Airport-CDM Workshop

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Introduction

1. CANSO and A-CDM
2. A-CDM role play
3. Experience in an international airport – Paris-CDG
4. Regional A-CDM

Conclusion
Introduction

**Stephane Durand**
- 15 years ATCO and Manager at Paris-CDG airport
- Co-Chair CANSO CDM Sub Group
- International Affairs DSNA / COO DSNA Services

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- Airline pilot
- Regional A-CDM project manager
- International Affairs DSNA / BD DSNA Services
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Introduction

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Conclusion
1. CANSO and A-CDM: Scope and expectations

Discuss. Decide. Done.

CDM in enterprise

CDM in education

CDM in finance
1. CANSO and A-CDM: CDM in ATM
1. CANSO and A-CDM: promote A-CDM in ATM

Regional conferences

Safety SC  Policy SC  Ops SC

OAS  ...

A-CDM

Co-chairs: Stephane Durand & Chris Varney

SC  Steering Committee
WG  Working Group
OAS  Optimised ATM
1. **CANSO and A-CDM: Methodology, Scope of work, definition**

**Methodology**
- ICAO, IATA and ACI
- Worldwide participants
- Meeting in Dubai, Conference call, World ATM Conference Madrid

**Definition:** a process that
- Applies to all airports irrespective of size
- Supports both Landside and Airside operations
- Enhances forward planning and tactical decision making
1. CANSO and A-CDM: Plan to produce Guidance Document

Join us to share your experience, your needs to enhance the A-CDM CANSO position

Únase a nosotros para compartir tus experiencias, tus necesita mejorar la posición A-CDM CANSO

Training courses
Introduction

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2. A-CDM role play: ¡Juguemos!

- Copa centraoamericana hosted in ‘Chili’ city
- Chili airport accommodates domestic and international airlines
- Chili tower provides local ATC
- Guacamole airlines is the local domestic and international airline
- Rewarding operation in terms of income and communication for the local ANSP and the airport authority
Chili Airport: 3 arrivals and 3 departures at peak hours

Chili Tower: ATS operating hours from 7.00am to 9.00pm

Guacamole Airlines: Operates domestics airlines and one long/haul aircraft
## 2. A-CDM role play: Increase of activity

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Normal day per hour</th>
<th>Copas day per hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airport</td>
<td>Max 2,300 pax</td>
<td>+40%</td>
</tr>
<tr>
<td>Airlines</td>
<td>Max 3 heavy A/C and 5 medium A/C</td>
<td>+2 heavy A/C + 2 medium A/C</td>
</tr>
</tbody>
</table>
2. A-CDM role play: Objectivos

To get everyone on time at the stadium!

1. Identify main issues
2. Find correctives measures

SAFETY
CUSTOMER SERVICE
COST EFFICIENCY
2. A-CDM role play: Identify main issues

- Dispatch more aircraft and crew
- Need to increase flight frequencies
- Less adaptability to disruption (delays, maintenance issues)
2. **A-CDM role play:** Let’s think together

SHARE INFORMATION AND DATA

1. Understand other partners’ constraints
2. Prioritise the issues, build consensus
3. Decide collectively on a course of action
2. A-CDM role play: Find corrective measures

- Anticipate first departure, adapt flight schedule
- Adapt aircraft type (seating capacity)
- Adjust for fuel planning (expect delays)
2. **A-CDM role play:** Added value

- Identify **all** the main issues
- Integrate other’s needs and constraints
- Define corrective actions in common, drive consensus

**Built customer satisfaction**

Get everyone on time at the stadium!
Content

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Conclusion
3. CDM@CDG – Context
3. CDM@CDG – Difficulties experienced in 1996-2002

Vicious circle

- Lack of trust
- Unreliable information
- Uncoordinated action
- Mistrust
- Segregated decision making

Traffic
3. CDM@CDG – What were the objectives?

**Operations**
- Address operations inefficiencies
- Optimise use of airport resources

**Management**
- Better understanding of partners key issues
- Cost reduction

**Customers**
- Improve airlines & passenger information
- Communicate to general public
3. CDM@CDG – Organisational implementation

Program board – Directorate level
(3 times a year, performance driven)

Operational Team (monthly, performance driven)

CDM Program Manager

- Airlines
- ATC
- Airport

- Ground handlers, other airlines, etc.
- Met office
- Other partners
  Network program, Other CDM airports
3. CDM@CDG – Implementation workshops

- Met Tool
- Departure Manager (ops)
- Departure Manager (technical)
- Website
- Key Performance Indicators

Operational Team
3. CDM@CDG – Today

Conf Call (Twice a day)

www.CDMparis.net (24/24)

Dedicated weather forecast (24/24)

Departure Manager (24/24)

CDM Operation Center (on request)

CDM Performance Review (Monthly)
3. CDM@CDG – Lessons learnt

- Top management commitment
- Feasibility study by neutral entity
- Road map: *Long term & Quick wins objectives*
- Involvement of middle management & operational staff
- Communication and training
### 3. CDM@CDG – Measured gains

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety</td>
<td>Less congestion on ground and holding points</td>
</tr>
<tr>
<td>Predictability</td>
<td>3 hours ahead</td>
</tr>
<tr>
<td>Departure punctuality</td>
<td>+13%</td>
</tr>
<tr>
<td>Taxi time</td>
<td>- 8%</td>
</tr>
<tr>
<td></td>
<td>up to 4 min per flight on LVP</td>
</tr>
<tr>
<td>Fuel consumption</td>
<td>- 4,000 tons per year</td>
</tr>
<tr>
<td>CO₂ emissions</td>
<td>- 13,000 tons per year</td>
</tr>
<tr>
<td>Adverse conditions (fog, snow...)</td>
<td>Optimised capacity, lower impact on customers, quicker return to normal situation</td>
</tr>
</tbody>
</table>
3. CDM@CDG – Actors and customers feedback
3. CDM@CDG – Feedback and prospective

- Improves management unusual/disruptive situations
- Allows a quicker return to normal situation
- Favours operational, tactical and pretactical planning
- Will allow to draw the strategic decision Master Plan
  Paris-CDG 2020
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Organised by

Hosted by
4. Regional A-CDM - Main objectives

1. Provides Airport-CDM to intermediate airports
2. Offer enhanced services to partners and customers
4. Regional A-CDM - Layout

Expected benefits of an affordable A-CDM system for Regional Airports, upgraded with AOP functionalities

- Passengers & Society
- Airport operators
- Ground handlers
- Local ATC
- GA, BA, rotoraircraft
- Airlines & Airspace users
- ATM network

SWIM infrastructure
4. Regional A-CDM - Interfaces

EXTERNAL INTERFACES

Platform Supervisor
Airline
Airport
ATC

Communication Bus
Data Bus
AODB

Flight Plans & Schedules
A/C positions & trajectories
FUM & DPI messages
4. Regional A-CDM – Use of simulation software

AIR TRAFFIC OPTIMISATION

TERMINAL OPTIMISATION

@ CAST Simulation
4. Regional A-CDM – Expected gains

- Improve information and data sharing within airport stakeholders
- Allow timely coordination action between partners
- Improve connectivity between the intermediate airport and the ATFM system
- Provide additional services (gate-to-gate → door-to-door)
Introduction

1. What is CDM?

2. A-CDM role play

3. In a major airport Paris–CDG - CDM@CDG

4. In a regional airport

Conclusion
Conclusion – Best Practices

Scheduling and strategic activities

Nominal operational planning

Tactical operational planning

Flight operations

Feedback

Organised by

Hosted by
Conclusion - Summary

Airport-CDM

I feel fit to face any challenge!
Airport-CDM

Thank You!
2. A-CDM case: Identify main issues

- Dispatch more aircraft and crew
- Need to increase flight frequencies
- Less adaptability to disruption (delays, maintenance issues)

Airlines

- HR: Training - Specific Briefing - Training - rostering
- Feasibility study Airspace Design (Procedures-GNSS-ILS)
- Runway configuration
- Safety Assessment
- Communicate with airport on the vicinity

ATC

- Information to airlines
- Parking stands
- Runway / TWY configuration
- HR: Immigration/Facilities/Security
- Fuel
- Environment
- Fire / MET crew

Airport
2. **A-CDM role play: Identify main issues**

- **Airlines**
  - Dispatch more aircraft and crew
  - Need to increase flight frequencies
  - Less adaptability to disruption (delays, maintenance issues)

- **ATC**
  - Increase of ground movements & approaches
  - Longer runway occupation time
  - More coordination with adjacent sectors

- **Airport**
  - Absorb more pax through terminals
  - Shortage of security staff
  - Lack of parking stands
2. A-CDM role play: Find corrective measures

**COMMON COMMUNICATIONS**

**Airlines**
- Anticipate first departure, adapt flight schedule
- Adapt aircraft type (seating capacity)
- Adjust for fuel planning (expect delays)

**ATC**
- Extend ATS operating hours
- Organise operational briefing
- Adjust with 1 ATC supervisor

**Airport**
- Adjust security staff, boarding procedures
- Use GA parking stands to create 2 temporary positions
- Adjust fire services