Safety First

> **" *If you think safety's expensive, try having an accident,* "**

...the *Health and Safety Executive (HSE)* states on its website and we couldn't agree more.

That's why safety was at the heart of our industry day when more than 100 people came together to discuss how human behaviour impacts the safety of our industry and what operators, builders, trainers and inspectors can do about it.

The HSE goes on to say *'Managing human failures is essential to prevent major accidents, occupational accidents and ill health, all of which can cost businesses money, reputation and potentially their continued existence'.*

So, we thought we'd share the highlights of our industry day at Cardiff International White Water because putting safety first is not only our moral duty, it also makes sound business sense.

Tim Morton, Senior Inspector with *Adventure Activities Licensing Service (AALS)*, kicked off by explaining what happens when you're living the nightmare of an accident and the inspectors descend.

Once all the initial facts are known, (what happened, who was there, what are the ages and injuries of those involved, what time did the accident take place, what was the weather like, etc.), the enforcing body – either the HSE or the Local Authority – will be looking at:

- **Staffing**
- **Operation of your facility**
- **Equipment**

They will ask questions like how competent are your staff? What are your induction processes? How do you continue to monitor and assess your staff? They'll also be looking at your Standard Operating Procedures (SOP) and Normal Operating Procedures (NOP), risk assessments – how you assess risk as well as your action plans.

Get in touch:

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Your equipment will come under scrutiny. Do you have the right kit in the right place? Is it fit for purpose?

Current standards such as *EN15567*, regulations such as *PPE, LOLER, WAH* and *PUWER* will be consulted, along with other resources, and investigators will take written submissions and conduct interviews.

Once all the information is collated, recommendations can range from:

- **No further action**

- **An improvement notice**

- **A prohibition notice**

- **A "simple" caution**

- **Prosecution**

In the end, the best way to avoid an investigation is to avoid an accident. However, with the number of people accessing these type of activities it's inevitable that at some point in all our careers we will be directly or indirectly involved in an accident and its subsequent investigation. So it's worth having your house in order with a strong safety culture to prevent accidents if possible and if one happens to have evidence you did everything in accordance with best practice.

So how can we avoid or lessen the chances of an accident? Within our industry there are three common themes in relation to accidents:

- **Point of attachment**

- **Adaptation**

- **Human Error**

Much has been written and shared on the first two so we will be focusing on human error for the rest of this article.

Dr Georgina Fletcher shared her expertise of human error and ergonomics during our industry day. She started by citing the HSE definition:

❝ *Human Factors refer to environmental, organisational and job factors, and human and individual characteristics, which influence behaviour at work in a way which can affect health and safety* **❞**

Reducing Error & Influencing Behaviour (HSG48, 1999)

This covers three interrelated areas: **the job, the person** and **the organisation**. Or, quite simply put:

- **What are people being asked to do (the task and its characteristics)**

- **Who is doing it (the individual and their competence)**

- **Where are they working (the organisation and its attributes)**

All these factors are influenced by the wider societal concern, both local and national.

The Person

The Organisation

The Job
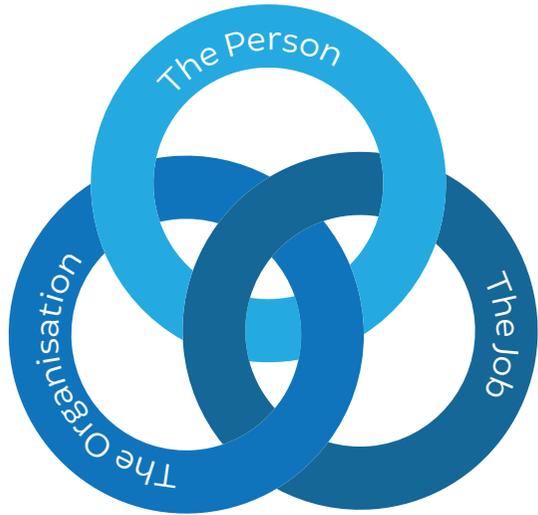
If we take a look at these three interrelated areas, some of the factors that need to be taken into account include:

Job Factors	Person Factors	Organisation Factors
System/equipment interface	Physical capability & condition	Work pressures
Routine or unusual tasks	Fatigue (acute or chronic)	Supervision/Leadership
Divided attention	Stress/morale	Communication
Procedures inadequate or inappropriate	Work overload/underload	Manning Levels
Working environment (noise, heat, space, light and ventilation)	Competence	Clarity of roles and responsibilities
Time available/required	Motivation	Consequences of not following procedures
Tools appropriate for task		Organisational or safety culture
Communication		

It's worth taking some time to reflect on each of these. To get you started, we'll take a couple from each column and think about scenarios that are relevant to our industry with potential control measures that could lessen the likelihood of human error.

Factor	What Could Help?
Routine & Repetitive Task – The dispatching of a customer down a zip wire – Attaching a customer to a Powerfan	• **For the zip wire you could evaluate and look at introducing two separate safety systems – the instructor then has to do two things and not just one** • **Rotate staff regularly** • **Ask the customer behind (this is less about the customer actually checking it but more about the instructor having to do more than one thing)**
Divided Attention – Looking after the safety of someone climbing whilst dealing with group control of those waiting to climb	• **Consider your instructor to participant ratios** • **Make sure there is a group leader looking after the waiting participants** • **Consider the position of the waiting area to make it easier for the instructor to keep a line of sight on all the participants** • **Encourage the group to take an active role in supporting the person climbing**
Physical Capability and Condition – Can staff manoeuvre around your course in reasonable time particularly in the event of an accident and/or rescue scenario	• **Have you designed the course to take this into account?** • **Make sure there are means of access for staff to all parts of your course** • **Appropriate emergency and rescue plans for staff** • **Appropriate training and assessment of staff**
Competence – Appropriate ropes course or adventure park instructor and rescuer qualifications whether this is ERCA, Site Specific or your own in-house system	• **Assess and identify the competencies you need for instructors to work on your course with your customers** • **Appropriate and suitable training given** • **Regular monitoring and recording of competencies** • **Practicing of unusual tasks and worst case scenarios** • **Use of technical advisors if not able to be done in-house**

Factor	What Could Help?
Work Pressures & Manning – Financial targets set by owners and board members – Constraints imposed on staff and budgets – Young and inexperienced staff	• Ensure there has been a fair evaluation of costs to run your facility without compromising the safety of your staff and customers • Recognition that there are non-financial benefits of employing highly experienced, competent and qualified staff • Recognition that staff are being asked to keep your customers safe all day and every day and this should be reflected in their pay and benefits
Supervision and Communication – An Adventure Park that moves through the forest where staff can be distracted by visitors and where there are other activities taking place, sunlight in their eyes and instructors supporting the needs of a single participant.	• Develop a supervision and communication plan to enable staff to supervise at the required levels for your site and customers • Do your methods of communication work on all parts of your course • Develop an area for spectators

Please remember that these are only ideas to get you thinking. Your site, organisation and staff will be unique to you and therefore it is your responsibility to ensure the safety of your customers and staff.

Dr Fletcher summed it up thus:

Human Factors is really about ensuring that:

- **These people...**
- **With this training...**
- **And this equipment...**
- **Can do these tasks...**
- **Safely, effectively, satisfyingly...**
- **Under these conditions...**

Final Thoughts

It's exciting to be part of a rapidly growing industry where a greater proportion of new builds are Pay-to-Play or even free as part of a wider recreational offering. But with that growth comes the increased risk of accidents.

This may result in an increase in regulations that govern our industry, trial by media, additional costs and ultimately a loss in revenue for your operation.

Historically, customers were organised groups who sought out ropes courses to support their personal and educational development. Nowadays, customers are on holiday, walking through shopping centres, staying on campsites when they spot a course and want to have a go at something they wouldn't normally do in their everyday life.

With the changes taking place in our industry we all need to work together to ensure we maintain good safety cultures. People are your last line of defence in any safety system so having the right skills, attitudes and behaviours is essential.

Finally, remember:

only when the entire system is designed correctly will error be minimised

(Moray, 1994).
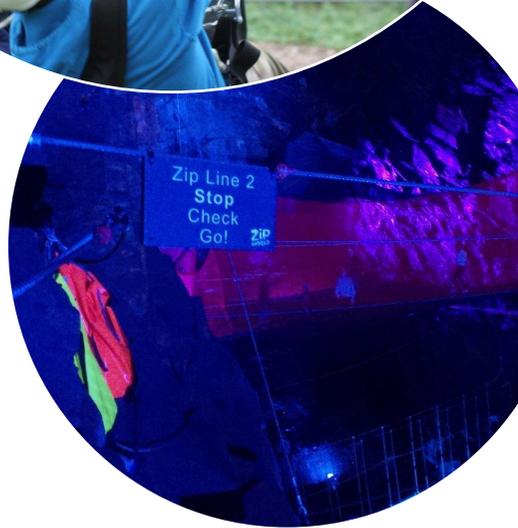
Further Reading

- **HSE Human Factors Briefing Note No. 7 Safety Culture**

- **HSE Introduction to Human Factors**

- **HSE Reducing Error and Influencing Behaviour**

European Ropes Course Association

ERCA Certified Training Body

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