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**AGENDA ITEM 3 : AVIATION SAFETY AND
AIR NAVIGATION**

INDONESIA MODERNIZATION AIR NAVIGATION FACILITY

(Presented by Indonesia)

INFORMATION PAPER

SUMMARY

This paper presents the program of modernization air navigation infrastructure program in Indonesia.

INDONESIA MODERNIZATION AIR NAVIGATION FACILITY

1. INTRODUCTION

1.1 This paper presents the modernization program of the ATM System operation in Jakarta FIR named New Jakarta Air Traffic Service Center (New JATSC).

1.2 Currently Indonesia has two FIR's which is Jakarta FIR and Ujung Pandang FIR. Jakarta FIR serve the western part of Indonesia and Ujung Pandang FIR serve the eastern part of Indonesia.

1.3 The development of new system in Ujung Pandang FIR has started since 2005, and upgraded with the latest technology called Topsky System in 2015.

1.4 The current ATM system in Jakarta Air Traffic Service Center is installed since 1985 and served the Jakarta FIR, in 2012 due to limitation of the old system DGCA has installed the back up system named Emergency JATSC.

1.5 AirNav Indonesia has planed to construct New JATSC which has full ATM functionality planned to be operated in 2018.

2. DISCUSSION

2.1 The improvements of New JATSC is envisioned by a program called Indonesia Modernization of Air Navigation Services (IMANS). IMANS program are informed and guided by numerous global and regional guidance documents and refer to the AirNav's 2014-2018 Roadmap. In the mid and longer-term ICAO Aviation System Block Upgrade (ASBU) Block 0 and 1, and the Asia Pacific Seamless ATM Plan provide important context. In addition, specific plans such as the Asia-Pacific Regional multi-nodal ATFM Plan provide further guidance for the modernization of Indonesian Air Navigation Service.

2.2. IMANS will improve many fundamental, system-wide services that are an essential foundation for AirNav to accomplish their objectives, these improvements include:

- Physically separate ATM facilities will progressively become more logically integrated, providing services with similar equipment, process, and procedures.
- AirNav personnel work collaboratively across sector and facility boundaries, managing operations from a system perspective.
- Predictive, responsive ATFM services effectively balances demand and capacity. Collaborative Decision Making (CDM) exchanges between AirNav, airspace users, and airport operators becomes the standard.
- All automation, communication, navigation, and surveillance systems are modern and restored to fully functional condition.
- ATM systems and facilities will be connected via high-speed, high-reliability networks utilizing redundant fiber loops and satellites.
- AirNav personnel will have access to high-reliability voice networks to improve collaboration.
- Data such as aeronautical, flight, and safety is archived from all ATM systems and made available across all facilities.
- AirNav Information exchanges will transition from point-to-point towards a System Wide Information Management (SWIM) approach that utilizes international data standards to encourage global interoperability.
- ATM systems are standardized across facilities and have on-site and off-site redundancy to continue operations in the event of system or facility failures.

- Cybersecurity protection occurs across all systems and personnel are aware of how to identify possible threats.
- Airspace design will fully integrate performance based operations that better accommodate new and expanded airports, provide more efficient flight paths, and reduce controller and pilot workload.
- CNS capabilities provide full coverage of all sovereign Indonesian airspace, enabling all aircraft operating on instrument flight rules (IFR) clearances to receive separation services.
- Weather is fully integrated into ATM systems and decision making.
- Safety and quality management will enable mitigation of safety issues in a predictive manner, before an accident or incident occurs.
- Training is centralized and consistent across all facilities.

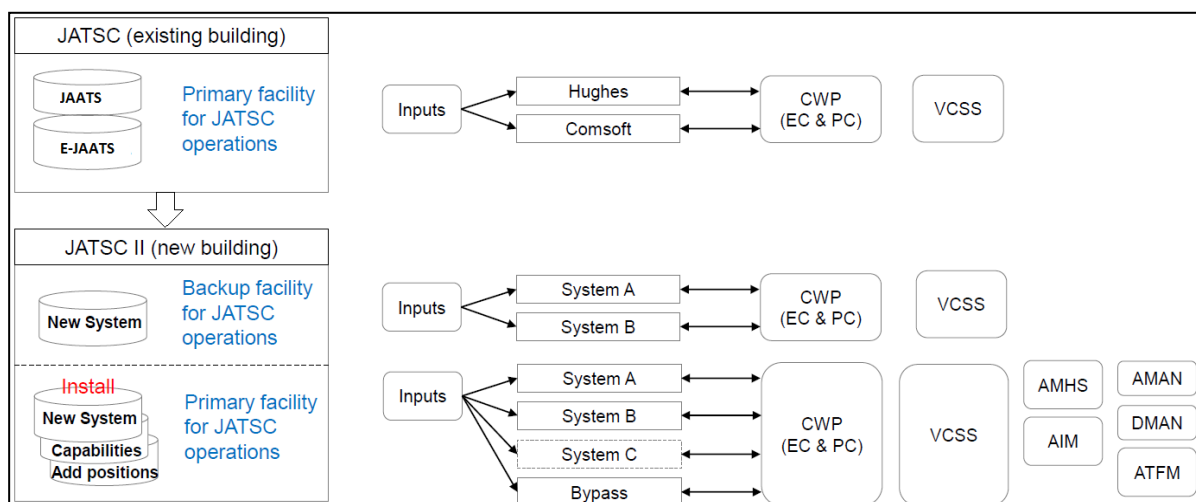


Figure 1: Jakarta Air Traffic Service Center Transition Plan

2.3 The IMANS program contain of building new system in Jakarta Air Traffic Service Center (JATSC) include: new Air Traffic Management (ATM) System, Aeronautical Information Management, Meteorological Information Management, and Information Display (AMI), SWIM, and Aeronautical Message Handling System (AMHS), Voice Communication Switching (VCS) System and ATFM support application.

2.4 The IMANS program now is procurement process, and hopefully will be fully operational in 2018.

3. ACTION BY THE CONFERENCE

3.1 The Conference is invited to:

- a) note the information contained in this paper; and
- b) discuss any relevant matters as appropriate.