

HITACHI
Inspire the Next

Effective Investigations Successful Interventions

Session A

Frank Horner

Signposts

Introduction to investigating

Understanding risk

Human Performance

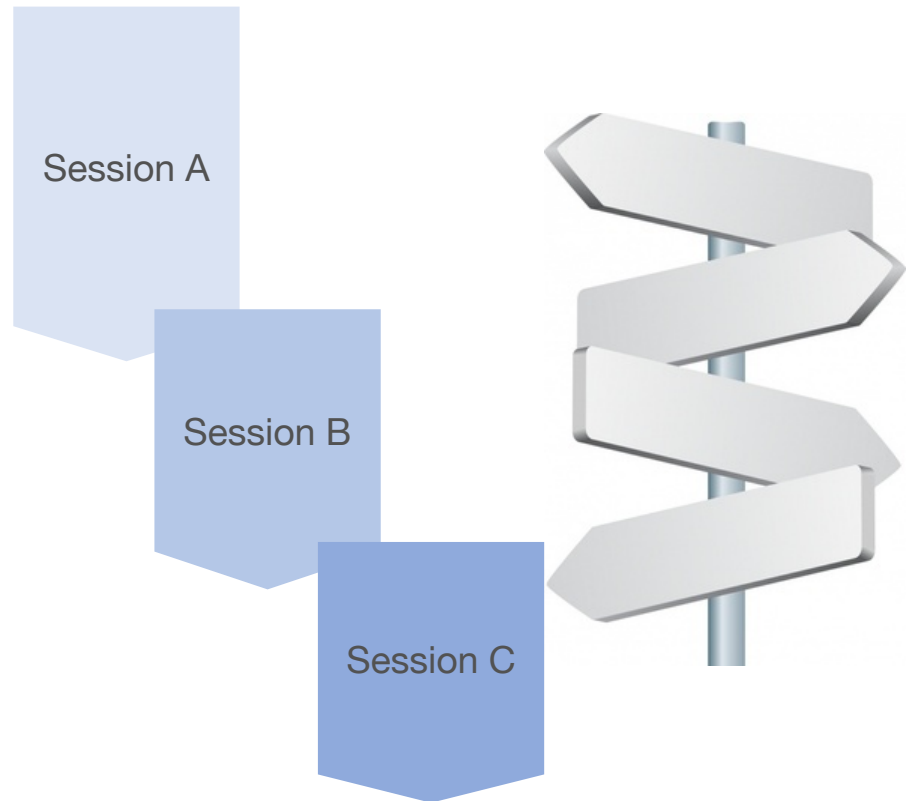
The investigation process

Gathering evidence

Analysis

Mitigation and control

The disciplinary investigation



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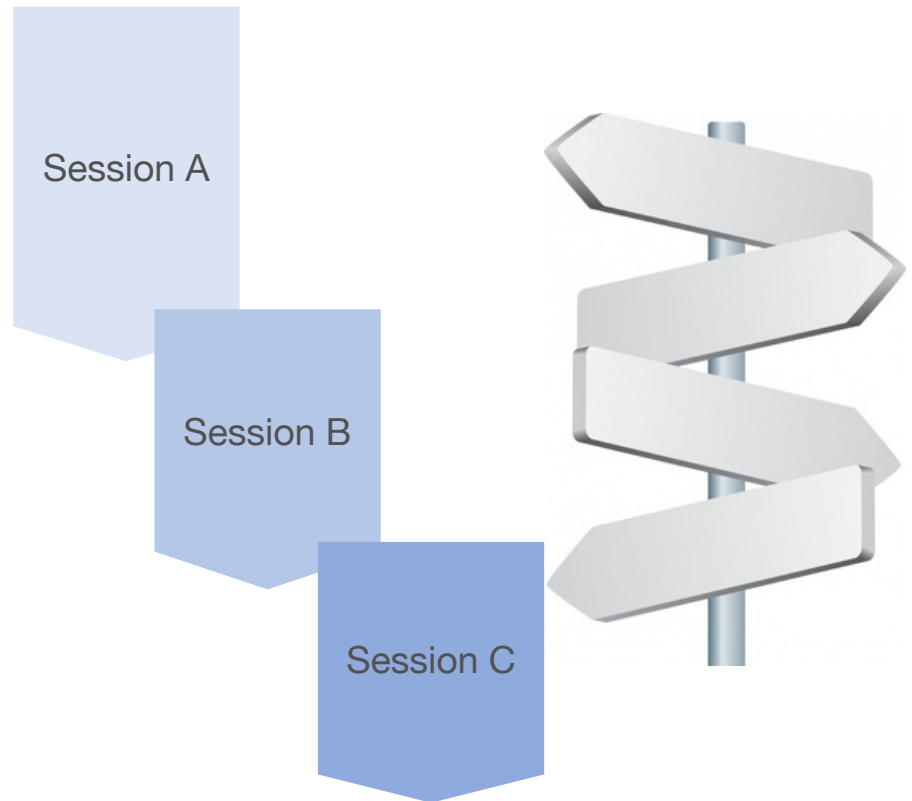
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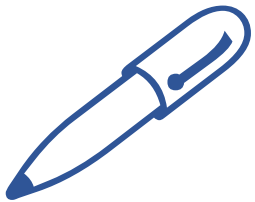
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Why we investigate?



Consider for a second - why do we investigate?

Accidents have a high cost, both human and financial. They can affect a company's viability even!



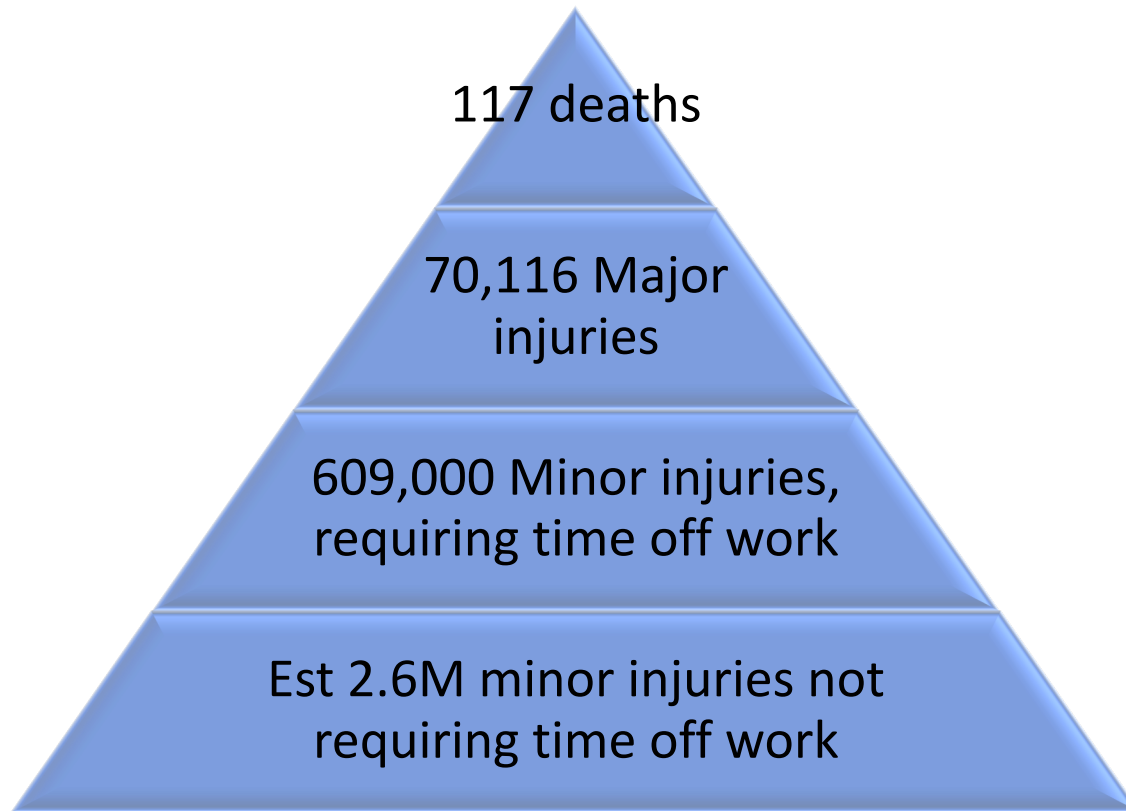
Clapham Crash 1988



Paddington derailment 2019

2017/18 figures (UK)

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In 2015/16

Over 40million work days lost

At a cost of

£14.56 Billion

(with workers over 60 at a 30% increased risk of injury)

Reasons to investigate

In groups discuss the reasons why your company puts in place methods for capturing, identifying, recording and investigating incidents?

- ◆ Ascertain both immediate and underlying causes
- ◆ Put in place defences to prevent recurrence
- ◆ Re-visit existing risk assessments
- ◆ Review control standards
- ◆ Satisfy legal reporting and recording duties
- ◆ Identify activities causing greatest number of incidents
- ◆ Preserve evidence should the case become an insurance claim
- ◆ Compliance with RIDDOR and ROGS

Types of incident / investigation

- ◆ Technical and Quality
- ◆ HSE
- ◆ Individual performance or misconduct



Jot down some thoughts and discuss - who can investigate each, independence, knowledge, skills etc.

Some initial questions management will need to address

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- ◆ Are there fatalities or significant injury to your staff?
- ◆ Are there members of the public involved?
- ◆ Is there or is there a risk of significant damage to equipment?
- ◆ Is service tomorrow likely to be significantly affected?
- ◆ Who else is on site – or has been called?

Initial steps that management will need help from you with

In groups (10 mins) - When you arrive on site, what is your role and what actions will you be taking?

- ❖ Do the police need calling? Do the ORR?
- ❖ Drugs and Alcohol testing?
- ❖ Is evidence secured?
- ❖ Is outside media controlled?
- ❖ What are the ramifications, is there an impact on Service, is the reputational risk etc?
- ❖ Staff reassurance – talking to them, they might have lost a dear friend

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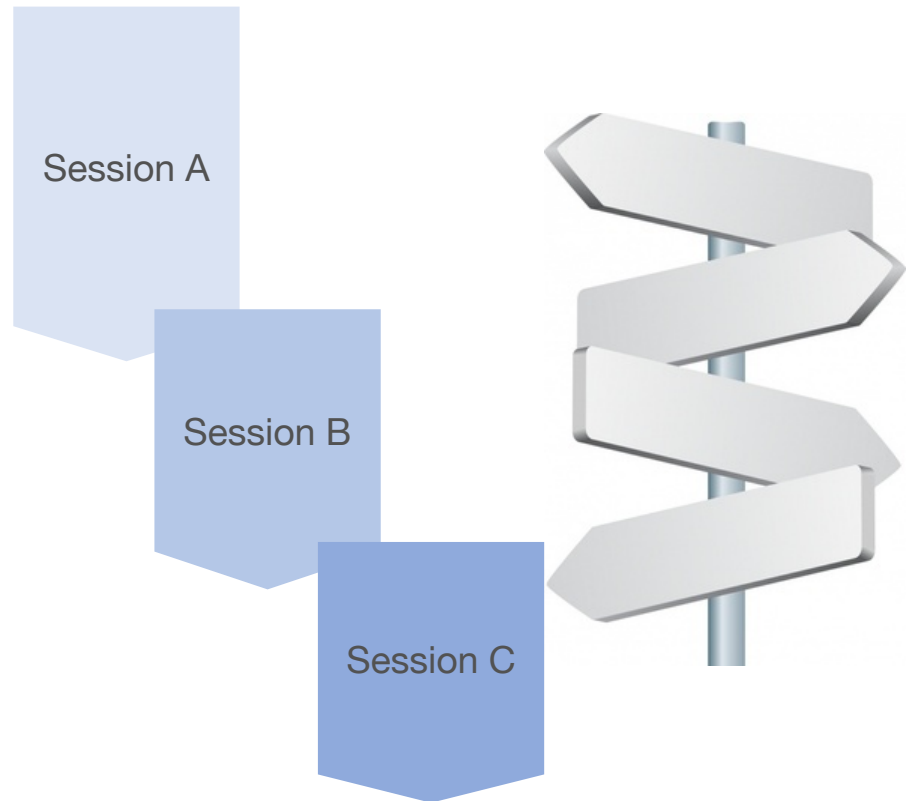
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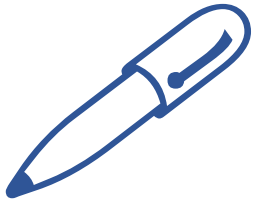
Safe?

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...and Risk?

What is risk?



- ❖ Jot down your thoughts on what is risk? – we'll then discuss

- ❖ Risk is the likelihood of a hazard having a bad outcome
 - ❖ Probability of damage or injury
 - ❖ In finance, the probability of lack of return on investment
 - ❖ In insurance the probability of loss due to [say] fire

Risk

Risk is the likelihood of a hazard having a bad outcome

❖ Mathematically often is described as

$\text{Risk} = \text{Likelihood} \times \text{worse possible consequence}$

Managing risk (5x5 matrix)

Defined locally, typically:

1=Minor injury (no time off)

2=1st aid only (or up to 3 days off)

3= Reportable (over 3 days off)

4= Major injury (broken limb)

5= Fatal or severely debilitating

Likelihood

	1	2	3	4	5
1	1	2	3	4	5
2	2	4	6	8	10
3	3	6	9	12	15
4	4	8	12	16	20
5	5	10	15	20	25

Severity

Likelihood 1 = Almost never ...to... 5 = Almost certain

Managing risk



Lets discuss:

You have had a person injured at work, they fell off whilst doing a PAN inspection.

List your thoughts regarding managing (mitigating) this risk

Likelihood

	1	2	3	4	5
1	1	2	3	4	5
2	2	4	6	8	10
3	3	6	9	12	15
4	4	8	12	16	20
5	5	10	15	20	25

Severity

How the fire service assess risk

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We may risk our lives a lot, in a highly calculated manner, to protect save-able lives

We may risk our lives a little, in a highly controlled manner, to protect save-able property

We will not risk our lives at all for lives or property that are already lost

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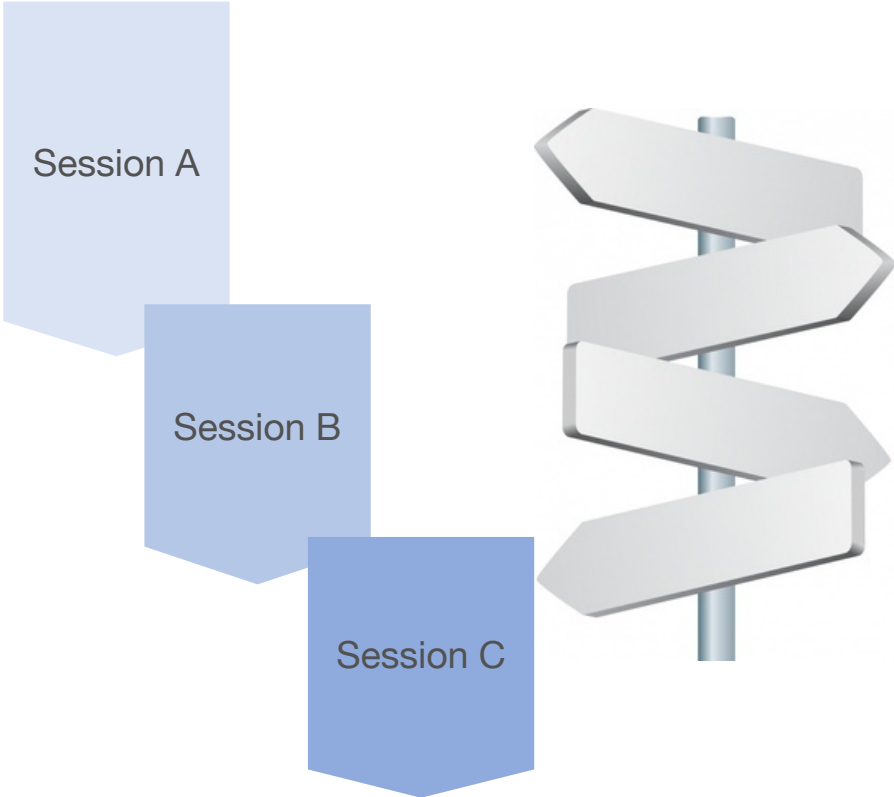
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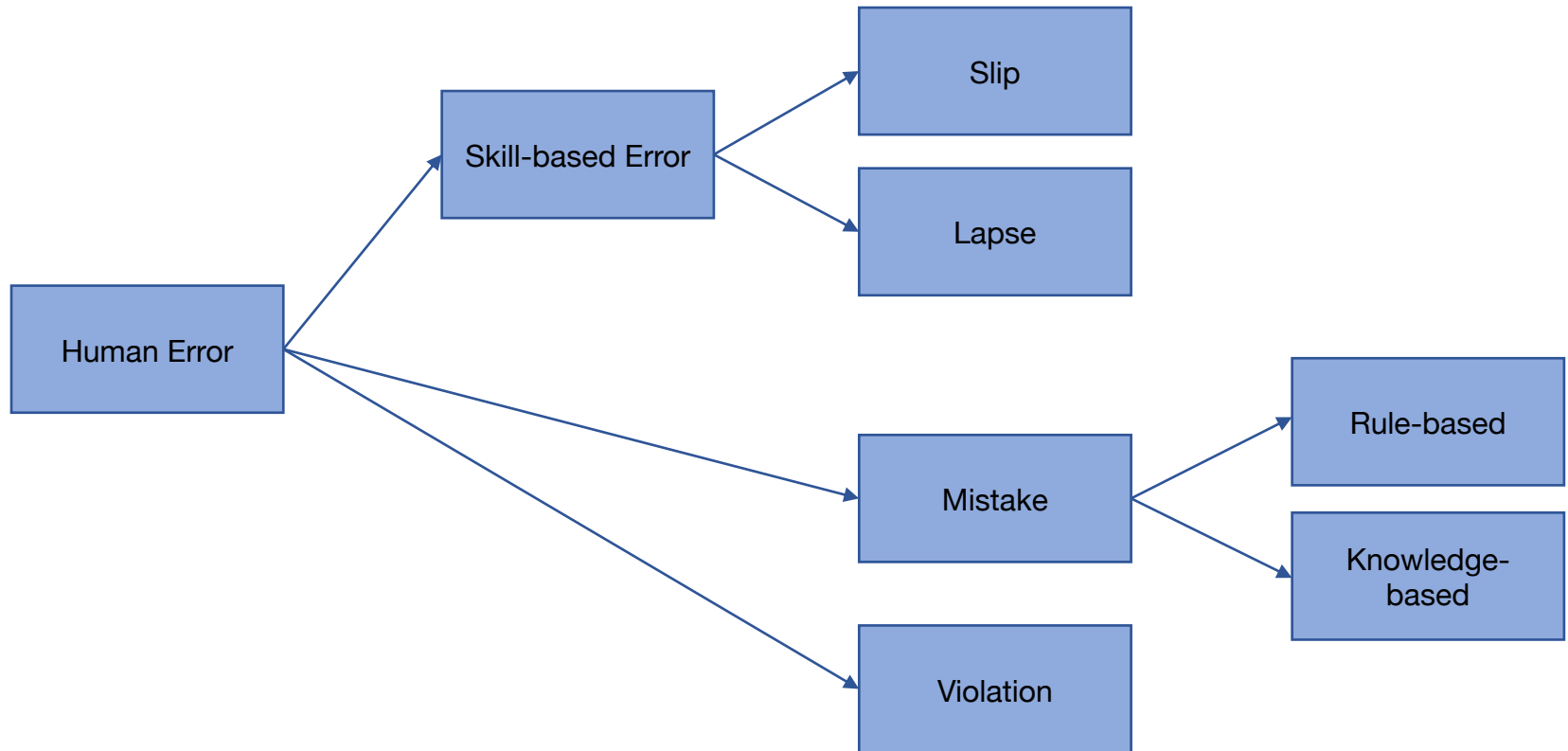
The disciplinary investigation



Errare Humanum Est (Human Error)

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Types of Human Error



Human Performance Influencing Factors (PIFs)

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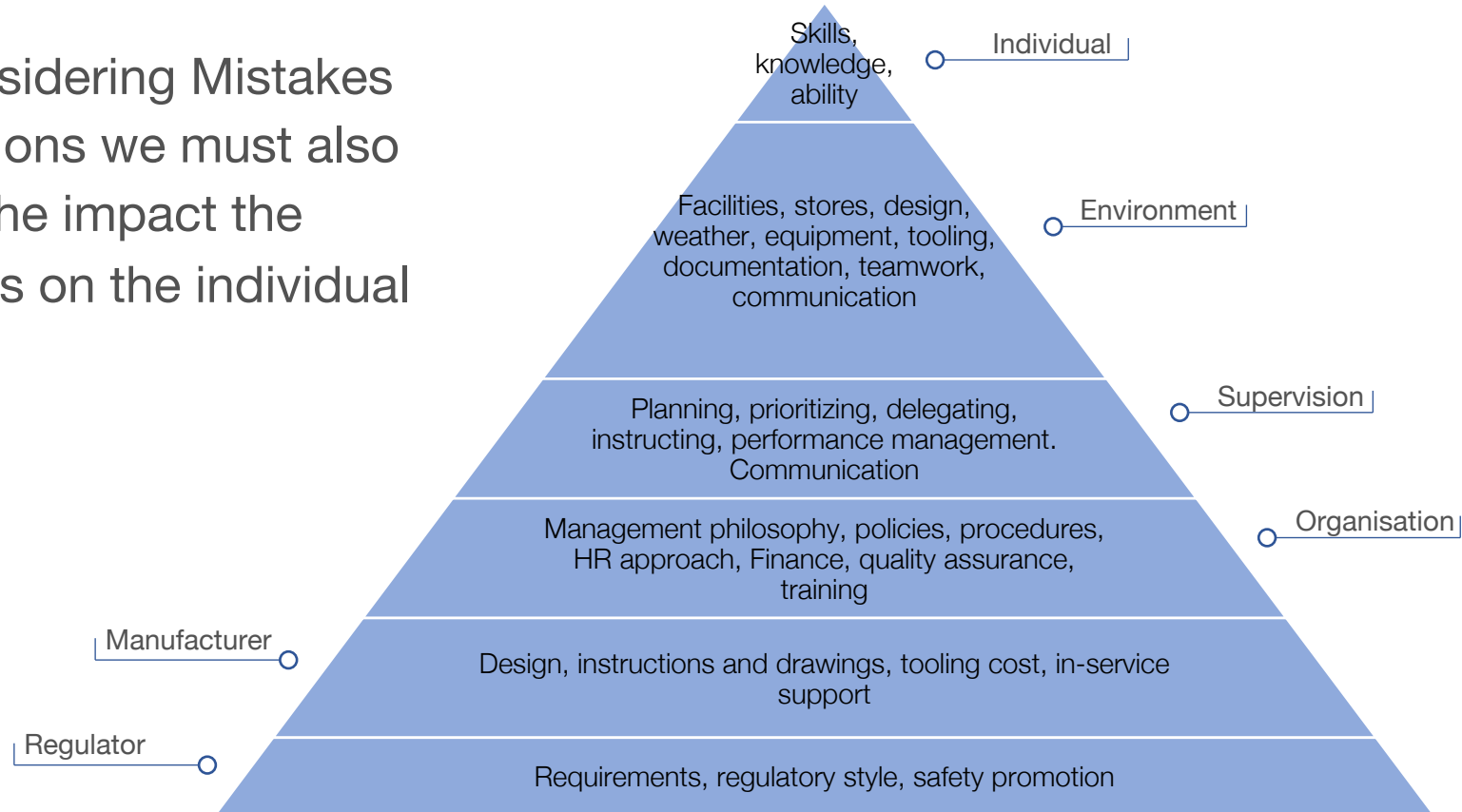
- ❖ Lack of communication
- ❖ Distraction
- ❖ Lack of resources, equipment, tooling etc.
- ❖ Stress, Fatigue, D&A
- ❖ Complacency
- ❖ Lack of teamwork
- ❖ Pressure and Lack of assertiveness
- ❖ Lack of awareness / Lack of knowledge
- ❖ Normalised behaviour

Concentration

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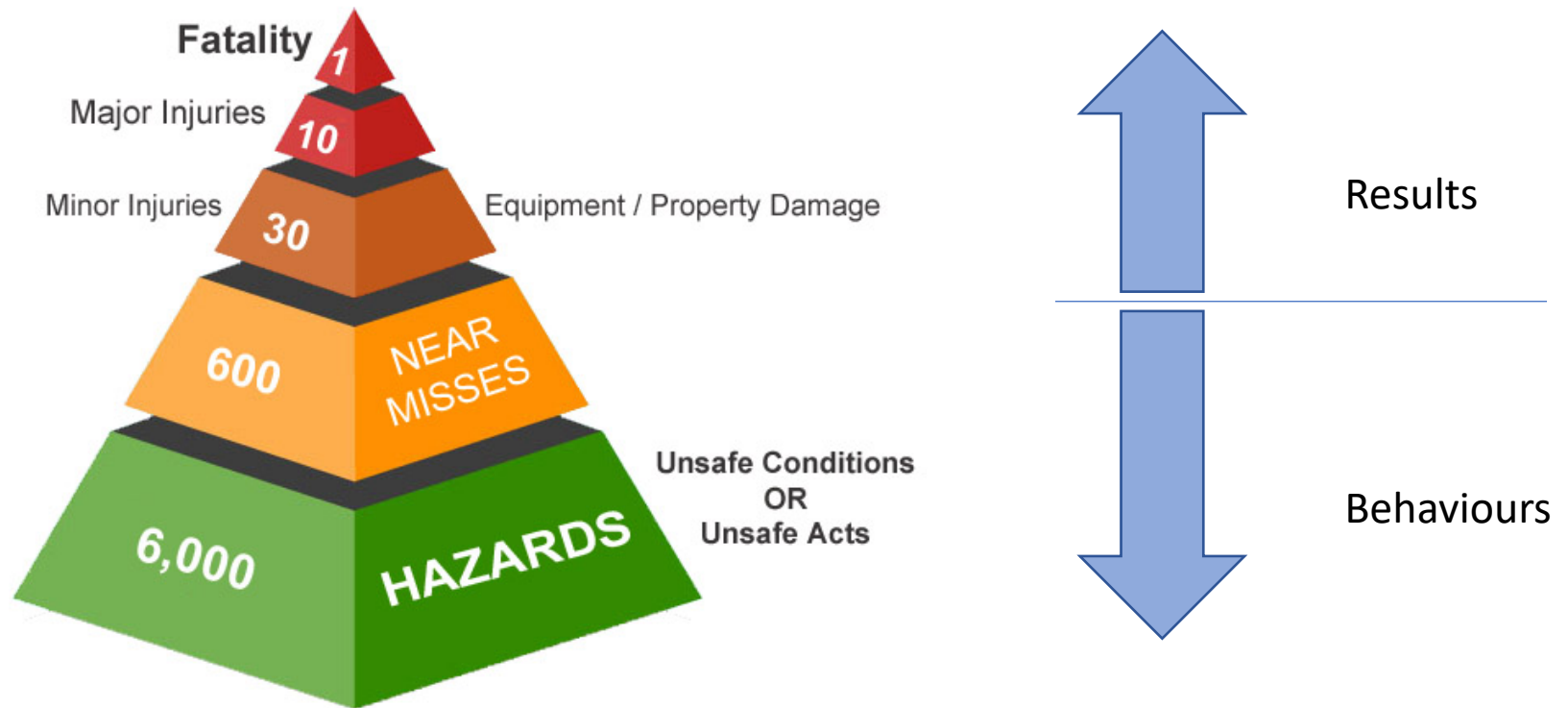
The System Influence

When considering Mistakes and Violations we must also consider the impact the system has on the individual



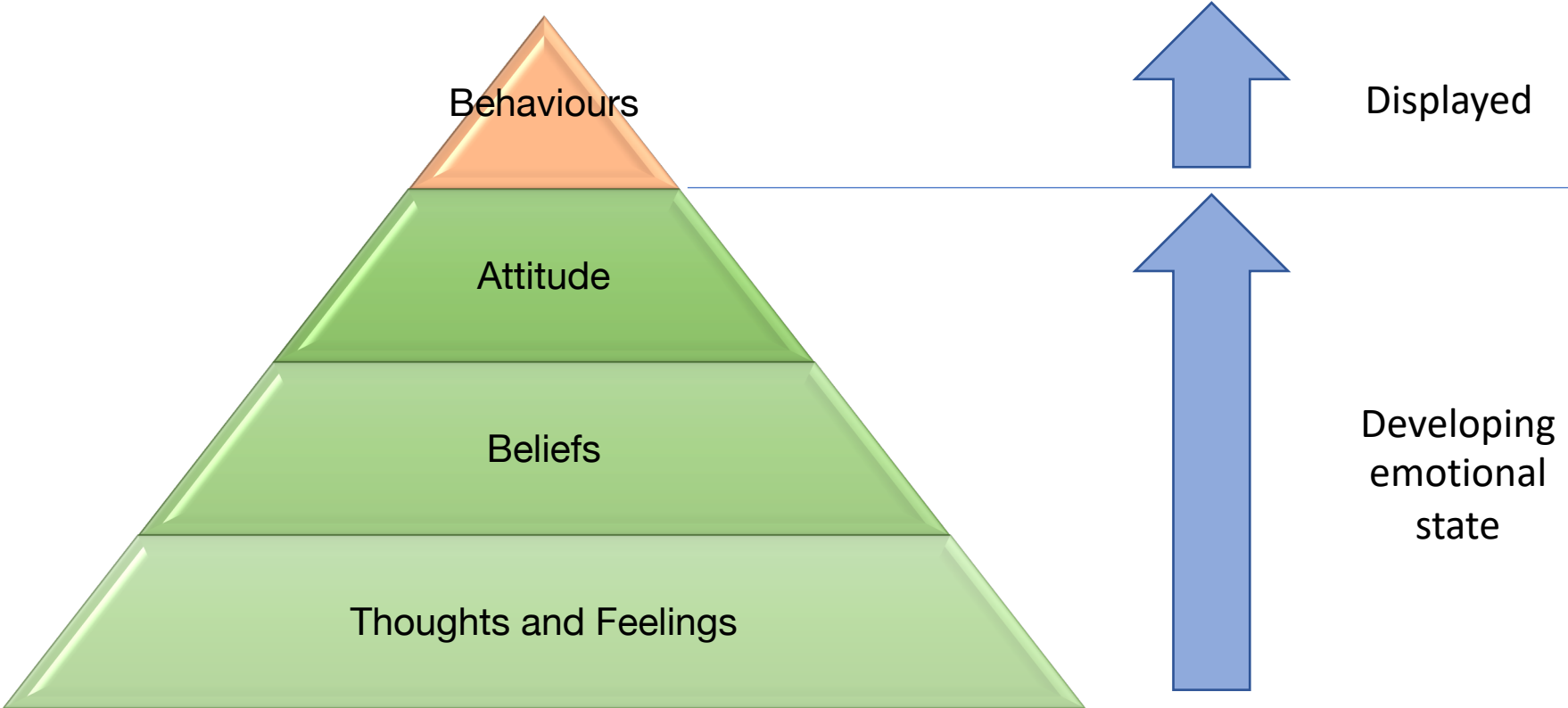
The accident pyramid (Heinrich / Bird's Ratio)

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Its all about behaviours – again!

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Affecting our behaviours?

- ❖ Who will win the next general election?

Emotionally we respond by saying who we want out

- ❖ How should people convicted of animal cruelty be sentenced?

Emotionally, we want a high sanction, but who knows what the sanction is presently?

- ❖ How much of my council tax should be spent on sport

Answer depends on how sporty you are

Compliance reporting externally

- ◆ RIDDOR (2013) requires reporting when 7 days are lost
 - ◆ Specified injuries
 - ◆ Diseases
 - ◆ Dangerous occurrence
- ◆ ROGS (2006) Under your safety case ORR require reporting when
 - ◆ Serious injury or death
 - ◆ Public involved
 - ◆ Derailment or other serious event
 - ◆ Under NIR for technical reasons

Reporting....HSE

❖ The Accident book

- ❖ Date and time
- ❖ Full name, address and occupation of casualty
- ❖ Nature of injury
- ❖ Location of incident and brief description of circumstances
- ❖ Name and details of any witnesses
- ❖ Details of the person making the report

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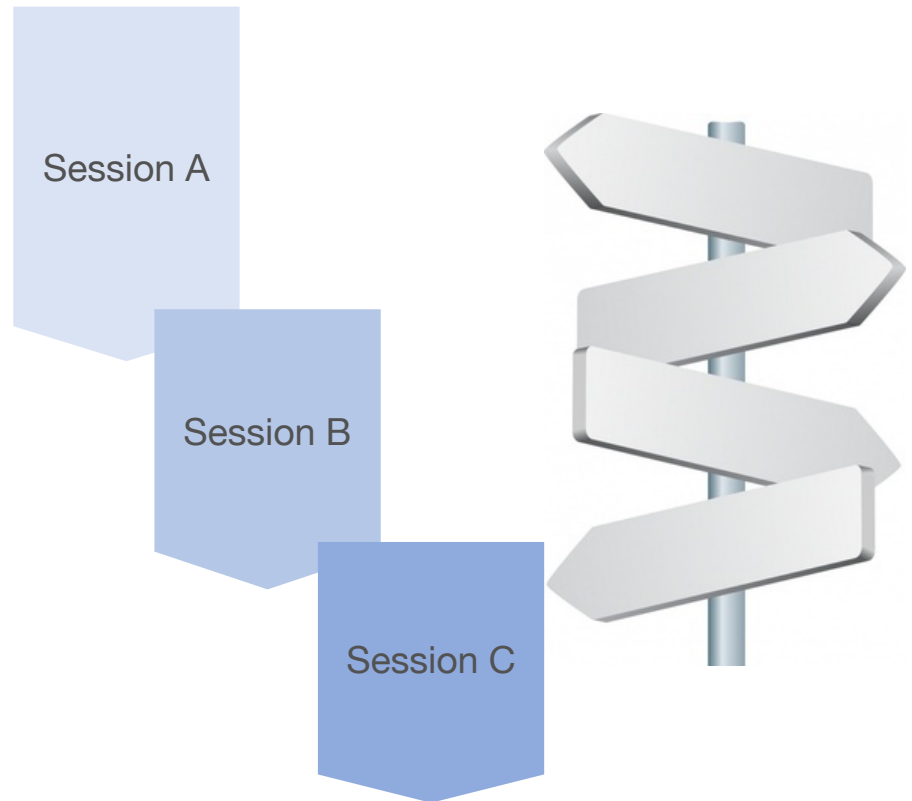
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The Investigation - level

Likelihood of recurrence	Potential worst consequence of adverse event			
	Minor	Serious	Major	Fatal
Certain	Yellow	Orange	Red	Red
Likely	Yellow	Orange	Red	Red
Possible	Yellow	Orange	Red	Red
Unlikely	Blue	Yellow	Orange	Red
Rare	Blue	Yellow	Orange	Red

Investigation Level	Minimal	Low	Medium	High
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Investigation levels

- ❖ **Minimal** - In a minimal level investigation, the relevant supervisor will look into the circumstances of the event and try to learn any lessons which will prevent future occurrences.
- ❖ **Low** - A low level investigation will involve a short investigation by the relevant supervisor or line manager into the circumstances and immediate, underlying and root causes of the adverse event, to try to prevent a recurrence and to learn any general lessons.
- ❖ **Medium** - A medium level investigation will involve a more detailed investigation by the relevant supervisor or line manager, the health and safety adviser and employee representatives and will look for the immediate, underlying and root causes.
- ❖ **High** - A high level investigation will involve a team-based investigation, involving supervisors or line managers, health and safety advisers and employee representatives. It will be carried out under the supervision of senior management or directors and will look for the immediate, underlying, and root causes.

4 key steps to any investigation

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- ◆ Step 1 – Gather evidence
- ◆ Step 2 – Analyse
- ◆ Step 3 – Identify suitable risk controls
- ◆ Step 4 – Implement (and verify) risk controls

Homework

Reflections – to be discussed openly at start of next session

1. Review your company investigation process, what advice and support does it give you. Come ready to share and challenge the process at the start of the next session

For next
session

Read the investigation fact sheets relating to investigation and specifically the material we have covered

Undertake the 'store robber' exercise – we shall discuss it next session

