SMS and Dangerous Goods

Oversight System

Safety Management Systems (SMS)

- What is SMS?
- SMS Components
- State Safety Programme (SSP)
- Governing Documents
  - Annex 19
  - ICAO SMM
  - Annex's 6 and 18 (for Dangerous Goods)

SMS Definition

- SMS is a systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies and procedures.

The Four Components of SMS

- Safety Policy
- Safety Risk Management (SRM)
- Safety Assurance (SA)
- Safety Promotion

Safety Policy

Establishes senior management's commitment to continually improve safety; defines the methods, processes, and organizational structure needed to meet safety goals

Safety Assurance (SA)

Evaluates the continued effectiveness of implemented risk control strategies; supports the identification of new hazards

Safety Risk Management (SRM)

Determines the need for, and adequacy of, new or revised risk controls based on the assessment of acceptable risk

Safety Promotion

Includes training, communication, and other actions to create a positive safety culture within all levels of the workforce

Policy

SRM

SA

Safety Promotion

Annex 19 – Safety Management

- Highlights the **importance of safety management** at the State level;

- Enhances safety by **consolidating safety management provisions** applicable to multiple aviation domains

- Facilitates the **evolution of safety management** provisions;

- An opportunity to **further promote the implementation of SMS and SSP** provisions; and

- A process established to **analyze feedback** received regarding Annex 19 and safety management implementation.

Why SMS?

- Global Aviation system is changing rapidly
- Repetitive, recurrent common cause accidents (low hanging fruit) essentially eliminated
- Increase in system demand and complexity
- Dangerous Goods pose a risk to global aviation
- Continuous evolution in application of system safety concepts in the aviation system
- Provides a comprehensive, systemic, and consistent approach supporting:
  - The identification of systemic issues
  - Proactive approach to safety risk management and decisions based on risk rather than in reaction to an accident of incident

State Safety Programme (SSP)

- Required by Annex 19
  - Appendix A contains framework
- *Guidance to States on SSPs is contained in the* Safety Management Manual (SMM) *(Doc 9859)*

ICAO Definition of SSP

- Integrated set of regulations and activities aimed at improving safety

- Management system for management of safety by the State

- Designed to achieve an acceptable level of safety performance

- SSP framework includes SMS requirements for Product/Service Providers

ICAO Annex 18 and 19 Interface

- **Annex 18 CHAPTER 8. OPERATOR'S RESPONSIBILITIES**
  - *Note 1.— Annex 19 includes safety management provisions for air operators. Further guidance is contained in the* Safety Management Manual (SMM) *(Doc 9859).*
  - *Note 2.— The carriage of dangerous goods is included in the scope of the operator's safety management system (SMS).*
    - *DGP 24, November 2013*

SMS and Dangerous Goods

- Annex 6
  - Contains SARPs for State and Operator Responsibilities
  - Chapter 14, Dangerous Goods
  - Attachment K – Dangerous Goods

- **FAA and SMS/SSP**

- **Safety Oversight Operations**
  - Collaboration between Dangerous Goods and Flight Operations
  - Data Collection and Analysis
  - Air Operators SMS Approvals
  - Affirmation of Dangerous Goods System Performance as part of SMS
  - Risk based decision making

- **State Oversight for Dangerous Goods**
  - State Legislation in place requiring Operators to implement SMS
  - Scheduled Inspections Based on Risk
  - Dangerous Goods Inspectors coordinate with Flight Safety Inspectors on safety oversight inspection outcomes and information.
  - All data is entered into a single database. This eliminates database duplication and provides a framework for analysis and risk management.
  - Already realizing the benefits of this approach with safety related data results in identifying systemic issues with Dangerous Goods transportation
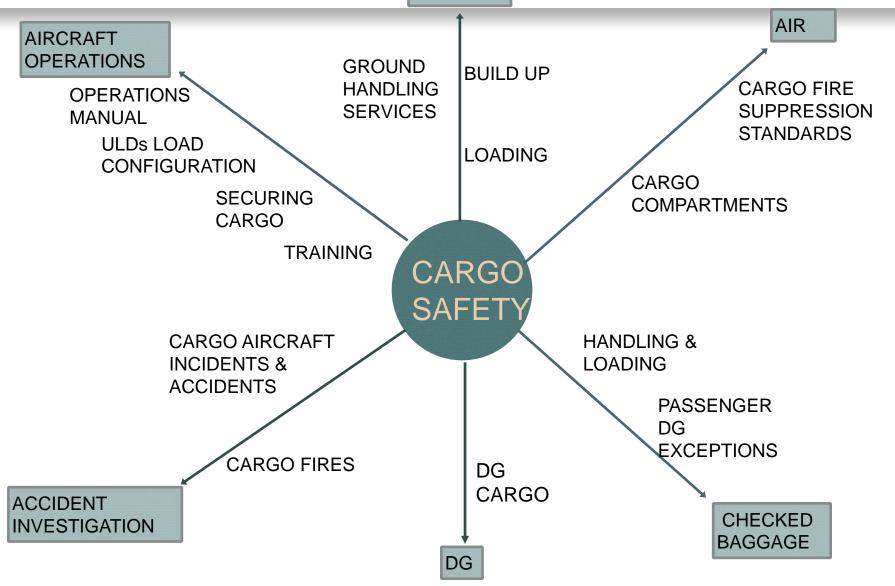
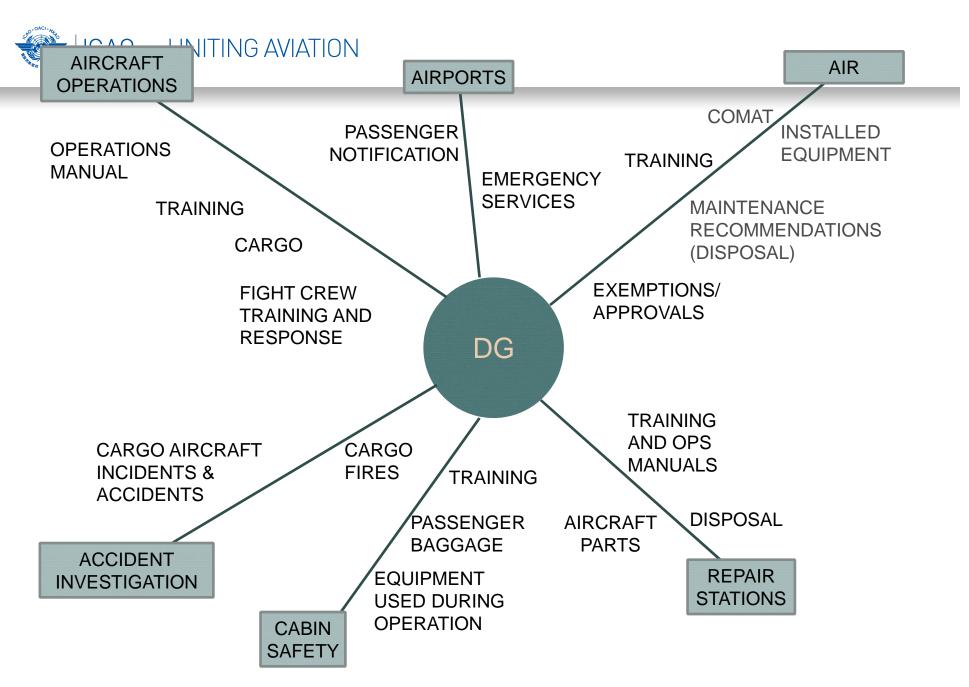- **Dangerous Goods Inspections**

  - System Design Assessments (Manuals and Training Programs)
    - o Policies, Processes, Procedures and Training

  - System Performance Assessments (Compliance Inspections)
    - o Compliance with accepted or approved procedures and regulations.

CARGO
SERVICES

AIR

AIRCRAFT
OPERATIONS

GROUND
HANDLING
SERVICES

BUILD UP

CARGO FIRE
SUPPRESSION
STANDARDS

OPERATIONS
MANUAL

ULDs LOAD
CONFIGURATION

LOADING

SECURING
CARGO

CARGO
COMPARTMENTS

TRAINING

CARGO
SAFETY

CARGO AIRCRAFT
INCIDENTS &
ACCIDENTS

HANDLING &
LOADING

PASSENGER
DG
EXCEPTIONS

CARGO FIRES

ACCIDENT
INVESTIGATION

DG
CARGO

CHECKED
BAGGAGE

DG

AIRCRAFT OPERATIONS

AIRPORTS

AIR

OPERATIONS MANUAL

TRAINING

CARGO

FIGHT CREW TRAINING AND RESPONSE

PASSENGER NOTIFICATION

EMERGENCY SERVICES

TRAINING

COMAT

INSTALLED EQUIPMENT

MAINTENANCE RECOMMENDATIONS (DISPOSAL)

EXEMPTIONS/ APPROVALS

DG

CARGO AIRCRAFT INCIDENTS & ACCIDENTS

CARGO FIRES

TRAINING

PASSENGER BAGGAGE

TRAINING AND OPS MANUALS

ACCIDENT INVESTIGATION

EQUIPMENT USED DURING OPERATION

AIRCRAFT PARTS

DISPOSAL

CABIN SAFETY

REPAIR STATIONS

- **Data Collection for Dangerous Goods**
  - The data collection is directed at gathering information on the system functions of Acceptance, Rejection, Handling, Storage, DG COMAT, Loading and Training.
  - The data collected allows us to focus on specific areas of concern or interest to evaluate system performance.
  - Risk based decision making to determine future inspection activity or targeted actions is based on data.

- Continue to collaborate with Flight Safety Organization

- Continue development of safety oversight systems and data collection methodologies

- Continue developing and improving FAA SMS

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Questions?