Human Factors

- "Human Factors (HF) is about people: it is about people in their working and living environments, and it is about their relationship with equipment, procedures and the environment. Just as important, it is about their relationship with other people. It involves the over-all performance of human beings within a system."

ICAO Human Factors Digest Number 1, 1989

Human Factors

- HF aspects are increasingly being recognised and addressed in land (road, rail), sea & air transport, medicine, etc

- Everyday HF influenced events;
  - Motor vehicle collisions
  - Workplace incidents & accidents

Human Factors

- Well known HF influenced accidents;
  - o Air New Zealand DC10, Mt Erebus, Antarctica
  - o ‘Exxon Valdez’ oil spill, Canada
  - o Piper Alpha Platform, North Sea
  - o Space Shuttle ‘Challenger’
- “Human Factors seeks to optimize the performance of people … it’s twin objectives can be seen as safety and efficiency”

ICAO Human Factors Digest Number 1, 1989

Human Factors

- Many HF influences have a positive impact & outcome on activities

- However there are also HF influences (including errors and omissions) which result in a negative outcome or increased risk

- In gliding, our focus should be to;
  - Recognise & appreciate the significance of HF
  - Endeavour to minimise the negative HF influences

What are some Human Factors in gliding?

- Fatigue - affecting concentration & accuracy
- Overload - aspects missed completely
- Perception - “I thought I put the gear down”
- Laziness - Poor or no planning & shortcuts
- Ego - Macho “I’m tough, I can do it”
- Risk Taking - Showing off or excessively competitive

What are some Human Factors in gliding?

- Time - while a physical factor, it takes time to LOOK, See, Decide & Respond. Sufficient time must be allocated for tasks and also to correctly prioritised them.
- Age - often effects reflexes & reactions with thought processes and decisions all take longer to complete

What are some Human Factors in gliding?

- Trust - that other pilots ‘do the right thing’, for example, LOOKOUT

- Emotional Stress - degradation of pilot or crew performance by personal issues

Human Factors

- There is a ‘chain’ of people with responsibility involved in gliding operations and their personal HF influences will have an impact on individual glider flights

- Any omission, oversight, lack of judgement, etc by anyone along this ‘chain’ may result in an incident / accident (however minor) or an increase in risk

Human Factors

- ‘chain’ of people with responsibility and HF influences in gliding operations

Individual Pilots

Airfield Operations (instructors, winch drivers, tug pilots and launch crew)

Gliding Clubs

State Associations

Controlling Entity – GFA

Regulator – CASA

Human Factors

- For individual pilots, examples of HF risk mitigation;
  - Lookout
  - Don’t put yourself under pressure (low in the circuit, or on a cross country)
  - Operation of sailplanes in accordance with training, Flight Manuals, Placards, Safety procedures, etc
  - Develop the routine to always do the standard checks. Don’t take short-cuts.

Human Factors

- For Gliding Clubs, examples of HF risk mitigation;
  - Pilot Training - Instructor / Coach standards, Review, Training & Development
  - Winch Driver & Tow Pilot Training
  - Glider Fleet - Airworthiness, Maintenance standards, Fleet condition
  - Club Systems, Procedures, Audits & Reviews

Human Factors

- In the wider field of gliding, endeavour to;
  - Remain vigilant - Don’t overlook anything
  - Recognise the HF risk
  - Use checklists
  - Correct any identified misunderstandings, errors, etc. Never allow these to go unchecked.