

# *International Seminar on Airport Management*



## **REAL-TIME OPERATIONS** *- Lessons Learnt -*



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## **SUMMARY**

- ✈ **RTO - THE CONCEPT**
- ✈ **AIRPORT PROCESSES**
- ✈ **OBJECTIVES OF RTO**
- ✈ **AIRPORT DASHBOARD SPECIFICATIONS**
- ✈ **TURN-KEY SOLUTIONS**
- ✈ **RTO IN EMERGENCY & CONTINGENCY SITUATIONS**

# Real-Time Operations

## THE CONCEPT

*The Process of monitoring, evaluate, measure and **to decide in real-time**, pertaining to the execution of any airport operation and process, within the broad scope of Airport Management, according to what was previously planned or expected, either in normal operation, contingency or emergency situations.*

***The right decisions at the right time !!***

# RTO - Processes

**ATC**

*Terminal Control, Slots/CFMUs, NavAids, Flight Planing, RWYs, TWYs, Weather Services*

**Air Side OPS**

*Stands Alocation, Ramps, Handlers, Vehicles, Maintenance, LVO, Inspections, RFFs*

**PAX Terminals**

*Arrivals CoBus, Gates, Immigration, Emmigration, Baggage  
 Delivery Belts, Customs, Health and Animal Services,  
 Transit FIDS, Public Address, Check-in/Drop-off, Security  
 Departures Screening, BHS, Emmigration, Maintenance, etc*

**Cargo Terminals**

*Handlers, Staff, Cargo Typology, Priorities, Safety and Security issues*

**Accessibilities**

*Acesses, Curbside, Public transportation, Taxis, Car parks*

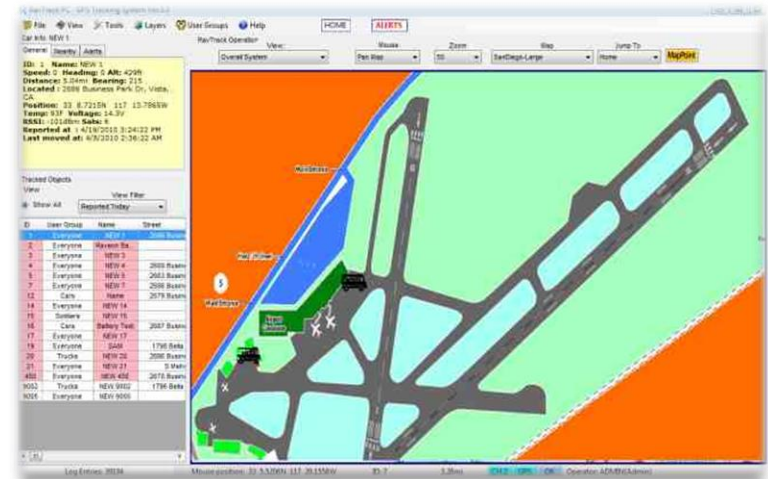
**... In a Safe and Secure environment....**

**COMPLYING** with Regulations (nac/intl) in effect, SLAs, LoS, SOPS ...

**MANAGING** times, queings, staff, KPIs, IQSs, etc, etc

# RTO – Data Processing

Operation requirement of data collection and processing, as MUCH and as FAST as possible, turning it intelligibly available for decision-making process.





## RTO – Objectives

- To improve Safety and Security levels and awareness in real-time
- To promote a strategic insight and a better control of Operations
- To improve Airside management  
*(RWYs, TWYs and Aprons);*
- To facilitate information sharing among airport players/stakeholders  
*(increasing readiness and performance)*
- To have a “prediction tool”  
*(timely alerts based on historic events, KPIs and algorithm patterns)*
- **To increasing overall Airport Management Efficiency** =  
*(from airspace to infrastructures, staff, maintenance, etc)*



# RTO – The Airport Dashboard

The Airport Dashboard became a new tool for operational processes and parameters monitoring in real time, and to act and react in any one of those as required, being no longer a mere preparation of programming and assign resources.



# RTO – Dashboard Specs

- | **Tailored** for the airport *(according to its specificities, modeling, layout, configuration, capacity, etc).*
- | **Web-based human-machine interface** *(granting access from any point at the airport - decision centers).*
- | Able to provide **A-CDM** *(airport collaborative decision making).*
- | **Simple integration** with remaining third-party systems *(through EAI - Enterprise Application Integration. Middleware just facilitates de integration of individual aplications with "discrete" transactions).*
- | **Intuitive** high-level of integrated graphic/charts *(easy reading/interpretation)*
- | **Visual reports and images in real time** *(huge recording and storage capacity)*
- | Focus on the **most important** and critical processes status and specific KPIs *(capacity and capability to “zoom” for a required level of detail).*
- | Prepared for **airport expansion** *(including operational changes, new KPIs, NextGen requirements or even ATM future (projects/programs/concepts)).*



# RTO – Turn-Key Solutions



## ***THE TEMPTING BUT DANGEROUS SOLUTION***

- ⚠ To provide a tailored solution according to client' requirements/specs
- ⚠ To accomplish acceptance, trials/tests and commissioning properly
- ⚠ To finish and deliver on time, according to Project timeframe
- ⚠ To accomplish the Project within the approved budget

**MAKE IT WORK !!**

# RTO – WHAT IF.....

## “ Typical” airport emergencies



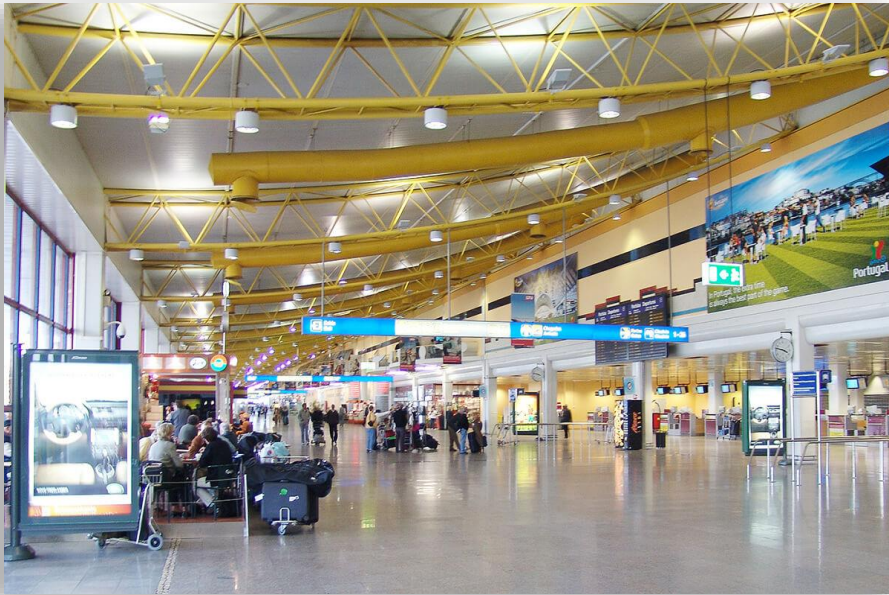
# RTO – WHAT IF.....

## “ Atypical” airport contingency situations





# RTO – WHAT IF.....



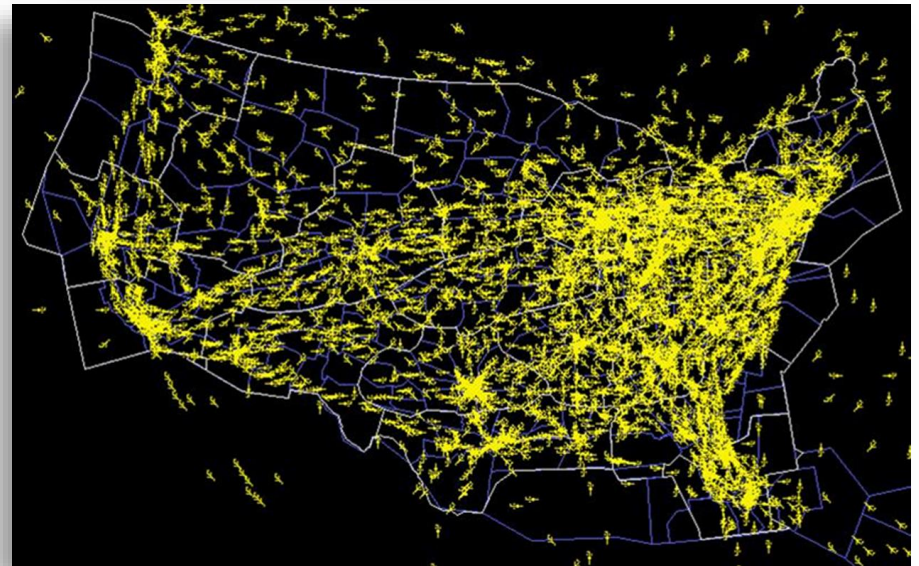
**3 minutes  
after.....**



**Sudden medium term  
capacity decrease**

# RTO – WHAT IF.....

**Even the most.....  
unexpected !**





# RTO – Emergency/Contingency

## *Some important tips for RTO in critical Situations*

- ✓ Plan for the worst, expect the best
- ✓ Train, Test & Exercise
- ✓ Elaborate procedures in workflows and checklists
- ✓ Well defined Chain of Command & Communication
- ✓ Human Resources

*People - The Best Airport Asset !*





## RTO – Lessons Learnt

*We can always LEARN from others experiences.....*



*.....Is less painful !!*