



第十三次空中航行会议

2018年10月9日至19日，加拿大，蒙特利尔

委员会A

- 议程项目 4: 全球空中航行系统的实施及地区规划和实施小组（PIRGs）的作用
4.3: 实施航空系统组块升级以提高效率

帮助制定国家、地区及全球层面航空系统效率衡量指标

（由哥伦比亚提交）

执行摘要

《哥伦比亚空中航行计划》（ANP COL）制定了一套指标，以监测并衡量预期由于实施《全球空中航行计划》（GANP，Doc 9750号文件）航空系统组块升级-B0升级而产生的运行效益。

哥伦比亚现提交这套指标供会议审议和审查，以着手整合一个国家、地区和全球层面各种指标的联合框架，使我们能够直观看到《全球空中航行计划》的实施进展。

行动：请会议同意第3段所载的建议。

1. 引言

1.1 2008年，哥伦比亚制定了第一个正式版本的《哥伦比亚空中航行计划》（ANP COL），从那时起，对这项战略文件进行了定期更新。2013年，哥伦比亚通过了国际民航组织航空系统组块升级（ASBU）框架，从而导致了《哥伦比亚空中航行计划》第I卷和第II卷07版面世。

1.2 《哥伦比亚空中航行计划》含三卷。第I卷为满足高效、安全和环境可持续的民用航空系统内的预计服务需求制定了各种运行要求。这一卷还提出了空中交通管理（ATM）、航空情报管理（AIM）、气象（MET）以及搜寻与援救（SAR）等事项路线图方面的建议。第II卷重点介绍了为满足第I卷要求所需的通信、导航和监视（CNS）基础设施及机场服务（救援和消防服务（RFF）、航空安保（AVSEC）、医疗服务、环境、运行、简化手续、目视助航设备以及实际基础设施）。第III卷查明了需要对国家技术规章进行的修订，以便能够对组块0和航空系统组块升级组块0的15个模块进行所设想的运行升级。《哥伦比亚空中航行计划》包含多项文件，这些文件载于：
<http://www.aerocivil.gov.co/servicios-a-la-navegacion/planes-de-navegacion-aerea-para-colombia>。

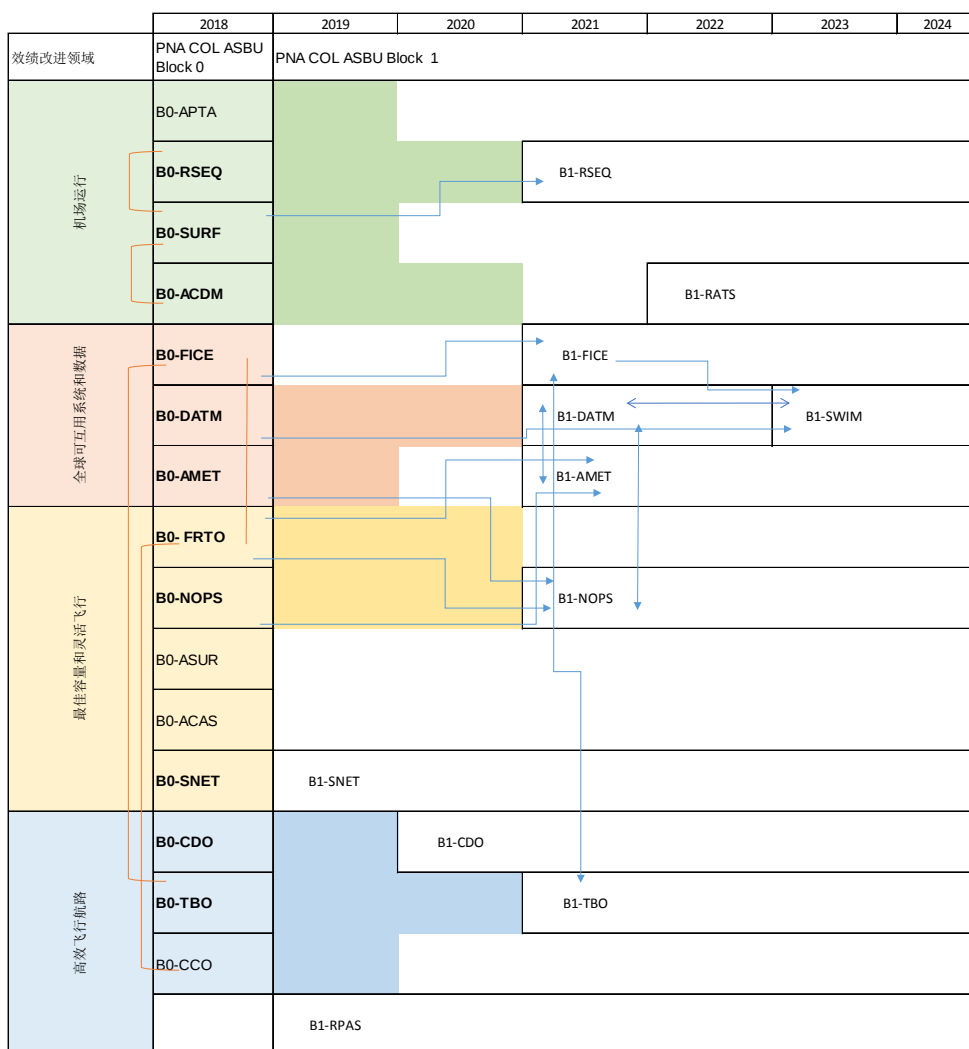
¹ 西班牙文本由哥伦比亚提供。

1.3 《哥伦比亚空中航行计划》是一项战略文件，其中制定了为实现短期（航空系统组块升级组块 0）、中期（航空系统组块升级组块 1）和长期（航空系统组块升级组块 2 和组块 3）运行升级拟开展的优先事项，因此使我们能够在满足国内和国际航空运行需求的同时，努力完成效率、容量、环境影响、灵活性、准入和公平方面的预期效益。

2. 讨论

2.1 哥伦比亚在实现全球既定目标方面取得了进展。同时，通过实施航空系统组块升级框架，在谋求国内层面运行效益的工作中也取得了进步。

2.2 按照实施组块 0 升级取得的部分成果，针对某些主线和要素尚不具备进入组块 1 所需同步的这一情况，我们预见到了以下情况：



2.3 为确认空域用户的预期是否得到了满足，必须核实运行效益。因此，哥伦比亚建议此次会议审议《哥伦比亚空中航行计划》中公布的关于组块 0 的 15 个模块的一整套指标，将其用于帮助构建联合指标框架。具体请参阅附篇。

3. 结论

鉴于上述，请会议同意以下建议：

建议 1.2/x — 通过航空系统组块升级（ASBUs）提高并衡量空中航行系统效绩

会议呼吁国际民航组织及各国同意建立一个各种指标的联合框架，使各国能够报告其运行效益，同时，这些衡量结果可以随后当作对全球空中航行计划实施工作进行地区及全球监测的基础。

APPENDIX

PNA COL ASBU B0	1- Access and Equality	2 - Capacity	4 - Efficiency	5 - Environment	10 - Operational Safety
B0-APTA	APV Baro VNAV procedures published for instrument runways	Increase runway capacity = operations / hour offered with procedure - operations / hour offered without procedure	Airport fuel savings = (estimated IFSET with procedure - estimated IFSET without procedure) aircraft, period / (estimated IFSET without procedure) <0	Lower airport CO2 emission = (estimated IFSET CO2 with procedure- estimated IFSET CO2 without procedure) / (estimated IFSET CO2 without procedure) <0	Increase of stabilized approaches using APV airport = Number of APV operations (current period- previous period) / (previous period)> 0
B0-RSEQ		Increase airport arrival rate = arrivals average period (after implementation- before implementation) / (before implementation)> 0	Increase airport departure rate = departures average period (after implementation- before implementation) / (before implementation)> 0		
B0-SURF		Constant capacity with Low Visibility -LV- airport = capacity normal condition - capacity in condition LV = 0			Lower runway incursion airport = Number of incursions (after implantation - before implantation) / before implantation <0
B0-ACDM		Actual capacity offered / declared capacity Actual time parking positions occupied / authorized time in parking position	Reduction hour landing = (estimated hours (ELDT) - actual hours (ALDT)) Compliance with ETOT estimated take-off time = estimated take off time regular flights ETOT - ATOT actual time Compliance with calculated off-block time (COBT) - actual off-block time (AOBT)	Reduction engine start time on the ground = taxi time in IAP (AXOT) - actual taxi time (EXOT)	

² English and Spanish versions provided by Colombia.

			Adherence to the arrival SLOT = (Time SLOT assigned (RIBT) - actual time of arrival (AIBT)) Adherence to the departure SLOT = (Time SLOT assigned (RIBT) - actual time of departure (AIBT))		
B0-FICE		NM separation reduction between ACC xxx and ACC yyy	Reduced transfer time per operation between ACC xxx and ACC yyy		
B0-DATM					Reduction in information inconsistencies <> eAIP delivery to feed devices on board (EFB)
B0-AMET					Compliance with the event = 80% success in TAF due to aviation adverse events (period, aerodrome)
B0-NOPS		Compliance with CTOT = Calculated takeoff time (CTOT) - Actual takeoff time (ATOT)	Decrease departure taxi time = (Estimated taxi time (EXOT) - Actual taxi time (AXOT) Compare between several periods, seasonality. Decrease taxi time arrival = (Estimated taxi time (EXIT) - Actual taxi time (AXIT) Compare between several periods, seasonality. Flight time reduction = estimated flight time (EET) - actual flight time (AEET)		
B0-ASUR		Upper airspace capacity increase = (capacity with ADS / MLAT operation - capacity without ADS / MLAT operation) / operation capacity without ADS /			

		MLAT> 0			
B0-ACAS					Decrease RA alerts
B0-SNET					Decrease of major incidents due to ground proximity = (Incidents current period - incidents previous period) / incidents previous period <= 0
B0- FRTO		Increase of civil operations in restricted airspaces = civil operations current period - civil operations previous period / civil operations previous period > 0		Lower CO2 emission ROUTE = (estimated IFSET CO2 conventional route - estimated IFSET CO2 route PBN) / estimated IFSET CO2 without PBN	
B0-CDO				Lower CO2 emission airport = (estimated IFSET CO2 without procedure - estimated IFSET CO2 with procedure) / estimated IFSET CO2 without procedure	
B0-CCO				Lower CO2 emission airport = (estimated IFSET CO2 without procedure - estimated IFSET CO2 with procedure) / estimated IFSET CO2 without procedure	
B0-TBO		Upper airspace capacity increase = (operations with CPDLC - operations without CPDLC operation) / operations without CPDLC > 0			Reduction of misinterpretations = Number of reported incidents due to misinterpretation (period with CDPDLC - period without CPDLC) / (period without CPDLC) <0