



# Data Integration & Timely Reporting for FDM



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SMS Manager

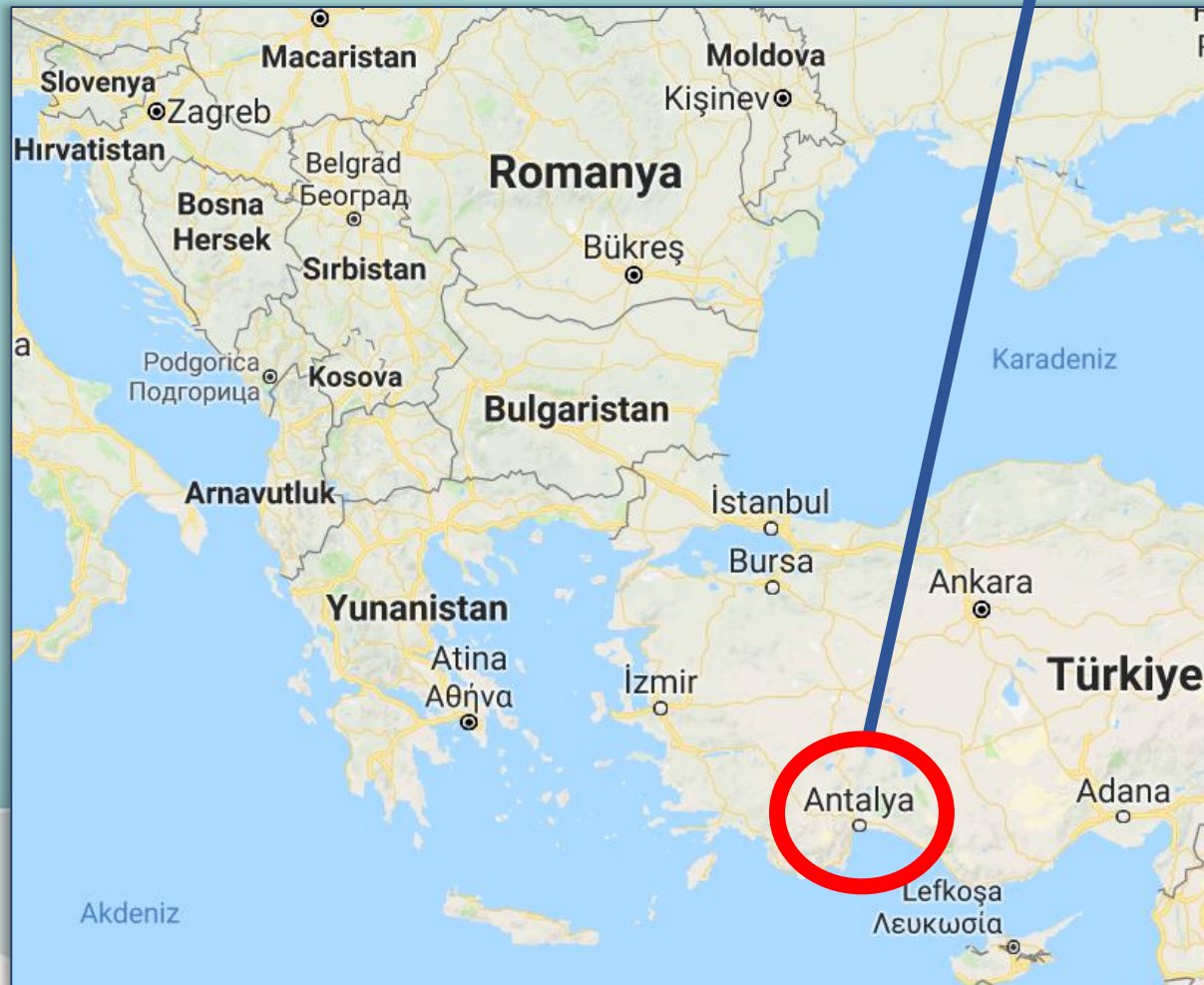


# Agenda



- FDM Reporting History
- Safety Data Collection and Processing (SDCP)
- Corendon Integrated Safety Analysis Tool (coreISAT)
- Corendon Individual Safety Report (coreISR)
- Results of Timely Reporting
- Recommendations

# Corendon Airlines



|      |    |
|------|----|
| 2019 | 16 |
| 2018 | 11 |
| 2017 | 10 |
| 2016 | 11 |
| 2015 | 11 |
| 2014 | 10 |
| 2013 | 8  |
| 2012 | 8  |
| 2011 | 8  |
| 2010 | 7  |
| 2009 | 5  |
| 2008 | 4  |
| 2007 | 4  |
| 2006 | 4  |
| 2005 | 2  |





# History of FDM Reporting



# 2014-Monthly Report



## FDM MONTHLY REPORT

Prepared By

Name:  
Date:  
Signature:

Evaluated By

Signature

| Corendon<br>AIRLINES                       |   | FDM PROGRAM<br>MONTHLY REPORT |    |    |    |    |   |    |    |    |     |
|--|---|-------------------------------|----|----|----|----|---|----|----|----|-----|
| Event Distribution by Aircraft             |   |                               |    |    |    |    |   |    |    |    |     |
| Event Name                                 |   |                               |    |    |    |    |   |    |    |    |     |
| Approach Speed High (1000-500 ft)          |   | 16                            | 8  | 3  | 2  |    | 9 | 9  | 4  | 2  | 53  |
| Approach Speed High (500-50 ft)            |   | 5                             | 6  | 2  |    |    | 9 | 2  | 1  | 1  | 26  |
| Approach Speed Low (1000-500 ft)           |   |                               |    |    |    |    |   |    |    | 2  | 2   |
| Approach Speed Low (500-50 ft)             |   |                               | 1  |    | 1  |    |   |    | 2  | 2  | 6   |
| Deviation above glideslope                 |   | 3                             |    |    |    |    |   |    |    | 1  | 4   |
| Deviation below glideslope                 | 2 |                               |    | 1  |    |    |   |    |    |    | 3   |
| Flap load relief in operation              |   |                               |    | 1  |    |    | 1 |    | 2  | 1  | 5   |
| Flap Placard Speed Exceeded                |   |                               |    | 1  |    |    | 1 |    | 2  | 1  | 5   |
| Go around                                  |   | 1                             |    |    |    |    |   |    |    |    | 1   |
| GPWS Warning Glideslope                    |   | 2                             | 2  | 1  | 3  |    |   |    | 1  | 7  | 16  |
| GPWS Warning Sink Rate                     |   |                               |    |    |    |    |   |    | 1  | 3  | 4   |
| GPWS Warning Terrain Too Low               |   |                               |    |    |    |    |   |    |    | 2  | 2   |
| GPWS Warning Too Low Flaps                 |   |                               |    |    | 1  |    |   |    |    |    | 1   |
| Harsh Braking (landing)                    | 1 |                               |    |    |    |    | 1 |    | 1  | 1  | 4   |
| Heading Deviation at Landing above 60 Kts  |   | 1                             | 1  | 1  | 1  |    |   |    |    |    | 4   |
| High normal acceleration (landing)         | 1 |                               | 1  |    |    |    | 1 |    |    |    | 3   |
| High Rate of Descent (Low ALT 500-50 ft)   |   |                               | 1  |    |    |    |   |    |    | 1  | 2   |
| High Rate of Descent (Med ALT 1000-500 ft) |   | 2                             |    | 1  |    |    |   |    | 1  | 1  | 5   |
| High Taxi Speed (after landing)            |   | 3                             |    |    | 9  |    |   |    | 10 | 15 | 37  |
| High Taxi Speed (before take-off)          | 3 | 1                             |    |    | 3  |    |   |    | 3  | 1  | 11  |
| High v/s During Level Change @ 2000ft      | 1 |                               |    | 1  |    |    |   |    |    |    | 2   |
| Late land flap (height AAL)                |   |                               | 1  |    | 1  |    |   |    |    |    | 2   |
| Late land gear                             |   | 1                             | 1  | 1  |    |    |   | 2  |    | 1  | 6   |
| Late Rotation                              |   | 17                            | 13 | 4  | 11 |    | 8 | 14 | 15 | 18 | 100 |
| Late Stabilisation on Approach             |   | 1                             | 2  | 2  |    |    | 1 |    | 2  | 5  | 13  |
| Long Flare (distance from flare height)    |   | 2                             |    | 1  | 4  |    | 3 | 3  | 4  | 6  | 23  |
| Long Flare (duration from flare height)    |   | 1                             |    | 1  |    |    |   | 3  |    |    | 5   |
| Low Power on Short Final                   |   | 1                             |    |    | 1  |    |   |    | 1  | 1  | 4   |
| Overweight Landing                         |   |                               |    |    | 1  |    |   |    |    |    | 1   |
| Possible Deep landing                      |   | 3                             |    | 2  | 9  |    | 4 | 4  | 9  | 11 | 42  |
| Significant Tailwind on Landing            |   |                               |    |    | 2  |    |   |    |    |    | 2   |
| T/R N1 at taxi speed                       |   | 1                             |    | 1  |    |    |   |    | 1  | 3  | 6   |
| Unstable approach (G/S variation)          |   | 1                             | 1  |    |    |    |   |    |    |    | 2   |
| Unstable approach (LOC variation)          |   | 1                             |    |    |    |    |   |    |    |    | 1   |
| TOTAL                                      |   | 8                             | 64 | 37 | 24 | 49 | 0 | 38 | 37 | 60 | 403 |
| Flight Number                              |   |                               |    |    |    |    |   |    |    |    |     |
| Event Rating                               |   |                               |    |    |    |    |   |    |    |    |     |

# 2015-Monthly Individual Report (coreIFR)



**coreIFR**  
*This is Individual FDM Report (IFR) for pilots.*

**Issue:**  
**Date:** 10 Jan 17  
**Period:** 01 Dec 16 31 Dec 16  
**Revision:** Rev\_01 100014\_00

**Safety depends on you!**  
CONFIDENTIAL

**corendon AIRLINES** INDIVIDUAL FDM REPORT (IFR) 10-01-17

This report is prepared from the FDM data.  
It is provided to each pilot to see his event average comparing to the fleet performance.  
It is confidential and is not shared with third parties.

FDM system analyzed 23 of your flights during this period.  
You performed 10 takeoff and 10 landing.  
There occurred

|   |          |                    |       |
|---|----------|--------------------|-------|
| 0 | event at | Cruise             | phase |
| 0 | event at | Taxi               | phase |
| 7 | event at | Landing & Approach | phase |
| 0 | event at | Take Off & Climb   | phase |

### 1. PILOT and FLEET EVENT AVERAGES:

|                |               | Takeoff&Climb Events |       |          | Approach&Landing Events |       |          |
|----------------|---------------|----------------------|-------|----------|-------------------------|-------|----------|
|                |               | Minor                | Major | Critical | Minor                   | Major | Critical |
| Last 1 Month   | Fleet Average | 1.5%                 | 0.3%  | 0.1%     | 87%                     | 27%   | 14%      |
| Last 1 Month   | Pilot Average | 0.0%                 | 0.0%  | 0.0%     | 50%                     | 20%   | 0%       |
| Last 3 Months  | Fleet Average | 2.2%                 | 0.6%  | 0.4%     | 79%                     | 22%   | 11%      |
| Last 3 Months  | Pilot Average | 2.6%                 | 0.0%  | 0.0%     | 47%                     | 25%   | 8%       |
| Last 6 Months  | Fleet Average | 2.0%                 | 0.6%  | 0.3%     | 82%                     | 24%   | 11%      |
| Last 6 Months  | Pilot Average | 2.2%                 | 0.0%  | 0.0%     | 58%                     | 20%   | 8%       |
| Last 12 Months | Fleet Average | 2.3%                 | 0.7%  | 0.4%     | 84%                     | 25%   | 13%      |
| Last 12 Months | Pilot Average | 2.6%                 | 1.4%  | 0.0%     | 64%                     | 21%   | 7%       |

### 2. PILOT'S TOP 5 EVENTS due to OCCURRENCE:

| Event Name                              | Count |
|---|-------|
| Approach Speed High (500-50 ft)         | 3     |
| Deep Landing (from 30 ft)               | 3     |
| Long Flare (duration from flare height) | 1     |

### 3. PILOT'S TOP 10 EVENTS due to SEVERITY:

| Severity | Event Name                              | Takeoff Date     | Flight No | FROM | TO  |
|----------|---|------------------|-----------|------|-----|
| 57       | Approach Speed High (500-50 ft)         | 18-12-2016 9:16  | SEJ060    | DXB  | IXE |
| 53       | Deep Landing (from 30 ft)               | 13-12-2016 0:13  | SEJ058    | DXB  | JAI |
| 42       | Deep Landing (from 30 ft)               | 16-12-2016 0:17  | SEJ058    | DXB  | JAI |
| 34       | Approach Speed High (500-50 ft)         | 05-12-2016 8:41  | SEJ8196   | IXE  | HYD |
| 33       | Deep Landing (from 30 ft)               | 04-12-2016 4:26  | SEJ057    | JAI  | DXB |
| 26       | Approach Speed High (500-50 ft)         | 16-12-2016 0:17  | SEJ058    | DXB  | JAI |
| 25       | Long Flare (duration from flare height) | 05-12-2016 14:07 | SEJ8195   | HYD  | IXE |

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**corendon AIRLINES** INDIVIDUAL FDM REPORT (IFR) 10-01-17

### G/S Dev - min (below 500 ft)

\*This graph shows the G/S deviation during approach.  
\*High values may result in "Unstabilized Approach".

|       | Acceptable | Minor | Major | Critical |
|-------|------------|-------|-------|----------|
| Fleet | 592        | 6     | 1     | 0        |
| AAN   | 9          | 0     | 0     | 0        |

### Approach speed high (500 - 50 ft)

\*This graph shows the maximum difference between recorded airspeed and Vref values during approach.  
\*High values in this event may result in "Problems During Landing".

|       | Acceptable | Minor | Major | Critical |
|-------|------------|-------|-------|----------|
| Fleet | 654        | 34    | 37    | 0        |
| AAN   | 7          | 2     | 1     | 0        |

### Approach speed low (500 - 50 ft)

\*This graph shows the minimum difference between recorded airspeed and Vref values during approach.  
\*Low values in this event may result in "Stall warning".

|       | Acceptable | Minor | Major | Critical |
|-------|------------|-------|-------|----------|
| Fleet | 644        | 33    | 8     | 2        |
| AAN   | 8          | 0     | 0     | 0        |

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# Findings



Time-lagged

Static

Backward



# New Objectives



1

The pilot has right **to know** what happened in his flight.

2

Information should be passed to pilot in a possible **shortest time**.

3

The information should allow the pilot for **self-assessment**.

4

The information should be accessible from **all platforms** (PC, tablet, phone).



## Success Criteria



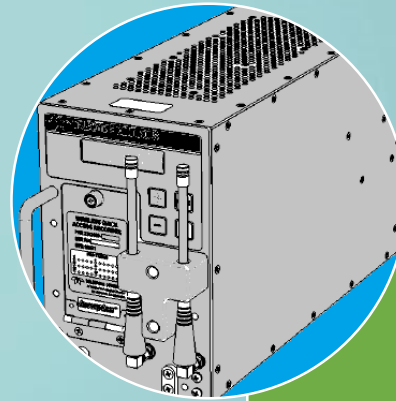
Collect  
Data

Analyze  
Data

Publish  
Data

**In Reasonable Time**

# 1. Step: WQAR Project



2016  
10 aircraft



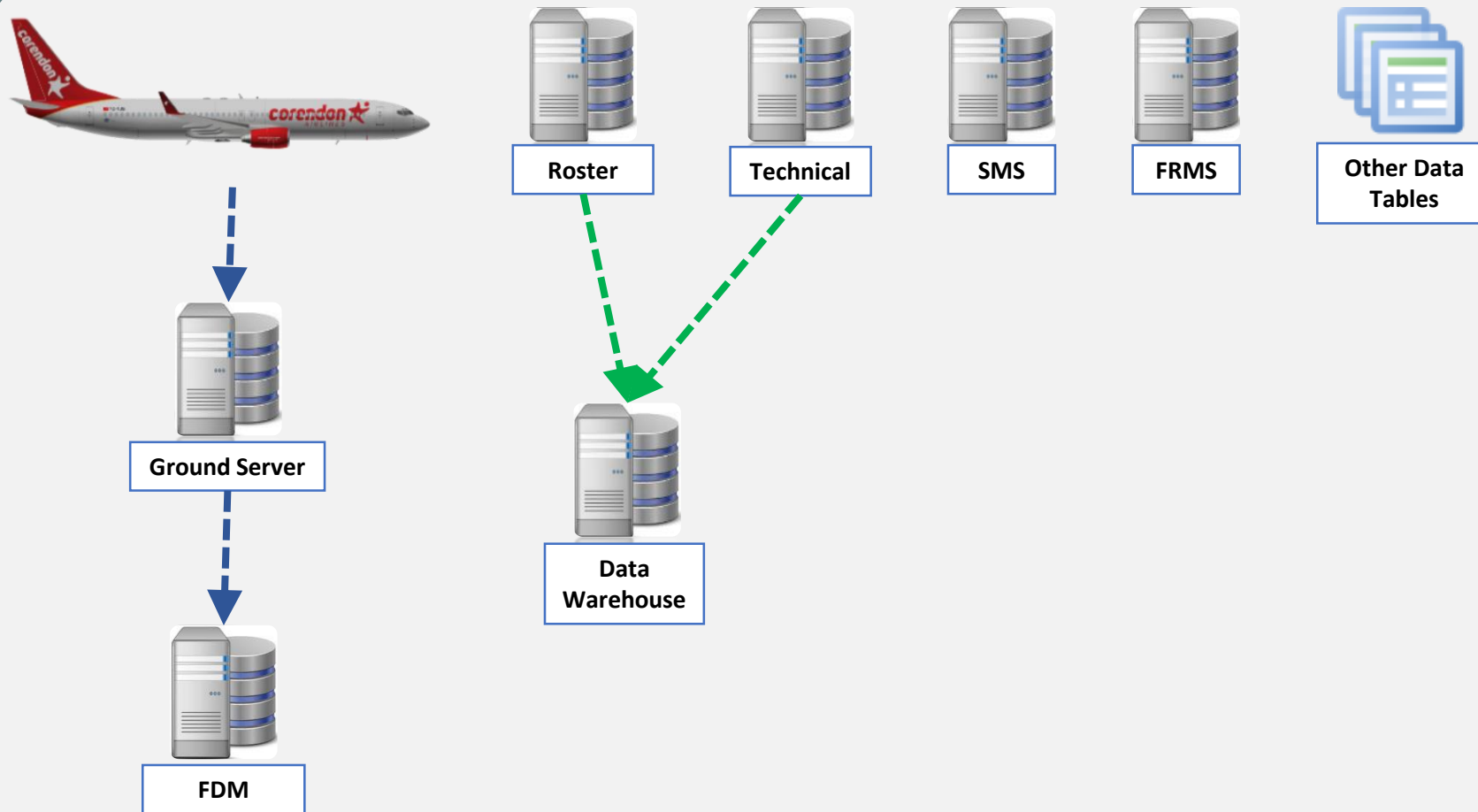
2015  
2 aircraft



## Safety Data Collection and Processing (SDCP)



## 2. Step: Collecting Data





|         |
|---------|
| SCH_ALL |
| ACREG   |
| ARR     |
| ATA     |
| ATA_L   |
| ATD     |
| ATD_L   |

|                 |
|-----------------|
| Date            |
| c_past          |
| Date            |
| DateAsInteger   |
| DayOfMonth      |
| DayOfWeek       |
| DayOfWeekNumber |

|                 |
|-----------------|
| Period          |
| Date            |
| Period          |
| Period (groups) |
| Period Long     |
| Sort            |

|        |
|--------|
| legnos |
| Column |
| LEGNO  |

|       |
|-------|
| FLEET |
| D2    |
| D3    |
| Fleet |
| Model |
| Reg   |

|               |
|---------------|
| EFB2          |
| c_jos_valid   |
| email         |
| InvOS.Version |

|                       |
|-----------------------|
| EVNT_ALL              |
| c_event_action        |
| c_event_action_no     |
| c_event_phase         |
| c_pilotLastFlight     |
| c_pilotPerformance    |
| c_PilotPerformanceKey |

|              |
|--------------|
| events       |
| c_KPI1_limit |
| EventName    |

|                              |
|------------------------------|
| Events2                      |
| Phase                        |
| Type                         |
| Acknowledge to the Authority |
| Act_Critical                 |
| Act_Major                    |
| Act_Minor                    |

|                                   |
|-----------------------------------|
| sValue_ALL                        |
| A/T Disengage                     |
| Airspeed - at unstick             |
| Airspeed - max vs V Selected...   |
| Airspeed - max vs Vref (500 t...  |
| Airspeed - min vs Vref (500 t...  |
| Airspeed - Selected vs Vref (5... |

|                  |
|------------------|
| x-FLT_ALL (2)    |
| Aircraft         |
| Analysed.Date    |
| ATA_L            |
| ATD_L            |
| c_TD_Arp_Rwy_all |
| c_TO_Arp_Rwy_all |

|                       |
|-----------------------|
| FLT_ALL               |
| Aircraft              |
| Analysed.Date         |
| ATA_L                 |
| ATD_L                 |
| c_count_report_event1 |
| c_crew_count          |

|                            |
|----------------------------|
| Reportable Events Follo... |
| AB Event ID                |
| AB Flight ID               |
| Aircraft                   |
| ASIR No                    |
| Call Sign                  |
| Column1                    |

|                              |
|------------------------------|
| EFB1                         |
| c_app_valid                  |
| email                        |
| First InvApplication.Version |
| InvApplication.Name          |

|                      |
|----------------------|
| ASIRS                |
| Aircraft             |
| Aircraft Reg.        |
| Arr                  |
| ASIR No              |
| Assessment           |
| Assessment Completed |

|                   |
|-------------------|
| x-EVNT_ALL (2)    |
| event_instance_id |
| event_phase_id    |
| EventName         |
| EventType         |
| EventValue        |
| FlightID          |

|      |
|------|
| Taxi |
| 11   |
| 12   |
| 13   |
| 91   |
| 92   |
| 93   |

|                 |
|-----------------|
| crew for filter |
| c_Filter_mail   |
| c_filter1       |
| CODE            |
| DUTY            |
| EMAIL           |
| NAME            |

|              |
|--------------|
| TD_Arp_Rwy   |
| c_TD_Arp_Rwy |
| T.D.Airport  |

|                |
|----------------|
| crew           |
| CODE           |
| DUTY           |
| EMAIL          |
| NAME           |
| no             |
| Pilot FDM Code |

|                               |
|-------------------------------|
| OCC                           |
| Aerodrome Approved Instru...  |
| Aerodrome Circling Minima(ft) |
| Aerodrome Fire Category       |
| Aerodrome Night Operation     |
| Airport Name                  |
| Approval Review Date          |

|            |
|------------|
| fdm        |
| ATD        |
| c_analyzed |
| Column     |

|                |
|----------------|
| KPIs           |
| KPI            |
| KPI_Definition |
| KPI_Index      |
| res1           |
| res2           |
| res3           |

|                                  |
|----------------------------------|
| Overdue                          |
| Department                       |
| Nos. of e-Signature requests ... |
| Nos. of e-Signatures complet...  |
| Nos. of e-Signatures complet...  |
| Nos. of e-Signatures requeste... |
| User Company                     |

|         |
|---------|
| runways |
| Arp-rwy |
| ASDA    |
| Code    |
| Comment |
| CrDate  |
| CrTime  |

|                        |
|------------------------|
| Users                  |
| Authorisation Number   |
| c_LastLogOnBeforeToday |
| c_Name                 |
| Edit                   |
| Email                  |
| Expiry Date            |

|              |
|--------------|
| FRMS         |
| c_CocpitCode |
| code         |
| FL_BEGIN     |
| FL_END       |
| FL_MAX       |
| FL_RANGE     |

|                |
|----------------|
| z-FLT_dynamic1 |
| Aircraft       |
| Analysed.Date  |
| ATA_L          |
| ATD_L          |
| Capt           |
| Crew1          |

|               |
|---------------|
| z-SCH_dynamic |
| ACREG         |
| ARR           |
| ATA           |
| ATA_L         |
| ATD           |
| ATD_L         |

|                                   |
|-----------------------------------|
| z_sValue_Dynamic                  |
| A/T Disengage                     |
| Airspeed - at unstick             |
| Airspeed - max vs V Selected...   |
| Airspeed - max vs Vref (500 t...  |
| Airspeed - min vs Vref (500 t...  |
| Airspeed - Selected vs Vref (5... |

|             |
|-------------|
| runway turn |
| airport     |
| arp-rwy     |
| rwy         |
| turn        |

|            |
|------------|
| SV_new_aLL |
| 11         |
| 12         |
| 13         |
| 22         |
| 23         |
| 24         |

|                                   |
|-----------------------------------|
| sValue_ALL_free                   |
| A/T Disengage                     |
| Airspeed - at unstick             |
| Airspeed - max vs V Selected...   |
| Airspeed - max vs Vref (500 t...  |
| Airspeed - min vs Vref (500 t...  |
| Airspeed - Selected vs Vref (5... |

|                 |
|-----------------|
| z-FLT_historic1 |
| Aircraft        |
| Analysed.Date   |
| ATA_L           |
| ATD_L           |
| Capt            |
| Crew1           |

|                |
|----------------|
| z-SCH_historic |
| ACREG          |
| ARR            |
| ATA            |
| ATA_L          |
| ATD            |
| ATD_L          |

|                                   |
|-----------------------------------|
| z_sValue_historic                 |
| A/T Disengage                     |
| Airspeed - at unstick             |
| Airspeed - max vs V Selected...   |
| Airspeed - max vs Vref (500 t...  |
| Airspeed - min vs Vref (500 t...  |
| Airspeed - Selected vs Vref (5... |

|                   |
|-------------------|
| z_EVNT_historic   |
| event_instance_id |
| event_phase_id    |
| EventName         |
| EventType         |
| EventValue        |
| FlightID          |

|                   |
|-------------------|
| z_EVNT_dynamic    |
| event_instance_id |
| event_phase_id    |
| EventName         |
| EventType         |
| EventValue        |
| FlightID          |

|               |
|---------------|
| z-FLT_spare1  |
| Aircraft      |
| Analysed.Date |
| Capt          |
| Column1       |
| Crew1         |
| Crew2         |

|             |
|-------------|
| z-SCH_spare |
| ACREG       |
| ARR         |
| ATA         |
| ATA_L       |
| ATD         |
| ATD_L       |

|                                   |
|-----------------------------------|
| z_sValue_spare                    |
| A/T Disengage                     |
| Airspeed - at unstick             |
| Airspeed - max vs V Selected...   |
| Airspeed - max vs Vref (500 t...  |
| Airspeed - min vs Vref (500 t...  |
| Airspeed - Selected vs Vref (5... |

|                   |
|-------------------|
| z_EVNT_spare      |
| event_instance_id |
| event_phase_id    |
| EventName         |
| EventType         |
| EventValue        |
| FlightID          |

|                                   |
|-----------------------------------|
| z_EVNT_free                       |
| A/T Disengage                     |
| Airspeed - at unstick             |
| Airspeed - max vs V Selected...   |
| Airspeed - max vs Vref (500 t...  |
| Airspeed - min vs Vref (500 t...  |
| Airspeed - Selected vs Vref (5... |

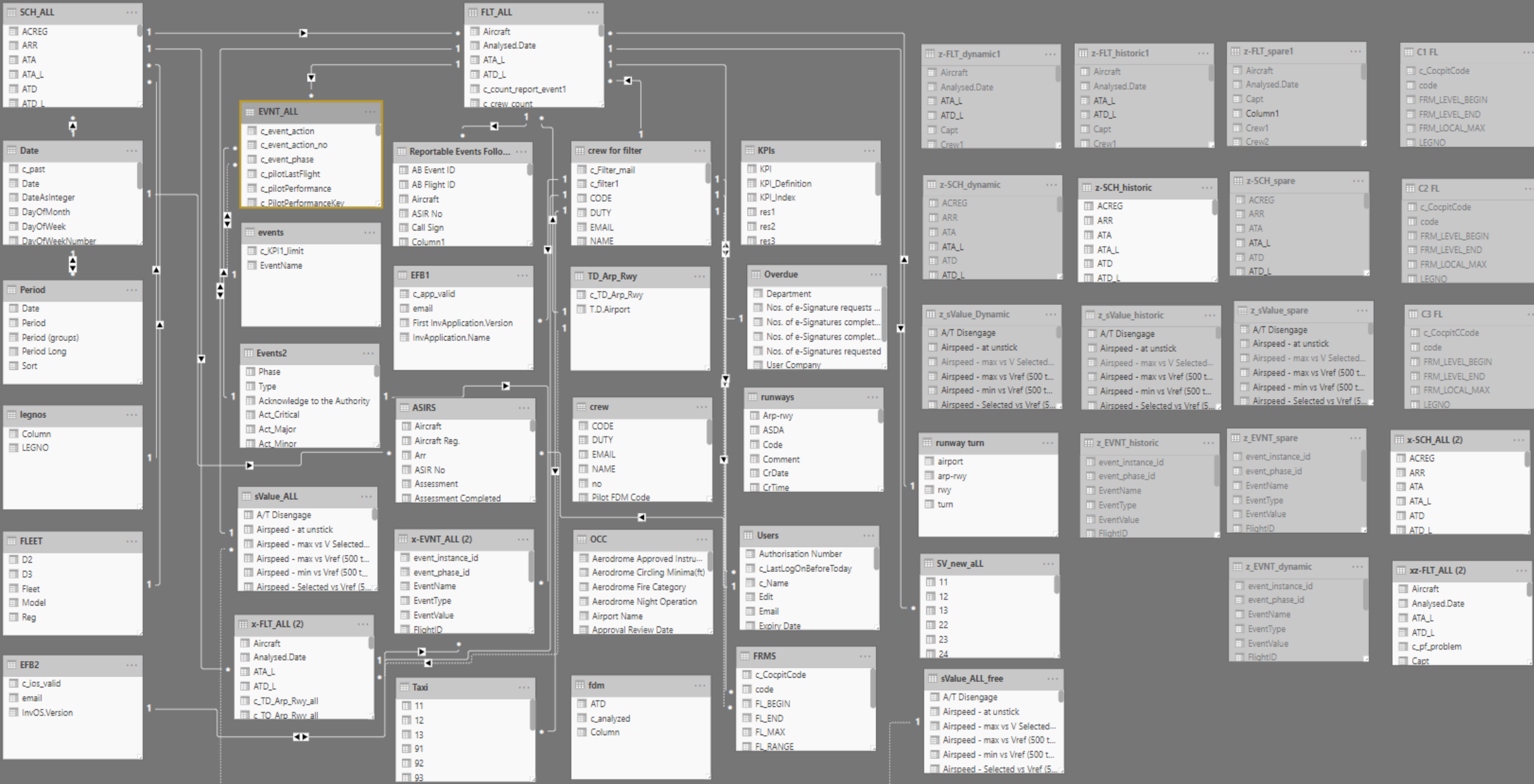
|                 |
|-----------------|
| C1 FL           |
| c_CocpitCode    |
| code            |
| FRM_LEVEL_BEGIN |
| FRM_LEVEL_END   |
| FRM_LOCAL_MAX   |
| LEGNO           |

|                 |
|-----------------|
| C2 FL           |
| c_CocpitCode    |
| code            |
| FRM_LEVEL_BEGIN |
| FRM_LEVEL_END   |
| FRM_LOCAL_MAX   |
| LEGNO           |

|                 |
|-----------------|
| C3 FL           |
| c_CocpitCode    |
| code            |
| FRM_LEVEL_BEGIN |
| FRM_LEVEL_END   |
| FRM_LOCAL_MAX   |
| LEGNO           |

|               |
|---------------|
| x-SCH_ALL (2) |
| ACREG         |
| ARR           |
| ATA           |
| ATA_L         |
| ATD           |
| ATD_L         |

|                |
|----------------|
| xz-FLT_ALL (2) |
| Aircraft       |
| Analysed.Date  |
| ATA_L          |
| ATD_L          |
| c_pf_problem   |
| Capt           |



### 3. Step: Connecting and Analyzing Data



**Ingredients**

**Connecting  
Kitchen  
Data**

**Cakes**



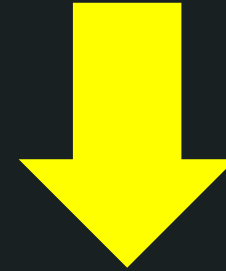
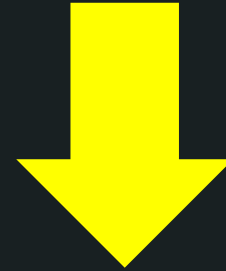
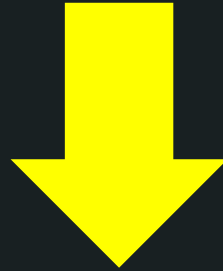
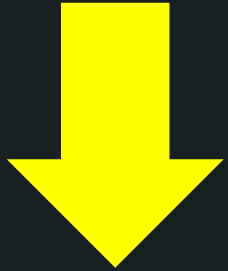
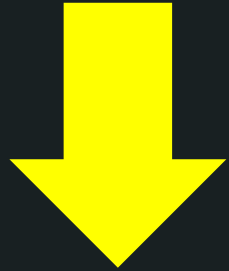
# Corendon Integrated Safety Analysis Tool (coreISAT)





# CORENDON AIRLINES

## INTEGRATED SAFETY ANALYSIS TOOL (coreISAT)



EXECUTIVE



ADMIN



ANALYSIS



SMS



FRMS



ISR



FUEL



# WELCOME

# coreISR<sub>v3</sub>

Welcome [redacted]

OVERALL



TAKEOFF



LANDING



SMS



FRMS



EFB



FUEL



Your last update was at **29-Apr-2019 08:53**. Please refresh your report, if current time is 3 hours later than the last update.



TABLE 1 shows the summary of your flights.



### 1- SUMMARY

| Period        | Flights | Events |
|---------------|---------|--------|
| Last 001 days | 0       | 0      |
| Last 010 days | 1       | 0      |
| Last 030 days | 5       | 3      |
| Last 060 days | 15      | 15     |
| Last 090 days | 17      | 16     |
| Last 180 days | 30      | 23     |
| Last 360 days | 94      | 82     |
| Last 720 days | 232     | 286    |

TABLE 2 shows the scheduled and events.  
Click on a row and table 2 will show the related events.  
RED color means a reportable event.



### 2-FLIGHTS

| Event Count | TO Date&Time | Aircraft | Flight | TO Airport | TD Airport |
|-------------|--------------|----------|--------|------------|------------|
| 2           |              |          |        |            |            |
| 1           |              |          |        |            |            |
| 1           |              |          |        |            |            |
| 2           |              |          |        |            |            |
| 1           |              |          |        |            |            |

TABLE 3 shows the Event Details.  
Click on a row and table 1 will show the related flight.  
Red Color means, "that event should be reported to SMS over SERA"



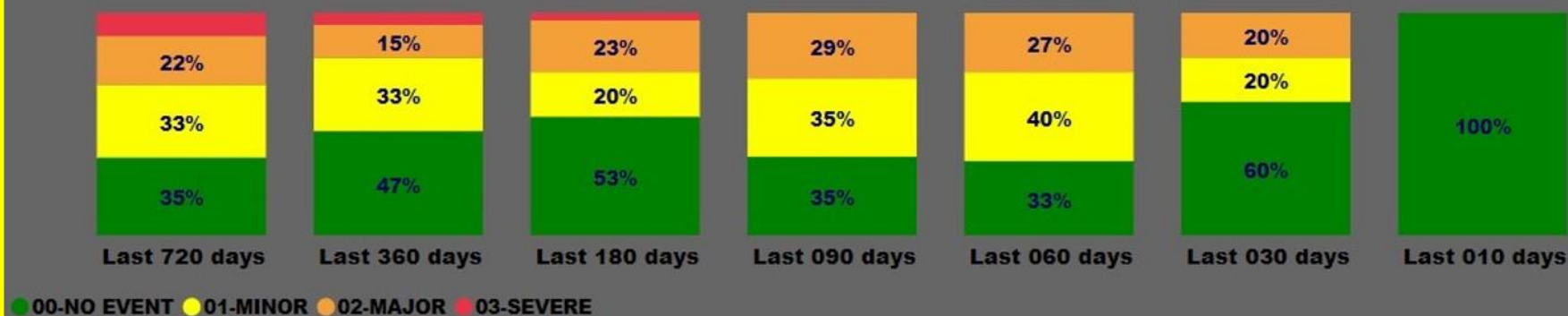
### 3-EVENTS

| Event Name                          | Severity | TO Date&Time | Is Mandatory Reporting Item? |
|-------------------------------------|----------|--------------|------------------------------|
| Approach Speed High (500-50 ft)     | 62       |              |                              |
| Low Power on Short Final            | 43       |              |                              |
| Deep Landing (from 50 ft)           | 36       |              |                              |
| Deep Landing (from 50 ft)           | 41       |              |                              |
| Approach Speed High (500-50 ft)     | 32       |              |                              |
| High Vertical Speed to Top of Climb | 38       |              |                              |
| Approach Speed High (500-50 ft)     | 42       |              |                              |
| Deep Landing (from 50 ft)           | 28       |              |                              |
| Approach Speed High (500-50 ft)     | 27       |              |                              |

TABLE 4 shows the event severity distribution over periods.



### 4-FLIGHT DISTRIBUTION as of EVENT SEVERITY



You are expected to sent **0** report/s in scope of mandatory reporting.

OVERALL



## 1-EVENTS CATEGORY

| Flight Phase       | Count | Rate | Fleet |
|--------------------|-------|------|-------|
| Air                | 3     | 20   |       |
| Ground             | 0     | 0    |       |
| Landing & Approach | 12    | 80   |       |
| Take Off & Climb   | 0     | 0    |       |

In **Last 060** days,

Your event rate is **Higher** than fleet average.

**TABLE 1** shows the event count, rate and fleet rate as of flight phase.  
**TABLE 2** shows the event counts due to severity, pilot rate and fleet rate for each event.  
 If a cell is in RED color, it means pilot rate is higher than fleet on that category.  
**TABLE 3** shows the event rate on the given periods. IF blue is over red, it means pilot average is higher than fleet.  
**TABLE 4** select a period of time to view the events related to that period.

## 2-EVENTS STATS

| Event Name                               | Minor     | Major    | Severe | Total     | Pilot Rate | Fleet Rate |
|--|-----------|----------|--------|-----------|------------|------------|
| Approach Speed High (500-50 ft)          | 4         | 1        |        | 5         | 33         | 29         |
| Deep Landing (from 50 ft)                | 3         |          |        | 3         | 20         | 13         |
| High Vertical Speed to Top of Climb      | 1         | 2        |        | 3         | 20         | 5          |
| Approach Speed Low (1000-500 ft)         |           | 1        |        | 1         | 7          | 4          |
| High Rate of Descent (Low ALT 500-50 ft) | 1         |          |        | 1         | 7          | 6          |
| High Rate of descent below 50 ft         | 1         |          |        | 1         | 7          | 3          |
| Low Power on Short Final                 | 1         |          |        | 1         | 7          | 5          |
| <b>Total</b>                             | <b>11</b> | <b>4</b> |        | <b>15</b> | <b>100</b> | <b>66</b>  |

## 3-PILOT vs FLEET (Event Rate)



## 4-PERIOD (...

Last 001

Last 010

Last 030

Last 060

Last 090

Last 180

Last 360

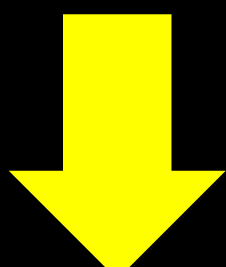
Last 720

OVERALL



## 1-TAKEOFF VALUES

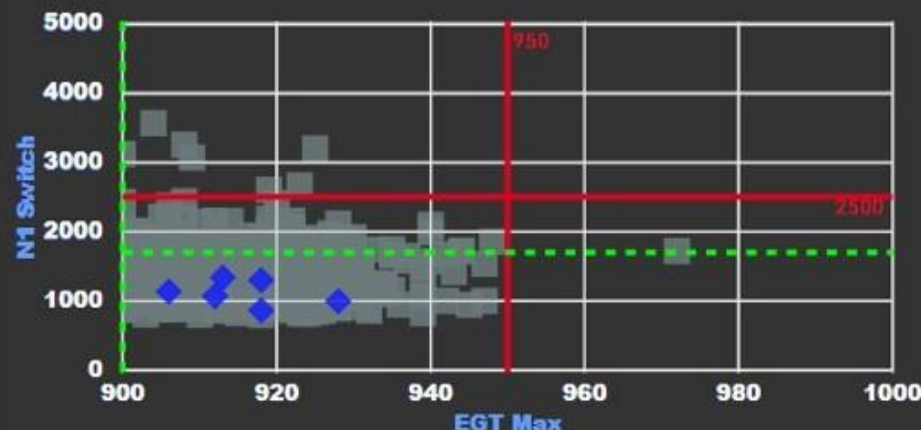
| TO Date&Time | Aircraft | Flight | TO Airport | TD Airport | 1-Taxi Speed | 2-Lateral G | 3-Taxi Duration | 4-Airspeed vs Vr | 5-Pitch Rate | 6-Pitch Attitude | 7-N1 Switch | 8-EGT Max |
|--------------|----------|--------|------------|------------|--------------|-------------|-----------------|------------------|--------------|------------------|-------------|-----------|
|              |          |        |            |            | 28           | 0,06        | 12              | 7                | 1,35         | 5,27             | 2190        | 0         |
|              |          |        |            |            | 17           | 0,07        | 11              | 4                | 2,01         | 8,44             | 2150        | 814       |
|              |          |        |            |            | 19           | 0,11        | 12              | 10               | 1,98         | 6,15             | 2105        | 859       |
|              |          |        |            |            | 30           | 0,11        | 21              | 11               | 1,67         | 4,04             | 1866        | 803       |
|              |          |        |            |            | 32           | 0,07        | 5               | 6                | 1,80         | 4,75             | 1866        | 824       |
|              |          |        |            |            | 12           | 0,09        | 6               | 10               |              | 5,10             | 1777        | 811       |
|              |          |        |            |            | 14           | 0,03        | 9               | 7                |              | 6,50             | 1775        | 0         |
|              |          |        |            |            | 13           | 0,07        | 8               | 8                |              | 7,56             | 1770        | 0         |
|              |          |        |            |            | 18           | 0,05        | 13              | 7                |              | 4,92             | 1757        | 888       |
|              |          |        |            |            | 19           | 0,07        | 8               | 5                |              | 5,98             | 1756        | 840       |
|              |          |        |            |            | 21           | 0,13        | 8               | 8                |              | 7,21             | 1747        | 826       |



### 2-PITCH RATE vs ATTITUDE



### 3-N1 SWITCH vs EGT



#### 1-Taxi Speed

#### 2- Lateral G1

Extreme speed and manoeuvre values during taxi increases the risk of tire damage and FOD.

#### 4-Airspeed vs Vr:

High values indicates long run on the runway and late rotation event

#### 5-Pitch Rate

Extreme pitch rates may cause high pitch attitude and tail strike

#### 6-Pitch Attitude

Extreme values may lead tail strike. Graph shows fleet behaviour and pilots trend with risk areas. Graph1

#### 7- N1 Switch Altitude

#### 8-Max EGT

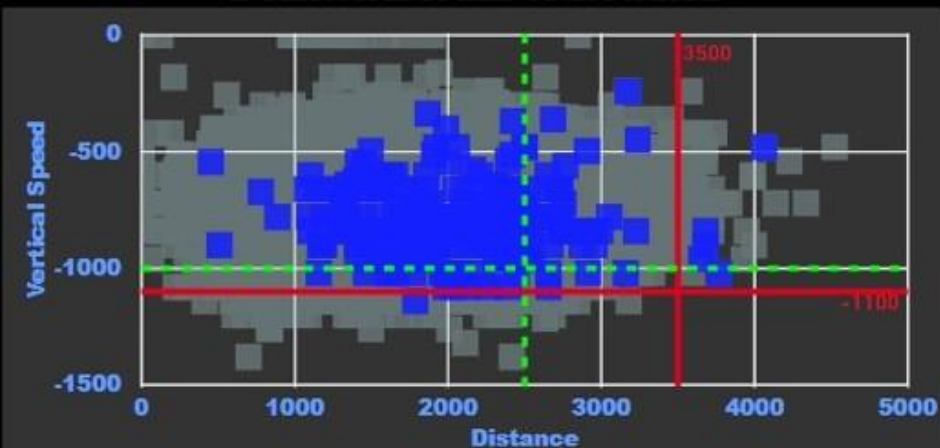
Late N1 configuration change may lead high EGT. One of possible reasons for high EGT may be short warm up time (3- Taxi Duration lower than 10 minutes) if Engines are cold ( on ground more than 6 hours ) Graph2

## TAKEOFF PERFORMANCE

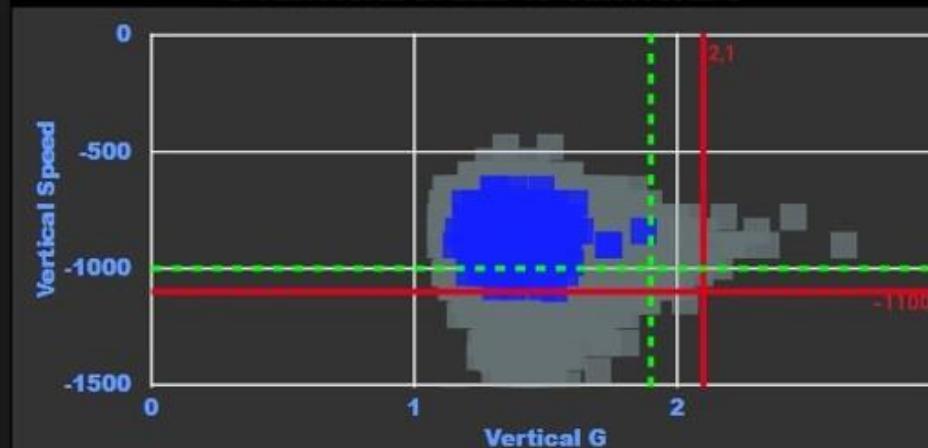
## 1-LANDING VALUES

| TO Date&Time | Aircraft | Flight | TO Airport | TD Airport | 1- App Speed High | 2- App Speed Low | 3- G/S Max | 4- G/S Min | 5-V/S below 500 ft | 6-V/S below 50 ft | 7-Distance to TD | 8- Vertical G | 9-Stable Point | 10-Lateral G | 11-Taxi Speed |
|--------------|----------|--------|------------|------------|-------------------|------------------|------------|------------|--------------------|-------------------|------------------|---------------|----------------|--------------|---------------|
|              |          |        |            |            | 0                 | -1               | 0.06       | 0.00       | -660               | -780              | 1702             | 1,31          | 100            | 0.06         | 12            |
|              |          |        |            |            | 9                 | 6                | -0.06      | -0.21      | -900               | -900              | 1406             | 1,74          | 100            | 0.07         | 16            |
|              |          |        |            |            | 4                 | 1                | 0.00       | 0.00       | -780               | -840              | 1774             | 1,44          | 100            | 0.06         | 17            |
|              |          |        |            |            | 2                 | 1                | -0.11      | -0.36      | -840               | -960              | 1600             | 1,44          | 100            | 0,11         | 20            |
|              |          |        |            |            | 5                 | 0                | 0.00       | 0.00       | -840               | -780              | 1959             | 1,28          | 100            | 0.07         | 20            |
|              |          |        |            |            | 4                 | 1                | 0.11       | 0.02       | -840               | -660              | 1859             | 1,46          | 96             | 0.03         | 16            |
|              |          |        |            |            | 6                 | 4                | 0.11       | -0.02      | -900               | -720              | 1311             | 1,37          | 98             | 0.07         | 19            |
|              |          |        |            |            | 7                 | 4                | 0.24       | 0.03       | -840               | -780              | 2281             | 1,43          | 100            | 0.12         | 20            |
|              |          |        |            |            | 2                 | 2                | 0.19       | -0.05      | -840               | -840              | 1306             | 1,45          | 100            | 0.04         | 21            |

## 2-VERTICAL SPEED vs DISTANCE



## 3-VERTICAL SPEED vs VERTICAL G



### 1-Max Speed vs Vselected

Maximum speed over MCP selected speed during final 500 ft

### 2-Min Speed vs Vselected

Minimum speed over MCP selected speed during final 500 ft. Minus values indicates the stall probability.

### 3-Glide Slope over path

### 4-Glide Slope below path

Glide slope Deviations during final 500 ft

### 5-Sink Rate Max below 500 ft

Max vertical speed at final 500 ft

### 6-Sink Rate Max below 50 ft

Max vertical speed during landing

### 7-Distance from 50 ft to touchdown

Distance from 50 ft threshold to touch down ( feet ) (Graph 1)

### 8-Vertical G on landing

High values during landing may cause structural damage on landing systems (Graph 2)

### 9- Stability Point

This is a new value shows the stability of the approach over 100 point. 100 is good lower values indicates there may be unstable portions.

### 10-Taxi Speed

### 11- Lateral G

Extreme speed and manoeuvre values during taxi increases the risk of tire

# LANDING PERFORMANCE



## TAXI Values

| TO Date&Time | Aircraft | Flight | TO Airport | TD Airport | 1-Taxi IN Speed | 2-TO Lateral G | 3-Taxi IN Duration | 4-Taxi OUT Speed | 5-TD Lateral G | 6-Taxi OUT Duration |
|--------------|----------|--------|------------|------------|-----------------|----------------|--------------------|------------------|----------------|---------------------|
|              |          |        |            |            | 21              | 0,08           | 10                 | 24               | 0,10           | 7                   |
|              |          |        |            |            | 16              | 0,08           | 9                  | 16               | 0,07           | 11                  |
|              |          |        |            |            | 14              | 0,09           | 24                 | 17               | 0,06           | 9                   |
|              |          |        |            |            | 19              | 0,08           | 13                 | 21               | 0,11           | 12                  |
|              |          |        |            |            | 14              | 0,05           | 31                 | 16               | 0,07           | 20                  |
|              |          |        |            |            | 19              | 0,08           | 8                  | 20               | 0,11           | 11                  |
|              |          |        |            |            | 21              | 0,08           | 14                 | 20               | 0,07           | 8                   |
|              |          |        |            |            | 18              | 0,12           | 19                 | 24               | 0,10           | 16                  |
|              |          |        |            |            | 16              | 0,04           | 21                 | 16               | 0,03           | 9                   |
|              |          |        |            |            | 16              | 0,07           | 9                  | 18               | 0,04           | 24                  |
|              |          |        |            |            | 18              | 0,07           | 21                 | 24               | 0,07           | 9                   |
|              |          |        |            |            | 19              | 0,11           | 16                 | 19               | 0,07           | 13                  |
|              |          |        |            |            | 16              | 0,03           | 17                 | 20               | 0,12           | 8                   |
|              |          |        |            |            | 19              | 0,11           | 15                 | 20               | 0,09           | 17                  |
|              |          |        |            |            | 20              | 0,05           | 25                 | 20               | 0,06           | 16                  |
|              |          |        |            |            | 15              | 0,06           | 10                 | 21               | 0,04           | 15                  |
|              |          |        |            |            | 22              | 0,09           | 13                 | 18               | 0,11           | 8                   |
|              |          |        |            |            | 26              | 0,10           | 23                 | 26               | 0,10           | 15                  |
|              |          |        |            |            | 28              | 0,15           | 14                 | 26               | 0,10           | 10                  |
|              |          |        |            |            | 22              | 0,06           | 9                  | 18               | 0,11           | 20                  |
|              |          |        |            |            | 18              | 0,06           | 26                 | 24               | 0,00           | 7                   |
|              |          |        |            |            | 22              | 0,00           | 12                 | 10               | 0,10           | 3                   |

## 1-4-Taxi Speed

## 2-5 Lateral G1

Extreme speed and manoeuvre values during taxi increases the risk of tire damage and FOD. Graph1

## 3-Taxi IN Duration:

One of possible reasons for high EGT may be short warm up time (3- Taxi Duration lower than 10 minutes) if Engines are cold ( on ground more than 6 hours )

## 6-Taxi OUT Duration:

TAXI VALUES

## 1-PILOT'S FLIGHTS

[illegible]

## 2-PILOT's EVENTS

| Event Name                          | Severity | TO Date&Time |
|-------------------------------------|----------|--------------|
| High Vertical Speed to Top of Climb | 56       |              |
| High Vertical Speed to Top of Climb | 37       |              |
| Flap Placard Speed Exceeded         | 49       |              |
| GPWS Warning Dont Sink              | 41       |              |

## TAKEOFF RUNWAYS

AYT-36C

ayt

☐ AYT-18C

☐ AYT-18L

☒ AYT-36C

☐ AYT-36L

☐ AYT-36R

### 3-PILOT vs FLEET

| Pilot's Flights | Pilot's Events | Pilot Rate | Fleet's Flights | Fleet's Events | Fleet Rate |
|-----------------|----------------|------------|-----------------|----------------|------------|
| 22              | 4              | 18         | 2898            | 311            | 11         |

## 4-PILOT vs FLEET (events)

| Event Name                            | Pilot's Event Count | Pilot's Event Rate | Fleet Rate |
|---------------------------------------|---------------------|--------------------|------------|
| High Vertical Speed to Top of Climb   | 2                   | 9                  | 3          |
| Flap Placard Speed Exceeded           | 1                   | 5                  | 1          |
| GPWS Warning Dont Sink                | 1                   | 5                  | 0          |
| Abnormal Climb Rate                   | 0                   | 0                  | 1          |
| Abnormal Pitch (High)                 | 0                   | 0                  | 0          |
| Abnormal Sink Rate                    | 0                   | 0                  | 1          |
| Early Rotation (High Pitch at Vr)     | 0                   | 0                  | 0          |
| Excessive bank after takeoff (<500ft) | 0                   | 0                  | 0          |
| Total                                 | 4                   | 18                 | 11         |

## TAKEOFF RUNWAYS



## 1-PILOT's FLIGHTS

| Event Count | TO Date&Time | Flight | Aircraft | T.O.Ai<br>rport | T.D.Ai<br>rport |
|-------------|--------------|--------|----------|-----------------|-----------------|
|             | ▼            |        |          |                 |                 |

## 2-PILOT's EVENTS

| Event Name | Severity | TO Date&Time |
|------------|----------|--------------|
|            |          | ▼            |

## LANDING RUNWAYS

BRU-01

bru

- ☒ BRU-01
- ☐ BRU-02
- ☐ BRU-07L
- ☐ BRU-07R
- ☐ BRU-19
- ☐ BRU-20
- ☐ BRU-25I

## 3-PILOT vs FLEET

| Pilot's<br>Flights | Pilot's<br>Events | Pilot<br>Rate | Fleet's<br>Flights | Fleet's<br>Events | Fleet<br>Rate |
|--------------------|-------------------|---------------|--------------------|-------------------|---------------|
| 0                  | 0                 | 0             | 42                 | 33                | 79            |

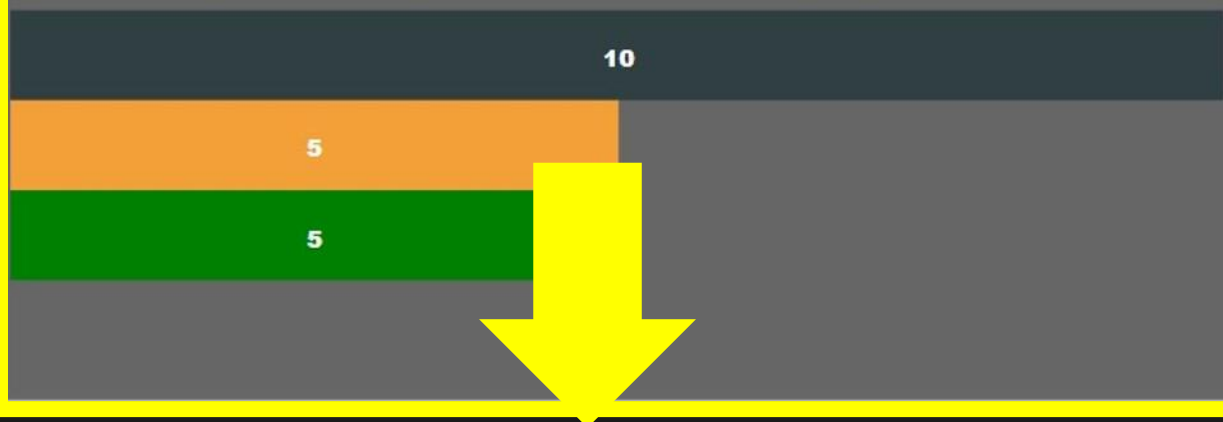
## 4-PILOT vs FLEET (events)

| Event Name                               | Pilot's<br>Event<br>Count | Pilot's<br>Event<br>Rate | Fleet<br>Rate |
|--|---------------------------|--------------------------|---------------|
| Approach Speed High (500-50 ft)          | 0                         | 0                        | 33            |
| Approach Speed Low (1000-500 ft)         | 0                         | 0                        | 2             |
| Approach Speed Low (500-50 ft)           | 0                         | 0                        | 2             |
| Deep Landing (from 50 ft)                | 0                         | 0                        | 21            |
| Deviation above glideslope               | 0                         | 0                        | 5             |
| High Rate of Descent (Low ALT 500-50 ft) | 0                         | 0                        | 2             |
| High Rate of descent below 50 ft         | 0                         | 0                        | 5             |
| Long Flare (duration from flare height)  | 0                         | 0                        | 2             |
| Low Power on Short Final                 | 0                         | 0                        | 5             |
| Total                                    | 0                         | 0                        | 79            |

LANDING RUNWAYS

## SERA REPORT STATUS

● Total Reports ● Closed After Due Date ● Closed Before Due Date ● Open Reports

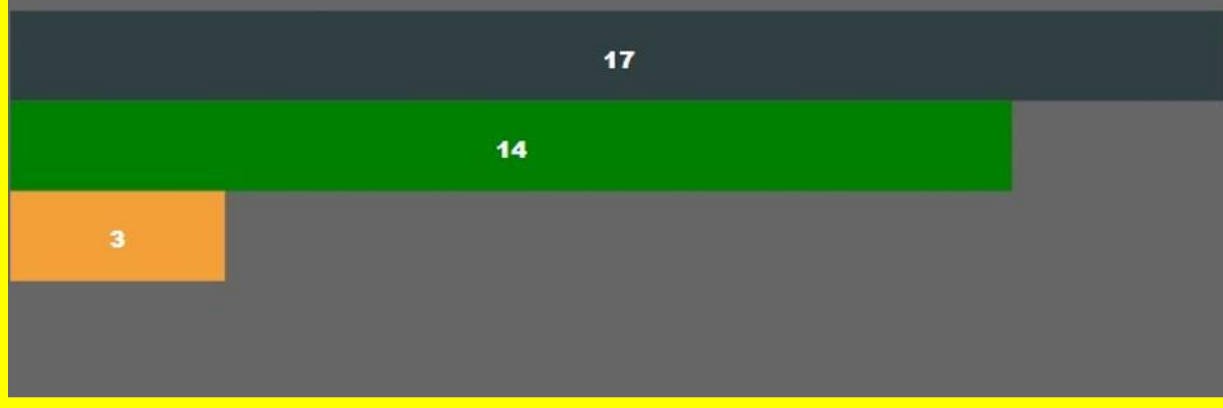


You have logged in to SERA **11** days ago.

You are expected to sent **1** report/s in scope of mandatory reporting.

## SERA My READINGS STATUS

● Total Readings ● Read before Due Date ● Read after Due Date ● Readings Still You Have to Read



## FDM REPORTS STATUS

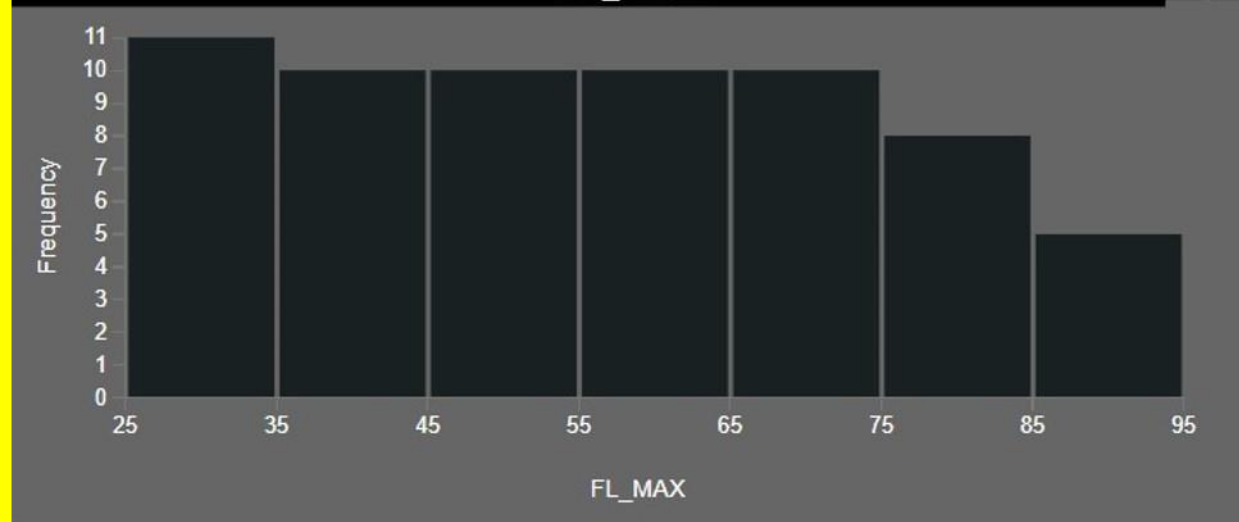
| TO<br>Date&Time | Aircraft | Flight | TO<br>Airport | TD<br>Airport | Event | Status |
|-----------------|----------|--------|---------------|---------------|-------|--------|
|                 |          |        |               |               |       |        |

### FRMS INFO

| TO Date&Time | Flight | TO Airport | TD Airport | Fatigue Level at the Beginning | Fatigue Level at the End | Maximum Fatigue Level | Fatigue Load | Pil |
|--------------|--------|------------|------------|--------------------------------|--------------------------|-----------------------|--------------|-----|
|              |        |            |            | 0                              | 0                        | 0                     | 0            | DC  |
|              |        |            |            | 56                             | 56                       | 56                    | 0            | BB  |
|              |        |            |            | 56                             | 56                       | 56                    | 0            | ES  |
|              |        |            |            | 50                             | 58                       | 58                    | 8            | SC  |
|              |        |            |            | 51                             | 59                       | 59                    | 8            | OA  |
|              |        |            |            | 60                             | 68                       | 68                    | 8            | ES  |
|              |        |            |            | 0                              | 0                        | 0                     | 0            | BM  |
|              |        |            |            | 50                             | 54                       | 54                    | 4            | ES  |



### FL\_MAX



FRMS

### EFB Applications

| Application | Version | Valid? |
|-------------|---------|--------|
| JeppFD-Pro  | 3.1.6   | Valid  |
| OPT         | 4.40    | Valid  |
| PFB         | 5.1.2   | Valid  |
| Web Manuals | 7.0.4   |        |

### IOS Version

| IOS Version | Valid? |
|-------------|--------|
| 12.1.4      | Valid  |

EFB

## THRESHOLD

| Event                                      | When and how this event is generated?   | Minor | Major | Critical |
|--|---|-------|-------|----------|
| Abnormal Climb Rate                        | If maximum vertical speed is over 5000 fpm during 10 seconds.                                 |       |       |          |
| Abnormal Pitch (High)                      | If pitch is over 20 degrees during 3 seconds.   |       |       |          |
| Abnormal pitch landing (low)               | If maximum pitch angle is over 7 degrees at touchdown.  |       |       |          |
| Abnormal Sink Rate                         | If sink rate is over 5000 fpm during 10 seconds.  |       |       |          |
| Approach Speed High (500-50 ft)            | If airspeed is 5 kts (or more) higher than V selected during 5 seconds from 500 ft to 50 ft.  |       |       |          |
| Approach Speed Low (1000-500 ft)           | If airspeed is 2 kts (or more) lower than V selected during 4 seconds from 1000 ft to 500 ft. |       |       |          |
| Approach Speed Low (500-50 ft)             | If airspeed is 2 kts (or more) lower than V selected during 4 seconds from 500 ft to 50 ft.   |       |       |          |
| Climb out Speed Low                        | If airspeed is 4 kts or less higher than the V2 during 3 seconds.                             |       |       |          |
| Deep Landing (from 50 ft)                  | If distance from 50 ft height to touch down is more than 2500 ft.                             |       |       |          |
| Deviation above glideslope                 | If GS is more than 0,75 dot below 500 ft.   |       |       |          |
| Deviation below glideslope                 | If GS is less than 0,75 dot below 500 ft.   |       |       |          |
| Early config change after take-off (speed) | If configuration change occurs below the V2+15 kts.   |       |       |          |
| Early Rotation (High Pitch at Vr)          | If pitch angle is more than 1 degrees at Vr speed.  |       |       |          |
| EGT Overtemp (duration)                    | If EGT is over the aircraft EGT limit. The limit starts at 930 degrees.                       |       |       |          |
| Excessive bank                             | If max roll angle is over 35 degrees.   |       |       |          |
| Excessive bank after takeoff (<500ft)      | If maximum roll angle is over 10 degrees from takeoff to 500 ft.                              |       |       |          |
| Excessive bank on approach (<500ft)        | If maximum roll angle is over 10 degrees at final 500 ft.                                     |       |       |          |
| Extreme TailWind Component (take-off)      | If average wind component is more than tail wind limit during takeoff.                        |       |       |          |





## Report Usage Metrics

This report is automatically generated by Power BI to provide usage metrics for your report. Usage data is retained for the last 90 days. Changes to your report may take up to 24 hours to appear here. [Learn more](#)

### Distribution methods

All

▼

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### Platforms

All

▼

### Report page

All

▼

### Views per day



### Unique viewers per day



Total views

424

Total viewers

8

**Rank** is calculated by comparing this report against other reports in your organization. [Learn more](#)

Total views rank

2

Total Reports in Organization

538

### Views by user

Family Name Given Name User Principal Name Views

|  |  |  |  |
|--|--|--|--|
|  |  |  |  |
|--|--|--|--|



## Results of Dynamic Reporting



# Results of Dynamic Reporting



**Increase in Awareness**



**Increase in SOP Compliance**



**Decrease in FDM Events**



**Decrease in Need of Communication**



**Decrease in Need of Time**





## Recommendation





# Recommendation



**Aim**

**Tool**

**Accusatory**

**Informative**

**Global**

**Individual**



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