European Joint Industry
CDA Action Plan

IATA

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ACI EUROPE
AIRPORTS COUNCIL INTERNATIONAL

EUROCONTROL

European Joint Industry **CDA Action Plan**

Foreword

In September 2008, CANSO, IATA and EUROCONTROL signed up to a Flight Efficiency Plan that includes a specific target to increase European CDA performance and achievement. This was followed in October 2008 by a Memorandum of Understanding between ACI EUROPE and EUROCONTROL to work on a range of collaborative initiatives to improve efficiency at airports, including CDA. These initiatives are in line with the joint-industry agreement to collaborate on environmental issues signed at the Global Summit in Geneva in April 2008 (*Aviation Industry Commitment to Action on Climate Change*).

Continuous Descent Approach (CDA) offers an early opportunity to save over 150,000 tonnes/year of fuel worth around 100 million Euro per annum[1] in ECAC, whilst at the same time reducing CO_2 emissions by almost 500,000 tonnes per annum and reducing noise impact on the ground by around 1-5 dB per flight. CDA is a priority requirement of the SESAR Master plan for the IP1 timeframe, to be widespread practice before the end of 2013.

This joint industry CDA Action Plan builds on the above high level commitments and sets out specific actions to be undertaken by the European Aviation Industry to ensure the rapid deployment of CDA for as many flights as possible.

Scope

This plan will ensure the widespread adoption of harmonised CDA *in accordance with ICAO and EUROCONTROL[2] guidance*:

- To as many airports as possible;
- For as many flights as possible;
- For the longest extent possible for each flight; and,
- Optimising existing CDA implementations where possible.

The aim is for rapid deployment of CDA, even if on a limited basis to start with, but with a view to continuously improved performance in all of these areas.

Overall Target

The target is to roll-out CDA at up to 100 and more ECAC Airports and to a minimum of 50 airports (ESSI Objective ENV01) by the end of 2013; and ensuring commitment and implementation of the CDA Action Plan and implementation of CDAs at a minimum 20 airports/year, as stated in the Flight Efficiency Plan.

1. Depends on fuel prices.
2. Continuous Descent Approach Implementation Guidance Information, EUROCONTROL, May 2008 and ICAO CDA Implementation Manual (presently under development).

Principles

In progressing this joint industry CDA Action Plan we will adhere to the following principles:

- Safety remains paramount;
- CDA should be implemented to the extent possible, but not so as to adversely effect Military airspace usage, Civil/Military airports or airspace capacity in general;
- Without prejudice to safety, the fuel and environmental benefits of CDA shall be optimised;
- There is only one CDA as defined in EUROCONTROL and ICAO guidance - but there are various ways to facilitate it;
- CDA can be implemented from any altitude but where and when possible the aim should be an optimised descent profile from top-of-descent;
- The decision on CDA implementation and facilitation methods shall be local, but within the EUROCONTROL / ICAO harmonised framework;
- CDA may not always be possible for all terminal airspaces / aerodromes and this should be recognised;
- CDA should be considered in the context of the entire terminal airspace, other operations and the ATM system itself;
- The implementation of CDA should not trigger unacceptable trade-offs in other operations (e.g. for non-CDA arrivals or for departures);
- Successful CDA implementation requires collaboration between local operational stakeholders. EUROCONTROL Collaborative Environmental Management guidance[3] is available, if required, to support this process;
- CDA is the 'art of the possible' with initial efforts forming the foundations for more advanced techniques in the future – CDA is possible now using existing airport and aircraft infrastructure. We should not wait for the perfect solution;
- At altitudes where noise is no longer the dominant impact, fuel efficiency and emission reductions shall be given priority;
- Future technologies and procedures, as delivered through the SESAR ATM Master Plan, will provide more advanced facilitation of CDA. Whilst acting now, we should therefore plan for these developments;
- Public expectations should not be raised unnecessarily; and,
- Good practice should be captured and promulgated.

3. Airport Environmental Partnership: A guide to implementing Collaborative Environmental Management at airports, EUROCONTROL, November 2008.

Actions

This joint industry CDA Action Plan consists of three elements. It has been developed to ensure that urgent actions are taken to implement CDA across Europe.

Stimulating demand for CDA:

- Joint promulgation of CDA to the Aviation community;
- Individual promulgation of CDA to relevant airport operational and support stakeholders (e.g. trade association members);
- Making and jointly endorsing the business case for CDA and facilitating local workshops; and,
- Developing joint and sponsoring specific CDA marketing material.

Supporting CDA roll-out:

- Maintaining CDA guidance material (supporting ICAO CDA developments);
- Facilitating stakeholder collaboration by involving Civil and Military Aviation administrators;
- Deploying high level CDA assessment tools to make the CDA case and to prioritise where CDA can bring most benefit;
- Facilitating expert visits and practical support;
- Providing flight and ATC simulator facilities;
- Advising on aircraft energy and flight performance management;
- Harmonising phraseology and procedures;
- Developing and providing training packages; and,
- Facilitating the sharing of performance data and good-practice.

Supporting the further development and promulgation of appropriate CDA facilitation and enhancement mechanisms, including, inter alia:

- Advanced navigation capabilities (such as RNAV and RNP);
- Advanced operational concepts (such as Point Merge, Transition to Final including VNAV, Tailored Arrivals or the Y or T type approaches including the TAA concept);
- Airspace Design;
- Controller Tools (e.g. Arrival Manager).

Shared responsibilities

We, the sponsors of this joint industry CDA Action Plan, hereby agree to:

- Promulgate collaboration on CDA implementation to our members;
- Nominate Point of Contacts to offer appropriate support to those seeking to implement CDA;
- Support the European collaboration on CDA implementation for the duration of this plan;
- Monitor, review and report progress in CDA implementation;
- Support individual CDA implementation initiatives by facilitating the sharing of good practice;
- Ensure that CDA features as a priority in our working arrangements and programmes;
- Publicise the business and environmental benefits achieved;
- Keep this action plan updated in the light of ATM developments; and,
- Support the ongoing developments in CDA capabilities.

Performance monitoring and reporting

We will encourage our members to support CDA performance monitoring and to report progress where appropriate. We will participate in and encourage our members to support performance reporting to Pan-European bodies and welcome the contribution of EUROCONTROL in supporting pan-European CDA performance monitoring and reporting.

CDA Performance Monitoring may include, as appropriate:

- Number of airports adopting CDA (ECAC-wide);
- Number of airlines participating in CDA (ECAC-wide and per CDA airport);
- Percentage of flights achieving CDA (ECAC-wide and per CDA airport);
- Percentage of time after Top of Descent being flown as CDA (ECAC-wide and per CDA airport);
- Percentage of Track Miles (after Top of Descent) being flown in level flight (ECAC-wide and per CDA airport);
- Estimated fuel and emissions being saved by CDA (ECAC-wide and per CDA airport);
- Difficulties and successes experienced in implementing CDA.

Performance monitoring and reporting

We will establish and maintain a co-ordinated list of potential candidate CDA airports and those that have successfully implemented CDA.

We will support the reporting of CDA implementation progress to recognised pan-European and industry bodies that have declared an interest. This should be done as cost effectively as possible by using joint reports and bulletins. Recipients could include:

- Appropriate committees of the aviation industry associations, such as Environment and Operations;
- EUROCONTROL's Working Arrangements (e.g. SCG, OCG, ANT/AOT or successors as appropriate and MAB), within their monitoring of the Flight Efficiency Plan;
- EUROCONTROL's Performance Review Commission in its monitoring of pan-European ATM performance;
- ECAC Directors General of Civil Aviation in their monitoring of aviation environmental indicators;
- ICAO's CAEP as it monitors the effectiveness of its forthcoming CDA guidance;
- The European Commission and its Agencies;
- The general public;
- Others as they arise.

Communication

Communications on CDA to the general public and to policy makers should be coordinated by Operational Stakeholders to ensure a consistent and validated message. Care will be taken not to raise unrealistic public expectations for CDA.

Training and awareness

We will support cross-industry CDA awareness campaigns and will promulgate harmonised CDA to our membership, advocating the proactive participation of our members in CDA implementation.

We will support multi-stakeholder CDA training initiatives, promulgating these to our membership. This support may include providing training content or arranging for participation of experts from our member organisations.

Where appropriate and cost effective, we will develop specific CDA awareness modules and incorporate CDA awareness in our existing training material.

Future developments

This plan is a living document and may be updated from time to time.

Where another significant potential Multi-State and Multi-Stakeholder mitigation technique arises, we will consider modifying the scope of this plan as appropriate.

Acknowledgements

The Action Plan and the associated CDA Implementation Guidance were prepared with the support of the following organisations, working in partnership:

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Acronyms

ANT	Airspace and Navigation Team
AOT	Airport Operations Team
ATC	Air Traffic Control
ATM	Air Traffic Management
CAEP	the Committee on Aviation Environmental Protection of ICAO
CDA	Continuous Descent Approach
CO_2	Carbon Dioxide
dB	Decibel
ECAC	European Civil Aviation Conference
ENV01	ESSI Environmental Objective 1 covering CDA implementation
ESSI	European Single Sky Implementation
IATA	International Air Transport Association
ICAO	International Civil Aviation Organisation
IP1	Implementation Package 1 (SESAR)
MAB	Military ATM Board
OCG	Operations Coordination Group
P-RNAV	Precision Area Navigation
RNP	Required Navigation Performance – (accuracy of following procedures)
SCG	Stakeholder Consultation Group
SESAR	Single European Sky ATM Research
TAA	Track Accuracy Analysis
VNAV	Vertical Navigation – (an on-board profile management facility)
Y/T type	A method of approaching a runway

Contacts

For further information on implementing CDA at your airport, please contact the EUROCONTROL CDA Implementation Support Team at *CDA@eurocontrol.int* or *environment@eurocontrol.int*.