



International Civil Aviation Organization

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# Airport Collaborative Decision Making (A-CDM)

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Workshop on preparations for ANConf/12 – ASBU methodology  
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# Objective

- Show some steps to improve airport efficiency through the application of the A-CDM concept.



# Overview

- What is A-CDM
- Benefits
- Costs
- Lessons learned

# What is A-CDM?

- **Acting on shared information.**



# What is A-CDM?

## **Will request between the partners**

- 1) Well defined Service Level Agreements
- 2) Non-disclosure Agreements

## **It will help to ensure that partners**

- provide high quality information
- stick to their commitments
- define appropriate access levels for sensitive information
- share data only internally within Airport CDM
- leave airlines with the right to decide which information they share with their passengers and which not

# What is A-CDM?

## What to share

- airline schedules and flight planning information
- predictions, status messages and operational planning information  
(stand, gate, landing time, in-block time, turn-round time)
- advisories and alarms (e.g. insufficient time to complete turn-round)
- status of aeronautical aids/systems and weather situation.

# Understanding A-CDM

- Waiting on the taxiway for an occupied stand
- No ground staff or equipment to meet you
- Sitting in the aircraft for a long time before leaving the stand
- Wait until the last minute to inform that the aircraft is not ready and you will miss the connection

# Understanding A-CDM

- **Airport CDM seeks to address these issues**

## Possible causes

- **Insufficient or unreliable information**
- **No single partner has the complete picture**
- **Accurate information is provided too late for a partner to be ready**

# Benefits of A-CDM

- **AIRLINES**
- Shorter taxi times, shorter holding before runway access
- No waiting in front of occupied gate
- Fuel savings
- Reduced delays > cost savings and customer satisfaction
- Increased capacity with the same fleet

# Benefits of A-CDM

- **AIR TRAFFIC CONTROL**
- More predictable traffic - therefore reduced workload
- Better pre-departure sequence
- Higher service quality

# Benefits of A-CDM

- **GROUND HANDLERS**
- Better planning and use of resources – therefore less cost, more profit
- Improved customer satisfaction
- Increased productivity – lower prices

# Benefits of A-CDM

- **AIRPORT OPERATOR**
- Reduced environmental impacts – noise and emissions
- Improved punctuality
- Improved gate/stand planning and management
- Additional flights and passengers possible

# Benefits of A-CDM

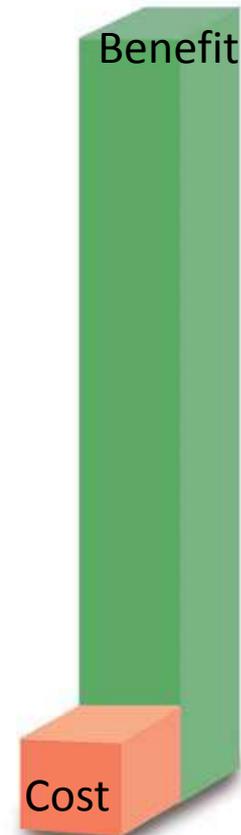
- **REGULATORS**
- Safety and environmental benefits that can help meet targets
  
- **THE ATM NETWORK**
- More available en-route and airport capacity

# Benefits of A-CDM

- **EVERYONE!**
- Reduced apron and taxiway congestion
- Mutual understanding and trust
- Less stress on the system and the people within it
- Higher service quality with knock-on benefits to company image and customer satisfaction

# Benefits of A-CDM

- **For a generic airport:**
- Benefit-to-cost ratio of up to 9/1
- Quick return of investment for all partners – 2 years
- Risk of financial loss is practically non existent
- ***There is a very strong case for implementing Airport CDM***



# Benefits of A-CDM

- Airport operators are on top, followed by airlines and ground handling companies
- ATC will see the smallest quantifiable benefit, but will see major qualitative improvements in work processes.



# Summary of Costs

## One-off Costs:

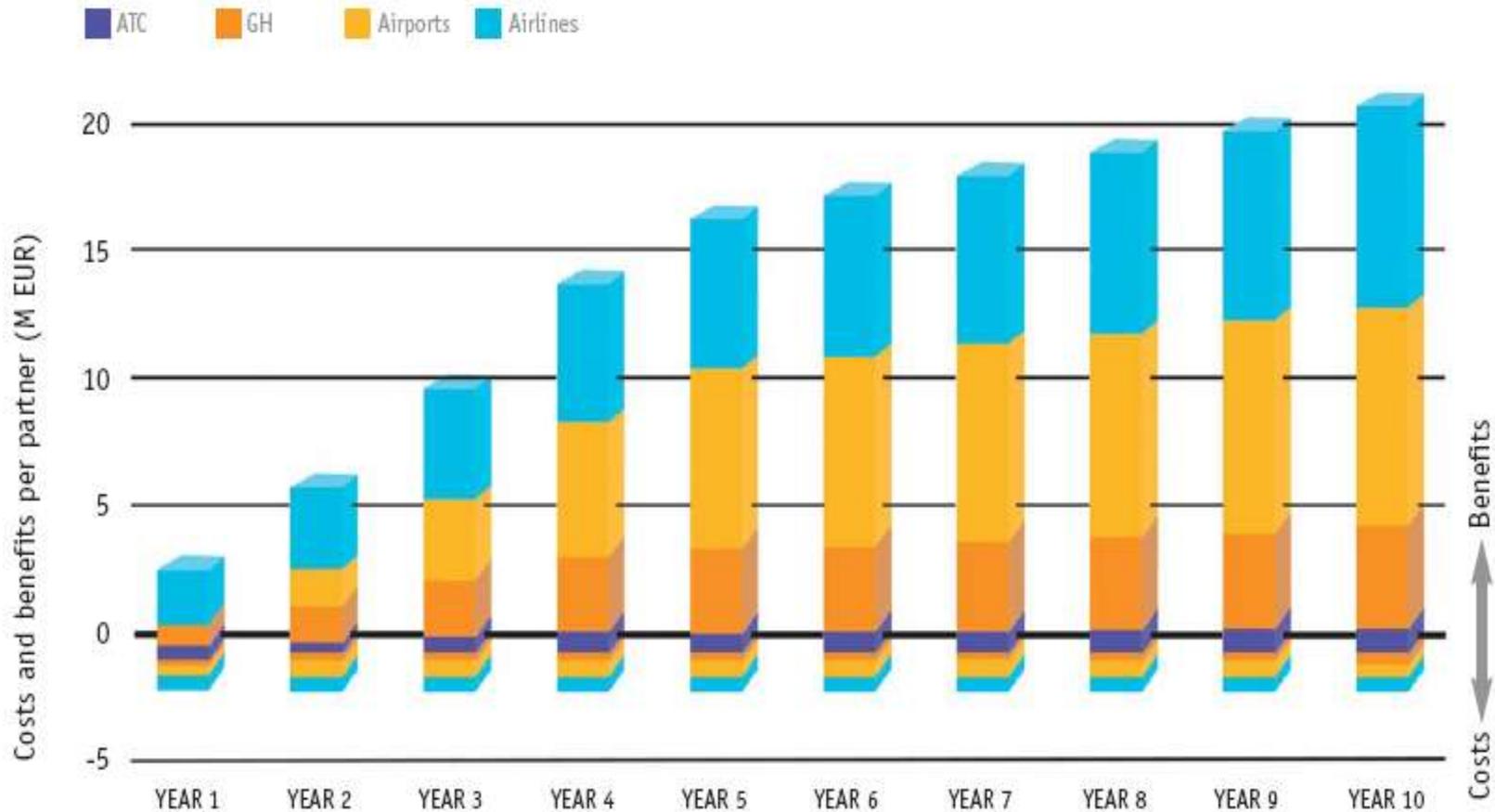
- **Project definition & project management**
- **Procedures adaptation**
- **System integration**
- **Staff training**

# Summary of Costs

## Operating Costs:

- **Maintenance & IT Improvements**
- **Recurrent training**
- **Travel costs**
- **Airlines: full time function – ATC/FLOW, flight dispatch staffing**

# Costs and benefits per partner



# The key

- Improved predictability

**“Out of every extra 100 kg of fuel loaded on the aircraft to accommodate ‘buffers’ in schedules, 4% per hour will be burned just in carrying the weight of that fuel.”**

**IATA**

# Lessons learned

*“It started as a part time job but we couldn’t do it like that. IT IS A FULL TIME JOB!!!”*

*“Airport CDM is a process. Sure, you have to have the IT systems - but first, you need to know what to do with it.”*

*“You must have a clear understanding of what you are going to implement before you proceed. Without a clear link between the process improvement and the required information, people will remain reluctant to share this information.”*

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