

**UKMPA**





# David Cooper

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**UKMPA Technical & Training Committee**

**Helmets**



No Risk = Not Required By Law !

Wearing Head Protection

Will not stop – ***really bad accidents;***

Will not stop – ***a massive impact;***

May not stop – ***you being injured.***

***BUT*** – Choosing and Wearing  
an appropriate helmet,  
might just stack the odds in your favour.

- Now that accident is not **Fatal !, Catastrophic** or **Life Changing** !
- Now you go home vertical and on two feet - not horizontal and in a box !

**What is the Best Helmet for a Marine Pilot ?**

**" The Best Helmet is the one you will want to wear ! "**



Performance

Self  
Cert.

028:  
Marine  
Safety;

3<sup>rd</sup> Party

International SO

1078: Bicycle,  
skateboard & roller  
skate;

EuroNorm EN

C  
P  
S  
C

1385: Canoeing & White Water

Materials

12492: Climbing  
& Mountaineering

Markings

American  
Society  
Testing &  
Materials

397: Industrial;

Snell

Independent  
– Non Profit

1077:  
Ski &  
Snow;

NTA-8776:  
e-Bike

British SI

1384: Equestrian

Testing

VT

Construction

14052: High-performance;



## Performance Standards

Guidance & **A**ssistance

Specific Outcomes

Specific Scenarios

Real World

Complex Environments

Range of Needs

Not Fully Satisfied

Available Standards

Certification

Understanding

Tests & **S**tamps of Approval

Important !

Are or Are **NOT**

Real Life

**Different Purposes & Applications**

Hold Helmet – Drop Weight

Fixed Anvil – Drop or Swing Helmet

Helmet - Absorb Forces *when something hits **ME***

VS

*when I suddenly hit something **ELSE**.*



## Performance Standards

Standard X – In **MUST DO**

Standard Y – it must **NOT DO**

Difficult

Manufactures

Full Compliance – the Law

Hybrid

Sections

Different Standards

Encompassing Solutions

Rarely Accepted

Compliant with Nothing

Multinorm

Several Standards

Oppportunity

Isolation

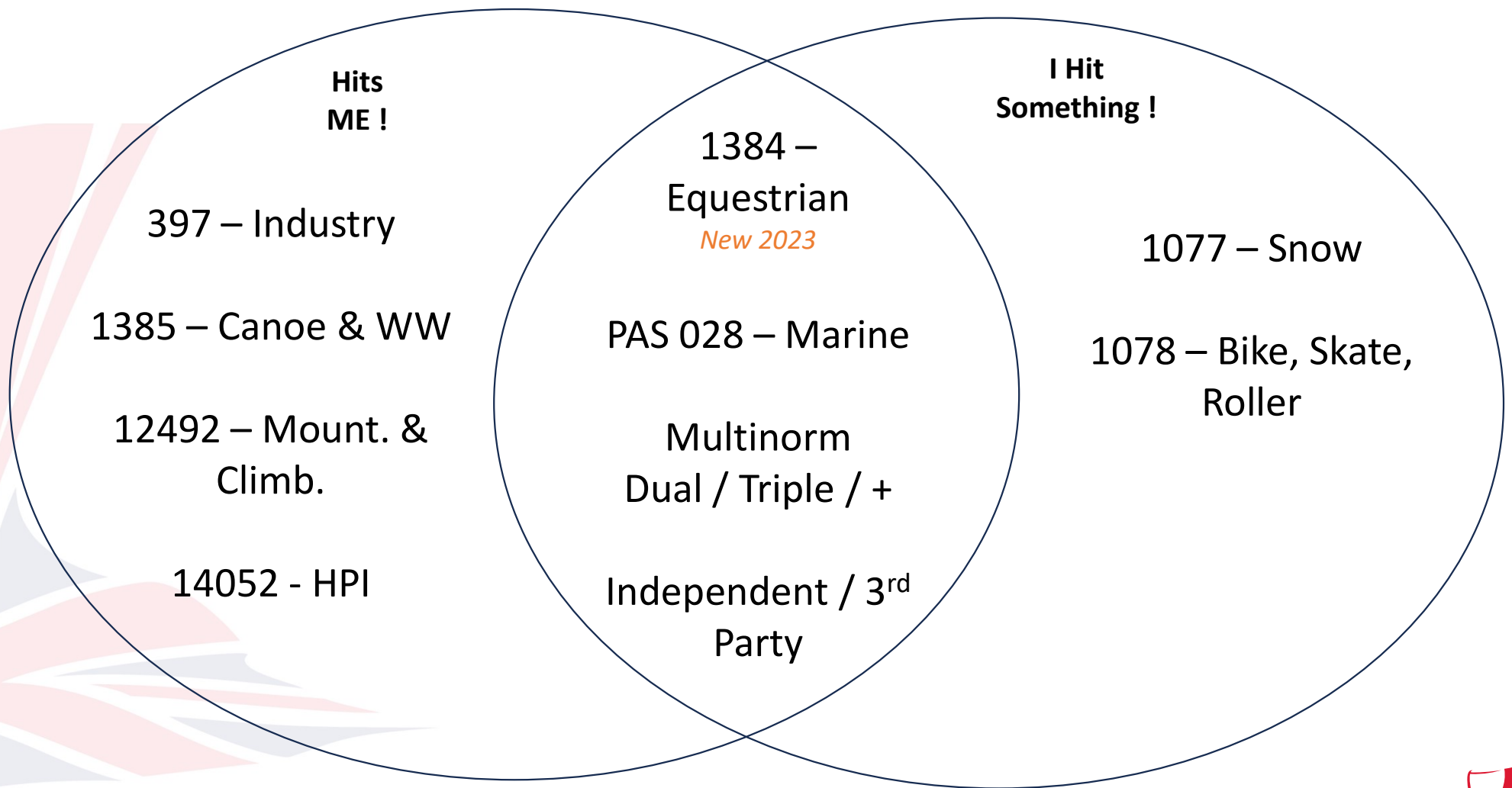
Considered

ReaL WorLd Assessment

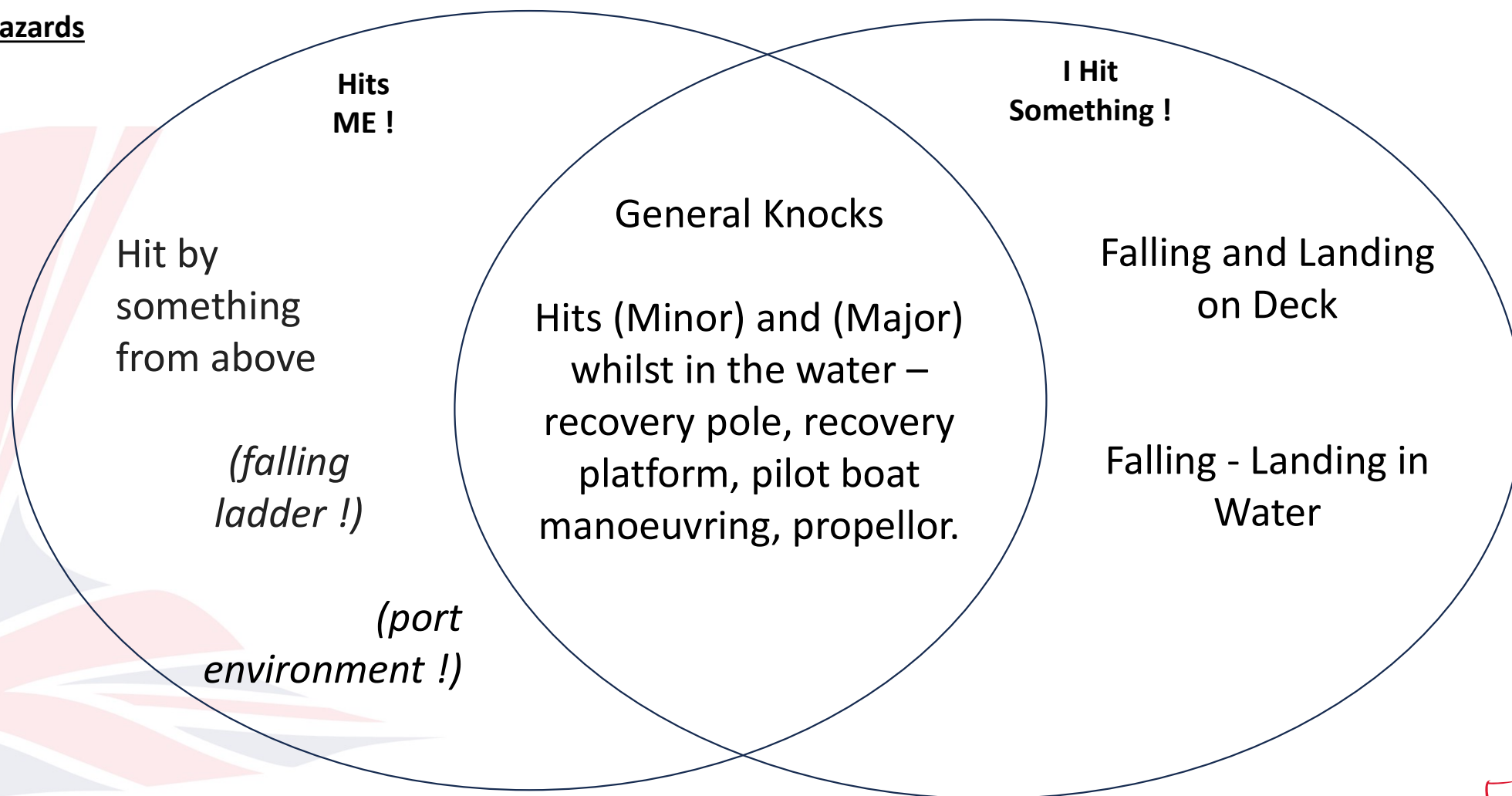
Determine & Assess the Risk

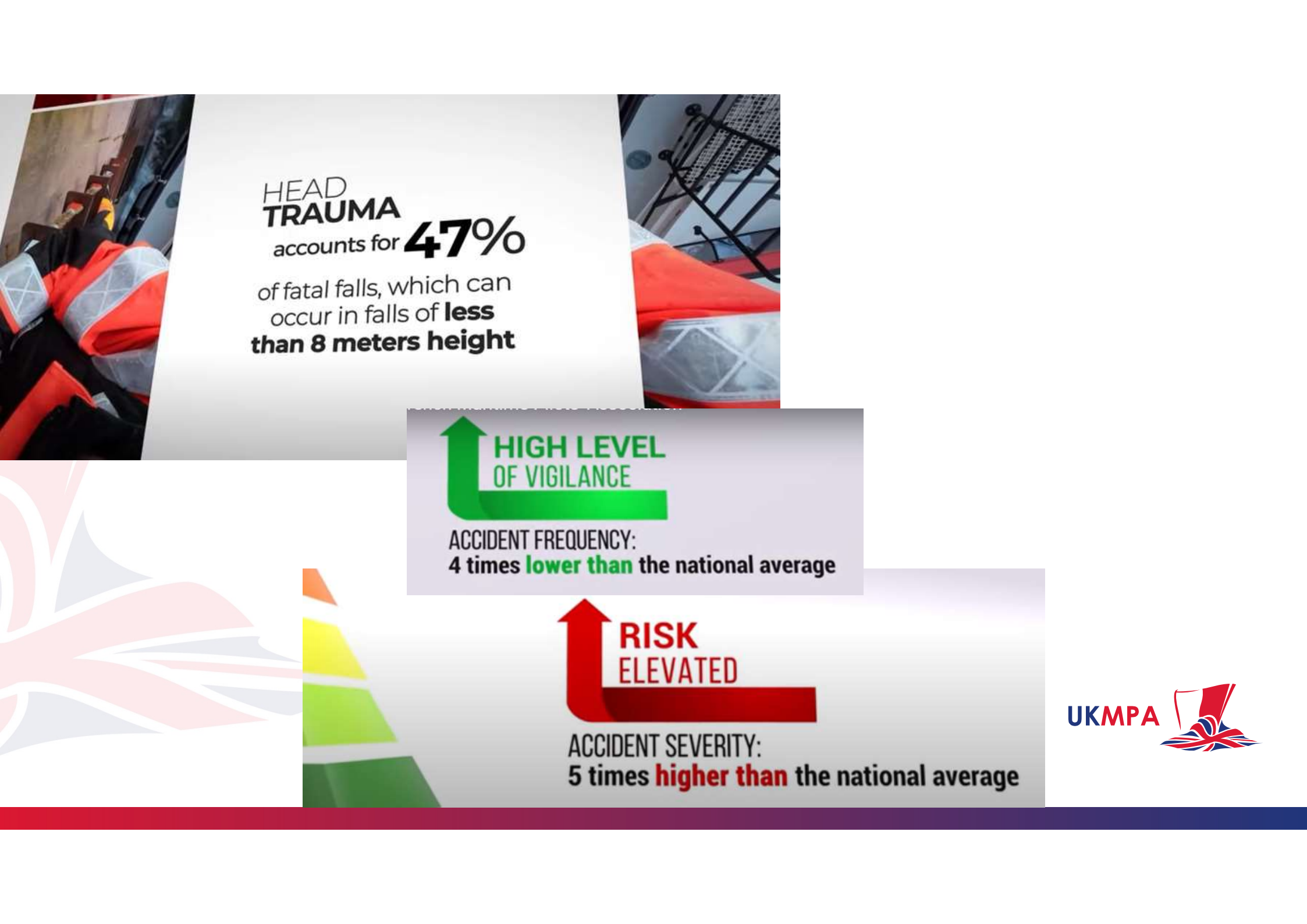
Choose the Right Product

Right Risk Environment



## Hazards





HEAD  
**TRAUMA**  
accounts for **47%**  
of fatal falls, which can  
occur in falls of **less**  
**than 8 meters height**



**HIGH LEVEL  
OF VIGILANCE**

ACCIDENT FREQUENCY:  
4 times **lower than** the national average

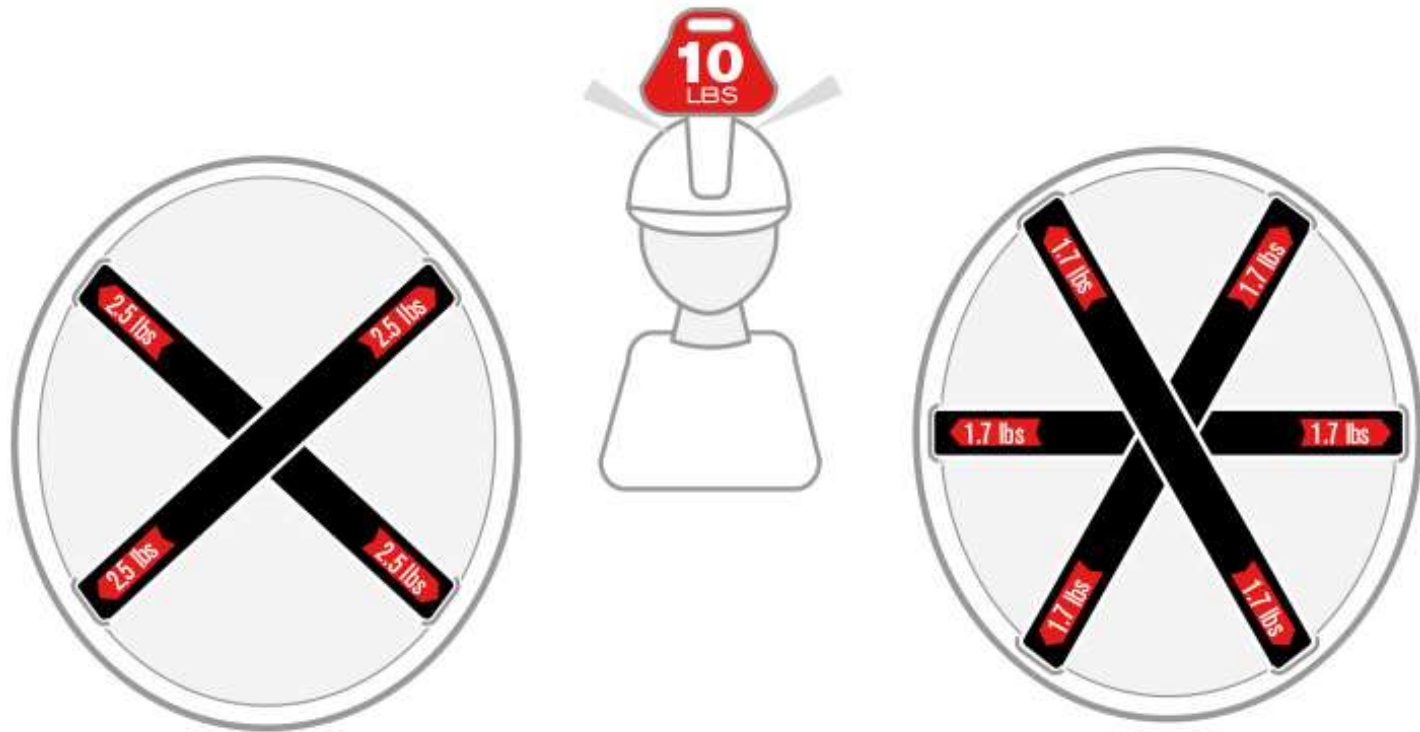


**RISK  
ELEVATED**

ACCIDENT SEVERITY:  
5 times **higher than** the national average



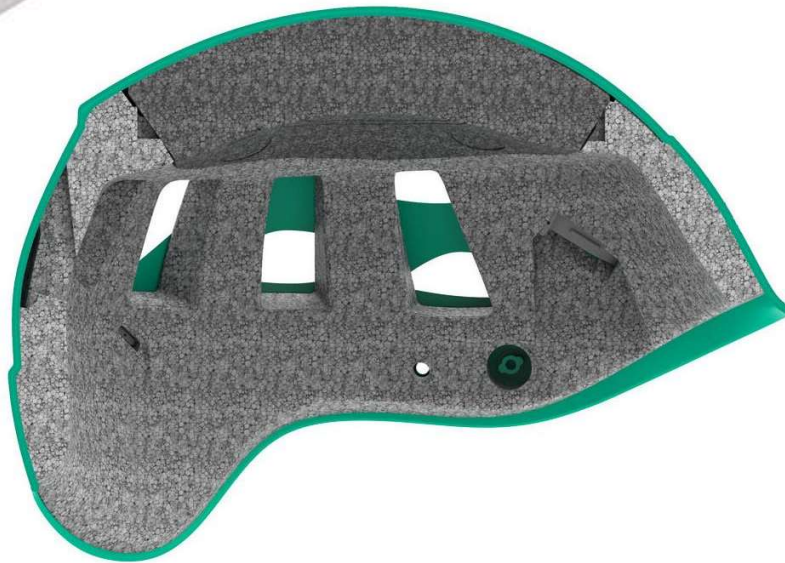
6 point vs 4 point internal harness –  
reduces pressure points, spreads and improves impact performance











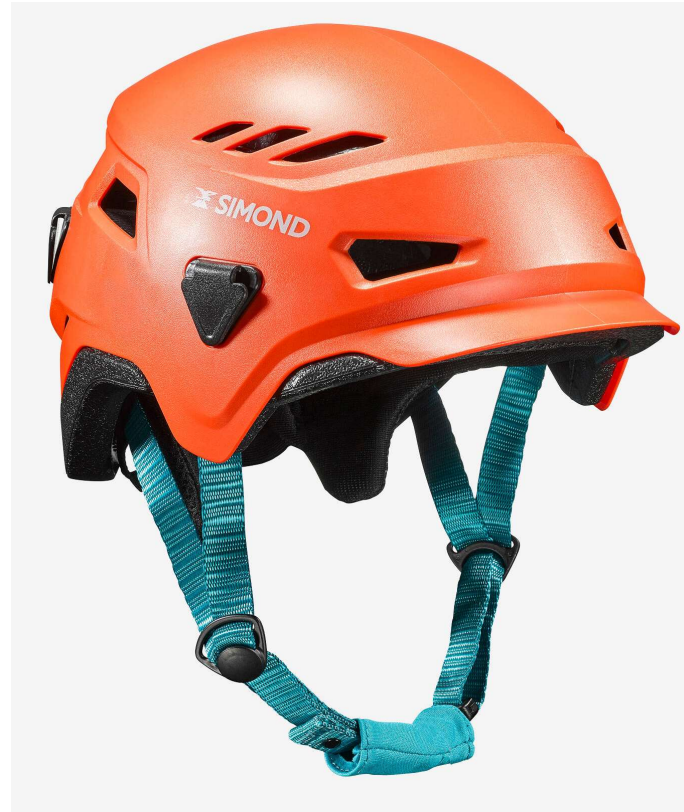


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Multi Norm –  
Marine & Mountaineering






Multi Norm –  
Canoe / White Water and Mountaineering





Multi Norm –  
Canoe / White Water, Mountaineering & HP Industrial \*





Meets additional off-crown impact requirements of BS EN 14052:2012 European standard for high performance industrial helmets.

*NOTE: EN 14052 requires a low-strength chinstrap, the helmet is not fully certified to BS EN 14052:2012 in order to meet more rigorous chinstrap requirements of BS EN 12492:2012 and reduce the risk of losing the helmet during a fall.*

Conforms to; EN 12492:2012 - helmet for Mountaineers, EN 1385:2012 – Swift Water, EN 16473:2014 – PAS 028: 2002\* (except clause 5.5 mass <700g) – Marine Safety Helmet



Multi Norm –  
Bike, Ski and Mountaineering



# TOP AND SIDE PROTECTION





Recommended for;

- Climbing,
- Mountaineering,
- Caving,
- via Ferrata,
- Canyoning

Multi Norm –  
Mountaineering & “TOP + SIDE”



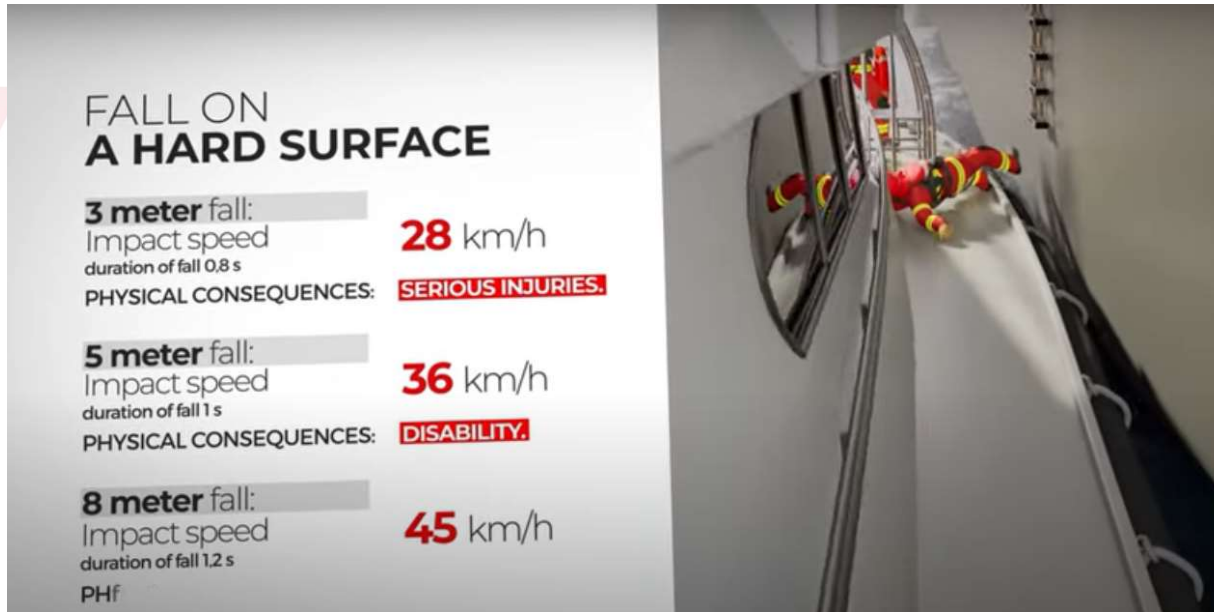


224 grams

Multi Norm –  
Industrial (397) and Mountaineering + *Side, Front & Rear*



## Wider Initiatives,



**FALL ON A HARD SURFACE**

Fall Height	Impact Speed	Duration of Fall	Physical Consequences
3 meter fall:	28 km/h	0.8 s	SERIOUS INJURIES.
5 meter fall:	36 km/h	1 s	DISABILITY.
8 meter fall:	45 km/h	1.2 s	PHF

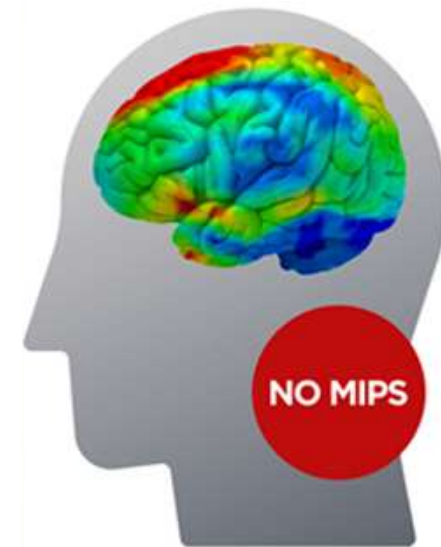
- E Bike – 28 mph / 45 KM/h = Impact Speed of 8m Fall
- NTA-8776 – Dutch e Bike Standard
- Greater Head Coverage – Greater Drop Test Heights – Greater Protection
- Consider / recommend ?

# Concussion and TBI

## Multi Directional Impacts

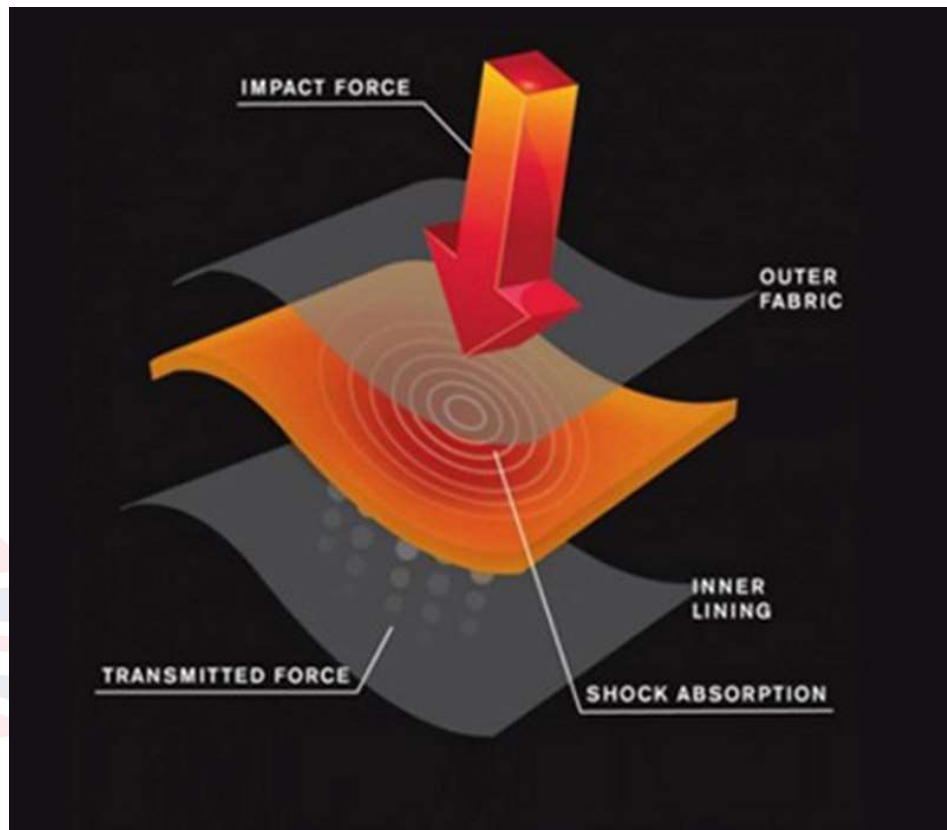
### Multi-Directional Impact PROTECTION SYSTEMS (MIPS)

SLIP, FLUID, SPIN, AIR, 6D,  
KOROYD, WAVECEL, Etc etc etc





# Innovation, Non-Newtonian Fluid TECHNOLOGIES



## In Summary

Enhance your specialist subject knowledge, speak with professional suppliers..

Risk assess the task BUT don't forget to Risk Assess your PPE.

Choose PPE with attributes to mitigate the risks – it will likely be a balance.



Performance Standards are only part of the storey.

Ask What, How and Why !

Conduct User Trial

Offer multiple options – your work force are not all identical.

**ABOVE ALL – WEAR IT !**

**HOW FAR ARE YOU PREPARED TO GO IN STACKING THE  
ODDS IN YOUR FAVOUR !!!**



**Thank You**

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