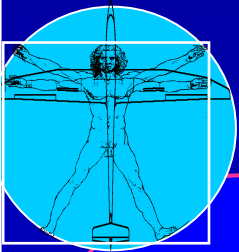


FAI-CIMP 2008

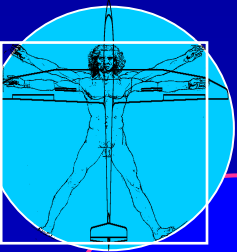
Human Factors - What is new ?

Jürgen K. Knüppel

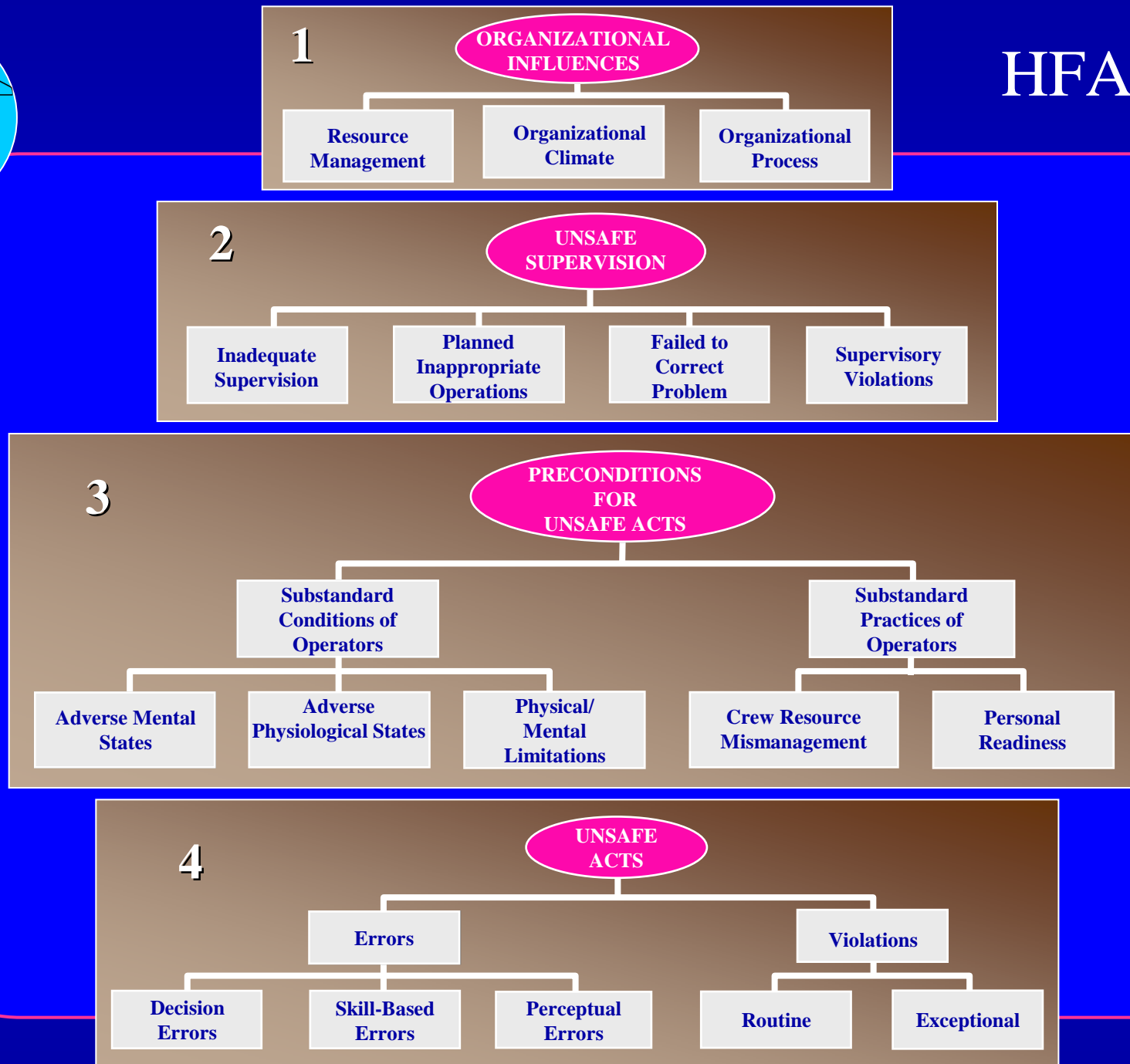


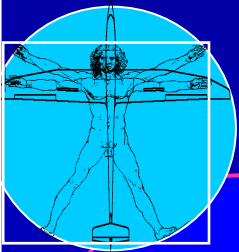
Admin EASA

- Old JAR FCL general Syllabus,
similar to Annex C
- No Updates so far
- Questionable: HF Working Group
- New EASA Post: - HF –
- So far no practical advice for Gen Aviation
- Scientific background, resources ?



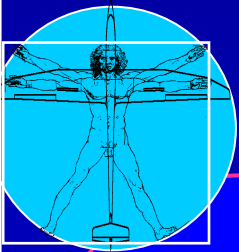
HFACS





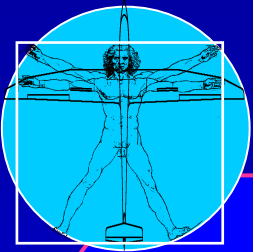
Percentage of recommendations associated with each intervention category

Intervention Category	%	n
▪ Administrative/Organizational	34.18	
– <i>Rules/Regulations/Policies</i>	9.29	81
– <i>Information management/ Comm.</i>	13.76	120
– <i>Research/Special study</i>	10.44	91
– <i>Human resource management</i>	0.69	6
▪ Mechanical/Engineering	31.20	
– <i>Design/Repair</i>	23.17	202
– <i>Inspection</i>	8.03	70
▪ Human/Crew	11.47	
– <i>Training</i>	11.47	100
▪ Task/Mission	23.16	
– <i>Procedures</i>	14.56	127
– <i>Manuals</i>	8.60	75



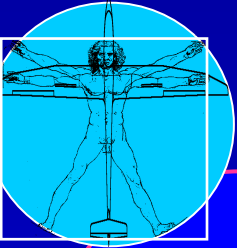
HFACS

- Accident Classification Taxonomy
- Track Mishap Trends (over time, internat)
- Applicability (Mil, Airlines, GenAviat, Maint)
- Evaluate Effectiveness of System
 - Validity
 - Inter Rater Reliability
 - Acceptable Levels of Expert Agreement
- Other Mishap Classification Systems
- Direct manpower and funds -other!



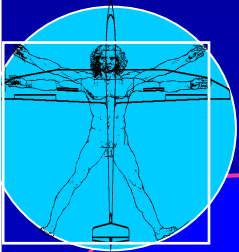
Glider-Competitions Analysis of Accident Data 1998 - 2007

Jürgen K. Knüppel



Subject

- **Requirements for Emergency Services**
at glider competitions
- **Accident Data BFU** (Ge. Inst. f. accident investigation)
- **Statistics: Accidents 1998 - 2007**
- **Analysis of Data**
- **Distribution „Onbase“ / „Offbase“**
- **Summery**



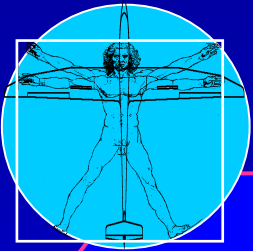
Collected Data of BFU

www.bfu-web.de → sorted reports

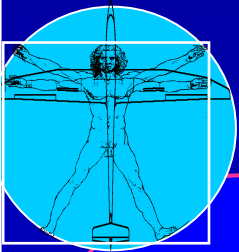
Annual Reports, Glider Competitions

21.04.2003 1200 Uhr (MESZ)	Unfall eines deutschen Lfz. im Inland mit leicht Verletzten
Ort: Auerbach (Sachsen)	Betriebsart: nichtgewerbliche Flüge - privater Reise- oder Rundflug
LFZ.: Cessna 182S	Bei der Landung setzte das Flugzeug mehrmals hart auf, zuletzt auf dem Bugfahrwerk, welches dabei einknickte.
Anzahl der verletzten Personen:	
Besatzung: 0 tödl., 0 schwer, 1 leicht	
Fluggäste: 0 tödl., 0 schwer, 0 leicht	
Andere: 0 tödl., 0 schwer, 0 leicht	
Flugzeug schwer beschädigt	
Keine Untersuchung durch BFU	Aktenzeichen: 3X042-0/03

- No Injuries
- T/O
- Collision
- Injured
- Ldg
- On-Base
- Killed
- Out-Landing
- Off-Base

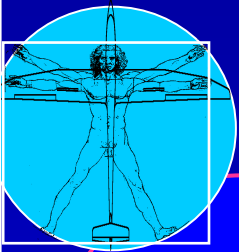


**35 accidents in
“Glider” Competitions
in 10 Years**

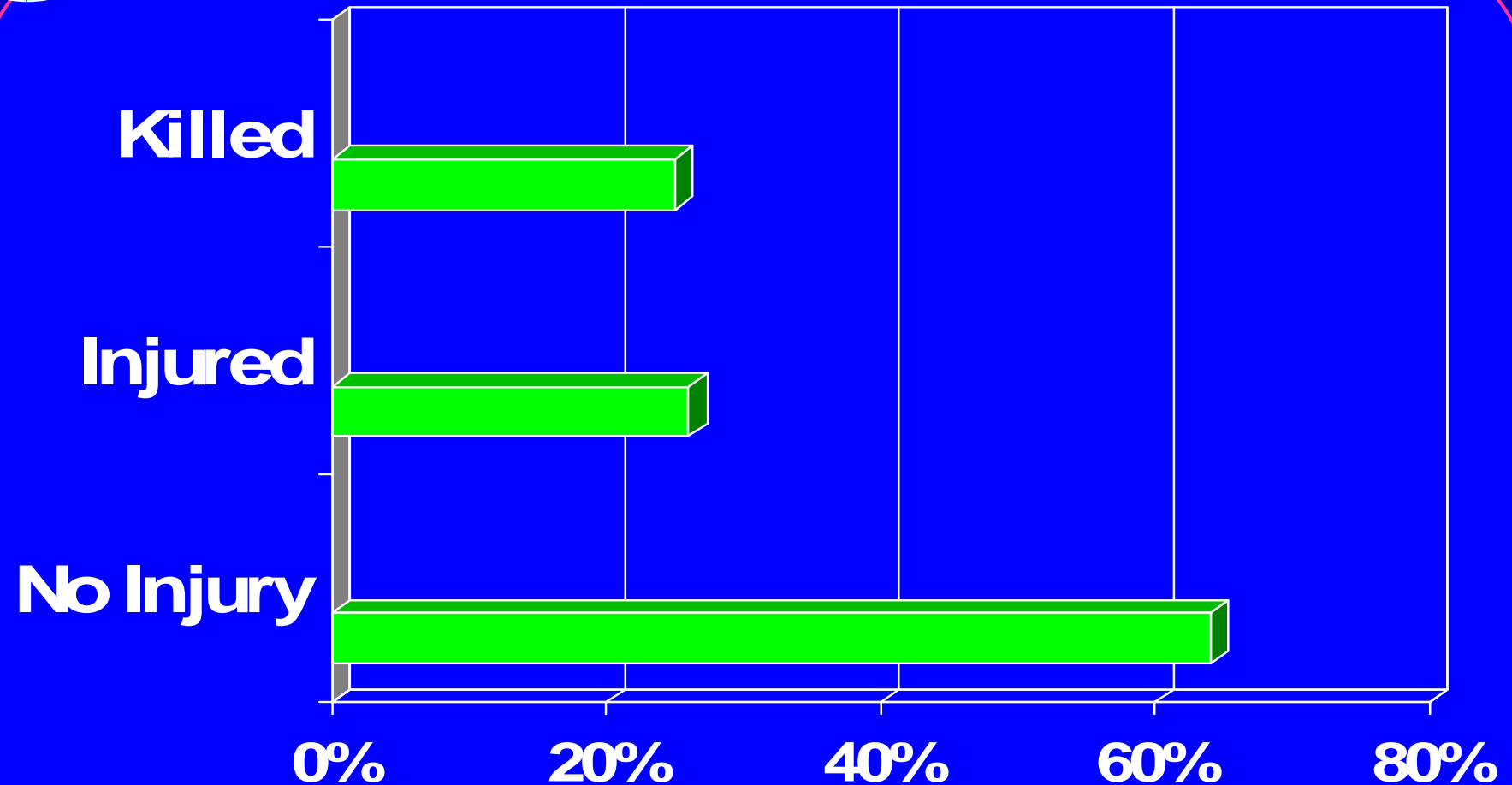


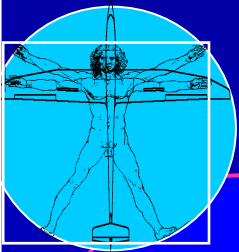
Analysis

- Location
- Phase of flight
- Level of Injury

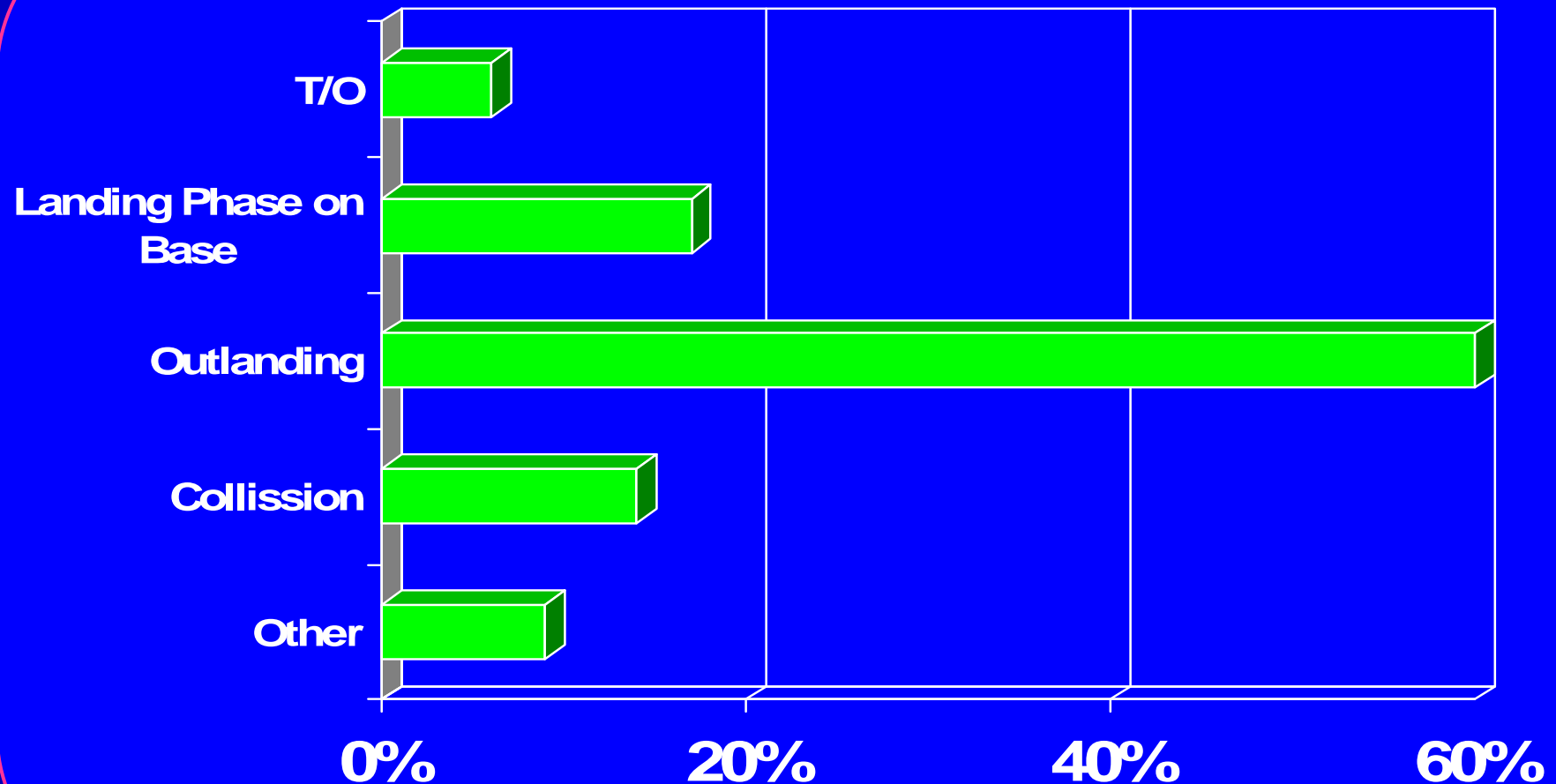


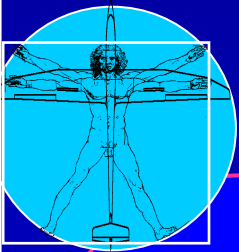
Injury



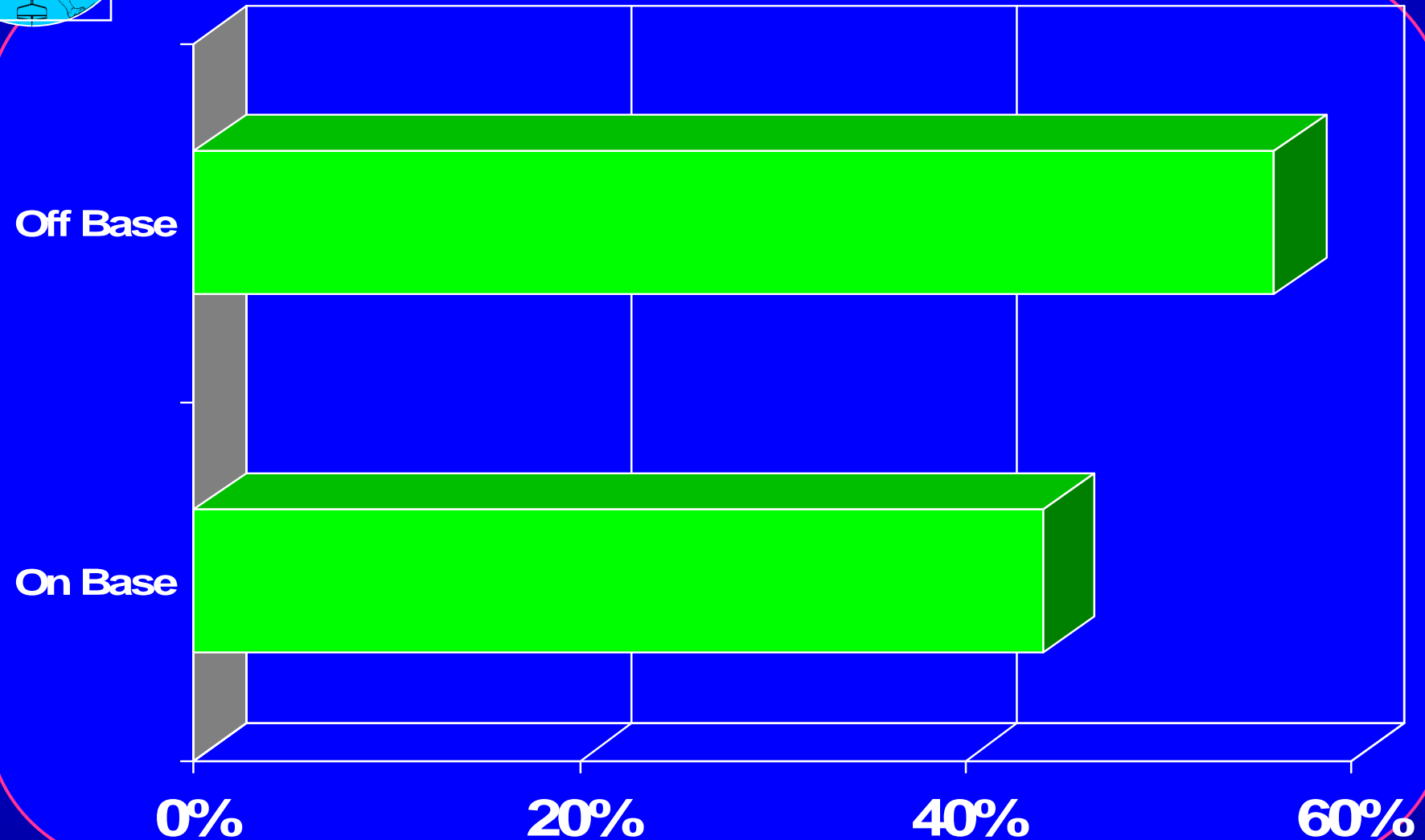


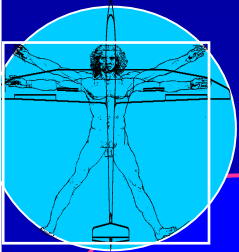
Phase of Flight





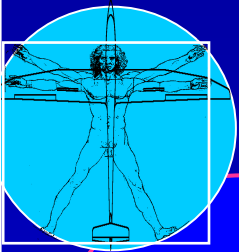
Victims (23)





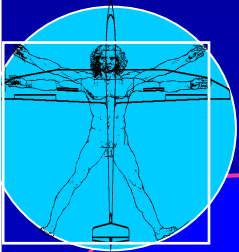
Results

- **60 %** of accidents without injuries
- **55%** accidents while **Outlanding**
- **44 %** on Base
- Every **7.** accident: **Collision**



Conclusions

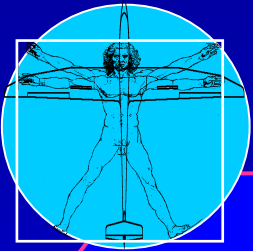
- There are glider accidents in competitions
- In about 1/3 of the accidents pilots get killed
- Landing accidents are No. 1
- Outlanding: a risk, not enough respected
- Med. Emergency Treatment Concepts
 - On Base: anticipated!
 - Off Base: to be improved
- Accidents on Base:
 - Special preparation required! (Training)
 - Consider modern Standards / Responsibilities!



ETA

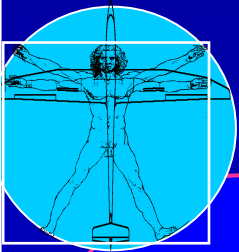


JK0608



Questions, Comments?

aeromednews@t-online.de



Human Factors

