AERONAUTICAL DECISION MAKING

COMMAND AND LEADERSHIP

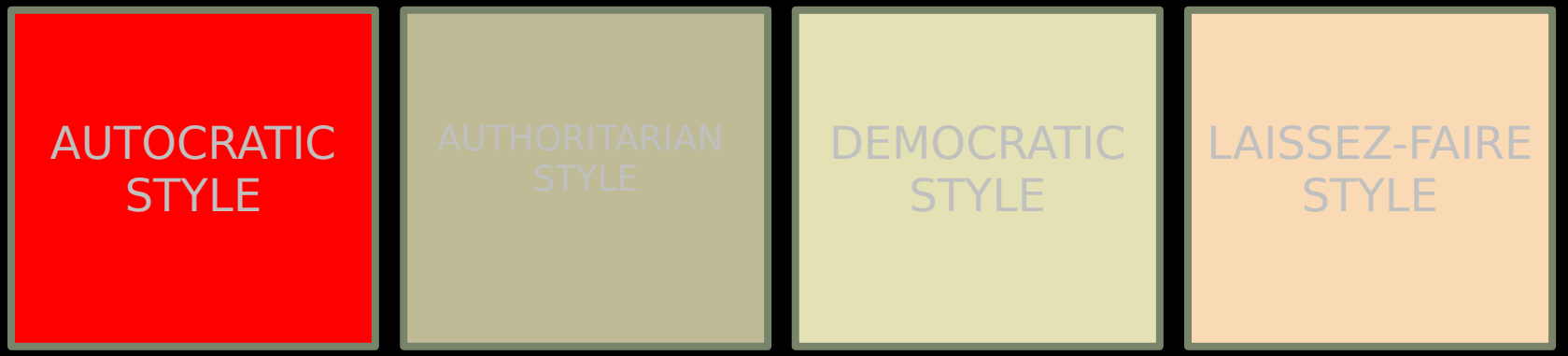
COMMAND ?

- Designated by Organization
- Cannot be Shared

LEADERSHIP ?

- Shared among Crewmembers
- Focuses on “What’s right,” not “Who’s right”

LEADERSHIP STYLE

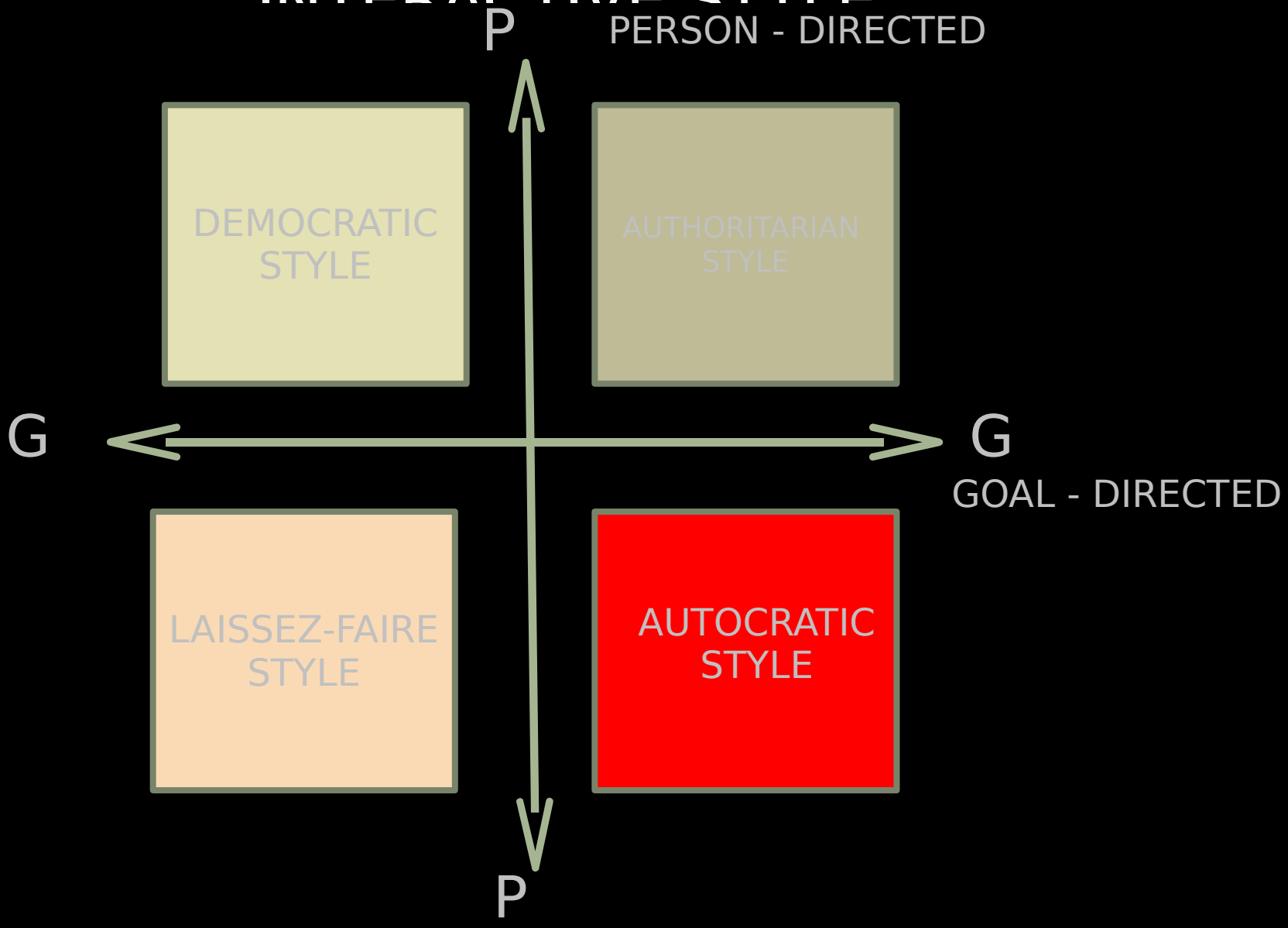


PARTICIPATION

LOW

HIGH

TWO DIMENTIONAL MODEL OF INTERACTIVE STYLE



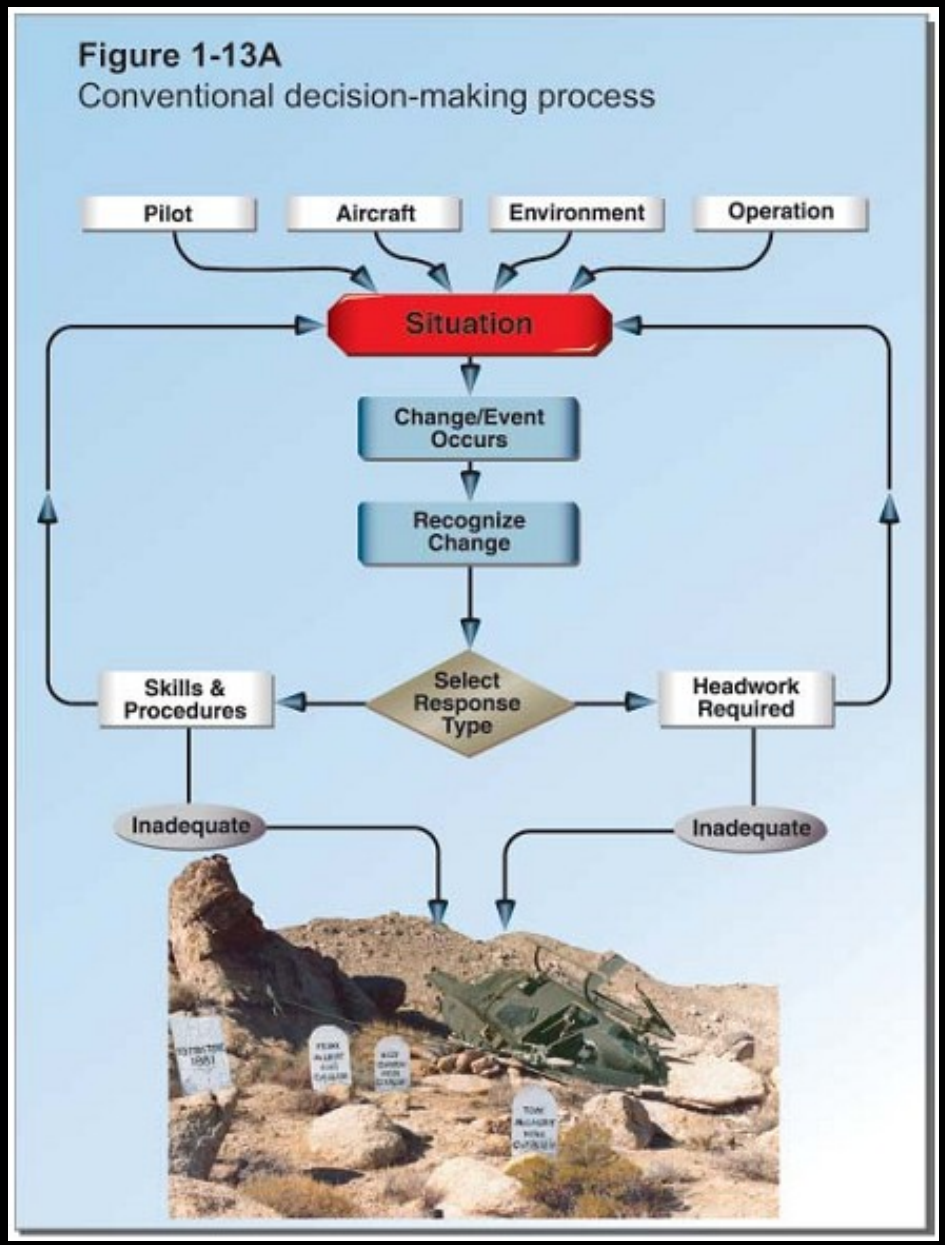
DECISION MAKING

The ability to use logical and sound judgment to make decisions based on available information

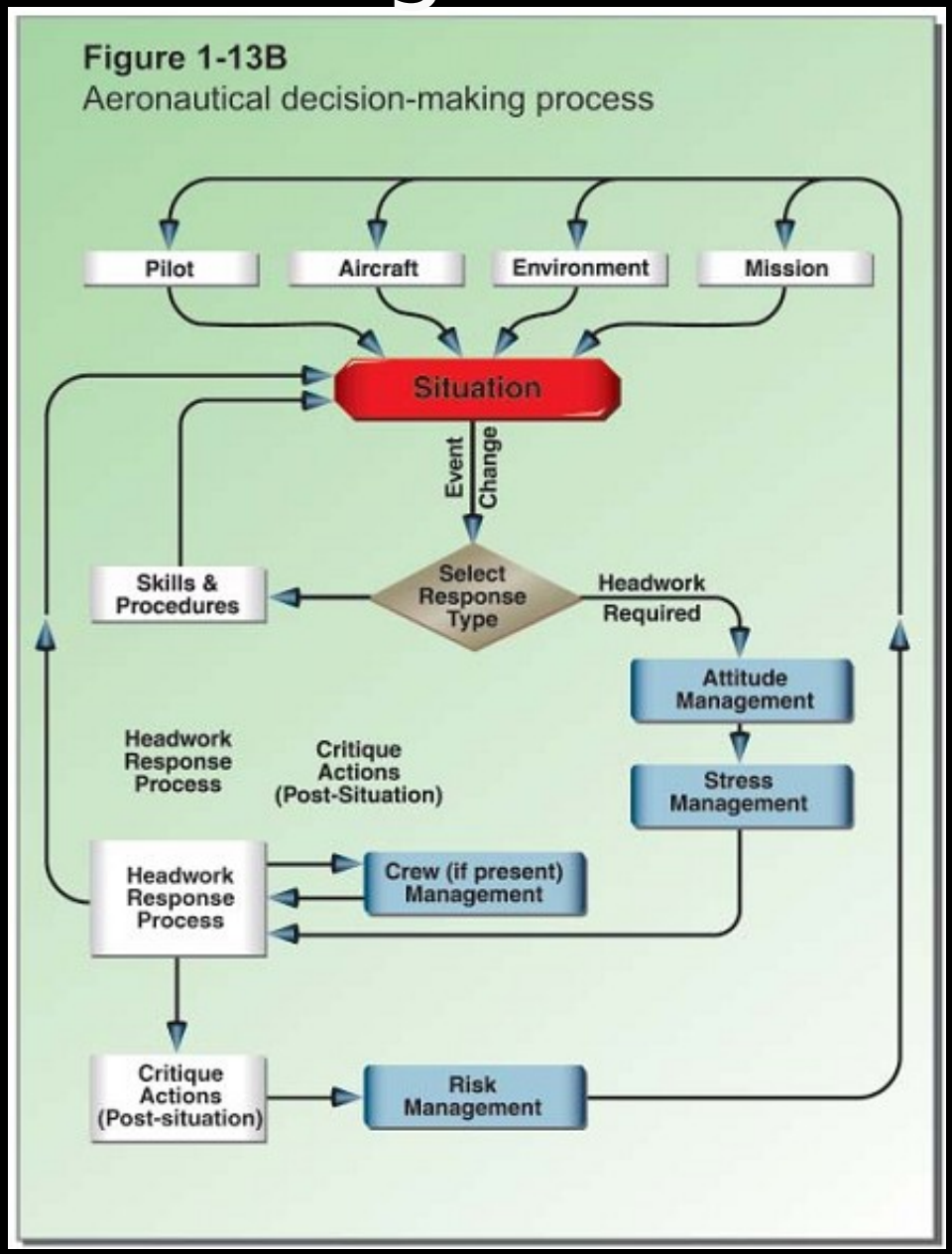
Effective DM includes

- Assessing the problem
- Verifying information
- Identifying solutions
- Anticipating consequences of decisions
- Informing others of decision and rationale
- Evaluating decisions

Decision Making Process



Decision Making Process



Hazardous Attitudes and Antidotes

Hazardous Attitude	Antidote
Anti-authority: Don't tell me.	Follow the rules. They are usually right.
Impulsivity: Do something quicky.	Not so fast. Think first.
Invulnerability: It won't happen to me.	It could happen to me.
Macho: I can do it.	Taking chances is foolish.
Resignation: What's the use?	I'm not helpless. I can make a difference.

DECISION MAKING

- DECISION MAKING WHEEL
- CLEAR MODEL
- DECIDE MODEL
- OTHERS

Perceive, Process, Perform

Perceive the given set of circumstances for a flight;

Process by evaluating their impact on flight safety;

Perform by implementing the best course of action.

Figure 1-12. *The 3P Model for Aeronautical Decision-Making.*

CLEAR MODEL

C — **C**larify the problem

L — **L**ook for ideas and share information

E — **E**valuate different solutions

A — **A**ct on your decision

R — **R**eview performance

CLEAR MODEL

C

L

PROBLEM CENTRED GROUP

IDEAS INFORMATION

E

A

R

SOLUTION CENTRED GROUP

SOLUTION DEFINED

An aircraft is on normal routine flight. About 30 min after take off, No.1 Engine Oil Pressure Caution Light On. What will be the crew sequence of action?

C

- Master Caution Light On
- Engine oil Pressure Caution Light On

L

- Two caution light on
- Oil pressure gauge zero
- Engine oil temperature rise

E

- What happened
- Engine oil system failure

A

- Action
- Immediate action (secure engine)
- Return to base

R

- Have one done the correct action and procedures

C

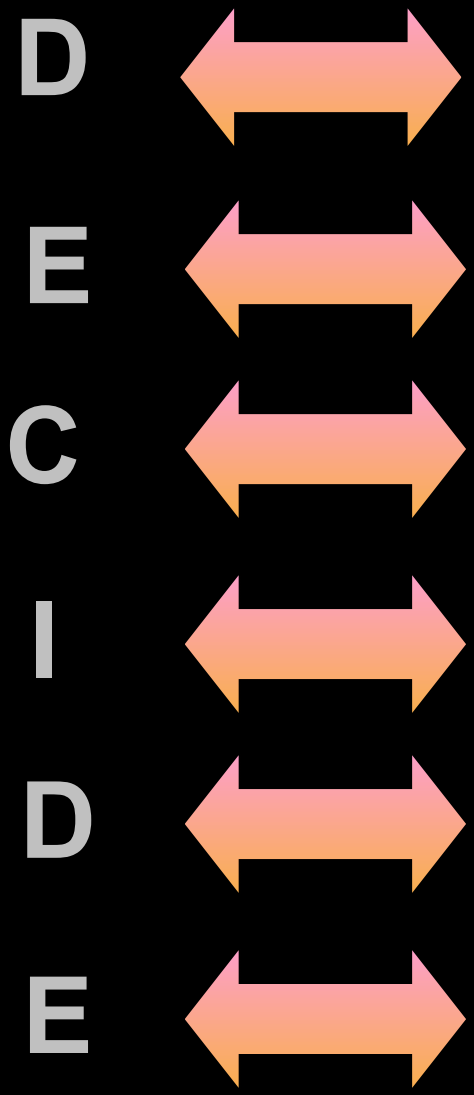
L

E

A

R

DECIDE MODEL



Detect the problem

Estimate effect of problem

Choose outcome

Identify option

Do (decide and act)

Evaluate results

DECIDE MODEL

1. Detect the problem	• Diagnose the situation. • Observe the symptoms • Identify the problem.
2. Estimate effect of problem	• How serious is the problem? • Is immediate action required? • "Knock on" effects?
3. Choose outcome	• What is the desired result? • Will a partial solution suffice? • Can we live with the problem?
4. Identify options	• List available options. • Test those options. • Seek advice.
5. Do (decide and act)	• Choose a course of action. • Assign tasks. • Execute the plan.
6. Evaluate results	• Was the problem solved? • If no, repeat the process.

AFFECTS OF STRESS ON DECISION MAKING

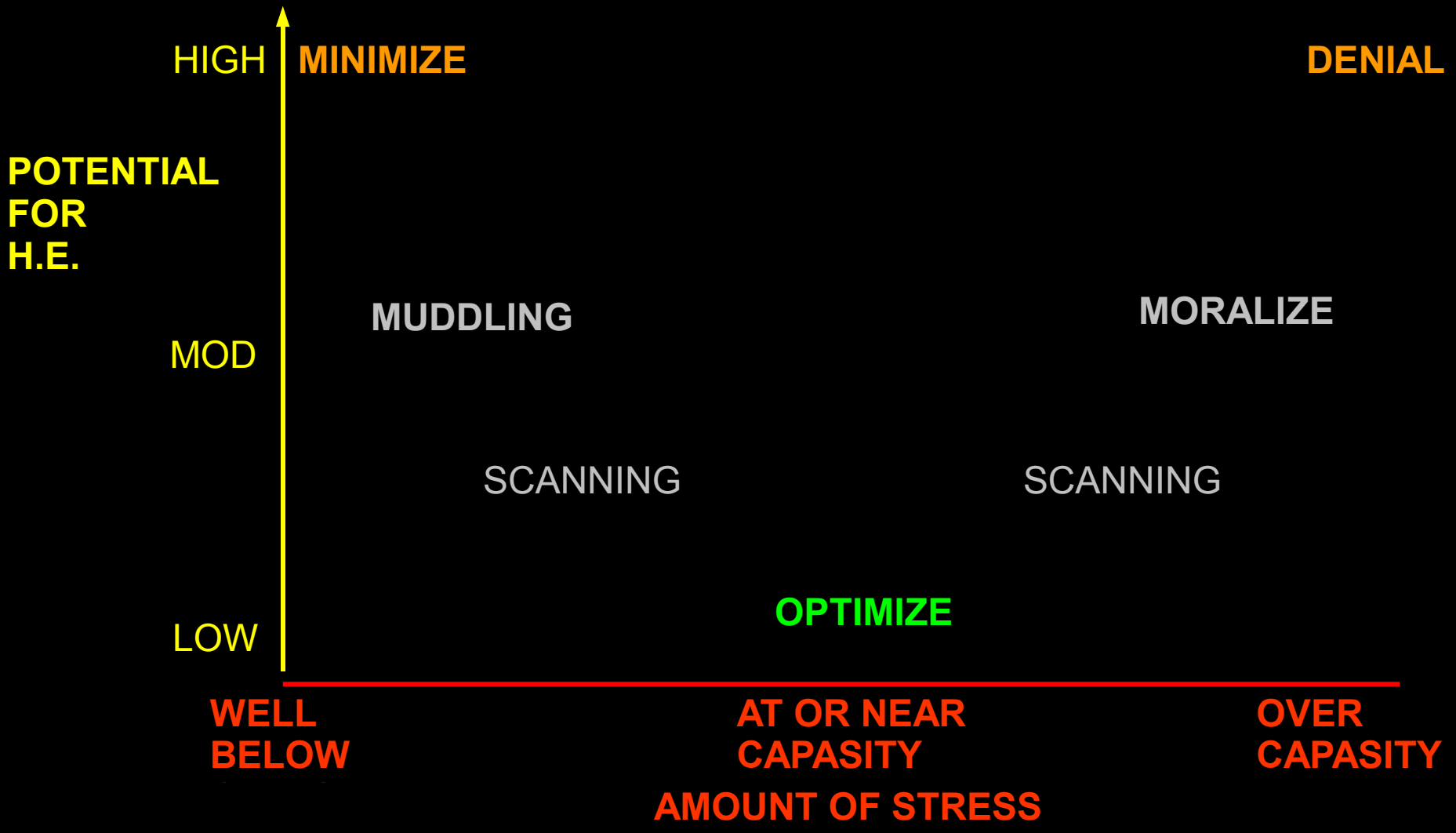
PROBLEM SOLVING

REDUCE LEVEL OF STRESS

DECISION MAKER

REDUCE STRESS + SOLVE PROBLEM =GOOD DECISION

AFFECT OF STRESS



Factors which promote good Decision Making

- Teamwork
- Extra time to make decision
- Alert crew members
- Decision strategies and experience

Remember

- Good decisions optimize risk management and minimize errors, while poor decisions increase them
- Each decision affects your future options
- Poor judgement or decision making is a leading cause of failure to complete missions and of mishaps

Thank

Congratulations, here is what you've just accomplished;

Decision Making in Aviation

To know more about new exciting subject