INTERNATIONAL CIVIL AVIATION ORGANIZATION

REGIONAL AVIATION SAFETY GROUP FOR AFRICA-INDIAN OCEAN REGION

RASG-AFI LOC-I TEAM IMPLEMENTATION

Project Title:	RASG-AFI Loss of control-in flight Team Implementation
Project proposed by:	Papa Issa Mbengue, Regional Officer, Flight Operations, Secretary of AFI RASG LOC-I safety support team
Safety Targets	Reduce LOC-I related accidents and serious incidents by 50% by the end of 2015
Project Champion:	Kenya
Project Champion base:	Nairobi
Project Champion focal point name and phone number:	Captain Joe Mutungi, Director Aviation Safety Standards and Regulation, KCAA. Tel: +254 722521503

1   Project Justification

- Safety is Aviation first priority globally and its constant improvement in Africa remains the biggest challenge, which brings together aviation stakeholders to set strategies.
- Loss of control in-flight (LOC-I) is of a global concern as it has been found to be the main cause of accidents with the highest fatality rate and hull loss.
- Aircraft upset is an in-flight condition whereby the pitch of the aeroplane unintentionally exceeds either 25 degrees nose up or 10 degrees nose down; or a bank angle exceeding 45 degrees; or flight within those parameters but at inappropriate speed.
- LOC-I is a categorization of an accident or incident resulting from a deviation from the intended flight path. Hence an aircraft upset can lead to a LOC-I accident.
- Proactive measures should be taken by air operators, training organizations, civil aviation authorities and other stakeholders to contribute in reducing aviation accident rates in the AFI, in particular in LOC-I.
- The contributory safety deficiencies that have an impact on LOC-I need also to be addressed.
- It has been found that the most effective defense is through sensitization, training and improvement of procedures.
- This Project is about the implementation of Upset Prevention and Recovery Training (UPRT) SARPs and best industry practices on issues related to LOC-I through sensitization, training, establishment of tools and guidance material as well as monitoring progress made on this regard.

1.1   PROJECT BACKGROUND

- Africa acknowledged its poor safety performance in contrast with aviation safety records; in July 2012,

decision makers expressed clear political will to improving Aviation Safety and adopted a set of regional safety targets which implementation will progressively reduce the African accident rate to be in line with the global average.
- Under ICAO leadership, the Regional Aviation Safety Group (RASG-AFI) has been established to bring all stakeholders in partnership to improve safety in Africa.
- A dashboard has been developed to measure progress against the set regional safety targets. Hence the need for pertinent projects to foster implementation towards the achievements of the said targets.
- Second meeting of AFI-RASG has approved the terms of reference for LOC-I safety support team and has nominated Kenya as Champion for this team, among others.

1.2 ENVISAGED SOLUTION

- To sensitize all stakeholders on LOC-I issues by holding a seminar in both ESAF and WACAF region.
- To establish an implementation plan for LOC-I and UPRT based on the areas of intervention.
- To establish additional guidance material for the industry.
- To establish guidance material for regulatory bodies.
- To establish a dashboard based on the areas of intervention.
- To monitor the implementation plan and undertake any additional actions.

The following matrix on areas of intervention that have been identified has been established in order to determine what needs to be done by each stakeholder.

	LOC-I: SYNTHESIS AREAS OF INTERVENTION							
	STAKE-HOLDERS	**AIR OPERATORS**		**TRAINING ORGANIZATIONS**		**CAAs**		**DATA (All stakeholders)**	
1	**Key areas**	**Operations manual : Parts A, B, D; SOPs**	**Training**	**Training and procedures manual and training programs**	**Training**	**Safety oversight: CE-2, 4, 5, 6, 7 and 8.**	**Safety management**	**AFI UPRT deficiencies related accidents and serious incidents**	**Information on other safety areas in AFI region having an impact on LOC-I and LOC-I accidents and serious incidents worldwide**
2	**Regulatory requirements**	Operations manual to take into account UPRT requirements	Training to take into account UPRT requirements	Training and procedures manual to take into account UPRT requirements	Training programs to take into account UPRT requirements	CE-2: incorporation of UPRT related SARPs in specific operating regulations.	Safety management principles to be incorporated in UPRT training	Serious Incidents to be also shared. Framework to be established.	Sharing of data between stake holders. Framework to be established.
3	**Training**	Part D of Operations manual to include UPRT programs	Training of flight crew, instructors and examiners on UPRT.	Programs to include UPRT	Training of instructor and examiners on UPRT	CE-4: training of inspector and examiners	Safety management principles to be incorporated in UPRT training	Sensitization on aircraft Upset and LOC-I for Accident investigators.	Sensitization on aircraft Upset and LOC-I for Accident investigators

LOC-I: SYNTHESIS AREAS OF INTERVENTION							
STAKE-HOLDERS	**AIR OPERATORS**		**TRAINING ORGANIZATIONS**		**CAAs**		**DATA (All stakeholders)**
4 **Guidance material and procedures**	Air operators to include additional procedures and information on aircraft Upset and LOC-I in Part A and Part B of the operations manual and in SOPs	Additional guidance by the CAA or industry on LOC-I and UPRT to be familiar with	Training and procedures manual to include additional procedure on UPRT	Additional guidance by the CAA or industry on UPRT to be familiar with	CE-5: inspectors' guidance materials and procedures to include UPRT. Guidance to the industry to include UPRT	Procedures for air operators and training organizations UPRT training to include safety management	Procedures for accidents and serious incidents to include aircraft Upset and LOC-I / Procedures for the analysis of data to derive relevant information and to report
6 **Licensing and Approvals. Proficiency training.**	-Type rating. -Multi-crew pilot training. -Flight crew training. -Academic training.	-Type rating. -Multi-crew pilot training. -Flight crew training. -Academic training.	-Type rating. -Multi-crew pilot training. -Academic training. -On-airplane training.	-Type rating. -Multi-crew pilot training. --Academic training. -On-airplane training. -Non-type specific FSTD training.	CE-6: -Type rating issuance; -Multi-crew pilot issuance. - Instructor authorizations.	-SMS for On-aeroplane UPRT. -	-Validation of data. -Proof-of -concept trial or operational review of training programs / Monitoring and benchmarking

	STAKE-HOLDERS	AIR OPERATORS		TRAINING ORGANIZATIONS		CAAs		DATA (All stakeholders)	
		-On-airplane training. -Non-type specific FSTD training. -Type-specific FSTD training.	-On-airplane training. -Non-type specific FSTD training. -Type-specific FSTD training	-Non-type specific FSTD training. -Type-specific FSTD training	-Type-specific FSTD training	-Approval of training organizations. -Approval of the operations manual.			
7	**Monitoring and taking measures**	Recurrent training	Recurrent training	Quality and SMS	Quality and SMS	CE-7 and CE-8: -Surveillance of training organizations. -Resolution of safety issues.	Apply Safety Management processes in the conduct of surveillance of training organizations.	Lessons learnt from flight data analysis to enhance training and for mitigation measures	Lessons learnt to enhance training and for mitigation measures

NB: UPRT: Upset Prevention and Recovery Training.

FSTD: Flight Simulation Training Devices.

TOOLS:

1) **SARPs and ICAO guidance materials on Upset Prevention and Recovery Training (UPRT):**

-Annex 1, Amendment No 172.

-Annex 6, Part I, Amendment No 38.

-Procedures for Air Navigation Services —Training *(PANS-TRG, Doc 9868).*

-Manual on Aeroplane Upset Prevention and Recovery Training *(Doc 10011).*

-Manual of Criteria for the Qualification of Flight Simulation Training Devices *(Doc 9625).*

-Manual on Evidenced-Based Training (Doc 9995).
- ICAO ADREP 2000 taxonomy

LOC-I: SYNTHESIS AREAS OF INTERVENTION

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STAKE-HOLDERS	**AIR OPERATORS**	**TRAINING ORGANIZATIONS**	**CAAs**	**DATA (All stakeholders)**
2)	**Industry guidance materials:**			
	-IATA LOC-I prevention tool-kit (still in development).			
	-Flight Simulation Training Device Design and Performance Data Requirements (IATA). - Commercial Aviation Safety Team_CAST LOC-I Joint Safety Implementation Team Report			
3)	**Flight Safety Foundation:**			
	-Airplane Upset Recovery Training Aid (AURTA).			
4) Additional guidance material to be developed by RASG AFI LOC-I Safety Team				

1.3   REGIONAL STRATEGIC VALUE

- As stated earlier this project implementation ensures proactively the reduction of LOC-I relating accidents in line with the first regional safety target: progressively reduce the African accident rate to be in line with the global average by the end of 2015.
- The structured approach and the processes laid down by the project can also be a means to address other safety issues.
- This project is high in terms of priority given the high expected rate of growth of air traffic in the AFI region and the need to meet Abuja Safety Targets.

1.4   PROVISIONAL TIMESCALES

Envisaged Setup / Seed / Feasibility Investment

Tim eline of the Project im plem entation

item				
Meeting with RASG Champion	24-Sep-14			
Implementation Plan		19-Jan-15		
RASG Guidance material on LOC-I			Mai 15	
Seminar on LOC-I				April, November15
Project Implementaion		From Jan 15		

Expected start date: 19 January 2015

"**Must complete by**" date: 31 December 2015

1.5   RISKS

- Cost incurred by stakeholders (air operators and training organizations) not determined.
- Most training is outsourced.
- The Regional safety target date is only 14 months away.
- Data on serious incidents is most of time unavailable.

1.6   KEY STAKEHOLDERS

- ICAO as RASG-AFI Secretariat

- RASG-AFI Safety Support Team relating to Emerging Safety Issues
- RASG-AFI Steering Committee
- AFCAC as custodian of Regional safety dashboard
- Safety Partners namely, ICAO, IATA, IFALPA, etc.
- States (CAAs and Accidents Investigation bodies), RSOOs, airlines, training organizations, aircraft manufacturers, etc.

1.7   WHAT WOULD BE THE IMPACT OF NOT IMPLEMENTING THIS PROJECT?

LOC-I is not clearly understood by all stakeholders. The level of awareness needs to be raised in the whole aviation community which is just starting to take necessary measures. Furthermore, flight crew need to be trained to proficiency in upset prevention and recovery.

The level of reporting accidents and serious incidents remain low in Africa, that's why complete data and information on this issue is not available. Without the impulse that will be given by the LOC-I project, the related Abuja Safety targets will not be met in 2015.

1.8   ACTIVITIES AND ENVISAGED FINANCIALS

Item	2015 (Cost in US dollars)	Remarks
Seminars in ESAF	14000	
Seminars in WACAF	15000	
Participation in ICAO LOC-I symposium and other events	5000	
Guidance materials	5000	
Other actions/missions for project implementation	4000	
TOTAL	42000	

1.9   ADDITIONAL COMMENTS
- Outline of the Draft Project was presented to the RASG LOC-I champion.