

# A-CDM PROJECT BRAZIL



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A-CDM Project Manager

# Objective

**To present a global  
view of the A-CDM  
project to be  
implemented in  
SISCEAB - BRAZIL**



# Road Map

00001 SEARCH FOR A - CDM

00002 SISCEAB STRUCTURE

00003 A - CDM EXPECTATIONS

00004 PARALLEL PROJECTS

The background is a deep blue gradient with several glowing, curved lines in a lighter blue color. There are also numerous small, bright blue dots scattered across the field, some appearing in clusters. The overall aesthetic is futuristic and scientific.

The search for the  
**A-CDM**

# BRAZIL – FLIGHT MOVEMENTS

**2018**

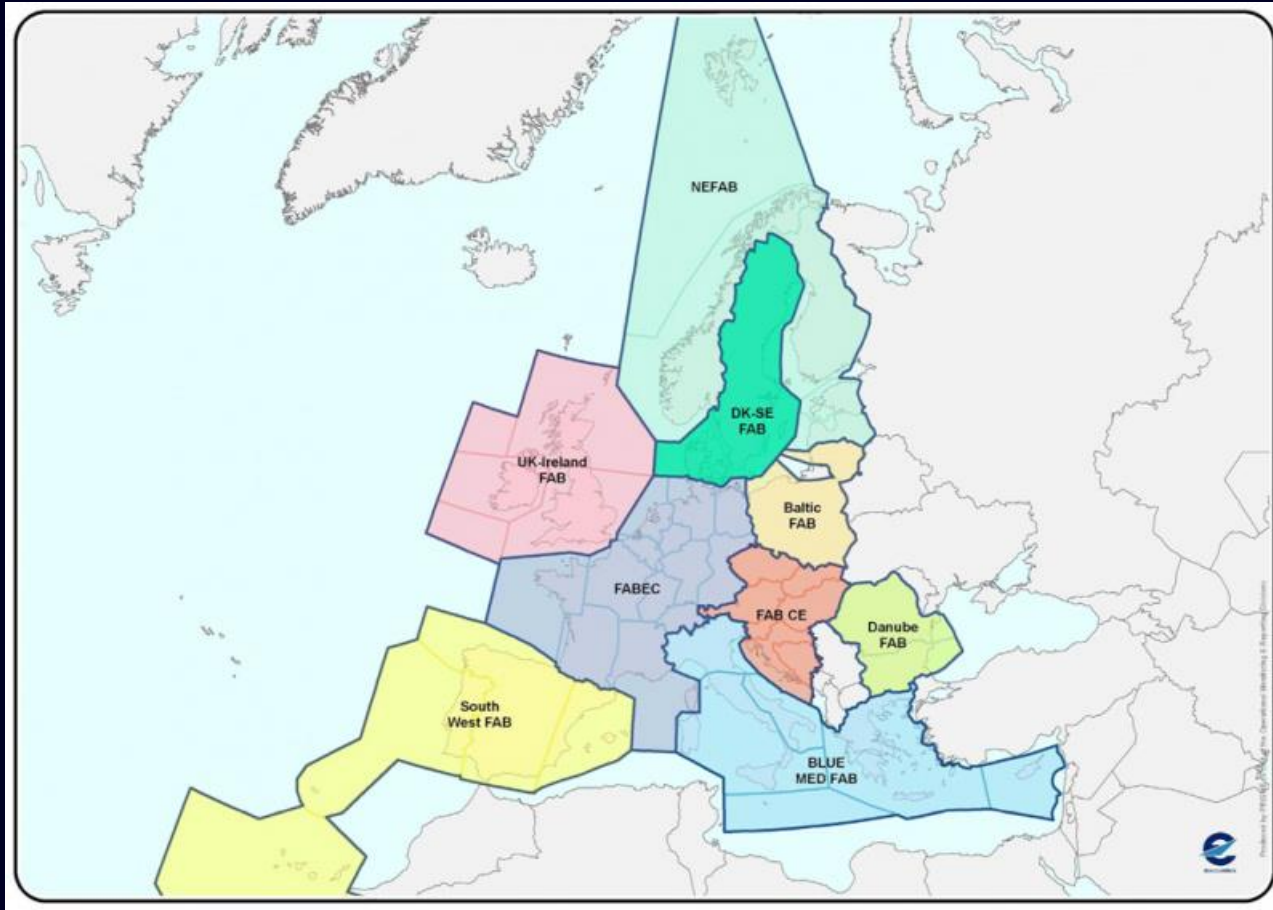
**3.009.609**

**(DEP/ARR)**



Source: Seta millenium – CGNA - 2019

# EUROCONTROL – FLIGHT MOVEMENTS



2018  
17.018.447  
DEP/ARR

Source: PRU – EUROCONTROL - 2019

# BRAZILIAN TERMINAL AREAS (TMA)

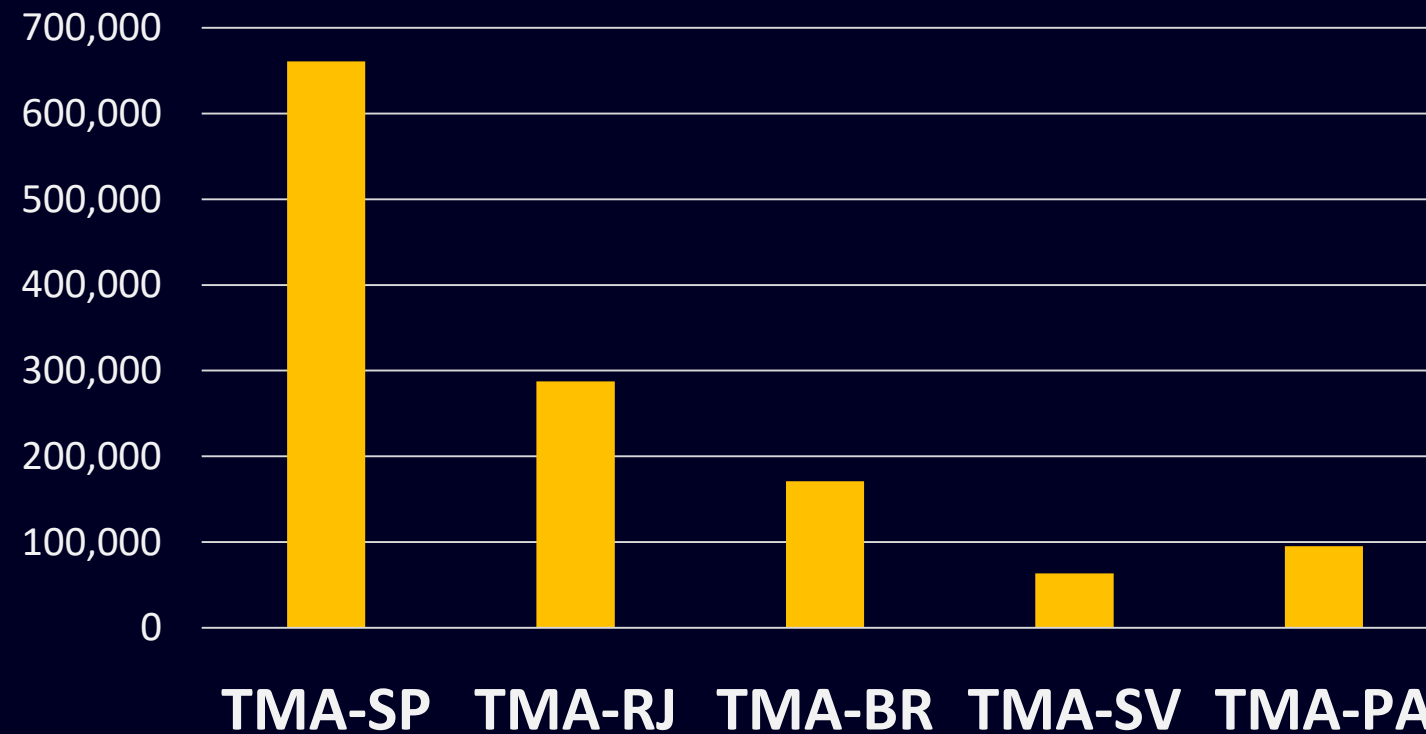
## FLIGHT MOVEMENTS INSIDE TERMINALS (2018)

TMA-SP	TMA-RJ	TMA-BR	TMA-SV	TMA-PA
660.843	287.491	171.122	63.477	95.215

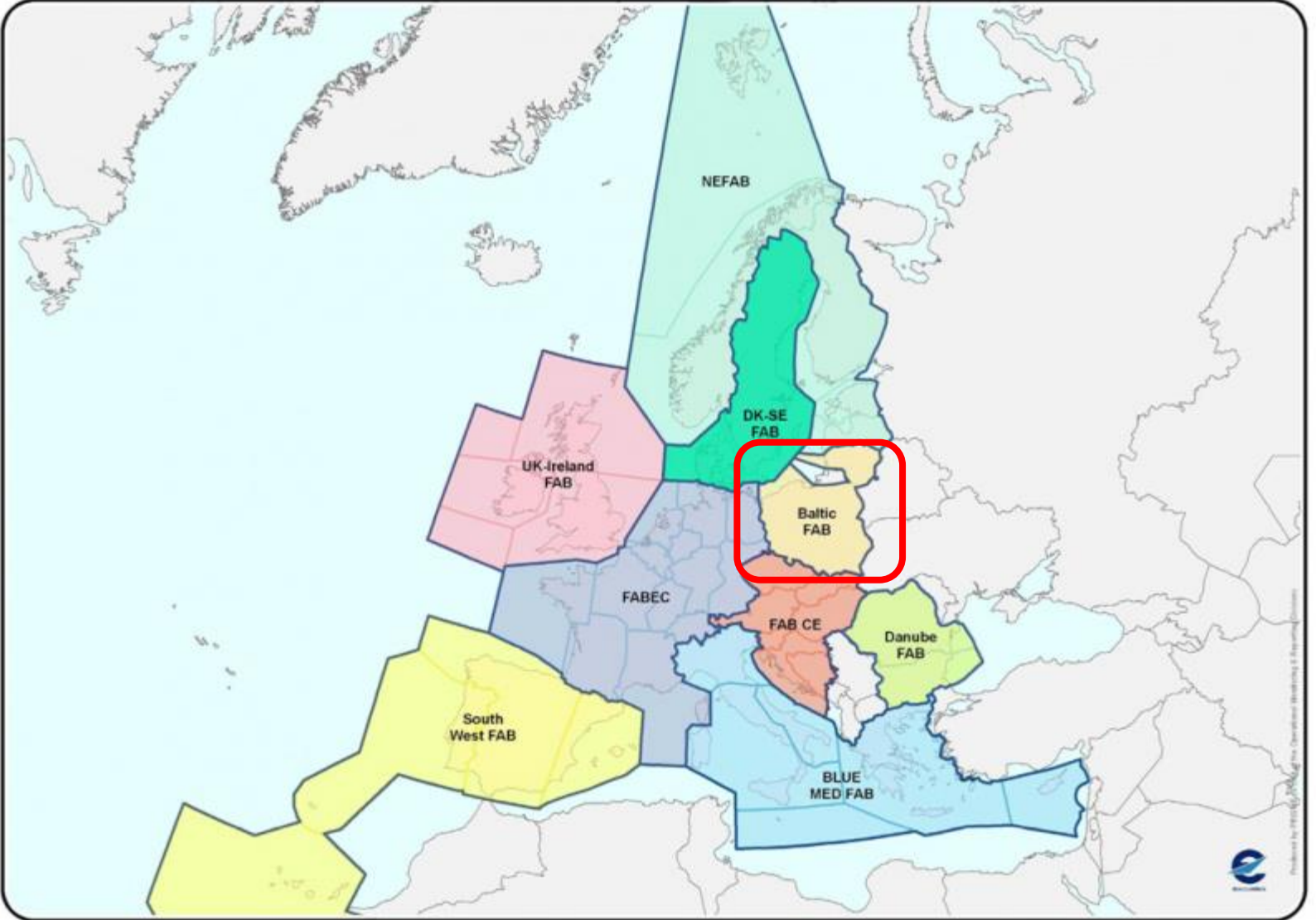
Source: Seta millenium – CGNA - 2019

# BRAZILIAN TERMINAL AREAS (TMA)

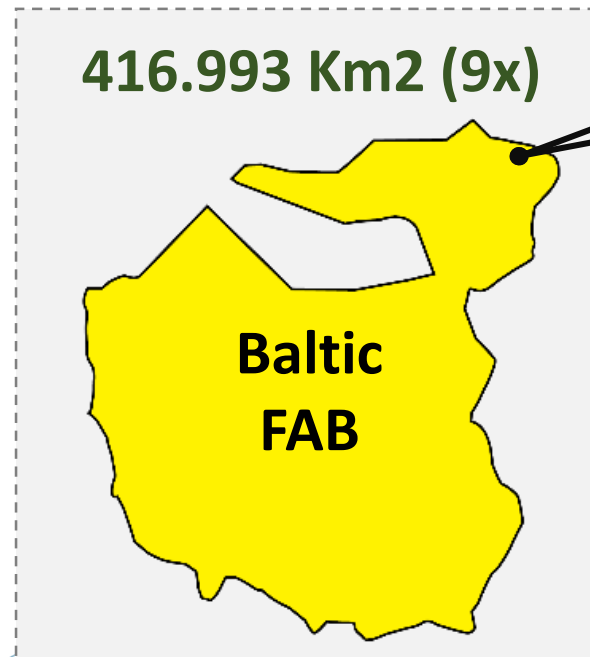
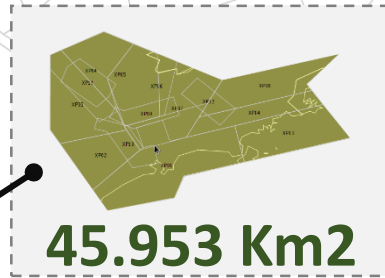
## FLIGHT MOVEMENTS (2018)



# FAB – FUNCTIONAL AIRSPACE BLOCK



# Comparatives



**660.843 flights**

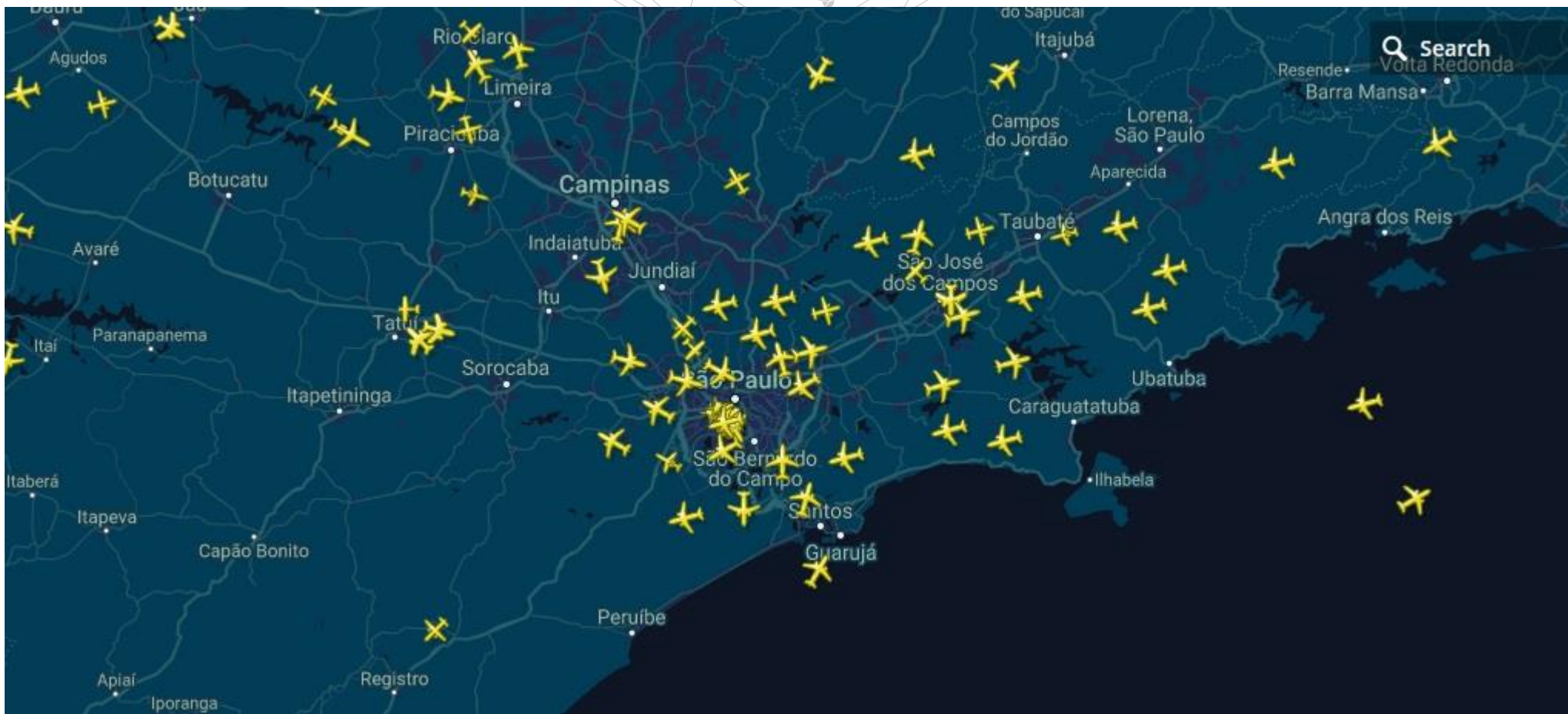
**X**

**976.250 flights (1,5 x)**

416.993 Km<sup>2</sup> (9x)

2018  
SETA MILLENIUM - CGNA  
PRU - EUROCONTROL

# TMA - SP

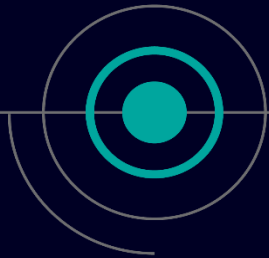




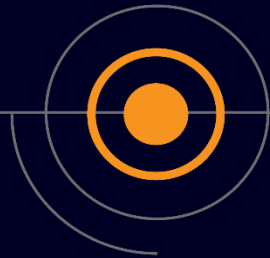
# SEARCH FOR KNOWLEDGE

A network diagram consisting of a circular arrangement of grey nodes connected by thin grey lines, positioned behind the main title.

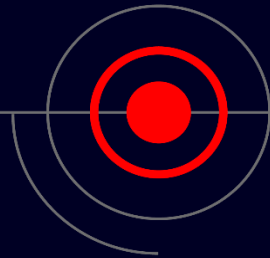
2012



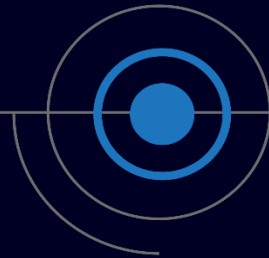
2015

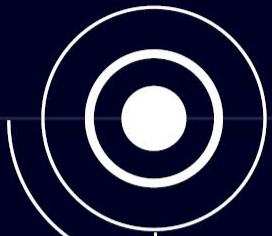


2017



2017





**2012**

National Air Traffic Management (ATM) Policy, envisaged in PCA-351-3 – DECEA's National ATM Implementation Plan.

2015



2017



2017



2012

2017

2017

**2015**

DECEA-EUROCONTROL Cooperation Agreement, HQ AIR NAVIGATION PROJECTS AGREEMENT, signed in

**OCTOBER 2015**

2012

2015

2017



Visit to the airport of  
Franz Josef Strauss (Munich) in  
**OCTOBER 2017**

**2017**

2012

2015

2017



A-CDM Operational Cooperation Agreement  
for Guarulhos airport, Signed in  
NOVEMBER 2017

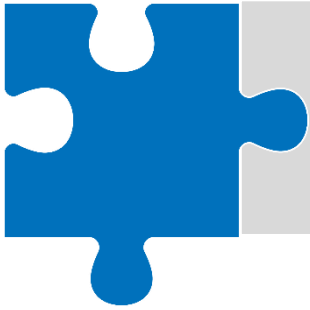
**2017**

The background is a deep blue gradient with several glowing, curved lines in a lighter blue color. There are also numerous small, glowing blue dots scattered across the background, creating a sense of depth and movement. The overall aesthetic is futuristic and technological.

STRUCTURE AND TOOLS FOR  
**SISCEAB**

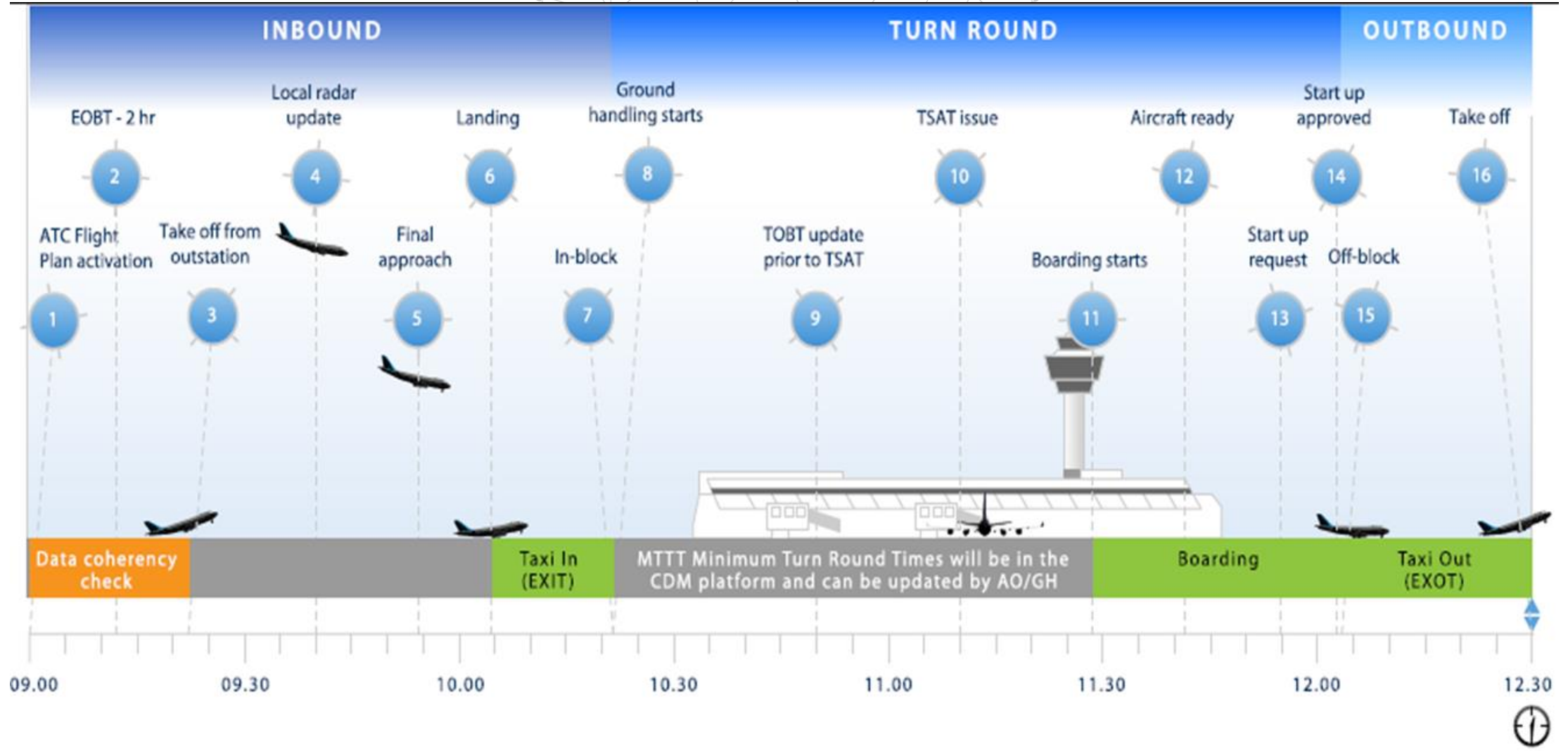
# Activities Planning

## Part 1



Study of the ACDM Manual as a way to level the knowledge on the subject







# Activities Planning

## Part 1



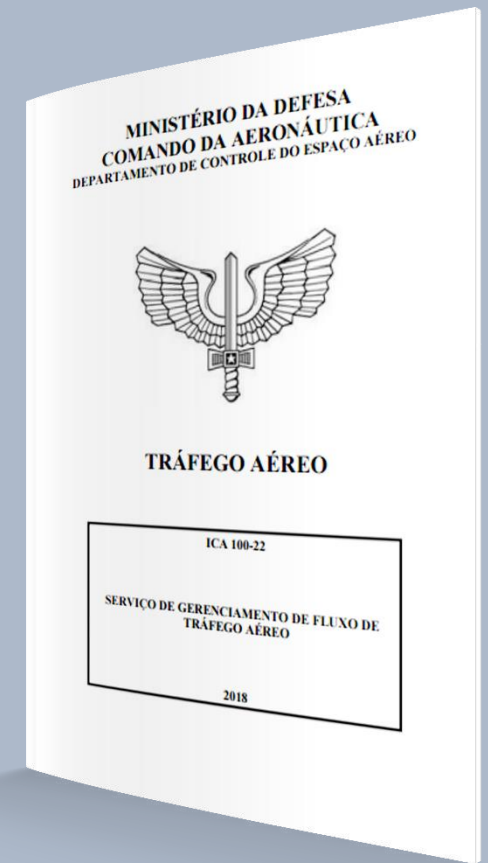
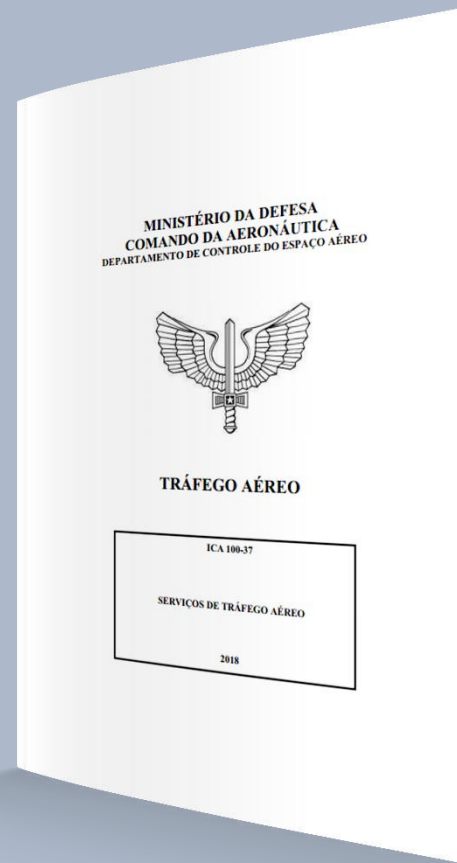
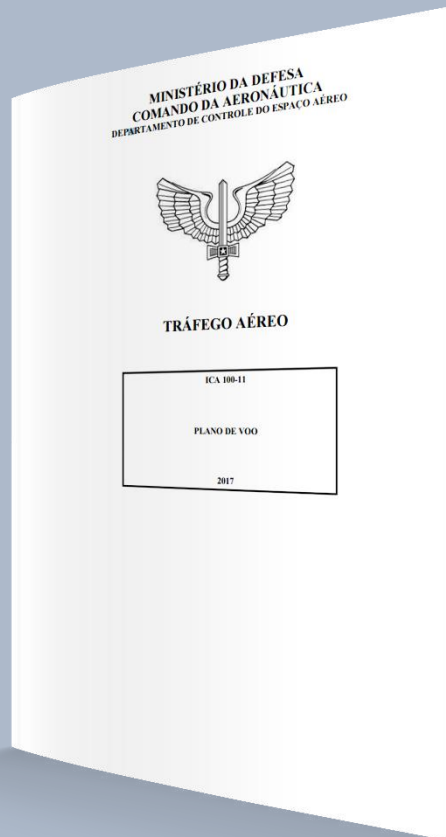
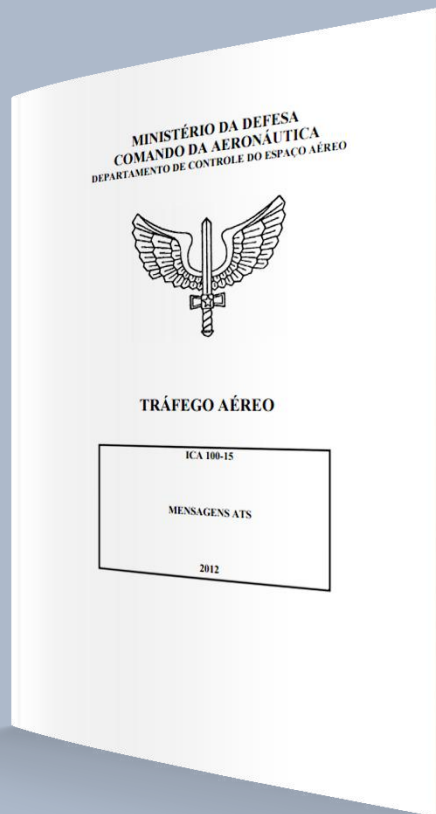
Study of the ACDM Manual as a way to level the knowledge on the subject

## Part 2



- Concept elements
- Adequacy of A-CDM to Brazil
- Analysis of indicators and sources
- Definition of the structure

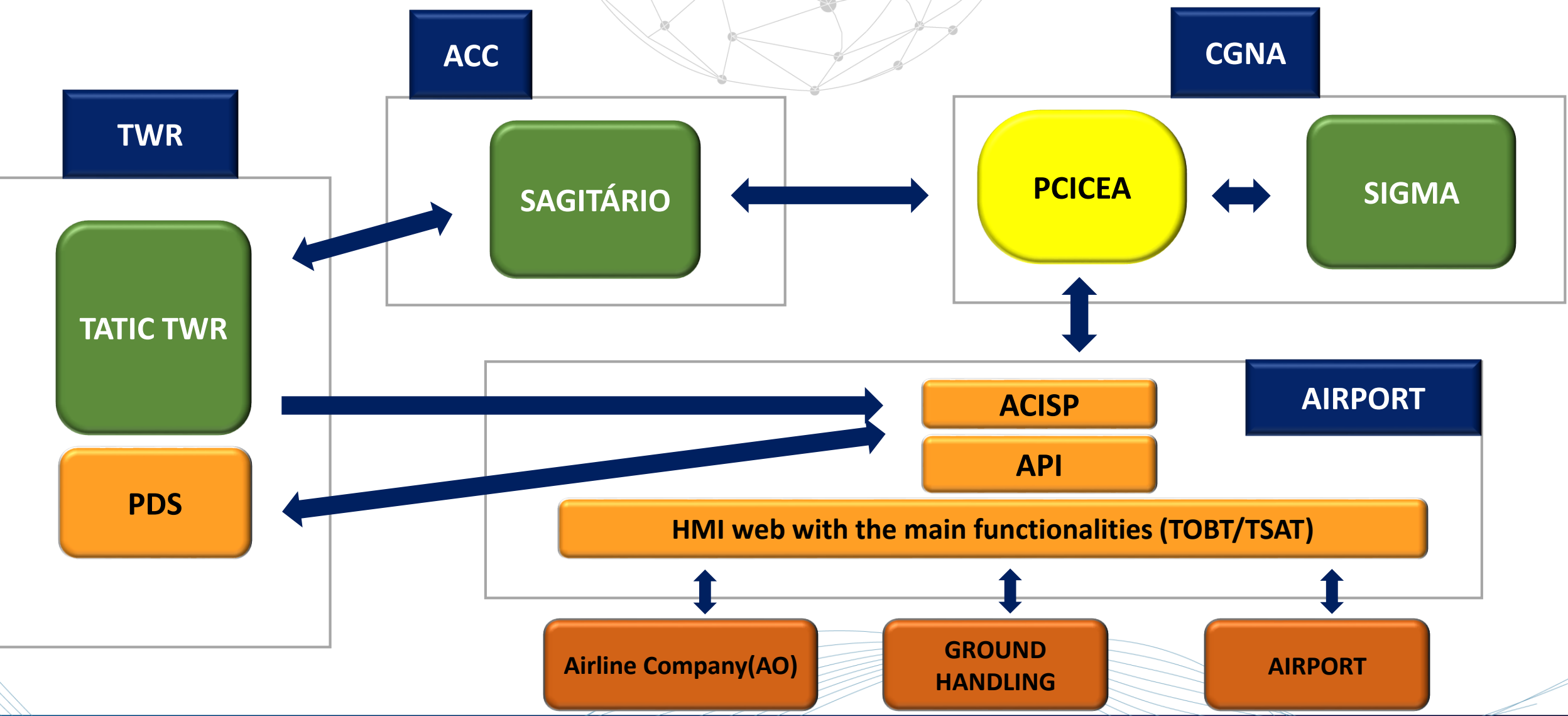
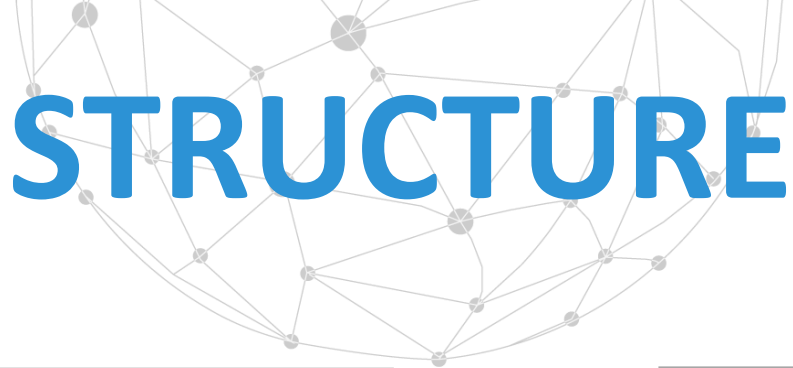
# Analysis of Brazilian legislations



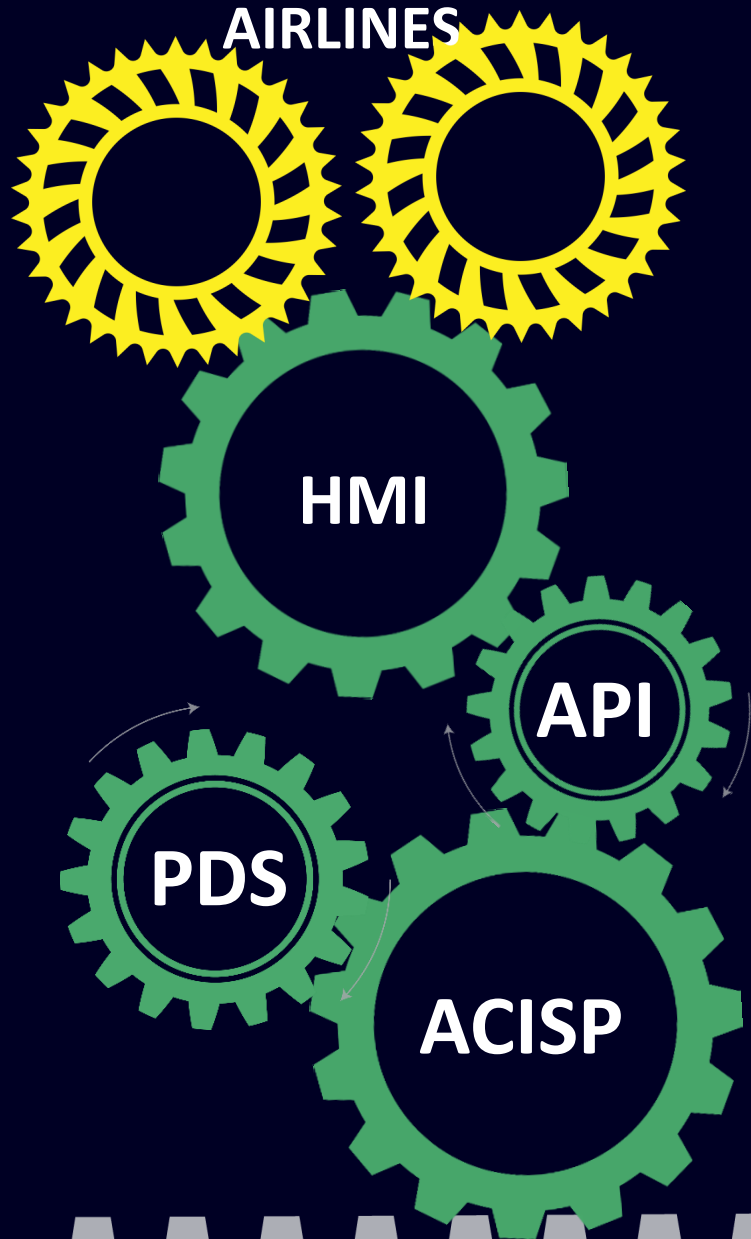
# Milestones vs. Sources



# STRUCTURE



SMALL  
AIRLINES



# DECEA Responsibility

- API of interface
- Calculation processes for sequencing (PDS).
- Sharing platform
- Data Base
- A-CDM Rules
- Interface with PCICEA.
- Data sharing with the participants
- Publication of TOBT by AO (**MANUAL**)
- Status e Alerts
- Text collaboration among participants
- Performance (KPI`s) indicators and reports

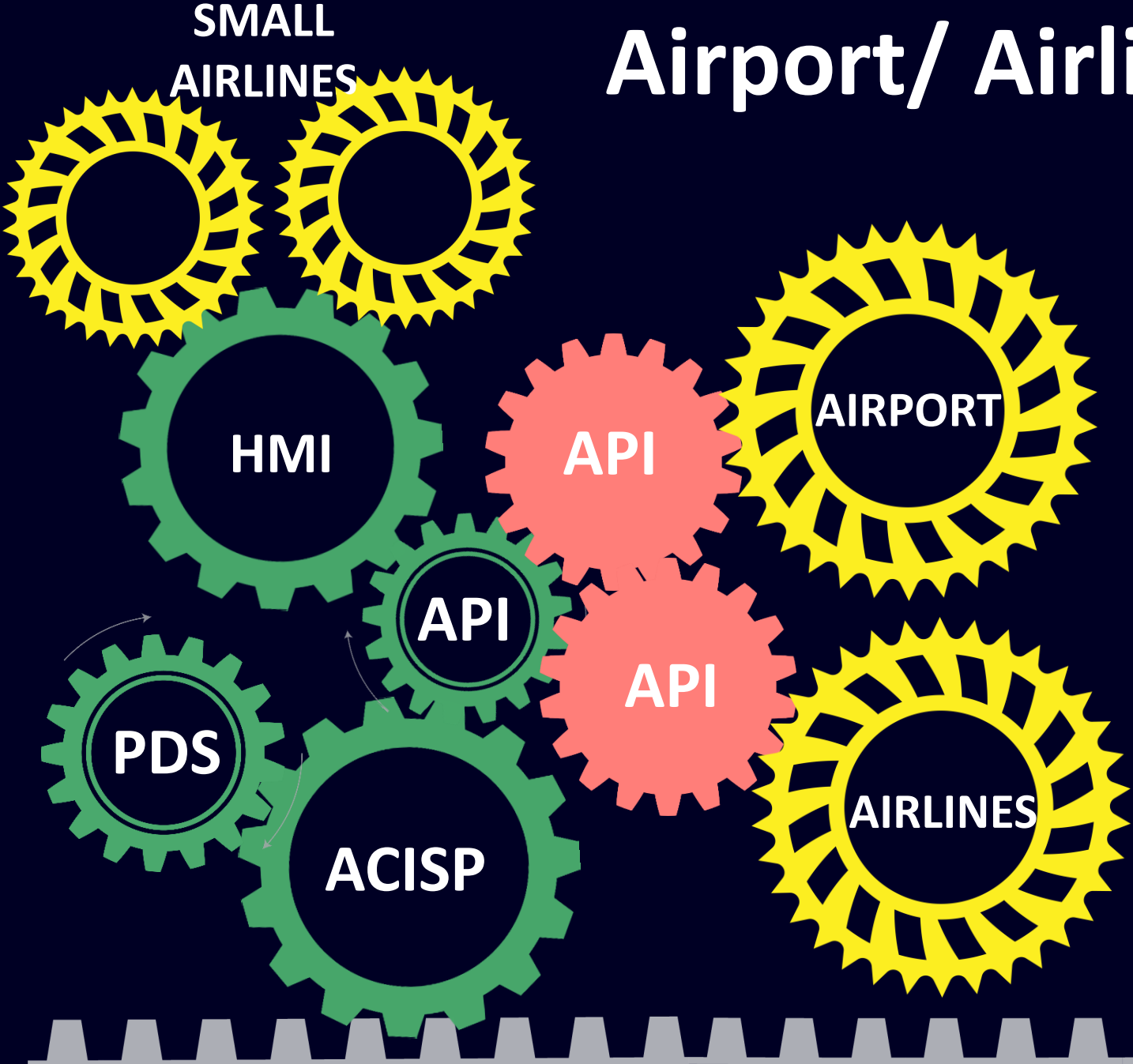
TATIC TWR

SAGITÁRIO

SIGMA

PCICEA

# Airport/ Airlines Responsibility



- Systems adaptations
- Specific functionalities for airline companies, ground handler, airport and others
- Specific indicators for AO and GH
- Optimization tools such as: Dynamic MTTT, etc
- App (mobile) for AO and GH

TATIC TWR

SAGITÁRIO

SIGMA

PCICEA



## TATIC A-CDM

User

Password

LOGIN

CHANGE PASSWORD



**GRU AIRPORT**  
**SAIPHER**  
Soluções em Tráfego Aéreo e Aeroportos

DEPARTURES

ARRIVALS

A-CDM OPERATIONS

SETTINGS

RESET DB

📄 Search...

Timeline Alerts Chat Milestones Stats

Alert	CallSign	Reg.Mark	Flight	Type	Stand	EOBT	OBT	SAT	CTOT	TOT	ADES	Status
	GLO4152	AAAA			2125	1327	<b>E</b> 1327			<b>E</b> 1342	SBSP	
	AZU2563	U12345			105	1328	<b>A</b> 1620	<b>A</b> 1645		<b>A</b> 1712	SBSP	
	EIK563	222222			150	1346	<b>T</b> 1320			<b>T</b> 1335	SBSP	
	AZU4512	ABF			R125	1356	<b>E</b> 1356			<b>E</b> 1411	SBGR	
	ONE6184	BOI737			L412	1401	<b>E</b> 1401			<b>E</b> 1416	SBFI	
	GLO1250	PTGGG			22	1404	<b>E</b> 1404			<b>E</b> 1419	SBFL	
	TAM3360	1111			1215	1411	<b>E</b> 1411			<b>E</b> 1426	SBFZ	
	TAM3868	222			111	1456	<b>E</b> 1456			<b>E</b> 1511	SBGO	
	AZU9070	4151			114R	1516	<b>E</b> 1516			<b>E</b> 1531	SBFL	

- 19:17 ★ MLS - 1: Plan Activated
- 20:17 ★ MLS - 2: Non Regulated Flight
- 20:35 EOBT changed to 22:45
- 20:35 **ALERT: CHG ISSUE**
- 21:01 ★ MLS - 3: Departed from SBGL
- 21:10 ★ MLS - 4: ELDT 21:59
- 21:30 ★ MLS - 4: ELDT 22:05
- 21:55 Manual Input TOBT 22:55
- 22:01 ★ MLS - 5: Final Approach
- 22:04 ★ MLS - 6: Landed
- 22:10 ★ MLS - 9: TOBT confirmed
- 22:19 ★ MLS - 7: Blocked On
- 22:19 ★ MLS - 8: Ground Handling auto started
- 22:20 ■ GRU : Estamos com problema na ponte deste finger.

Detailed info for selected flight: /REG: AAAA /ASBT: 17:22 /ARDT: 17:20 /ASDT: 15:54 /SOBT: 12:38

DEPARTURES

ARRIVALS

A-CDM OPERATIONS

SETTINGS

RESET DB

Search...

Alert	CallSign	Reg_Mark	Fi.L. ↑	Type	Stand	EOBT	OBT	SAT	CTOT	TOT	ADES	Status
	GLO4152	AAAA			2125	1238	<span style="color: green;">A</span> 1245	1240		<span style="color: green;">A</span> 1254	SBSP	
	AZU2563	U12345			105	1239	<span style="color: red;">T</span> 1240	1241		<span style="color: red;">T</span> 1255	SBSP	
	EIK563	222222			150	1257	<span style="color: red;">T</span> 1258	1258		<span style="color: red;">T</span> 1313	SBSP	
	AZU4512	ABF			R125	1307	<span style="color: red;">T</span> 1308	1309		<span style="color: red;">T</span> 1323	SBGR	
	ONE6184	BOI737			L412	1312	<span style="color: red;">T</span> 1313	1314		<span style="color: red;">T</span> 1328	SBFI	
	GLO1250	PTGGG			22	1315	<span style="color: red;">T</span> 1316	1317		<span style="color: red;">T</span> 1331	SBFL	
	TAM3360	1111			1215	1322	<span style="color: red;">T</span> 1323	1323		<span style="color: red;">T</span> 1338	SBFZ	
	TAM3868	222			111	1407	<span style="color: red;">T</span> 1408	1408		<span style="color: red;">T</span> 1423	SBGO	
	AZU9070	4151			114R	1427	<span style="color: red;">T</span> 1428	1409		<span style="color: red;">T</span> 1443	SBFL	

Timeline
Alerts 6
Chat
Milestones
Stats

Activation <b>19:17</b> MLS-01	Regulation <b>20:17</b> MLS-02	Departure from outstation <b>21:01</b> MLS-03
FIR Entrance <b>N/A</b> MLS-04	Final Approach - MLS-05	Final Approach - MLS-05
Block In - MLS-07	Ground Handling <b>75min</b> MLS-08	TOBT Confirmation <b>3min</b> MLS-09
TSAT issu - MLS-10	<div style="border: 1px solid black; padding: 5px;"> <p><b>TOBT Confirmation</b></p> <p>09 : 00</p> <p>OK CANCEL</p> </div>	
Startup Request - MLS-13	Startup Approval - MLS-14	Block Off - MLS-15
Take Off - MLS - 16		

Detailed info for selected flight: /REG: AAAA /ASBT: 17:22 /ARDT: 17:20 /ASDT: 15:54 /SOBT: 12:38

DEPARTURES

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A-CDM OPERATIONS

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Search...

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	AZU2563	U12345			105	1239	<span style="background-color: red; color: white;">T</span> 1240	1241		<span style="background-color: white; border: 1px solid black;">T</span> 1255	SBSP	
	EIK563	222222			150	1257	<span style="background-color: red; color: white;">T</span> 1258	1258		<span style="background-color: white; border: 1px solid black;">T</span> 1313	SBSP	
	AZU4512	ABF			R125	1307	<span style="background-color: red; color: white;">T</span> 1308	1309		<span style="background-color: white; border: 1px solid black;">T</span> 1323	SBGR	
	ONE6184	BOI737			L412	1312	<span style="background-color: red; color: white;">T</span> 1313	1314		<span style="background-color: white; border: 1px solid black;">T</span> 1328	SBFI	
	GLO1250	PTGGG			22	1315	<span style="background-color: red; color: white;">T</span> 1316	1317		<span style="background-color: white; border: 1px solid black;">T</span> 1331	SBFL	
	TAM3360	1111			1215	1322	<span style="background-color: red; color: white;">T</span> 1323	1323		<span style="background-color: white; border: 1px solid black;">T</span> 1338	SBFZ	
	TAM3868	222			111	1407	<span style="background-color: red; color: white;">T</span> 1408	1408		<span style="background-color: white; border: 1px solid black;">T</span> 1423	SBGO	
	AZU9070	4151			114R	1427	<span style="background-color: red; color: white;">T</span> 1428	1409		<span style="background-color: white; border: 1px solid black;">T</span> 1443	SBFL	

- Timeline
- Alerts**
- Chat
- Milestones
- Stats

19:39

**CHG issue - Acording new TOBT a new CHG issue is needed.**

Acknowledge confirmed at 19:45

---

20:01

**CHG issue - Acording new TOBT a new CHG issue is needed.**

Confirm Acknowledge

---

20:30

**Aircraft Type inconsistency between ATC Flight Plan and Airport Database. Immediate of ATC Flight Plan or Airport Database needed.**

Acknowledge not required

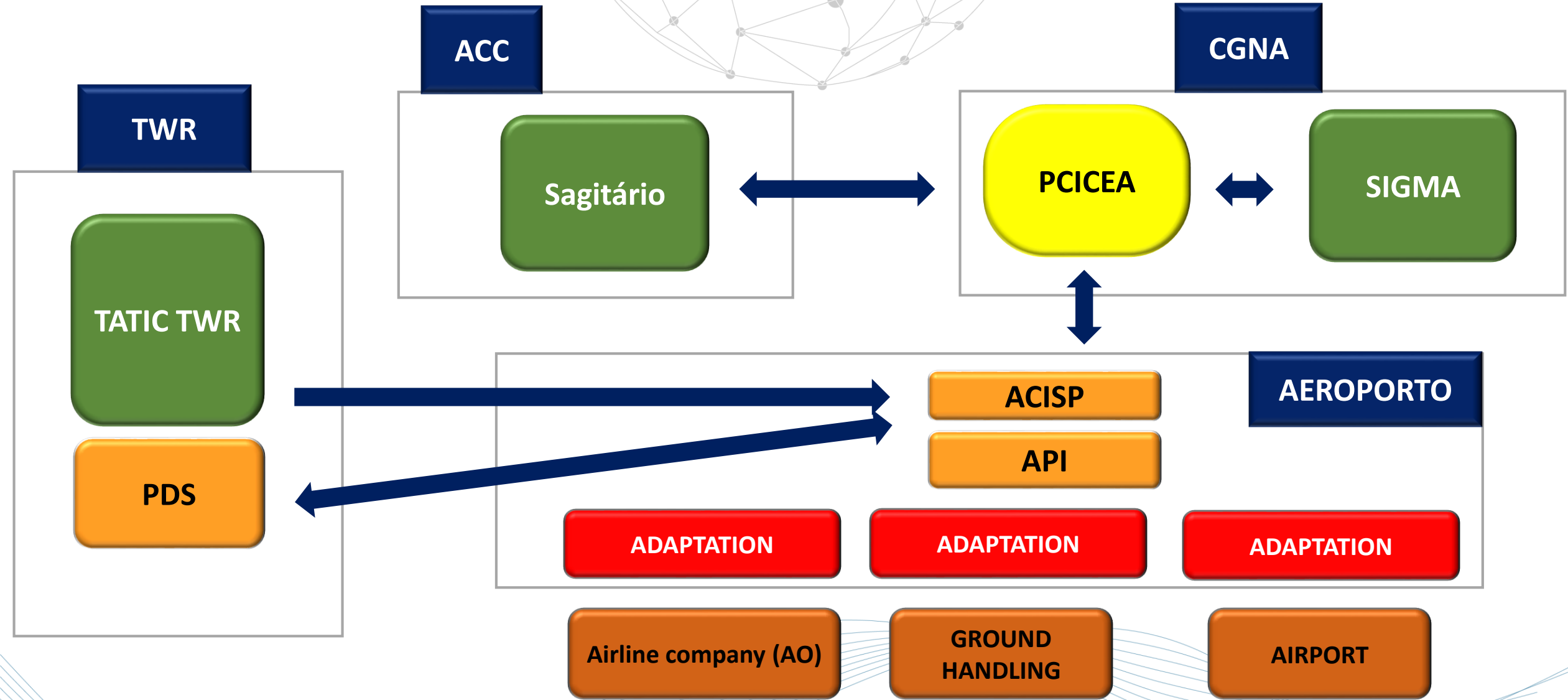
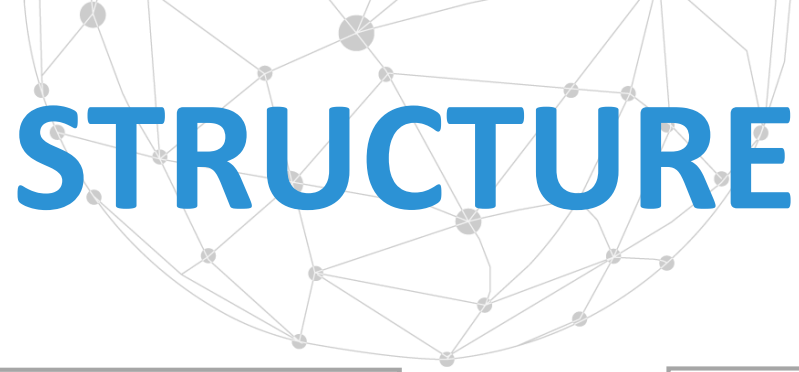
Detailed info for selected flight: /REG: AAAA /ASBT: 17:22 /ARDT: 17:20 /ASDT: 15:54 /SOBT: 12:38

# Swim

Concept



# STRUCTURE



# Activities Planning

Part 1



Study of the ACDM Manual as a way to level the knowledge on the subject

Part 2

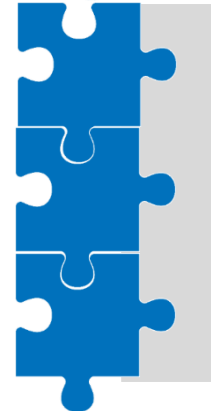


- Concept elements
- Adequacy of A-CDM to Brazil
- Analysis of indicators and sources
- Definition of the structure



KPI  $\Delta t_0$  GRU  
AIRPORT

Part 3



- Data Sharing
- Test of the Proposed Indicators
- Analysis and adjustments of the operation
- Availability of the requirements for development of API / APP (Airline Companies and others)
- Implementation of ACISP & PDS platform




# A-CDM

## EXPECTATIONS

A network diagram consisting of numerous grey circular nodes connected by thin grey lines, forming a complex web-like structure. The nodes are of varying sizes, and the connections are dense in some areas and sparse in others. The overall shape is roughly circular, with some lines extending towards the edges.

# SISCEAB Benefits

- Complete indicators for the air movement analysis
  - Possibility of ATFM (CGNA) measures needed to be known anticipatedly (coordination with airlines, airports and etc)
  - Flaw evidences performed by each stakeholder
  - Management of the air movement for air traffic flow enhancement (PDS) – TWR
  - Efficient Airspace – “do more with the same resources” (TMA SP)
- 
- A decorative graphic at the bottom of the slide featuring several thin, light blue wavy lines that sweep across the width of the page, creating a sense of motion and flow. The lines are layered and overlap, with some appearing as solid lines and others as fainter, more ethereal curves. The background at the bottom is a solid dark blue color.

# Implementation Schedule

		2017				2018				2019				2020				2021				2022				2023							
		1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T				
GRU	GRU	◆ Abertura do Projeto GRU Fase informação				↑ Assinatura do ACO-GRU Fase de análise				Início da implantação da plataforma ACISP-GRU Fase de implantação				Implantação da plataforma ACISP-GRU Fase de Oper. análise KPI				◆															
	CFN																	◆ Abertura do Projeto CFN Fase informação				↑ Assinatura do ACO-CFN											
	GIG																					◆ Abertura do Projeto GIG Fase informação				↑ Assinatura do ACO-GIG							
	BSB																									◆ Abertura do Projeto BSB Fase informação							

The background is a deep blue gradient. It features several glowing blue arcs and a grid of small, bright blue dots. In the upper left, there are thin, white, wavy lines that appear to be part of a larger, faint structure. The overall aesthetic is futuristic and digital.

**PARALLEL**

**PROJECTS**



- **AIR MOVEMENT CENTRALIZED IN ONLY ONE PLATFORM**
- **UNIQUE ADDRESSMENT TO ALL BRAZILIAN FPL**
- **FEEDBACK TO ALL USERS WITH ALPHANUMERIC ID**



- **SEGREGATED OPERATIONS IN BOTH RUNWAYS**
- **REDUCTION OF DEPARTURE DELAYS AND TAXI OUT TIME**
- **REDUCTION IN FINAL SEPARATION AND RUNWAY CAPACITY INCREASE**



- **AFTER PBN IMPLEMENTATION (2013)**
- **OPERATIONAL ADJUSTS IN SP TERMINAL AND REAJUSTMENTS (AIRWAYS, PROCEDURES E ETC)**
- **AIRSPACE CAPACITY INCREASE**
- **BETTER FLOW MANAGEMENT FOR INBOUND/OUTBOUND TRAFFIC**



- **CIVIL/MILITARY COORDINATIONS**
- **OPTIMIZATION OF THE ENTIRE BRAZILIAN AIRSPACE**
- **SHARING OF SPECIAL USE AIRSPACE**



A large commercial airplane is shown in flight, banking slightly to the right, against a dramatic sunset sky. The sun is low on the horizon, creating a bright glow and casting long, golden rays through the clouds. The foreground shows a wide, paved runway with white and yellow markings, receding into the distance. The overall scene conveys a sense of forward motion and optimism.

The **FUTURE**  
IS COLLABORATIVE