

Air France

“FORMER UTILE” - ATQP implementation

Opportunities and challenges

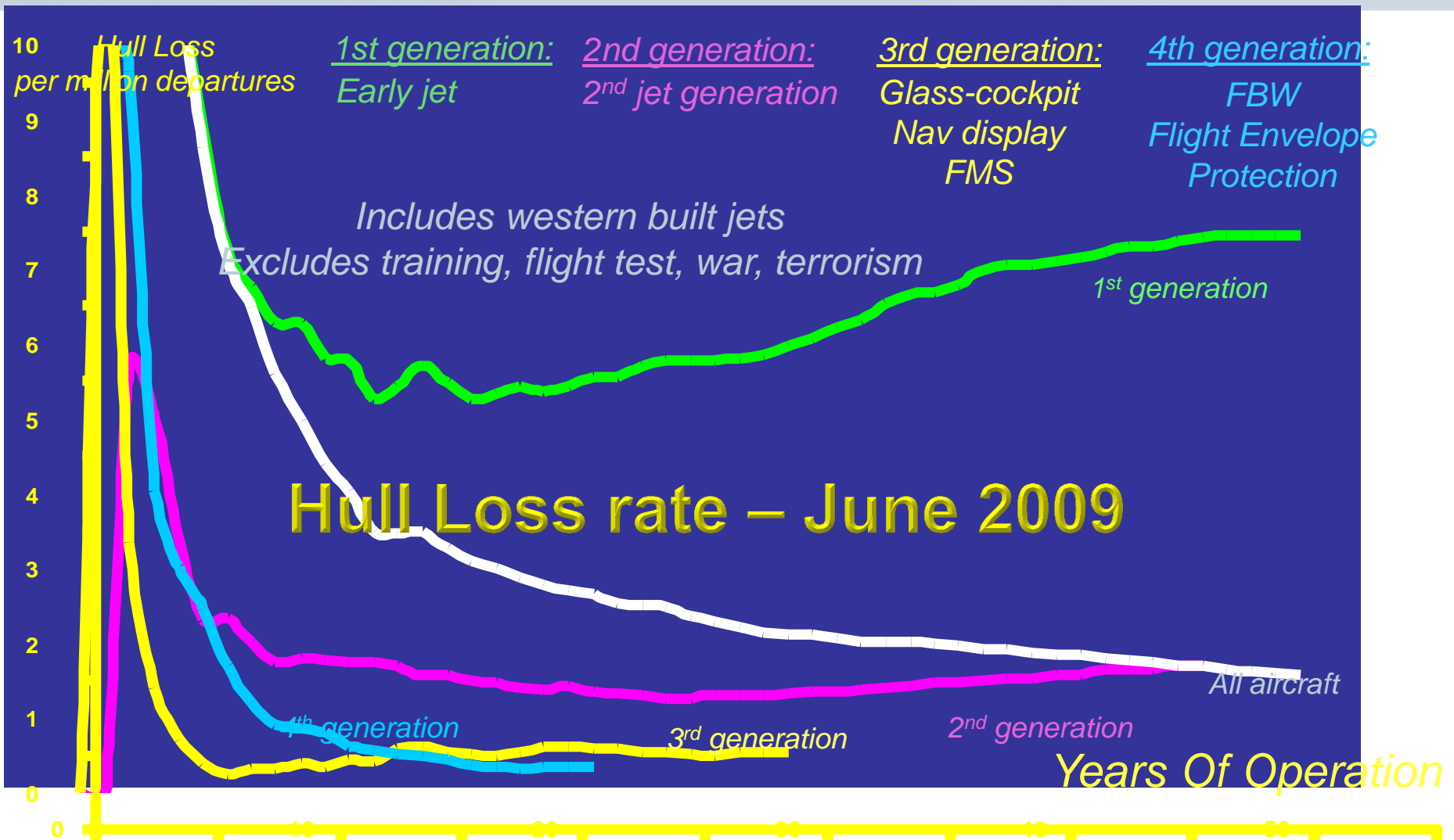
Michel Lacombe
AF 777 CPT
Training Data Analysis

DGAC - Symposium-December 2014



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The generic problem...



ATQP Options



If adequate – Develop then...
Enhance
CDT, Role Play etc

If inadequate – Train to proficiency
Then Develop..

24/10/2014

Capt D Mason – Emirates CFE

Trainers :
“The ability to fix issues
check”

“The ability to c

Trainees :
“I felt it was more
partnership”

“For the first time in... I think this will
help me on the line, relevant training, the
instructor was
outstanding”

The benefits of ATQP

**Less Checking – More training
Covers individual needs
Training proficiency will improve**

...very worthwhile investment of
money

...doing less routine checking and more
relevant training

The pilots and trainers all like it

- Training proficiency and safety will be improved
- We're saving money!

ATQP

BRITISH AIRWAYS

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Lessons learnt about ATQP

- Talk to the regulator at an early stage
- Keep the programme design simple and objective
- If it needs a new set of people to run it it's too complicated
- Get the training or validation early as they will be selling it for the day
- Think about any system changes you'll need, e.g. training the new validity periods

**TALK TO THE REGULATOR
from the beginning
AND
KEEP IT SIMPLE !!!**



ATQP

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Components of an ATQP

1. Task Analysis including Knowledge, Skills and Attitude
2. Training need Analysis
3. Competencies, method of assessment and Line Oriented Evaluation
4. Program for each fleet and instructors
5. Data monitoring/analysis program
6. Process if proficiency standards are not maintained



Task Analysis and Training Needs Analysis

ROULAGE ARRIVEE (Piste dégagée -> C/L Parking effectuée) TAXI TO THE PARKING (Runway vacated -> PARKING C/L complete)	Actions Actions	Réfé 02 04 04 01 TU Proc ANO Préambule
Traiter toute situation anormale et d'urgence conformément à la méthode ABN <u>React to any abnormal or emergency according to ABN method</u>		GEN OPS 01 12 03
Communiquer avec l'ATIS clairances. <u>Comply with ATIS</u>		
Assurer la veille anti-collision <u>Maintain an effective lookout</u>		
Suivre de manière continue le au sol. <u>Ensure continuous monitoring</u>		

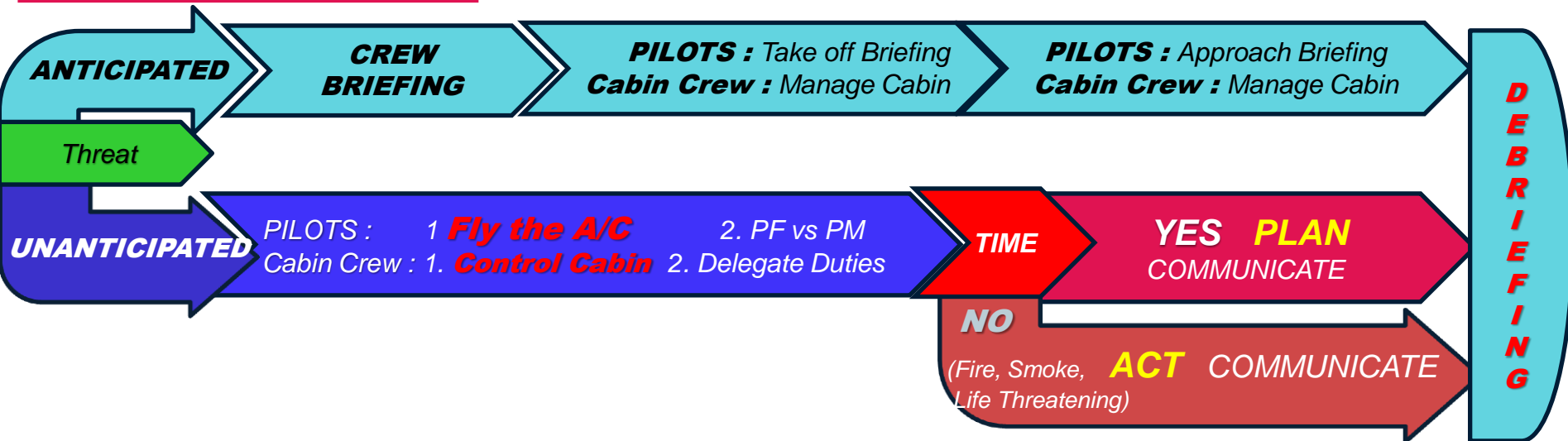
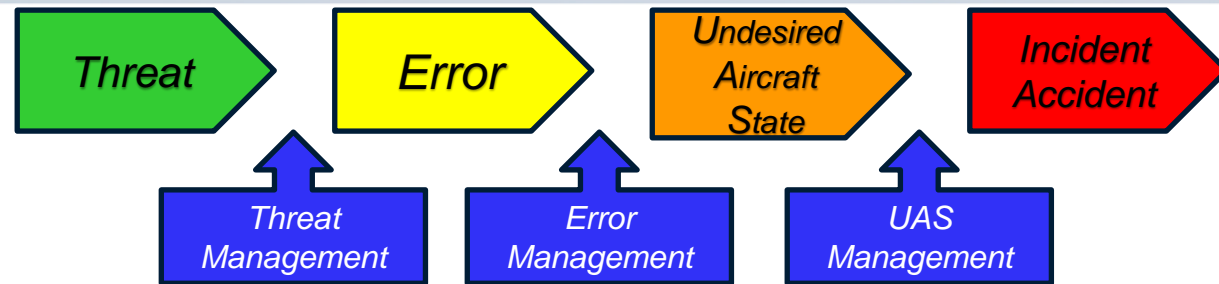
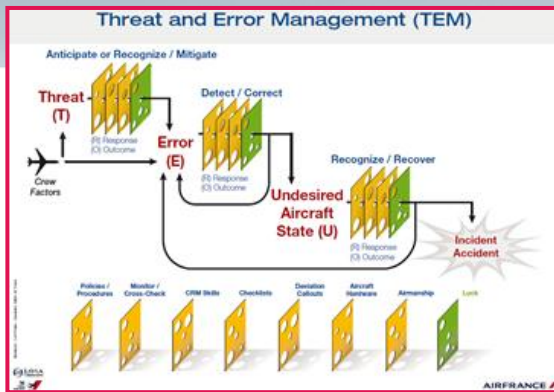
Tasks done by a pilot on a normal flight.

Training needs Analysis

An objective methodology to turn the TA into a training and checking syllabus.

Just need to determine what will be trained and what will be assessed, and how often.



















What do we have to evaluate - Situations



Threats, errors and UAS are every day normal events and crews need to know how to manage them in order to assure aircraft safety.

We can evaluate how our crew manage situations

What do we have to evaluate - Competencies

Characteristics	Competencies				Remarks		General view	
	NA	A	S	S+	Comments			
• Leadership and Work Team Building			X				Good participation	Cruise X
• Situation Awareness				X			Always optimum	X
• Work Load Management			X					
• Decision Making			X					
• Communication			X					
• Manual Aircraft Control			X					
• Automation Aircraft Control			X					
• Application of procedures				X			Good monitoring of track (PF and PM) calls out C	
• Knowledge			X					

Preparation of
Pre-flight
Start up
Taxi out
Take-off
Climb

Competency : A combination of skills, knowledge and attitudes required to perform a task to a prescribed standard

Phases of flight

Preparation of flight
Pre-flight
Start up
Taxi out
Take-off
Climb
Cruise
Descent
Approach
Landing
Taxi in
Apron and post flight
Go around

Where do we find our Competencies

Manual aircraft control

Trajectory conception

Monitoring

Automation aircraft control

Decision Making
Leadership and Team building
Workload Management
Situation Awareness

	NA	A	S	S+	PROFESSION SKILLS	KNOWLEDGE	NON TECHNICAL SKILLS
• Accuracy				X	Precise and anticipate		
• Monitoring parameters			X				
• Control of integrated aircraft				X			
• Trajectory	NA	A	S	S+	PROFESSION SKILLS	KNOWLEDGE	NON TECHNICAL SKILLS
• Trajectory			X				
• Use of Automation			X				
• Taxiing			X				
• Take-off			S	S+	PROFESSION SKILLS	KNOWLEDGE	NON TECHNICAL SKILLS
• Take-off			X				
• Landing / Go-around			X				
• Emergency procedures			X				

Conduct of the flight

	NA	A	S	S+	PROFESSION SKILLS	KNOWLEDGE	NON TECHNICAL SKILLS
• Personal preparation			X				
• Fuel management			X				
• Flight monitoring			X				
• Control of integrated aircraft				X	Good management of threats		Cooperation
• Application of procedures			X				
• Incidents			X				

COMMENTS :

Communication

	NA	A	S	S+	PROFESSION SKILLS	KNOWLEDGE	NON TECHNICAL SKILLS
• Briefing			X				
• Announcements			X				
• Radio communication			X				

COMMENTS :

Conduct of the mission

	NA	A	S	S+	PROFESSION SKILLS	KNOWLEDGE	NON TECHNICAL SKILLS
• Cabin Crew Management			X				
• Public Address Announcements			X				

COMMENTS :

Knowledge

	NA	A	S	S+	PROFESSION SKILLS	KNOWLEDGE	NON TECHNICAL SKILLS
• OM			X				
• FCOM			X				
• SECURITY			X				
• SAFETY			X				

COMMENTS :

Knowledge

- Procedures
- Systems
- Performances
- Environment

AF Level of requirement – Grading system

LEVELS OF REQUIREMENTS				
	UNACCEPTABLE	ACCEPTABLE	STANDARD	STANDARD +
	Flight Safety is engaged	Flight Safety is ensured	Safety margins are maintained	Safety margins are enhanced by good practices
SITUATION	<ul style="list-style-type: none"> Major UAS 	<ul style="list-style-type: none"> Ignored or abused threat Ignored or abused error Intentional error Minor UAS 	<ul style="list-style-type: none"> Threat anticipated or recognized and mitigated Error detected and corrected 	<ul style="list-style-type: none"> TEM outstanding performance
COMPETENCIES	<ul style="list-style-type: none"> One UNACCEPTABLE Too many ACCEPTABLE 	<ul style="list-style-type: none"> One or more significant ACCEPTABLE 	<ul style="list-style-type: none"> Occasional ACCEPTABLE or STANDARD + are not significant 	<ul style="list-style-type: none"> Performance observed always STANDARD or STANDARD +
	Adjournment, treatment before return to flight	Must take into consideration recommendations to improve the performance	Performance expected and to be maintained	Performance can serve as an example

Implementing a new training system - Trainers

you need to train and standardize the instructors using these techniques



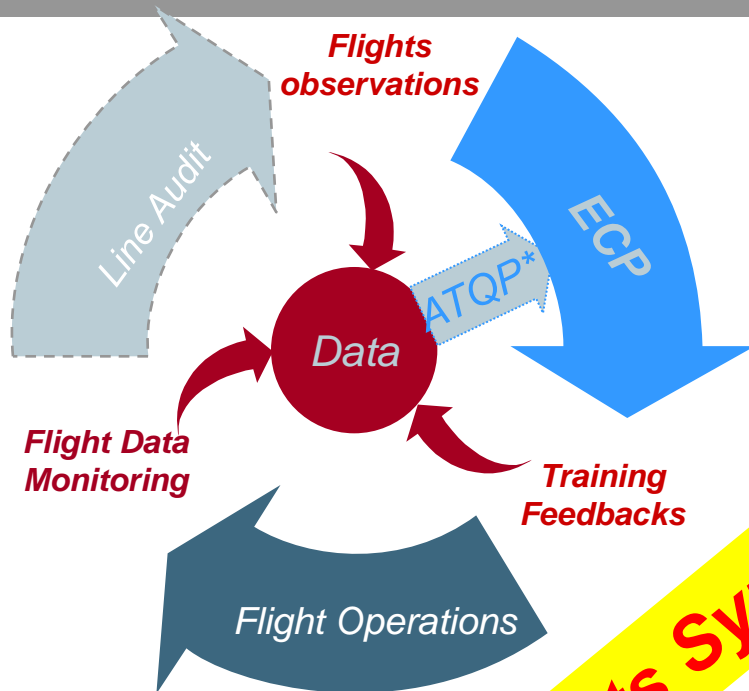
**Barbara Holder
(Boeing)**

Implementing a new training system - Trainees

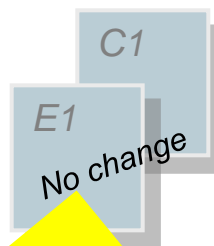
you need to inform the Line Pilots about this new system

Training AF pilots on AF main risks areas

Adapt training program to individual needs



Still 4 Full Flight SIM sessions every year



Training
- Company Exercises

Evaluation

- LOE
- Company Exercises

- ✓ exercise 1
- ✓ exercise 2
- ✓ exercise 3
- ✓

Pilots Symposium



Proposed exercises by the instructor after LOE observations

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* Alternative Training and Qualification Programme

	2012	2013	2014
A320 →	transition	ATQP	
LC →	--	transition	ATQP

How to measure Pilots proficiency?

From the operational standards using the Flight Data Monitoring and the SMS.

From the ASR - feedbacks – interviews – surveys of trainers and trainees.

From the training standards using the existing training records.

From the way events are managed.

From the way competencies are used to manage events.



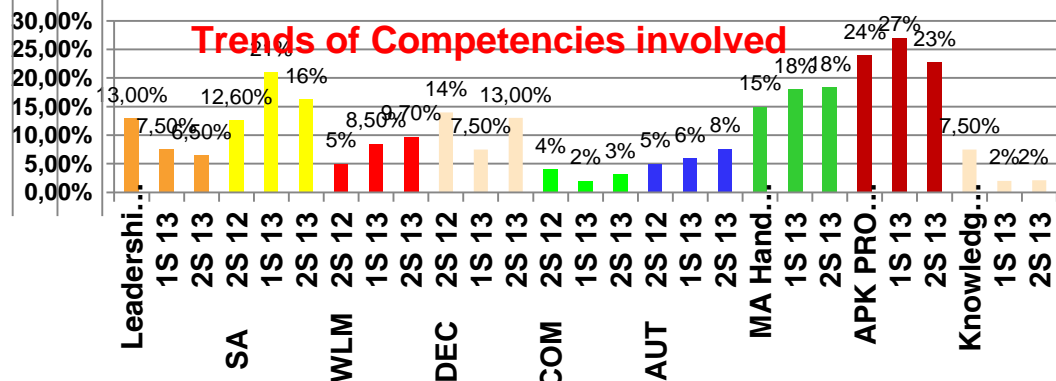
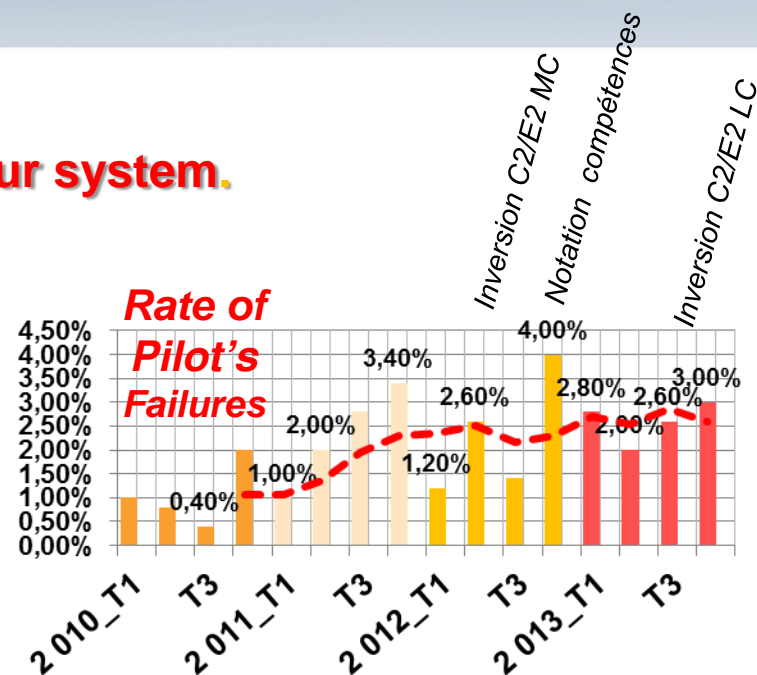
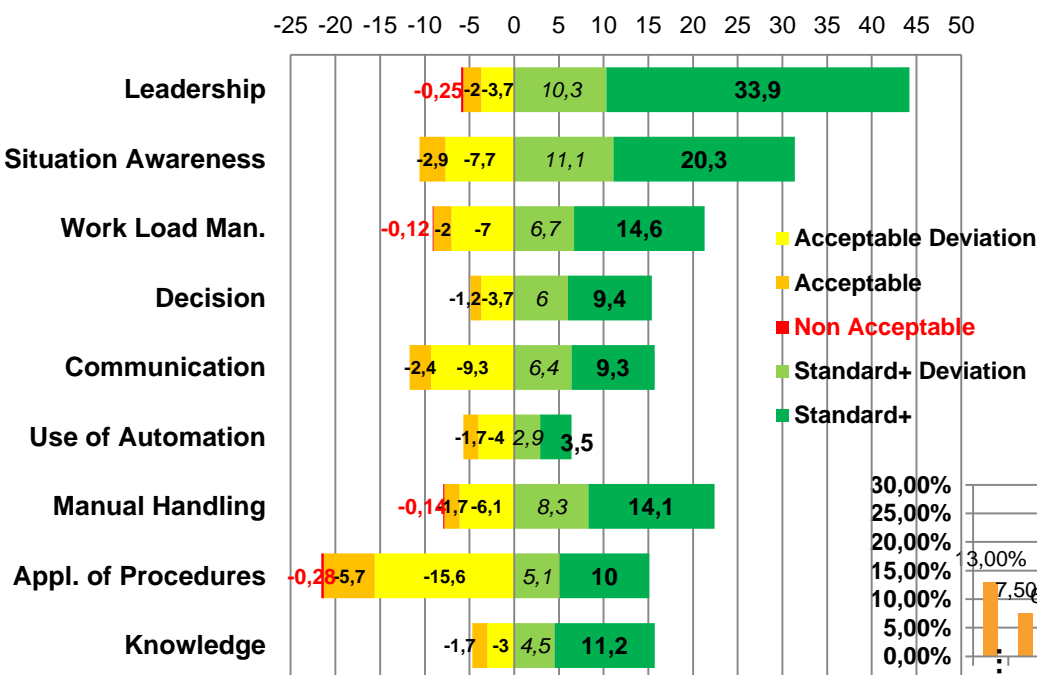
Caractéristiques	Compétences	Remarques	General view
Leadership and Work Team Building	X		Good participation
Decision Making	X		Good participation
Communication	X		Good participation
Manual Aircraft Control	X		Good participation
Automation Aircraft Control	X		Good participation
Application of procedures	X		Good participation
Knowledge	X		Good participation

	NA	A	S	S+
Coopération et Leadership			1 Exercic...	
Conscience de la situation	2 Exercic...		1 Exercic...	2 Exercic...
Gestion de la charge de travail				
Décision				
Communication				
Pilotage manuel				
Utilisation des automatismes				
Procédures			1 Exercic...	
Connaissances				1 Exercic...

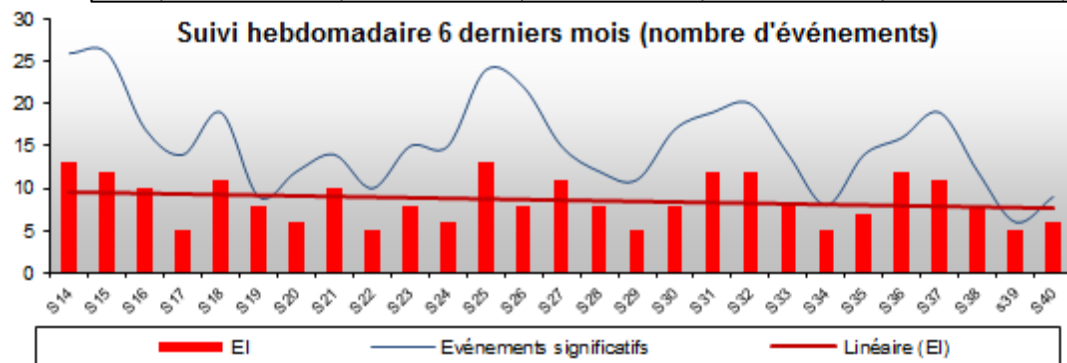
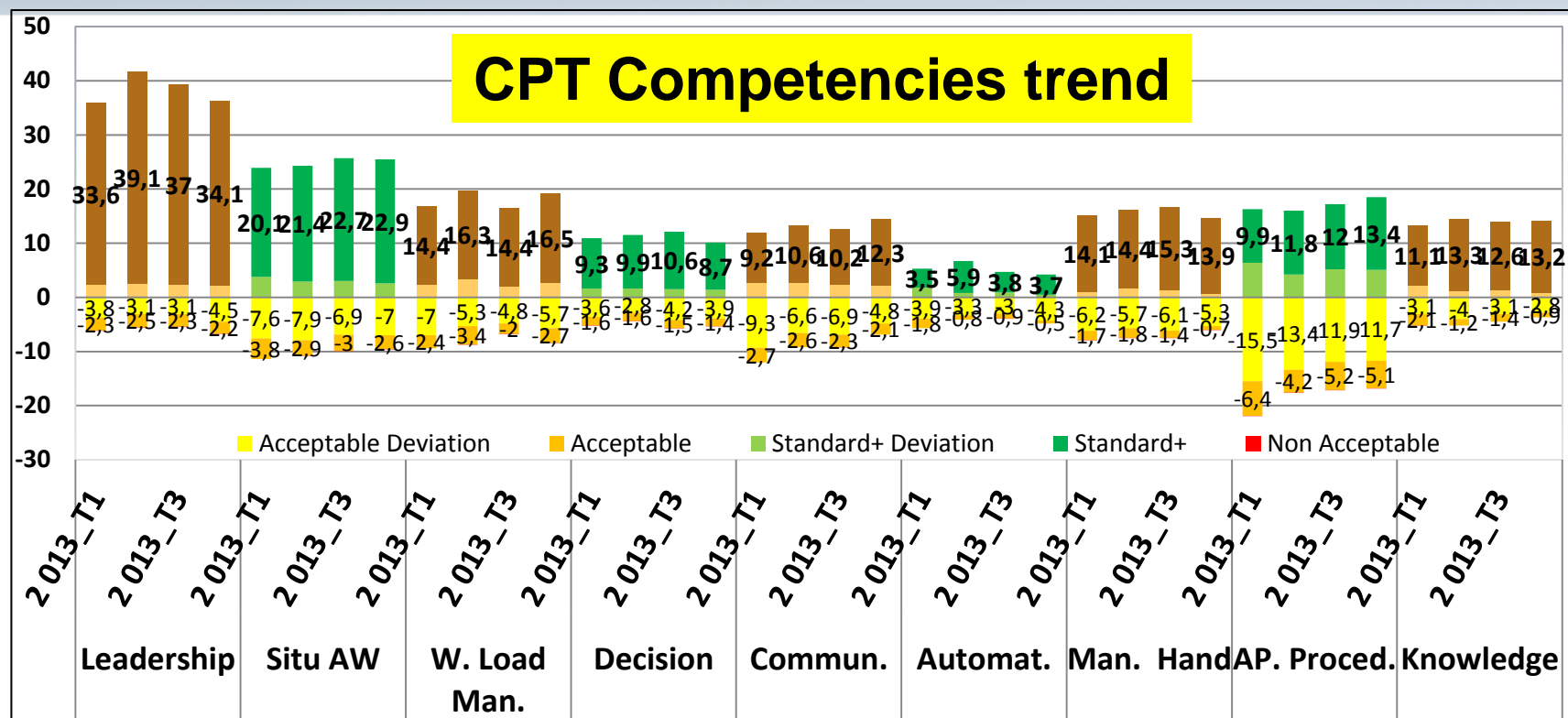
How to measure Pilots proficiency? - Indicators

We were able to develop:

Specifics indicators to follow and improve our system.



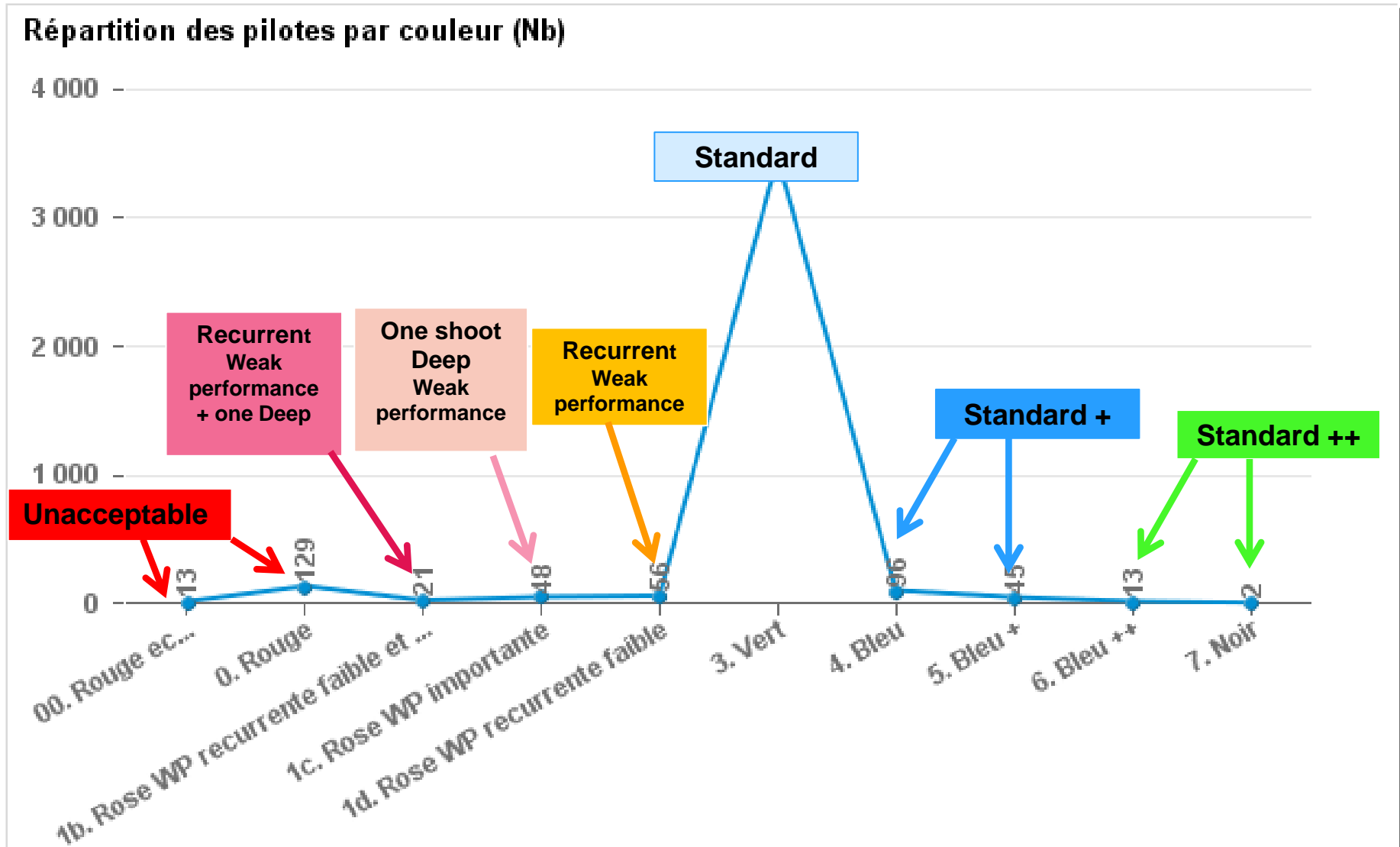
How to measure Pilots proficiency? - Indicators



**Adverse Events
Monitoring
(SMS/FDM)**

Pilots proficiency-Opportunities–Manage Weak Performance

Distribution of pilots on competencies on 2013



To build the LOE

LOE Design

Several scenarios
Evidence Based Training
More focus on normal operations
Working as a crew

AF topics

- LOE scenarios of 4 events created by the trainer on the day from a multi-choice menu.

Preflight / Start Up / Taxi out : Event 1

Take Off / SID / Climb : Event 2

Cruse : Event 3

Descent / Holding

STAR, Approach / Landing : Event 4

Taxi in / Shut down/ Secure

LOE EVENT SAMPLE

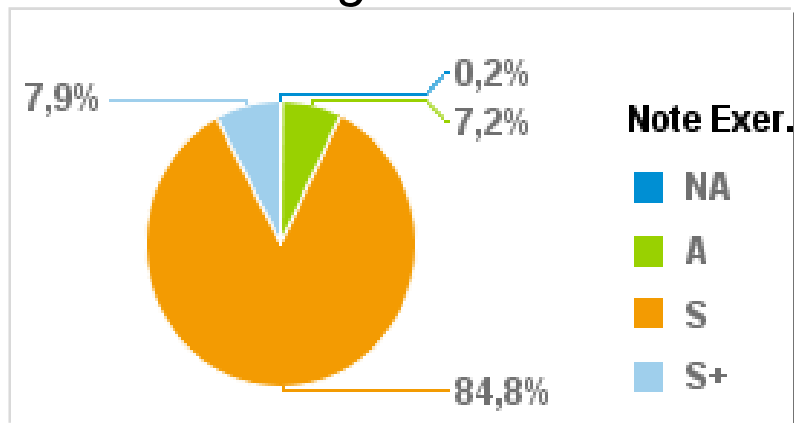
Event Number 1D	
Event	<u>Electrical Bus Isolation Fault</u>
Application Fleet	<u>B777</u>
Event Trigger	<u>After Engineer dispatched</u>
Event End Point	AC taxies
Distracters	Heathrow GND (121.90) "Emirates 2, confirm you are pushing back now?"
Supporting Script/Details	EKIB-8R1 and MEL
How was the event handled?	
<u>Problem Solving & Decision Making</u>	Did the crew understand the problem?
<u>Situational Awareness</u>	Were the crew cognisant of environmental influences while dealing with problem?
<u>Workload Management</u>	Did the crews demonstrate efficient workload management and prioritisation while dealing with the problem?
<u>Leadership, Teamwork & Support</u>	Did CM2 provide appropriate support to CM1 while managing event?
<u>Communications</u>	Did the crew liaise adequately with Ground Crew, ATC and Cabin Crew?
<u>Knowledge</u>	Was crew aware of EKIB-8R1?
<u>Application of Procedures</u>	Did the crew consult the relevant bulletin and carry out the relevant procedures including ECL correctly?
<u>Use and Management of Autoflight Systems</u>	Not Applicable
<u>Handling</u>	Not Applicable

ATQP ideas used by other operators:

- LOE combined with LPC.
- LOE event defined by SMS/FDM trends.
- Pilots divided into three « tiers » based on training performance.

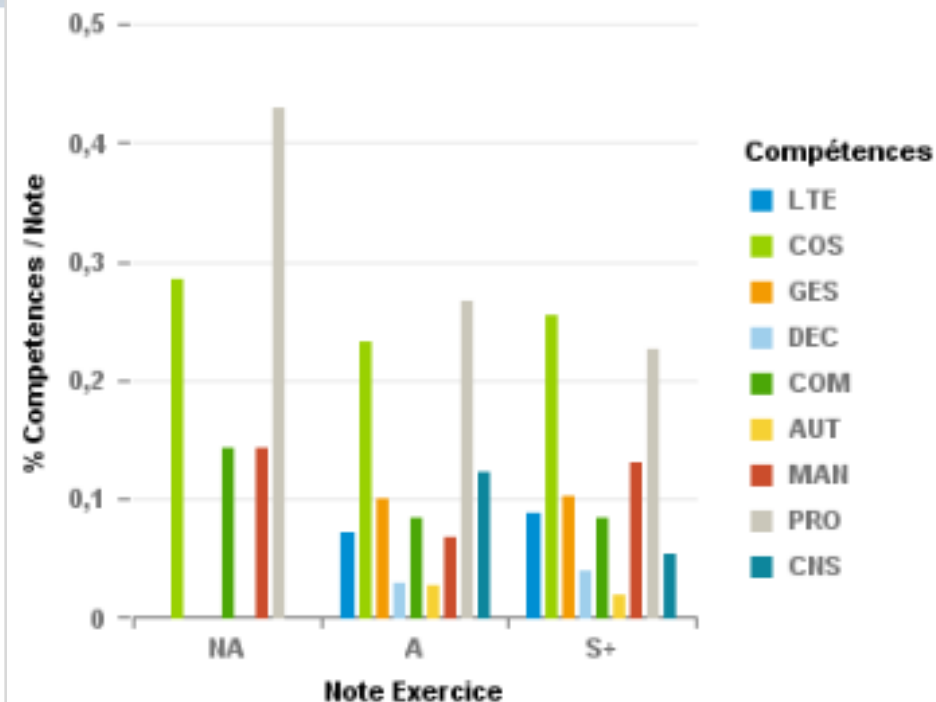
Indicators – F/O contribution in A320 LOE management

Signal



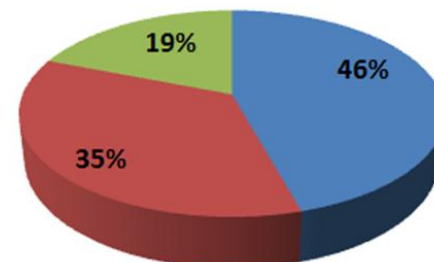
Exercices avec le + d'« Acceptable »

Exercice	Tx
ENG STALL en fin de montée	0,31
FCU 1 + 2 FAULT	0,26
SEC 1 FAULT (SEC 3 en tolérance au	0,22
Erroneous RADIO ALT height indicatio	0,18



Répartition des compétences dans les événements reportés en Acceptable et Non Acceptable

■ Procédures ■ Conscience de la situation ■ Connaissances





LOQE

- A Goal
 - To target an area of the operation under-represented in the data
- A Process
 - Structured
 - Focused
 - Standardized
- Management
 - How initiated? Who controls?
 - Training

LOQE

Utilisation du radar :

Les échelles et le tilt sont-ils correctement utilisés?

A320 :

Non

23%

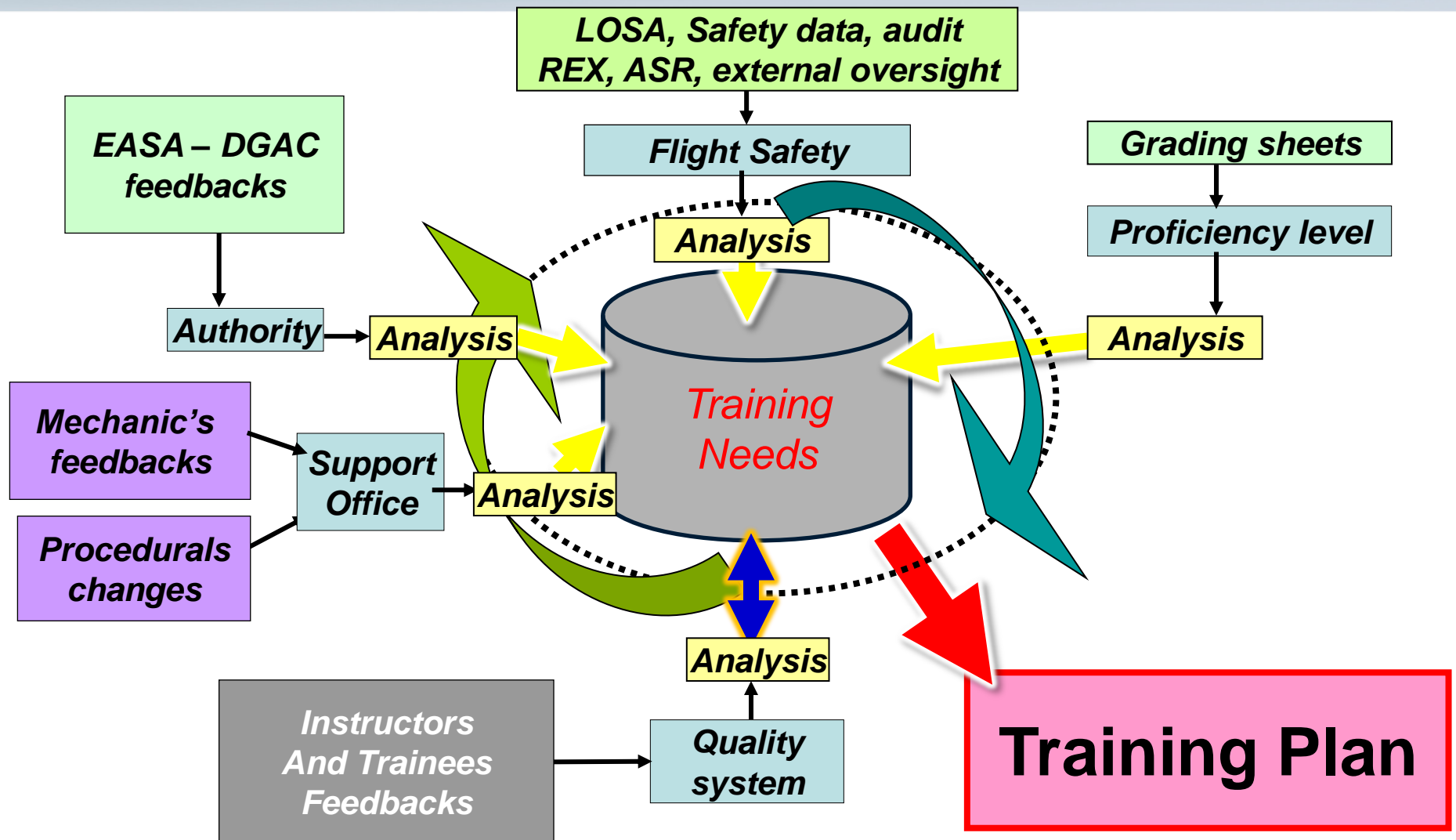


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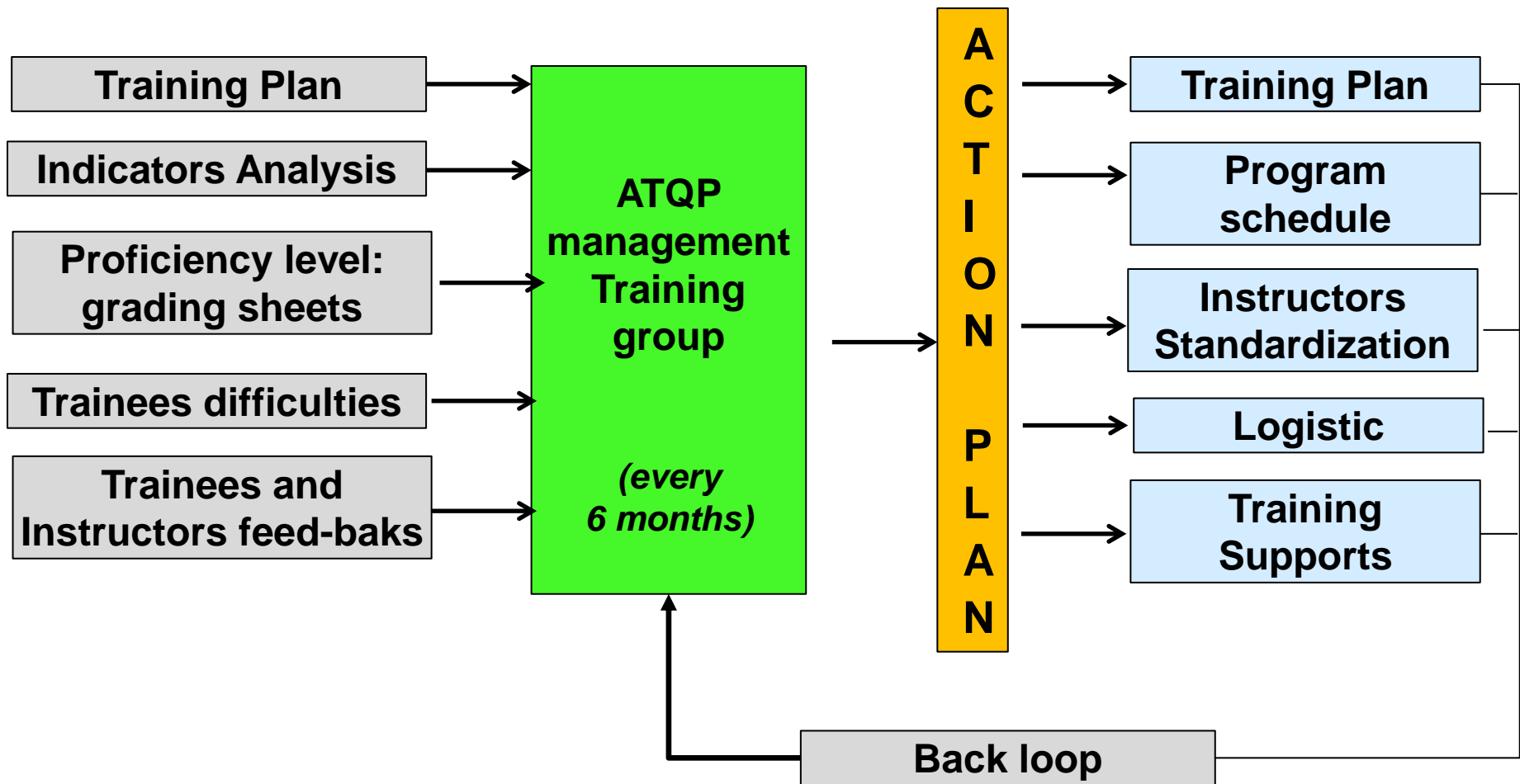
Partie 6	
6.1	Croisière (M)
	Non Fait <input type="button" value="Non"/> Fait <input type="button" value="Fait"/>
6.1A	Les radars sont sélectionnés sur les deux ND (M)
	Oui <input type="button" value="Oui"/> Non <input type="button" value="Non"/>
6.1B	Echelles et TILTs sont conformes à la doctrine (M)
	Oui <input type="button" value="Oui"/> Non <input type="button" value="Non"/>

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ATQP Management System - Training Plan Definition



ATQP Management System – Deficiency management





Thank you !!!

***“Not bad, you’ve passed your check
now lets talk about that landing!”***