Government of Sharjah
Department of Civil Aviation

حكومة الشارقة
دائرة الطيران المدني

Sharjah DCA Safely Managing Change in the context of Runway Safety

ICAO Runway Safety Seminar 02nd 04th June 2014

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Sharjah Department of Civil Aviation

Runway Safety…..

- What is Runway Safety?
- Sharjah DCA Approach to Runway Safety.
- Managing Change with regard to Runway Safety.

Outline of the Presentation….

- Sharjah Airport Traffic.
- Sharjah Airport Basic Operations.
- Present Runway Incursion Prevention Measures.
- Additional Runway Incursion Prevention Measures required for the New Runway Operations.
- Runway Incursions statistics

What is Runway Safety?

Runway safety

Sharjah DCA considers runway safety one of its highest priorities as it remains one of the most serious threats to aviation safety. Improving runway safety, therefore, is a key focus of Sharjah DCA.

Improving runway safety involves considering all runway related incidents, including:

- runway incursions
- runway excursions
- runway confusion.

Runway Incursion (ICAO definition)

A runway incursion is: *“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 takeoff of aircraft.”*

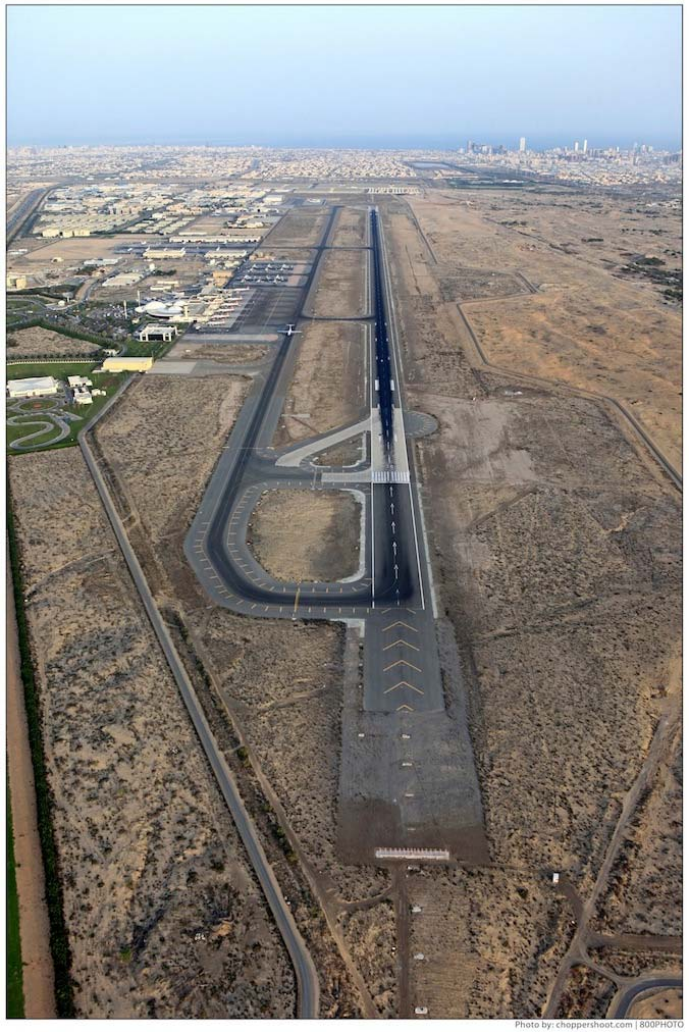
Airport Description

- APPROXIMATELY 75,000 movements for last 3 years.
  - Peak day : 240 operations.
  - *Mean day: 190 operations*
  - Peak hour : 26 (Single Runway Operation).
- MAJOR HUB FOR Air Arabia
- WEATHER CONDITIONS
  - Low Visibility Procedures (LVP) : less than 5 % of the time.
  - A few wet days.

Airport Layout……

- Runway
  - One Runway
  - A mixed-mode runway.
  - Code F Operations (AN 225, AN 124, B747-8, A380-800)
- Taxiway
  - One parallel taxiway with 7 entry and exit points (no RETs)
  - One Air Traffic Control Tower situated on south side of the Airport

Airport Layout....



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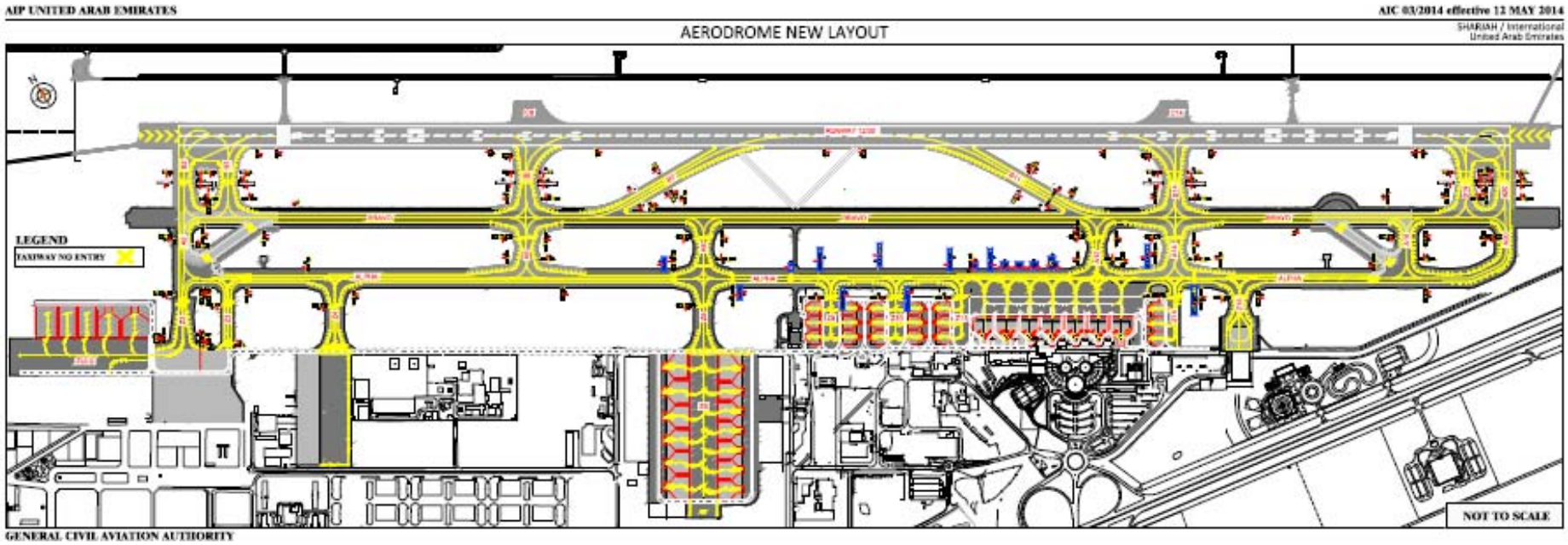
Future Plans….

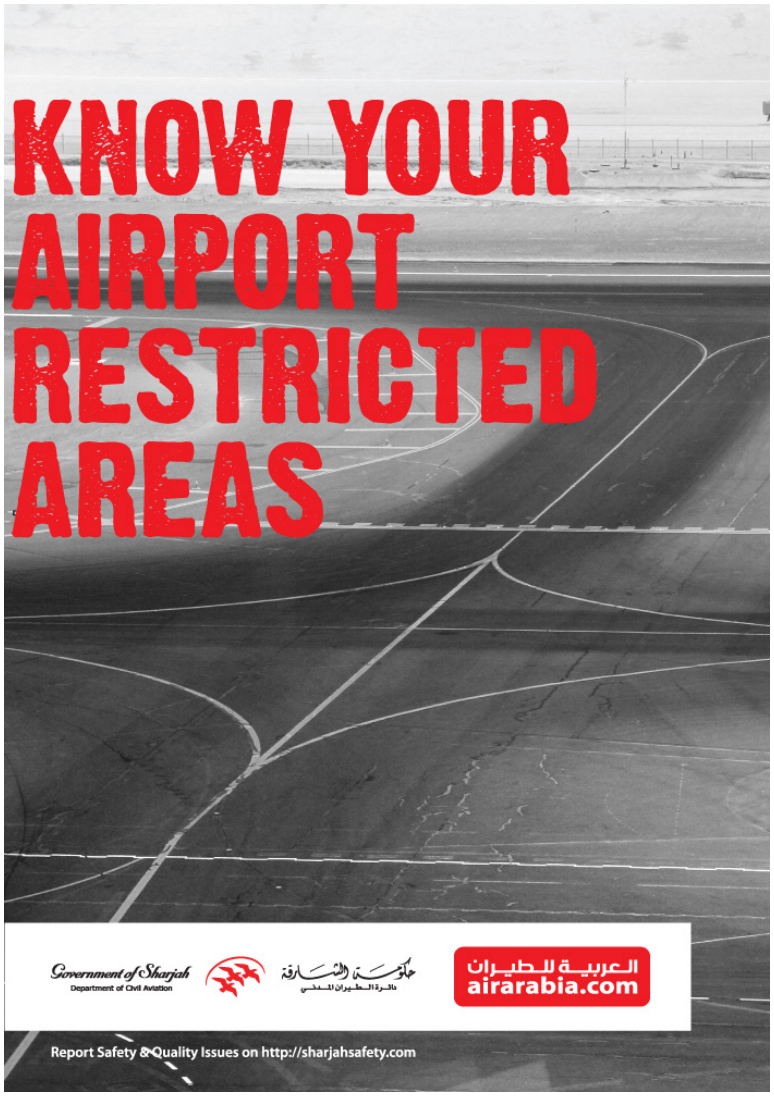
- New Runway to Open August 2014.
  - 250m North of present runway (centerline to centerline)
  - Code F compliant.
  - CATIIIB compliant
  - A mixed-mode runway.
- Taxiways
  - Two parallel taxiways with 7 entry and exit points + RETs
  - Refurbished Air Traffic Control Tower situated on south side of the Airport

Future Plans….



Runway Safety….

- Sharjah DCA is working to improve runway safety through the Runway Safety Group, a cross industry group working to provide a coordinated improvement to runway safety.



Addressing the Issues

In **2008** Sharjah DCA conducted a Runway Safety GAP analysis which identified a number of focus areas:

- Limit the physical possibility to mistakenly enter runways.
- Support the Implement a Safety Management System.
- Implement GCAA CAR Part IX Provisions especially markings, lighting, signage.
- Provide information about temporary work areas.
- Airside training and assessment.

Addressing the Issues

- Review Taxiways named in accordance with GCAA CAR Part IX .
- Review procedures related to vehicle drivers when uncertain of their position.
- Establish a Local Runway Safety Team.
- Poster Campaign

Addressing the Issues….

- **Change management process**
- The change management process is the sequence of steps or activities that a change management team or project leader would follow to apply change management to a project or change.
- **Phase 1 - Preparing for change** (Preparation, assessment and strategy development)
- **Phase 2 - Managing change** (Detailed planning and change management implementation)
- **Phase 3 - Reinforcing change** (Data gathering, corrective action and recognition)

- Addressing the Issues….

Phase 1 - Preparing for change

- Define your change management strategy
- Prepare your change management team
- Develop your sponsorship model

Phase 2 - Managing change

- Develop change management plans
- Take action and implement plans

Phase 3 - Reinforcing change™

- Collect and analyze feedback
- Diagnose gaps and manage resistance
- Implement corrective actions and celebrate successes

2nd Runway Project

New Runway Project has been subject to the same process since inception.

The Risk of Runway confusion will increase due to the changed layout.

Identified mitigations will be adopted prior to aircraft operations commencing.

The Results…..
Runway Incursion Prevention Program

Government of Sharjah
Department of Civil Aviation

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Sharjah Department of Civil Aviation

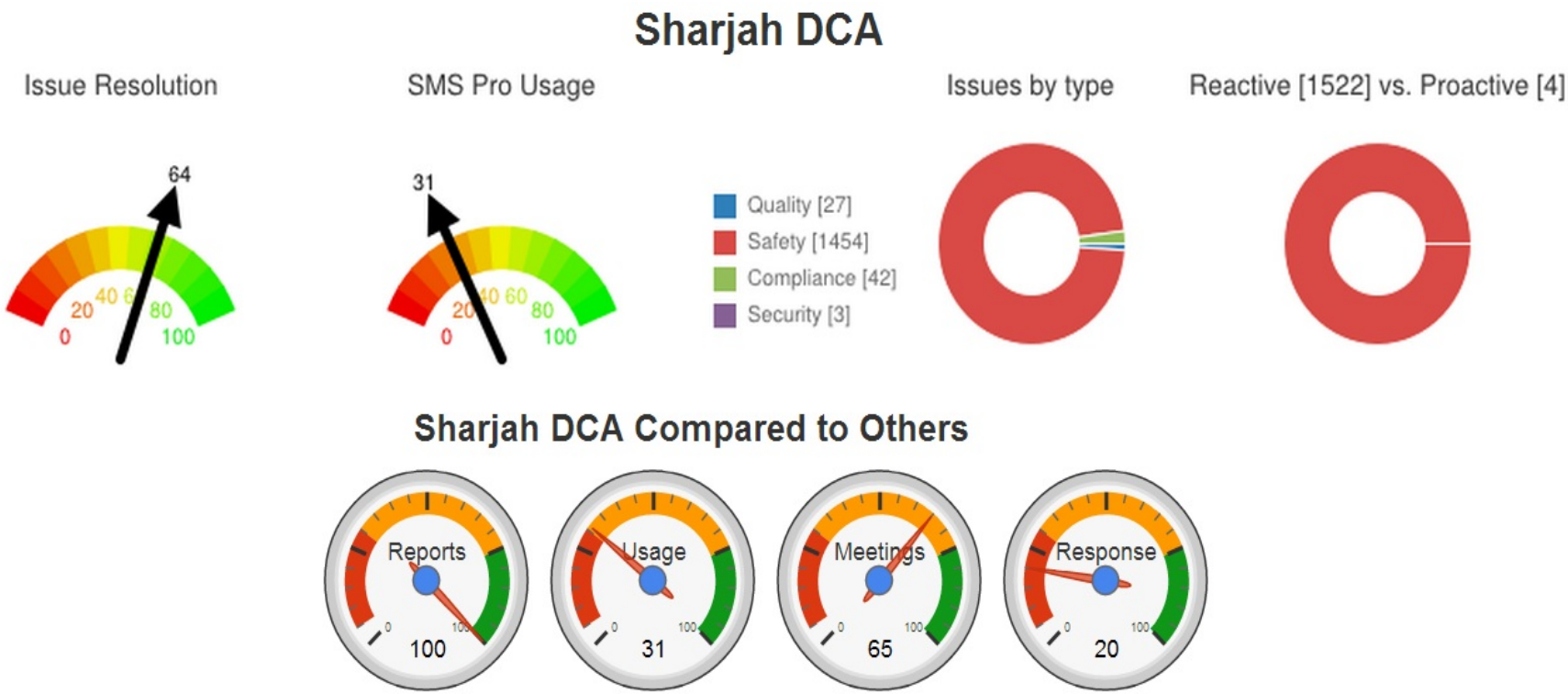
Sharjah International Airport
Runway Incursion Prevention Program (RIPP)

Version 2 - 01 November 2012

	Risk Reference & Hazard Identification	Risk(s) description	Risk Evaluation			Mitigation	
		Consequences	Probability	Severity	RISK CAT Severity/ Probability	Mitigation	Remarks (Revised RISK CAT)
4	**Operational & Human Factors** a. Airline Crew & Driver Lack of Situational Awareness	• Crew Techniques • Cockpit workload • Airport factors • Language proficiency and understanding English • Lack of familiarity with the airfield due to lack of OMSJ experience (and construction and commissioning of new areas) • Readback & Hearback errors (i.e. readback error not detected) • Runway incursion • Loss of rwy separation • Loss of control • Loss of situational awareness • Increased ATCO workload • Aircraft collision	3	B	2	• Airline training procedures conforming to ICAO standards. • Airport conforming to ICAO standards. • Dual pilot cockpit's • ATC procedures and experience regarding the importance of correct readback and hearback • Published standard taxi routes • Awareness Campaign. **Future Mitigation** • Enhanced surface markings – RWY ahead surface markings • Enhanced signage – vertical RWY ahead signs • NOTAM's highlighting hotspots issued with caution message on ATIS	3 prob/severity 1B)

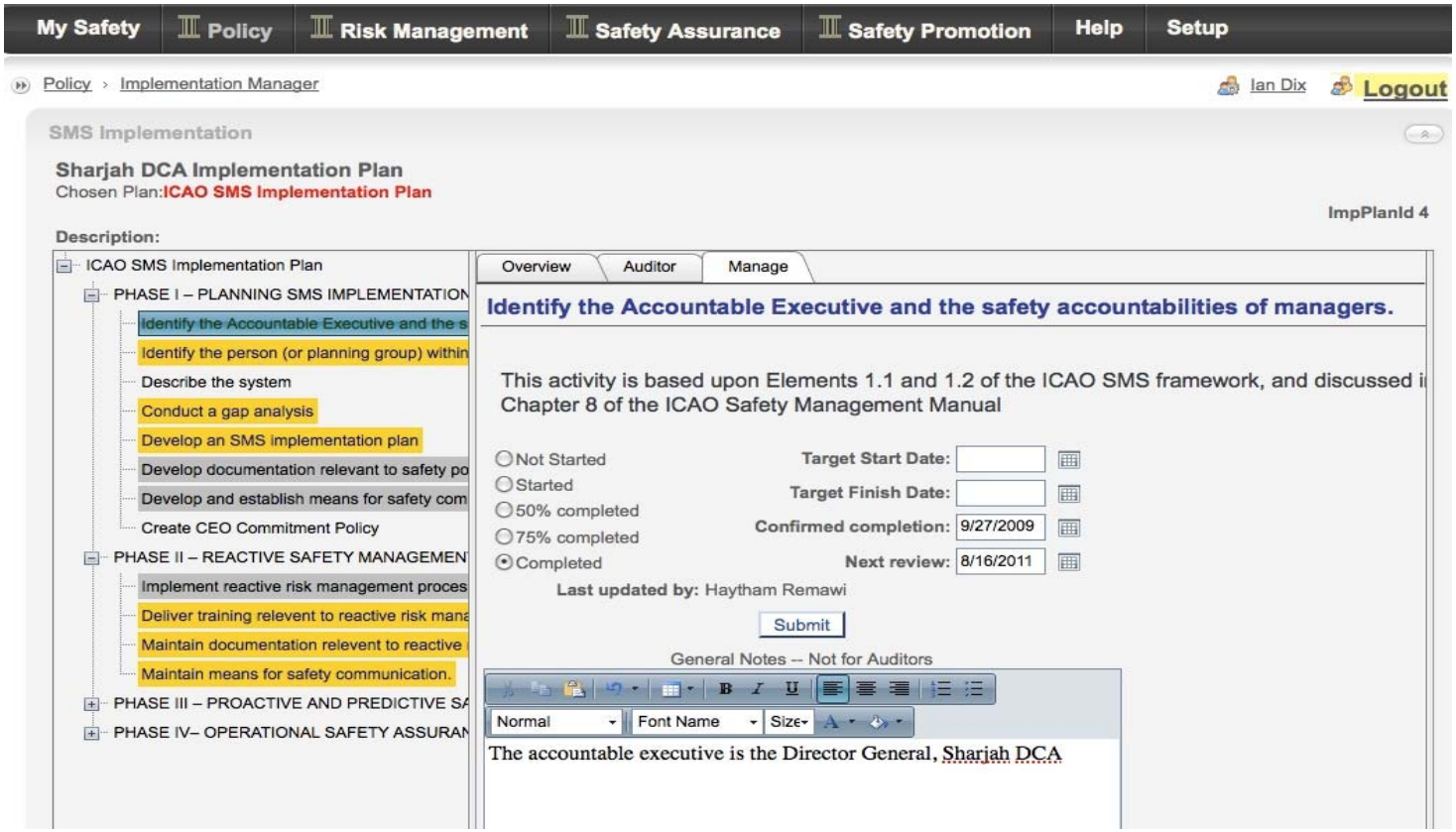
The Results…..

Introduction of SMS Software Tool



The Results…..

Introduction of SMS Software Tool



The Results…..

Management of Change in SMS Pro

Management of Change Requests

Create MOC

	Title	Initiated By	Responsible Manager	Date Requested	Accepted	Approved
11	Enhanced Taxiway Markings	Adam M Shaikh	Jacob Avis	11/5/2012 10:31:29 AM	☑	☑
10	Change Managment Workshop for the New Runway Project	Dr. Haytham Remawi	Dr. Haytham Remawi	10/24/2012 6:49:53 AM	☑	☑
9	Standby Generator and UPS Load testing for AGL only.	Adam M Shaikh	Haytham Remawi	10/14/2012 5:00:53 AM	☑	☑
8	Juma Al Majid Hangar for A318	Dr. Haytham Remawi	Dr. Haytham Remawi	9/17/2012 10:56:10 AM	☑	☑
7	Rubber Removal	Dr. Haytham Remawi	Dr. Haytham Remawi	9/12/2012 8:23:42 AM	☑	☑
6	Low Visisbility Procedures Signbord and barriers	Dr. Haytham Remawi	Dr. Haytham Remawi	9/12/2012 7:39:30 AM	☑	☑
5	Replacement Of Senior Electronics Engineer - AGL, Mr. Devanand Sharma with Existing Electronics Engineer Mr. Sheikh Adam Mohammed	Devanand Sharma	Mr. Jacob Avis	8/9/2012 9:17:42 AM	☑	☐
4	AGL Inspection Form	Devanand Sharma	Jacob Avis	8/7/2012 4:43:01 PM	☑	☑
2	Additional VCS Direct Dial Lines to DXB APP.	Leiv Bjerga	Doug Megson	7/17/2012 7:15:07 AM	☑	☑
1	Enhanced taxiway Marking	Masab Osman	Mosab Osman	7/16/2012 10:51:58 AM	☑	☐

SMS PRO™ safety-security-quality
SMS MANAGEMENT TOOL

The Results…..
Local Runway Safety Team

مطار الشارقة الدولي
Sharjah International Airport

Runway Incursion Prevention

Never assume the runway is clear or closed

Always check with ATC

Only enter the runway with permission

Even an Emergency Situation

If Lost
or unsure of your location on the Airport

STOP!!

Phone ATC Tower : 06-5581218 / 06-5084614

Speak Slowly and Clearly in English.
Describe where you THINK you are.
REMAIN STOPPED
Until an escort vehicle finds you.

Phone ATC and say "I have an escort and request to proceed"

Wait for ATC to say you can proceed and follow the escort vehicle.

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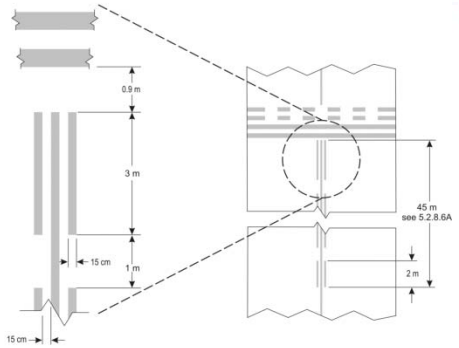
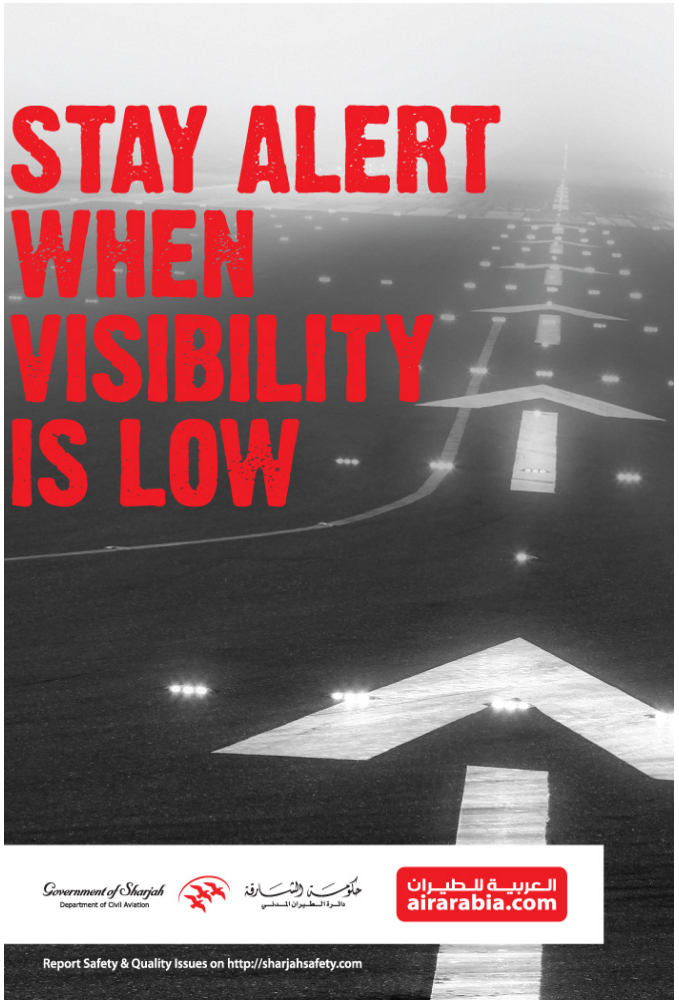
The results….
Enhanced Taxiway Markings

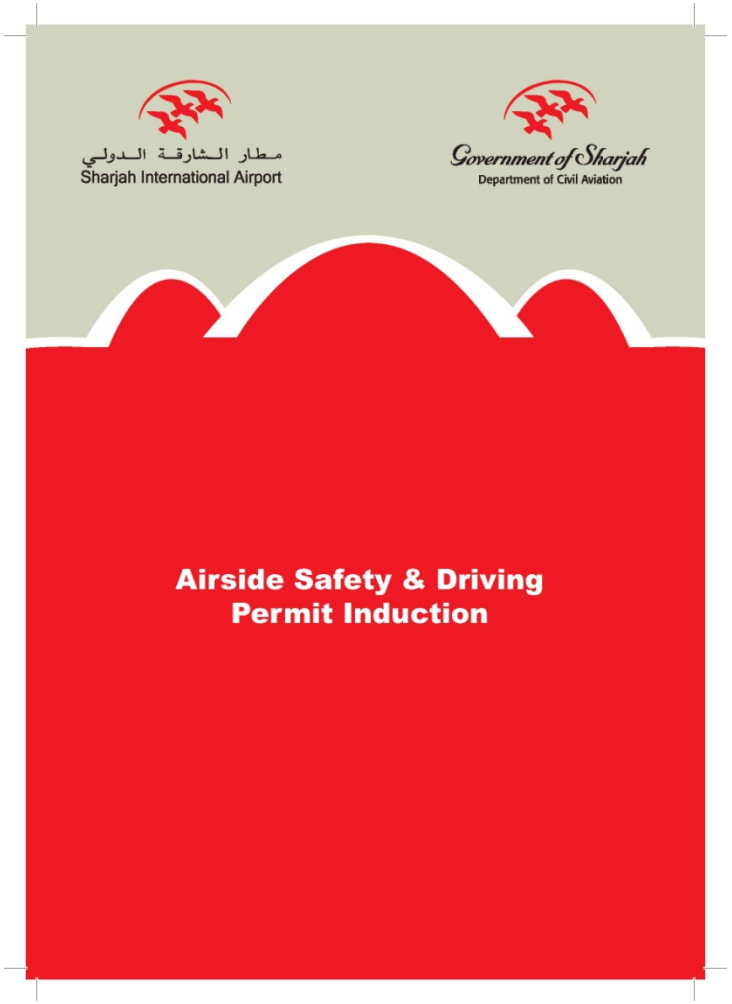


The Results….
Runway workshops

The Results….
Poster Campaign



The Results….
Airside Driver Handbook



Statistics.....

There were zero Runway Incursions in **2012**

There was one Runway Incursion(CAT D) in **2013.**

To date there have been no Runway Incursions in **2014**

There has been no Runway Confusion since January 2012.

Thank You