The Europe-US International Aviation Safety Conference
2005

Yves Morier
European Aviation Safety Agency

2005 Europe/US International Aviation Safety Conference, Cologne 7-9 June

Contents of the presentation

- Foresight:
  - Its importance
  - Techniques
- The total Aviation system and its trends:
  - Some examples
  - The challenge put to the presenters:
    - Develop scenarios
    - Indicate consequences of scenarios
  - The challenge for attendees:
    - Expectations from the workshops:
      - Suggestions for Authorities’ consideration
      - Practical organisation for June 8:
        - Brief description

Foresight

- Its importance:
  - Aviation safety tends to be reactive:
  - Safety strategies are usually based on accident experience
  - Need to be pro-active:
    - Use of incident analysis is already very developed:
      - Flight Data Monitoring; Flight Operations Quality Assurance will detect precursors
    - However the future may not be a direct extrapolation of the past:
      - Changes occur and this is where Foresight comes into play.
    - Foresight in Aviation safety is much less developed:
      - One example is the JAA Future Aviation Safety Team (FAST)

Foresight

- Its techniques:
  - Environmental scanning:
    - Provide early warning about important changes and detect “weak signals”.
  - Quantitative techniques
  - Qualitative techniques:
    - Scenarios:
      - Consist of visions of future states and course of developments organised in a systematic way
      - Extrapolative or normative
    - Drivers: e.g. Social, Technological, Economic, Environmental, Political, Value-based
    - Methods for defining actions and priorities

The total Aviation system and its trends

- The aviation system need to be seen as a whole and the interactions of its elements need to be taken into account;
- Trends were arbitrarily organised as follows:
  - Institutional changes
  - Industry initiatives
  - New/Emerging technologies

Some examples of Institutional changes:
- Growing network of bilateral agreements
- Increased cooperation between States at regional level
- Towards a global data sharing and reporting
- Increased use of appropriately approved bodies in Certification (“Delegation”)

The challenge put to the presenters:
- Develop scenarios
- Indicate consequences of scenarios

The challenge for attendees:
- Expectations from the workshops:
  - Suggestions for Authorities’ consideration
  - Practical organisation for June 8:
    - Brief description

Expectations from the workshops:

Suggestions for Authorities’ consideration

Practical organisation for June 8:
- Brief description
The total Aviation system and its trends

Some examples of Industry initiatives:
- The future vision of operational initiatives (E.g. alliances; fractional ownership; IATA Operational Safety Audits)
- Development of global manufacturing
- Increased application of Information Technology in design and certification
- Development of integrated air transport systems

June 8th workshop presenters were requested to:
- Provide future scenarios –5 years, 10 years, 15 years from now –for their topic:
  - Two scenarios at least should be developed
  - The scenarios should take into account the influence of other trends, e.g., new technologies, institutional changes, etc.

The challenge put to presenters

- Consider the possible consequences of these scenarios on safety regulation, relations between Industry and Authorities, and international relations:
  - What are the consequences? What new risks may arise?
  - How should they be addressed?

The challenge for attendees

- Does the presenter’s vision capture the key issues?
- What additional challenges do you envision?
- How could the regulators prepare for these scenarios?
- What are the ramifications globally?

CONTRIBUTE YOUR THOUGHTS TO THE DEBATE!!

The output of the thematic workshops should be twofold:
- A list of future consequences and
- Suggestions for consideration by the Authorities on how to address these consequences.

The future vision of operational initiatives (E.g. commercial airplanes, general aviation, rotorcraft)

Some examples of new/emerging technologies:
- Future vision of aeronautical products and technologies (E.g. commercial airplanes, general aviation, rotorcraft)
- Uninhabited/Unmanned Aerial Vehicles

Some examples of Industry initiatives:
- Development of global manufacturing
- Increased application of Information Technology in design and certification
- Development of integrated air transport systems
Practical organisation of June 8

→ Three thematic workshops will run in parallel:
  * Institutional changes chaired by Mr Probst & Mr Hickey;
  * Industry initiatives chaired by Industry
  * New technologies chaired by Dr Lohl & Mr Ballough
→ They are organised as follows:
  * A few key presentations of 25-30 minutes seeking reactions after each
  * 45 minutes at the end for discussion and conclusions
→ They will be followed by a 'Round Table' discussion:
  * Overview of the discussions and preliminary conclusions from each workshop

THANK YOU FOR YOUR ATTENTION.