



Volatility in Air Traffic and its impact on ATM Performance

The IFATCA input to the discussion

15-16 May 2018 in Warsaw/Poland

Marc Baumgartner, Anthony Smoker and Tom Laursen

Program



About IFATCA



How we collect data and our angle of approach

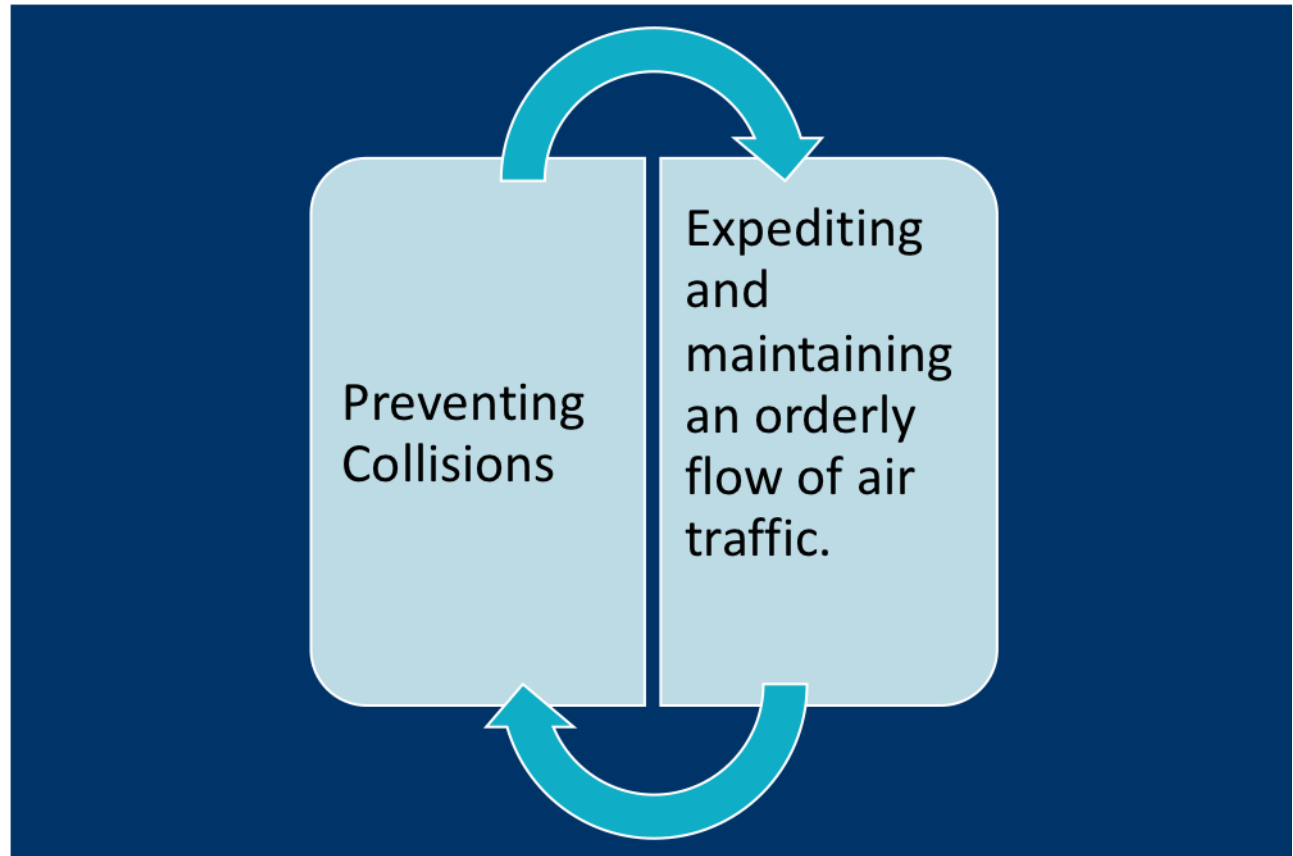
- IFATCA Member Associations annual reports
- ICAO documents
- Authors experience and examples
- It is an ATC - operational point of view



Creating the Ideal – The goals of Air Traffic Control

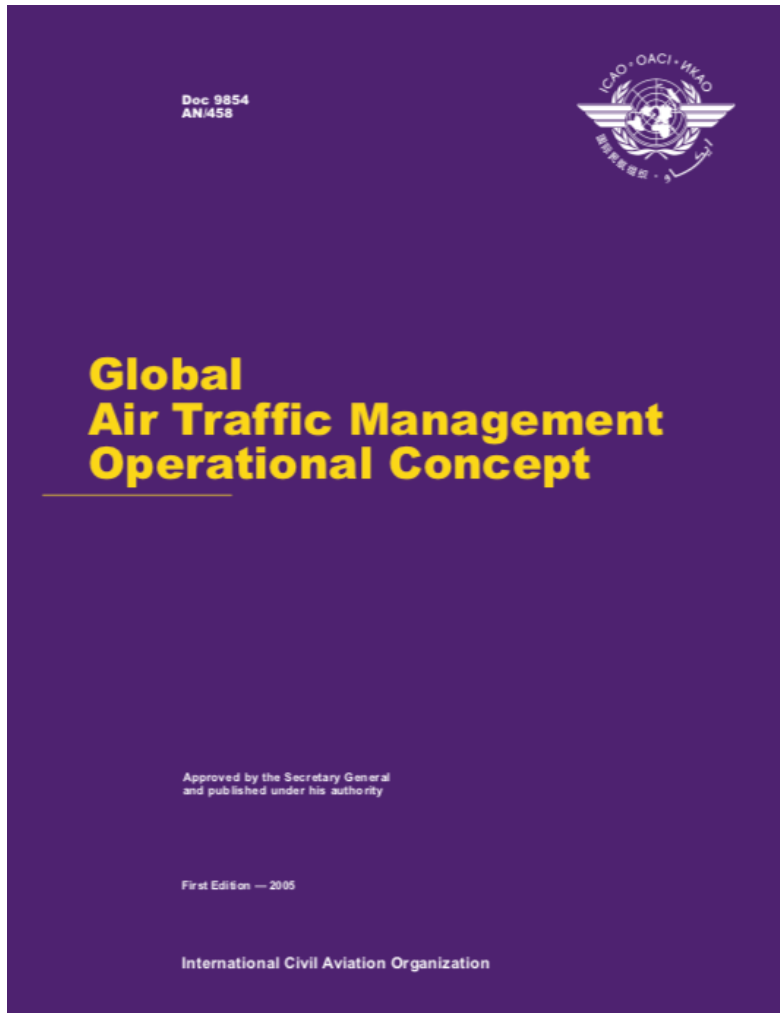
***Air traffic control
service:***

*A service provided for
the purpose of:*



ICAO DOC 4444 – Air Traffic Management

ICAO Doc 9854



“Strategic conflict management measures aim to reduce the need to apply the second layer - separation provision — to an appropriate level as determined by the ATM system design and operation”.

In other words ATM design is about two layers:

- **Strategic layer**
- **Separation provision (tactical layer)**

So how do we do it?

(Very simplified)

- **Orderly flow is achieved by,**
 - Agreements, rules and coordination
 - Known and organised traffic patterns
- **Preventing collisions is achieved by,**
 - Creation of margins
 - Time and space
 - Control of flow of traffic in sectors
 - Actions to separate – turns, level, speed, direct routings, etc

Increased Safety => Increased Capacity





Deterioration of the ideal

- **Macro issues, where the main areas are,**
 - Political changes
 - Global finances
 - 9-11
 - SES, e.g. difference in investment and execution
 - Noise abatement
- **Changes in traffic patterns**
 - Jet streams
 - Head-wind
 - En-route charges
 - Delays, etc.
 - Free route airspace



Deterioration of the ideal

- **The influence of Weather,**

- Snow
- Fog
- thunderstorms



- **Everyday operations,**

- Individual requests/local rationality - difference to flight plans
- Military – New aircraft types
- Strike
- Staffing

What does it cost to produce capacity?

Is better faster cheaper the right medicine?

The way forward- some suggestions and conclusion

- Improved weather predictions
- Reduction of the number of tactical interventions by the ATCO
 - Sharing of separation could be a help to improve the flexibility, redistribute the responsibility and thereby free resources
- More homogenous Airline fleets
- Development of new weather resistant aircraft types

The way forward- some suggestions and conclusion

- More authority to the Network manager towards the airspace users
- Improve predictability of traffic patterns
- Harmonised en-route charges
- Long-term planning (SES, reference periods)

Thank you for listening

