



IP 07-ARFF EXERCISES & RUNWAY SAFETY

Operated by

Bangalore International Airport Limited (BIAL)

Agenda





**18 Nov 2022- 15:11 (LT)- LATAM A320 LA2213, Lima to Juliaca, Peru
hit CFT while rolling for takeoff from RWY 16.**

Heartfelt Condolences

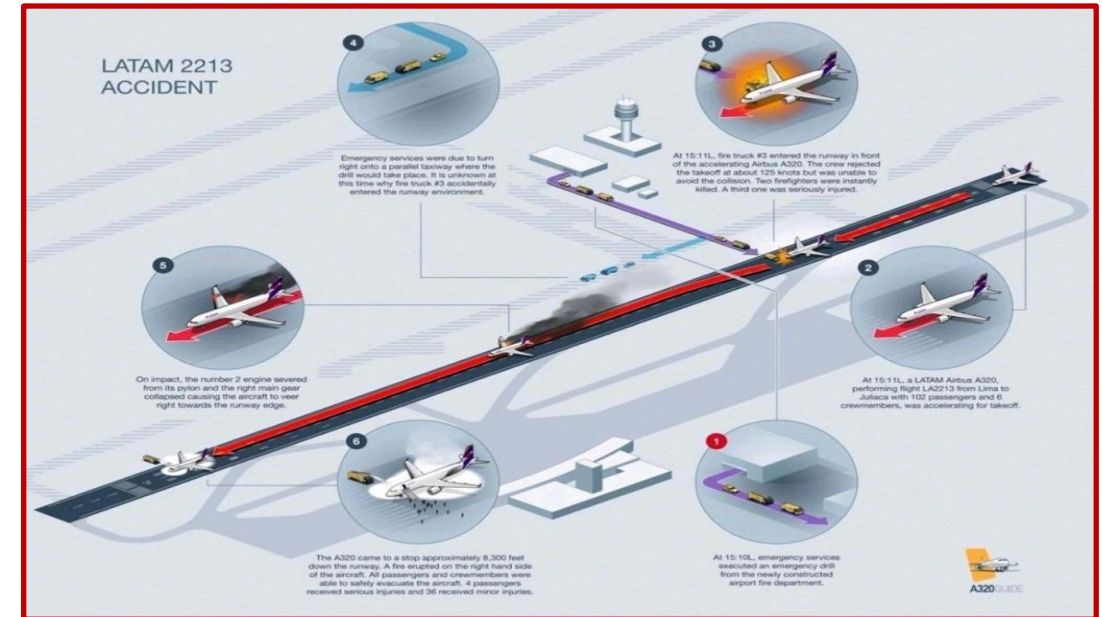
Our sincere condolences to the family members of the heroic firefighters

Nicolás Santa Gadea, Angel Torres & Manuel Villanueva.



Event

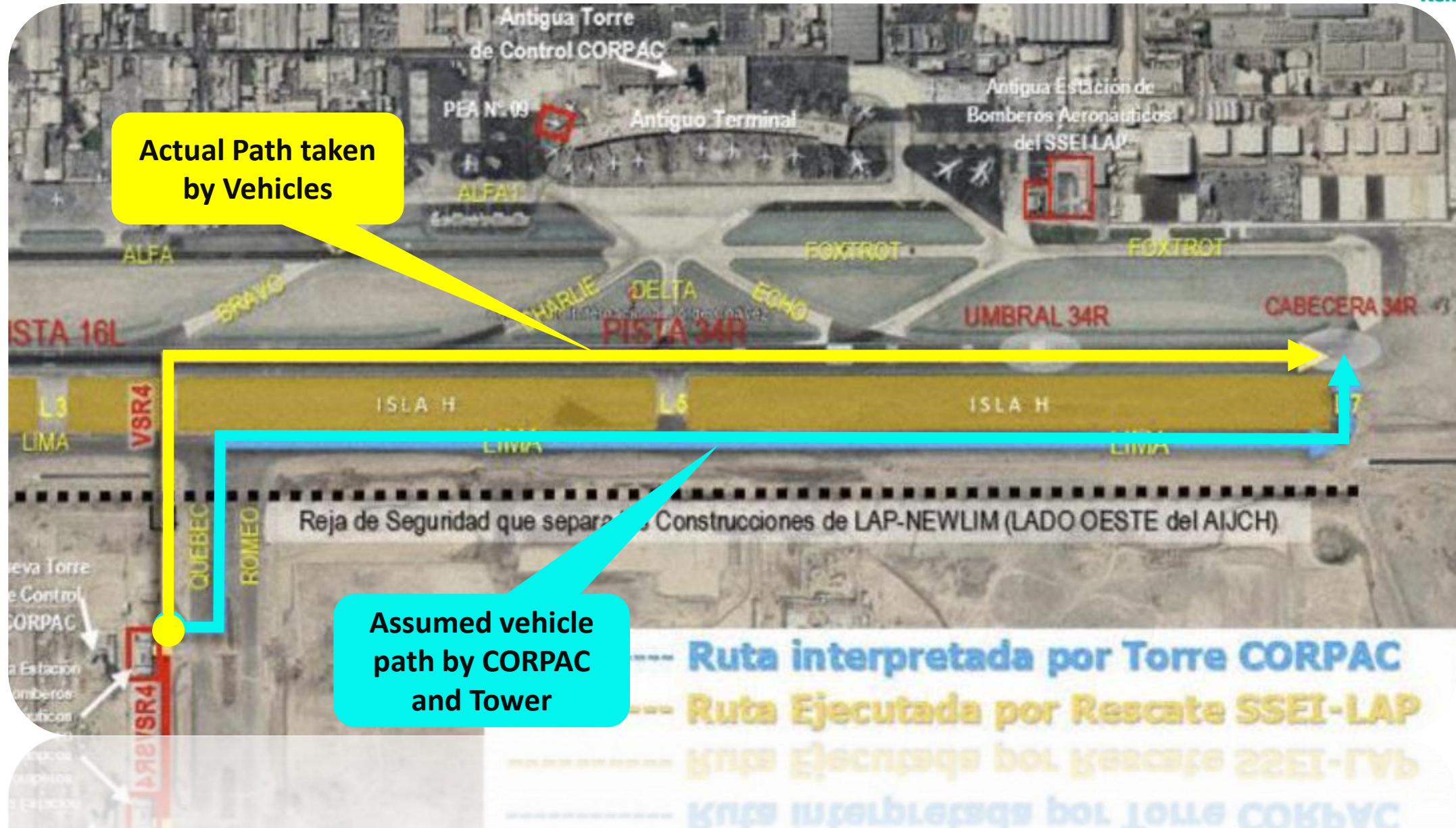
- 18 Nov 2022- 15:11 (LT)- LATAM A320 LA2213, Lima to Juliaca, Peru SOB 108 rolling for takeoff from RWY 16.
- Multiple fire trucks with flashing lights and sirens entered the runway in front of the accelerating aircraft.
- Pilot rejected takeoff at high speed (at about 125 knots over ground) but couldn't avoid contact with Fire Truck No: 3.
- The truck operator tried to turn right to avoid collision, but could not.
- Right main gear collapsed causing the aircraft to veer right and stopped partially off the runway about 2500 meters down the runway and caught fire.



Outcome

- Fire on starboard engine
- All pax & crew evacuated.
- Serious injuries to 4 Pax & Minor injuries to 36.
- Fatal injuries to two Fire Crew & serious injury to one Fire crew

Communication Lapse



Contributing Factors

Failure to Hold Briefing Meeting

Improper handover

Failure to Hold Joint Planning Meeting

Insufficient Time for Hazard Assessment

Non-Compliance with ICAO Phraseology

Misinterpretation by Airport Rescue Services

Lack of Controller Awareness

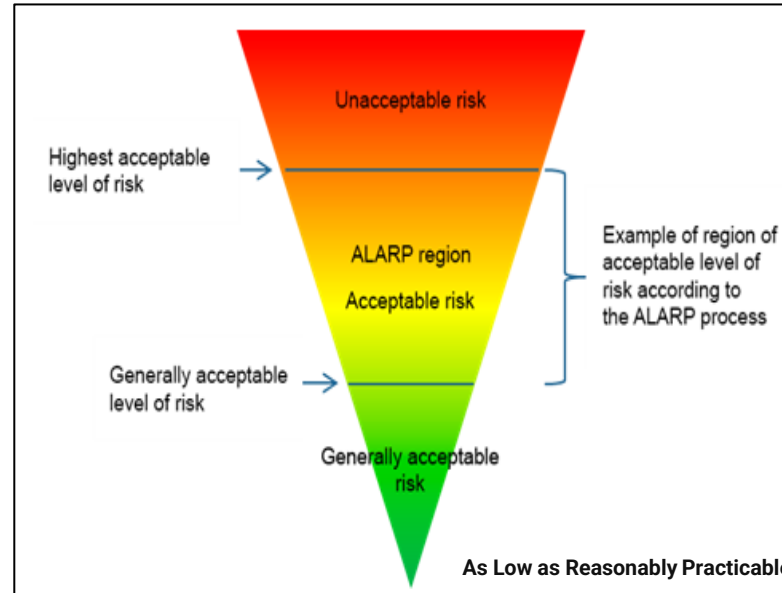
Coordination Challenges during Emergency

Lack of Instructions to Control Tower and Emergency Services

Safety First

Aviation safety

The state of an aviation system or organization in which **risks** associated with aviation activities, related to, or in direct support of the operation of aircraft, are reduced and controlled **to an acceptable level**.



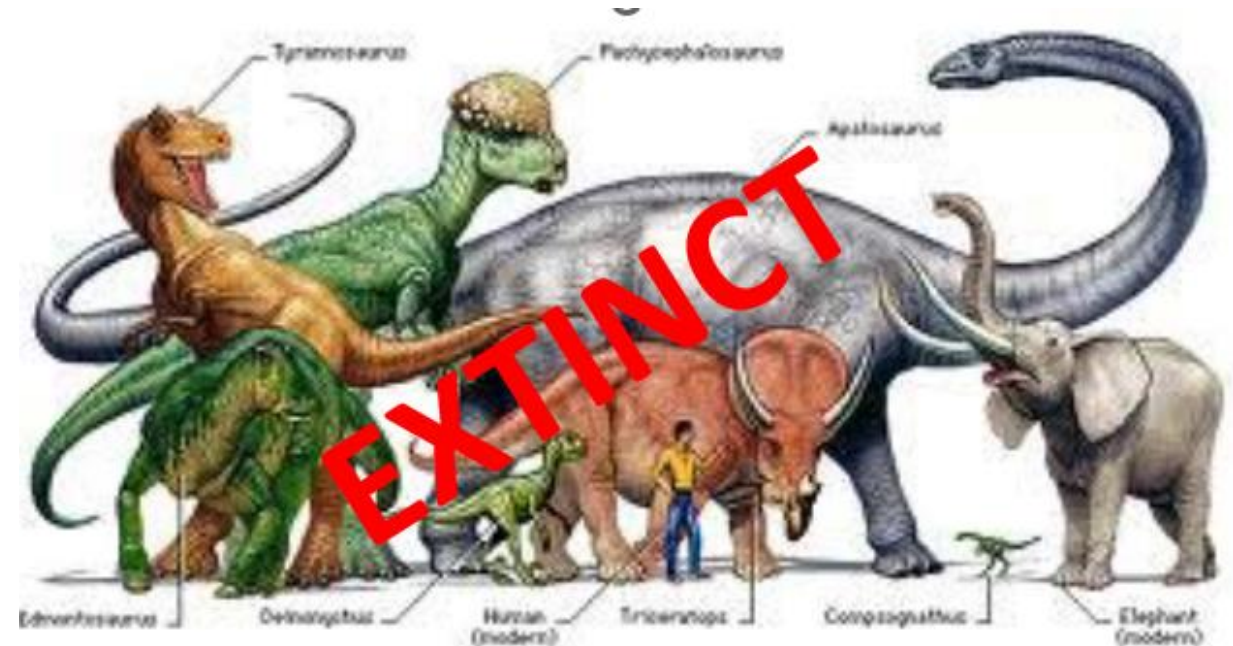
Are Changes to be Managed?



Change Management

Change management in aviation involves structured approaches that transit organizations from current to desired states.

- Aviation is Dynamic - Organizations must embrace changes and effectively manage them.
- Adopting new technologies
 - New Equipment (CFTs)
 - Artificial Intelligence
- Restructuring operations
 - Addition of Infrastructure
 - Change of Mode
- Enhancing customer experience
 - Low Visibility Operations
 - Exercises & Operations
- Responding to economic shifts
 - Pandemic
 - Cost management



Change Management – Key Strategies

Safety First - Rigorous safety assessments and meet regulatory standards

Effective Communication - Engage stakeholders, employees, regulators, and customers, - fosters understanding & support and mitigate resistance to change.

Leadership Alignment – Change oriented, provide guidance and actively engage - fosters change culture and encourages employee buy-in.

Comprehensive Planning - **Consider** risks, resources, timelines, roles, responsibilities, milestones.

Training and Development - New skills, adaptation, enhance performance and change success rate.

Continuous Improvement – Iterative, feedback, surveys, and metrics to identify areas for improvement.



Change Management

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Assessing of Exercises

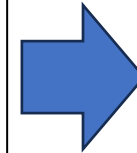
Exercises

- Full Scale
- Partial
- Modular
- Response Checks
- Hot Fire Drill
- Performance Checks....



Risks

- Runway Incursion
- Collision - Aircraft
- Collision - vehicles
- Collision - Personal
- Injury – Fire Staff
- Damage – CFTs/Emy Vehicles
- Reduced Category
- Image.....



Mitigations

- Positive two-way communication
- SMR Coverage
- ARIWS
- Standard Operating Procedures
- Checklists
- Situation Awareness
- Protective Equipment
- Effective Supervision
- Training & Awareness
- Stakeholder coordination
- Change Management

Lesson's Learnt

Scenario

- Date : 02.02.2024
- Time : 1900h
- Exercise : On-Site Crisis Management
- Location : Grid Reference G18 (Twy G on Rwy 09R/27L)
- Mode of Operations : Segregated (Rwy 27L Take Off)

Preparatory Phase

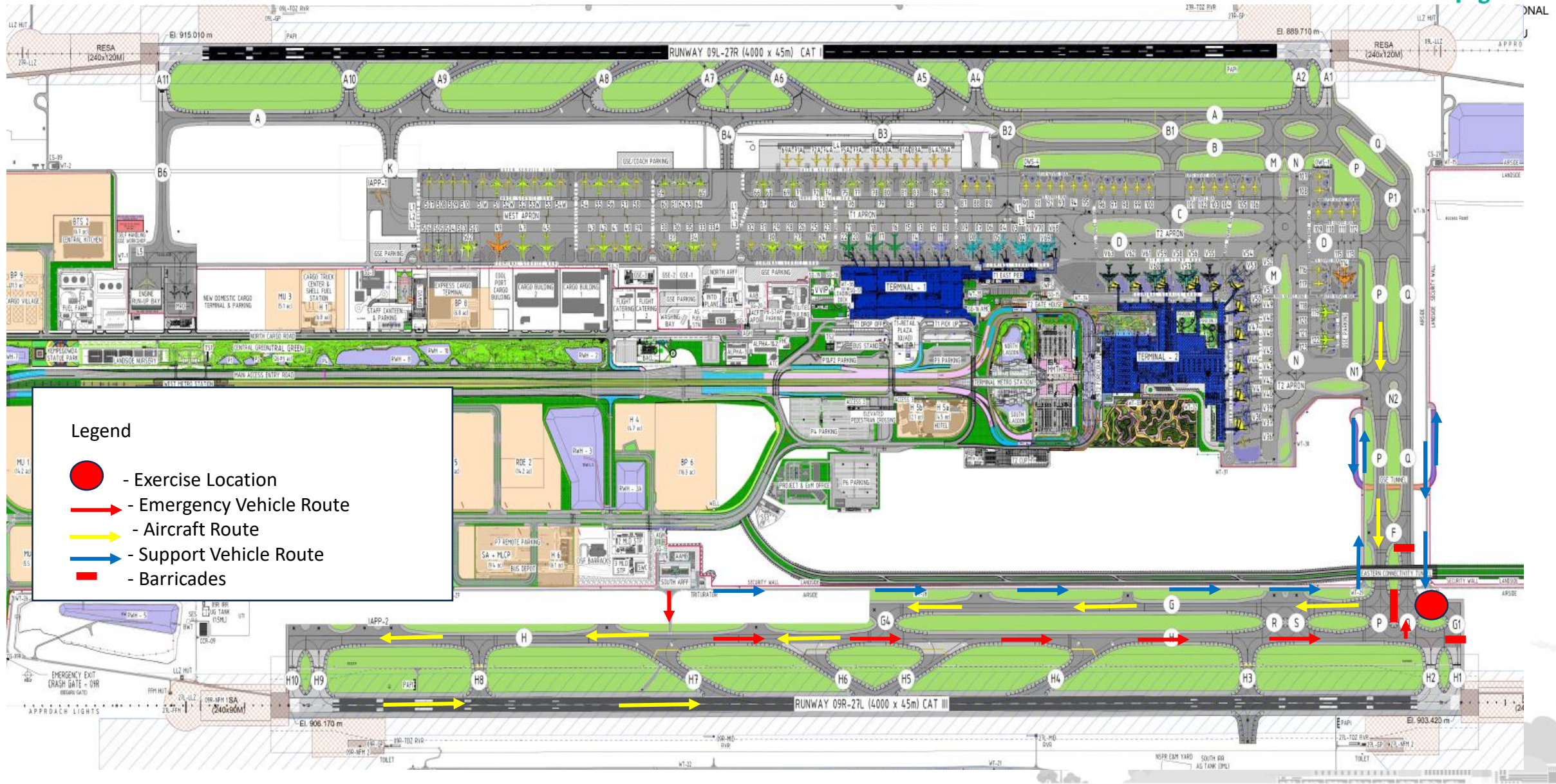
- Identification of critical resources & stakeholders
- Coordination meetings & site visit.
- Familiarization to involved parties.
- Tabletop exercise.

Risk Assessment

- Movement of Emergency services – Highspeed response
- Movement of Men, material, vehicles of mutual aid.
- Aircraft entering exercise area
- Straying/staying back of personnel.
- FOD Menace
- Breakdown of vehicle in movement area
- Inadequate lightings
- Actual Aircraft Emergency



Lesson's Learnt



Lesson's Learnt

What did we do?

- Reviewed our procedures.
- Risk Assessments before every exercises – Movement area entry.
- Effective Communication
 - Placing of ARFF staff at ATC Tower
 - Positive two-way communication
 - Vehicle equipped with Transponder
- Do not disregard RED lights
- Road holding position marking, lights & sign – All entry points.
- Trafficator lights either side of Fire Stations
- Dedicated Road network to enter manoeuvring area.
- Prohibition to stop on emergency roads by other vehicles.
- Right of Way



Success Factor @ KIAB



Safety Department “An Enablers”

Revolutionize the way you do business



Safety

Management Support
Safety Culture Development



Management

Trust Building
Process Driven



System

Solution Oriented
Be an Enabler



We are pioneers in India !!!

- SMS Application integrated with workflow & eLearning
- Disabled Aircraft Equipment Kit with trained manpower
- Fire fighting simulator.

THANK YOU

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