



ICAO/McGill Worldwide Conference on Aviation Safety, Security and The Environment: The Way Forward

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Air Traffic Management Challenges

Challenges

- Air traffic growth is expected to double by 2020
- Increasing needs for safety, security and cost-effectiveness
- The environment at the heart of ATM short-term initiatives

Objectives

- Implement a performance-based ATM
- Participate in global initiatives
- Support deployment of existing technologies for short-term operational benefits



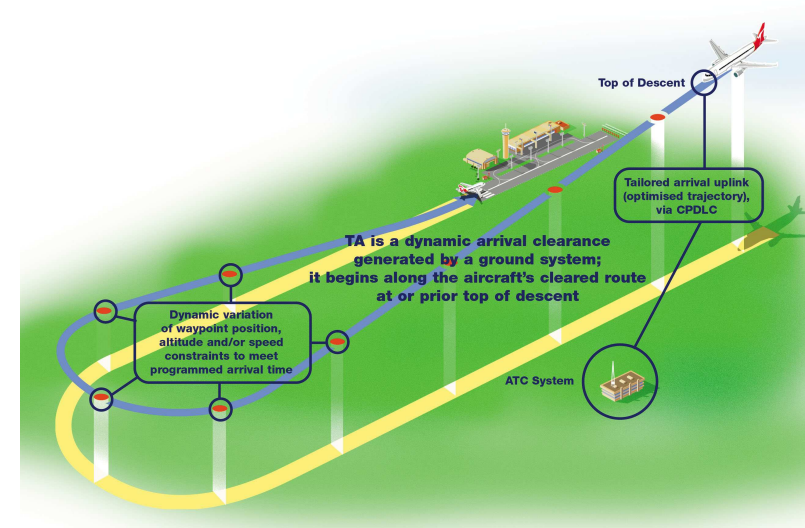
What is a Tailored Arrival?

A Tailored Arrival is a procedure that:

- Allows ATS to utilise the current capabilities of existing aircraft Flight Management Systems (FMS)
- Minimize radar vectoring for more fuel efficient descent profile leading to reduced noise and exhaust emissions

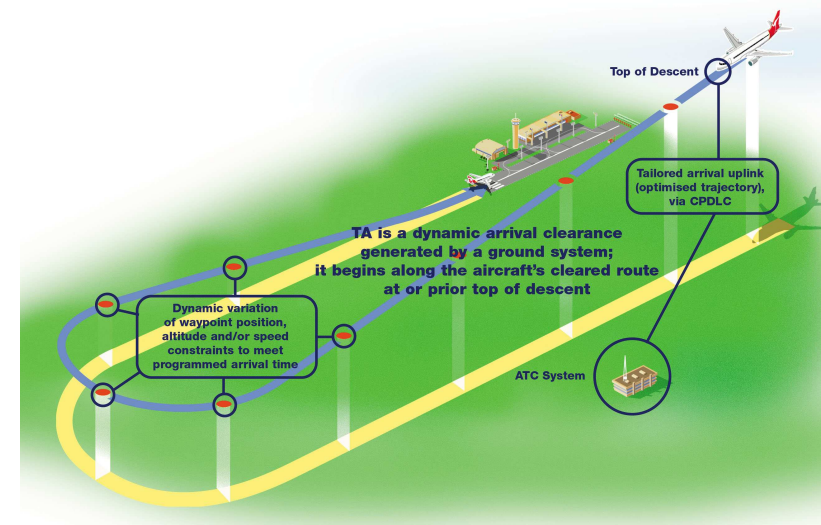
Enabling aircraft to:

- Fly an optimised descent trajectory
- Avoid terrain and restricted airspace
- Reduce voice communications
- Reduce controller and pilot workload
- Improve predictability



Air Traffic Alliance - Boeing Cooperation Tailored Arrivals Flight Trials

- A concrete project towards improved operations
- In cooperation with Qantas and AirServices Australia
- Phase 1:
 - demonstration of the concept
 - validation of environmental and operations benefits
- Phase 2: pre-operational implementation and standardisation activities for a validated concept



Tailored Arrival Flight trials

Concrete benefits achieved

- A significant reduction of up to 800 pounds of fuel burned achieved
- Up to \$100,000 of airline savings per year per aircraft
- Reduced engine emissions and significantly quieter approach operations
- Reduced controller workload
- Plays a key role towards global interoperability



Global ATM initiatives

Global Interoperability needs to find support on political, institutional and operational level

- **Some regional initiatives in Europe and the US are the first steps towards this challenge**
- **AIRE (Atlantic Initiative to Reduce Emissions) is a joint EC-FAA initiative launched in June 2007 and supported by several of the major air transport players**
- **SESAR, the operational and technological complement to the Single European Sky (SES) legislation**
- **Definition phase**
 - **First two deliverables agreed by all stakeholders**
 - **The ATM concept of operations for 2020 : from an airspace-based environment to a trajectory and performance-based environment**
- **Development phase: an industry-led project starting in 2008**

- **The environment, a key objective for the SESAR project**

