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SMS Implementation by an Airport Operator



Aberdeen 110,000

3.5M pax



Gatwick 260,000
ATM's

Peak 50 per hour
35M pax



Stansted 195,000
ATM's

24M pax



Heathrow 480,000
ATM's

Peak 80 per hour
69M pax

Southampton 58,000

2M pax



Glasgow 110,000

9M pax



Edinburgh 130,000

10M pax



Safety Management?



SMS History within BAA

- Formal SMS since 1993.
- Designed Centrally and used at each of the 7 airports in an appropriate and proportionate manner to suite the scale of operation.
- Current SMS has evolved and one I will describe is its third iteration.
- Prior to 1993 many parts of the system did exist, e.g. training, safety groups, local rules/regulations, inspections but they were not contained within a formal system.

- **A system for the management of safety at aerodromes including the organisational structure, responsibilities, procedures, processes and provisions for the implementation of aerodrome safety policies by the aerodrome operator, which provides safety at, and the safe use of, the aerodrome.**

Regulatory Documentation

- November 2005 (Annex 14) - A certified aerodrome shall have a Safety Management System
- November 2005 (Annex 14) - Each certified aerodrome shall have an Aerodrome Manual
- ICAO Doc 9859 Safety Management Manual Ch 18
- ICAO DOC 9774 Aerodrome Certification Manual
- UK CAA CAP 728 The Management of Safety
- UK CAA CAP 642 Airside Safety Management
- UK HSE HS(G) 209 Aircraft Turnround
- UK HSE HS(G) 65 Health and Safety Management

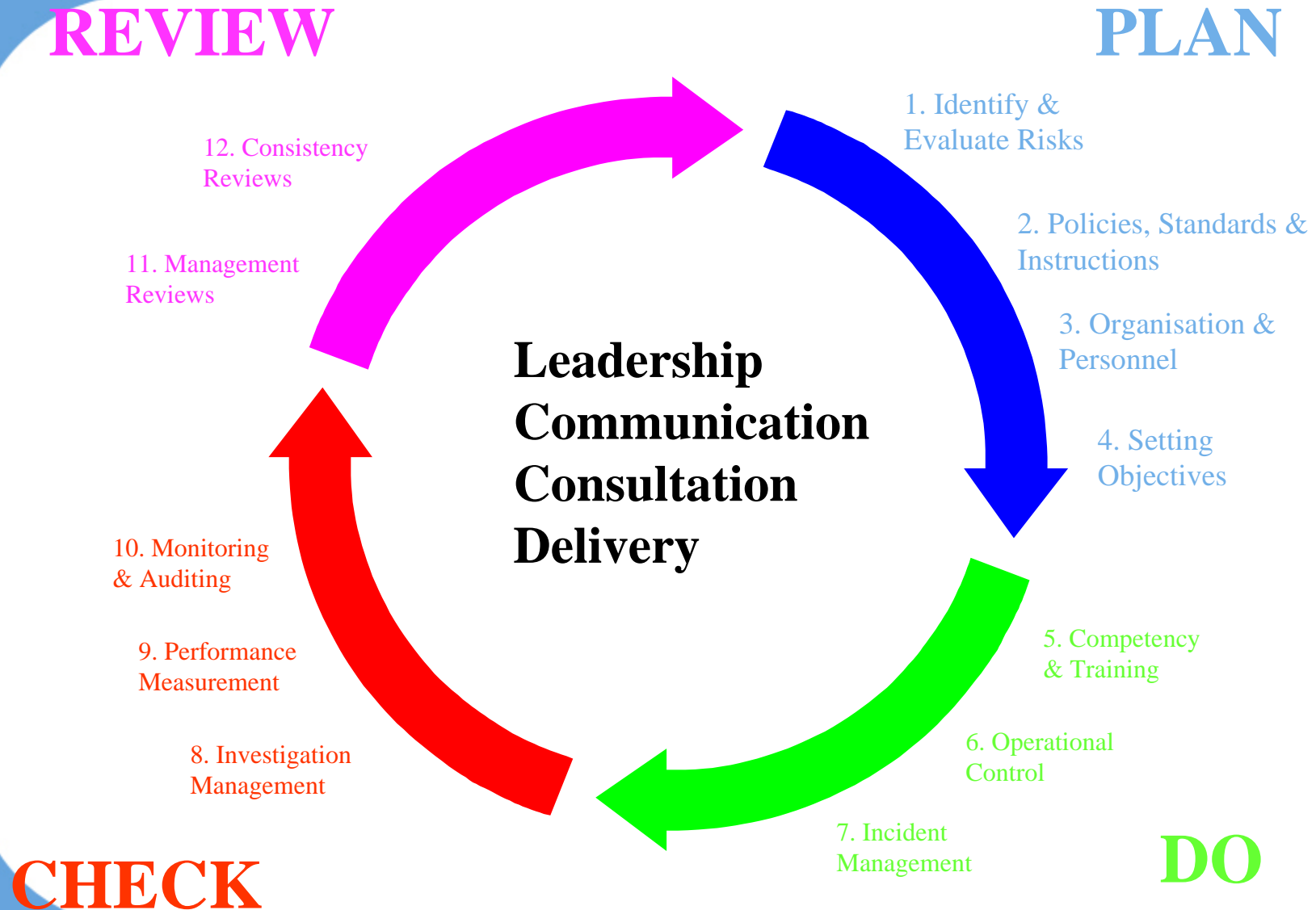
Management Systems Approach -1

- Good HSSE performance is good for business and our reputation.
- HSSE issues integrated not an 'add on'.
- BAA committed to stakeholders to improve HSSE performance.
- Safety Management is seen as a 'line management' responsibility for delivery.
- Commitment is required from the Board of Directors

Management Systems Approach - 2

- Ensures legal compliance (licence to operate).
- Controls losses, reduces waste, maximises resources.
- Proactive not reactive.
- Establishes an audit trail.
- Incident investigation, accident causation.
- SMS is 'risk based'
- Holistic view of health, safety, security, environment

BAA Managing Responsibly_System



Plan - *‘getting the business where we want to be’*

- Identify and Evaluate Risks
- Policies Standards and Instructions
- Organisation and Personnel
- Setting Objectives

Identify and Evaluate Risks

- Bird Strike
- Runway Incursion
- Airside Accidents
- Aircraft Accident on Runway
- Loss of Facilities
- Fuel Hydrant Leak
- Adverse Weather
- Power Failure
- Communications Failure

Policies, Standards and Instructions

- Overall 'Safety Policy' for the Airport
- Main SMS Document – Aerodrome Manual
- Aerodrome Emergency Orders
- Local 'Operational Safety Instructions'
- Risk Register + Risk Assessments
- Operational Standards and requirements

Organisation and Personnel

- An appropriate structure for size of airport
- Balance between management and duty teams
- Technical Competency Framework
- Means of teaching, coaching and testing staff
- Programme of initial and refresher training
- Means of assessing ongoing competence

Setting Objectives

- Setting overall targets for specific operational areas
- Setting improvement objectives against risk areas
- Setting individual 'safety targets' for staff
- Working with the concept of 'Continuous Improvement'

Do - *'Putting Plans into Action'*

- Competency and Training
- Operational Control
- Incident Management

Competency and Training

- Provision of layered training programme/courses
- Agreed process for initial and recurrent training
- Trained presenters and coaches
- Commitment to an agreed Technical Competency Framework.
- 'Safety Critical' annual competency assessments

Operational Control

- Aerodrome Inspections
- Runway Inspections
- Bird Control measures
- Aircraft Turnaround Audits
- Apron Discipline measures
- Safety Audits of third party organisations
- Health and Safety checks
- Adverse weather operations
- Aircraft recovery/accident management

Incident Management

- Annual Emergency Exercise
- Regular Table Top Exercises
- Regular meetings between Airport and Emergency Services (Police, Fire, Ambulance).
- Regular training for airlines/handling agents
- Important to exercise both airfield and terminal

Check - *‘How far have we got in achieving our policies and objectives’*

- Investigation Management
- Performance Measurement
- Monitoring and Auditing

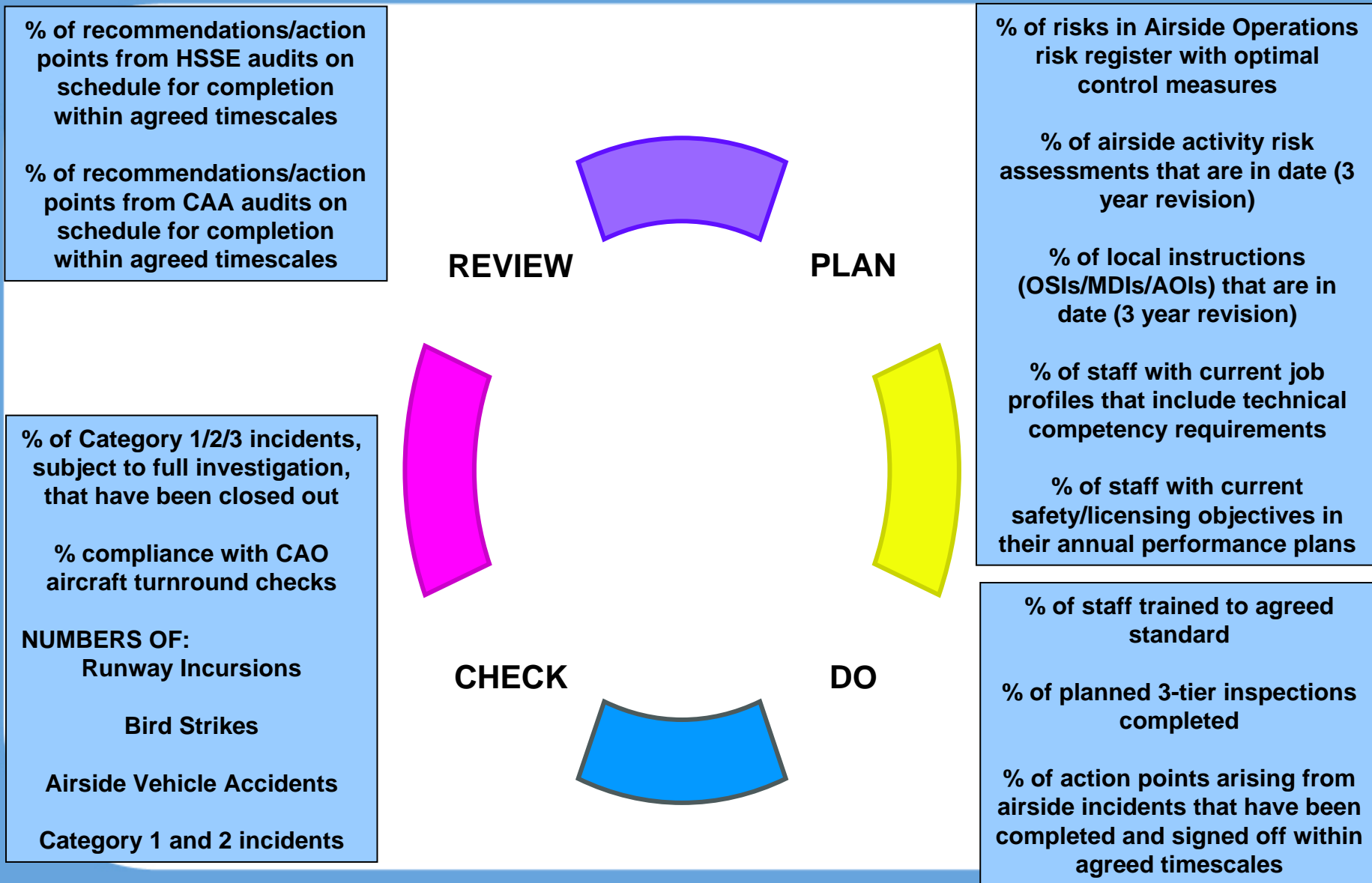
Investigation Management

- Despite SMS things will still 'go wrong'
- Important to plan for the 'what if'
- Programme of 'Hazard Analysis' will assist with this
- Must learn from mistakes and spread lessons
- How do we do it in BAA?
- How does BAA learn from others?

Performance Measurement

- Statistics provided to Board of Directors (BAA Group)
- Statistics used by each individual airport
- Individual airport Airside Safety Group meetings
- Performance measurement of 3rd Parties
- Individual airport Flight Operations Performance
- Individual staff progress against safety objectives

Airside KPI's



Monitoring and Review

- From performance data analyse trends
- Compare against Key Performance Indicators (KPI's)
- Leading and Lagging Indicators
- How are high risk areas performing?
- Are all targets and objectives realistic and achievable?
- Are any changes needed for the next year?
- If so amend targets for future years appropriately

Review - *'Is the management system suitable, adequate and effective'*

- Management Reviews
- Inter-company Consistency Reviews

Management Reviews

- BAA has annual Corporate Audit for Health, Safety, Security and Environment.
- All BAA airports are also subject to an annual Civil Aviation Authority Safety Audit of the SMS.
- Each airport has a self audit/assessment process for all safety critical operational areas.
- Each airport has a senior manager that has responsibility for safety oversight in relation to the aerodrome licence/certificate.

Inter-Company Consistency Reviews

- Central Airside Operations currently carries out an agreed programme of 'Best Practice Reviews'.
Examples of topics recently covered – RESA, Airside Driver Training, Staff Competency Training, Winter Operations, Bird Hazard Management, runway friction testing/measurement, Aerodrome Manual content.
- 'Best Practice Reviews' ensure compliance with agreed Group standards and help to identify areas where BAA exceeds standards, this then normally becomes the new standard at all airports.

Plan, Do, Check, Review – Rwy Incursions



Pilot/ATC Phraseology

Language Proficiency

ATC/Pilot

Procedures

Vehicles/Drivers

Weather/Visibility

Construction/WIP

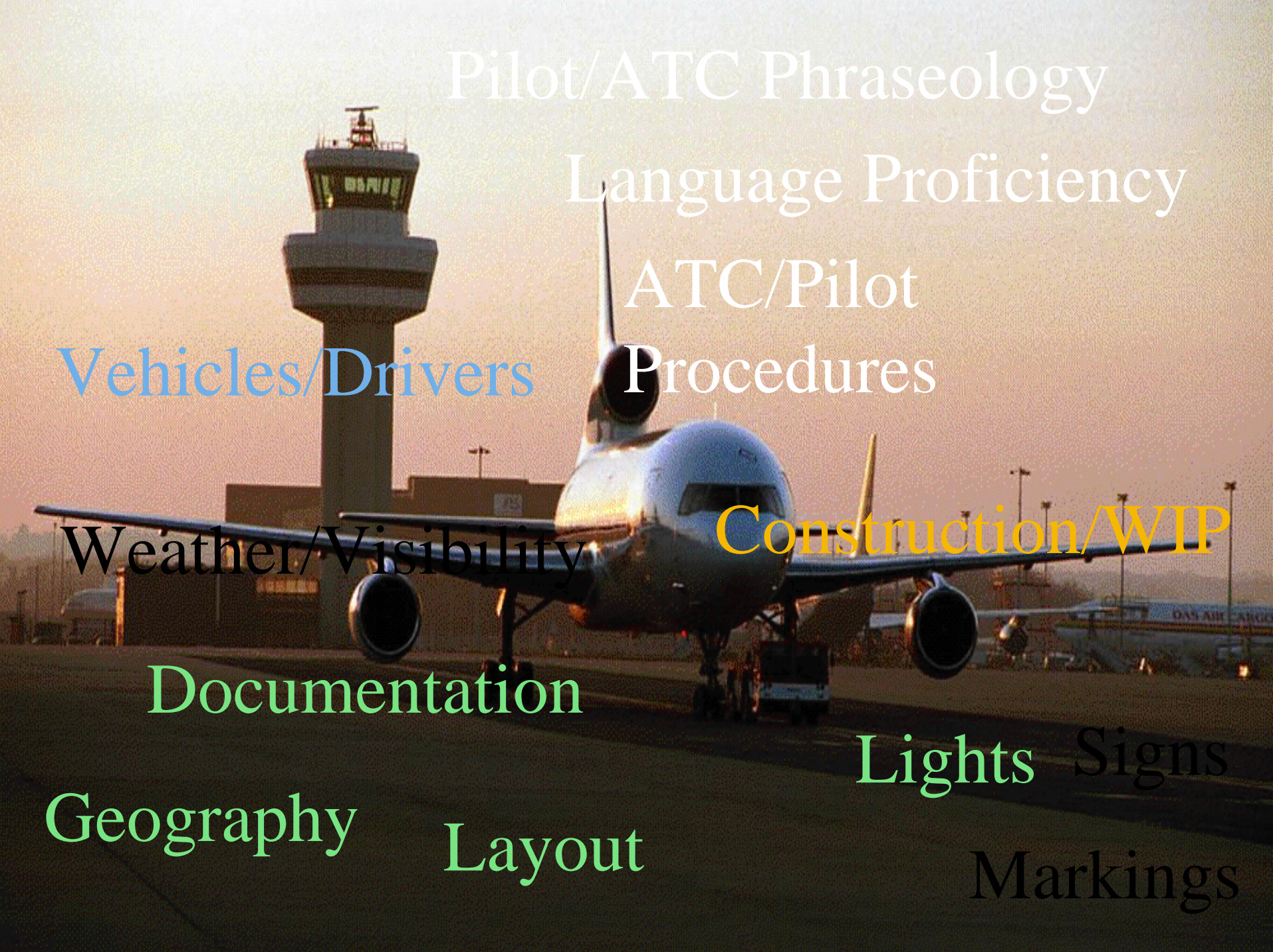
Documentation

Lights Signs

Geography

Layout

Markings



Use English

Don't mix languages

Standard Phraseology

Use SOP's

Flight Safety Committee

ATC/Pilots Ops Group

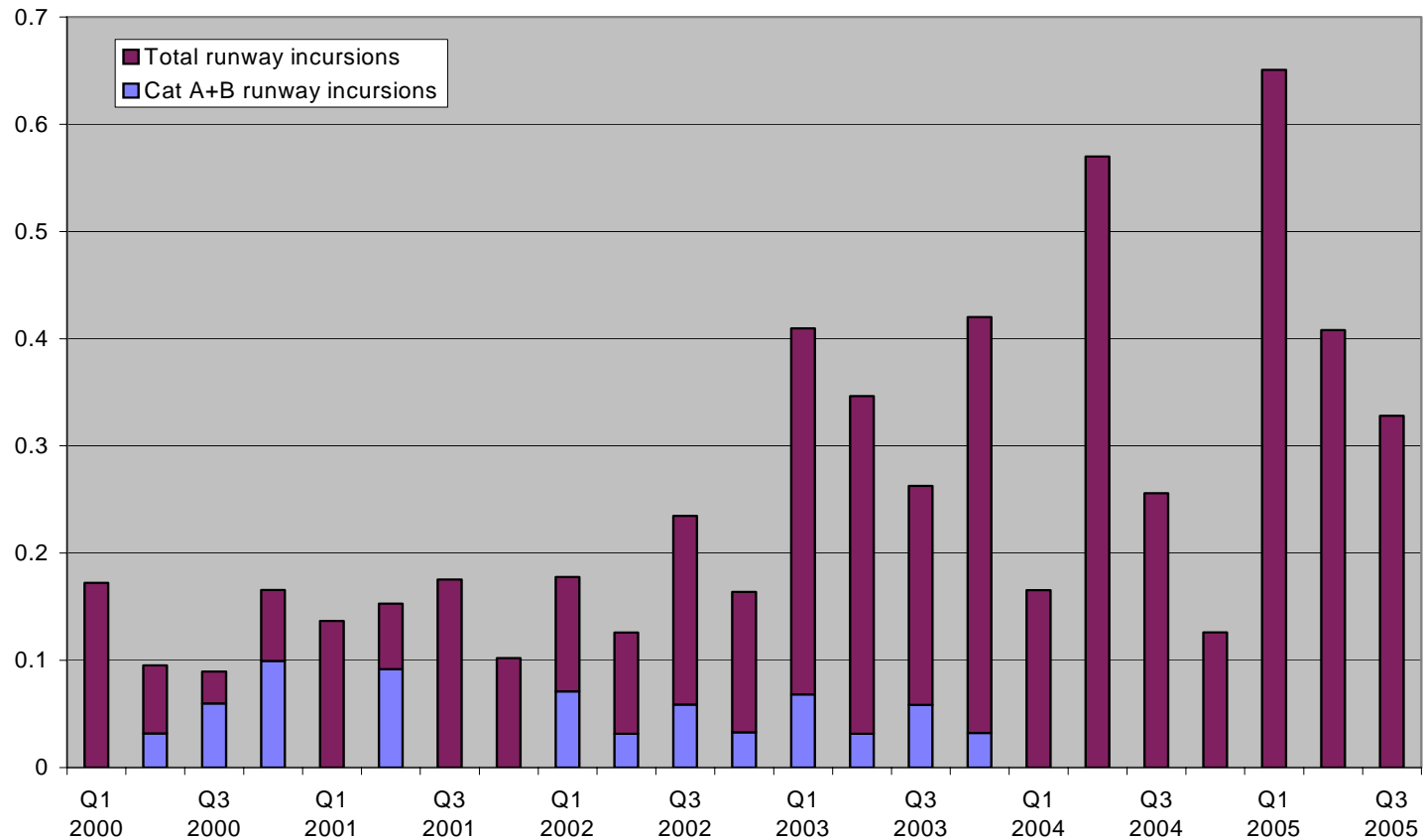
Local Communications





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Group total runway incursion rate and Cat A+B runway incursion rate per 10,000 movements from 1st quarter 2000 - 3rd quarter 2005



Conclusions

- SMS can be simple to develop but does take time
- It needs to be part of the Company culture
- Part of normal functions – not an ‘add on’
- Owned by the line management, assisted by specialists
- There must be ‘buy in’ from CEO and Board
- It is risk based
- It is good for business and reputation



BAA 



Thank you

Any further Questions?