

Responding to the Emergency – Using All The Tools Can Training Fill the Tool Bag?



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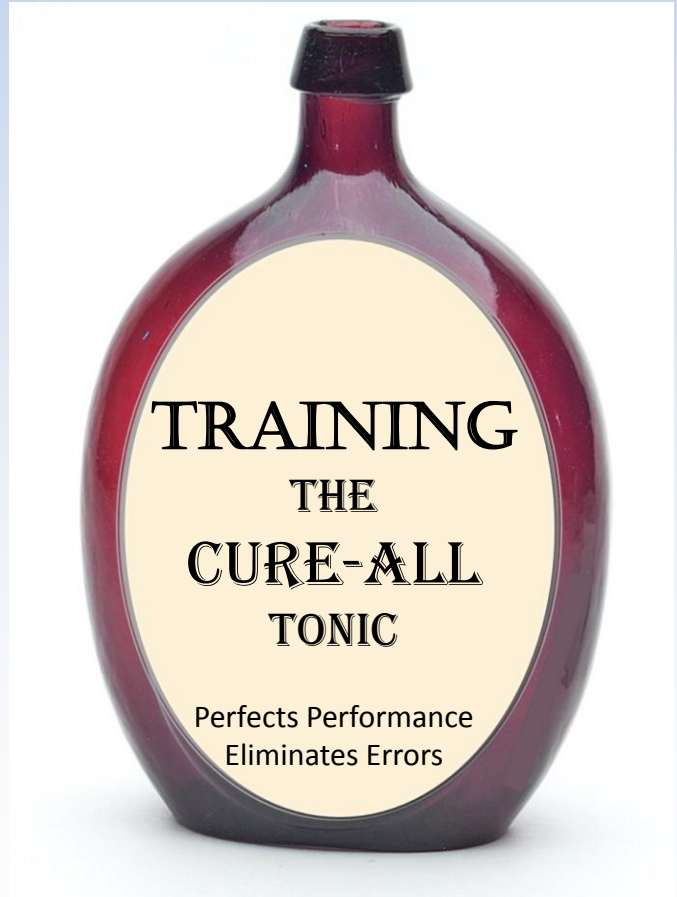
Can Training Fill the Tool Bag? (For a Smoke-Filled Cockpit Event)

- Answer: Yes, but be cautious
- Don't: Focus on the specific event
- Do: Focus on the core skills necessary for managing these types of events



Beware the “Just Train It” Philosophy

- Uncontained Fire
- Total Hydraulic Failure
- Dual Engine Failure
- Wing Falls Off?



Common Elements

- Uncontained Fire
 - Total Hydraulic Failure
 - ~~■ Dual Engine Failure~~
 - Wing Falls Off?
- Time → Limited
Complexity → High



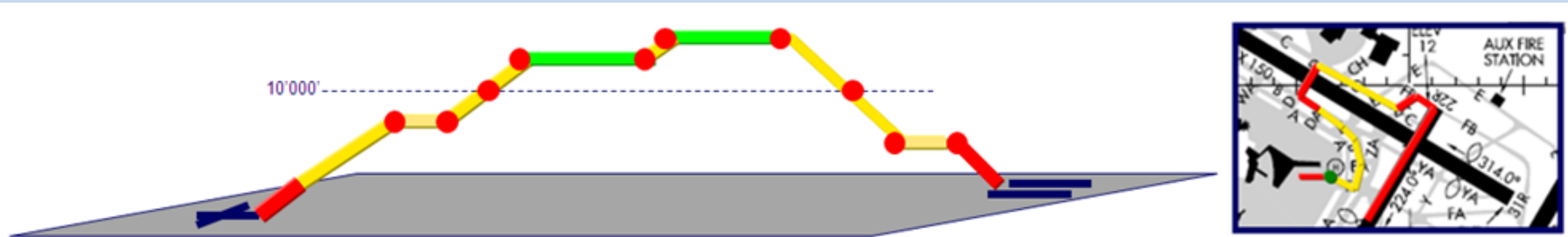
Core Skills

For Time-Limited, High-Complexity Events

- Flight Path Management (FPM)
- Threat & Error Management (TEM)
- Non-Normal Process



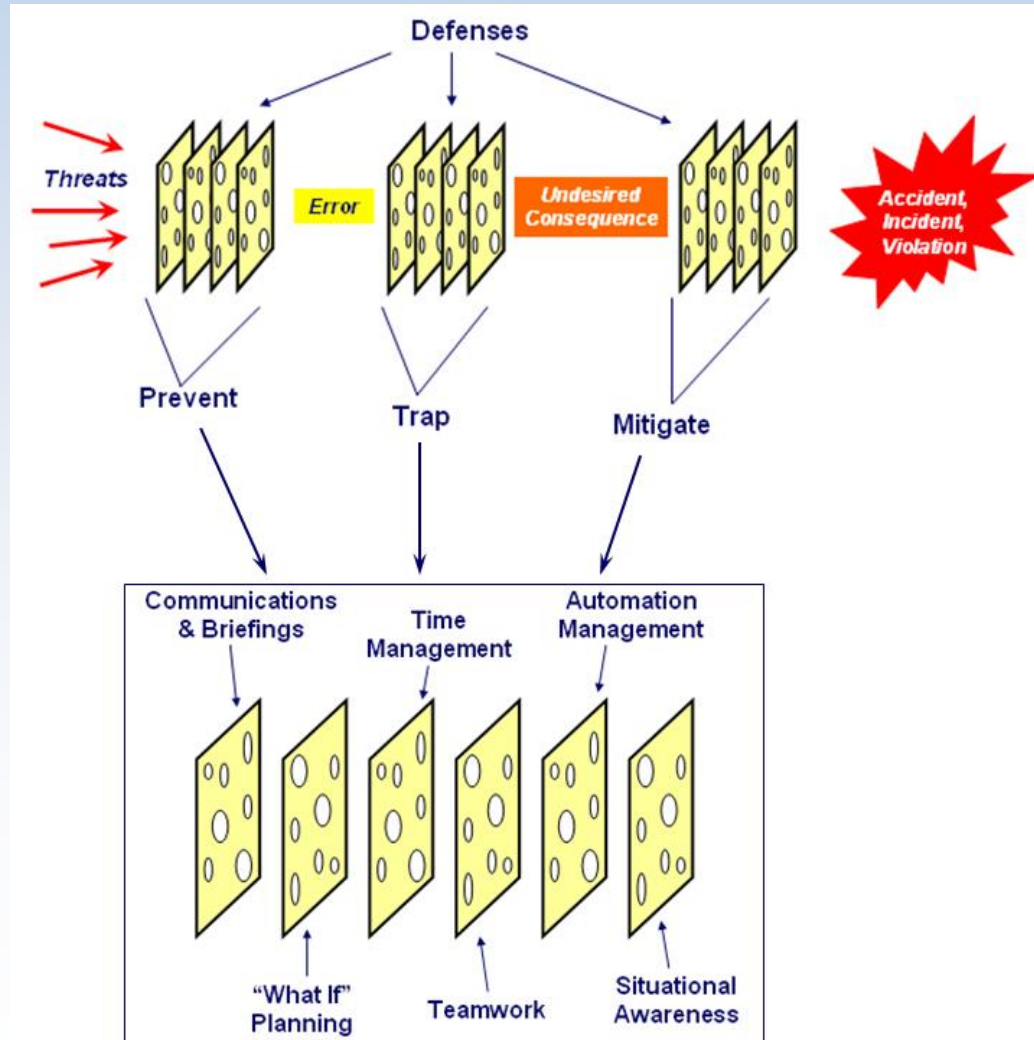
Flight Path Management (Illustration from JetBlue Training)



Threat	In Flight	On Ground	Defense
High	All changes of lateral or vertical trajectory, or speed Last 1000' of climb/descent All flight close to the ground	Approaching, crossing, or entering a runway or tight space	Both Pilots Mentally Fly the Airplane Avoid all non-flight path related tasks, if at all possible
Medium	Climbs and Descents Flight below 10,000'	All other ground movement	PF Mentally Fly the Airplane Avoid non-essential tasks Ensure essential (but non-flight path) tasks are done by PM
Low	Simple, Stable, Safe E.g., straight-and-level cruise above 10,000'	Simple, Static, Safe E.g., parking brake set	Monitor normally

Threat & Error Management

(Illustration from JetBlue Training)



Basic Non-Normal Process (Illustration Only – As Appropriate for your Carrier)

1. Maintain Aircraft Control
2. Assess the Situation
3. Take Appropriate Action
 - a. Memory Items
 - b. QRC
 - c. Initial Plan
 - d. ECAM/QRH
 - e. Refine and Communicate Plan



Core Skills

For Time-Limited, High-Complexity Events

- Flight Path Management (FPM)
 - Ensure clear PF assignment and priority of FPM
 - Demands hand-flying skills
- Threat & Error Management (TEM)
 - Especially Time Management
 - Recognition that time is limited; then setting priorities
- Non-Normal Process
 - Have the procedural litany down “cold”



Final Thoughts

When Training for Time Limited, High Complexity Events...

- Respect simulation limitations
 - Startle is very difficult to create reliably
 - “Gouge” sharing is very difficult to prevent
 - Environmental complexities are tough to recreate
- Use training, not checking, for these events
 - Set trainees up for success
- Remember that pilots who do well in these events do well with less “dramatic” events, too...



– It's about the Core Skills

Thank You!



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