

INTERNATIONAL CIVIL AVIATION ORGANIZATION
WP3.1A1 – APPENDIX 1 - ASBU Elements in AOP

ASBU Modules	ASBU Elements	Purpose of elements	Elements Enablers	Applicability (Yes or No)	Rationale for applicability
B0 (ACDM)	B0/1 Airport CDM Information Sharing	To generate common situational awareness by sharing relevant surface operations data among the local stakeholders involved in aerodrome operations.	Surface operation milestones procedure ACIS system Phraseology	Yes	Ready for implementation Applicable to all States in the AFI region The element forms the first step for Airport Stakeholder collaboration in Aerodrome Operations. It generates situational awareness for effective decision making and does not need automation.
B1- (ACDM)	B1/1 Airport Operations Plan	To enhance the planning and management of airport operations and allow their full integration into the ATM network	Airport operations plan CDM information management processes	Yes (for specific States)	Ready for implementation To be implemented by States with airports of medium traffic density The element consists of a collaborative airport operations plan (AOP) which encompasses “local” airport information and shared information with the ATM network in order to develop a synchronized view for the integration of local airport operations.
	B1/2 Airport Operations Centre	To enable integration of all stakeholders, both landside and airside, into a coherent decision-making entity/process (and team), using the shared information and capabilities provided through the AOP.	Airport operation center(APOC) sharing system Operational facility APOC monitoring and decision support systems	Yes (for specific States)	Ready for implementation To be implemented by States with airports of medium traffic density Integrating all stakeholders, both landside and airside, into a coherent decision-making entity/process (and team), using the shared information and capabilities provided through the AOP. This will be achieved by bringing all stakeholders together in a physical facility, using the shared information and capabilities of the AOP

Applicability criteria: Aerodrome traffic density.

- a) *Light*. Where the number of movements in the mean busy hour is not greater than 15 per runway or typically less than 20 total aerodrome movements.
- b) *Medium*. Where the number of movements in the mean busy hour is of the order of 16 to 25 per runway or typically between 20 to 35 total aerodrome movements.
- c) *Heavy*. Where the number of movements in the

Illustration of the applicability criteria (Data istars 2018)

City	Airport Name	Peak period Mvts	Peak hour Capacity usage	Peak hour on-time departure\	Worst on-time departure performance	Peak hour mvmts	Traffic density
Johannesburg	OR Tambo International Airport					20.00	Medium
Addis Ababa	Addis Ababa Bole International Airport	69	25%	96%	89.77%	23.00	Medium
Nairobi	Jomo Kenyatta International Airport	63	52%	94%	91%	21.00	Medium
Nairobi	Wilson Airport						
Cape Town	Cape Town International Airport	54	34.50%		94.04%	18.00	Light
Lagos	Murtala Muhammed Airport Two (MMA2)	46	19.17%		93.96%	15.33	Light
Dar Es Salaam	Julius Nyerere International Airport	45	29.04%		93.61%	15.00	Light
Abuja	Nnamdi Azikiwe International Airport	17	24.36%		50%	5.67	Light
Zanzibar	Zanzibar International Airport	41	34%		93.46%	13.67	Light
Durban	King Shaka International Airport	29	23.82%		90%	9.67	Light
Maun	Maun Airport	4	3.68%		96.67%	1.33	Light
Port Elizabeth	Port Elizabeth National Airport					0.00	
Saint-Pierre	Aéroport de Saint-Pierre - Pierrefonds					0.00	
Victoria	Seychelles International Airport	18	14.83%		98.35%	6.00	Light
Entebbe	Entebbe International Airport	13	8.31%		90.19%	4.33	Light
George	George National Airport					0.00	
Accra	Kotoka International Airport	24	20.33%		65.96%	8.00	Light
Lusaka	Kenneth Kaunda International Airport					0.00	
Abidjan	Aéroport Felix Houphouet Boigny					0.00	



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Saint-Denis	Aéroport de la Réunion Roland Garros					0.00	
Harare	Harare International Airport					0.00	
Khartoum	Khartoum International Airport					0.00	
Mombasa	Moi International Airport					0.00	
Diass	Aéroport international Blaise Diagne					0.00	
Arusha	Arusha Airport					0.00	
Kilimanjaro	Kilimanjaro International Airport					0.00	
Makale	Makale Airport					0.00	
Windhoek	Eros Airport					0.00	
East London	East London Airport					0.00	
Kigali	Kigali International Airport	14	11.88%		88.74%	4.67	Light
Plaine Magnien	SSR International Airport					0.00	
Nelspruit	Kruger Mpumalanga International					0.00	
Hassi-Messaoud	Aéroport de Oued Iraka-Krim Belkacem					0.00	
Borg El Arab	Borg El Arab Airport					0.00	
Douala	Aéroport International de Douala					0.00	
Kinshasa	Aéroport de Kinshasa/Ndjili					0.00	
Maputo	Maputo International Airport					0.00	
Libreville	Aéroport International Léon-Mba					0.00	
Oran	Aéroport International d'Oran Es-Sénia					0.00	
Antananarivo	Antananarivo Airport - Ivato					0.00	
Port Harcourt	Port Harcourt International Airport					0.00	
Windhoek	Hosea Kutako International Airport					0.00	
Gaborone	Sir Seretse Khama International Airport					0.00	



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Agadir	Aéroport Agadir Al Massira					0.00	
Bangui	Aéroport de Bangui M'Poko					0.00	
Djerba	Aéroport International de Djerba Zarzis					0.00	
Dzaoudzi	Dzaoudzi Pamandzi International Airport					0.00	
Bloemfontein	Bram Fischer International Airport					0.00	
Monastir	Monastir International Airport					0.00	
Bamako	Aéroport International de Bamako-Sénou					0.00	
Kasane	Kasane Airport					0.00	
Ouagadougou	Aéroport de Ouagadougou					0.00	
Lilongwe	Lilongwe International Airport					0.00	
Ilha Do Sal	Sal Amilcar Cabral International Airport					0.00	
Brazzaville	Aéroport international de Brazzaville Maya-Maya					0.00	
Constantine	Aéroport de Constantine Mohamed Boudiaf					0.00	
Malabo	Malabo International Airport					0.00	
Tanger	Aéroport international de Tanger-Ibn Batouta					0.00	
Annaba	Aéroport d' Annaba Rabah Bitat					0.00	
Victoria Falls	Victoria Falls International Airport					0.00	
Mwanza	Mwanza Airport					0.00	
Gabes	Aéroport de Gabes					0.00	
Yaoundé	Yaounde Nsimalen International Airport					0.00	
Lome	Aéroport de Lomé-Tokoin					0.00	
Fez	Aéroport Fes/Saiss					0.00	
Pointe Noire	Aéroport de Pointe Noire					0.00	
Marsa Alam	Marsa Alam International Airport					0.00	
Luxor	Luxor International Airport					0.00	



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Praia	Praia International Airport - Nelson Mandela					0.00	
Kimberley	Kimberley National Airport					0.00	
Ndola	Simon Mwansa Kapwepwe International Airport					0.00	
Rabat	Aéroport Rabat/Salé					0.00	
Maiduguri	Maiduguri International Airport					0.00	
Eldoret	Eldoret Airport					0.00	
Cotonou	Aéroport International de Cotonou					0.00	
Livingstone	Harry Mwaanga Nkumbula International Airport					0.00	
Kano	Mallam Aminu Kano International Airport					0.00	
Niamey	Diori Hamani International Airport					0.00	
Sfax	Aéroport International de Sfax Thyna					0.00	
Manyara	Lake Manyara Airport					0.00	
Osubi	Osubi Airport					0.00	
Beira	Beira International Airport					0.00	
Aswan	Aswan Airport					0.00	
Conakry	Aéroport de Conakry G'Bessia					0.00	
Vilankulos	Vilankulos Airport					0.00	
Pemba	Aeródromo de Pemba					0.00	
Owerri	Owerri Airport					0.00	
Upington	Upington International Airport					0.00	
Alexandria	Alexandria International Airport					0.00	
Oujda	Aéroport Oujda Angads					0.00	
Nampula	Nampula International Airport					0.00	
Sohag	Sohag International Airport					0.00	
Port Said	Port Said Airport					0.00	

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Bulawayo	Joshua Mqabuko Nkomo International Airport					0.00	
Nador	Airport Nador Laroui					0.00	
Asmara	Asmara International Airport					0.00	
Enfidha	Enfidha Hammamet International Airport					0.00	
Dire Dawa	Dire Dawa International Airport					0.00	
Enugu	Akanu Ibiam Int'l Airport Enugu					0.00	
Bujumbura	Aéroport International de Bujumbura					0.00	
Bahir Dar	Bahir Dar Airport					0.00	
Boa Vista	Rabil International Airport - Aristides Pereira					0.00	
Walvis Bay	Walvis Bay Airport					0.00	
Benin	Benin Airport					0.00	
Assiut	Assiut International Airport					0.00	
Banjul	Banjul International Airport					0.00	
Adrar	Aéroport Touat Cheikh Sidi Mohamed Belkebir					0.00	
Sao Vicente	São Pedro International Airport - Césaria Évora					0.00	
Toamasina	Toamasina Airport					0.00	
Tanga	Tanga Airport					0.00	
Tete	Aeródromo de Tete/Chingodzi					0.00	
Mafia	Mafia Airport					0.00	
Mahajanga	Mahajanga Airport					0.00	
Laayoune	Aéroport Laâyoune Hassan 1er					0.00	
Nosy Be	Nosy Be Airport					0.00	
Francistown	Francistown Airport					0.00	
Bejaia	Aéroport de Béjaïa Soummam Abane Ramdane					0.00	
São Tomé	São Tomé International Airport					0.00	



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Manzini	King Mswati III International Airport					0.00	
Ondangwa	Ondangwa Airport					0.00	
Ilorin	Ilorin Airport					0.00	
Tabarka	Aéroport International de Tabarka 7 Novembre					0.00	
Kaduna	Kaduna Airport					0.00	
Mfuwe	Mfuwe Airport					0.00	
Freetown	Lungi International Airport					0.00	
Yola	Yola Airport					0.00	
Dakhla	Aéroport Dakhla					0.00	
Setif	Ain Arnat Airport					0.00	
Maseru	Moshoeshoe 1 International Airport					0.00	
Ziguinchor	Aéroport de Ziguinchor					0.00	
Ben Slimane	Ben Slimane Airport					0.00	
Ibadan	Ibadan Airport					0.00	
Tlemcen	Aéroport de Tlemcen "Messali El Hadj"					0.00	
Tamanrasset	Aéroport de Tamanrasset Aguenar Hadj Bey Akhamokh					0.00	
Oumache	Biskra Ouakda Airport					0.00	
Akure	Akure Airport					0.00	
Calabar	Margaret Ekpo Int'l Airport Calabar					0.00	
Ouarzazate	Aéroport Ouarzazate					0.00	
Sokoto	Sokoto Airport					0.00	
Bissau	Osvaldo Vieira International Airport					0.00	
Luderitz	Luderitz Airport					0.00	
Bechar	Aéroport de Bechar Boudghene Benali Lotfi					0.00	



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Maroua	Aéroport de Maroua-Salak					0.00	
Jijel	Jijel Ferhat Abbas Airport					0.00	
Essaouira	Aéroport d'Essaouira					0.00	
Rodrigues	Plaine Corail Airport					0.00	
Tindouf	Aéroport de Tindouf					0.00	
Bukoba	Bukoba Airport					0.00	
Tiaret	Aéroport d'Abdelhafid Boussouf					0.00	
Abu Simbel	Abu Simbel Airport					0.00	
Quelimane	Quelimane Airport					0.00	
Garoua	Aéroport International de Garoua					0.00	
Santo Antonio	Principe Airport					0.00	
Sao Felipe	São Felipe Nacional Aerodrome					0.00	
Bamenda	Aéroport de Bamenda					0.00	
Al Hoceima	Aéroport Al Hoceima/Al Charfi Al Idrissi					0.00	
Jos	Yakubu Gowon Airport, Jos					0.00	
Tozeur	Aéroport International de Tozeur Nefta					0.00	
Kigoma	Kigoma Airport					0.00	
Errachidia	Aéroport Errachidia					0.00	
Gafsa	Aéroport International de Gafsa Ksar					0.00	
Inhambane	Inhambane Airport					0.00	
Tetouan	Aéroport Tétouan Saniat R'mel					0.00	
Tbessa	Aéroport de Tébessa Cheik Larbi Tebessi					0.00	
Batna	Mostépha Ben Boulaid Airport					0.00	
Bobo Dioulasso	Aéroport International de Bobo Dioulasso					0.00	



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Tan Tan	Aéroport de Tan Tan					0.00	
Mocimboa da praia	Mocimboa da Praia Airport					0.00	
Timimoun	Aéroport de Timimoun "Gourara"					0.00	
Chimoio	Chimoio Airport					0.00	
Beni Mellal	Beni Mellal Airport					0.00	
Oyo	OLLOMBP 1					0.00	
Mtwara	Mtwara Airport					0.00	
St Louis	Aéroport de St Louis					0.00	
Katima Mulilo	Katima Mulilo airport					0.00	
Cap Skirring	Cap Skirring Airport					0.00	
Rundu	RUNDU AIRPORT					0.00	
Lichinga	Lichinga Airport					0.00	
Nacala	Nacala Airport					0.00	
Minna	Minna Airport					0.00	
Keetmanshoop	Keetmanshoop Airport					0.00	
Ngaoundéré	Aéroport de Ngaoundéré					0.00	
Goulimime	Guelmim Aerodrome					0.00	
Bordj Baji Mokhtar	Aéroport de Bordj Baji Mokhtar					0.00	
Zagora	Zagora Airport					0.00	
Sao Nicolau	Preguica Nacional Aerodrome					0.00	
Bouarfa	Bouarfa Airport					0.00	
Taba	Taba International Airport					0.00	
Maio	Maio Nacional Aerodrome					0.00	
Katsina	Katsina Airport					0.00	



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Selebi Phikwe	Selebi Phikwe Airport					0.00	
El Dabaa	El Alamein International Airport					0.00	
Kolda	Kolda North Airport					0.00	
Kharga	El Kharga Airport					0.00	
Inhaca	Inhaca Airport					0.00	
Mersa Matruh	Mersa Matruh Airport					0.00	
Tambacounda	Tambacounda					0.00	
El Bayadh	Airport El Bayadh					0.00	
Makurdi	Makurdi Airport					0.00	
Mascara	Aéroport de Mascara "Ghriss"					0.00	
St. Catherine	St. Catherine International Airport					0.00	
Mechria	Aéroport de Mechria "Cheikh Bouamama"					0.00	
Ghanzi	Ghanzi Airport					0.00	
Dakar	Aéroport International Léopold Sédar Senghor					0.00	
Manzini	Matsapha International Airport					0.00	