



AEROMEDICAL CREW RESSOURCE MANAGEMENT


Stefan Becker, MD EHAC


Agenda



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- To Err is Human
 - Errors in Medicine
 - Errors & Adverse Events

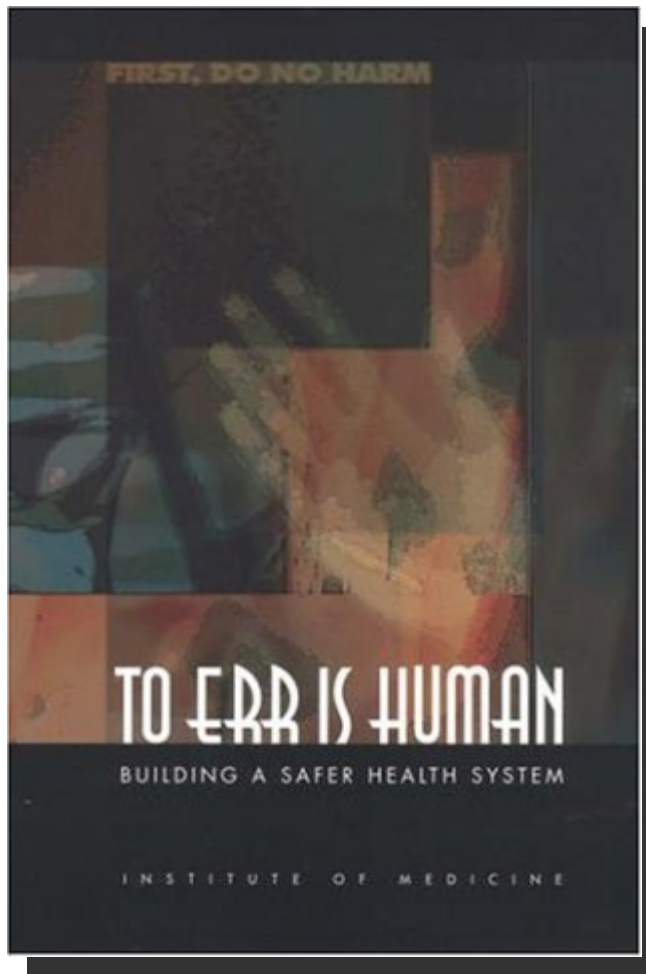
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- CRM & CIRS in HEMS operations
 - Responsibilities
 - Leadership & Change of Leadership

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- Development of ACRM
 - Operational Goals
 - Training Programme & Network

Human Factors in Medicine



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- 6.6-13 % of adverse events led to death
- Over half of these adverse events resulted from medical errors and could have been prevented

From Errors and Adverse Events



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- An **error** is defined as
 - ▣ the failure of a planned action to be completed as intended (i.e. error of execution) or
 - ▣ the use of a wrong plan to achieve an aim (i.e. error of planning).
- An **adverse event** is an injury caused by medical management rather than the underlying condition of the patient.

8th-Leading Cause of Death



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- More people die in a given year as a result of **medical errors** than from
 - ▣ motor vehicle accidents
 - ▣ breast cancer or
 - ▣ AIDS



Costs of Human Errors



- \$37.6 - \$50 billion for adverse events
- \$17 billion - \$29 billion for preventable adverse events

Contributing Factors to Critical Incidents

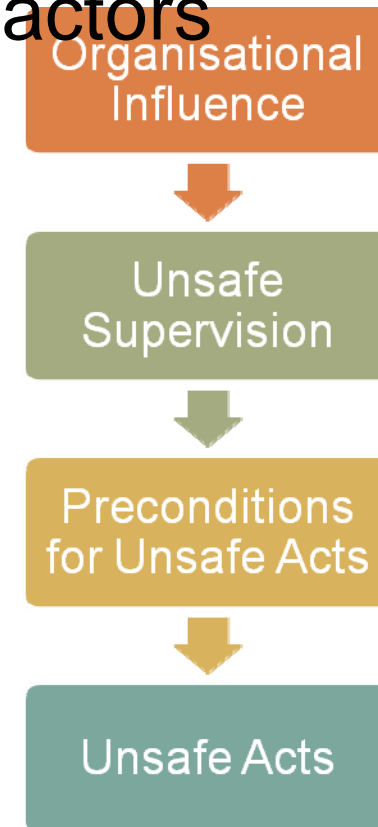


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■ Individual Factors



■ Organisational Factors



Human Factors in Aviation



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- In aviation human factors lead to 70-90% of all grave mistakes

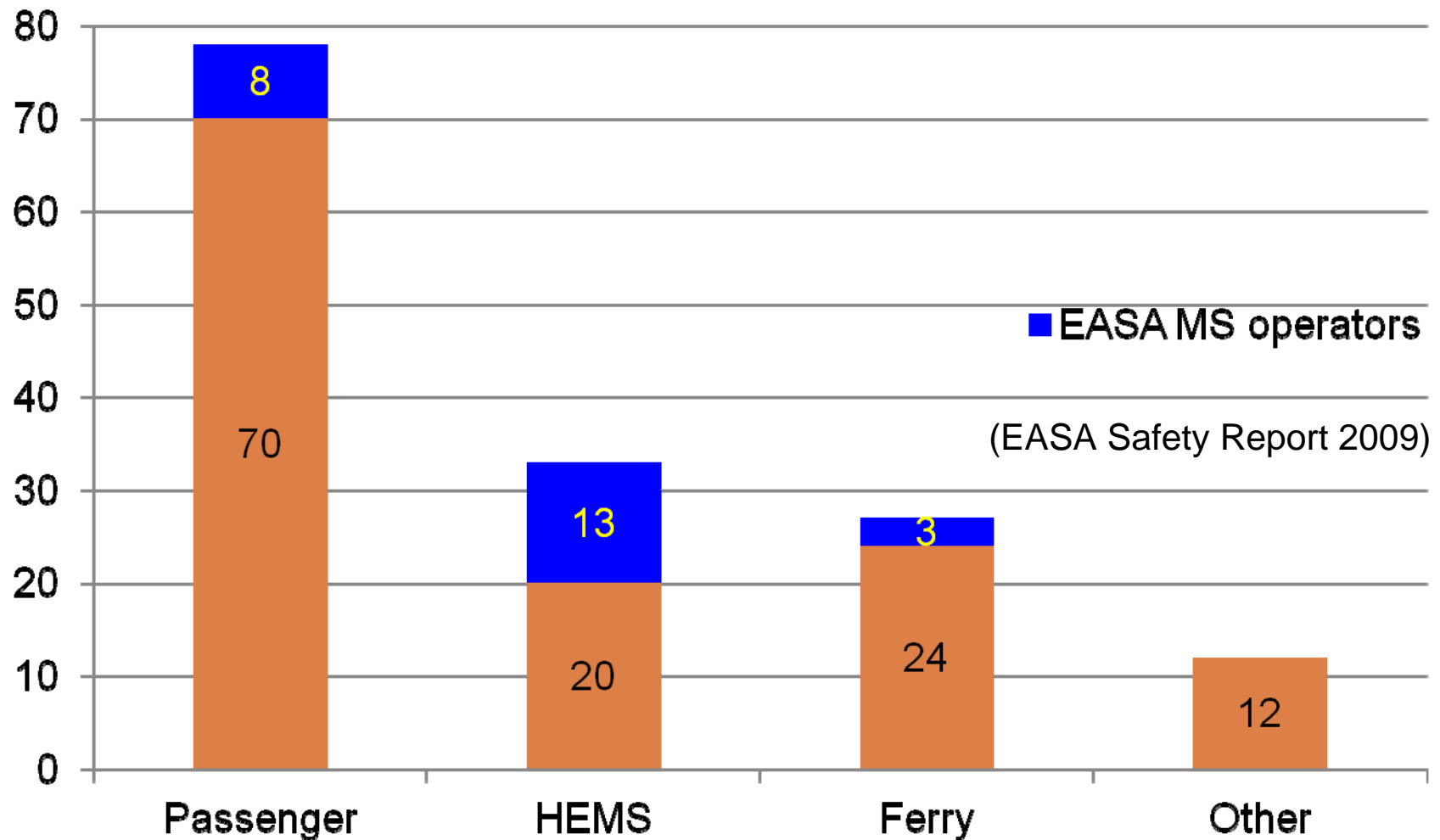
(Kern T, 2001; Helmreich RL, 1993; Wiegmann, 2003)



Fatal Accidents 2000-2009



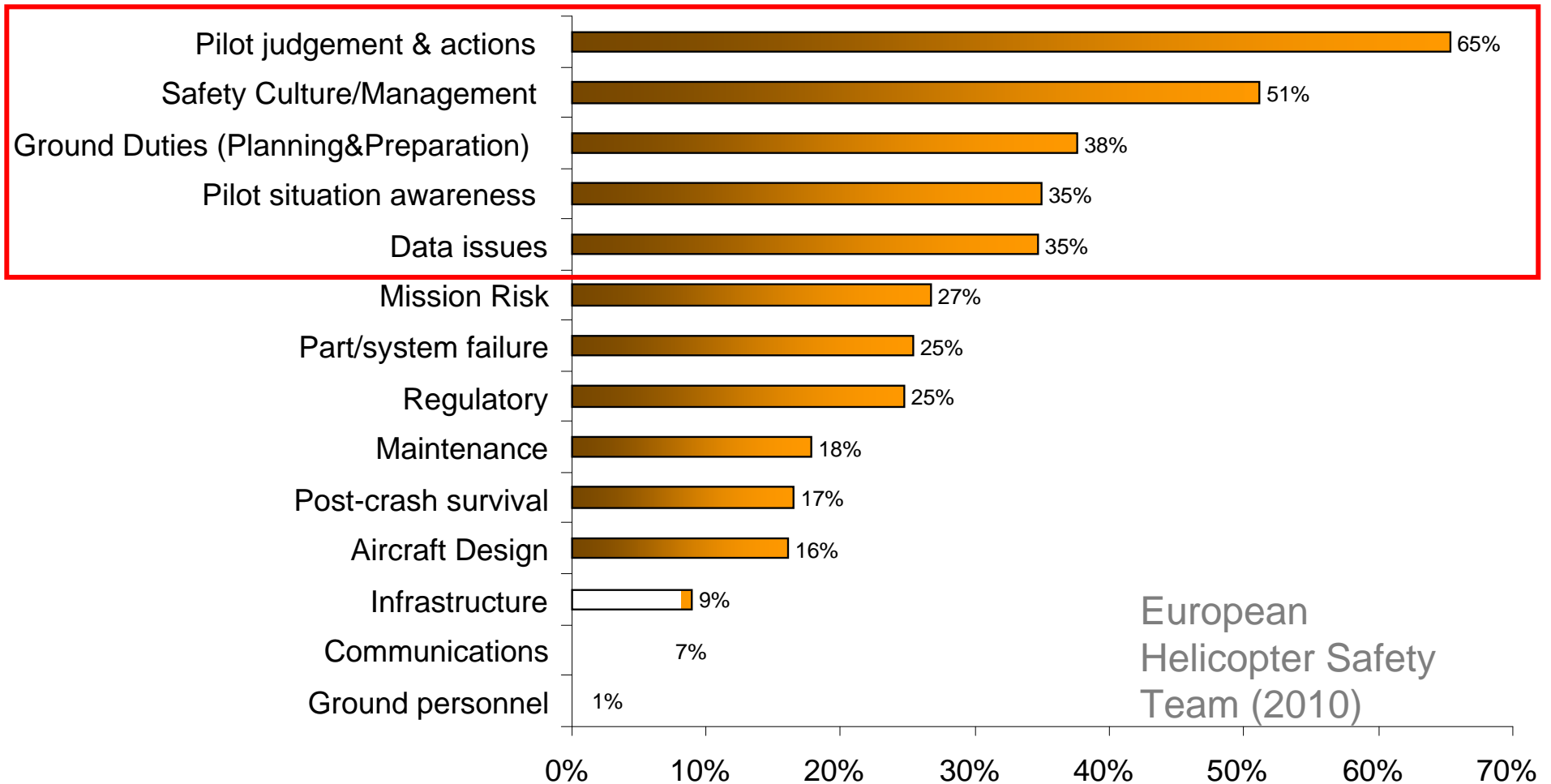
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Standard Problem Statements acc. to EHSAT



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Challenge „Air Rescue“



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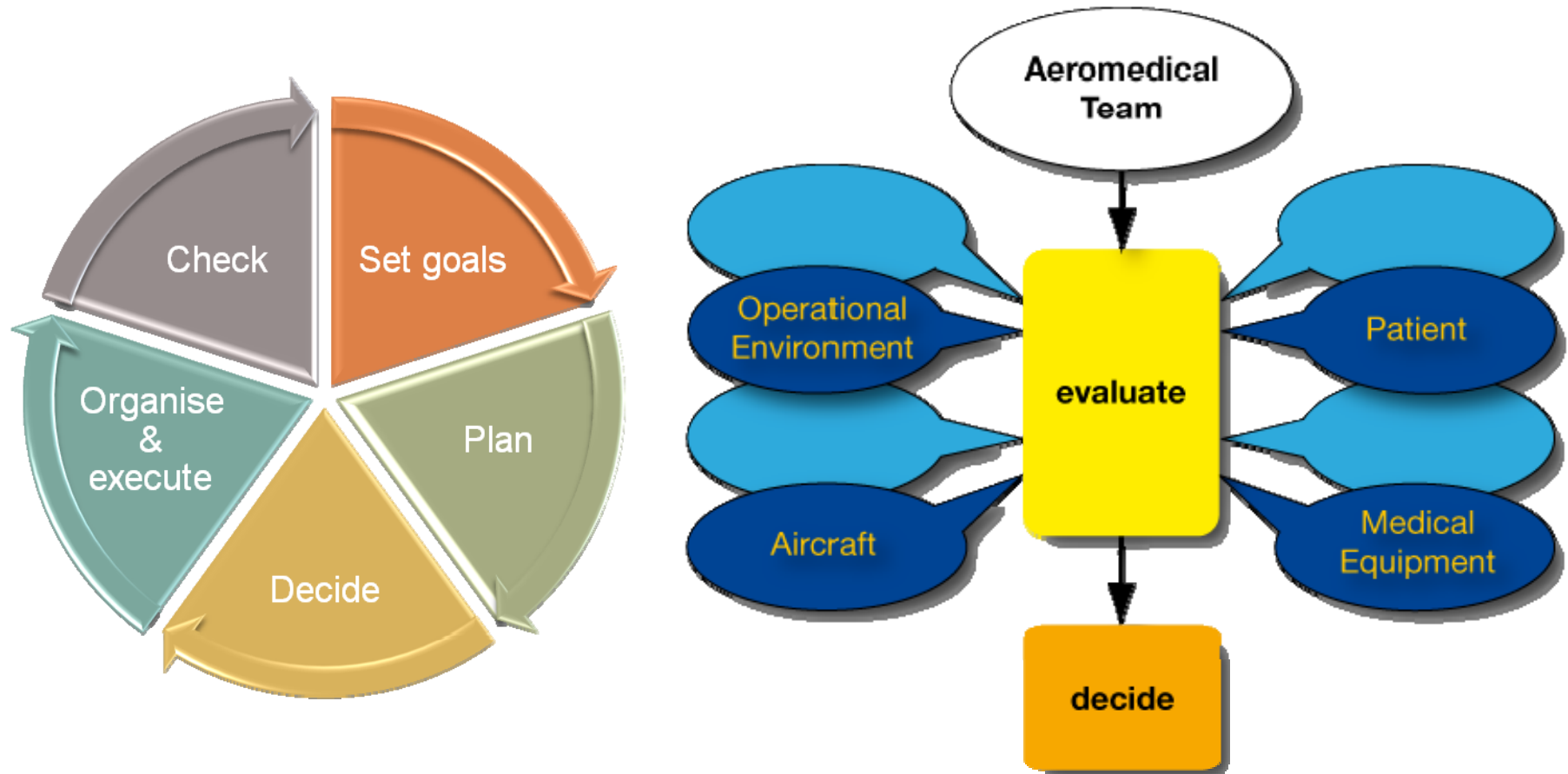


Aviation

**Emergency
Medicine**

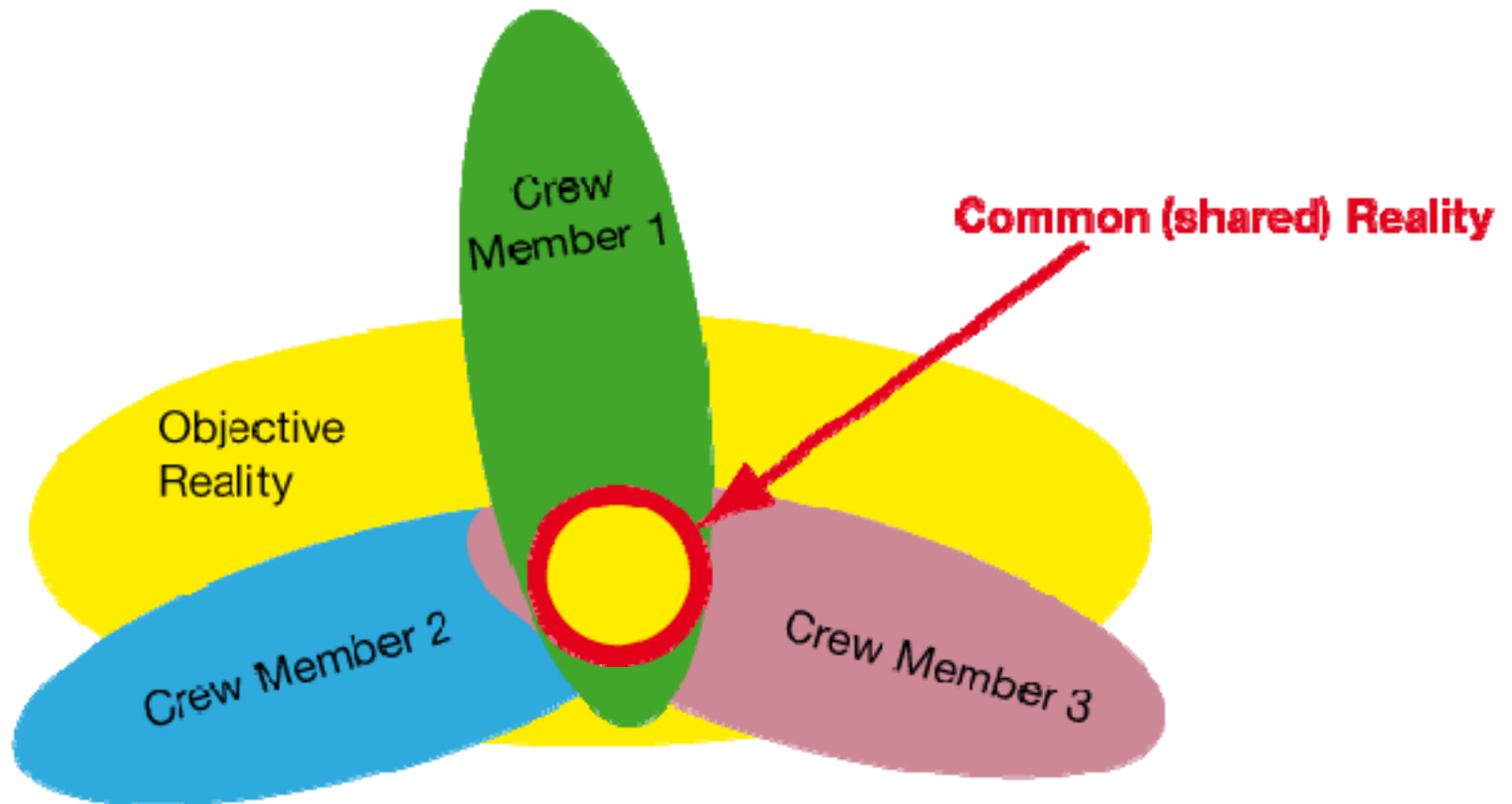


Decision making



The Team Reality

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Interacting Responsibilities during Missions



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- Aircraft control
- Navigation
- Flight Safety

Doctor /
Paramedic

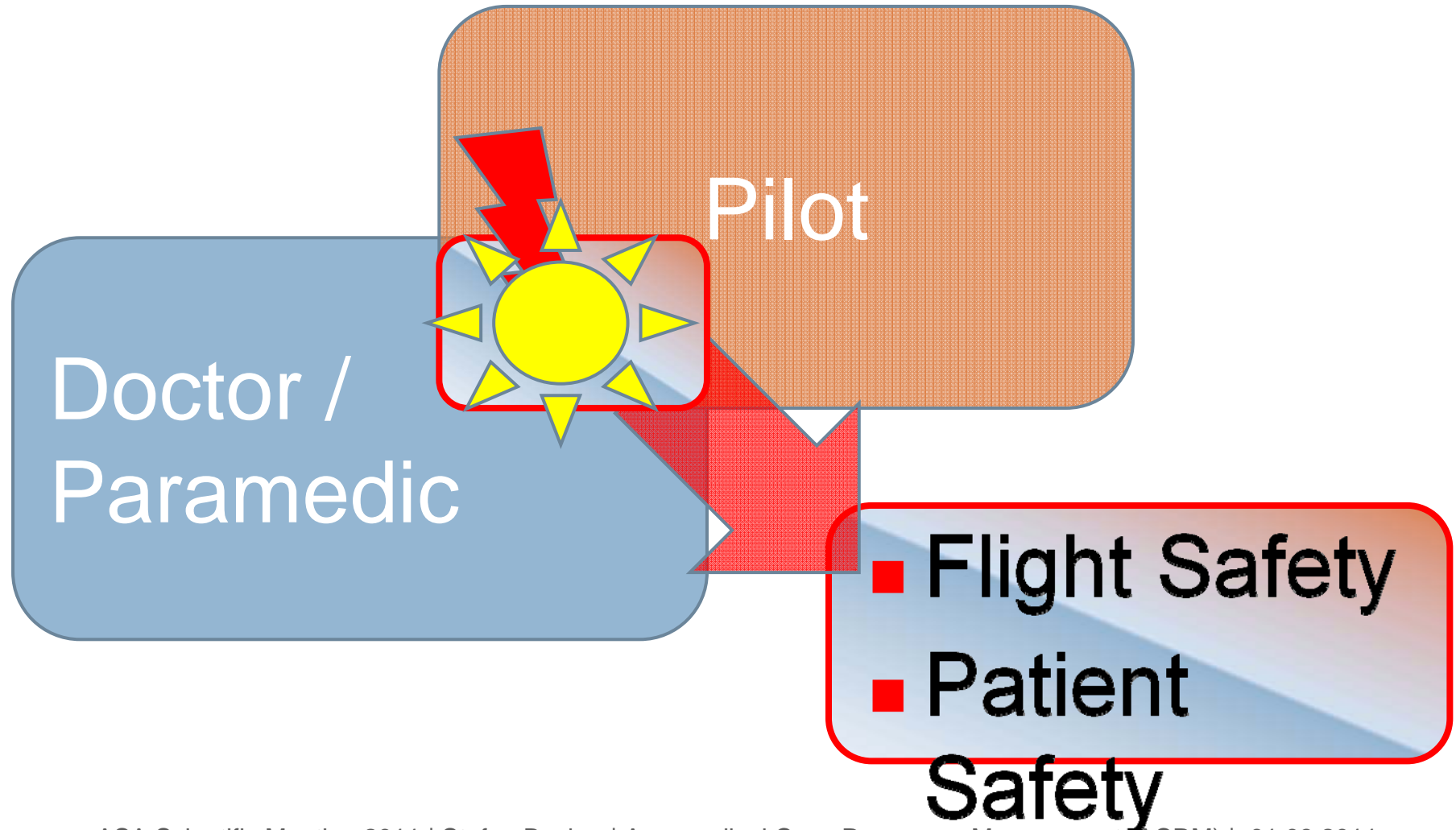
Pilot

- Diagnosis & Indication
- Initial medical treatment
- Hospital selection for further med. treatment
- Patient Safety

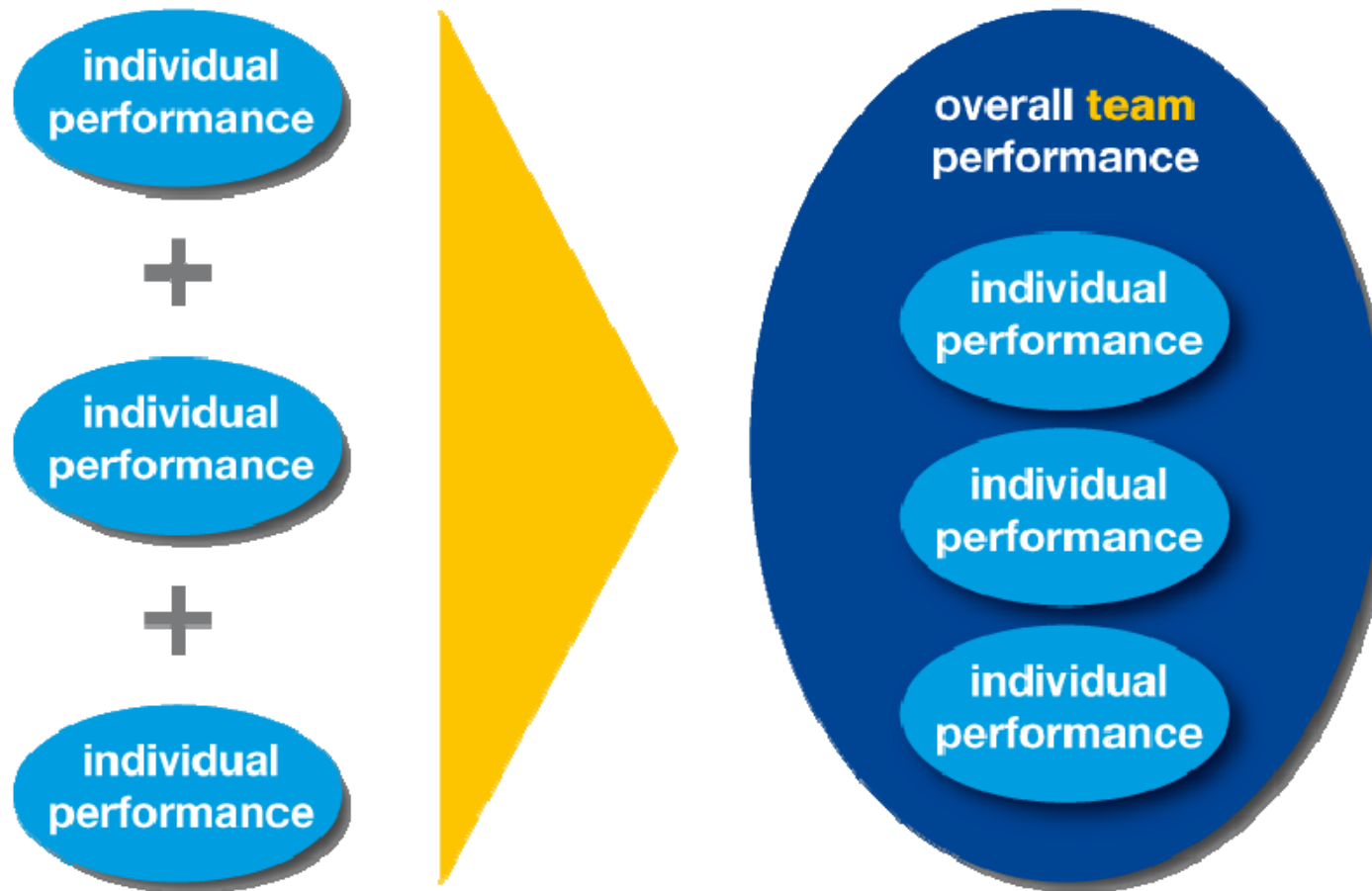
Interacting Responsibilities



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Safety Performance



ACRM: Development



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EU co-financed
"Leonardo da Vinci"
project

Building of a working
group

Implementation of the
training concept

3 hotrun trainings &
special evaluation

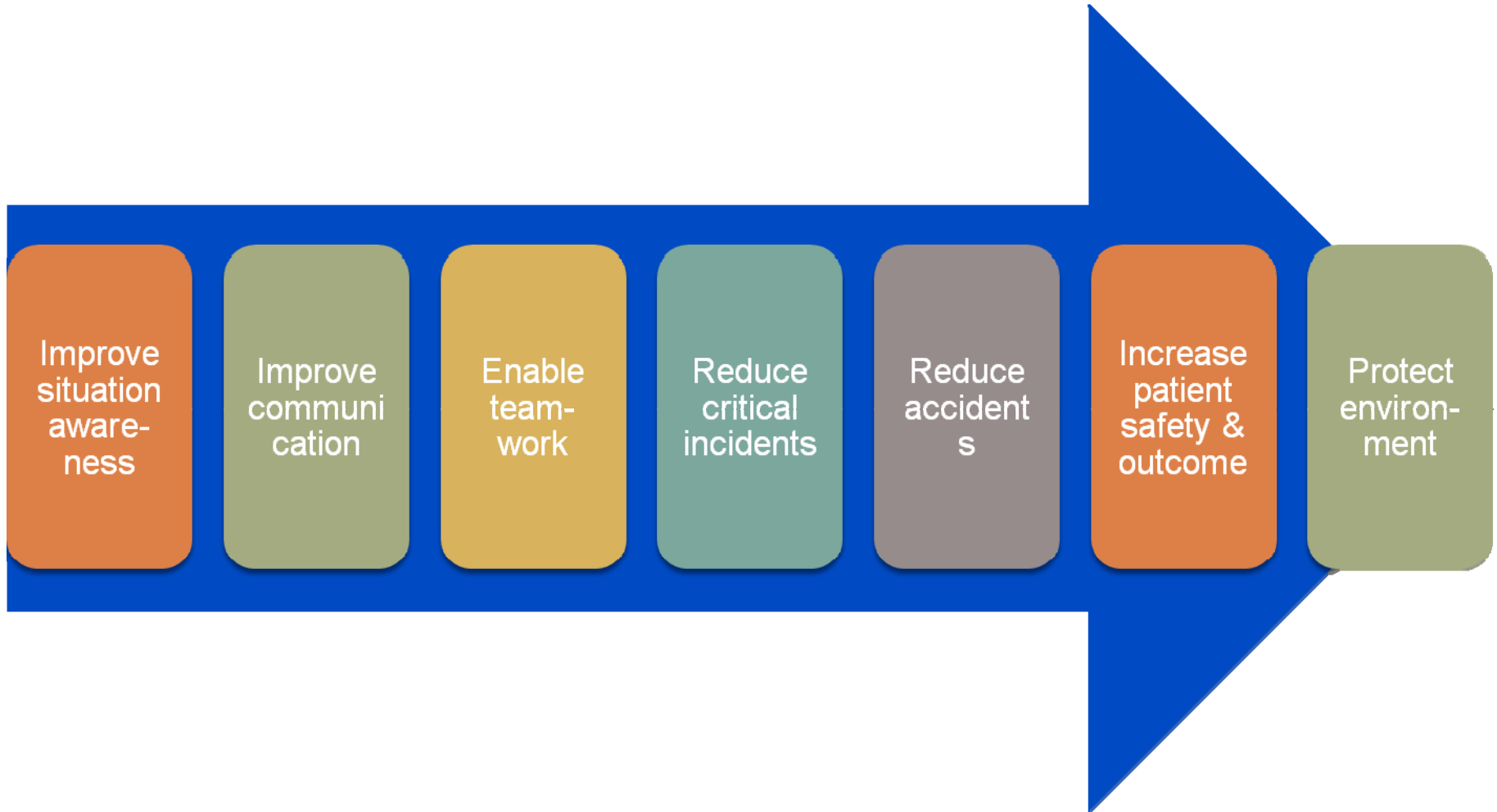
Enhancement of the
training concept



ACRM: Operational Goals



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ACRM Training Programme



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Cross-professional teambuilding process



Development of a common goal and language



Sensitisation of individual expectations in the team



Changing perspective between self-perception and external perception



Development of cross-professional competence

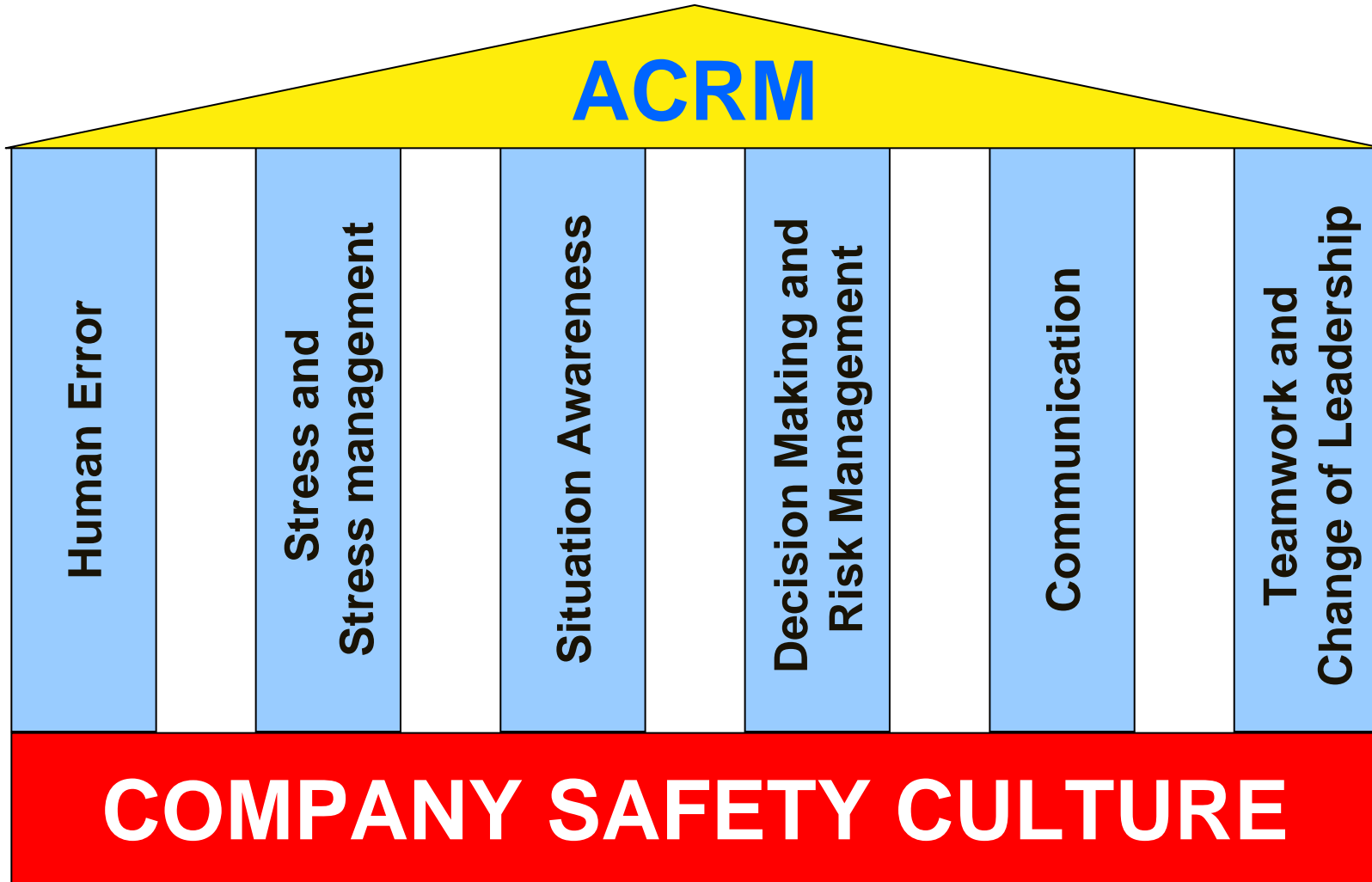


Improvement of non-technical-skills

ACRM Training Programme



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ACRM: Quality & Network



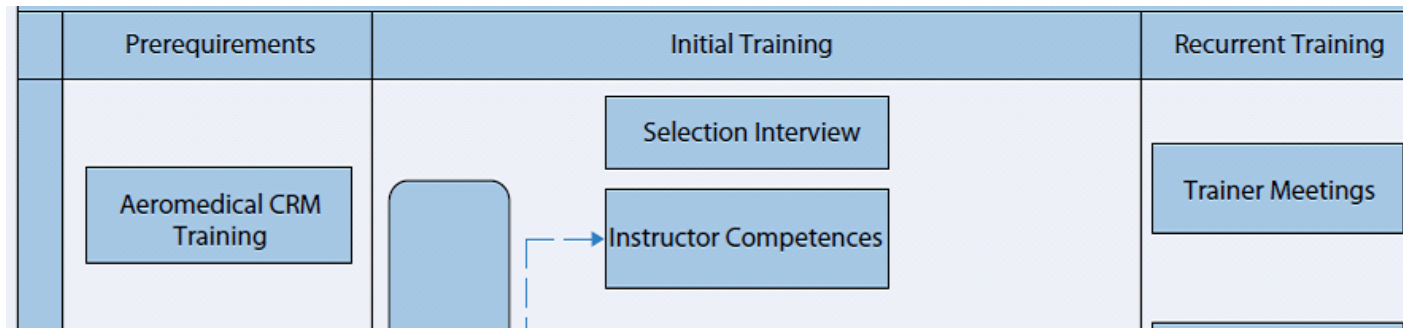
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EHAC Working Group

- Regular meetings
- Trainer qualification
- Continuous improvement process

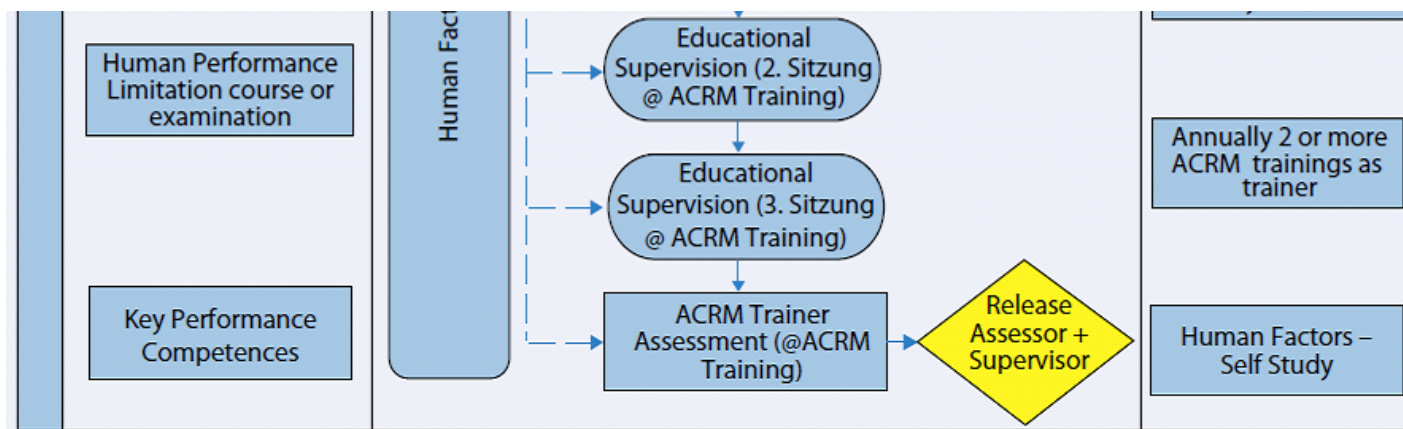


Train the Trainer Concept



Assessment – Certification

Supervision – Evaluation – Re-Certification



EHAC



Country	Helicopters	Bases
Austria	28	24
Czech Republic	9	8
Finland	1	1
Germany	85	62
Great Britain	15	14
Hungary	8	6
Italy	11	10
Luxembourg	4	3
Netherlands	5	4
Norway	14	11
Poland	22	16
Slovakia	7	6
Spain	28	28
Switzerland	22	13
Total	259	206

Total HEMS AOC in EU: ???

TTT – Train the Team



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„Train those as a team,
which are expected
to work as a team.“

