EUROPEAN ORGANISATION
FOR THE SAFETY OF AIR NAVIGATION

EUROCONTROL

ESARR ADVISORY MATERIAL/GUIDANCE MATERIAL
(EAM/GUI)

EAM 2 / GUI 9

ANNUAL SUMMARY TEMPLATE

Edition	:	4.0
Edition Date	:	22 September 2015
Status	:	Released Issue
Distribution	:	General Public
Category	:	SRC Document

SAFETY REGULATION COMMISSION

F.2 DOCUMENT CHARACTERISTICS

TITLE		
EAM 2 / GUI 9 – Annual Summary Template		
Document Identifier	**Edition Number**	4.0
eam2gui9	**Edition Date**	22-09-2015

Abstract

This document provides the template for annual safety data statistics in accordance with the safety data reporting requirements documented in ESARR 2, Edition 3.0. Member States shall submit their national AST biannually, by the end of March and September, respectively.

This new AST format includes the indication of the application of the Risk Analysis Tool Methodology, the second Safety Key Performance Indicator for Commission Implementing Regulation (EU) No. 390/2013 in regard to the second reference period 2015-2019.

Keywords

ATM	Safety Occurrence	Accidents
Causes	AST	Incidents

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DOCUMENT INFORMATION

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Working Draft	☐	General Public	☑	SRC Document	☑
Draft Issue	☐	Restricted SRC	☐	DPS/SSR Document	☐
Proposed Issue	☐	Restricted DPS/SSR	☐	Comment / Response Document	☐
Released Issue	☑	Restricted Other *(please specify)*	☐		

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F.3 DOCUMENT APPROVAL

The following table identifies all management authorities who have approved this document.

Authority	Name & Signature	Date
Document Focal Point (DPS/SSR)	*{ signed }* (Razvan ULARESCU)	22-Sep-15
Head of Unit (DPS/SSR)	*{ signed }* (Juan VÁZQUEZ-SANZ)	22-Sep-15
Chairman, Safety Regulation Commission (SRC)	*{ signed }* (Karsten TILENDA)	22-Sep-15

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F.4 AMENDMENT RECORD

The following table records the complete history of this document.

Edition No.	Date	Reason for change	Pages Affected
0.1	29-Mar-05	Simplification of safety data reporting under ESARR 2. Changes to the format in which safety data is presented to improve the quality of data collected at occurrence level. In accordance with SRC Action A-22/11, EAM 2 / COD 1, Edition 3.0 has been re-issued as EAM 2 / GUI 9, Edition 0.1 with changes as noted above.	All
1.0	27-Jul-05	Document released following SRC consultation and approval (RFC No. 0508). EAM 2 / COD 1 simultaneously withdrawn.	All
1.01	23-Jun-10	Document updated following the release of ESARR 2, Edition 3.0.	All
1.1	23-Sep-10	Document sent to SRC for approval following AST-FP consultation.	-
2.0	24-Mar-11	Document approved by SRC and formally released.	-
2.1	17-Oct-11	Update to include the indication of the application of Risk Analysis Tool Methodology.	All
3.0	13-Mar-12	Document released following AST-FP and SRC approval (RFC No. 1124).	-
3.1	11-Jun-15	Update of the RAT Methodology to reflect changes in the scope of applicability in RP2. Document sent to SRC for consultation and approval.	All
4.0	22-Sep-15	Document formally released following SRC consultation and approval (RFC No. 1502).	-

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F.5 CONTENTS

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F.6 EXECUTIVE SUMMARY

This edition of the Annual Summary Template (AST) provides the template for annual safety data statistics in accordance with the safety data reporting requirements documented in ESARR 2, Edition 3.0.

This new AST format includes the indication of the application of the Risk Analysis Tool (RAT) Methodology, the second Safety Key Performance Indicator for Commission Implementing Regulation (EU) No. 390/2013 in regard to the second reference period 2015-2019 for Separation Minima Infringements, Runway Incursions and ATM-specific Occurrences.

This template should be used by the Annual Summary Template Focal Points (AST-FP) appointed to compile and submit to the EUROCONTROL Safety Regulation Commission (SRC) the AST on behalf of their State as from the September 2015 reporting cycle.

To populate the AST, please use the Excel version. The new AST will be automatically produced by both EUROCONTROL's TOKAI and the European Commission's ECCAIRS tools.

Member States shall submit their national AST twice annually, by the end of March and September, respectively.

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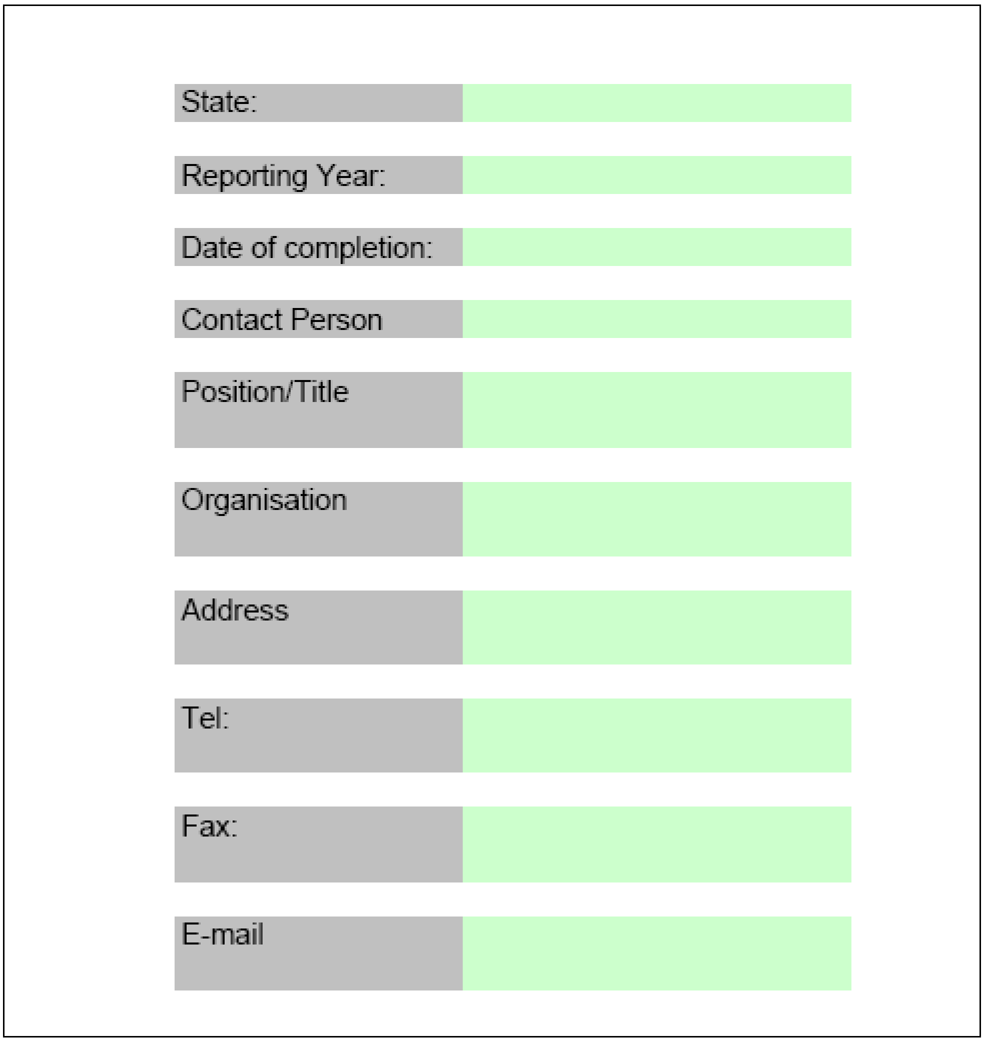
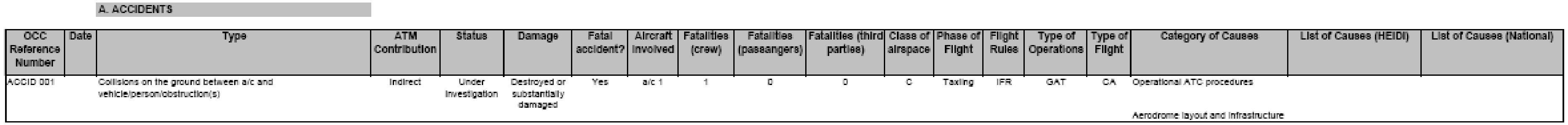
1. ANNUAL SUMMARY TEMPLATES

1.1 Front Page



State:	
Reporting Year:	
Date of completion:	
Contact Person	
Position/Title	
Organisation	
Address	
Tel:	
Fax:	
E-mail	

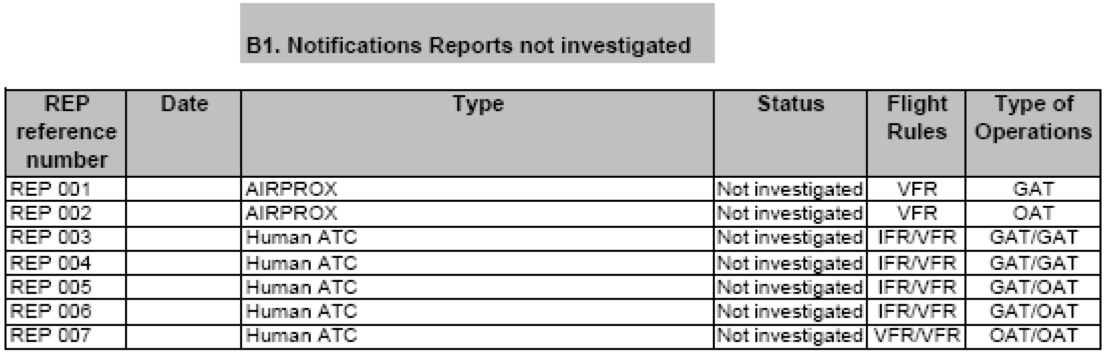
1.2 Sheet A – Accidents



A. ACCIDENTS

OCC Reference Number	Date	Type	ATM Contribution	Status	Damage	Fatal accident?	Aircraft involved	Fatalities (crew)	Fatalities (passangers)	Fatalities (third parties)	Class of airspace	Phase of Flight	Flight Rules	Type of Operations	Type of Flight	Category of Causes	List of Causes (HEIDI)	List of Causes (National)
ACCID 001		Collisions on the ground between a/c and vehicle/person/obstruction(s)	Indirect	Under Investigation	Destroyed or substantially damaged	Yes	a/c 1	1	0	0	C	Taxiing	IFR	GAT	CA	Operational ATC procedures Aerodrome layout and infrastructure		

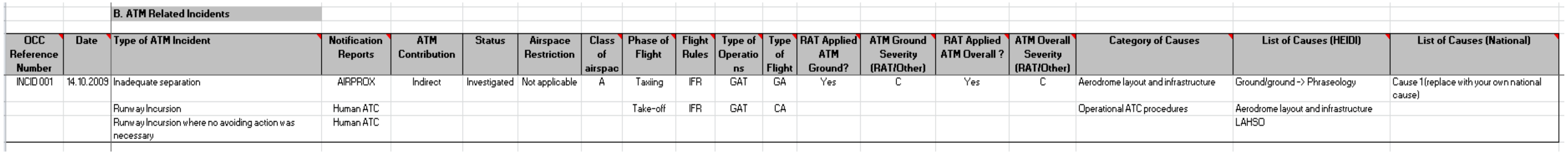
1.3 Sheet B1 – Notification of Reports Not Investigated



B1. Notifications Reports not investigated

REP reference number	Date	Type	Status	Flight Rules	Type of Operations
REP 001		AIRPROX	Not investigated	VFR	GAT
REP 002		AIRPROX	Not investigated	VFR	OAT
REP 003		Human ATC	Not investigated	IFR/VFR	GAT/GAT
REP 004		Human ATC	Not investigated	IFR/VFR	GAT/GAT
REP 005		Human ATC	Not investigated	IFR/VFR	GAT/OAT
REP 006		Human ATC	Not investigated	IFR/VFR	GAT/OAT
REP 007		Human ATC	Not investigated	VFR/VFR	OAT/OAT

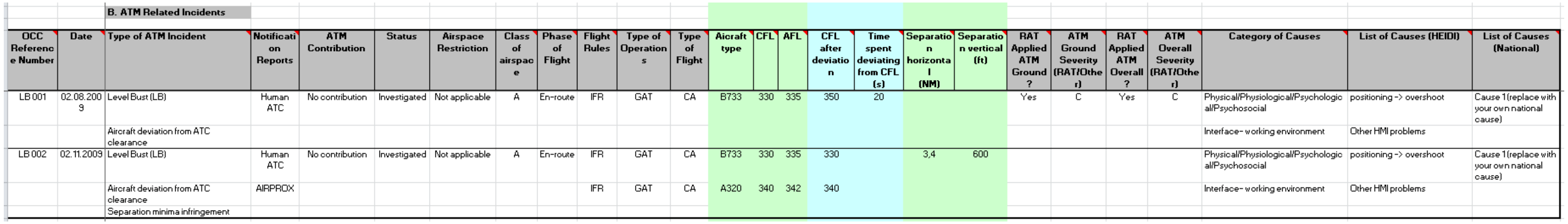
1.4 Sheet B – Incidents



B. ATM Related Incidents

OCC Reference Number	Date	Type of ATM Incident	Notification Reports	ATM Contribution	Status	Airspace Restriction	Class of airspac	Phase of Flight	Flight Rules	Type of Operations	Type of Flight	RAT Applied ATM Ground?	ATM Ground Severity (RAT/Other)	RAT Applied ATM Overall ?	ATM Overall Severity (RAT/Other)	Category of Causes	List of Causes (HEIDI)	List of Causes (National)
INCID 001	14.10.2009	Inadequate separation	AIRPROX	Indirect	Investigated	Not applicable	A	Taxiing	IFR	GAT	GA	Yes	C	Yes	C	Aerodrome layout and infrastructure	Ground/ground -> Phraseology	Cause 1 (replace with your own national cause)
		Runway Incursion	Human ATC					Take-off	IFR	GAT	CA					Operational ATC procedures	Aerodrome layout and infrastructure	
		Runway Incursion where no avoiding action was necessary	Human ATC														LAHSO	

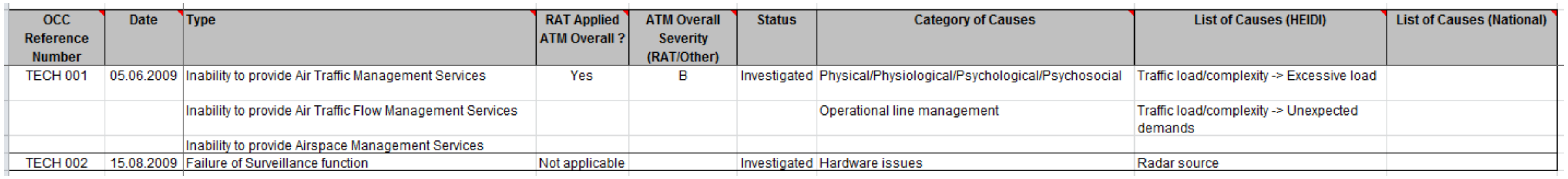
1.5 Sheet B – RVSM



B. ATM Related Incidents

OCC Reference Number	Date	Type of ATM Incident	Notification Reports	ATM Contribution	Status	Airspace Restriction	Class of airspace	Phase of Flight	Flight Rules	Type of Operations	Type of Flight	Aicraft type	CFL	AFL	CFL after deviation	Time spent deviating from CFL (s)	Separation horizontal (NM)	Separation vertical (ft)	RAT Applied ATM Ground ?	ATM Ground Severity (RAT/Other)	RAT Applied ATM Overall ?	ATM Overall Severity (RAT/Other)	Category of Causes	List of Causes (HEIDI)	List of Causes (National)
LB 001	02.08.2009	Level Bust (LB)	Human ATC	No contribution	Investigated	Not applicable	A	En-route	IFR	GAT	CA	B733	330	335	350	20			Yes	C	Yes	C	Physical/Physiological/Psychological/Psychosocial	positioning -> overshoot	Cause 1 (replace with your own national cause)
		Aircraft deviation from ATC clearance																					Interface- working environment	Other HMI problems	
LB 002	02.11.2009	Level Bust (LB)	Human ATC	No contribution	Investigated	Not applicable	A	En-route	IFR	GAT	CA	B733	330	335	330		3,4	600					Physical/Physiological/Psychological/Psychosocial	positioning -> overshoot	Cause 1 (replace with your own national cause)
		Aircraft deviation from ATC clearance	AIRPROX						IFR	GAT	CA	A320	340	342	340								Interface- working environment	Other HMI problems	
		Separation minima infringement																							

1.6 Sheet C – ATM Specific Occurrences



OCC Reference Number	Date	Type	RAT Applied ATM Overall ?	ATM Overall Severity (RAT/Other)	Status	Category of Causes	List of Causes (HEIDI)	List of Causes (National)
TECH 001	05.06.2009	Inability to provide Air Traffic Management Services	Yes	B	Investigated	Physical/Physiological/Psychological/Psychosocial	Traffic load/complexity -> Excessive load	
		Inability to provide Air Traffic Flow Management Services				Operational line management	Traffic load/complexity -> Unexpected demands	
		Inability to provide Airspace Management Services						
TECH 002	15.08.2009	Failure of Surveillance function	Not applicable		Investigated	Hardware issues	Radar source	

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1.7 AST Detailed Lists

Categories of Accidents

- MID-AIR Collisions
- Controlled Flights Into Terrain (CFIT)
- Collisions on the ground between aircraft
- Collisions btn. airborne a/c and vehicle/another a/c on the ground
- Collisions on the ground between a/c and vehicle/person/obstruction(s)
- Other

Type of reports

- AIRPROX
- ACAS
- Human ATC
- Automated ATC
- ACAS/TCAS False RAs
- Technical
- Other

Type of ATM Related Incidents

- Separation minima infringement
- Inadequate separation
- Near Controlled Flight Into Terrain (CFIT)
- Runway excursion by aircraft
- Aircraft deviation from applicable ATM regulation
- Aircraft deviations from applicable published ATM procedures
- Aircraft deviation from ATC clearance
- Level Bust (LB)
- Unauthorised penetration of airspace
- Deviations from aircraft ATM-related equipment carriage and operations, as r
- Runway Incursion
- Runway Incursion where avoiding action was necessary
- Runway Incursion where no avoiding action was necessary
- Prolonged Loss of Communication (PLOC)
- Other

Type of ATM Specific Occurrences

- Inability to provide Air Traffic Management Services
- Inability to provide Air Traffic Services
- Inability to provide Airspace Management Services
- Inability to provide Air Traffic Flow Management Services
- Failure of Communication function
- Failure of Surveillance function
- Failure of Data Processing and Distribution function
- Failure of Navigation function
- Failure of Support Information function
- ATM system security
- Other

List of Category of Causes

- Physical/Physiological/Psychological/Psychosocial
- Interface- working environment
- Operational tasks demand
- Other (ATM Services Personnel)
- Operational ATC procedures
- Other operational ATM service procedures
- Engineering and maintenance procedures
- Other (ATMServices personnel operating procedures and instructions)
- Interface between ATM service units
- Hardware issues

Status of investigation

- Investigated
- Under investigation
- Not investigated

ATM Contribution

- Direct
- Indirect
- No contribution
- Not assessed

Class of Airspace

- A
- B
- C
- D
- E
- F
- G
- Not applicable
- Unknown
- Not collected

Phase of Flight

- Standing
- Taxiing
- Take-off
- En-route
- Approach
- Landing
- Manoeuvering
- Other
- Unknown
- Not applicable
- Not collected

Flight Rules

- IFR
- VFR
- Other
- Not applicable
- Not available
- Unknown
- Not collected

Type of Operations

- GAT
- OAT
- Other
- Not applicable
- Not available
- Unknown
- Not collected

Type of Flight

- CA
- GA
- Other
- Not applicable
- Not available
- Unknown
- Not collected

Aircraft damage

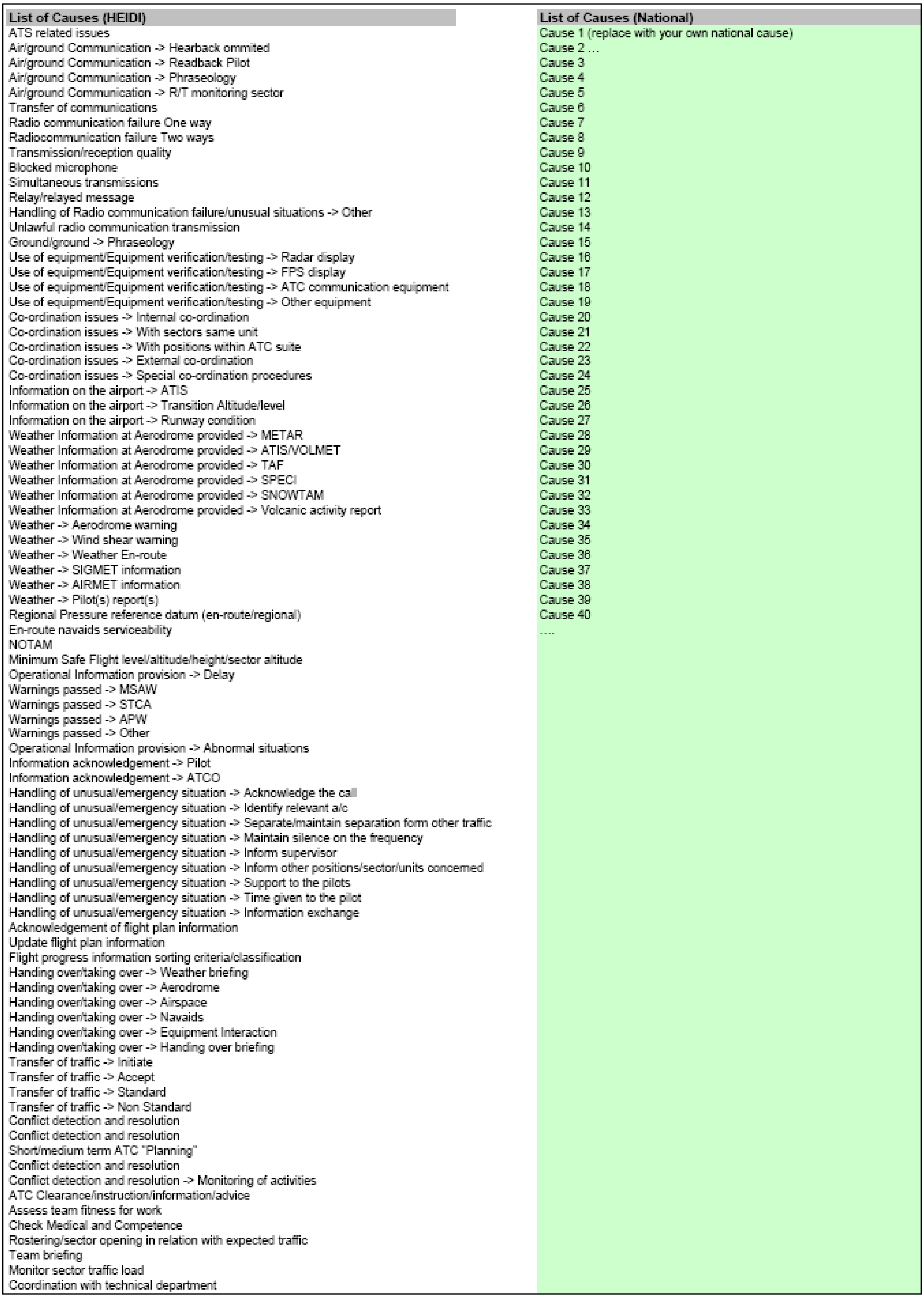
- Destroyed or substantially damaged
- Minor or none
- Not applicable

ECAC States

- Albania
- Armenia
- Austria
- Azerbaijan
- Belgium
- Bosnia and Herzegovina
- Bulgaria
- Croatia
- Cyprus
- Czech Republic
- Denmark
- Estonia
- Finland
- France
- Germany
- Greece
- Hungary
- Iceland
- Ireland
- Italy
- Latvia
- Lithuania
- Luxembourg
- FYROM
- Malta
- Moldova
- Monaco
- The Netherlands
- Norway
- Poland
- Portugal
- Romania
- The Slovak Republic
- Slovenia
- Spain
- Sweden
- Switzerland
- Turkey
- Ukraine
- United Kingdom
- Serbia & Muntenegro

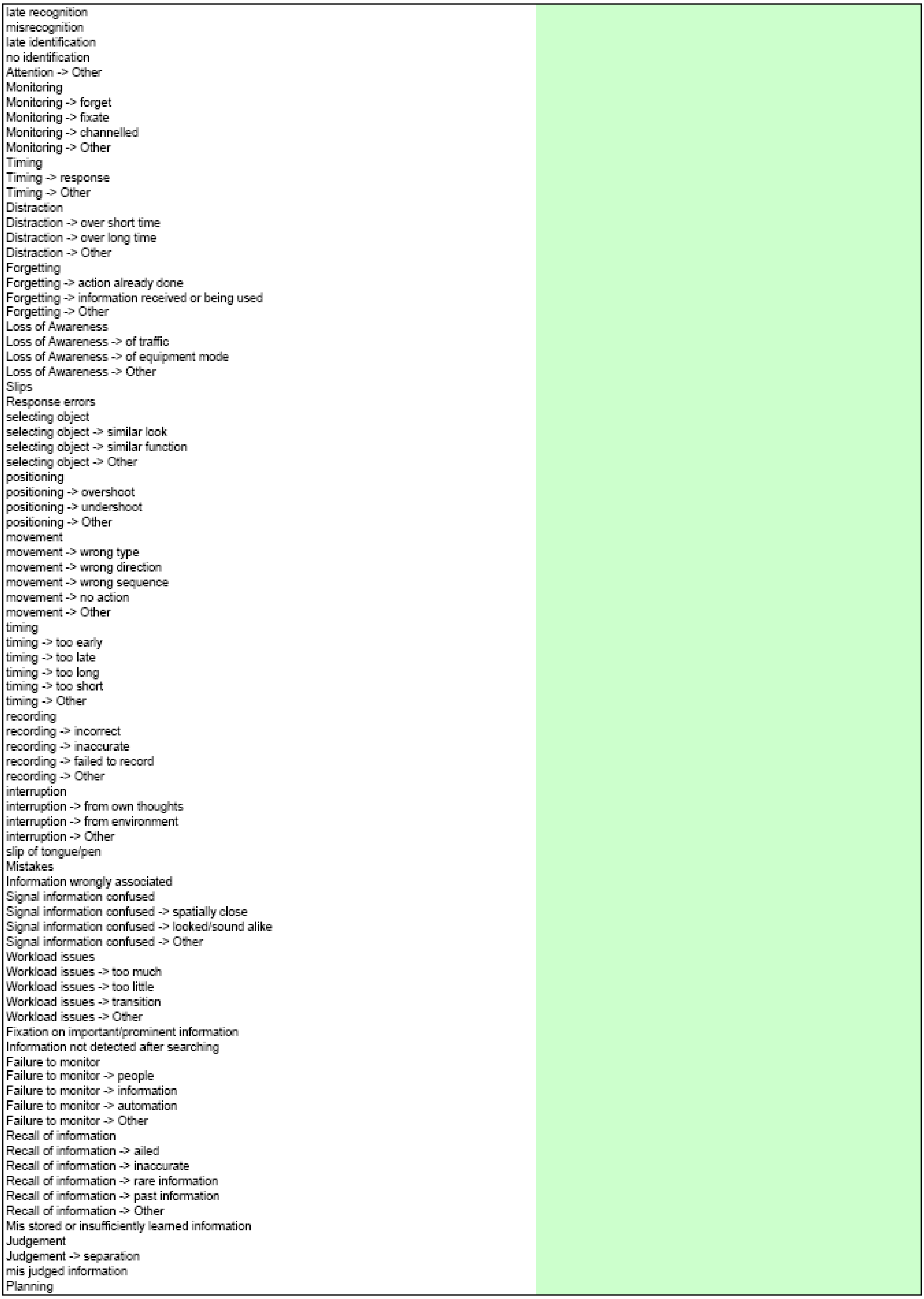
Software issues	Not available
Integration Issues	Unknown
Aerodrome layout and infrastructure	Not collected
Other (ATM Services infrastructure Facilities/technical systems)	
Route structure	
Capacity	**Severity Tech**
Sectorisation	AA
ATS airspaces	A
Other (Airspace Structure)	B
AIRAC Non-Adherance	C
ATS Route Description Inconsistencies	E
Other (AIS)	D
Safety Management System	Not available
Management/personnel policy	Not assessed
Institutional arrangements	
Operational line management	
Other (Company Structure and Management Policy)	**Airspace restrictions**
Regulation	Temporary Segregated Area
Approval Process	Cross-border Area
Other (Regulatory activity)	Restricted area
Other	Prohibited area
	Danger Area
	Other
	Not applicable
	Not collected
	Aircraft involved
	a/c 1
	a/c 2
	a/c 3
	a/c 4
	a/c 5
	None
	Options
	Yes
	No
	Unknown
	Not applicable
	Flight Rules Reports
	IFR
	VFR
	IFR/IFR
	IFR/VFR
	VFR/VFR
	Other
	Not applicable
	Not available
	Unknown
	Not collected
	Type of Operations Reports
	GAT
	OAT
	GAT/GAT
	GAT/OAT
	OAT/OAT
	Other
	Not applicable
	Not available
	Unknown
	Not collected
	Status of investigation Reports
	Not investigated
	Severity Ops
	A
	B
	C
	E
	D
	Not available
	Not assessed

1.8 Causes

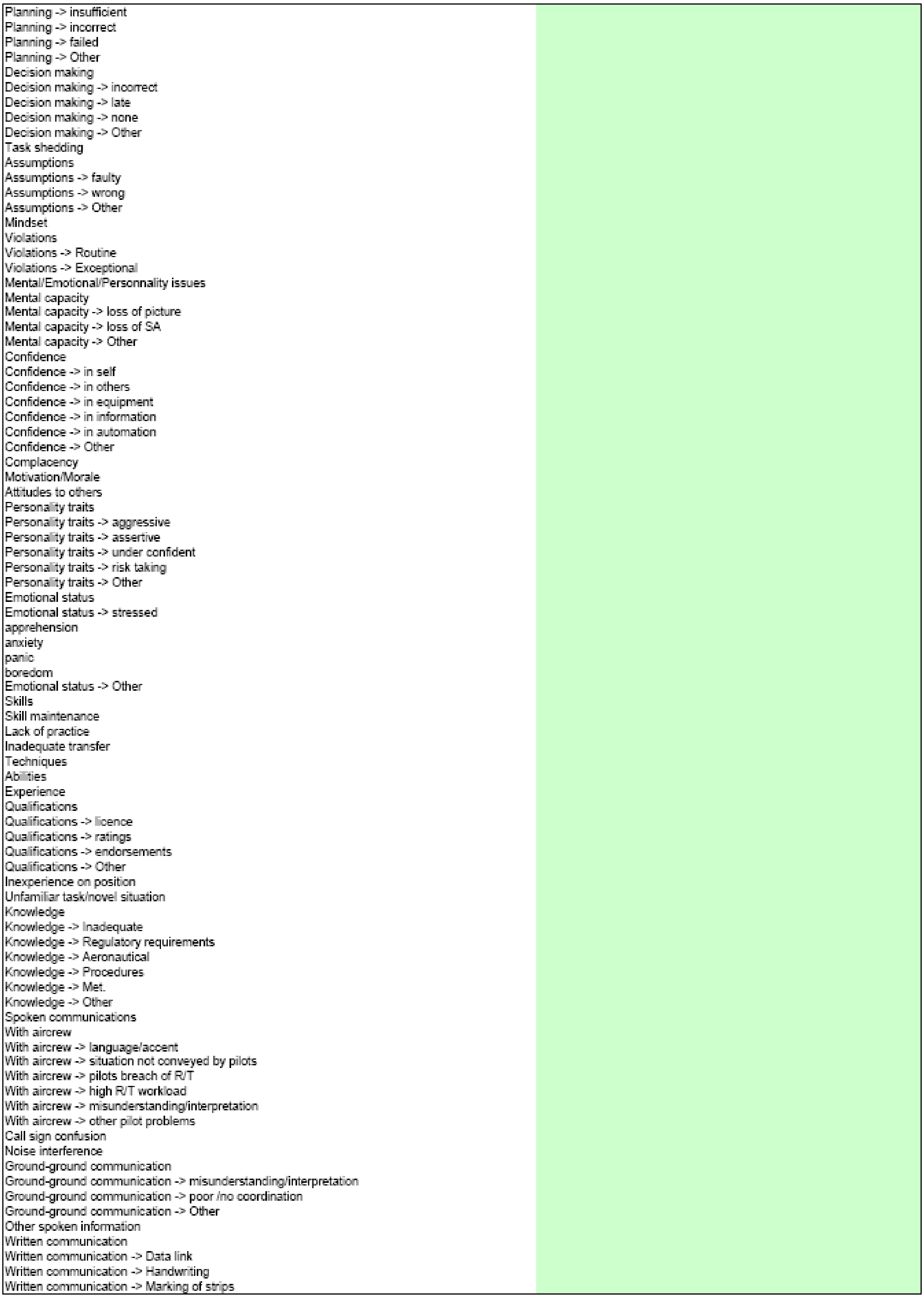


List of Causes (HEIDI)	List of Causes (National)
ATS related issues	Cause 1 (replace with your own national cause)
Air/ground Communication -> Hearback ommited	Cause 2 …
Air/ground Communication -> Readback Pilot	Cause 3
Air/ground Communication -> Phraseology	Cause 4
Air/ground Communication -> R/T monitoring sector	Cause 5
Transfer of communications	Cause 6
Radio communication failure One way	Cause 7
Radiocommunication failure Two ways	Cause 8
Transmission/reception quality	Cause 9
Blocked microphone	Cause 10
Simultaneous transmissions	Cause 11
Relay/relayed message	Cause 12
Handling of Radio communication failure/unusual situations -> Other	Cause 13
Unlawful radio communication transmission	Cause 14
Ground/ground -> Phraseology	Cause 15
Use of equipment/Equipment verification/testing -> Radar display	Cause 16
Use of equipment/Equipment verification/testing -> FPS display	Cause 17
Use of equipment/Equipment verification/testing -> ATC communication equipment	Cause 18
Use of equipment/Equipment verification/testing -> Other equipment	Cause 19
Co-ordination issues -> Internal co-ordination	Cause 20
Co-ordination issues -> With sectors same unit	Cause 21
Co-ordination issues -> With positions within ATC suite	Cause 22
Co-ordination issues -> External co-ordination	Cause 23
Co-ordination issues -> Special co-ordination procedures	Cause 24
Information on the airport -> ATIS	Cause 25
Information on the airport -> Transition Altitude/level	Cause 26
Information on the airport -> Runway condition	Cause 27
Weather Information at Aerodrome provided -> METAR	Cause 28
Weather Information at Aerodrome provided -> ATIS/VOLMET	Cause 29
Weather Information at Aerodrome provided -> TAF	Cause 30
Weather Information at Aerodrome provided -> SPECI	Cause 31
Weather Information at Aerodrome provided -> SNOWTAM	Cause 32
Weather Information at Aerodrome provided -> Volcanic activity report	Cause 33
Weather -> Aerodrome warning	Cause 34
Weather -> Wind shear warning	Cause 35
Weather -> Weather En-route	Cause 36
Weather -> SIGMET information	Cause 37
Weather -> AIRMET information	Cause 38
Weather -> Pilot(s) report(s)	Cause 39
Regional Pressure reference datum (en-route/regional)	Cause 40
En-route navaids serviceability	….
NOTAM	
Minimum Safe Flight level/altitude/height/sector altitude	
Operational Information provision -> Delay	
Warnings passed -> MSAW	
Warnings passed -> STCA	
Warnings passed -> APW	
Warnings passed -> Other	
Operational Information provision -> Abnormal situations	
Information acknowledgement -> Pilot	
Information acknowledgement -> ATCO	
Handling of unusual/emergency situation -> Acknowledge the call	
Handling of unusual/emergency situation -> Identify relevant a/c	
Handling of unusual/emergency situation -> Separate/maintain separation form other traffic	
Handling of unusual/emergency situation -> Maintain silence on the frequency	
Handling of unusual/emergency situation -> Inform supervisor	
Handling of unusual/emergency situation -> Inform other positions/sector/units concerned	
Handling of unusual/emergency situation -> Support to the pilots	
Handling of unusual/emergency situation -> Time given to the pilot	
Handling of unusual/emergency situation -> Information exchange	
Acknowledgement of flight plan information	
Update flight plan information	
Flight progress information sorting criteria/classification	
Handing over/taking over -> Weather briefing	
Handing over/taking over -> Aerodrome	
Handing over/taking over -> Airspace	
Handing over/taking over -> Navaids	
Handing over/taking over -> Equipment Interaction	
Handing over/taking over -> Handing over briefing	
Transfer of traffic -> Initiate	
Transfer of traffic -> Accept	
Transfer of traffic -> Standard	
Transfer of traffic -> Non Standard	
Conflict detection and resolution	
Conflict detection and resolution	
Short/medium term ATC "Planning"	
Conflict detection and resolution	
Conflict detection and resolution -> Monitoring of activities	
ATC Clearance/instruction/information/advice	
Assess team fitness for work	
Check Medical and Competence	
Rostering/sector opening in relation with expected traffic	
Team briefing	
Monitor sector traffic load	
Coordination with technical department	

OPS room management	
Handling of accident, incident and emergencies -> Assist ATCOs in recovering control of traffic	
Handling of accident, incident and emergencies -> Remove controller from position	
Handling of accident, incident and emergencies -> Other	
Airspace structure	
Interface between ATM service units	
Route structure	
LAHSO	
SIRO	
Capacity	
Sectorisation	
Aerodrome layout and infrastructure	
Issue related to operational ATM support service procedures	
Issues related to Engineering and maintenance procedures	
Issues related to ATM service personnel operating procedures and Instructions	
Failure of COMMUNICATION function -> Radio communication system	
Failure of COMMUNICATION function -> Telephone system	
Failure of COMMUNICATION function -> Intercom	
Failure of COMMUNICATION function -> Datalink system	
Failure of COMMUNICATION function -> Data exchange network	
Failure of COMMUNICATION function -> Recording	
Failure of COMMUNICATION function -> Other	
Radar source	
Radar data processing system	
Radar data processing system	
Traffic display system	
Other -> Hardware issues	
Other -> Software issues	
Other -> Integration issues	
Failure of SURVEILLANCE function -> Airborne element of ATM	
Failure of Data Processing and Distribution function	
Failure of Data Processing and Distribution function	
Failure of Support Information function	
Failure to provide NAVIGATION function	
Power supply system	
AIS up to date	
Aeronautical Information Service (AIS) related issues	
AIS erroneous data	
Flight deck/Pilot and ATM using different data	
Documentation/charts	
Evaluate traffic demand	
Regulate traffic	
ATM Service related factors	
Licensing - medical	
Illness	
Incapacitation	
Collapse	
Health and fitness	
Nutrition	
Hydration	
Exercise	
Pain	
Stress	
Other health issues	
Impairment	
Alcohol & Smoking	
llicit drugs	
Prescription drugs	
Fatigue	
Sleep loss	
Sleep disturbance	
Tiredness	
Tiredness -> acute	
Tiredness -> chronic	
Other fatigue issues	
Other physiological issues	
Lapses	
Receipt of information	
failed to hear message	
failed to see message	
Identification of Information	
misread	
mishear	
Identification of Information -> Other	
Perception of information	
readback error	
hearback error	
misperceive	
no perception	
Perception of information -> Other	
Detection	
late detection	
no detection	
Detection -> Other	
Misunderstanding	
Attention	



late recognition	
misrecognition	
late identification	
no identification	
Attention -> Other	
Monitoring	
Monitoring -> forget	
Monitoring -> fixate	
Monitoring -> channelled	
Monitoring -> Other	
Timing	
Timing -> response	
Timing -> Other	
Distraction	
Distraction -> over short time	
Distraction -> over long time	
Distraction -> Other	
Forgetting	
Forgetting -> action already done	
Forgetting -> information received or being used	
Forgetting -> Other	
Loss of Awareness	
Loss of Awareness -> of traffic	
Loss of Awareness -> of equipment mode	
Loss of Awareness -> Other	
Slips	
Response errors	
selecting object	
selecting object -> similar look	
selecting object -> similar function	
selecting object -> Other	
positioning	
positioning -> overshoot	
positioning -> undershoot	
positioning -> Other	
movement	
movement -> wrong type	
movement -> wrong direction	
movement -> wrong sequence	
movement -> no action	
movement -> Other	
timing	
timing -> too early	
timing -> too late	
timing -> too long	
timing -> too short	
timing -> Other	
recording	
recording -> incorrect	
recording -> inaccurate	
recording -> failed to record	
recording -> Other	
interruption	
interruption -> from own thoughts	
interruption -> from environment	
interruption -> Other	
slip of tongue/pen	
Mistakes	
Information wrongly associated	
Signal information confused	
Signal information confused -> spatially close	
Signal information confused -> looked/sound alike	
Signal information confused -> Other	
Workload issues	
Workload issues -> too much	
Workload issues -> too little	
Workload issues -> transition	
Workload issues -> Other	
Fixation on important/prominent information	
Information not detected after searching	
Failure to monitor	
Failure to monitor -> people	
Failure to monitor -> information	
Failure to monitor -> automation	
Failure to monitor -> Other	
Recall of information	
Recall of information -> ailed	
Recall of information -> inaccurate	
Recall of information -> rare information	
Recall of information -> past information	
Recall of information -> Other	
Mis stored or insufficiently learned information	
Judgement	
Judgement -> separation	
mis judged information	
Planning	



Planning -> insufficient	
Planning -> incorrect	
Planning -> failed	
Planning -> Other	
Decision making	
Decision making -> incorrect	
Decision making -> late	
Decision making -> none	
Decision making -> Other	
Task shedding	
Assumptions	
Assumptions -> faulty	
Assumptions -> wrong	
Assumptions -> Other	
Mindset	
Violations	
Violations -> Routine	
Violations -> Exceptional	
Mental/Emotional/Personnality issues	
Mental capacity	
Mental capacity -> loss of picture	
Mental capacity -> loss of SA	
Mental capacity -> Other	
Confidence	
Confidence -> in self	
Confidence -> in others	
Confidence -> in equipment	
Confidence -> in information	
Confidence -> in automation	
Confidence -> Other	
Complacency	
Motivation/Morale	
Attitudes to others	
Personality traits	
Personality traits -> aggressive	
Personality traits -> assertive	
Personality traits -> under confident	
Personality traits -> risk taking	
Personality traits -> Other	
Emotional status	
Emotional status -> stressed	
apprehension	
anxiety	
panic	
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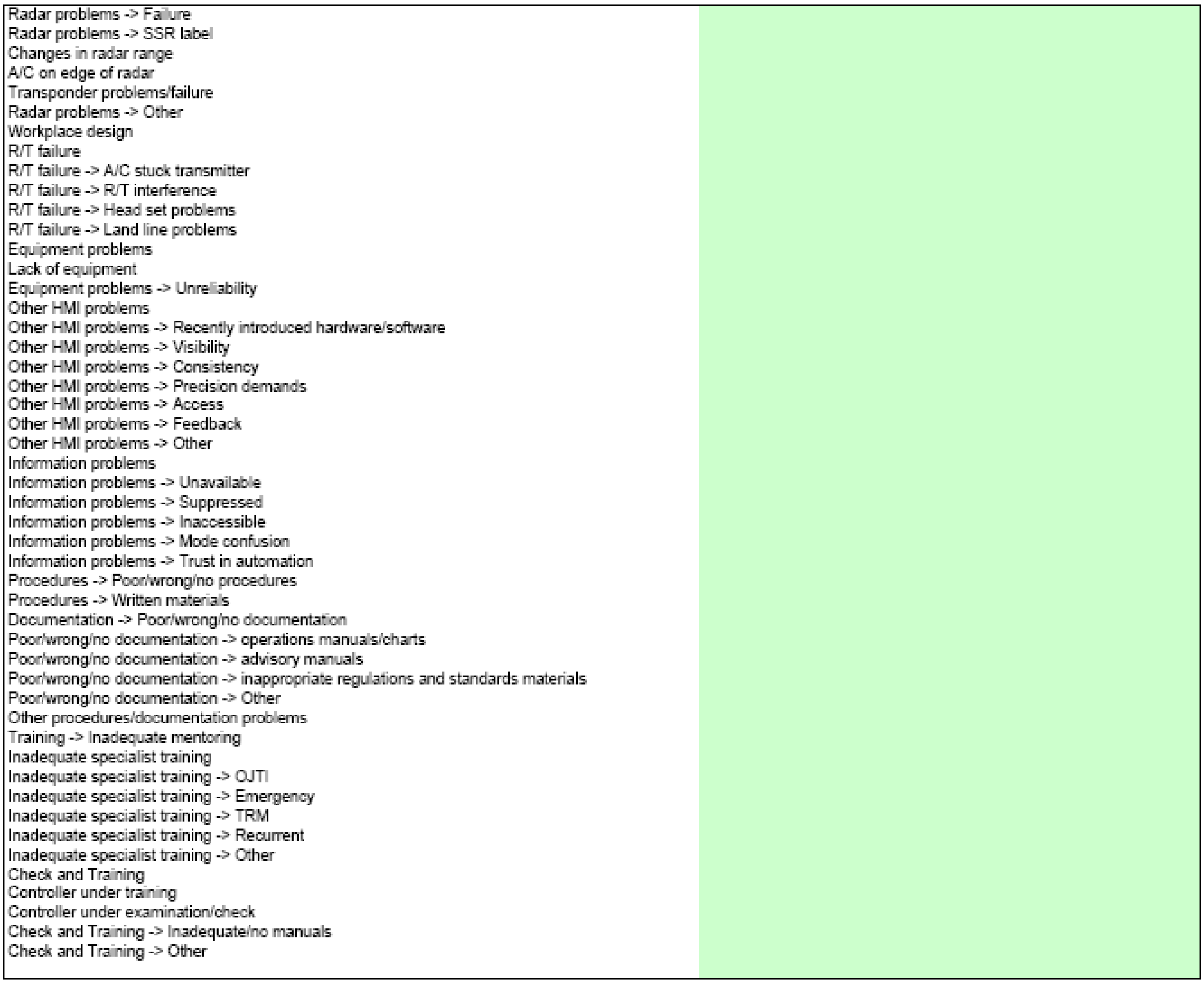
Emotional status -> Other	
Skills	
Skill maintenance	
Lack of practice	
Inadequate transfer	
Techniques	
Abilities	
Experience	
Qualifications	
Qualifications -> licence	
Qualifications -> ratings	
Qualifications -> endorsements	
Qualifications -> Other	
Inexperience on position	
Unfamiliar task/novel situation	
Knowledge	
Knowledge -> Inadequate	
Knowledge -> Regulatory requirements	
Knowledge -> Aeronautical	
Knowledge -> Procedures	
Knowledge -> Met.	
Knowledge -> Other	
Spoken communications	
With aircrew	
With aircrew -> language/accent	
With aircrew -> situation not conveyed by pilots	
With aircrew -> pilots breach of R/T	
With aircrew -> high R/T workload	
With aircrew -> misunderstanding/interpretation	
With aircrew -> other pilot problems	
Call sign confusion	
Noise interference	
Ground-ground communication	
Ground-ground communication -> misunderstanding/interpretation	
Ground-ground communication -> poor /no coordination	
Ground-ground communication -> Other	
Other spoken information	
Written communication	
Written communication -> Data link	
Written communication -> Handwriting	
Written communication -> Marking of strips	

Written communication -> Other written information	
Visual signals	
Transfer of responsibility	
Transfer of responsibility -> Handover/takeover	
Transfer of responsibility -> Co ordination	
Transfer of responsibility -> Poor communication	
Team management -> Returning to sector after break	
Team management -> Temporary unmanned position	
Team management -> team allocation	
Team management -> working methods/responsiblities	
High administrative workload	
Team dynamics	
Team dynamics -> Poor team relations	
Team dynamics -> Trust in others	
Team dynamics -> Inadequate assertiveness	
Team dynamics -> Cultural issues	
Team dynamics -> Duty of care	
Supervisory problems	
Supervisory problems -> Poor/no planning	
Supervisory problems -> decision making	
Supervisory problems -> feedback	
Supervisory problems -> quality control	
Poor/inadequate support -> Flight data	
Poor/inadequate support -> Maintenance	
Other team issues	
Traffic load/complexity	
Traffic load/complexity -> Excessive load	
Traffic load/complexity -> Fluctuating load	
Traffic load/complexity -> Unexpected demands	
Traffic load/complexity -> Complex mix	
Traffic load/complexity -> Unusual situations	
Traffic load/complexity -> Abnormal time pressure	
Traffic load/complexity -> Underload	
Traffic load/complexity -> Similar confusable call signs	
Airspace problems	
Flights in non controlled and controlled air space	
Airspace problems	
Airspace problems	
Traffic and Airspace	
Pilot problems	
Pilot problems -> Language	
Pilot problems -> Culture	
Pilot problems -> Experience	
Ambient environment	
Ambient environment -> Noise	
Ambient environment	
Distraction	
Ambient environment -> Air quality	
Ambient environment -> Lighting	
Ambient environment -> Pollution/fumes	
Ambient environment -> Radiation	
Ambient environment -> Other problems	
Problems in work environment	
General understaffing	
Roster/rest day times	
Poor splitting/collapsing sectors	
Work scheduling	
Terms and condition	
Union/professional issues	
Administrative workload problems	
Poor relations/confidence in management	
Job insecurity	
Low morale/job satisfaction	
Problems in work environment -> Other	
Company/commercial pressure	
Company/commercial pressure -> Unsafe operations	
Company/commercial pressure -> Failure to correct problems	
Management problems	
Management problems -> Poor/no planning	
Management problems -> Poor/no decision making	
Management problems -> Poor/no feedback	
Management problems -> Other	
Organisation problems	
Organisation problems -> Organisational change	
Organisation problems -> Poor/no planning	
Organisation problems -> Poor/no decision making	
Organisation problems -> Poor/no feedback	
Organisation problems -> Other	
Regulatory problems	
Regulatory problems -> Poor/no planning	
Regulatory problems -> Poor/no decision making	
Regulatory problems -> Poor/no feedback	
Regulatory problems -> Other	
Workplace design -> Poor console layout	
Workplace design -> Visibility	
Radar problems	



Radar problems -> Failure	
Radar problems -> SSR label	
Changes in radar range	
A/C on edge of radar	
Transponder problems/failure	
Radar problems -> Other	
Workplace design	
R/T failure	
R/T failure -> A/C stuck transmitter	
R/T failure -> R/T interference	
R/T failure -> Head set problems	
R/T failure -> Land line problems	
Equipment problems	
Lack of equipment	
Equipment problems -> Unreliability	
Other HMI problems	
Other HMI problems -> Recently introduced hardware/software	
Other HMI problems -> Visibility	
Other HMI problems -> Consistency	
Other HMI problems -> Precision demands	
Other HMI problems -> Access	
Other HMI problems -> Feedback	
Other HMI problems -> Other	
Information problems	
Information problems -> Unavailable	
Information problems -> Suppressed	
Information problems -> Inaccessible	
Information problems -> Mode confusion	
Information problems -> Trust in automation	
Procedures -> Poor/wrong/no procedures	
Procedures -> Written materials	
Documentation -> Poor/wrong/no documentation	
Poor/wrong/no documentation -> operations manuals/charts	
Poor/wrong/no documentation -> advisory manuals	
Poor/wrong/no documentation -> inappropriate regulations and standards materials	
Poor/wrong/no documentation -> Other	
Other procedures/documentation problems	
Training -> Inadequate mentoring	
Inadequate specialist training	
Inadequate specialist training -> OJTI	
Inadequate specialist training -> Emergency	
Inadequate specialist training -> TRM	
Inadequate specialist training -> Recurrent	
Inadequate specialist training -> Other	
Check and Training	
Controller under training	
Controller under examination/check	
Check and Training -> Inadequate/no manuals	
Check and Training -> Other	

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