3rd CAPSCA Global Coordination Meeting

Business Continuity Management Systems: Implementation Guidelines for Airports

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Airports Council International - ACI World
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ACI’s vision:

Lead, represent and serve the world’s airport community
ACI’s mission

To advance the collective interests of world's airports and promote professional excellence in airport management and operations.

Six priority areas

- Safety
- Security
- Customer Service
- Environment
- Economic Development
- Efficiency and Innovation
ACI’s membership

- 574 members operating 1672 airports in 173 countries and territories: 96% of the world’s passengers

**Europe:**
180 members, 46 countries, 435 airports

**North America:**
186 members, 3 countries, 298 airports*

**Latin America-Caribbean:**
58 members, 37 countries, 181 airports

**Asia-Pacific:**
95 members, 42 countries, 500 airports

**Africa:**
56 members, 47 countries, 250 airports

*Membership as of 31 Dec 2011, as approved by annual assembly
**Regular members only
ACI’s offices

- ACI World: Montreal, Canada
- 5 regional offices

ACI World: Montreal, Canada
ACI Europe: Brussels, Belgium
ACI North America: Washington DC, USA
ACI Latin America-Caribbean: Quito, Ecuador
ACI Asia-Pacific: Hong Kong
ACI Africa: Casablanca, Morocco

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ACI initiatives – visit [www.aci.aero](http://www.aci.aero)

- **AELP**: Airport Executive programmes and career succession planning
- **AMPAP**: Airport Top Leadership programmes aimed at high level management
- **Global Safety Network**
  - **Economics**
  - **Security**
  - **Environment**
  - **Facilitation**
  - Global Safety Network Diploma and professional courses aimed at developing airport departmental leadership and specialty skills
- **Airport Operations Diploma**: Airport entry level and supervisory training programmes, aimed at operational efficiencies
- **Operational and Regulatory courses**: Short regulatory courses aimed at airport operational staff
1. Airport Guidelines for Pandemic Preparedness
Guidelines for airport pandemic preparedness

- Aviation can potentially increase the rate of disease propagation
- Main Responsibility: Local/Regional/National Health Authorities
- Fast, efficient, communication and collaborative decision-making is crucial
- Results ➔ greater predictability of the various stakeholders measures

2. Business Continuity Management for Airports
It is not possible to foresee every conceivable type of airport emergency, not only pandemic outbreaks, but also:

- safety emergencies, hurricanes, vulcanos, snow storms, floods, earthquakes, tsunamis, nuclear crisis, security crisis, strikes, cyber security attacks...

Therefore, our planning should focus on the possible impact to the airport’s processes, systems and staff, from different events, since these could have a similar impact on airport operations.

Accordingly, ACI recommends that an airport establishes one generic Business Continuity Management System to cover the range of operational threats that it faces.

Risk-based approach to manage disruptions.
Business Continuity Management System (BCMS)

Framework – Terminology

‘Business Continuity Management System’ (BCMS)
An integrated, multi-layered, business driven, process based approach to plan for and manage business disruptions and crises.

‘Incident’
An event which causes an impact or has the potential to cause an impact or disruption to the normal operational flows at an airport.

‘Crisis’ or ‘Critical Event’
Any event requiring an immediate, proactive response in order to minimize its negative impact to the airport operator’s operations, reputation and profitability.
Different Business Continuity Plans for each airport business process and operational system

Pre-Critical Event Plans
- Preventive & Maintenance Plans
- System Fallback Plans

Post-Critical Event Plans
- IT Recovery Plans
- Operational Continuity Plans
- Business Recovery Plans

Incident → Critical Event

TIME

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Courtesy of AAHK
1. BCMS Project Oversight
2. Map the core processes
3. Operational impact analysis
4. Develop Preventive Measures
5. Develop Post Event Plans
6. Develop Crisis Management Capability
7. Preparedness and Quality Assurance
8. Management Review
1. Establish the BCMS Project Oversight structure

- BCMS Project Oversight Team proposed participants
  - From the Airport Operator:
    - Director of Operations or Senior Operations Manager, with operations experience
    - Engineering and maintenance Senior Manager
    - Safety and Security Senior Managers
    - Administration and HR Manager
  - Possible Business Partner and External participants
    - Civil Aviation Authorities and Health Authorities representatives
    - Emergency Services representatives
    - ATM and ANSP representatives
    - Airline representatives, Local Station Managers, Ground Handlers
    - Fuel Suppliers, utilities and supplies (water, electricity, ICT, etc…)
2. Map the core processes

Courtesy of Malaysia Airports

LANDSIDE

TRANSPORT

PARKING

DROP OFF / PICKUP

TERMINAL (MTB/CP/SAT)

CHECK-IN

BAGGAGE HANDLING

BAGGAGE SCREENING

PASSPORT CLEARANCE

PAX SCREENING

WAITING / TRANSIT

BOARDING / LOADING

RETAIL

CUSTOM CLEARANCE / QUARANTINE

BAGGAGE CLAIM

PASSENGER CLAIM

BOARDING / LOADING

DOMESTIC / INTERNATIONAL

LANDSIDE

TRANSPORT

PARKING

DROP OFF / PICKUP

TERMINAL (LCCT)

BAGGAGE SCREENING

CHECK-IN

BAGGAGE HANDLING

PASSPORT CLEARANCE

PAX SCREENING

WAITING

BOARDING / LOADING

RETAIL

CUSTOM CLEARANCE / QUARANTINE

BAGGAGE CLAIM

PASSENGER CLAIM

BOARDING / LOADING

DOMESTIC / INTERNATIONAL

FREE COMMERCIAL ZONE

CARGO STORAGE

FREE ZONE DECLARATION

CARGO CLEARANCE

CARGO

DOCKING / UNDOCKING & AIRCRAFT PREPARATION

PRE-EMBARKATION SCREENING

CARGO TRANSPORTATION

CUSTOM CLEARANCE / QUARANTINE

AIRSIDE

DOCKING / UNDOCKING & AIRCRAFT PREPARATION

TAXING / PARKING

TAKE-OFF

LANDING

CARGO PROCESS

AIRPORT ESSENTIAL SERVICES

FIRE RESCUE SERVICES

SECURITY SERVICES

AIRPORT OPERATIONS

IT SERVICES

ENGINEERING SERVICES

AIRPORT SUPPORT SERVICES

FINANCIAL SERVICES

CORP COMM SERVICES

PROCUREMENT SERVICES

HR SERVICES

LEGAL & SECRETARIAL SERVICES
3. Operational impact analysis

Normal operations = 100% of agreed Service Delivery Standards
Degraded (Impact) Level 1 = XX% of agreed Service Delivery Standards
Degraded (Impact) Level 2 = YY% of agreed Service Delivery Standards
1. BCMS Project Oversight
2. Map the core processes
3. Operational impact analysis
4. Develop Preventive Measures
5. Develop Post Event Plans
6. Develop Crisis Management Capability
7. Preparedness and Quality Assurance
8. Management Review

BCMS Framework & Development Process
4. Develop/Review Preventive Measures

- Preventive and Maintenance Plans:
  - **Definition**
    - Those programmed actions that are undertaken to warrantee the normal operation of a system or process without failure.
  - **Who’s involved in putting the plan together?**
    - Business Process owner (could be department head)
    - Technical owner/expert or system owner/manager
    - Main user(s) (stakeholders and business partners)
  - **What needs to be done?**
    - Document all maintenance protocols from equipment manufacturers
    - Plan to deliver all maintenance actions accordingly
    - Program regular inspections of critical systems and processes to detect potential incidents before they happen.
    - Coordinate with the maintenance department as needed.
System Fallback Plans

Definition

These plans ensure that, when an incident occurs, those specific business process elements affected are either fixed, or in the case of systems that may fail with only minor, non-operational effects, there is a workaround.

What needs to be done?

- Ensure the process map and inventory of systems is up to date and systems’ status are known.
- From the process flows, determine weaknesses/failure spots
- Propose fixes and workarounds
- Determine the resource requirements for each part
- Document the Plan
### Establishing the Recovery Time Objectives (RTO)

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PASSENGER</td>
<td>Process Passengers (i.e. check-in, customs clearance, passport clearance, flight information services, information counters, passenger holding area, passenger loading &amp; disembarkation facilities)</td>
</tr>
<tr>
<td></td>
<td>Process baggage (includes baggage reclaim area)</td>
</tr>
<tr>
<td>AIRCRAFT</td>
<td>Ability for aircraft to land &amp; take-off (at least 1 runway is available)</td>
</tr>
<tr>
<td>RETAIL</td>
<td>Monitor and manage retailing activities at MA Niaga owned/managed retail stores</td>
</tr>
<tr>
<td>RENTAL</td>
<td>Manage F&amp;B tenants at KLIA</td>
</tr>
<tr>
<td></td>
<td>Manage retail tenants at KLIA</td>
</tr>
<tr>
<td>CARGO (FCZ)</td>
<td>Process Free Zone Declaration applications</td>
</tr>
</tbody>
</table>

*Courtesy of Malaysia Airports*
5. Develop/Review Post Event Plans

- ICT Contingency and Recovery Plans

The Post-Event Plans should start by addressing the importance of Information and Communication Technologies (ICT) as a basic enabler of aviation operational business continuity. Priority should be given to manage and recover any possible disruption in the basic ICT services (phone, internet) and its power sources.

- Definition
  - An ICT Contingency plan enables the operation of a ICT related service to continue in the event of a failed system. This may involve a degraded standard of service.
  - An ICT Recovery plan details the means by which ICT systems are brought back into service after failure or back into normal operation from contingency mode.
Operational Continuity Plans

Definition

An Operational Continuity plan enables the operation of a business process to continue in the event of a failed system or piece of equipment, or lack of supplies or resources. This may involve a degraded level of service. These plans can be divided in material continuity plans and staff continuity plans.

What needs to be done?

For each process:

- Develop an Operational Materials and Supplies Continuity Plan: Assessing the risk and the impact of failure on the supply chain for critical elements of the process.
- Develop an Operational Staff Continuity Plan: Identifying the number of staff required to maintain operations at a predetermined service level over the disruption period.
- Implement the Operational Continuity Plans
Business Recovery Plans

Definition
Details the means by which systems or equipment are brought back into service after failure or back into normal operation from contingency mode.

What needs to be done?
For each process:
- Develop the Business Recovery Plans:
  - Determine the impact going into contingency/continuity mode will have on the individual elements within the process, and
  - document the steps required to proceed from contingency/continuity mode to normal operational mode
- Implement the Business Recovery Plans:
  - Establish a reasonable timeline to gradually implement subsequent steps identified in the plan.
6. Develop Crisis Management Capability

Courtesy of AAHK

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7. Preparedness /Quality Assurance

Testing preparedness through drills and exercises

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Courtesy of AAHK
BCMS Framework & Development Process

1. BCMS Project Oversight
2. Map the core processes
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4. Develop Preventive Measures
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7. Preparedness and Quality Assurance
8. Management Review
BCMS – Best Practices for Infectious Disease Pandemics

Pandemic Risk Matrix

WHO Pandemic Severity

- Severe
- Intermediate
- Mild

WHO Phasing

- 3
- 4
- 5
- 6

Business as usual

Containment and mitigation

On alert and close monitoring

Activation of the BCP

Courtesy of Malaysian Airlines

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### Planning Templates

#### Critical Business Functions Resources Summary Chart

<table>
<thead>
<tr>
<th>Critical Business Function (CBF)</th>
<th>Staff Needed</th>
<th>Premises Needed</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Area (m²)</td>
<td>Work Stations</td>
<td>IT Systems/Applications</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>F. Air Navigational Services</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**CBF 01**:

**Owned by Division/Department/Section:**

<table>
<thead>
<tr>
<th></th>
<th>Agreed 100% Service Delivery Standards</th>
<th>Degraded Level 1 (a/b/c) Service Delivery Standard</th>
<th>Degraded Level 2 (a/b/c) Service Delivery Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**CBF 02**:

**Owned by Division/Department/Section:**

<table>
<thead>
<tr>
<th></th>
<th>Agreed 100% Service Delivery Standards</th>
<th>Degraded Level 1 (a/b/c) Service Delivery Standard</th>
<th>Degraded Level 2 (a/b/c) Service Delivery Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
## Operational Checklists

<table>
<thead>
<tr>
<th>Departments / Sections</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airside Operations</td>
</tr>
<tr>
<td>Airside Planning</td>
</tr>
<tr>
<td>Airside Engineering</td>
</tr>
<tr>
<td>Aeronautical Operations</td>
</tr>
<tr>
<td>Cargo Operations</td>
</tr>
<tr>
<td>Customer Relations</td>
</tr>
<tr>
<td>Customer Service</td>
</tr>
<tr>
<td>Fire Services</td>
</tr>
<tr>
<td>Food and Beverage</td>
</tr>
<tr>
<td>Ground Services</td>
</tr>
<tr>
<td>Maintenance</td>
</tr>
<tr>
<td>Security</td>
</tr>
<tr>
<td>Surveillance</td>
</tr>
<tr>
<td>Telecommunications</td>
</tr>
<tr>
<td>Travel Services</td>
</tr>
<tr>
<td>Utilities</td>
</tr>
</tbody>
</table>

### Departments / Sections

- Airside Operations
- Airside Planning
- Airside Engineering
- Aeronautical Operations
- Cargo Operations
- Customer Relations
- Customer Service
- Fire Services
- Food and Beverage
- Ground Services
- Maintenance
- Security
- Surveillance
- Telecommunications
- Travel Services
- Utilities

**Courtesy of Fraport**
## Operational Status Coding

### Human Resources

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>13 – 10</td>
<td>Full capacity with sufficient reserve</td>
</tr>
<tr>
<td>10 - 9</td>
<td>Operation possible with limited reserve</td>
</tr>
<tr>
<td>8</td>
<td>Critical – Unable to maintain operation if one more staff is absent</td>
</tr>
<tr>
<td>&lt; 8</td>
<td>Continuity impacted</td>
</tr>
</tbody>
</table>

### Supplies/Stocks

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stock reserve for &gt; 1 weeks</td>
<td>Full capacity with sufficient reserve</td>
</tr>
<tr>
<td>Stock reserve for 7 days</td>
<td>Full capacity with reduced reserve, re-stocking should be undertaken</td>
</tr>
<tr>
<td>Stock reserve for max. 3 days</td>
<td>Full capacity with limited reserve, re-stocking very urgent</td>
</tr>
<tr>
<td>No Stock</td>
<td>Full 24-h operations not possible, reduction of operation capacity</td>
</tr>
</tbody>
</table>

### IT

- [Image]

### Etc.

- [Image]

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*Courtesy of WHO*
Use of existing infrastructure

- Passenger reception center that’s used in an aircraft accident response
- Modified to be the temporary holding area in a possible aircraft quarantine situation
3. Summary

- **Airport operators need to be ready** for communicable disease outbreaks
- It is crucial to **coordinate** with Civil Aviation and Health Authorities
- **Communication** with all stakeholders is critical
- It is very important to execute tests involving all stakeholders
- An integrated, multi-layered, business driven, process based **BCMS** is very important to plan for and manage business disruptions and crises.

**Main Goal:**

- **Keep the airport running safely** for all passengers, users and staff
- Developing a **BCMS Project Oversight Team**, supported by top management, is an important success factor
- It is fundamental to consider **pre-critical and post-critical event plans**
- **Risk-based** approach
THANK YOU FOR YOUR ATTENTION!

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