

# *Brazilian Airspace Surveillance*

## *Current Infrastructure and ADS-B Implementation Plan*

Lima – NOV 2017



Departamento de Controle  
do Espaço Aéreo  
[www.decea.gov.br](http://www.decea.gov.br)

DEPARTMENT OF AIR SPACE CONTROL - DECEA



# SCRIPT

- 1. SIRIUS Overview***
- 2. Existing Aeronautical Surveillance***
- 3. ADS-B Implementation Plan***

# SCRIPT

## **1. SIRIUS Overview**

*2. Existing Aeronautical Surveillance*

*3. ADS-B Implementation Plan*

# 1. SIRIUS Overview



*The SIRIUS Program is based on strategic improvements that will provide continuous evolution of the Brazilian Air Traffic Management System.*

# 1. SIRIUS Overview



## *Improvement of Aeronautical Surveillance Services Project*

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1. *SIRIUS Overview*
2. **Existing Aeronautical Surveillance**
3. *ADS-B Implementation Plan*

## 2. Existing Aeronautical Surveillance

### 2.1 National FIR



## 2. Existing Aeronautical Surveillance

### 2.1.1 FIR Atlântico

ADS-C/CPDLC (FANS 1/A)



## 2. Existing Aeronautical Surveillance

### 2.1.2 Continental FIR

PSR/MSSR – FL250



## 2. Existing Aeronautical Surveillance

### 2.2 TMA

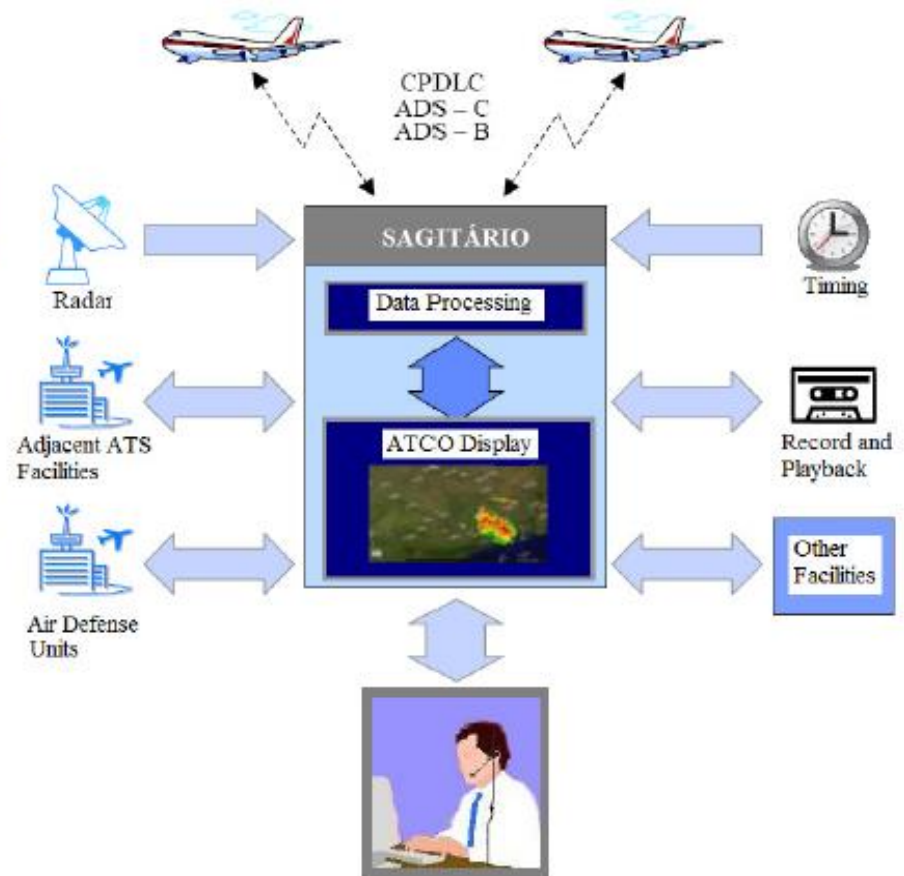
PSR/MSSR (31/44 TMA)

### 2.3 Aerodrome

SMR (Guarulhos, Galeão e Curitiba)

## 2. Existing Aeronautical Surveillance

### 2.4 ATM Automation System (SAGITARIO)



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### 3. ADS-B Implementation Plan

#### 3.1 Improvement of Aeronautical Surveillance Services Project

- Oceanic Airspace



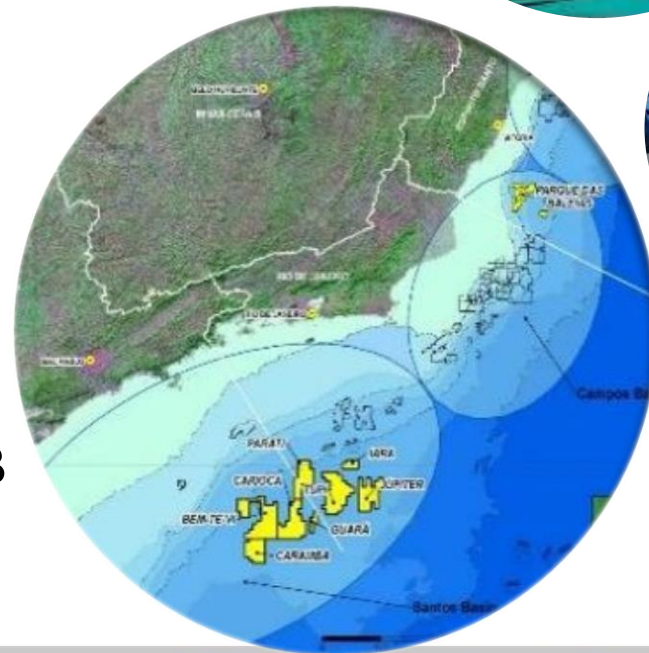
- Continental Airspace



## 3. ADS-B Implementation Plan

### 3.1 Improvement of Aeronautical Surveillance Services Project

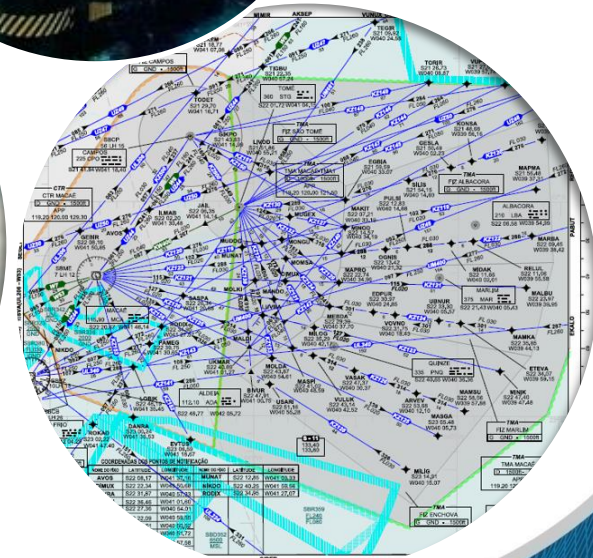
- Oceanic Airspace
  - ADS-B NRA – Campos Basin
  - 1090 Extended Squitter
    - Annex 10 Vol.III, Vol.IV
    - Doc 9871
  - 6 ADS-B stations
    - RTCA/ DO260, 260A, 260B



# 3. ADS-B Implementation Plan

## 3.1 Improvement of Aeronautical Surveillance Services Project

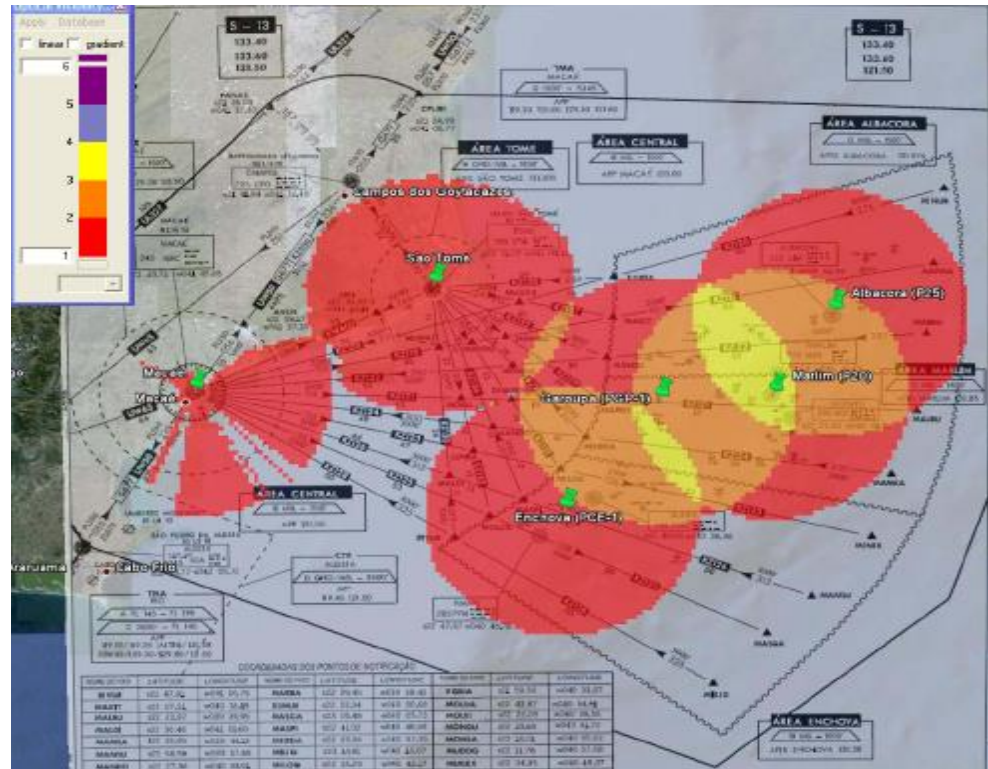
- Oceanic Airspace
  - Low Altitude Coverage
  - Installed: 2017
  - Mandate: 2018



# 3. ADS-B Implementation Plan

## 3.1 Improvement of Aeronautical Surveillance Services Project

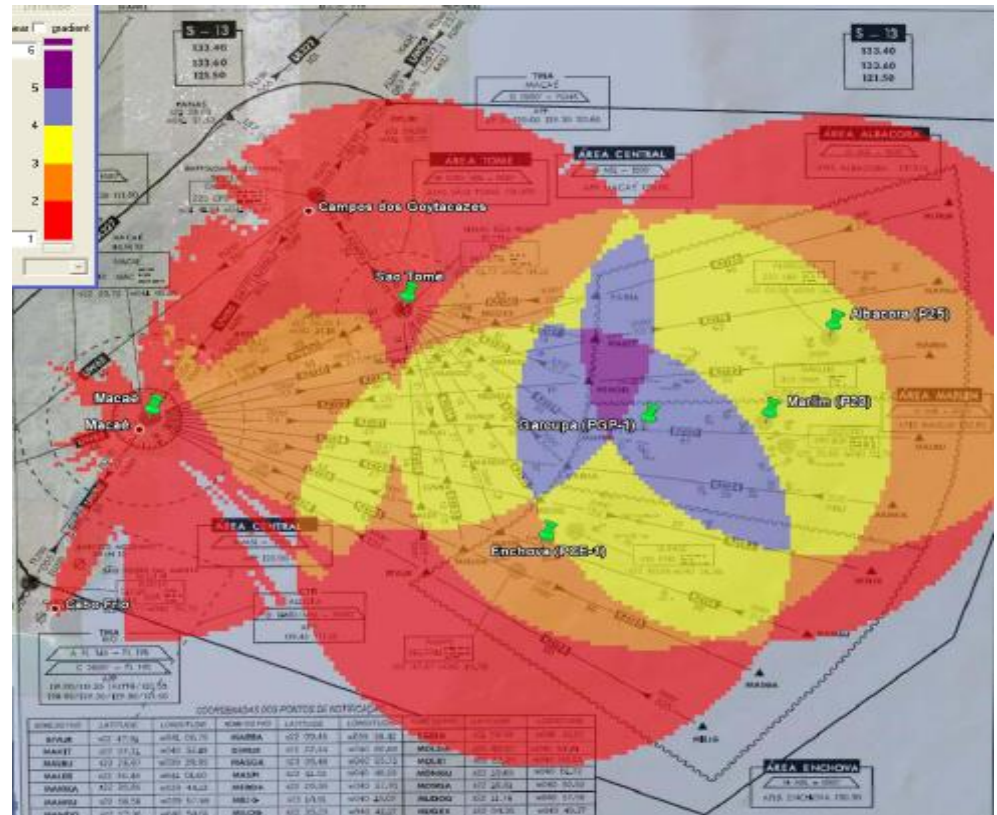
- Oceanic Airspace
- Coverage 100ft AMSL



# 3. ADS-B Implementation Plan

## 3.1 Improvement of Aeronautical Surveillance Services Project

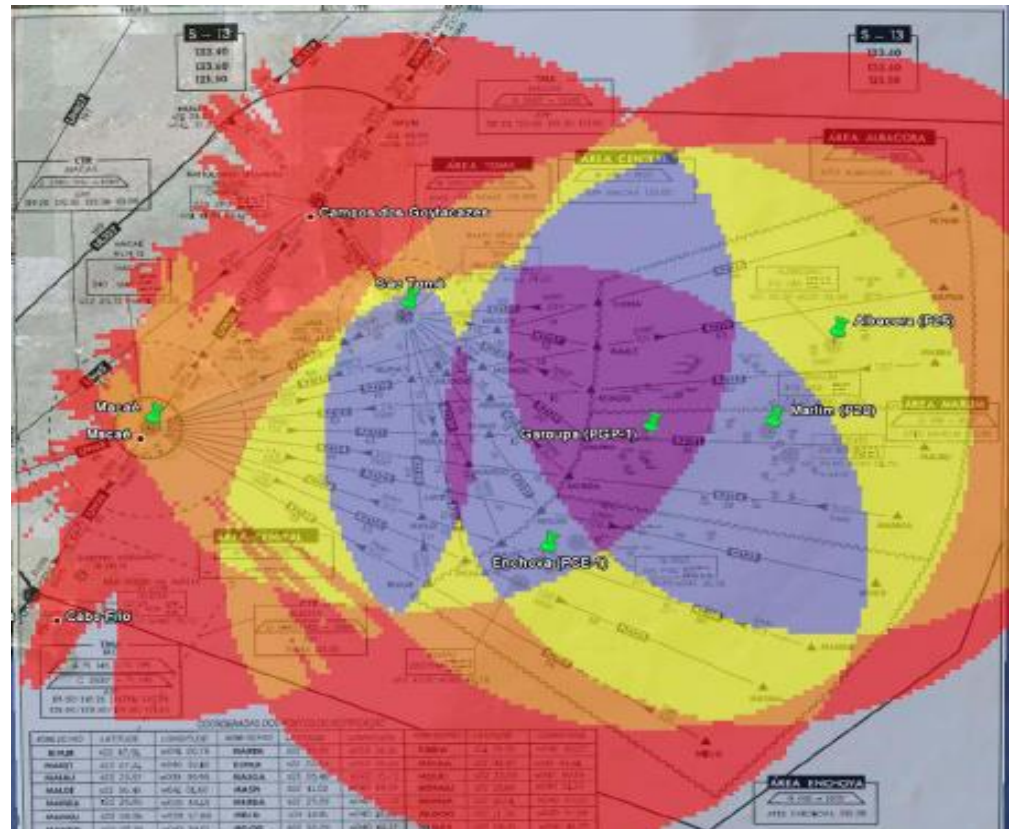
- Oceanic Airspace
- Coverage 500ft AMSL



# 3. ADS-B Implementation Plan

## 3.1 Improvement of Aeronautical Surveillance Services Project

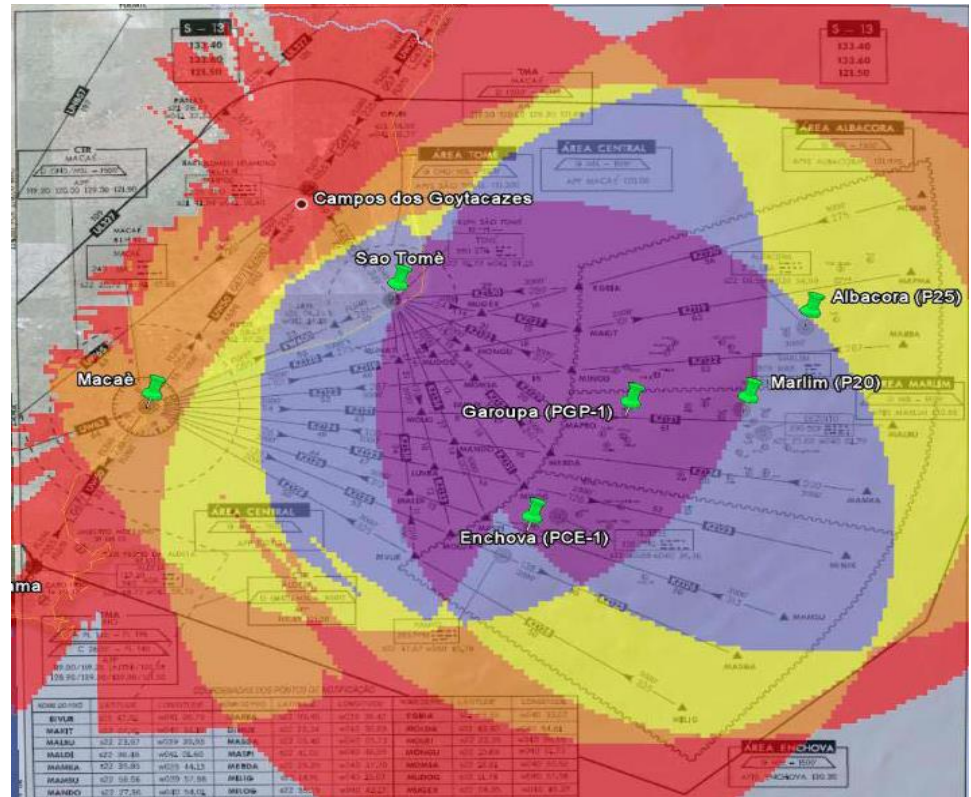
- Oceanic Airspace
- Coverage  
1000ft AMSL



# 3. ADS-B Implementation Plan

## 3.1 Improvement of Aeronautical Surveillance Services Project

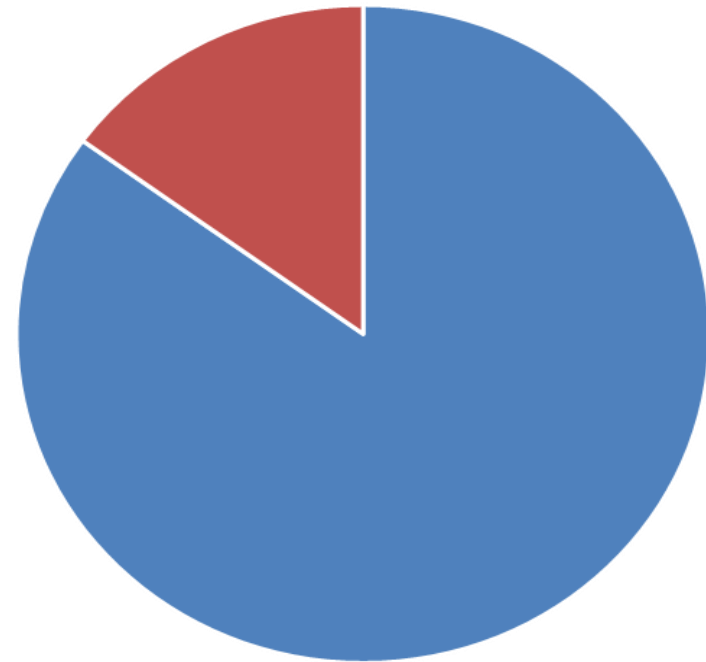
- Oceanic Airspace
- Coverage 1500ft AMSL



### 3. ADS-B Implementation Plan

#### 3.1 Improvement of Aeronautical Surveillance Services Project

- Oceanic Airspace
- Status OCT 2017  
85% Aircrafts Equipped



■ ADS-B Equipped

■ ADS-B Non Equipped



## 3. ADS-B Implementation Plan

### 3.1 Improvement of Aeronautical Surveillance Services Project

- Continental Airspace - Planning
  - 4 Flight Information Regions
  - 62 stations
  - 4 priorities
    - ATM Homogeneous Areas
    - Main Air Traffic Flows
    - RTCA/DO260, 260A, 260B



### 3. ADS-B Implementation Plan

#### 3.1 Improvement of Aeronautical Surveillance Services Project

- Continental Airspace - Planning

- 2018 – 2021
- No Mandate

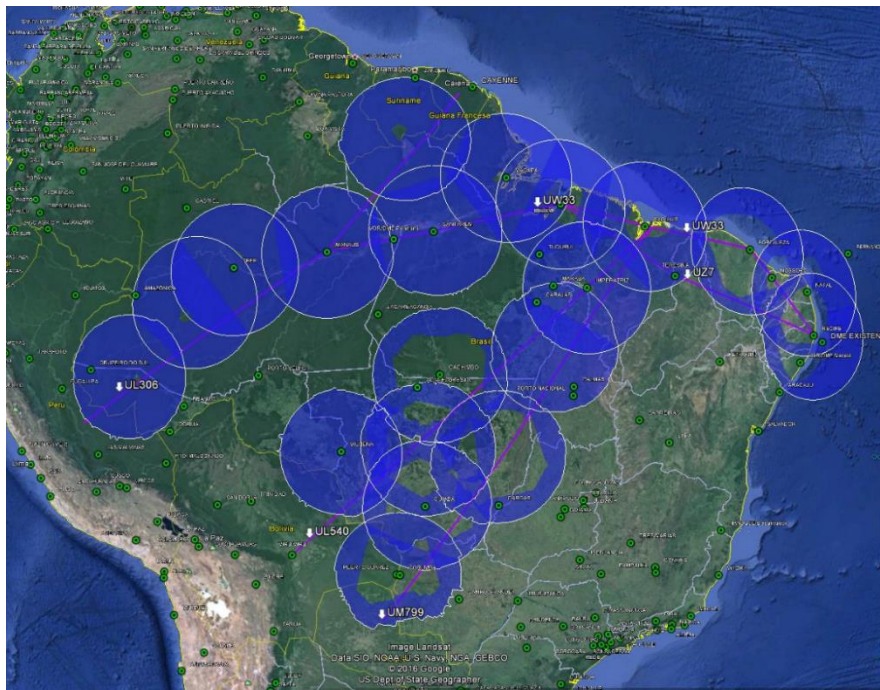




# 3. ADS-B Implementation Plan

## 3.1 Improvement of Aeronautical Surveillance Services Project

**Prioridade 3 – ADS-B OUT (2020)**  
Coverage - FL300



**Prioridade 4 - ADS-B OUT (2020)**  
Coverage - FL300



### 3. ADS-B Implementation Plan

#### 3.1 Improvement of Aeronautical Surveillance Services Project

- Continental Airspace - Planning

STEPS	ACTIVITIES	DEADLINES
Planning	- Terms of operational need - Technical and Logistics Requirements	2016
<u>Conception</u>	- <u>Conception</u> - Bidding/Contract Agreement	2017
<u>Implantation</u>	Implantation of ADSB Sensors - Priority 1	2018
	Implantation of ADSB Sensors - Priority 2	2019
	Implantation of ADSB Sensors - Priority 3	2020
	Implantation of ADSB Sensors - Priority 4	2021

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