





FLY BETTER

Safer and Better with Training

– Developing Training that Develops Expertise

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Content

- The Challenge
- Simulation Exercise
- Stories, Simulation and "Shadow Boxing"
- Way Forward

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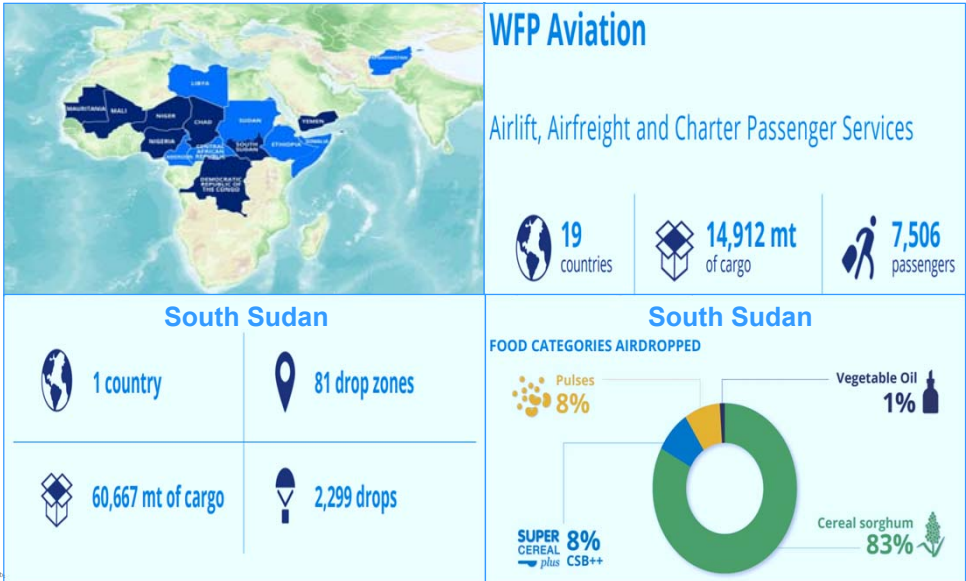


The Challenge

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Humanitarian Operations



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Safety Challenges of Humanitarian Operations



The Challenge for Pilots and Other Aviation Professionals



Limited exposure ⇒ Degraded experience ⇒ More effective training to achieve expertise





Simulation Exercise

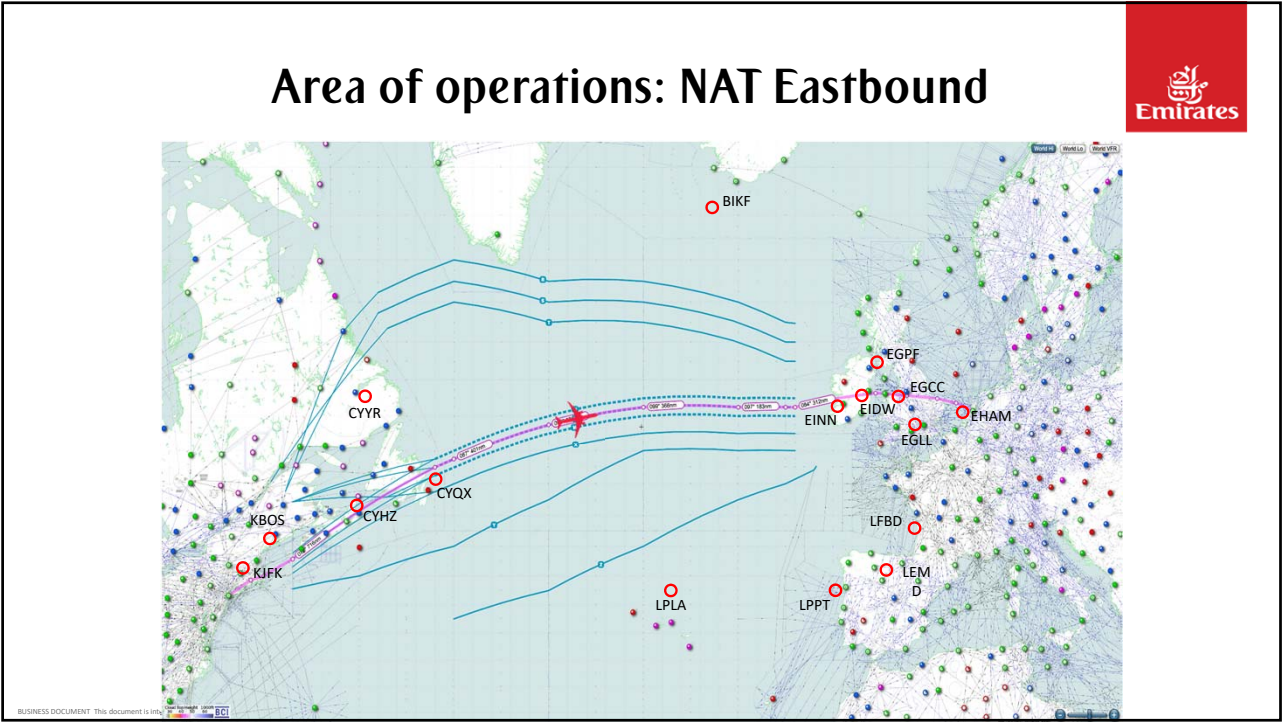
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Next Generation

- Twin engine flight, NAT Track from JFK to AMS
- OFP and a general chart is available
- New aircraft, not one you have flown before
- No SOPs, ops based on knowledge/experience
- ETOPS not needed due to reliability of engines

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Additional Information

There are news reports about increased volcanic activity at the Fimmvörðuháls fissure ...

... near the Eyjafjallajökull ice cap in Iceland, but as of yet no reported eruption...

Emirates

Additional Information



During check-in at JFK you notice a large party of "old people" joining your flight to go on a cruise...

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Additional Information



Getting you and the crew through the airport...

... was "exciting", with no time for the flight plan...

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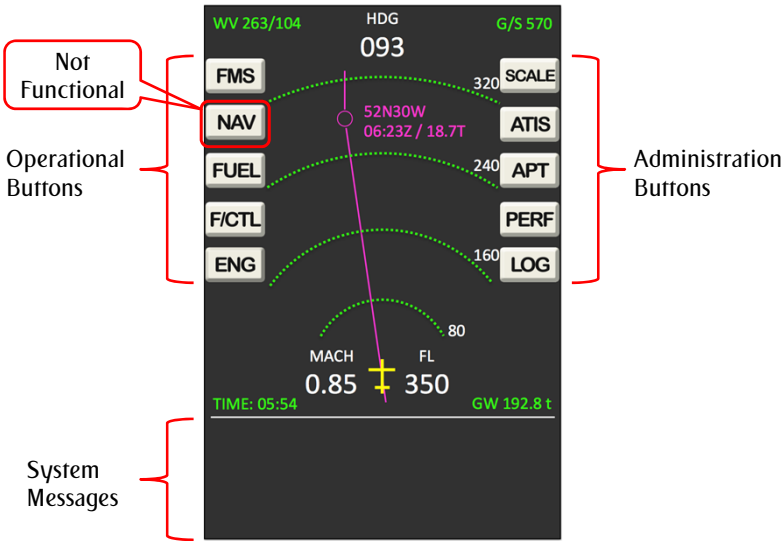
And just a minute ago!



... you were woken up before it was planned,
needing to take over from crew feeling ill...



Simulation Layout



Not Functional

Operational Buttons

Administration Buttons

System Messages



Navigation Commands

Touching on the white text allows navigation to that airport

	BRG/DIST	ETA	FUEL REM
CYOX	277/676	07:39	11.5
BIKF	042/868	07:19	12.9
LPLA	162/898	07:41	11.4
EINN	091/1048	07:39	11.5
EIDW	088/1137	07:48	10.7

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Where to find it!

eLearning link will be provided

Currently:

https://tecnogramlab.eu/mfs_1/2_02/top_C13.html

The simulation is password protected.

User: Emirates

Password: 3x3rc1s3St4rt

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Ready, Set ...

Click on this!

OFCD
Operational
1-3

NEXT

Don't touch!

PLEASE WAIT FOR
INSTRUCTOR
GUIDANCE TO
PROCEED.

NEXT

Emirates

What was the problem?



Emirates

So ... what's the answer?





Though you will still have had some challenges...

If you did something else...

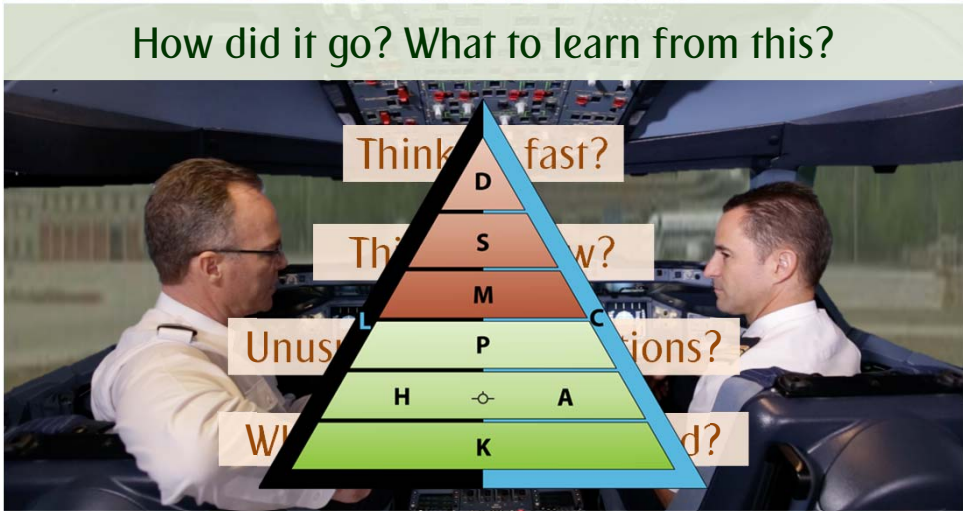


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Debrief



How did it go? What to learn from this?



How can this exercise/experience be useful?

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Simulation Exercise

- Main Points

- "Fail Safe" = Focus on learning
- Exposure to unusual situation
- Development of competencies
- Expertise = Improving + Exploring



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Stories, Simulation and "Shadow Boxing"



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Stories and Learning

The story is the most important part for learning!



"Reacting rapidly, Captain Gennotte recalled a television documentary he had seen about a DC-10 crash at Sioux City, Iowa some years before and the techniques employed by Captain Al Haynes and his crew to control their aircraft."
(IFALPA, 2005)



Cold Store

Thermo Sim

Controller Input

-

+ 100

+

Target Value

+04

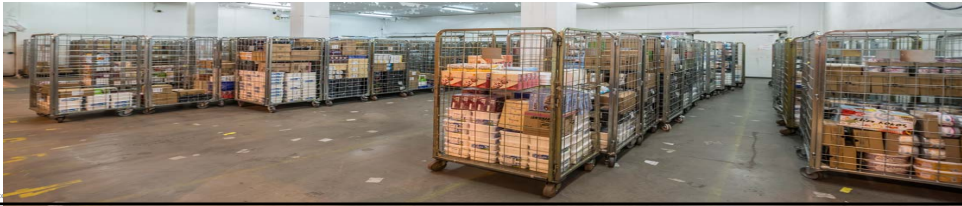
Start

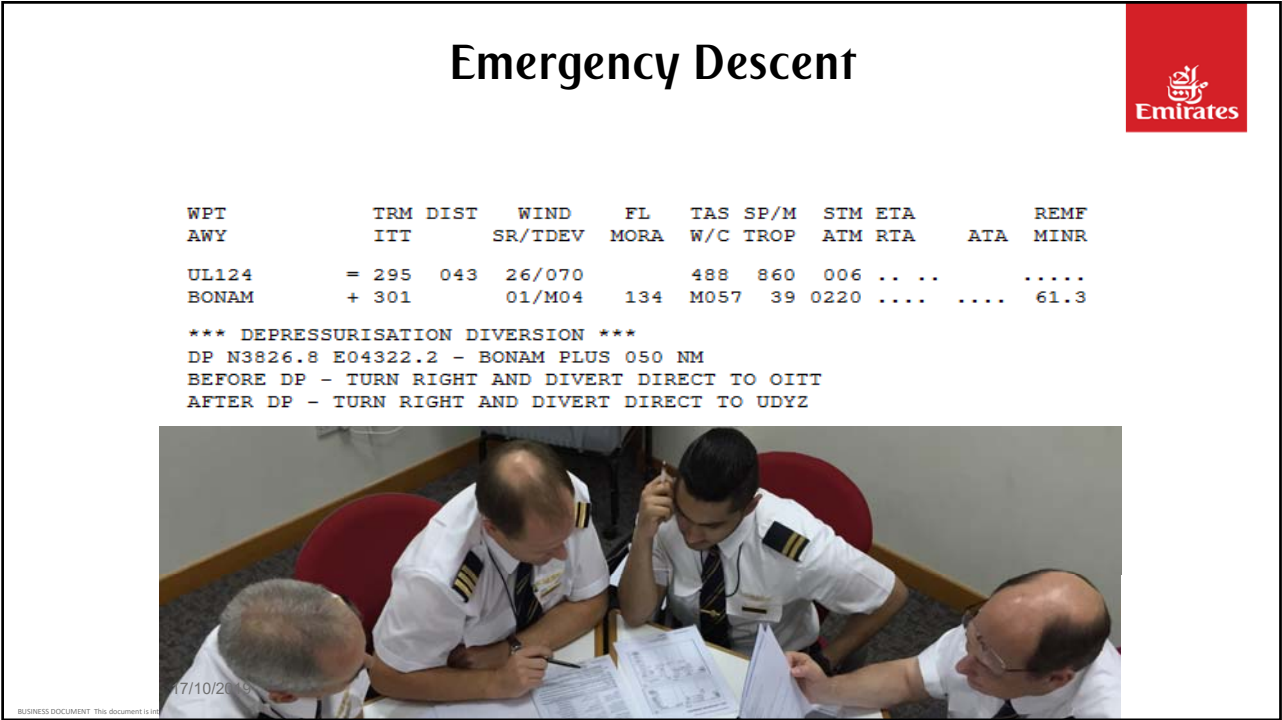
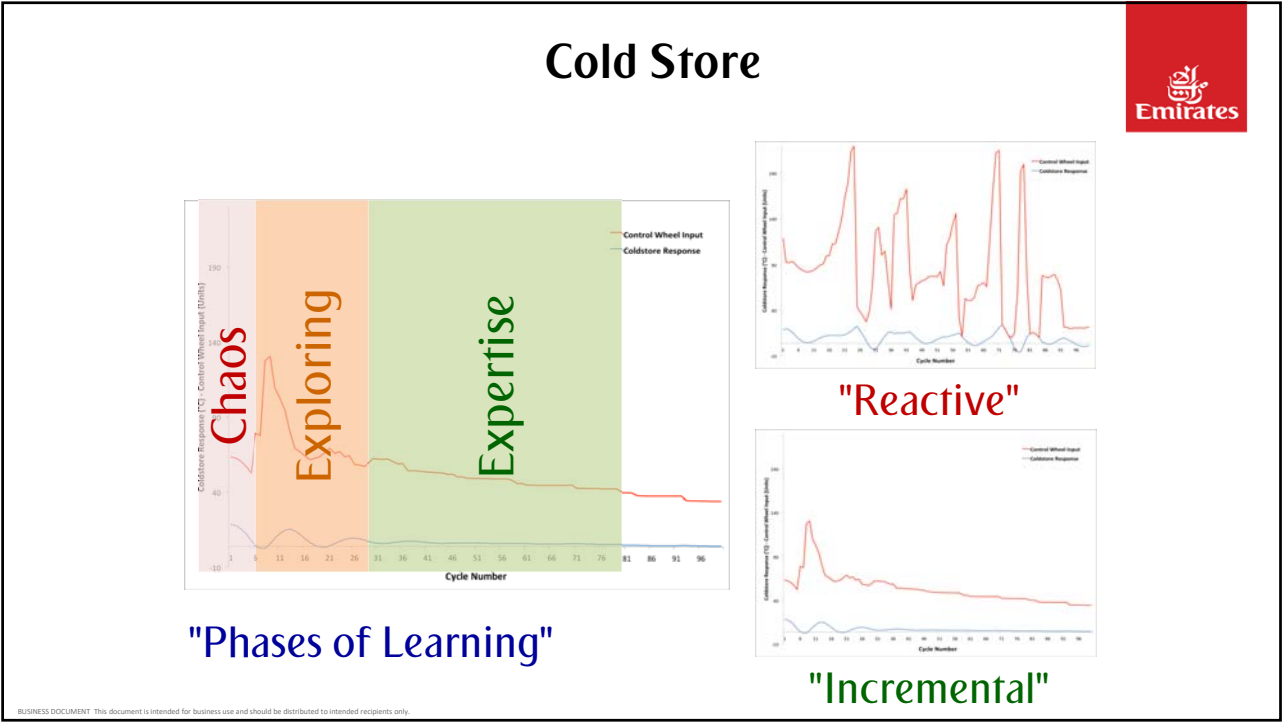
Current Value

+ 14.1

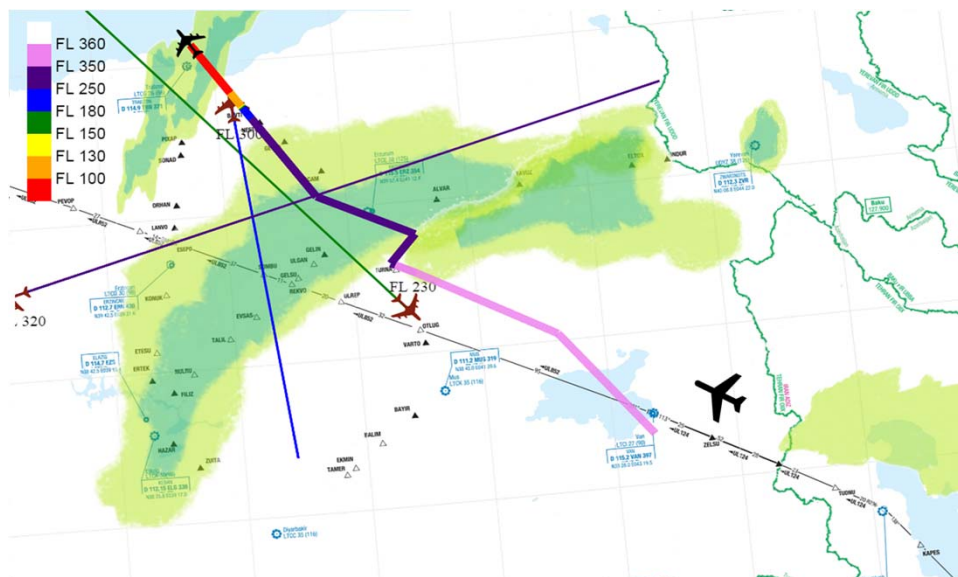
100

8





Emergency Descent



And now...



"Shadow Boxing"



Challenge - how to develop competence and expertise!



Availability and cost of experts and training!

"Shadow Boxing"



- Development of perceptual and cognitive skills, i.e. "thinking skills"
- Scenario based, with stops for assessment and decisions
- Action options, prioritisation of goals, select cues to monitor, identify information to seek etc.
- 3-5 options, ranked per preference and explained by trainees
- Then compared with expert results, reflected and discussed



PRIORITIES

- 1.
- 2.
- 3.



"Shadow Boxing"

At takeoff, a civilian suddenly runs across the runway, soldiers run after, a soldier then waves to hurry up takeoff



What would you look for? Option 1 Option 2 Option 3	What would you do? Option 1 Option 2 Option 3
--	--



"Shadow Boxing"

- Tried with soldiers
- Social/cognitive skills for interaction with civilians
- Significantly improved performance in short time
- No limit on trainee numbers, when or where to train, etc.
- Have been used with firefighters, police, etc.





Way Forward

Sharing of experiences for scenarios?



Cooperation on development of training?



Safer and Better with Training

- Developing Training that Develops Expertise

- "The Story" = Most important!
- Learning before technology
- The Goal = Shortcut to expertise
- Development require cooperation



