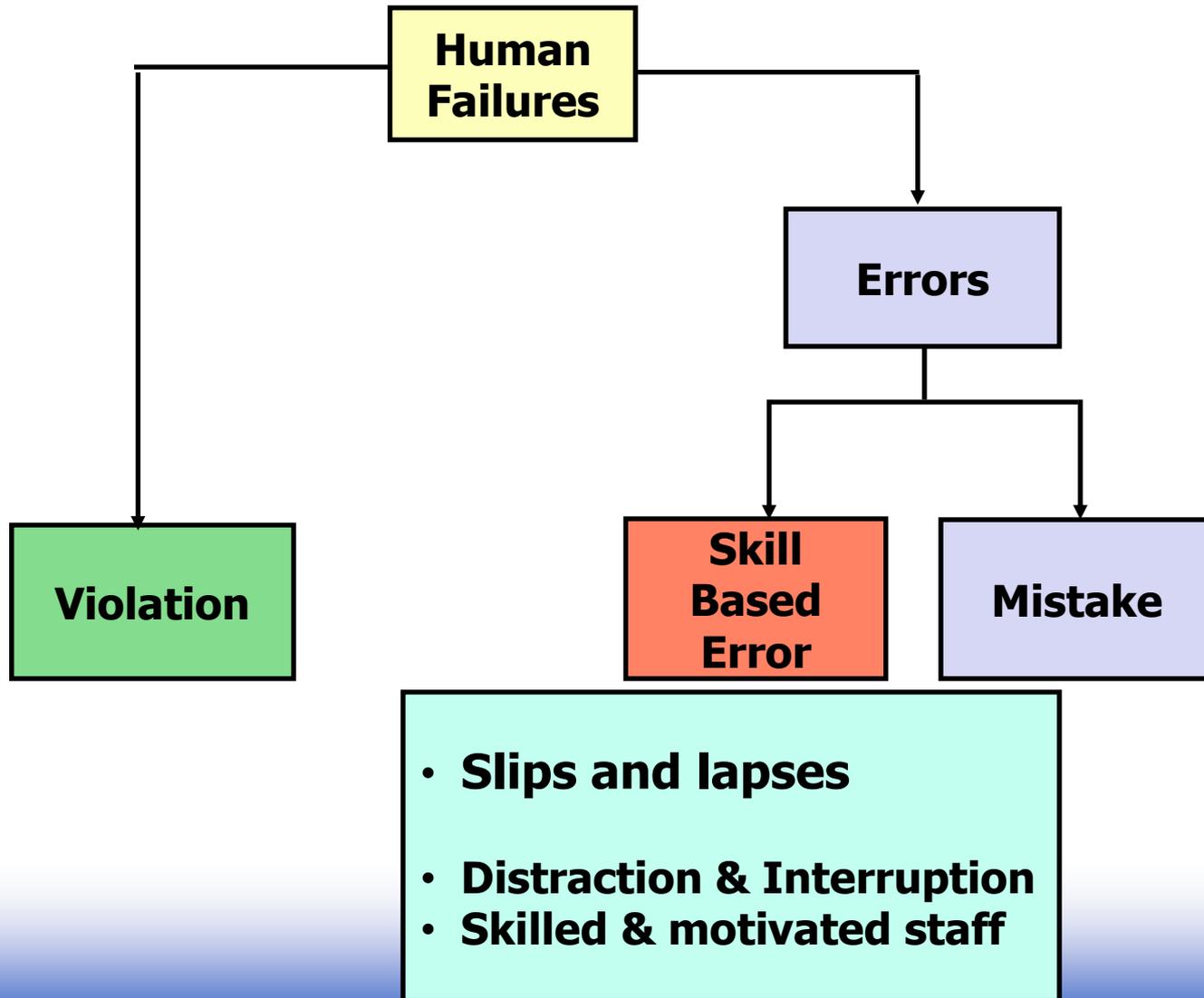   - false conclusions
    - inappropriate behavioural outputs

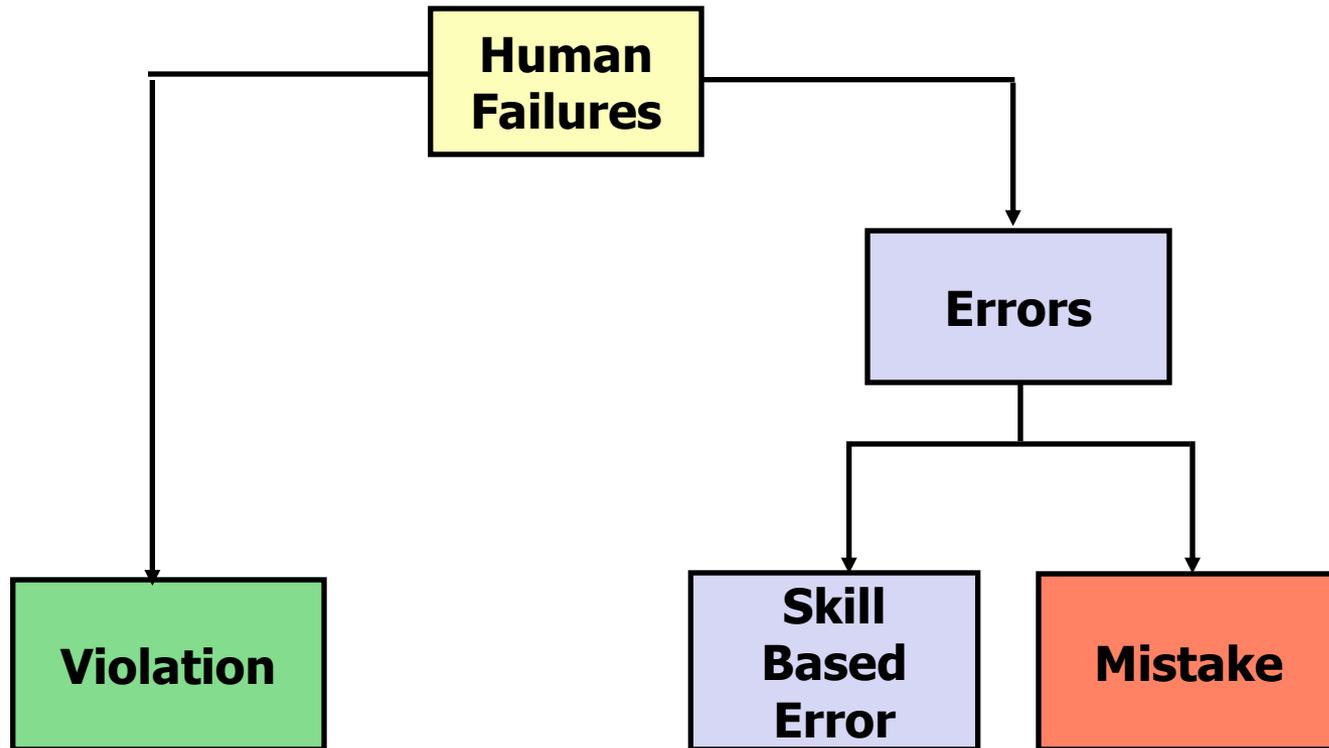   ***Error and violation***

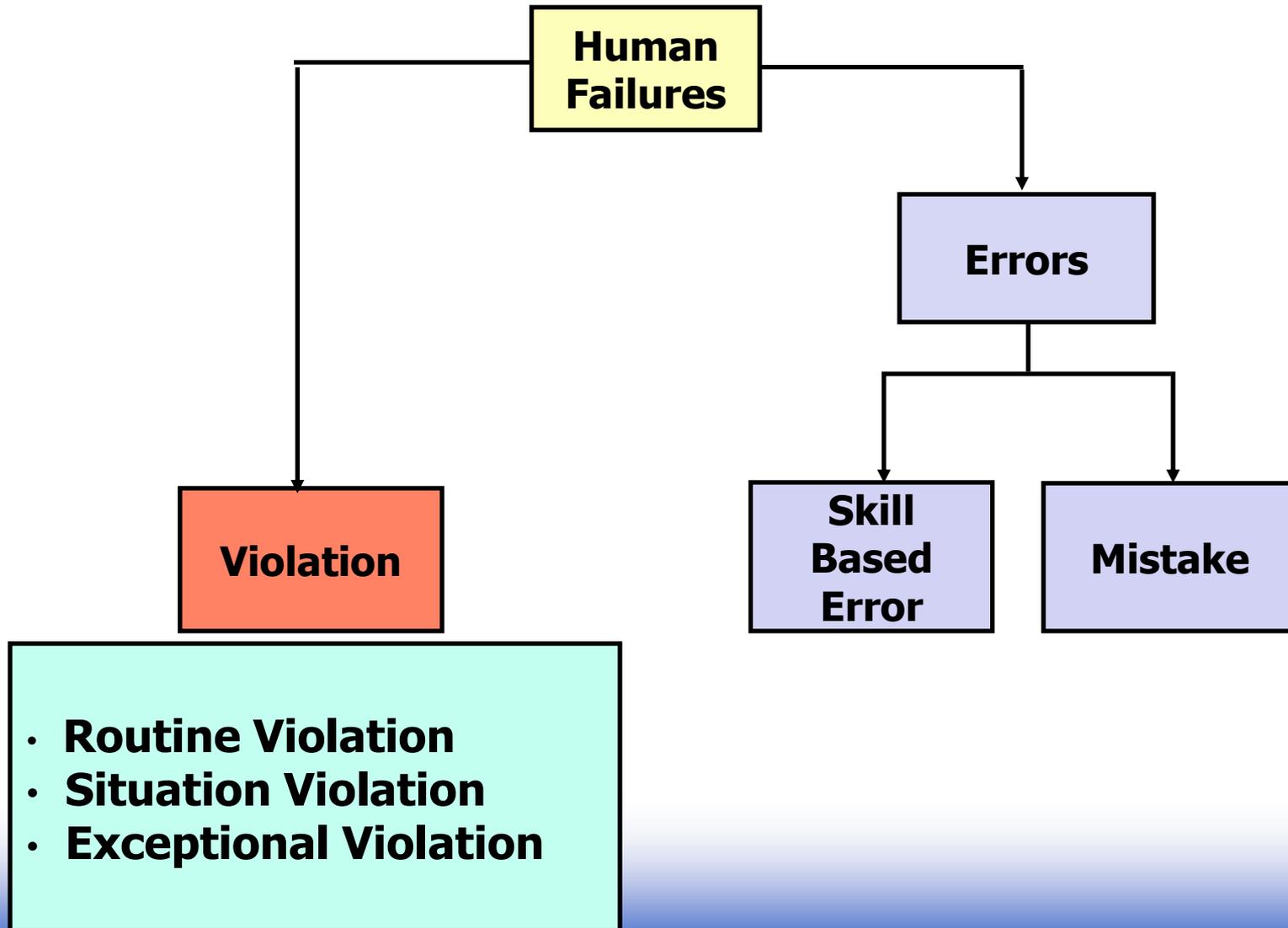# Human errors and violations

Human errors and violations

Human errors and violations

```
                    ┌──────────────┐
                    │    Human     │
            ┌───────│   Failures   │───────┐
            │        └──────────────┘        │
            │                                │
            │                         ┌──────────────┐
            │                         │    Errors    │
            │                         └──────────────┘
            │                          ┌──────┴──────┐
            ▼                          ▼             ▼
    ┌──────────────┐         ┌──────────────┐ ┌──────────────┐
    │  Violation   │         │    Skill     │ │   Mistake    │
    │              │         │    Based     │ │              │
    │              │         │    Error     │ │              │
    └──────────────┘         └──────────────┘ └──────────────┘
```
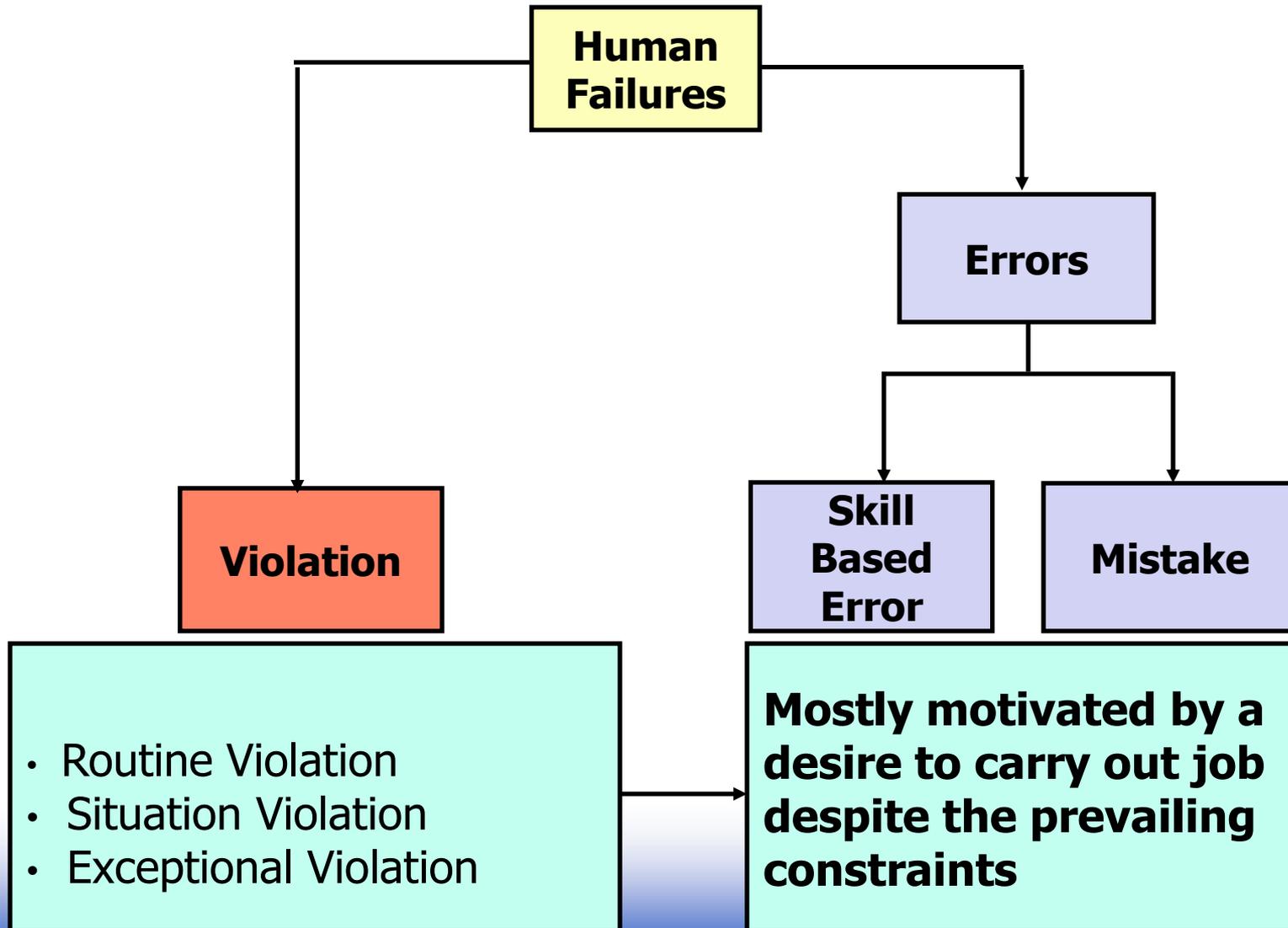
- **Incorrect action, believing it to be correct**

- **Rule or knowledge based**
- **Experienced and trained staff**
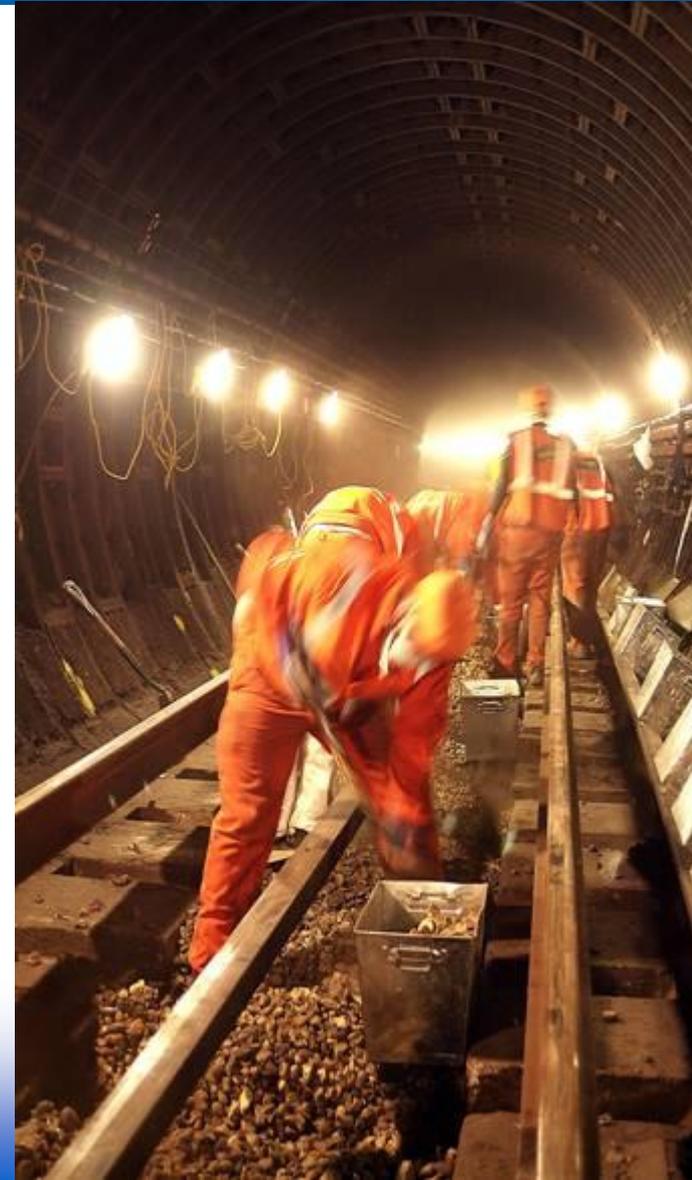
Human errors and violations

Human errors and violations

Human Behaviour

- Behavioural motivators and drivers
  - Values, beliefs, attitudes
  - Mood
  - Interest
  - Stimulation level
  - Competency
  - Learnt consequences
  - Cultural influences
  - Relationships with colleagues
  - Components of job / task
 - Working environment
  - Organisational structure

Behavioural safety

- **Behavioural Safety -** *Cohesive and planned collection of corporate and personal activities:*

  - Commitment and leadership
  - Structures & processes
  - Positively considers the individual within the system
  - Improves trust and communication
  - Moves culture towards maturity

- Consider behaviours of all staff / stakeholders

- Not a 'quick fix'

- Requires long term commitment and sustained input

- Considered, planned programme

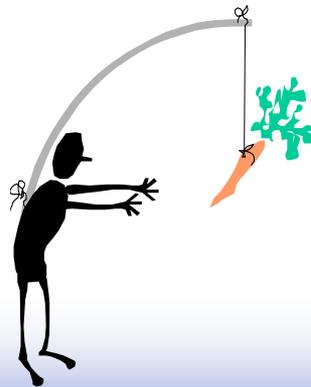- Implementation method

Cultural and behavioural tools

Cultural and behavioural tools

- Safety culture tool
- Root cause analysis
- ABC model
- Safety Tours
- Leading performance indicators
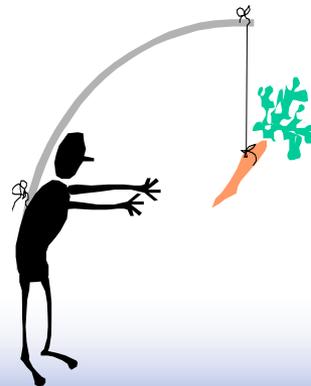
Cultural and behavioural tools

- **Safety culture tool**
- Root cause analysis
- ABC model
- Safety Tours
- Leading performance indicators

Organisational culture

What is culture?

- **A product of group:**
  - Perceptions, values
  - Attitudes, beliefs
  - Competences
  - Patterns of behaviour

- **Which become:**
  - Frame of reference
  - Directing behaviour
  - Custom and practice
  - Communicated and imitated

Organisational culture

- **An organisations' culture will therefore affect:**
  - prioritisation
  - knowledge
  - what is valued
  - what is expected by the organisation
  - how work activities are undertaken
  - how safely those work activities are conducted

- **Organisational culture:**
  - is a learned situation
  - it can be developed
  - it can change

The nature of safety culture: a review of theory and research', F. Guldenmund, Safety Science 34, 215-257, 2000
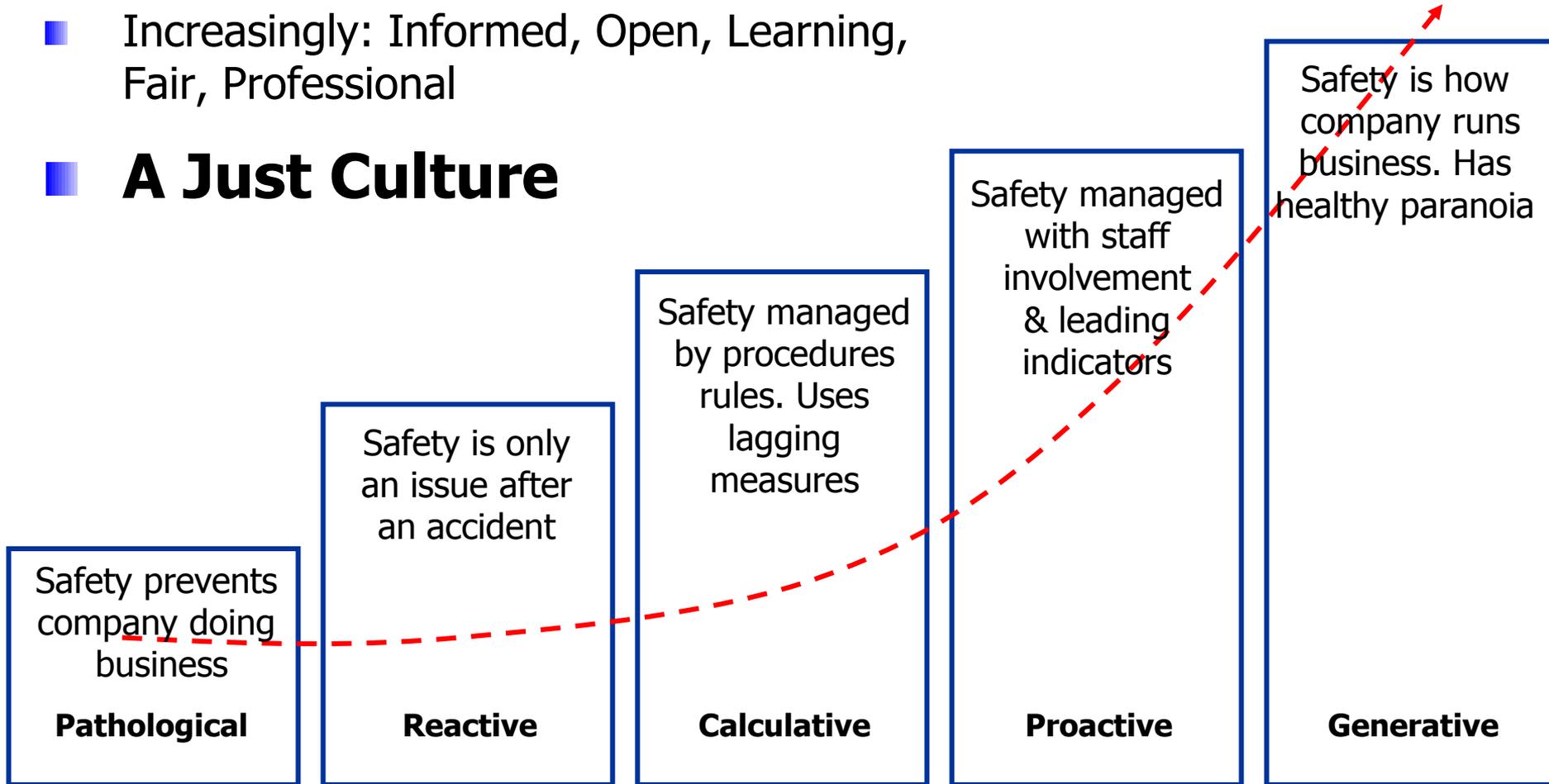
Safety culture

- **What characterises a positive safety culture?**

  - Communications founded on mutual trust

  - Shared perception of importance of safety

  - Confidence in preventative measures

  - Motivated involved and empowered staff

The Way We Want Things To Be Done Around Here

Safety culture

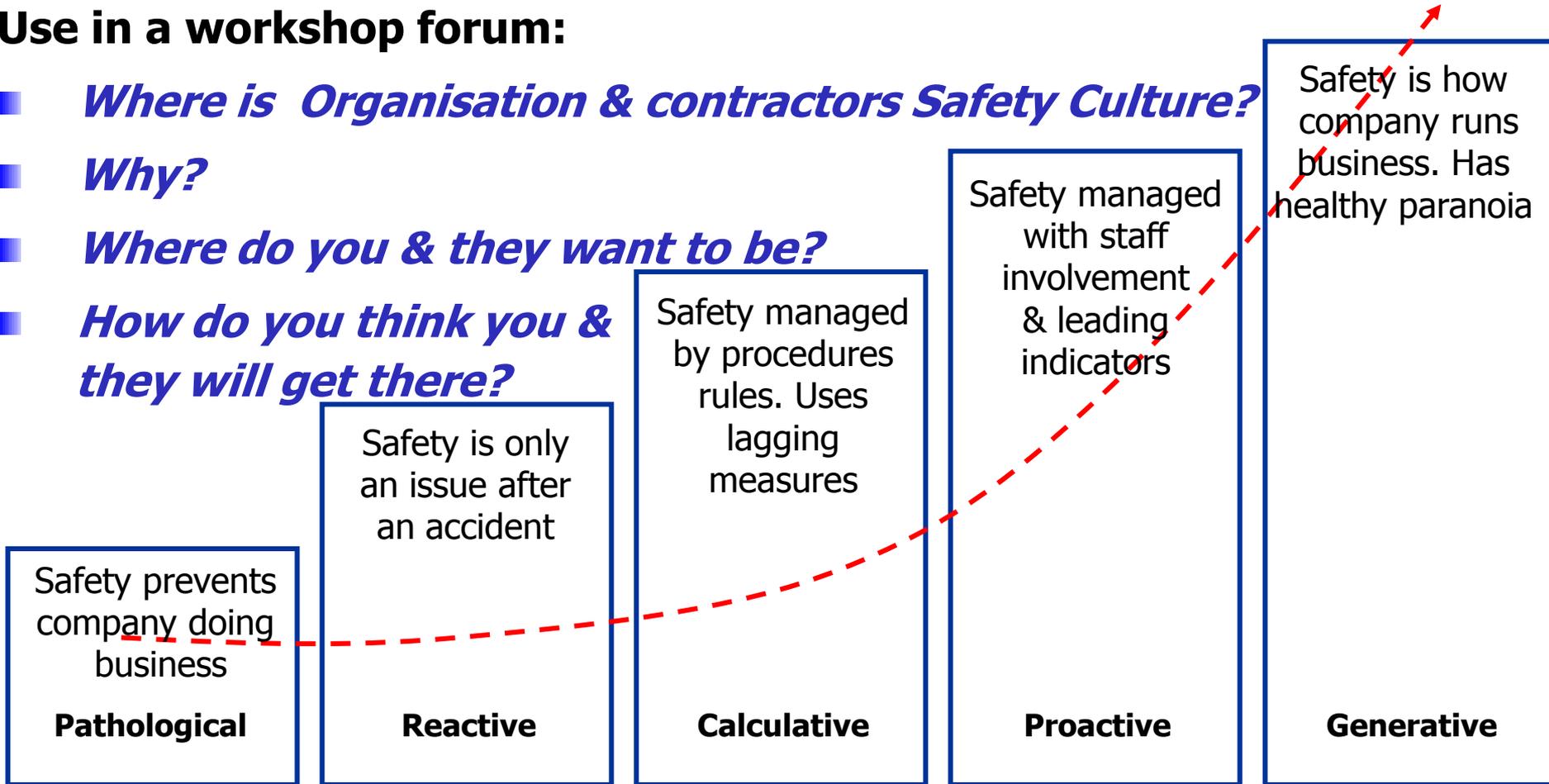- Increasingly: Informed, Open, Learning, Fair, Professional

- **A Just Culture**

Safety is how company runs business. Has healthy paranoia

Safety managed with staff involvement & leading indicators

Safety managed by procedures rules. Uses lagging measures

Safety is only an issue after an accident

Safety prevents company doing business

Pathological

Reactive

Calculative

Proactive

Generative

After: 'A framework for understanding the development of organisational safety culture; Parker, Lawrie & Hudson, Safety Science, 44, 6, 2006

Safety culture

Risktec

Use in a workshop forum:

- *Where is Organisation & contractors Safety Culture?*
- *Why?*
- *Where do you & they want to be?*
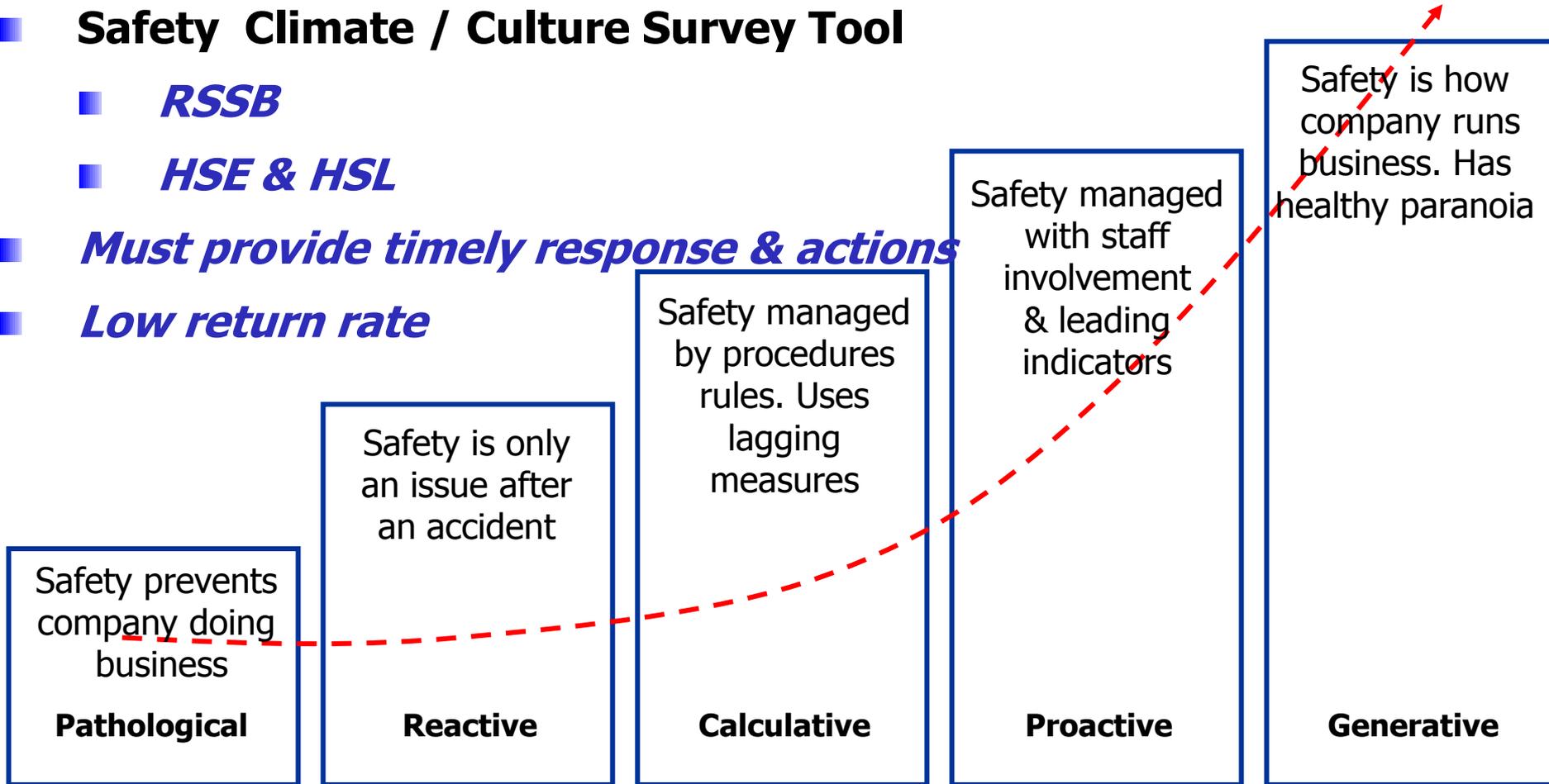- *How do you think you & they will get there?*

Pathological	Reactive	Calculative	Proactive	Generative
Safety prevents company doing business	Safety is only an issue after an accident	Safety managed by procedures rules. Uses lagging measures	Safety managed with staff involvement & leading indicators	Safety is how company runs business. Has healthy paranoia

After: 'A framework for understanding the development of organisational safety culture; Parker, Lawrie & Hudson, Safety Science, 44, 6, 2006

Safety culture

Risktec

- **Safety Climate / Culture Survey Tool**
  - *RSSB*
  - *HSE & HSL*
- *Must provide timely response & actions*
- *Low return rate*

| Pathological	Reactive	Calculative	Proactive	Generative
Safety prevents company doing business	Safety is only an issue after an accident	Safety managed by procedures rules. Uses lagging measures	Safety managed with staff involvement & leading indicators	Safety is how company runs business. Has healthy paranoia

After: 'A framework for understanding the development of organisational safety culture; Parker, Lawrie & Hudson, Safety Science, 44, 6, 2006

Cultural and behavioural tools

- Safety culture tool
- **Root cause analysis**
- ABC model
- Safety Tours
- Leading performance indicators
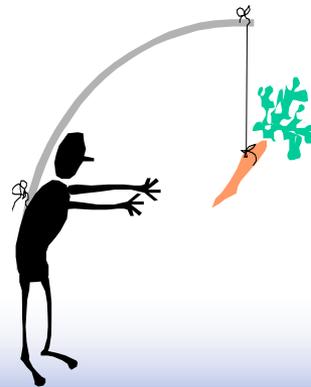
Root Cause Analysis
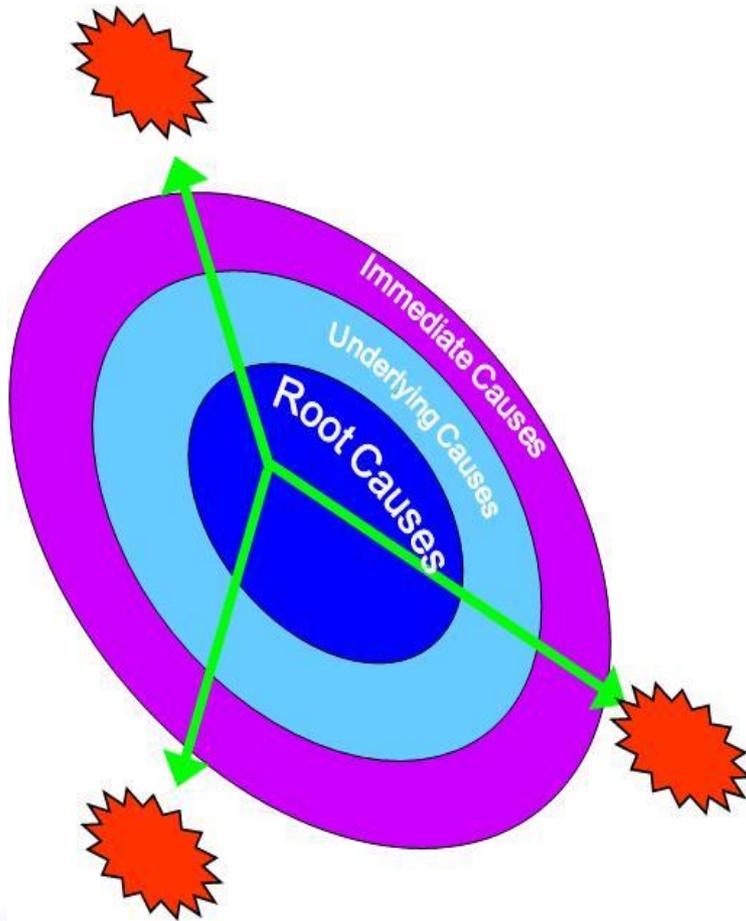
- ## Immediate causes
  - Most obvious reason(s) why adverse event happens
  - Immediate actions (or failure to act) of people (active failures)

- ## Underlying causes
  - The less obvious "system" or "organisational" reason for an event happening (latent failures)

- ## Root causes
  - Initiating event / failing
  - Leads to all other causes or failings
  - Latent failures
  - Generally management, planning or organisation failings

Accident causation - Swiss cheese
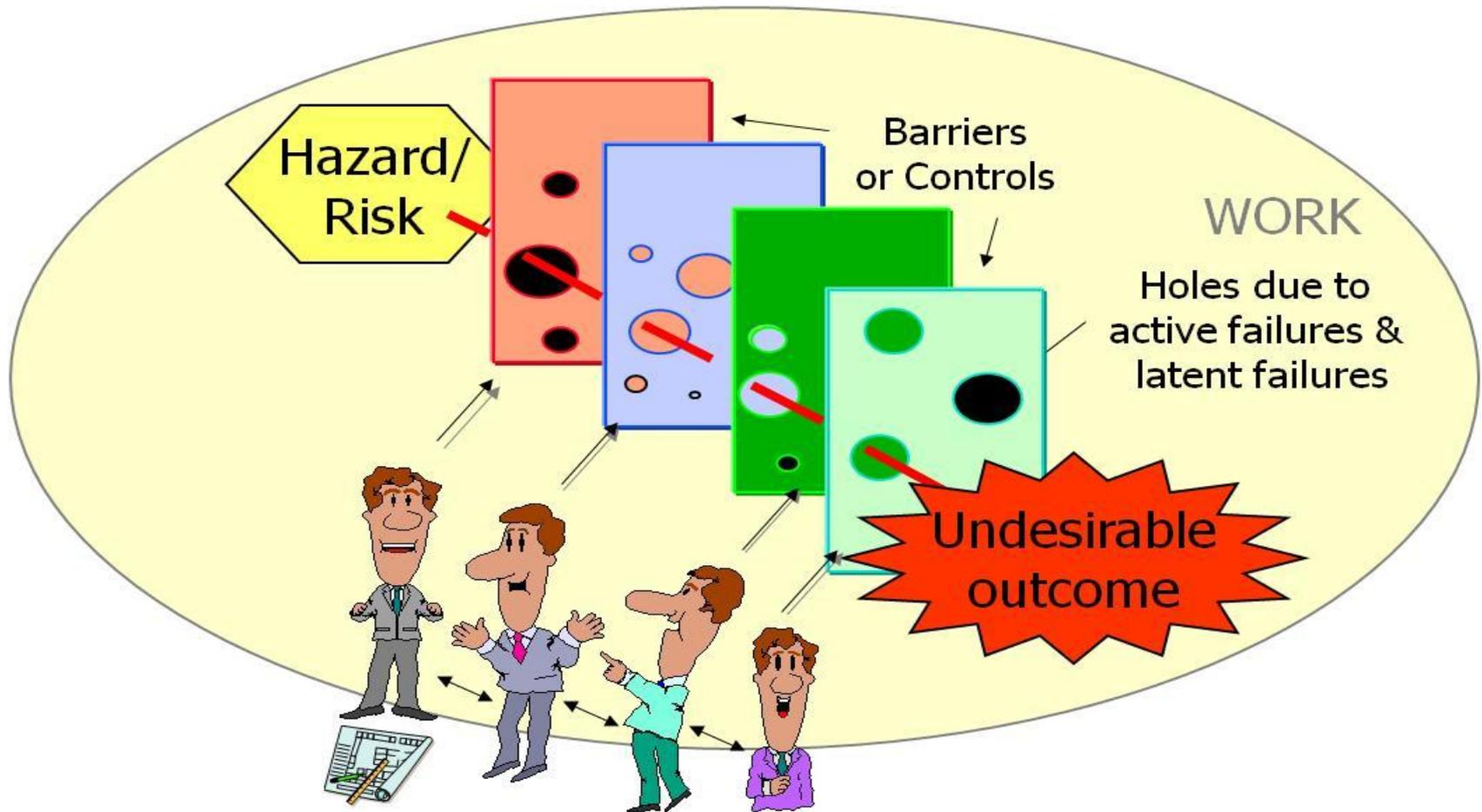
Controls and failures are due to people

Need to:

- Identify both active and latent failures

- Identify changes throughout organisation required to prevent repeat active and latent failures

- Implement changes

Not an exercise in apportioning blame

Cultural and behavioural tools

- Safety culture tool
- Root cause analysis
- **ABC model**
- Safety Tours
- Leading performance indicators
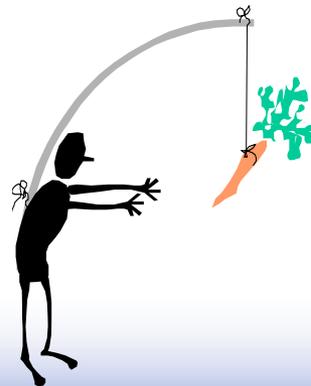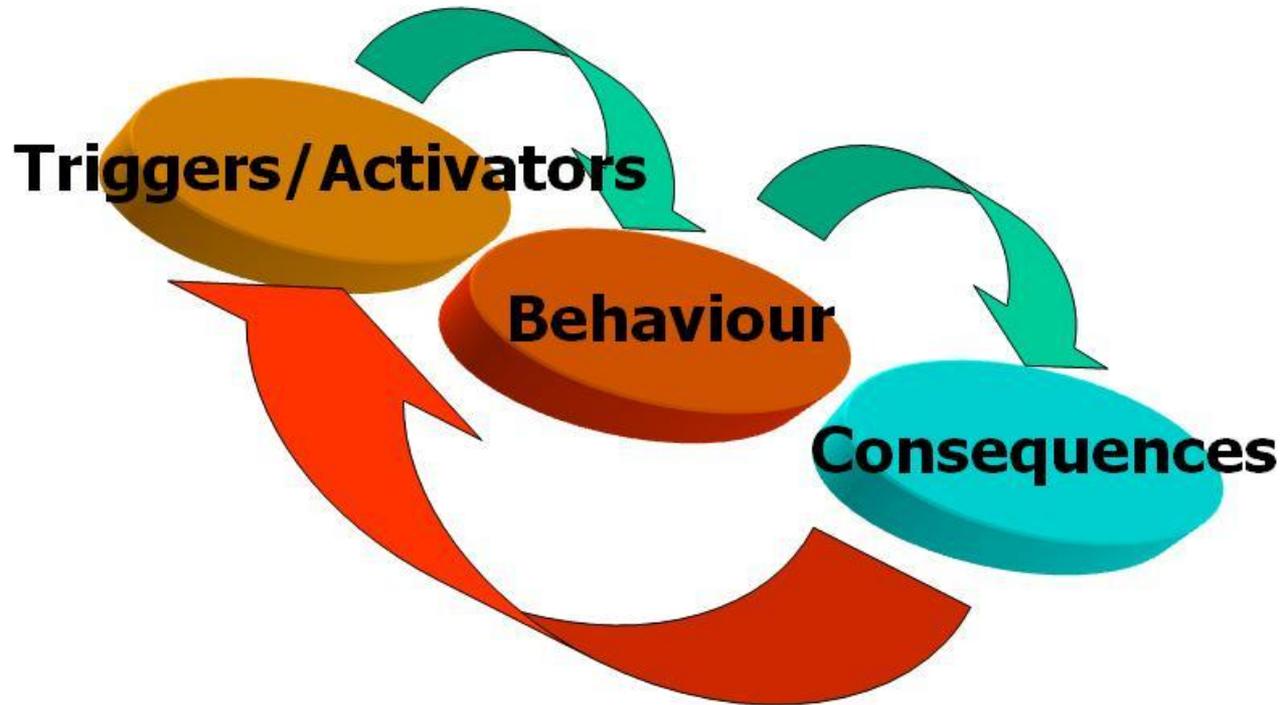
Behavioural Model – ABC

Cognitive Behavioural Therapy & Humanistic Psychotherapy

'People behave the way that they do because of the consequences that result for them from having behaved in that way'

Based on 'Cognitive Behavioural Therapy', Humanistic Psychotherapy, A Ellis, New York, McGraw Hill, 1973

Behavioural Model

- Human behaviour turns systems and procedures into reality

- Human behaviour determines how effective management systems will be

- More difficult to change attitude than to change behaviour

- But changing behaviour can lead to positive changes in attitudes towards

- Behaviours of all staff throughout a business must be considered

- ***People do not simply do what they are told to do***

Behavioural model - ABC

Based on 'Cognitive Behavioural Therapy', Humanistic Psychotherapy, A Ellis, New York, McGraw Hill, 1973

Behavioural model - ABC

- Trigger / Activator / Precursor for every behaviour
- Behaviour is a reaction or choice
- After every behaviour there are consequences
- Incorrectly assume that people think long term and logically
- People are driven by consequences that are:
    - Positive
    - Immediate
    - Significant
    - Certain
- People play down negative, delayed, uncertain and insignificant consequences

Behavioural model - ABC

- Training tool

- Exercise

- In the workplace
  - Identify required behaviours
  - Consider behaviours throughout organisation
  - ABC – present situation
  - ABC – required situation
  - Involve staff

Behavioural model - ABC
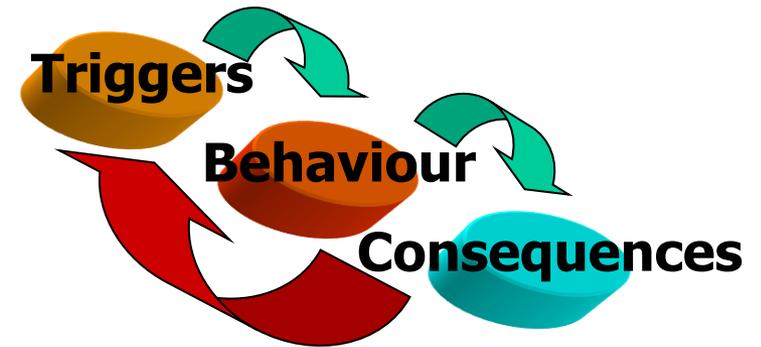
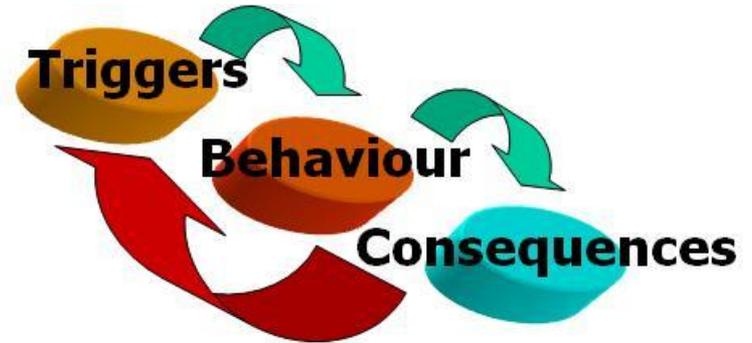**Behaviour:**
Not Wearing PPE

Behavioural model - ABC

Behaviour:
Not wearing PPE

Triggers

– None available; Does not fit; Is not appropriate for task, hazard and person; No training in use; Not stored appropriately, is contaminated and has defects; Not aware PPE must be use; No task training; Not hazard and risk aware; no one wears PPE

Consequences

- Not ridiculed; No immediate or apparent injury; Not enforced; More comfortable; Get the job done; Look trendy; Easy option

Behavioural model - ABC

Behaviour – Wearing PPE

Triggers:

- PPE available
- PPE fits, is appropriate for task, hazard and person
- Trained in how to use PPE
- PPE stored appropriately, is not contaminated and has no defects
- Aware that PPE must be worn
- Trained in the task and is hazard and risk aware;
- It is universally worn
- Previous experience of the protection afforded by PPE

Behavioural model - ABC

Behaviour – Wearing PPE

Triggers:

- PPE available
- PPE fits, is appropriate for task, hazard and person
- Trained in how to use PPE
- PPE stored appropriately, is not contaminated and has no defects
- Aware that PPE must be worn
- Trained in the task and is hazard and risk aware;
- It is universally worn
- Previous experience of the protection afforded by PPE

Behavioural model - ABC

Behaviour – Wearing PPE

Consequences:

- Not ridiculed; Same as everyone else; It is the 'Norm'
- Protected from an incident
- Comfortable to wear
- Enforced
- Group will be 'measured'
- Feel more professional
- Look trendy
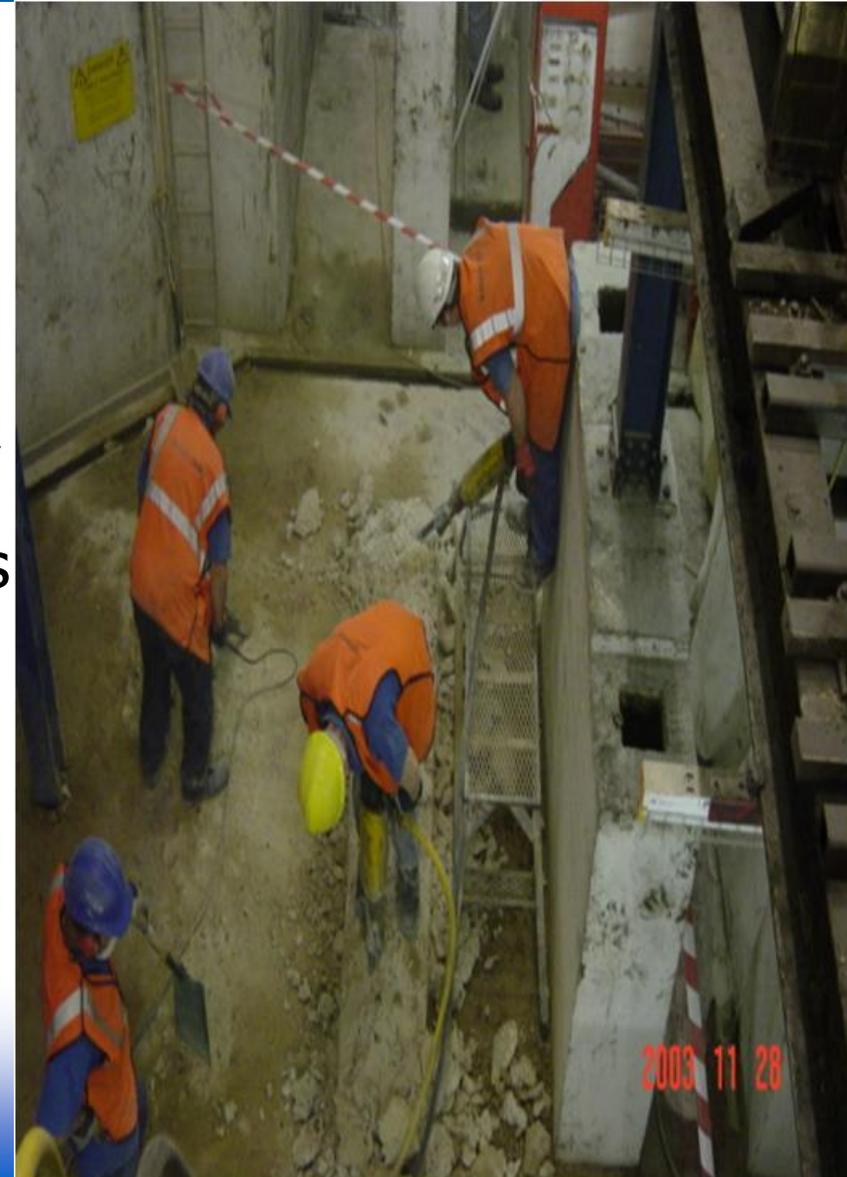- Wearing PPE is the easy option

Cultural and behavioural tools

- Safety culture tool
- Root cause analysis
- ABC model
- **Safety Tours**
- Leading performance indicators
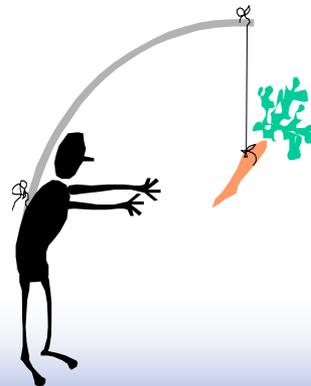
Safety Tours

What is a safety tour?

- A site visit involving one to one, two way discussion

- Focus on safety not productivity

- Identify & change active failures (acts and conditions)

- Management commitment

- Staff commitment

- Leading performance indicator

Safety Tours

What should be included?

- Competency / Training
  - Safety Tours
  - Behaviour & communication
  - Hazard & risk awareness

- Must consider latent failures

- Joint solution finding – learning not looking to blame

- Identify good practice as well as problems

- Positive & enthusiastic attitude

- Selective – risk based approach

- Must be committed & convinced

- Managers perceived priorities

- Record – quality not just quantity

Cultural and behavioural tools

- Safety culture tool
- Root cause analysis
- ABC model
- Safety Tours
- **Leading performance indicators**
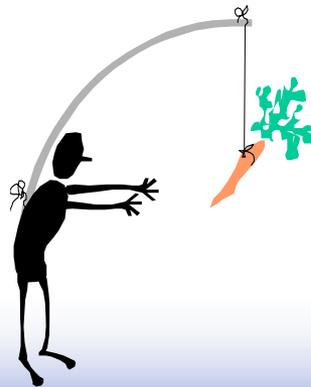
Performance indicators

- What gets measured gets done

- Performance indicators provide feedback on what is happening so that we can take appropriate actions

- Lagging performance (output) indicators (LOI) – provide data on past events that have happened

- Leading performance indicators (LPI) – provide data on event precursors, allowing action to avoid unwanted outcomes and to achieve desired outcomes

- LPI's provide +ve reinforcement for behaviours associated with improving performance

- LPI choice important

LPI Choice

- Identify main threats to future performance & actions that will remove them

- Association between inputs LPI measure & LOI

- Belief that improving LPI will lead to improvement in associated LOI

- Relevant & provides immediate and reliable indication of performance

- Cost effective, understood & measurable

- Choose in relation to cultural maturity level

Pitfalls

- Targeting the wrong issues

- LPI not sufficiently demanding

- LPI's used purely as a metric & not to direct actions to improve performance

- Subjectivity in evaluation of LPI allows self deception

Cultural and behavioural tools

- Safety culture tool
- Root cause analysis
- ABC model
- Safety tours & safety observations
- Leading performance indicators
- Staff involvement, ownership, empowerment
- Leadership skills and behaviours
- Competency management – training, people skills, coaching, behaviour, task, risk awareness
- Change Management
- Communication, consultation / meetings / discussion
- HF – Design, task analysis
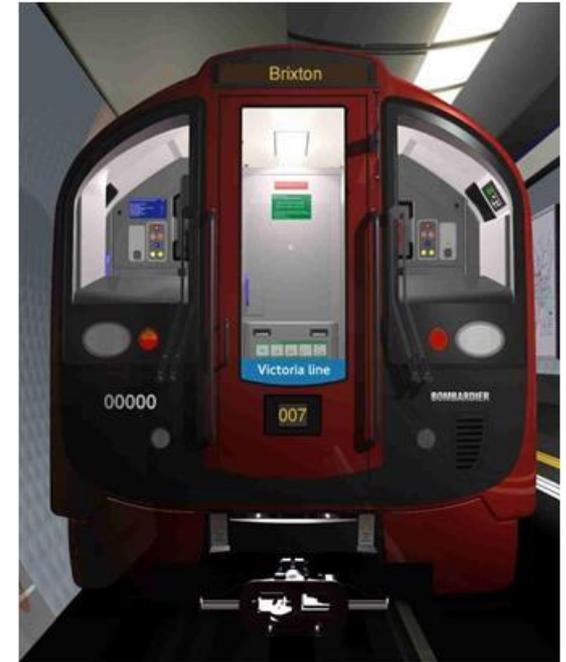
Getting Safe Behaviours Embedded

Essential elements:

- Behavioural safety programme / plan

- Cultural and behavioural tools

- Implementation methodology

- Provide inspirational leadership

- Commitment at all levels

- Ensure people are involved

- Trust, open communication, belief

- ***Provide an informed choice***

Thank you for listening

Ali Southan

Principal Consultant, Risktec Solutions Ltd

Ali.southan@risktec.co.uk

London Office, 1st Floor, 3 More London Riverside, London. SE1 2RE

Phone: +44 (0) 207 357 9942 / +44 (0) 208 912 4380

http://www.risktec.co.uk