



GOVERNMENT OF INDIA
OFFICE OF THE DIRECTOR GENERAL OF CIVIL AVIATION
TECHNICAL CENTRE, OPP. SAFDARJUNG AIRPORT, NEW DELHI – 110 003

CIVIL AVIATION REQUIREMENTS
SECTION 4 – AERODROMES
SERIES ‘ X’ PART I
8th JANUARY 2010

EFFECTIVE : FORTHWITH

Subject : Runway Safety Programme and formation of Runway Safety Teams.

1. Background

With the growth in traffic runway incursions have been showing a growing trend the world over, and have been causing safety concerns. Prevention of runway incursions has become a priority area. Runway incursions have sometimes led to serious accidents with significant loss of life. Although it is not a new problem, with the predicted growth of air traffic, the actual numbers of incidents are likely to rise, unless held in check by preventative actions.

Aviation safety programmes have a common goal – to reduce hazards, mitigate and manage residual risk in air transportation, **which are the essential components of Safety Management System as recommended by ICAO in the field of Aircraft Operations, Air Traffic Service and Aerodrome Operations.** Runway operations, which are vital part of activity at an airport; the hazards and risks associated with it; therefore, needs to be managed in order to prevent runway incursions that may lead to accidents.

The Air Navigation Conference of ICAO, which closely examined runway incursion prevention, in its eleventh meeting held in September – October 2003 in Montreal, Canada, recommended that States take appropriate actions to improve runway safety worldwide through the implementation of runway safety programmes. It also recommended that when capacity-enhancing procedures at aerodromes are considered, appropriate safety studies should be conducted which would take due consideration of the effect on runway safety.

With the recent growth in air traffic in India and enhancement of capacity at all major airports across the country, it has become vital that runway safety programmes are put in place to prevent runway incursions that may lead to incidents/ accidents.

This CAR is issued in supersession of ‘CAR Section 4 Series ‘X’ Part IV dated 17th October 2007.

This CAR is issued under the powers conferred under Section 5A of the Aircraft Act 1934 and Rule 133A of Aircraft Rules 1937.

2. **Applicability**

The runway safety programme requires the collaboration of air traffic controllers, pilots, vehicle drivers and aerodromes management, therefore this CAR is applicable to aerodromes operators, air traffic service provider, airlines, aircraft operators or any other group which may have a direct bearing on runway operations.

Aerodrome operator is responsible for establishment of the runway safety team at his licensed aerodrome.

3. **Definitions**

Hot spot. A location on an aerodrome area with a history or potential risk of collision or runway incursion, and where heightened attention by pilots/ drivers is necessary.

Incident. An occurrence, other than an accident, associated with the operation of an aircraft which affects or could affect the safety of operation.

Runway Safety Team. A team comprised of representatives from aerodromes operations, air traffic service providers, airlines or aircraft operators, pilot and air traffic controllers associations and any other group with a direct involvement in runway operations that advise appropriate management on the potential runway issues and recommend mitigation strategies.

Runway incursion. Any occurrence at an aerodrome involving the incorrect presence of an aircraft, vehicle or person on the protected area of a surface, designated for the landing and take-off of aircraft.

4. **Contributory Factors and Mitigation Measures**

Contributory factors and guidelines for stakeholders to prevent the runway incursion are given in Aeronautical Information Circular 6 of 2006. Additional Material is also available in the ICAO Runway Safety Toolkit and DOC. 9870.

5. **Establishment of Runway Safety Team**

A runway incursion Prevention programme starts with the establishment of runway safety teams at Individual airports. The requirement for establishing the runway safety team and terms and reference of the team are given below:

- a) Individual aerodrome operator shall establish runway safety teams at each of their aerodromes.
- b) The runway safety team shall comprise of representatives from aerodrome operator, air traffic service provider, airlines or aircraft operators and any other groups with a direct involvement in runway operations. The team shall be headed by the Incharge of the Aerodrome/ Airport Director/ Chief Operating Officer etc. as the case may be.

- c) The runway safety team shall have the terms of reference as given in para 6 of this CAR.
- d) The runway safety teams at each licensed aerodromes used for International Air Transport Services shall be completed by 31st December 2007. For other aerodromes, such teams to be established as part of the licensing procedure and establishment of Safety Management System.
- e) The primary role of a runway safety team shall be:
 - to develop action plan for runway safety;
 - identify potential runway incursion issues; and
 - recommend strategies for hazard removal and mitigation of the individual risk.

Note: These strategies may be developed based on local occurrences or combined with information collected from other sources associated with aviation activities.

- f) The team shall meet at least once in three month at aerodromes used for International Air Transport Services and once in six month at other aerodromes. Frequency of meetings may be increased keeping in view of traffic growth due to capacity enhancement.

6. Generic terms of reference for the runway safety team

The generic terms of reference for the runway safety team formed at individual aerodromes shall be:

- a) determining the number, type and, if available, the severity of runway incursions;
- b) considering the outcome of investigation reports in order to establish local hot spots or problem areas at the aerodromes;
- c) working as a cohesive team to better understand the operating difficulties of personnel working in other areas and recommending areas for improvement;
- d) ensuring that the recommendations contained in the *Manual on the Prevention of Runway Incursions* (ICAO Doc 9870) / *Aeronautical Information Circular 6 of 2006*, and applicable on the various aspects of aerodrome operation are implemented;
- e) identifying any local problem areas and suggesting improvements;
- f) conducting a runway safety awareness campaign that focuses on local issues, for example, producing and distributing local hot spot maps or other guidance material as considered necessary; and
- g) regularly reviewing the airfield to ensure its adequacy and compliance with regulatory requirements contained in the Aircraft Rules, Civil Aviation Requirements and other guidance material issued by DGCA from time to time.
- h) Forwarding 'Runway Incursion Initial Report Form' and 'Casual Factors identification Form' (Appendix A & B) to DGCA by the Safety Managers of Aerodrome Operator. Casual Factor identification form to be completed in association with the assistance of Safety Managers (ATM, Airlines, service provider).

7. Objectives of the runway safety team

Once the overall number, type and severity of runway incursions have been determined, the team shall establish goals to improve the safety of runway operations. Examples of possible goals are:

- a) to improve runway safety data collection, analysis and dissemination as required in the SMS;
- b) to check that signage and markings are compliant with CAR Section 4, Series B, Part – I and visible to pilots and drivers;
- c) to develop initiatives for improving the standard of communications;
- d) to identify potential new technologies that may reduce the possibility of runway incursion;
- e) to ensure that procedures are compliant with Aircraft Rules, Civil Aviation Requirements and other guidelines issued by DGCA from time to time; and
- f) to initiate local awareness by developing and distributing runway safety education and training material to Air Traffic controllers, pilots, personnel driving vehicles on the air side and personnel working at aerodromes.

8. Action items to be prepared and monitored by the runway safety team

- a) The outcome of the meetings of the runway safety team shall be the development of a plan containing action items for mitigating runway safety deficiencies. **The action plan would be aerodrome specific and linked to a runway safety concern, issue or problem at that aerodrome.** Action items may include suggested changes to the physical features of, or facilities at the aerodrome; air traffic control procedures; air field access requirements; pilot and vehicle operator awareness; and production of hot spot maps.
- b) **Each action item shall have a designated person or organization which is responsible for completing the relevant tasks.** There may be more than one person or organization affected by an action item; in such cases head of the safety team, shall co-ordinate with such persons or organizations for the completion of all tasks associated with the action item. **A realistic time frame to accomplish the work should also be associated with each action item.**
- c) The effectiveness of the implemented and/or completed action items should be assessed periodically. This can be accomplished by comparing the results of the initial analysis and the current runway incursion status. For example, if an action item was to provide training for controllers, pilots or vehicle drivers, the effectiveness of such training should be evaluated by the team. If the analysis shows little or no improvement in the number, type or severity of runway incursions, the team should re-evaluate the implementation of that action item.

- d) **Education and awareness material such as newsletters, posters, stickers and other educational information are invaluable tools for reducing the risk of runway incursions.** These should be used by the runway safety teams for the guidance and education of controllers, pilots, vehicle drivers and personnel working at the aerodromes.
- e) **Identification of Hot Spots.** Suitable strategies should be implemented to remove the hazard associated with hot spots. When this is not immediately possible, action should be initiated by adopting strategies to manage and mitigate the risk. These strategies may include:
 - i) awareness campaigns;
 - ii) additional visual aids (signs, markings and lighting);
 - iii) use of alternative routings;
 - iv) construction of new taxiways; and
 - v) the mitigation of blind spots in the aerodrome control tower.
- f) **Aerodromes charts showing hot spots should be produced by the aerodrome operator, checked regularly for accuracy, revised as needed, distributed locally and published in the Aeronautical Information Publication (AIP).**

9. Monitoring

The activities of Runway Safety Teams shall be monitored by DGCA. Information on establishment of team and reports of the meetings, mitigating action by the runway safety teams including runway incursion, casual factor identification reports etc. shall be submitted by the aerodrome operators directly to DGCA HQrs (Aerodrome Standard Directorate).

Nasim Zaidi

(Dr. Nasim Zaidi)
Director General of Civil Aviation

RUNWAY INCURSION INITIAL REPORT FORM

A	Date/time of incident (in UTC)	Report Number:																												
	<table border="1"> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>M</td><td>M</td><td>D</td><td>D</td><td>h</td><td>h</td><td>m</td><td>m</td><td></td><td></td> </tr> </table>															Y	Y	Y	Y	M	M	D	D	h	h	m	m			DAY <input type="checkbox"/> NIGHT <input type="checkbox"/>
Y	Y	Y	Y	M	M	D	D	h	h	m	m																			
B	Person submitting the report:																													
	Name																													
	Job Title																													
	Telephone																													
	Facility/Unit																													
	Date/time/place of completion of form																													
C	ICAO Aerodrome Designator																													
D	Surface Condition (Braking)																													
E	Aircraft, vehicle or person involved in the runway incursion (Indicate those involved in the occurrence)																													
	Aircraft 1																													
	Aircraft 2																													
	Aircraft 3																													
	Vehicle																													
	Person																													
F	Weather Conditions																													
	Wind _____	Visibility/RVR _____																												
	Temperature (° Celsius) _____	Ceiling/Cloud _____																												
	Additional Information : _____																													
G	Evasive Action Aircraft 1																													
	No <input type="checkbox"/>																													
	Yes <input type="checkbox"/>																													
	<i>Select from the list below as appropriate</i>																													
	Cancelled take off clearance <input type="checkbox"/>																													
	Rejected takeoff <input type="checkbox"/>	distance rolled _____																												
	Rotated early <input type="checkbox"/>																													
	Delayed rotation <input type="checkbox"/>																													
	Abrupt stop <input type="checkbox"/>																													
	Swerved <input type="checkbox"/>																													
	Missed approach <input type="checkbox"/>	Distance to runway threshold _____																												
	Other <input type="checkbox"/>																													
H	Evasive Action Aircraft 2																													
	No <input type="checkbox"/>																													
	Yes <input type="checkbox"/>																													
	<i>Select from the list below as appropriate</i>																													
	Cancelled takeoff clearance <input type="checkbox"/>																													
	Rejected takeoff <input type="checkbox"/>	Distance rolled _____																												
	Rotated early <input type="checkbox"/>																													

Delayed rotation	<input type="checkbox"/>	
Abrupt stop	<input type="checkbox"/>	
Swerved	<input type="checkbox"/>	
Missed approach	<input type="checkbox"/>	Distance to runway threshold _____
Other	<input type="checkbox"/>	

I Evasive Action - Vehicle

No

Yes *Select from the list below as appropriate*

Abrupt stop	<input type="checkbox"/>
Swerve	<input type="checkbox"/>
Other	<input type="checkbox"/>

J Closest Proximity (CP)

Vertical (ft)

Horizontal (m)

K Communication Difficulties?

No

Yes *Select from the list below as appropriate*

Read back/hear back	<input type="checkbox"/>
Blocked communication	<input type="checkbox"/>
Partially blocked communication	<input type="checkbox"/>
Confused call signs	<input type="checkbox"/>
ACFT/vehicle on wrong frequency/no radio	<input type="checkbox"/>
Non-standard phraseology	<input type="checkbox"/>

L. ATC

Did the ATC forget about ?	Yes	No
An ACFT/person/vehicle cleared onto or to cross a runway?	<input type="checkbox"/>	<input type="checkbox"/>
An ACFT on approach to land?	<input type="checkbox"/>	<input type="checkbox"/>
A runway closure?	<input type="checkbox"/>	<input type="checkbox"/>

M. Description of Incident and Relevant Circumstances:

1. A description or diagram of the geometry of the incident scenario;

Description:

Diagram:

2. A description of any evasive or corrective action taken to avoid a collision;

3 An assessment of the available reaction time and the effectiveness of the evasive or corrective action;

4. An indication of whether a review of voice communication has been completed and results of that review :

5. Initial assessment of severity.

N. Aircraft details- Aircraft - 1

Registration No . _____ Call sign _____

SSR code (if applicable) _____ Flight No. _____

Owner/Operator _____ Aircraft 1 type _____

Flight Details
 (Select from the list below as appropriate)

Type of Flight	Flight Rules
----------------	--------------

General Aviation	<input type="checkbox"/>	IFR	<input type="checkbox"/>
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Military	<input type="checkbox"/>	VFR	<input type="checkbox"/>
Non-scheduled	<input type="checkbox"/>		
Scheduled	<input type="checkbox"/>		
Other	<input type="checkbox"/>		
Not applicable	<input type="checkbox"/>		

O. Aircraft details- Aircraft 2

Registration No . _____	Call sign _____
SSR code (if applicable) _____	Flight No. _____
Owner/Operator _____	Aircraft 2 type _____
Flight Details (Select from the list below as appropriate)	
Type of Flight	Flight Rules
General Aviation <input type="checkbox"/>	IFR <input type="checkbox"/>
Military <input type="checkbox"/>	VFR <input type="checkbox"/>
Non-scheduled <input type="checkbox"/>	
Scheduled <input type="checkbox"/>	
Other <input type="checkbox"/>	
Not applicable <input type="checkbox"/>	

P. Vehicle details –Vehicle 1

Registration No . _____	Call sign _____
Vehicle-1 type _____	Owner/Operator _____
Permit No. _____	

Other details (Select from the list below as appropriate)

Other:

Runway inspection	<input type="checkbox"/>
Bird control	<input type="checkbox"/>
Tugging/Towing	<input type="checkbox"/>
Fire brigade	<input type="checkbox"/>
Maintenance	<input type="checkbox"/>
Military	<input type="checkbox"/>

Q. Vehicle details –Vehicle 2

Registration No . _____	Call sign _____
Vehicle-2 type _____	Owner/Operator : _____
Permit No. _____	

Other details (<i>Select from the list below as appropriate</i>)		Other:
Runway inspection	<input type="checkbox"/>	
Bird control	<input type="checkbox"/>	
Tugging/Towing	<input type="checkbox"/>	
Fire brigade	<input type="checkbox"/>	
Maintenance	<input type="checkbox"/>	
Military	<input type="checkbox"/>	
R. Report received by		
Name of person :	_____	
Designation :	_____	
Organisation :	_____	
	Date:	_____
S. Person/Agency responsible for investigation & likely date of completion of Investigation.	_____	

INSTRUCTIONS FOR THE COMPLETION OF RUNWAY INCURSION INITIAL REPORT FORM

Item

- A. Date/time UTC and conditions (day or night).
- B. Details of the person submitting the report.
- C. Aerodrome designator as indicated in *Location Indicators* (Doc 7910).
- D. Information regarding runway condition at the time of the incursion that affected the braking action of the aircraft.
- E. Identification of aircraft, vehicle and person involved in the runway incursion. More details should be provided in N, O, P, and Q.
- F. Information on weather conditions such as wind, visibility, RVR, temperature, ceiling, cloud and additional information as required.
- G, H, I. Information regarding evasive actions taken by aircraft and/or vehicle.
- J. Information regarding the closest proximity (CP) or distance, horizontally and/or vertically, between both parties during the runway incursion or at the point at which both parties were aware of the situation and the aircraft was under control at taxi speed or less.
- K, L. Information regarding communications difficulties and ATC memory lapses.
- M. Describe the runway incursion, provide information requested. Attach additional papers as requested.
- N, O, P, Q. Detailed information regarding aircraft and vehicles involved in the runway incursion.
- R. Details of the Safety Manager receiving the report.
- S. Investigating agency & likely date of completion of Investigation.

Appendix-B

RUNWAY INCURSION CAUSAL FACTORS IDENTIFICATION FORM

A	Date/time of incident (in UTC)	Initial Runway Incursion Report Number																								
	<table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 5%;"> </td><td style="width: 5%;"> </td><td style="width: 5%;"> </td><td style="width: 5%;"> </td><td style="width: 5%;"> </td><td style="width: 5%;"> </td><td style="width: 5%;"> </td><td style="width: 5%;"> </td><td style="width: 5%;"> </td><td style="width: 5%;"> </td><td style="width: 5%;"> </td><td style="width: 5%;"> </td> </tr> <tr> <td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>M</td><td>M</td><td>D</td><td>D</td><td>h</td><td>h</td><td>m</td><td>m</td> </tr> </table>													Y	Y	Y	Y	M	M	D	D	h	h	m	m	
Y	Y	Y	Y	M	M	D	D	h	h	m	m															
B	B. Aircraft, vehicle or person involved in the runway incursion (Indicate those involved in the occurrence)																									
	Aircraft 1																									
	Aircraft 2																									
	Aircraft 3																									
	Vehicle																									
	Person																									
C	Severity of Runway Incursion Accident (Select as appropriate)																									
	Severity (Tick ✓)																									
	A <input type="checkbox"/>	B <input type="checkbox"/>																								
	C <input type="checkbox"/>	D <input type="checkbox"/>																								
	E <input type="checkbox"/>																									
D	Causal and Coincident Factors (Multiple choices can be made)																									
1.	AIR TRAFFIC CONTROL																									
1.1	Communications																									
1.1.1	Transmitted instructions which were long, complex, spoken rapidly or not in accordance with ICAO language requirement for air-ground radiotelephony communications (language normally used by the station on the ground or the English language)	<input type="checkbox"/>																								
1.1.2	Did not obtain read-backs for clearances, instructions & coordination as required by ICAO	<input type="checkbox"/>																								
1.1.3	Did not correct an error in a read-back	<input type="checkbox"/>																								
1.1.4	Issued a clearance to the wrong aircraft	<input type="checkbox"/>																								
1.1.5	Confused similar call-signs	<input type="checkbox"/>																								
1.1.6	Transmission was completely blocked	<input type="checkbox"/>																								
1.1.7	Deviation from established ICAO standard phraseologies	<input type="checkbox"/>																								
1.1.8	Other (please specify), If not ICAO procedure, briefly describe the procedure used and where.	<input type="checkbox"/>																								
1.2	Situational Awareness																									
1.2.1	Head down time due to equipment/displays; duties other than traffic processing such as inputting flight data	<input type="checkbox"/>																								
1.2.2	<u>Forgot:</u>	<input type="checkbox"/>																								

	<ul style="list-style-type: none"> aircraft on an active runway aircraft cleared to cross a runway aircraft in the lined up position aircraft on approach to land to issue a clearance that a clearance had already been issued closed runways a vehicle on an active runway A vehicle cleared to cross a runway 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
1.2.3	Distractions due to: <ul style="list-style-type: none"> performing other assigned duties, such as conducting operational telephone calls, weather observations and recording, issuing NOTAM and other operational information engaging in non-operational activities such as personal telephone call, extraneous conversation, reading material and radios 	<input type="checkbox"/> <input type="checkbox"/>
1.2.4	Used a language other than ICAO air-ground radiotelephony communications language requirements (language normally used by the station on the ground or the English language)	<input type="checkbox"/>
1.2.5	Other (please specify),	<input type="checkbox"/>
1.2.6	Misidentified the aircraft or the aircrafts position due to: <ul style="list-style-type: none"> incorrect position report an incorrect expectation(e.g. expected the aircraft to be clear of the runway) 	<input type="checkbox"/> <input type="checkbox"/>
1.2.7	Lack of visual scanning of ground movements	<input type="checkbox"/>
1.2.8	Limitations on the view of the maneuvering area from ATC tower	<input type="checkbox"/>
1.2.9	Recent runway configuration change	<input type="checkbox"/>
1.2.10	Unusual runway configuration	<input type="checkbox"/>
1.2.11	Error occurred within 15 minutes of assuming the control position	<input type="checkbox"/>
1.2.12	Controller was conducting on-the-job training	<input type="checkbox"/>
1.2.13	Fatigue	<input type="checkbox"/>
1.2.14	Other (please specify).	<input type="checkbox"/>
1.3	Staffing	
1.3.1	ATC positions were combined on the same frequency	<input type="checkbox"/>
1.3.2	Absence of a supervisor in the tower	<input type="checkbox"/>

1.3.3	Supervisor was working at a control position	<input type="checkbox"/>
1.4	Decision Making	
1.4.1	Misjudged separation or anticipated separation	<input type="checkbox"/>
1.4.2	Inadequate ATC to ATC coordination	<input type="checkbox"/>
1.4.3	Other (please specify).	<input type="checkbox"/>
1.5	Procedures	
1.5.1	Misapplication of Conditional clearances	<input type="checkbox"/>
1.5.2	Use of multiple line up clearances	<input type="checkbox"/>
1.5.3	Other (please specify).If not ICAO procedure, briefly describe the procedure used & where.	<input type="checkbox"/>
1.6	Aerodrome works	
1.6.1	ATC not advised of works on the manoeuvring area	<input type="checkbox"/>
1.6.2	Other (please specify).	<input type="checkbox"/>
2.	FLIGHT CREW	
2.1	Communications	<input type="checkbox"/>
2.1.1	Transmission was completely blocked	<input type="checkbox"/>
2.1.2	Transmission was partially-blocked "stepped-on"	<input type="checkbox"/>
2.1.3	Accepted another aircraft's clearance:	
	• With similar call signs	<input type="checkbox"/>
	• Without similar call signs	<input type="checkbox"/>
2.1.4	Deviation from established ICAO standard phraseologies	<input type="checkbox"/>
2.1.5	Used other than ICAO language requirements for air-ground radiotelephony communications (language normally used by the station on the ground or the English language) in situation not covered by ICAO standard phraseology	<input type="checkbox"/>
2.1.6	Used language not in accordance ICAO language requirement for air-ground radiotelephony communications (language normally used by the station on the ground or the English language)*	<input type="checkbox"/>

2.1.7	Speech quality: <ul style="list-style-type: none"> • Not proficient in ICAO language requirement air-ground radiotelephony communications (language normally used by the on the ground or the English language) • Poorly enunciated or heavily accented • Spoken rapidly • Spoken with an inconsistent volume 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
2.1.8	Did not use headsets	<input type="checkbox"/>
2.1.9	Received clearance or instructions during periods of high cockpit workload	<input type="checkbox"/>
2.1.10	Did not advise ATC of a delay on the runway prior to take off	<input type="checkbox"/>
2.1.11	Other (please specify).	<input type="checkbox"/>
2.2	Situational Awareness	<input type="checkbox"/>
2.2.1	Crew conducting checklists while taxiing	<input type="checkbox"/>
2.2.2	Crew member programming flight management system or other flight deck system while taxiing	<input type="checkbox"/>
2.2.3	Crew member was on another radio frequency	<input type="checkbox"/>
2.2.4	Competing radio communications	<input type="checkbox"/>
2.2.5	Unfamiliar with the aerodrome layout	<input type="checkbox"/>
2.2.6	Crew mistook position on the aerodrome (thought they were in a different location)	<input type="checkbox"/>
2.2.7	Fatigue	<input type="checkbox"/>
2.2.8	Reported incorrect location to ATC	<input type="checkbox"/>
2.2.9	Taxied fast	<input type="checkbox"/>
2.2.10	Did not refer to the aerodrome diagram	<input type="checkbox"/>
2.2.11	Did not listen to the ATIS	<input type="checkbox"/>
2.2.12	Works on the manoeuvring area not previously advised by NOTAM	<input type="checkbox"/>
2.2.13	Used out of date or inaccurate publications or charts	<input type="checkbox"/>
2.2.14	Failed to apply or correctly observe Sterile Cockpit procedures	<input type="checkbox"/>
2.2.15	Other (please specify).	<input type="checkbox"/>

2.3	Marking, Signs and Lighting	
2.3.1	Not ICAO/ CAR compliant	<input type="checkbox"/>
2.3.2	Not provided	<input type="checkbox"/>
2.3.3	Irregularly spaced	<input type="checkbox"/>
2.3.4	Ambiguous and difficult to follow	<input type="checkbox"/>
2.3.5	Poorly sized	<input type="checkbox"/>
2.3.6	Poorly situated	<input type="checkbox"/>
2.3.7	Poorly maintained	<input type="checkbox"/>
2.3.8	Other (please specify).	<input type="checkbox"/>
2.4	Clearances and Instructions	
2.4.1	Misunderstood clearance:	
	• conditional	<input type="checkbox"/>
	• follow	<input type="checkbox"/>
	• other	<input type="checkbox"/>
2.4.2	Flight crew did not ask for clarification when they did not understand clearance or instruction	<input type="checkbox"/>
2.4.3	Did not inform ATC when could not comply with a clearance	<input type="checkbox"/>
2.4.4	Forgot part of the clearance or instruction	<input type="checkbox"/>
2.4.5	Entered the runway after being instructed to "hold short"	<input type="checkbox"/>
2.4.6	Lined up on the runway after instruction to taxi to the runway holding position (point)	<input type="checkbox"/>
2.4.7	Took off without a clearance after being instructed to "line up and wait"	<input type="checkbox"/>
2.4.8	Took off without a clearance after being instructed to taxi to the runway holding position (point)	<input type="checkbox"/>
2.4.9	Landed or departed on wrong runway	<input type="checkbox"/>
2.4.10	Landed or departed on taxiway	<input type="checkbox"/>
2.4.11	Other (please specify).	<input type="checkbox"/>
3.	VEHICLES AND PEDESTRIANS	
3.1	Communications	
3.1.1	Not operating on the appropriate:	
	• Ground frequency for operations outside the runway strip	<input type="checkbox"/>
	• Tower frequency for operations within the runway strip	<input type="checkbox"/>

3.1.2	Turned the radio volume down or off after initial communication with ATC	<input type="checkbox"/>
3.1.3	Other (please specify).	<input type="checkbox"/>
3.2	Situational Awareness	
3.2.1	Forgot the details/limits of any clearance to operate on the manoeuvring area	<input type="checkbox"/>
3.2.2	Distracted by: <ul style="list-style-type: none"> • current work • high noise levels • monitoring more than one frequency and possibly a mobile telephone • disoriented or lost on the aerodrome 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
3.2.3	Failure to report correct location	<input type="checkbox"/>
3.2.4	Other (please specify).	<input type="checkbox"/>
3.3	Markings, Signs and Lighting	
3.3.1	Not ICAO/CAR compliant	<input type="checkbox"/>
3.3.2	Not provided	<input type="checkbox"/>
3.3.3	Irregularly spaced	<input type="checkbox"/>
3.3.4	Ambiguous and difficult to follow	<input type="checkbox"/>
3.3.5	Poorly sized	<input type="checkbox"/>
3.3.6	Poorly situated	<input type="checkbox"/>
3.3.7	Poorly maintained	<input type="checkbox"/>
3.3.8	Other (please specify).	<input type="checkbox"/>
3.4	Procedures	
3.4.1	Not adequately familiar with the aerodrome and its procedural requirements	<input type="checkbox"/>
3.4.2	Did not refer to current aerodrome NOTAM	<input type="checkbox"/>
3.4.3	Did not refer to current aerodrome diagram	<input type="checkbox"/>
3.4.4	Used out of date or inaccurate publications or charts	<input type="checkbox"/>
3.4.5	Did not advise ATC of work that affected operations	<input type="checkbox"/>

3.4.6	Ground vehicles did not stop at required positions	<input type="checkbox"/>
3.4.7	Other (please specify).	<input type="checkbox"/>
3.5	Clearances and Instructions	
3.5.1	Did not comply with ATC clearances and instructions	<input type="checkbox"/>
3.5.2	Mistook as theirs, a clearance intended for another vehicle or an aircraft	<input type="checkbox"/>
3.5.3	Did not advise ATC that the driver did not understand the clearance or instruction	<input type="checkbox"/>
3.5.4	Other (please specify).	
E.	Person submitting the form:	
	Name:	
	Title:	
Sign.		
Date:	Organisation	

**INSTRUCTIONS FOR THE COMPLETION OF RUNWAY INCURSION
CAUSAL FACTORS IDENTIFICATION FORM**

ITEM

- A. Date/time in UTC and place where the runway incursion occurred.
- B. Identify the aircraft, vehicle and person involved in the runway incursion.
- C. Classify the severity of the runway incursion according to following **Severity Classification scheme**
(Refer ICAO DOC 9870, Manual on the Prevention of Runway Incursion Chapter 6)

Severity Classification	Description
A	A serious incident in which a collision is narrowly avoided.
B	An incident in which separation and there is a significant potential for collision which may result in a time critical corrective/evasive response to avoid a collision.
C	An incident characterized by ample time and /or distance to avoid a collision.
D	Incident that meets the definition of runway incursion such as incorrect presence of a single vehicle/person/aircraft on the protected area of a surface designated for the landing and take-off of aircraft but with no immediate safety consequences.
E	Insufficient information inconclusive or conflicting evidence precludes severity assessment.

- D Fill all causal and coincident factors applicable to the runway incursion incident.
- E Details of the person submitting the form and date (Refer para 6- h of the CAR).

Note : The information provided in the form may be required by ICAO to facilitate global identification of runway incursion causal factor.