INTERNATIONAL CIVIL AVIATION ORGANIZATION

ASSEMBLY — 35TH SESSION

TECHNICAL COMMISSION

Agenda Item 24: ICAO Global Aviation Safety Plan (GASP)

SAFETY DATA COLLECTION AND SHARING

[Presented by the International Air Transport Association (IATA)]

SUMMARY

This paper identifies the IATA Safety Data Management and Analysis (SDMA) programme principles, examines synergies with the ICAO Global Aviation Safety Plan (GASP), and discusses the need to develop a more encompassing global data-driven safety regime focused on proactive rather than reactive safety data management.

Action by the Assembly is in paragraph 5.

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1.   **INTRODUCTION**

1.1   ICAO and IATA share the same aims in accident prevention. IATA applauds the GASP initiative and welcomes the synergies it has with the IATA Six-point Safety Plan. The principal medium through which IATA communicates its safety plan and accident prevention strategies for the industry is the annual Safety Report. Copies of the Safety Report 2003 in CD-ROM format have been provided for the Assembly.

1.2   All safety organizations need to be data-driven and both IATA and ICAO devote much time to learning from the experience of accidents. Within the IATA Six-point safety programme, which is designed mainly to meet airline safety requirements, safety data management and analysis plays a dominant role. IATA's Safety Report shows the value of unlocking the data.

1.3   To concentrate solely, or predominantly, on the analysis of accidents and accident data, however, tends to be reactive, missing the opportunity to apply preventive measures before the occurrence

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of an accident. IATA has moved to be more proactive through collation and analysis of incident data, looking at predictive contributing factors on a global scale.

1.4   This paper shows how the IATA Safety Data Management and Analysis (SDMA) programme complements the GASP objectives in the incident-reporting arena.

2.   IATA SAFETY DATA MANAGEMENT AND ANALYSIS

2.1   Global experience in safety management has shown that the many thousands of safety incidents experienced in daily airline operations provide solid indication of predisposition to accidents. Potentially therefore, these incidents have far more intrinsic value than details unearthed in the aftermath of an accident.

2.2   One of the difficulties encountered over the last several years is the collection of sufficient valid and diverse data from which to draw global safety conclusions. Confidentiality of data, and retention of non-punitive provisions, normally present as a main constraint. IATA's direct interaction with airlines brings the potential to act as a trusted broker of safety data for 98% of all commercial air transport operations.

2.3   The SDMA programme has developed the Safety Trend Evaluation, Analysis and Data Exchange System (STEADES) to analyse airline safety incident reports, such as Air Safety Reports and reports through programmes such as the United States ASAP and ASRS, for trends indicating risks that, if managed correctly, could identify and prevent possible accident situations. STEADES is the primary investigative tool used for this purpose. It uses the most sophisticated classification and incident descriptor system, optimized for global data exchange based on a data-driven programme, and is a focal point in the IATA Six-point Safety Plan detailed in the Safety Report 2003 CD-ROM.

2.4   While STEADES has been amassing and analysing probably the largest database of pilot safety reports worldwide (currently about 300,000 events), IATA has plans to expand the SDMA into the Flight Data Analysis (FDA) area, to assist airlines that do not have the internal resources or expertise to meet the FDA programme requirements of Annex 6 — *Operation of Aircraft* from 1 January 2005.

3.   SYNERGIES BETWEEN GASP AND THE IATA SDMA

3.1   ICAO is aiming to improve the collection, analysis and sharing of safety information through the GASP initiative. The following paragraphs identify synergies in this area between GASP and the IATA SDMA programme.

3.2   **Accident Prevention Strategies**. The IATA annual Safety Report is an in-depth report based on analysis of the previous year's accidents by a group of industry experts. The report examines the contributory factors to each accident, and recommends intervention and prevention strategies to overcome any potential safety threats emerging from the analysis. IATA also produces periodic reports to members derived from analysis of the safety reports contributed by members to the STEADES database. A further monthly report, the IATA Safety Bulletin, summarizes air transport accidents and serious incidents of the previous month to give air carrier safety departments an early picture of the current global air transport safety situation.

3.3 **Incident and Event Analysis and Sharing.** IATA believes that the sharing of safety information is the key to spreading the flight safety message, and therefore reduction of accident rates. The ICAO ADREP system reports on Hull Loss and Fatal accidents reported by States through the reporting provisions of Annex 13 — *Aircraft Accident and Incident Investigation*. IATA's STEADES programme is a data-driven programme which collates and analyses safety reports submitted by airline operators through a confidential and non-punitive reporting system to establish potential operational trends which may be accident precursors, and reports these trends and possible prevention strategies to members. IATA is committed to a data-driven approach to safety through expansion into Flight Data Analysis. In recognizing the complementary approach of ADREP and STEADES, IATA wishes to cooperate with ICAO in the mutual exchange of safety data information, and to work together to the benefit of international aviation safety.

3.4 **Non-punitive Data Sharing**. The principle of non-punitive reporting has always been a keystone for data contribution and integrity in the STEADES programme. This principle will continue to be emphasized with the expansion of STEADES into the Flight Data Analysis area, in accordance with the requirements of Annex 6. The incorporation of both Line Operations Safety Audits (LOSA) and the IATA Operational Safety Audit (IOSA) data into the SDMA programme will further help to link IATA and ICAO initiatives. Non-punitive reporting is also a key component of the IATA Safety Management System, and the IATA Six-point Safety Plan. IATA is totally committed to supporting the ICAO principle of non-punitive reporting. IATA shares ICAO's concerns on the protection of people (and data) from interference by judicial authorities, particularly in the area of air accident investigation, and supports the Draft Resolution to protect Critical Safety Data to ensure the free flow of safety information worldwide, now before the Assembly. IATA is actively working with the Global Aviation Information Network (GAIN) programme to develop and evaluate data and text-mining tools to facilitate the exchange of data and information globally throughout the aviation industry. Additionally, IATA is also working towards data-sharing agreements with Eurocontrol and other Air Navigation Service Providers.

3.5 **Regional Activities**. There are Safety representatives in all of the IATA Regional offices who are charged with implementation of the IATA Six-point Safety Plan in their regions. The IATA Safety Committee has established a Task Force to work jointly with governments, regulators and air carriers in the implementation of Safety Management Systems in which data management plays such key part. Additionally, the regional offices all have data-driven activities in place which are specific to their areas, for example, the recently formed African Safety Enhancement Team (ASET) which is coordinating efforts to increase safety with airlines, national and international organizations in Africa. IATA notes that Eurocontrol has safety programme initiatives under way in the ECAC area (e.g. the ECCAIRS programme), and the IATA European Office is heavily involved in the support of these activities. The addition of regional incident data through the data-sharing agreements mentioned above will enhance the STEADES database and the quality of information available after analysis.

4. **CONCLUSION**

4.1 The broad objectives of the ICAO GASP and the IATA Six-Point Safety Plan are remarkably similar, with particular synergies in accident incident data analysis and sharing identified in this paper. IATA therefore fully supports GASP and wishes to cooperate by developing jointly a robust plan for safety data information exchange, especially that derived from incident data, leading to a better understanding of threats to operational safety.

5.   **ACTION BY THE ASSEMBLY**

5.1   The Assembly is invited to recommend to the Council that it:

a)   **develop provisions for the exchange of safety information derived from incident data** amongst safety organizations, that ameliorate concerns over confidentiality and punitive action; and

b)   **expand the safety data management scope** of ICAO so that incident and contributing factor trend analysis is used proactively to understand and better manage threats to aviation operational safety.

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