



***huperman***

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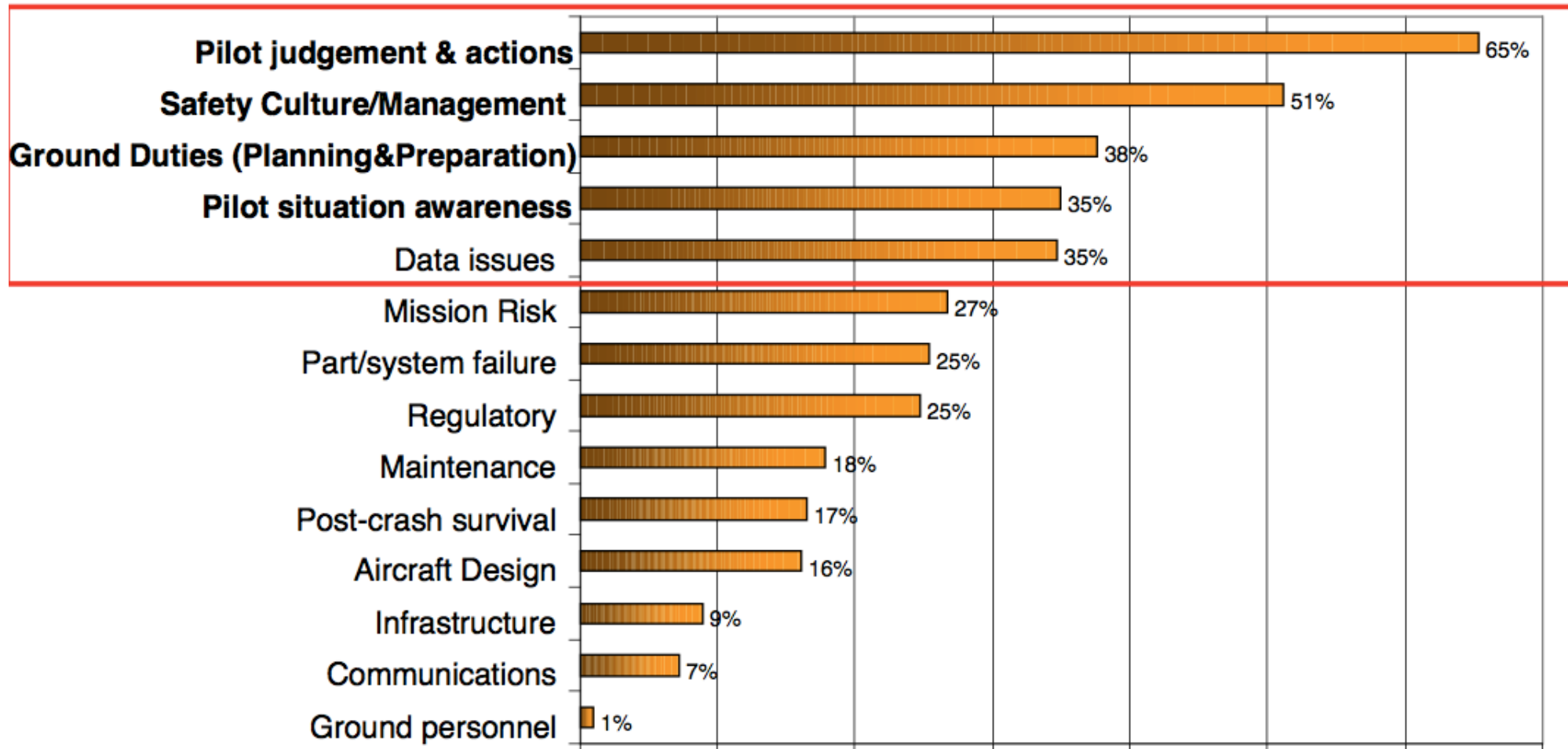
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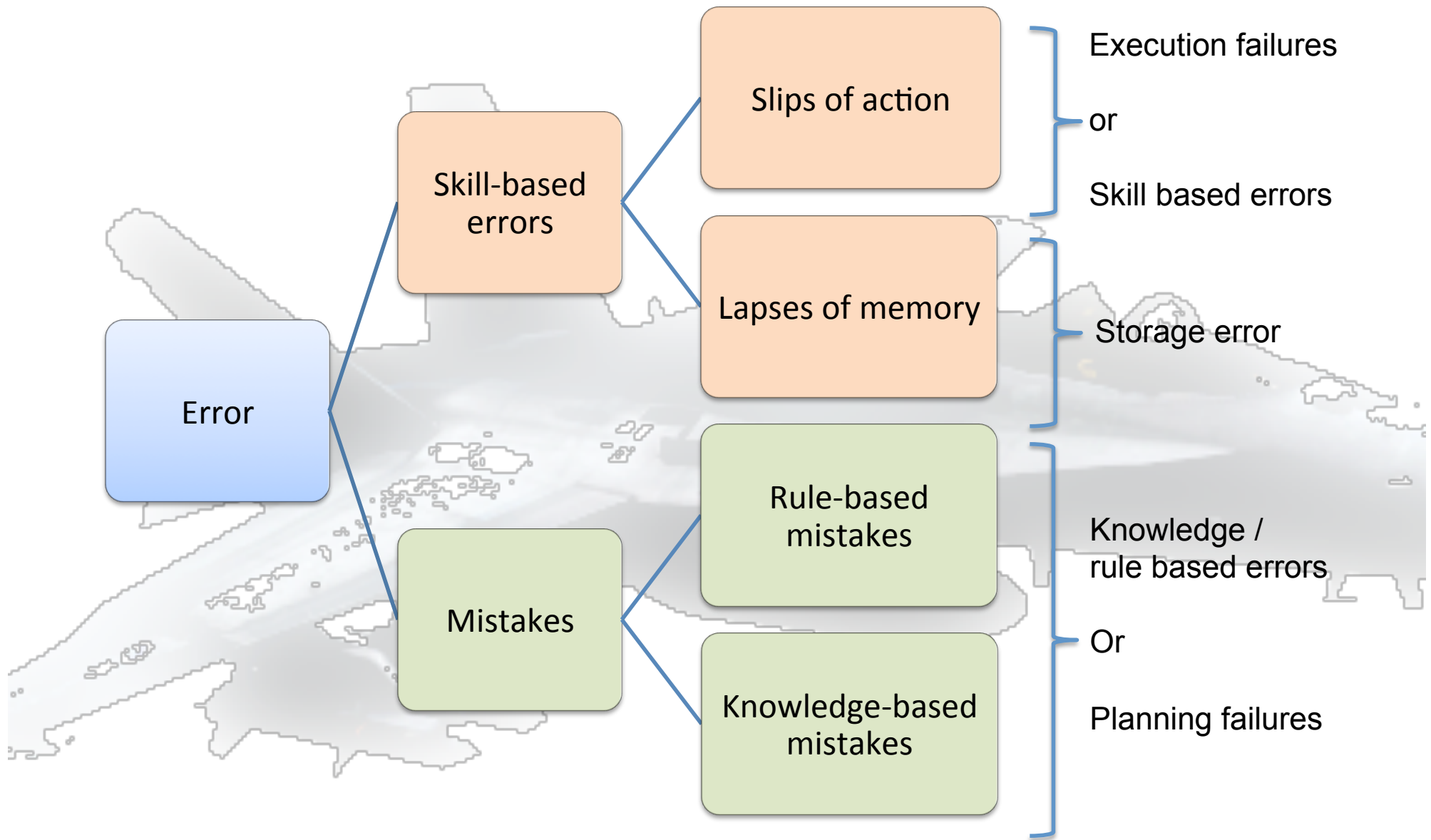
*Single pilot decision making*

# Decision-making - #1 challenge

**% of Accidents where SPS level 1 has been identified at least once  
EHSAT Dataset**

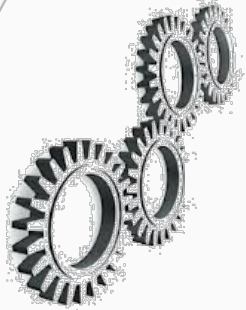


# Principal error types



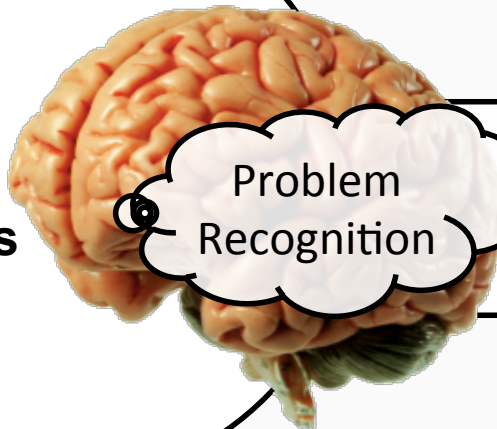
(Reason J. & Hobbs, 2003)

## Rational DM process



- 1) Define the problem
- 2) Develop options
- 3) Compare options (Risk analysis)
- 4) Choose “the best” options

**Situation awareness**



Problem Recognition

Decision

Execution & Follow up

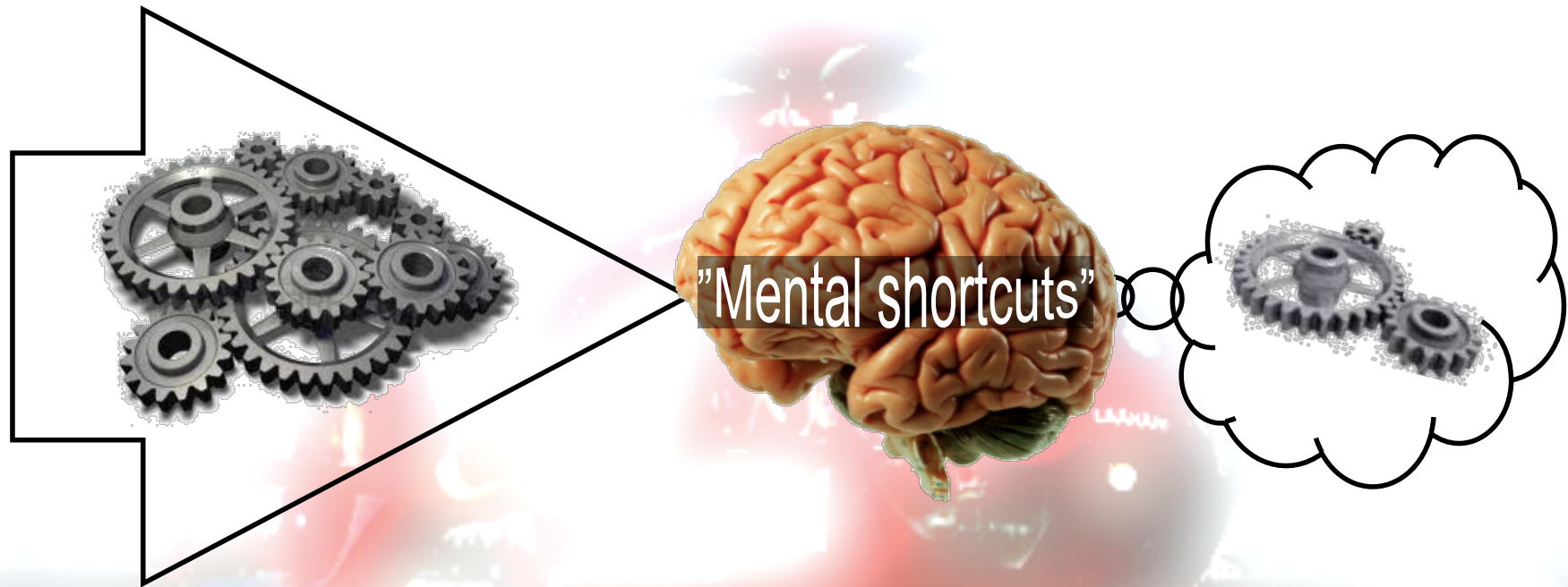
Consequences of actions

## Recognition primed DM

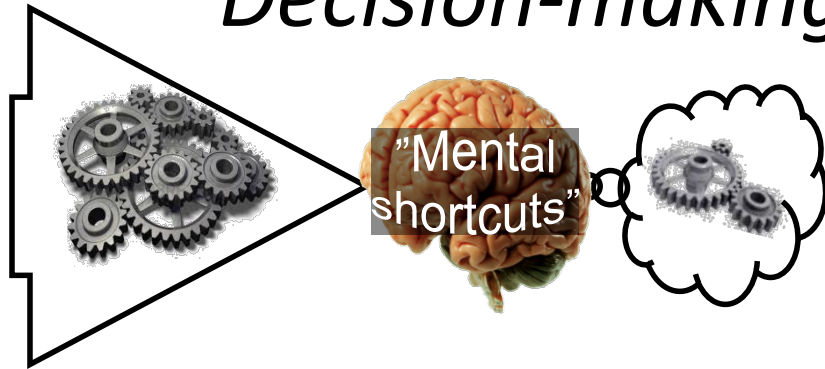


- 1) Identify situation
- 2) Explore mental models
- 3) Select the first suitable model

# *Decision-making Heuristics & Biases*



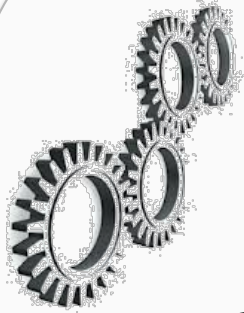
# Decision-making Heuristics & Biases



Anchoring & Adjustment	The initial information anchors the DMP and other information is used for adjustment (e.g. negotiations)
Confirmation bias	Tendency to search and interpret information for supporting preconceptions
“Easily acquired”	Information easily available, well represented or familiar distorts the judgement of probability
Loss-aversion	The cost of loosing feels greater that the cost of acquiring. Difficulty to let go.
Sunk cost fallacy	Cumulative investments justify commitment regardless of poor cost-benefit ratio from now on
Hindsight bias	I-knew-it-all-along-bias.
Complacency	“Everything is good because nothing has happened for a long time”. Self satisfaction.
Focusing effect	Focusing too much on one item and disregarding the other items
Over confidence	Self explanatory. (self-serving bias: taking credit from success, blaming others from failures)
“Simultaneous events”	Urge to find a relation between independent events happening simultaneously. Two simultaneous symptoms may be unralated

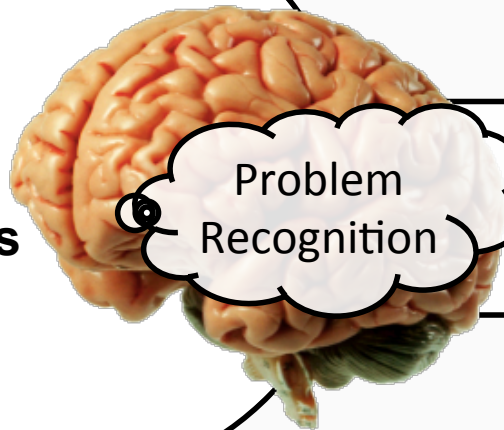
# How to train non-technical skills?

## Rational DM process



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- 2) Develop options
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**Situation awareness**



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## Recognition primed DM



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