



NANSC SMS Implementation Experience

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OUTLINE

- Introduction
- Status of implementation
- Achievements
- Future Challenges
- Relation with canso

introduction

- NANSO Started with the study of the operation system to determine the size and complexity of the operations. (2006) including gap analysis.
- Setting the Company **SMS Policy** in manner that covers the **non-punitive Policy** as an essential part for safety culture.
- Set an accurate description of the **accountabilities and responsibilities towards safety** for all layers of organization.

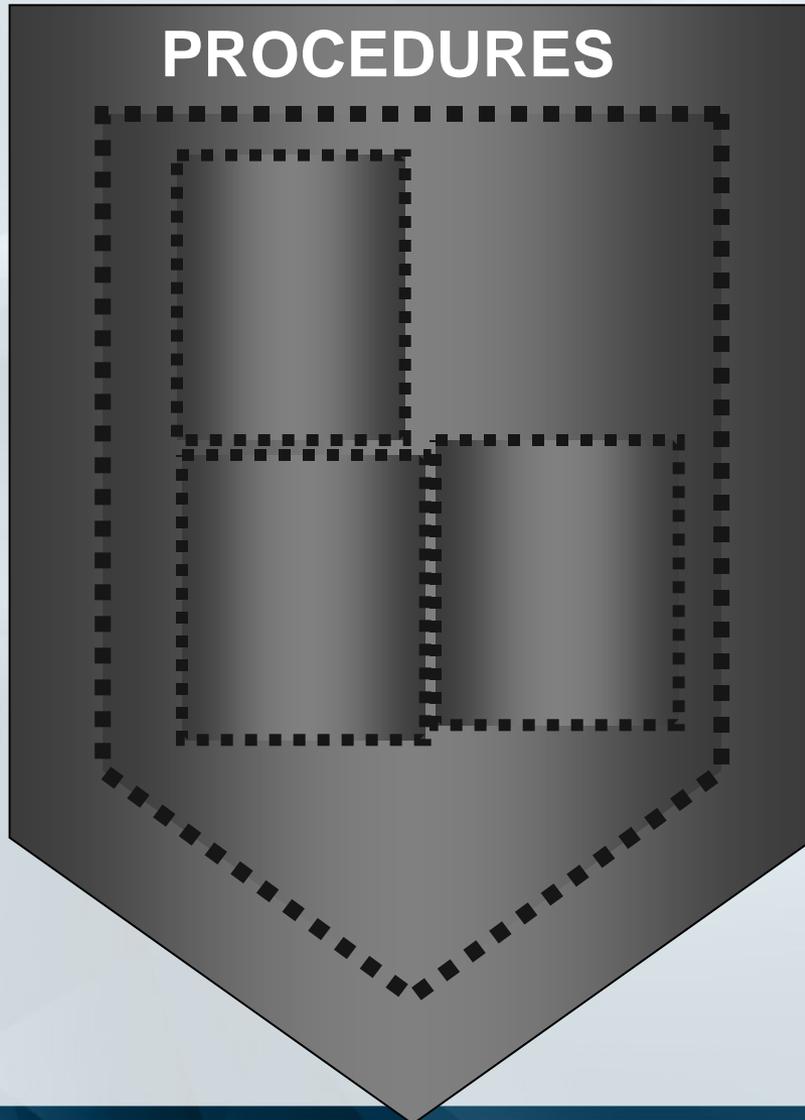
(Top management – line management – all staff and safety personnel)

- Produce the **SMS manual** which contains :
 - General part
 - Safety organization
 - Safety performance monitoring
 - Safety assessments
 - Safety audit
 - Safety promotion

SMS design principles

- Integration
- Optimization
- Continuous improvement.
- Analytical
- Human performance & organizational factors
- Change
- Open reporting & standardization

Strengthening Defences



SAHARA REPORT

(Safety And Hazard Advice Requiring Assessment)

Please write clearly, outline the problem and detail your possible solution if applicable. Forward your completed report to ATS Safety Manager or Unit Safety Representative.

PART 1 – Safety Concern

SAFETY CONCERN:

POSSIBLE SOLUTION(S):

NAME: _____

DEPARTMENT: _____ *DATE:* _____

Training



TRAINING DIRECTORATE

NANSC ATC

Unit Training Plan
Cairo International Airport
& Area Control Centre

STAFF



Competency

AIR TRAFFIC CONTROL OFFICER CERTIFICATE OF COMPETENCE

To be completed and forwarded to the General Director Area Control Centre.

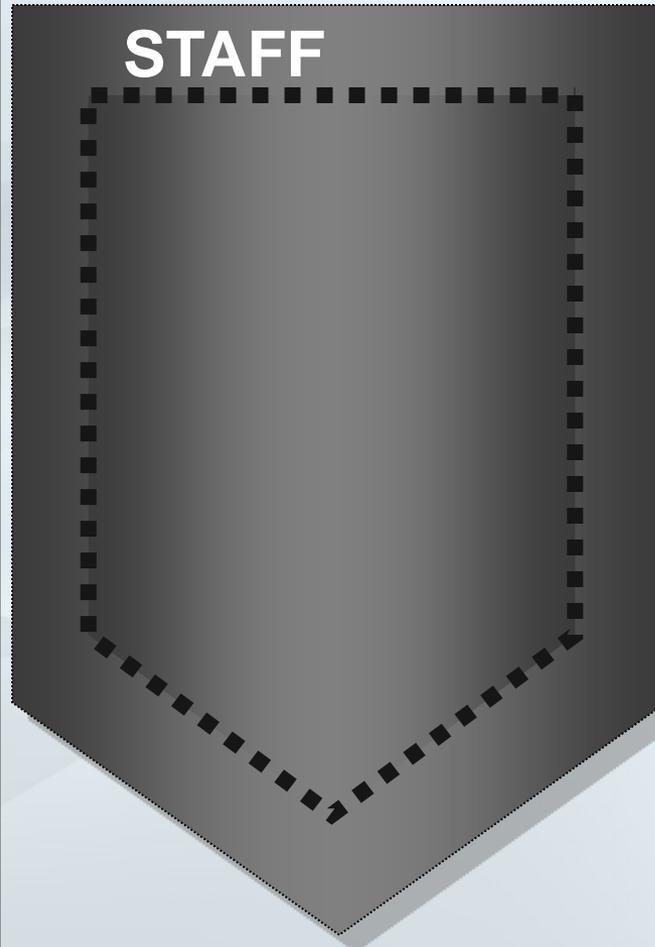
Name:		Rating:	
First / Subsequent / Renewal			
ASSESSMENT	Date Completed	P	REMARKS
		FAIL	
1. Practical			
2. Written/Oral Knowledge Assessment			
3. ECT			
4. Audio Review			
OVERALL RESULT			

Marking a "P" in each category indicates the ATCO being rated is fully satisfactory in the performance of job related duties.

Signature of ATCO: _____ Date: _____

Signature of LCE: _____ Date: _____

Signature of GDACC: _____ Date: _____



Status of Implementation

- NANSOC started the implementation phase at 2007 with the second pillar (Safety Risk Management) and the fourth pillar (Safety promotion) in parallel.

Note : this will start reactively and once experience is gained it will be reactive and proactive at the same time.

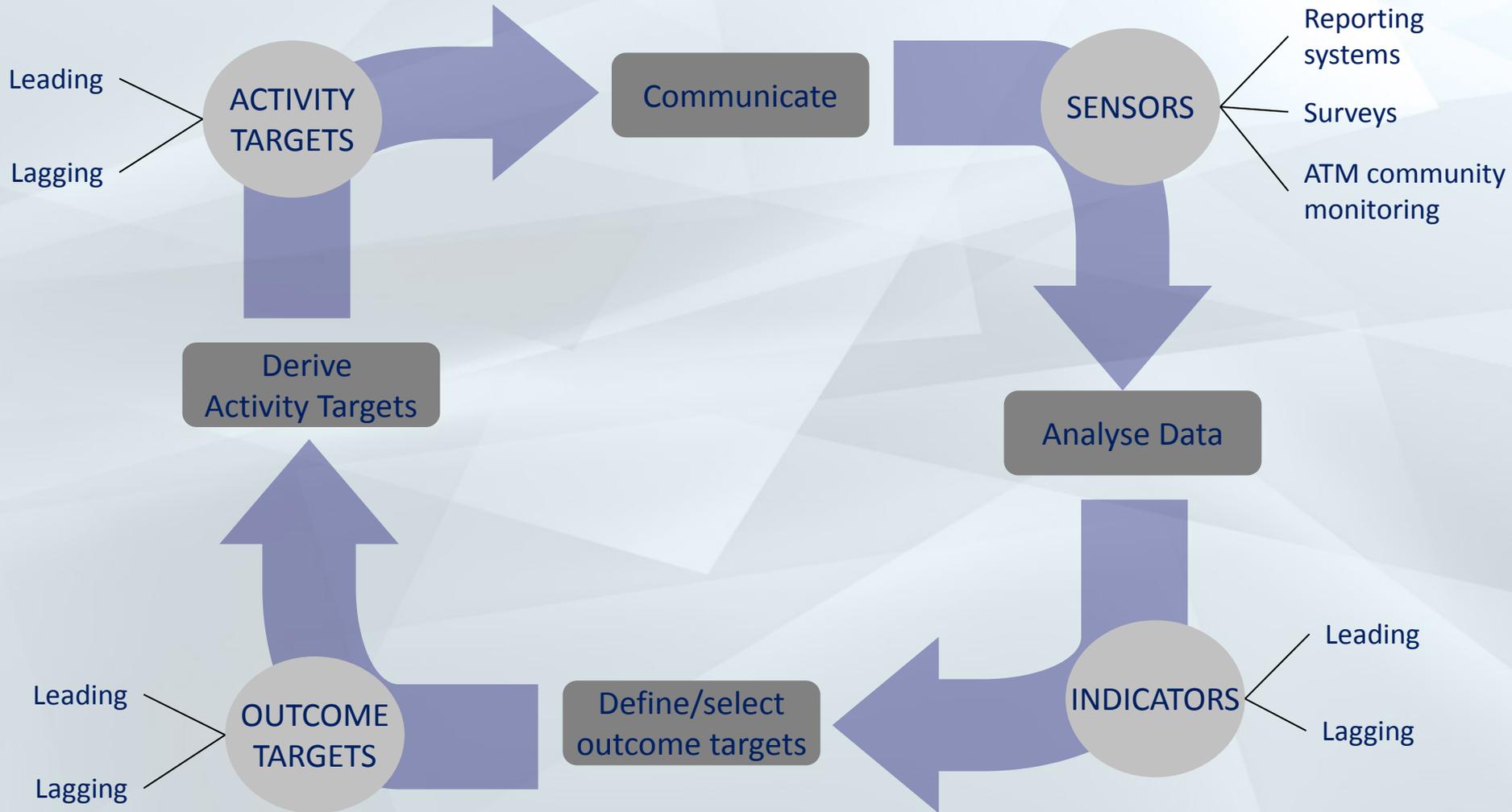
- Safety dept. started to build up a specialized SMS team , it took 3 years. And it is continuing .
- NANSOC fosters an effective partnership and collaboration in all safety matters with ECAA .
- Hazard and risk assessment is conducted qualitatively and quantitatively according to data availability, with reference to ALARP methodology.

- Then after a period of time we started the assurance activities like
(safety reviews , internal audits)

To complete the cycle of SMS and to raise the effectiveness of SMS.

- **Set the key performance indicators for SMS :**
 - Occurrence number and classes.
 - English language proficiency for controllers.
 - Number of safety bulletins and briefings distributed to staff.
 - Safety culture measurement within operation units.
 - Identification of key risk areas.
 - Change management processes.
 - Number of awareness courses and workshops conducted.

Safety Monitoring Loop



Achievements

- Change the operation staff and management point of view and concept about safety. (there is a considerable progress)

(but still need a lot of work to be done in this field)

-In the context of safety promotion , a continuing dissemination of safety bulletins and briefings to all staff have been an effective method of raising safety culture and maintain communication with operational staff.

-design and production of human factors awareness document to be inserted in ATC training syllabus. (including TEM conceptual model)

-unification of risk assessment methodology in ATM operations.

ACHIEVEMENTS AT LAST 3 YEARS

Turn the SMS concepts and policy targets into a specific procedures

SMS Training

Integration of SMS awareness and questions within the rating process for ATC and technical personnel

Expand of Implementation

To 5 international airports
HGD
SHARM
LXR
ASN
BORG AL ARAB

Investigation

Total change Of the process to depend on analysis of H.F and root cause rather than blame game

System Based Approach

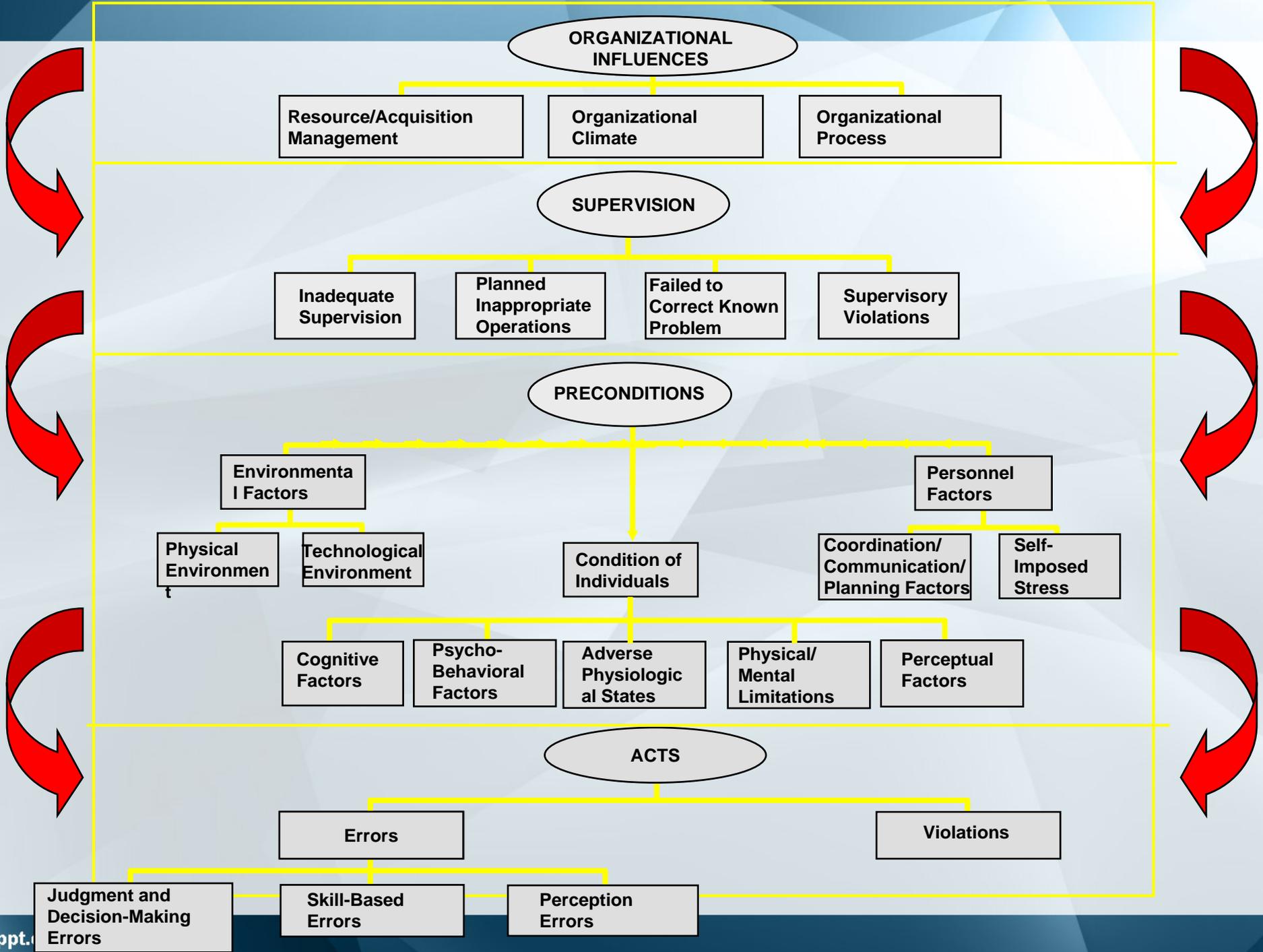
- Employ sms to bridge the outputs of other dept. for system benefits .
- Dept of competence check.
- Dept of flow control
- Dept of civil military coordination

TAGHEER Report Process Parts 1-3

TAGHEER Report (Threat Assessment Guidance Highlighting Early Evaluation of Risks)		
Location:	Date:	
PART 1 - PROPOSAL		
Title:		
Reason for Change:		
Details of Change:		
Interested Parties:		
Functional Hazard Assessment (FHA) Hazard(s):		
Proposed Date of Introduction: Originator/Comments:		
Name:	Position:	Section:
Date:	Signature:	

TAGHEER Report (Threat Assessment Guidance Highlighting Early Evaluation of Risks)			
PART 2 - Preliminary System Safety Analysis (PSSA)			
Hazard(s):			
Incident Sequence:			
Severity / Probability Risk Assessment: (See table)	3	2	1
Safety Requirement:			
Mitigation:			
Mitigated Severity / Probability Risk Assessment: (See table)	3	2	1

TAGHEER Report (Threat Assessment Guidance Highlighting Early Evaluation of Risks)									
PART 3 - ASSESSMENT SUMMARY and APPROVAL									
Hazard	Probability	Severity Category	Risk Classification	POST MITIGATION			Action	Person Responsible	Date Action Completed
				Probability	Severity Category	Risk Classification			
1									
2									
3									
APPROVAL by Safety Manager									
Remarks:									
Name:				Signature:					
				Date:					
APPROVAL by General Director									
Remarks:									
Name:				Signature:					
				Date:					



ORGANIZATIONAL INFLUENCES

- Resource/Acquisition Management
- Organizational Climate
- Organizational Process

SUPERVISION

- Inadequate Supervision
- Planned Inappropriate Operations
- Failed to Correct Known Problem
- Supervisory Violations

PRECONDITIONS

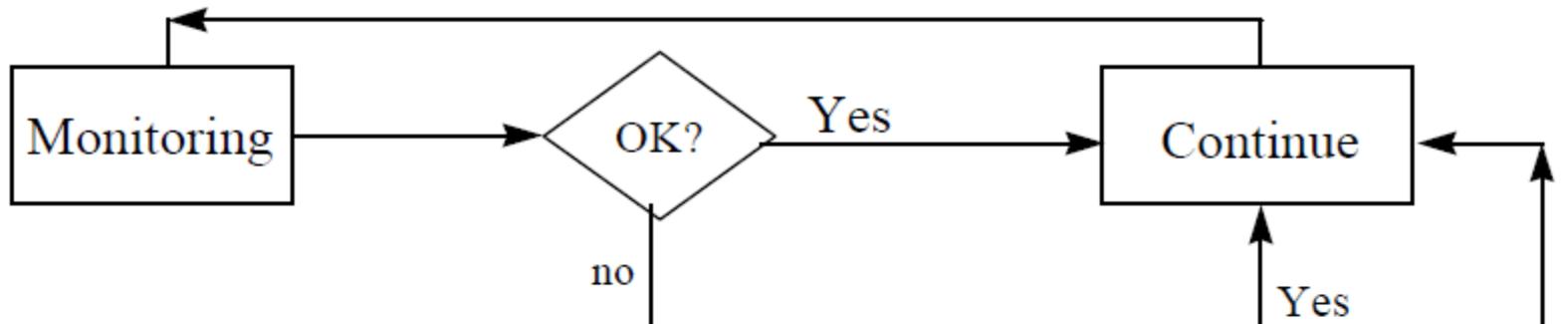
- Environmental Factors
 - Physical Environment
 - Technological Environment
- Condition of Individuals
 - Cognitive Factors
 - Psycho-Behavioral Factors
 - Adverse Physiological States
 - Physical/Mental Limitations
 - Perceptual Factors
- Personnel Factors
 - Coordination/Communication/Planning Factors
 - Self-Imposed Stress

ACTS

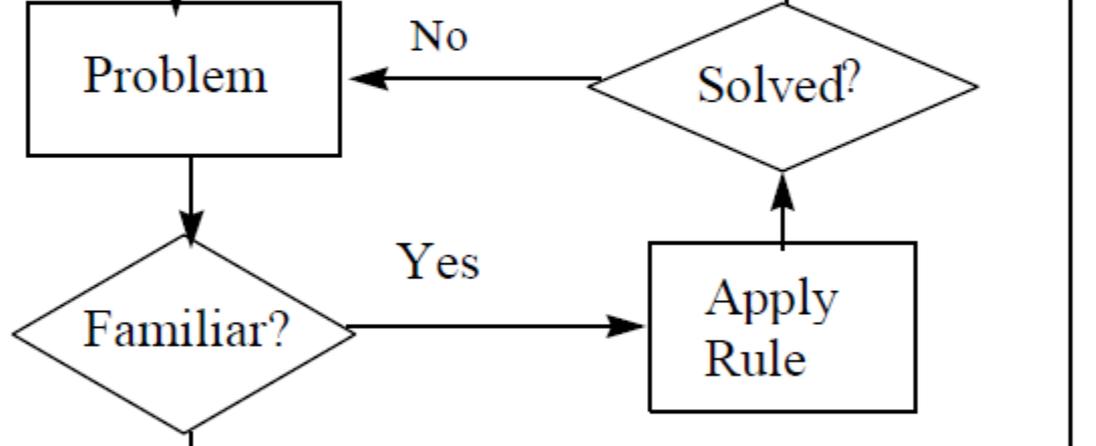
- Errors
 - Judgment and Decision-Making Errors
 - Skill-Based Errors
 - Perception Errors
- Violations



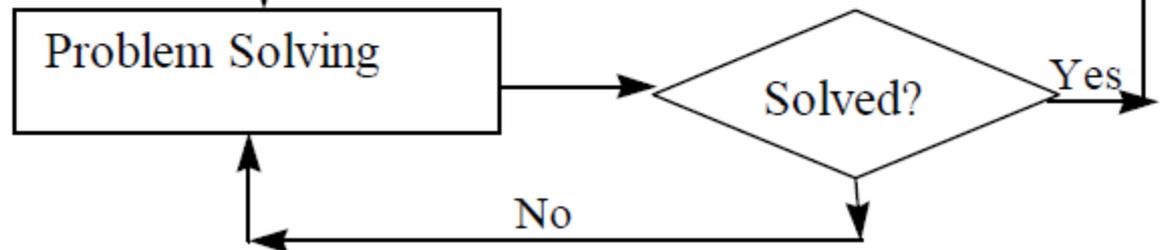
Skill Based Performance



Rule Based Performance



Knowledge Based Performance



Future Challenges and Requirements

- Increase the degree of SMS implementation by establishing a better communication link between operation units and all its interfaces .
- Continue to build up a competent team of operational safety specialists.
- The SMS is not yet mature at ATC units in a number of aerodromes , we plan to work at this issue for the next year.

Commitment to SMS

- Documents alone will not guarantee development of a positive safety culture.
- Employees must see **evidence** of management commitment to SMS.



**Management Attitudes & Actions =
the most important factor.**

Relation with CANSO

- ◆ NANSO was the first ANSP from the Middle East to join CANSO .
- ◆ NANSO is one of the founded members of CANSO in the Middle East in 2009.
- ◆ Provided NANSO with a mechanism to exchange information and best practices which assist NANSO in improving its SMS, and overall safety performance;
- ◆ NANSO always updated with all related Safety ATM best practices and researches , and publications.
- ◆ In close coordination in regard any Global or Regional Safety ATM issues.
- ◆ By participating in the **SMS implementation measurement surveys**, NANSO could determine its current status and gave us directions about how higher levels of SMS implementation can be achieved in the future .

Thank You