

# Safety Report



Safety data 2015-2018



### ***Disclaimer***

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## Foreword

Volume of air traffic in the World is experiencing an incredible growth. The number of passengers traveling in 2019 was 4.3 billion in the World, 1.1 billion in Europe and 185 million in Italy. The Safety levels achievements are very high but, with those numbers, we must not let our guard down and we must continue to improve.

The Safety Report is a very useful tool containing data that allow us to learn from occurred accidents and incidents.

The ENAC Safety Report has been prepared using, for the first time, data collected by means of the electronic ENAC Mandatory Occurrence Reporting (eE-MOR) system where about 9800 reports have been received in 2018 with information related to a wide range of occurrences.

In the present report are also shown ENAC Safety Performance Indicators, continuously monitored in order to maintain the ENAC Safety Plan at maximum level of reliability.

During the considered period (2015–2018) no fatal accidents occurred in Italy in the scheduled commercial transport and the Italian accident rate in 2018 was less than the World average of 1.46 accidents per million departures for scheduled commercial flights on airplane above 5.7 tons. In any case it is a fundamental priority for ENAC, as well as for all the Civil Aviation Authorities in the World, to further improve those numbers emphasising occurrences analyses, corrective actions and Safety prevention tasks.

The overall results arising from the present Safety Plan are positive, but we will continue to put the maximum effort to increase Safety in all the areas and domains of Civil Aviation.

*ENAC President  
Nicola Zaccheo*





## 1. Introduction

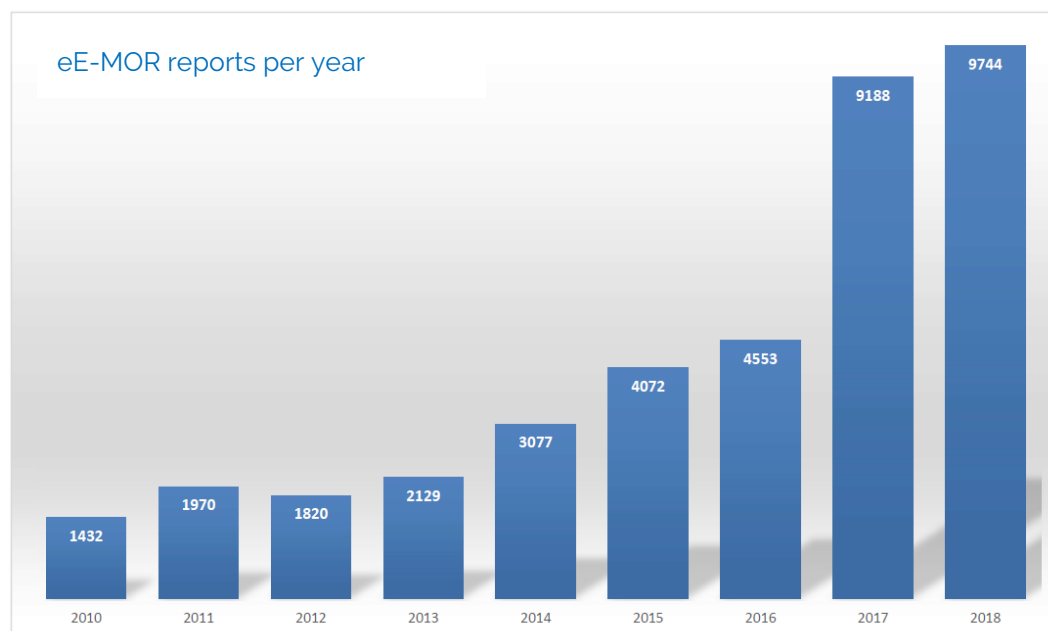
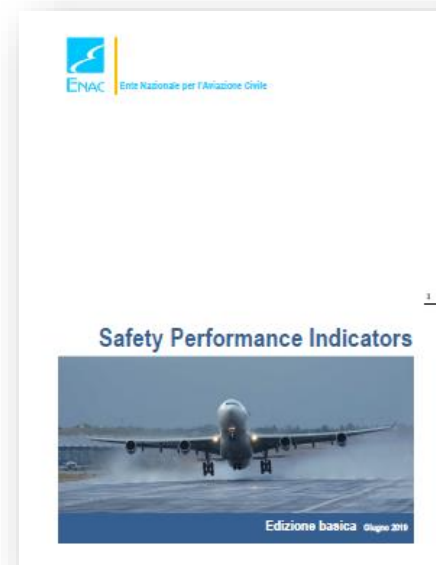
The **State Safety Program - Italy**, as for the ICAO Annex 19 and ICAO Doc.9859 (Safety Management Manual), requires that Italy defines indicators to measure the level of safety performance achieved in the Italian civil aviation. These indicators, **Safety Performance Indicators** (SPI), aim to verify the achievement and keeping of an Acceptable Level of Safety Performance (ALoSP) at State level.

For this scope, ENAC issued in June 2019 the document "ENAC Safety Performance Indicators".

Furthermore, ENAC must comply with the obligation to carry out an analysis of the safety data collected, as required by Regulation (EU) no. 376/2014.

The present ENAC Safety Report is the result of the statistical analysis of the safety data available in ENAC eE-MOR (electronic ENAC Mandatory Occurrence Reporting) system for the four-year period 2015-2018 with reference to the Safety Performance Indicators established in the aforementioned document.

The link between SPIs and the corresponding action items in the ENAC Safety Plan are indicated in tables § 7.1 and § 7.2.





## 2. Occurrence Class

**Accident:** an occurrence associated with the operation of an aircraft which, in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time it comes to rest at the end of the flight and the primary propulsion system is shut down, in which:

- a person is fatally or seriously injured as a result of:
  - being in the aircraft, or,
  - direct contact with any part of the aircraft, including parts which have become detached from the aircraft, or,
  - direct exposure to jet blast, except when the injuries are from natural causes, self-inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew; or
- the aircraft sustains damage or structural failure which adversely affects the structural strength, performance or flight characteristics of the aircraft, and would normally require major repair or replacement of the affected component, except for engine failure or damage, when the damage is limited to a single engine, (including its cowlings or accessories), to propellers, wing tips, antennas, probes, vanes, tires, brakes, wheels, fairings, panels, landing gear doors, windscreens, the aircraft skin (such as small dents or puncture holes) or minor damages to main rotor blades, tail rotor blades, landing gear, and those resulting from hail or bird strike, (including holes in the radome); or
- the aircraft is missing or is completely inaccessible.

**Serious Incident:** means an incident involving circumstances indicating that there was a high probability of an accident and is associated with the operation of an aircraft, which in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time it comes to rest at the end of the flight and the primary propulsion system is shut down.

**Incident:** an occurrence, other than an accident, associated with the operation of an aircraft which affects or could affect the safety of operation.

*[Regulation (EU) 996/2010]*









### 3. Information Sources

In this section are described data sources (occurrences and exposure data) used in the report.

#### 3.A eE-MOR system

The following table shows the number of occurrence reports received in the eE-MOR system (the Italian occurrence repository). The eE-MOR system is described in the ENAC web site and in the Circular GEN-01D.

Year/Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	total
2015	214	189	263	310	479	466	456	445	435	357	257	201	4072
2016	175	294	291	407	512	541	557	491	418	327	280	267	4560
2017	472	519	627	861	1050	998	1152	952	853	705	496	512	9197
2018	533	475	672	831	1226	1094	1244	979	816	801	596	522	9789

#### 3.B ENAC exposure data

Number of movements in the Italian commercial aerodromes is shown in the documents "*Dati di Traffico*" published in the [ENAC website](#). Data on ramp and ACAM inspections, instead, are published in ENAC Management Report (*Report Direzionale*).

#### 3.C Eurocontrol exposure data

The source for the numbers of total flights is the STATFOR interactive dashboard of Eurocontrol. Number of total flights is calculated as the sum of flight to/from Italian aerodromes, flights between Italian aerodromes and flights that flies over Italy.





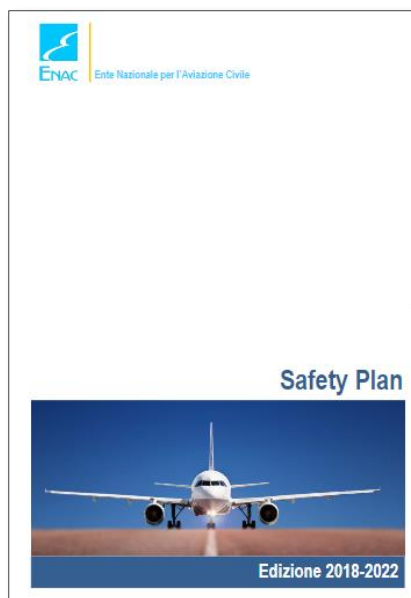


## 4. ENAC Safety Plan

ICAO Annex 19 requires that all Contracting States implement an SSP [**State Safety Program**] while providers are required to establish an SMS [**Safety Management System**].

[State Safety Program-Italy](#), according to the ICAO SSP framework, is based on three main elements:

- *the strategy*: a set of policies and objectives established by Italian aviation institutions (ENAC, ANSV, MIT, Aeronautica Militare, AeroClub d'Italia, ENAV).
- *the programme*: an integrated set of regulations and activities aimed at improving safety.
- *the plan*: all the actions developed by ENAC in order to achieve the safety objectives set in the SSP-Italy. The [ENAC Safety Plan](#) conforms to the [European Plan for Aviation Safety](#) (EPAS). The ENAC Safety-Plan cover a five years period; the current edition available is the 2018-2022; however the 2020-2024 edition is close to be published.

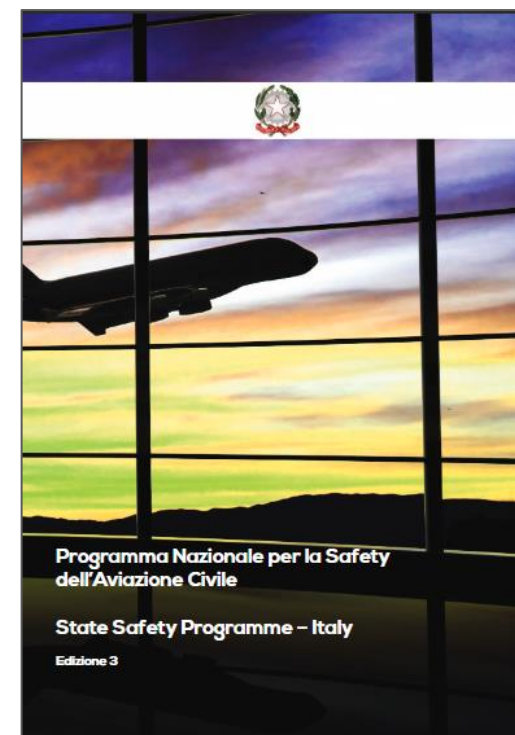


Details on how national SPIs are connected to on going actions of the ENAC Safety Plan can be found in table 7.1.

*Note:*

**MST.xxx=Member State Task** are action deriving from EPAS, based on safety priorities identified in collaboration with MSs and owned by the State. Most of them are continuous actions to ensure continuous monitoring of the underlying safety risks and regular reporting on progress of those MS actions.

**ENS.xxx (ENAC Systemic), ENO. xxx (ENAC Operational) and ENE.xxx (ENAC Emerging)** are actions established by ENAC Safety Board at national level.





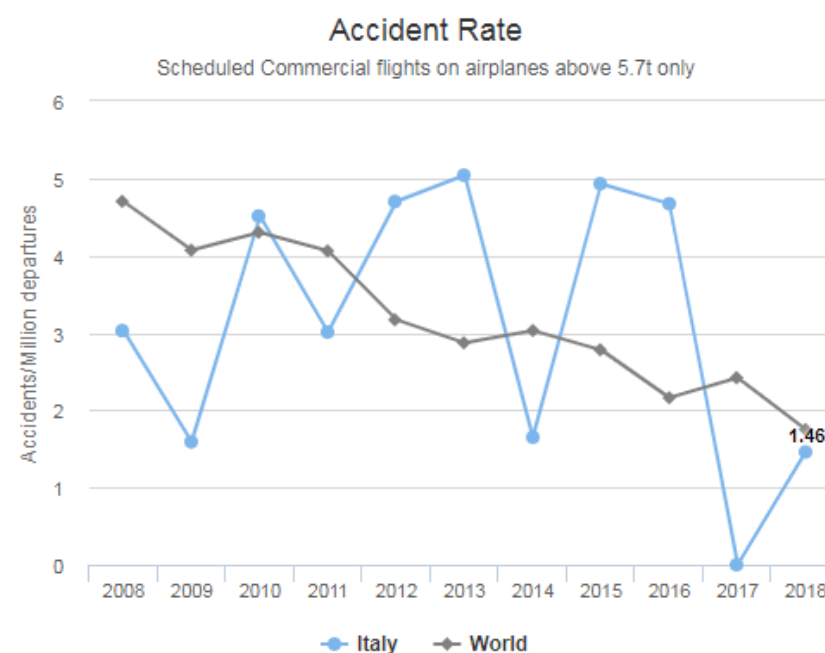
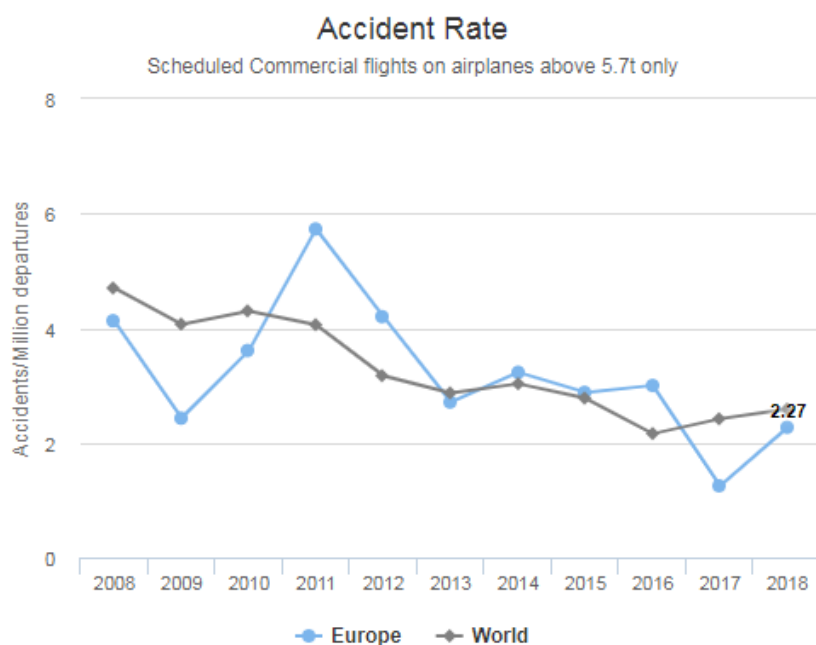


## 5. Accident rate

Graphs below show, for commercial flights of aircrafts with MTOW > 5700 Kg, the accident rate in Europe and in Italy in comparison to the world (source: web [ICAO iSTARS](https://www.icao.int/safety/ISTARS/)).

The Italian data appear to be spreaded but, from a statistic point of view but this can be easily explained because the dataset available in ICAO database is much wider than the limited number of accident occurred in Italy.

However, even if the number fluctuates over the years, a trend can be recognized also for Italy and it can be considered substantially equivalent to the world average.





## 6. Occurrence Category (ICAO ADREP)

TAXONOMY	DESCRIPTION
<b>ARC</b>	Abnormal Runway Contact
<b>AMAN</b>	Abrupt Maneuver
<b>ADRM</b>	Aerodrome
<b>MAC</b>	Airprox/TCAS Alert/Loss of Separation/Near Mid-Air Collisions/Mid-Air Collisions
<b>ATM</b>	ATM/CSN
<b>BIRD</b>	Bird
<b>CABIN</b>	Cabin Safety Events
<b>CTOL</b>	Collision with Obstacle(s) during Take-Off and Landing
<b>CFIT</b>	Controlled Flight into or toward Terrain
<b>EVAC</b>	Evacuation
<b>EXTL</b>	External Load related occurrences
<b>F-NI</b>	Fire/Smoke (non-impact)
<b>F-POST</b>	Fire/Smoke (post-impact)
<b>FUEL</b>	Fuel related
<b>GTOW</b>	Glider Towing related events
<b>GCOL</b>	Ground Collision
<b>RAMP</b>	Ground Handling
<b>ICE</b>	Icing

TAXONOMY	DESCRIPTION
<b>LOC-G</b>	Lost of Control-Ground
<b>LOC-I</b>	Lost of Control-InFlight
<b>LOLI</b>	Loss of Lifting Conditions En Route
<b>LALT</b>	Low Altitude Operations
<b>MED</b>	Medical
<b>NAV</b>	Navigation Errors
<b>OTHR</b>	Other
<b>RE</b>	Runway Excursion
<b>RI</b>	Runway Incursion
<b>SEC</b>	Security related
<b>SCF-NP</b>	System/Component Failure or Malfunction (Non-Powerplant)
<b>SCF-PP</b>	System/Component Failure Or Malfunction (Powerplant)
<b>TURB</b>	Turbulence Encounter
<b>USOS</b>	Undershoot/Overshoot
<b>UIMC</b>	Unintended Flight in IMC
<b>UNK</b>	Unknown or Undetermined
<b>WILD</b>	Wildlife
<b>WSTRW</b>	Wind Shear or Thunderstorm







## 7. ENAC Safety Performance Indicators

Safety Performance Indicators have been identified in accordance with the ICAO Doc. 9859 ed.4 and ICAO Annex 19 issue 2 as described in the document "[ENAC Safety Performance Indicators](#)" available in the ENAC web site.

SPIs have been grouped into two main categories:

- 1 Outcome oriented [operational SPI]** deriving from the measurement of events that could be the precursors of "*undesired events*" (accident or serious incident).

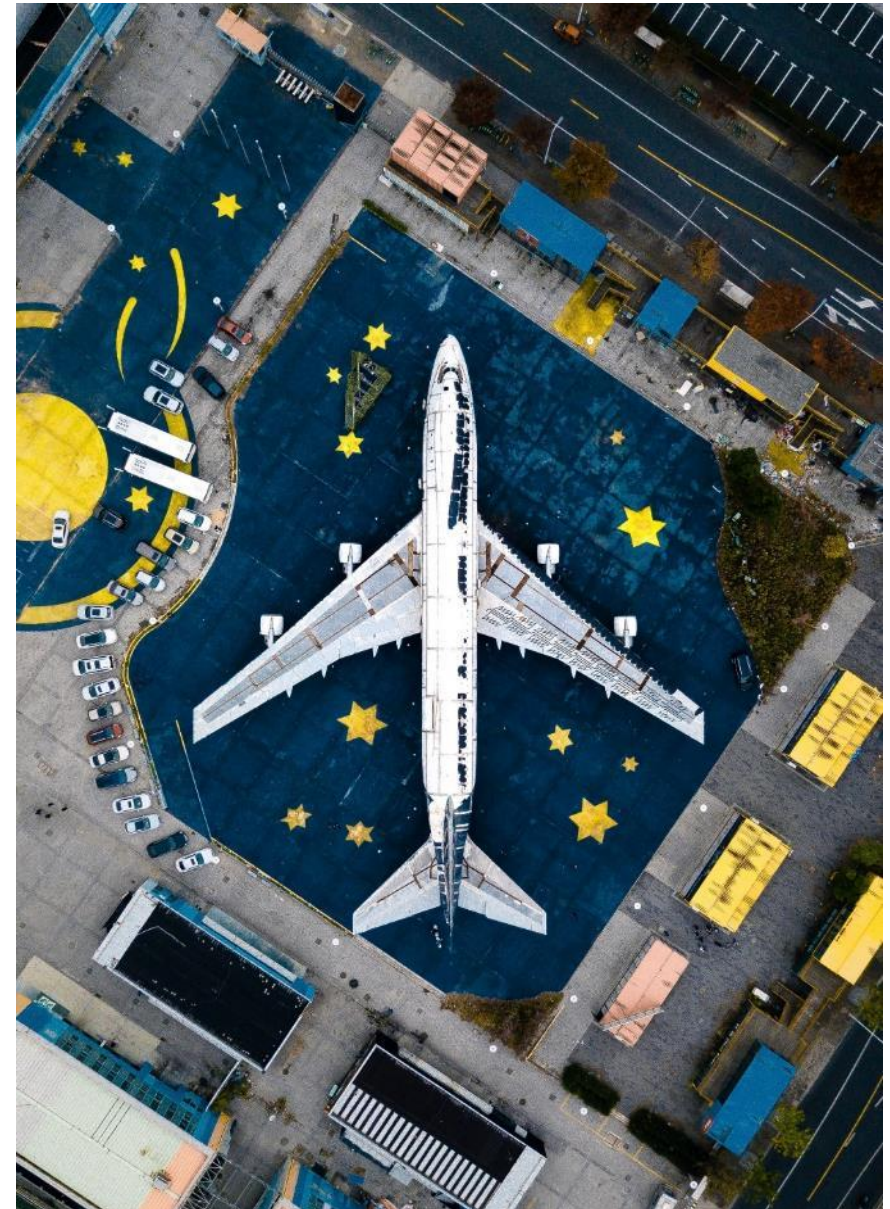
Normally these SPIs are measured on the basis of mandatory reports (MOR's) received in the eE-MOR system.

These indicators have been chosen taking into account types of events particularly relevant in all the domains of civil aviation: Aerodrome, Air Traffic Control, Airworthiness, Operations and UAS.

Note: statistics are based on **number of occurrences** not on the number of reports received.

- 2 Process oriented [systemic SPI]**: deriving from most typical processes of the Civil Aviation Authority. These SPIs aim to measure the effectiveness of the activities that ENAC has been activated to ensure the highest possible level of safety of the aeronautical operations.

For this reason the two types of SPIs have been included into two different tables. Each table shows, for each indicator, a brief description, the data source for its measurement and (if any) the connection to the relevant action of the ENAC Safety Plan.









## 7.1 Outcome oriented Operational SPI<sup>1</sup>

Code	SPI	Indicator description	Safety Plan Action	Data source [ref. § 3]
<b>SPI-O-01</b>	<b>RE</b> <b>Runway Excursions</b> (rate)	Number, every 10.000 movements, of occurrences involving a veer off or overrun off the runway surface.  A runway excursion occurs when an aircraft departs the runway in use during the take-off or landing run. The excursion may be intentional or unintentional.  Note: Runway excursion occurred in GA private airfield are not included.	MST.007	3.A/3.B
<b>SPI-O-02</b>	<b>RI</b> <b>Runway Incursions</b> (rate)	Number, every 10.000 movements, of occurrences involving the incorrect presence of an aircraft, vehicle or person on the protected area of a surface designated for the landing and take-off of aircraft  <b>Runway Incursion:</b> any occurrence at an aerodrome involving the incorrect presence of an aircraft, vehicle or person on the protected area of a surface designated for the landing and take-off of aircraft [ICAO DOC 4444].  Note: Indicators SPI-O-02A and SPI-O-02B have been merged in a single indicator	MST.014	3.A/3.B
<b>SPI-O-03</b>	<b>LOC-I</b> <b>Loss of aircraft control in flight</b> (rate)	Number, every 10.000 flights, of occurrences with loss of aircraft control while, or deviation from intended flight path in flight	MST.004	3.A/3.C
<b>SPI-O-04</b>	<b>TCAS Resolution Advisories</b> (rate)	Number, every 10.000 flights, of TCAS Resolution Advisories following a TCAS activation	MST.010	3.A/3.C
<b>SPI-O-05<sup>2</sup></b>	<b>CFIT</b> <b>Controlled Flight into Terrain</b> (occurrences) <i>(only for NCO operations)</i>	Number of occurrences where an airworthy aircraft under the complete control of the pilot is inadvertently flown into terrain, water or an obstacle.  N.d.r. Due to the very low number of events occurred this indicator it was considered to be of little statistical significance and, therefore, no diagrams will be presented.	MST.006	3.A

<sup>1</sup> some indicators, based on the experience gained during the analysis, could be slightly different from those listed in the ENAC SPIs document.

<sup>2</sup> This SPI has not been calculated because it resulted to be not significant from a statistical point of view.





Code	SPI	Indicator description	Safety Plan Action	Data source
SPI-O-06	<b>TAWS</b> <b>Activations of TAWS</b> (rate)	Number, every 10.000 flights, of Terrain and Avoidance Warning System (TAWS) activations.  TAWS is a system that provides the flight crew with sufficient information and alerting to detect a potentially hazardous terrain situation and so the flight crew may take effective action to prevent a CFIT event.	MST.006	3.A, 3.C
SPI-O-07	<b>RAMP</b> <b>Ramp events</b> (rate)	Number of occurrences, every 10.000 movements, where a collision occurred while servicing, boarding, loading, and deplaning the aircraft.  Includes injuries to people from propeller/main rotor/tail rotor/fan blade strikes; pushback/powerback/towing events; jet blast and prop/rotor down wash ground handling occurrences; aircraft external preflight configuration errors (examples: improper loading and improperly secured doors and latches) that lead to subsequent events. Includes all parking areas (ramp, gate, tiedowns).	MST.018	3.A, 3.B
SPI-O-08	<b>GCOL</b> <b>Collision while taxiing to or from a runway in use</b> (rate)	Number of occurrences, every 10.000 movements, where an aircraft comes into contact with another aircraft, a vehicle, a person, a structure, a building or any other obstacle while moving under its own power in any part of the airport other than the active runway, excluding power pushback.  Collision while taxiing to or from a runway in use. Includes collisions with an aircraft, person, ground vehicle, obstacle, building, structure, etc., while on a surface other than the runway used for landing or intended for takeoff.  Ground collisions resulting from events categorized under Runway Incursion (RI), Wildlife (WILD), or Ground Handling (RAMP) are excluded from this category.	MST.018	3.A, 3.B
SPI-O-09	<b>F-NI</b> <b>"Fire or smoke on aircraft"</b> (rate)	Number, every 10.000 flights, of occurrences where fire or smoke was detected in or on the aircraft, in flight, or on the ground.  Includes fire due to a combustive explosion from an accidental ignition source, fire and smoke from system/component failures/malfunctions in the cockpit, passenger cabin, or cargo area.	MST.005	3.A, 3.C
SPI-O-10	<b>LASER</b> <b>Laser beam interferences with flight operations</b> (rate)	Number of occurrences, every 10.000 movements, in which a laser beam interfered with the flight operations of an aircraft during take-off or landing.	N/A	3.A, 3.B

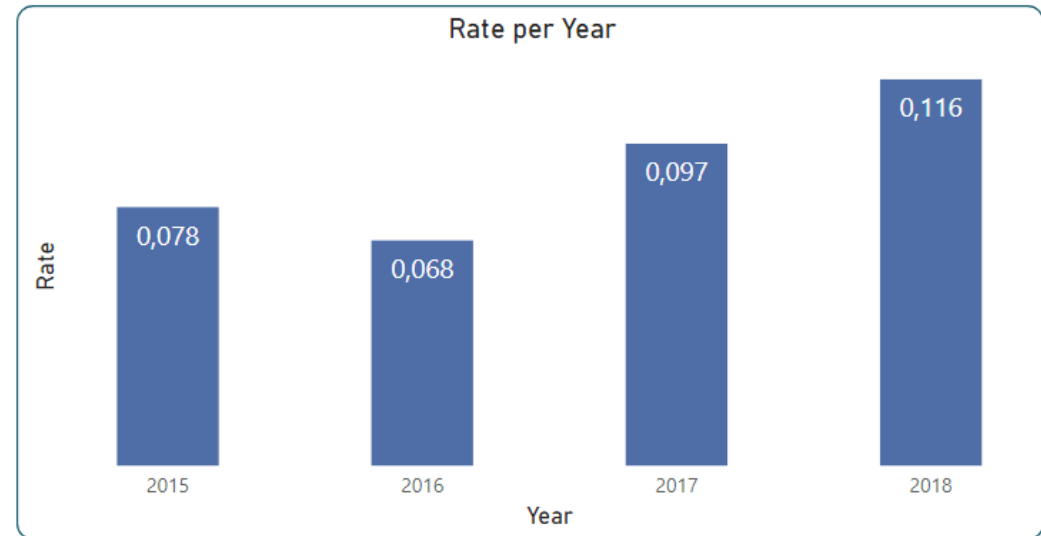
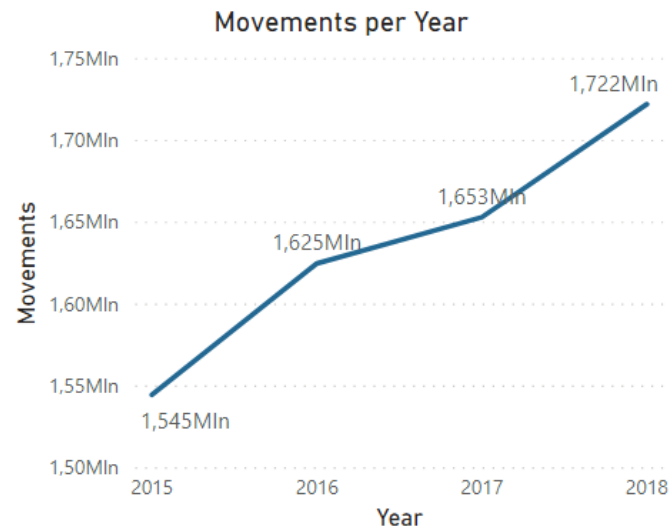
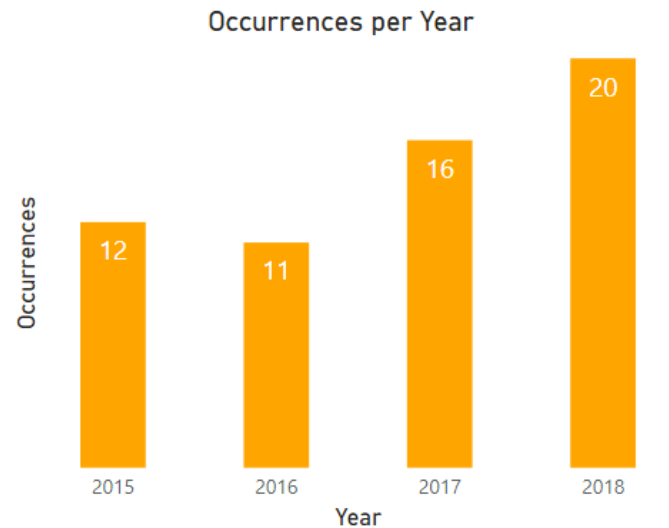


Code	SPI	Indicator description	Safety Plan Action	Data source
<b>SPI-O-11<sup>3</sup></b>	<i>BRI - Bird Strike Index</i> Bird/Wildlife Strikes rate	Please refer to ENAC Circolare APT-01 (last revision)	ENO.002	3.A, 3.B
<b>SPI-O-12</b>	<b>UPA</b> <b>Airspace Infringements</b> (occurrences)	Number of airspace infringements that occurs when an aircraft enters notified airspace without previously requesting and obtaining clearance from the ATC or enters the airspace under conditions that were not contained in the clearance.  Notified Airspace includes controlled airspace structures in ICAO airspace classes A to E, such as Airways, Terminal Control Areas (TMA), Control Zones (CTR) or Aerodrome Traffic Zones (ATZ) outside controlled airspace, as well as restricted airspaces, such as danger areas, restricted areas, prohibited areas and temporary segregated/reserved areas.	MST.016	3A
<b>SPI-O-13</b>	<b>SMI</b> <b>Separation Minimum Infringement number</b> (occurrences)	Number of occurrences where prescribed separation minima between aircrafts was not maintained	N/A	3A
<b>SPI-O-14</b>	<b>ATM failure</b> <b>Serious technical failure</b> (occurrences)	Number of serious technical failures affecting the safe provision of air traffic services.  Occurrences involving Air Traffic Management (ATM) or Communication, Navigation, Surveillance (CNS) service issues. Includes Air Traffic Control (ATC) facility/personnel failure/degradation, CNS service failure/degradation, procedures, policies, and standards. Occurrences do not necessarily involve an aircraft.  ATM includes all of the facilities, equipment, personnel, and procedures involved in the provision of Italian approved Air Traffic Services.	N/A	3A
<b>SPI-O-15</b>	<b>APR interference</b> <b>Interferences of APR with manned aircraft during take-off or landing</b> (occurrences)	Number of occurrences where an APR interferes with the flight of a manned aircraft during take-off or landing.	ENE.002	3A

<sup>3</sup> SPI-O-11 will be analyzed after the publication of the [Bird Strike Committee Italy Report](#) 2018.



## SPI-O-01 RE - Runway Excursions



The **Runway Excursions** (RE) rate shows a decrease in the year 2016 (if compared to the value of the year 2015) followed by a significant increase in the following two years (+ 42% in 2017 and + 20% in 2018).

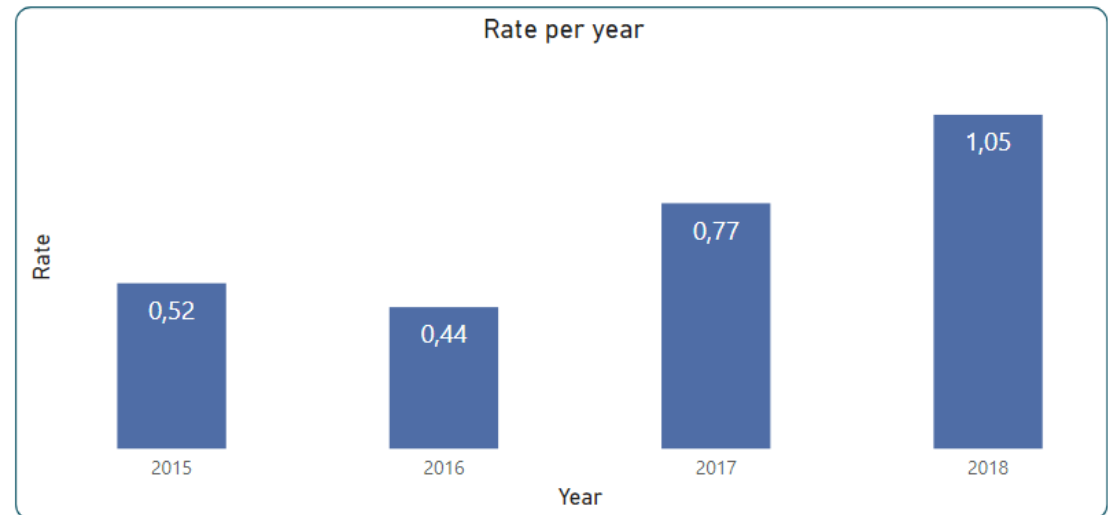
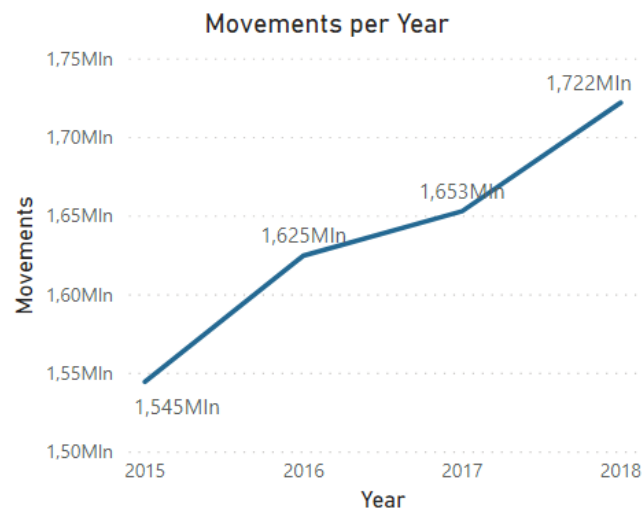
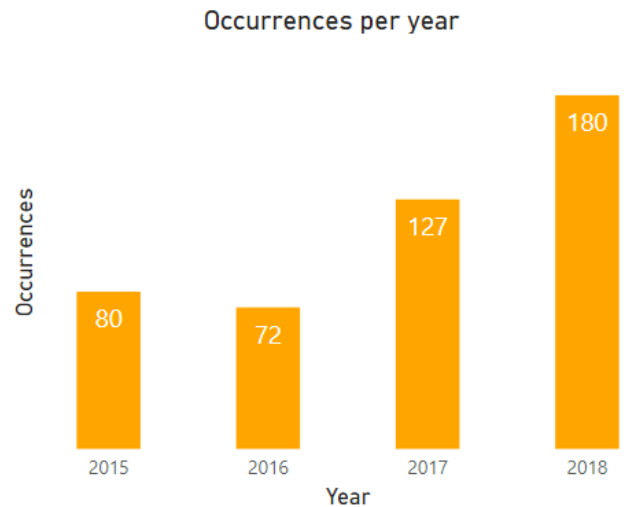
To have a confirmation of such increasing trend, as well as for the definition of the value of the Safety Performance Target, it needs to wait for the year 2019 data.

However the analysis of the data will be appropriately assessed in the context of the MST.007 action of the ENAC Safety Plan which will be reviewed in the light of the aforementioned conclusions.





## SPI-O-02 RI - Runway Incursions



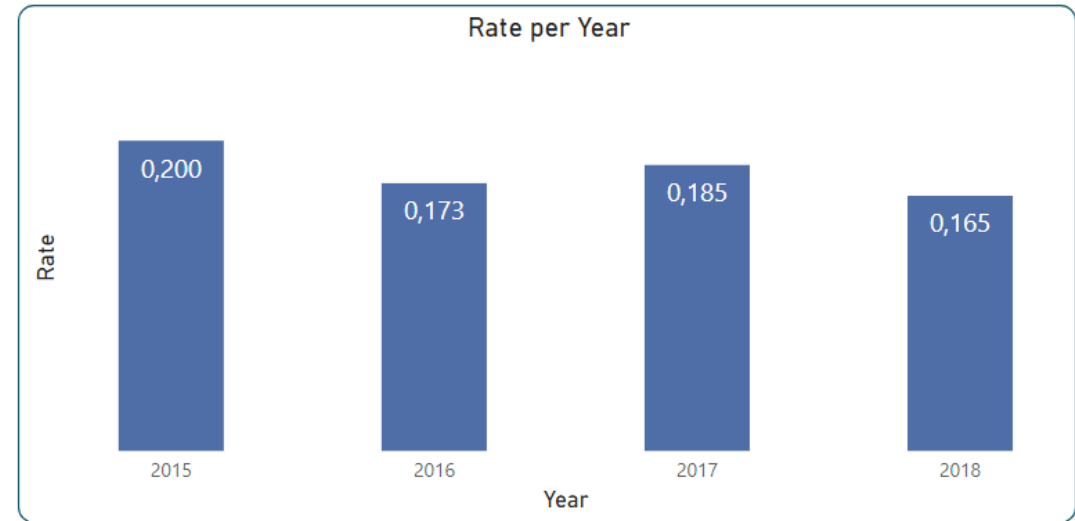
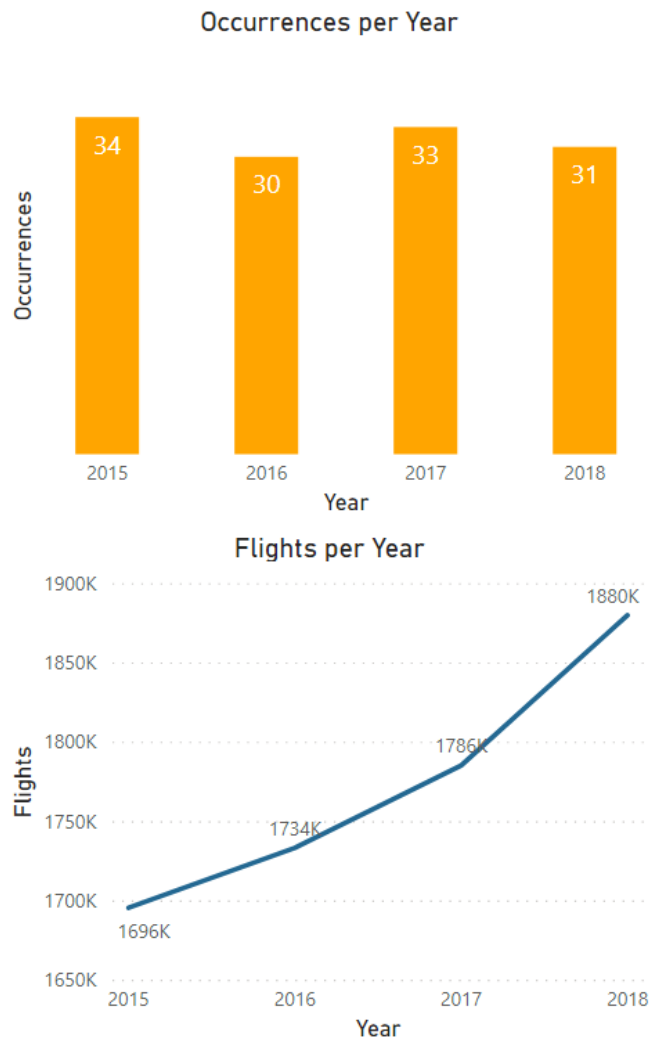
The **Runway Incursions** (RI) rate shows a decrease in the year 2016 (if compared to the value of the year 2015) followed by a significant increase in the following two years (+ 75% in 2017 and + 36% in 2018).

To have a confirmation of such increasing trend, as well as to establish the value of the Safety Performance Target, it needs to wait for the year 2019 data.

However the analysis of the data will also be appropriately assessed in the context of the MST.014 action of the ENAC Safety Plan which will be reviewed in the light of the aforementioned conclusions.



## SPI-O-03 LOC-I - Loss of aircraft control in-flight

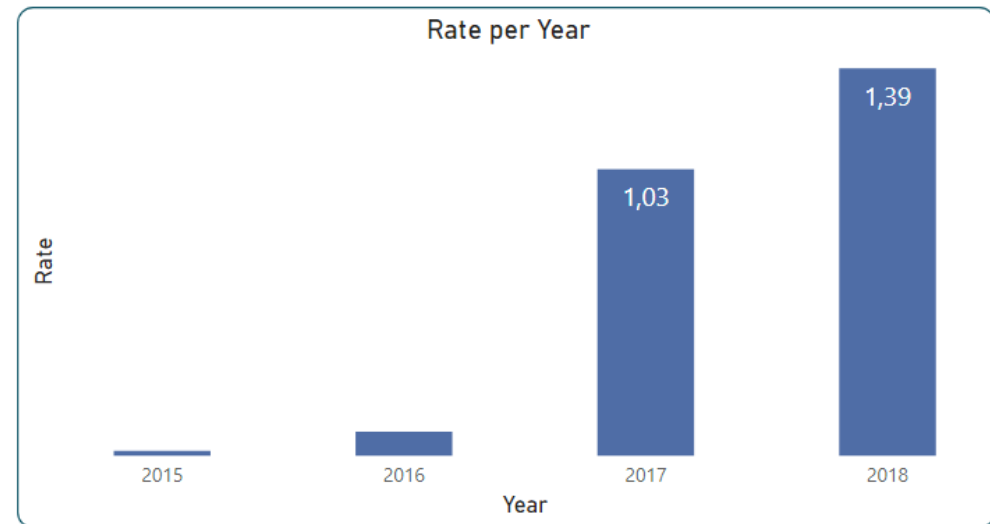
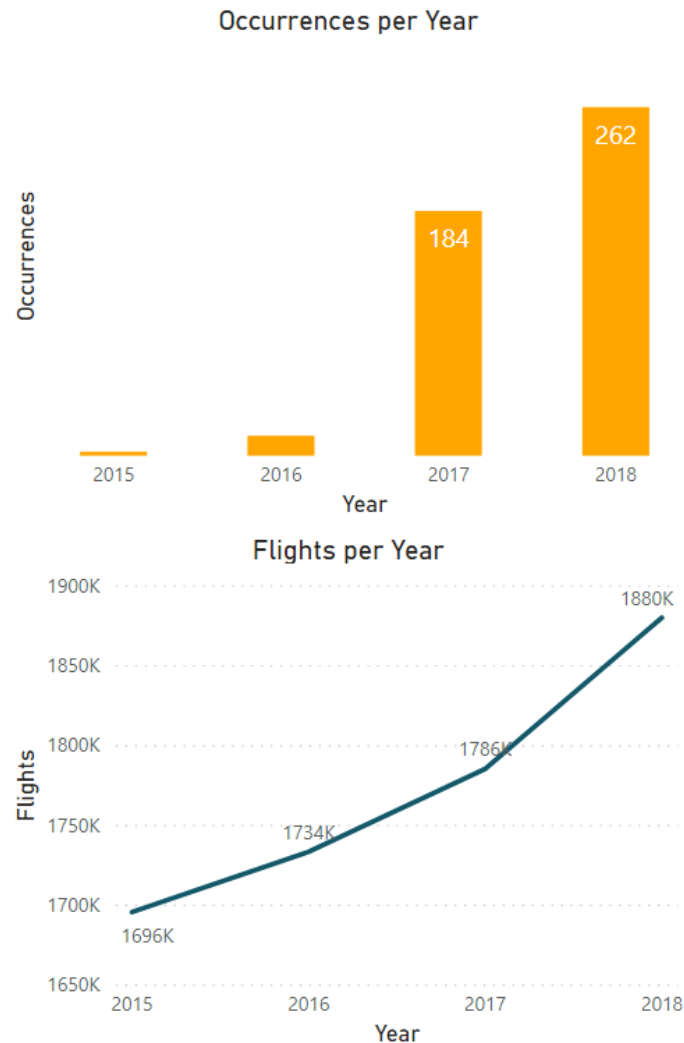


The trend over the four-year period of the **Loss of Control in Flight** (LOC-I) events does not show an evident trend, fluctuating around an average value of 0.180 from which it deviates slightly. For this reason, to establish the value of the Safety Performance Target (which could be initially set equal to the average value), it is considered appropriate to wait for the year 2019 data to verify whether or not this oscillatory trend continues or an evident trend is shown.

However the analysis of the data will also be appropriately assessed in the context of the MST.004 action of the ENAC Safety Plan which will be reviewed in the light of the aforementioned conclusions.



## SPI-O-04 TCAS Resolution Advisories



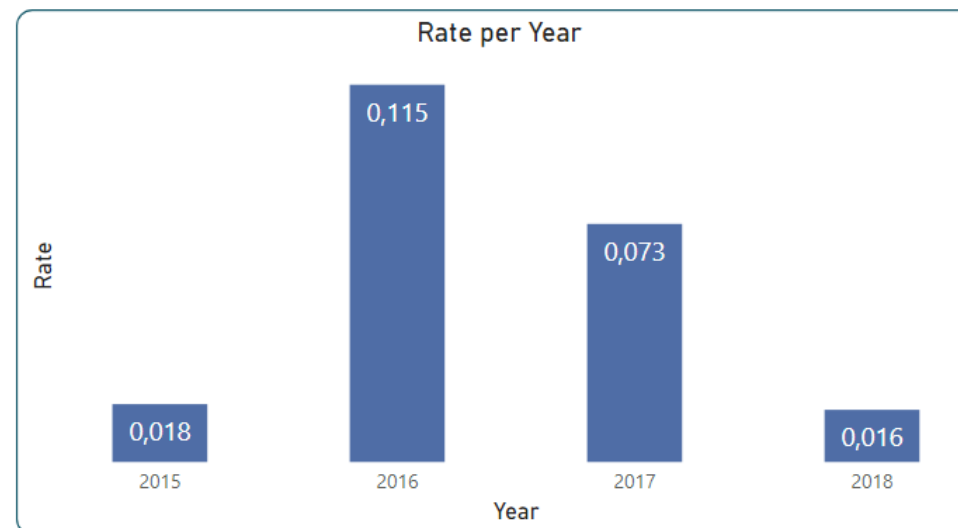
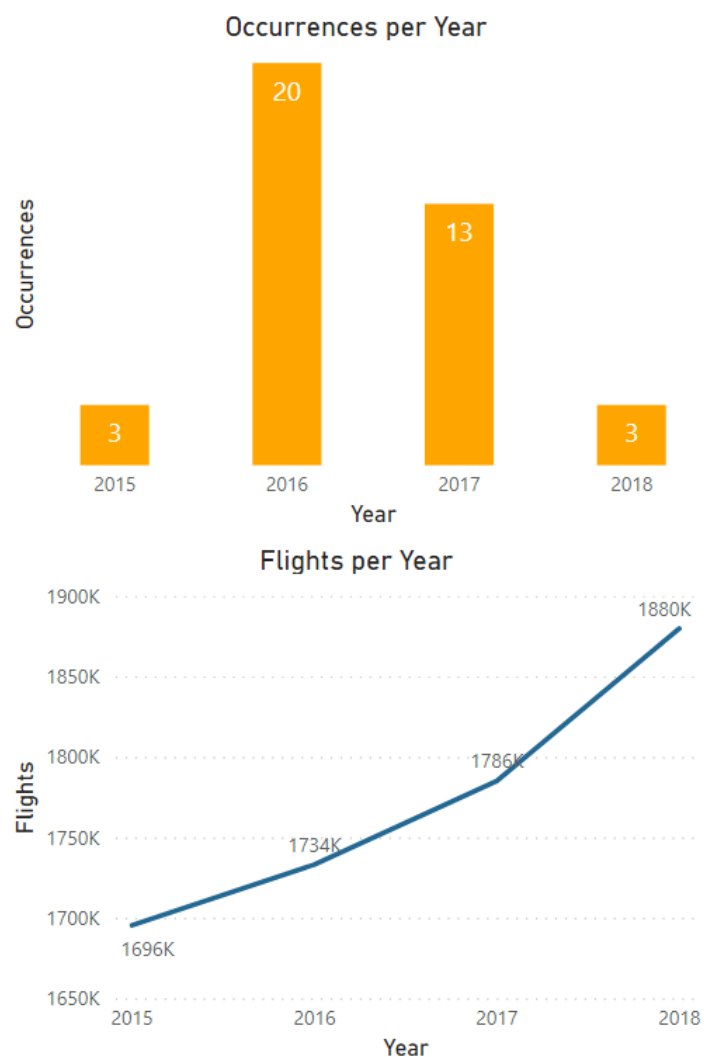
The trend over the four-year period of the **TCAS Resolution Advisory** (TCAS-RA) events can not be considered statistical significant because the main Italian ANSP begun to send occurrence reports to the eE-MOR system only since January 2017. For this reason it should be considered more appropriate to wait for the year 2019 data in order to have a significant trend over at least a three years period. For the same reason a Safety Performance Target can not yet be defined.

However the analysis of the data will be appropriately assessed in the context of the MST.010 action of the ENAC Safety Plan which will be reviewed in the light of the aforementioned conclusions.





## SPI-O-o6 TAWS - Activations of TAWS

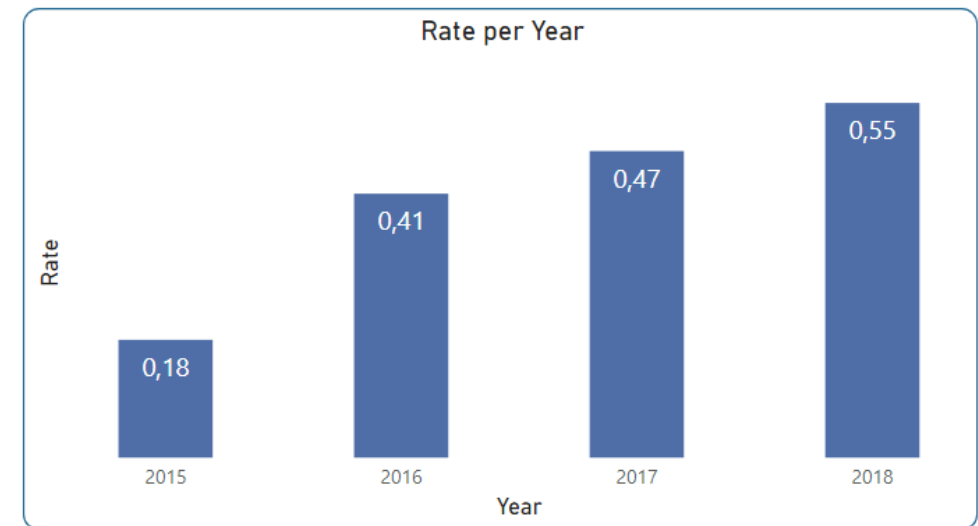
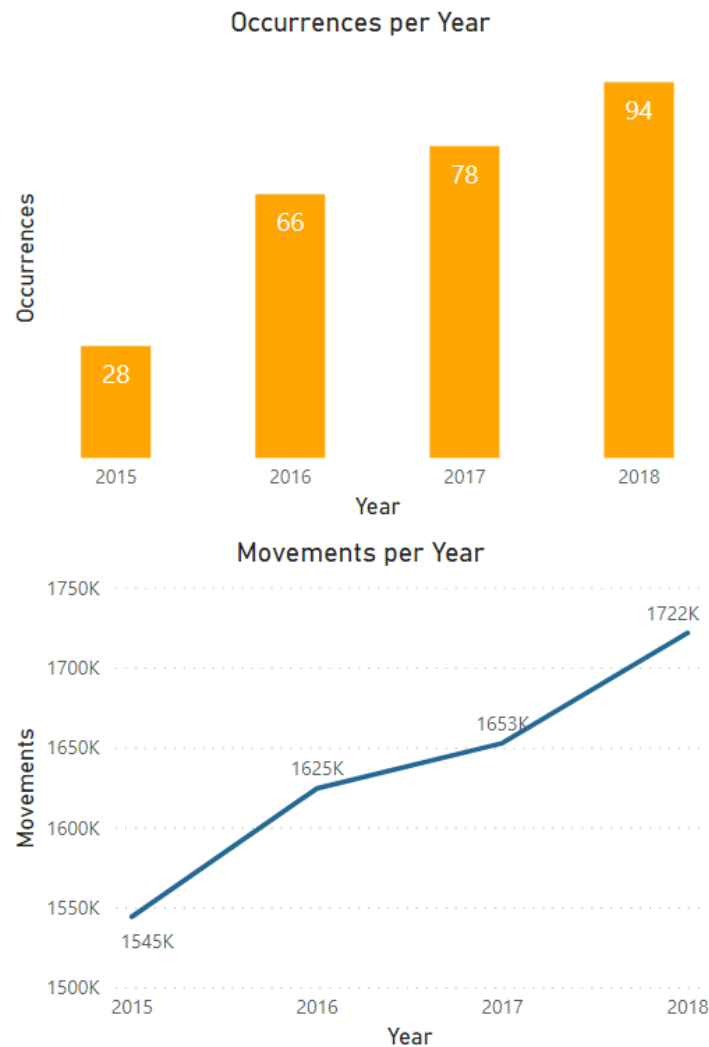


The trend over the four-year period of the **Terrain Advisory Warning System** (TAWS) activations events shows a peak in 2016 followed by a decrease in the following two years. Then it should be considered appropriate to wait for the year 2019 data in order to have a more significant trend over a longer period. For the same reason a Safety Performance Target can not yet be defined.

However the analysis of the data will be appropriately assessed in the context of the MST.006 action of the ENAC Safety Plan which will be reviewed in the light of the aforementioned conclusions.



## SPI-O-07 RAMP events



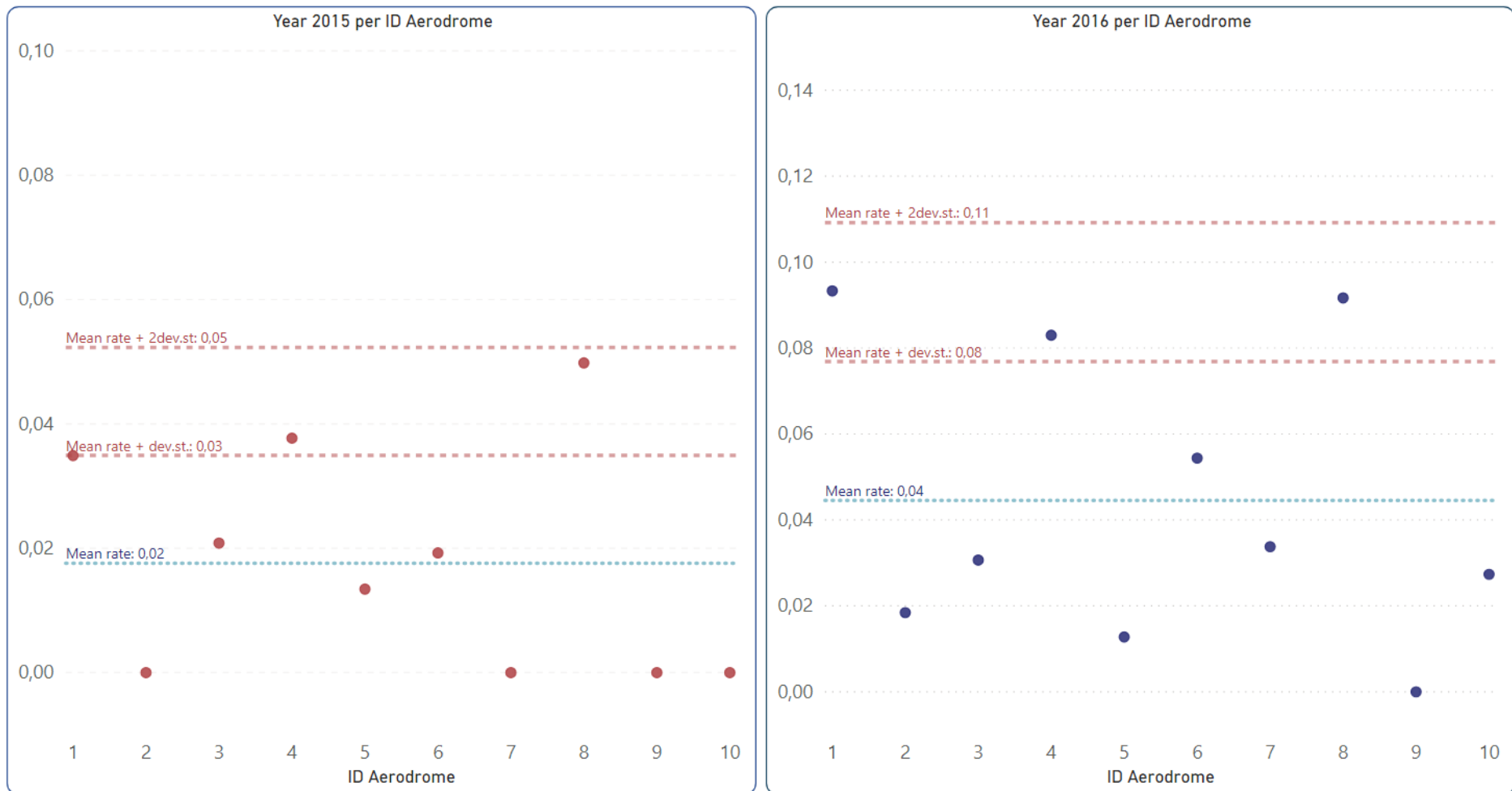
The trend over the four-year period of **Ramp** events shows a constant increase over the four years period. This trend could be partially explained with the increasing number of ground handlers reporting (mainly in the last two years) but it must be verified on the basis of the year 2019 data in order to define a significant Safety Performance Target.

However the increasing trend of reported ramp events will be appropriately assessed in the context of the MST.018 action of the ENAC Safety Plan.



## (continue) SPI-O-07 RAMP events

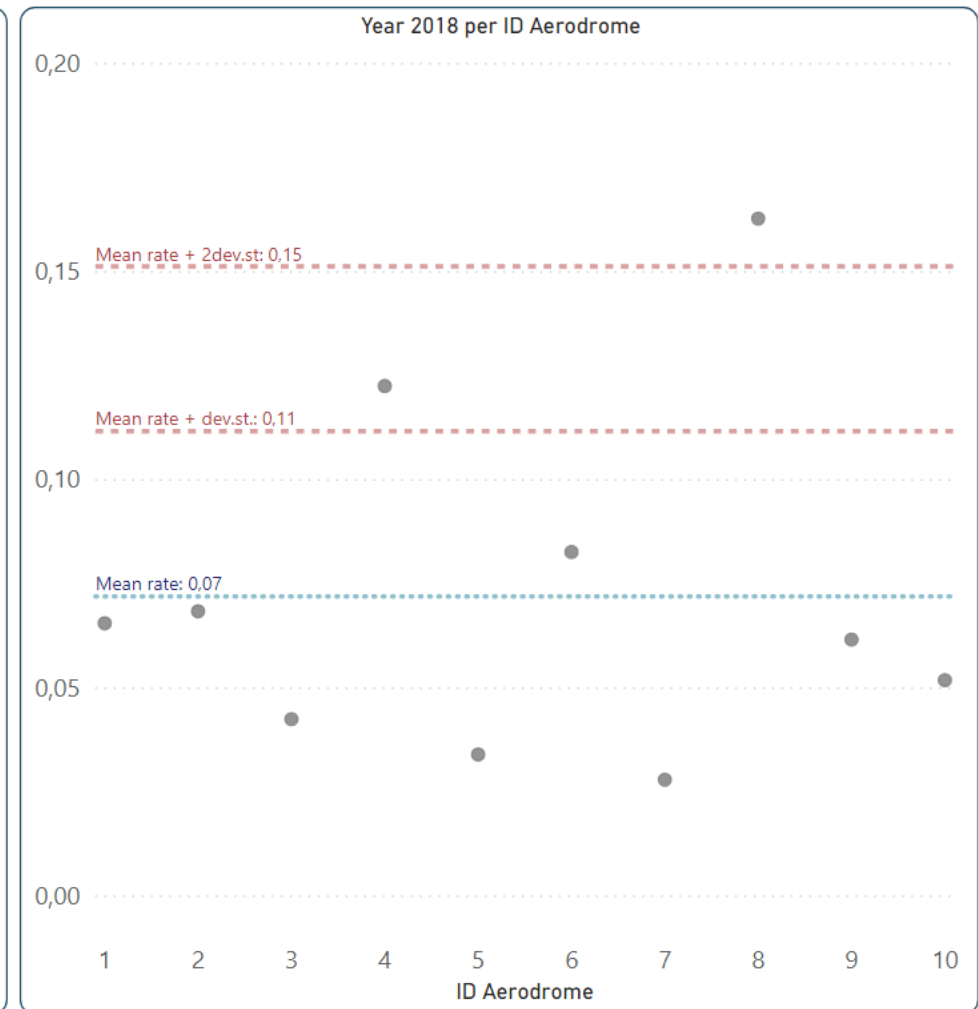
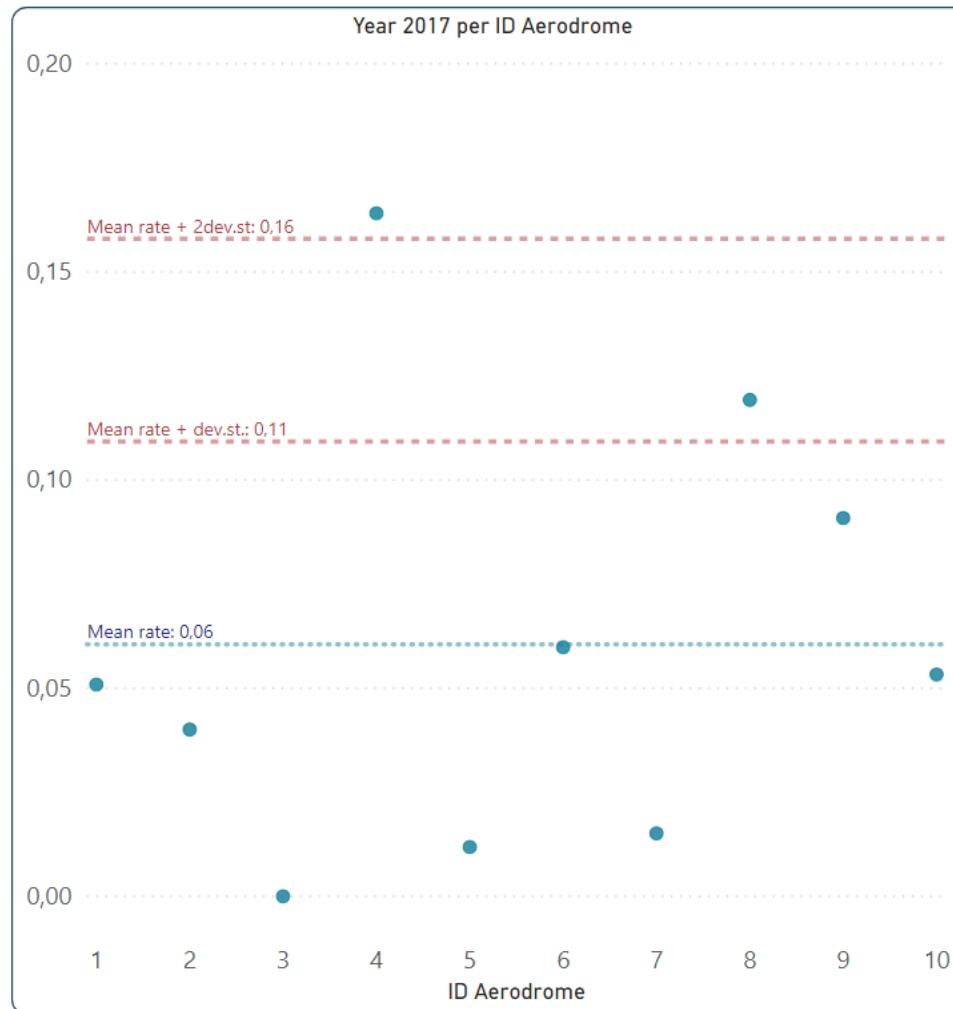
The **ID Aerodrome** is an anonymous identifier linked to a specific aerodrome. These graphs show the top 10 airports for movements.. These data show evidence that some aerodromes constantly have values above the standard deviation (i.e. ID 4, ID 8, etc)..





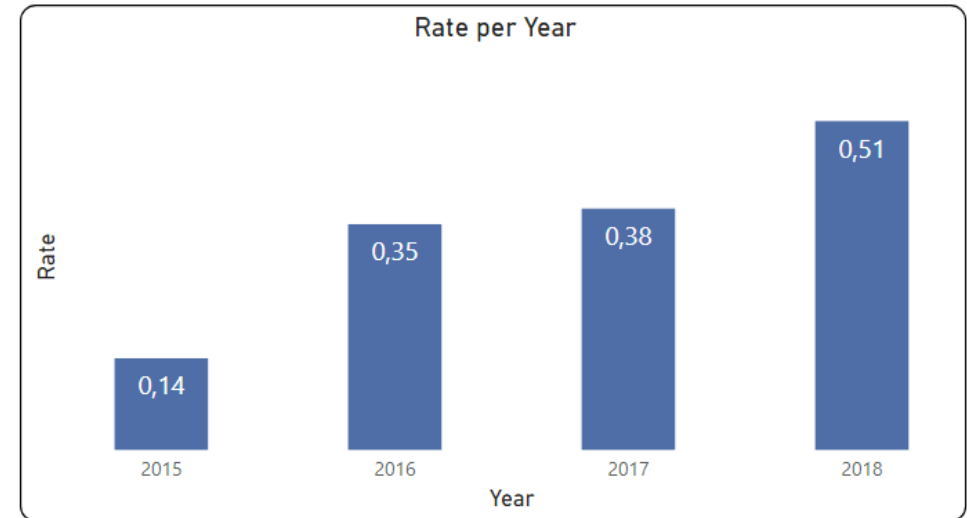
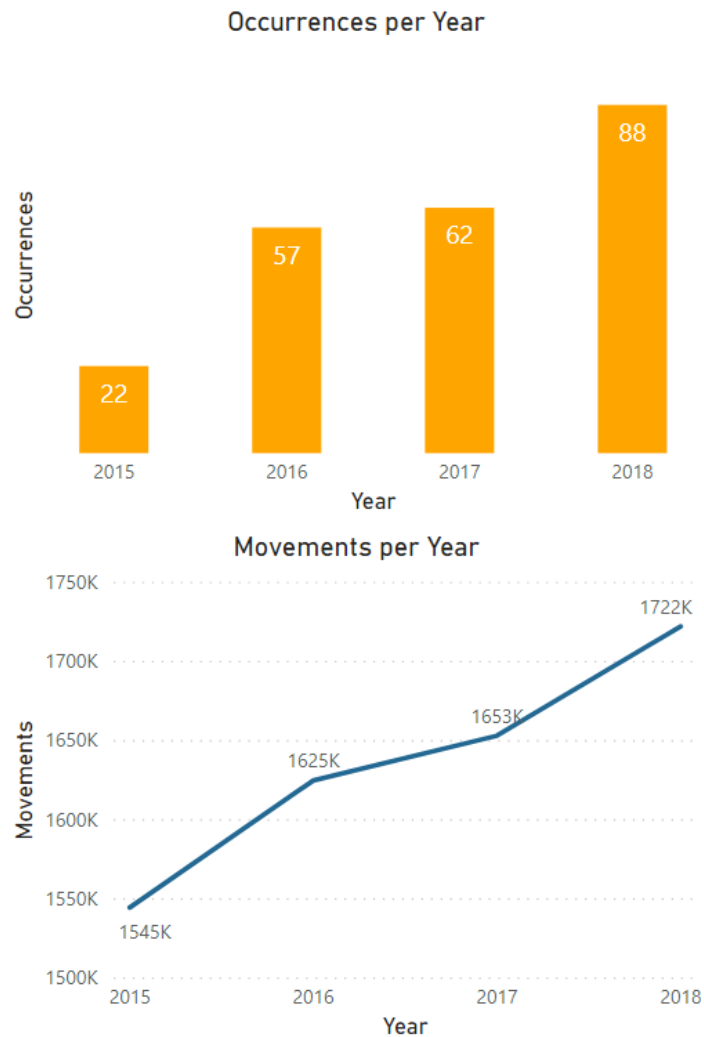


(continue) **SPI-O-07 RAMP events**





## SPI-O-08 GCOL - Collision while taxiing to or from a runway in use



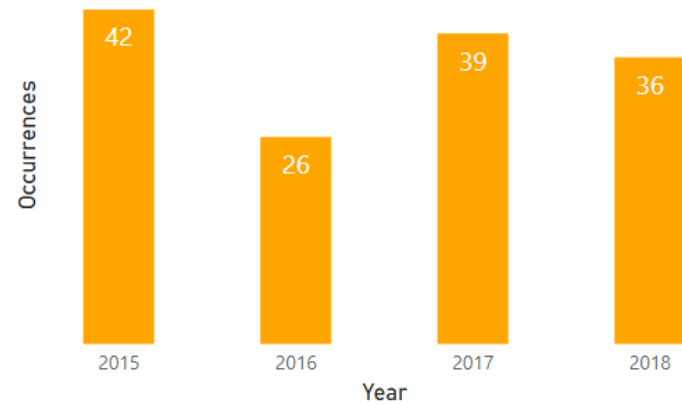
The trend over the four-year period of the **Ground Collisions** shows a constant increase over the four years period. This trend could be partially explained with the increasing number of ground handlers reporting (mainly in the last two years) but it must be verified on the basis of the year 2019 data to define a significant Safety Performance Target.

However the increasing trend of reported ground collisions will be appropriately assessed in the context of the MST.018 action of the ENAC Safety Plan.

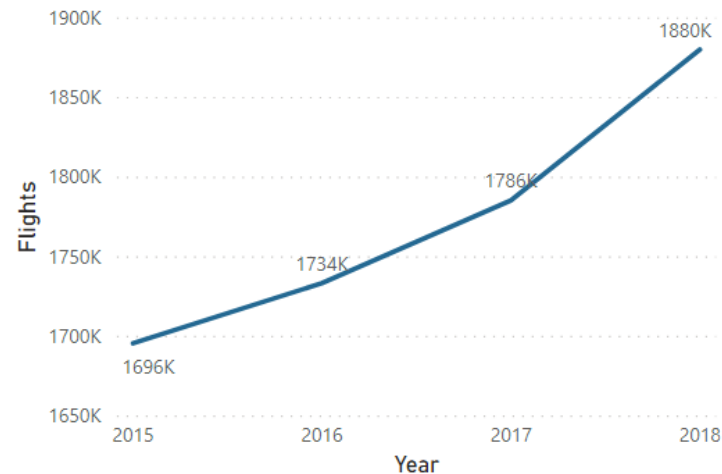


## SPI-O-09 F-NI – “Fire or Smoke on aircraft”

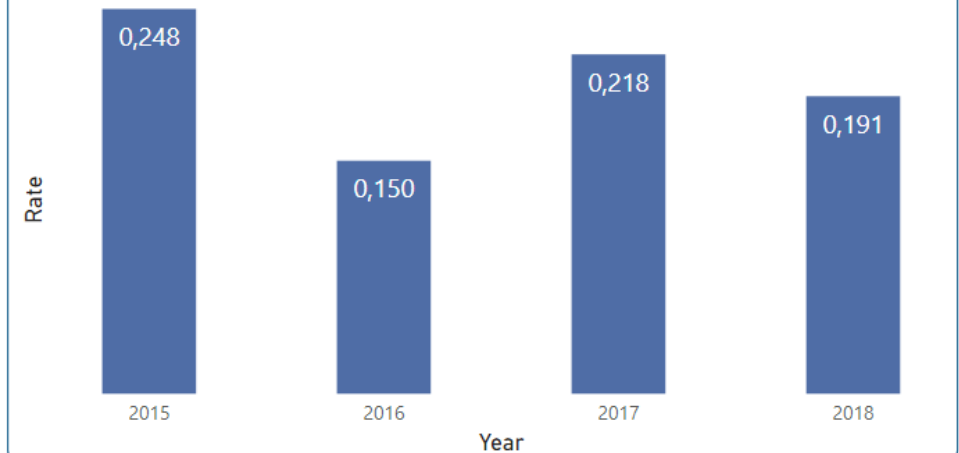
Occurrences per Year



Flights per Year



Rate per Year



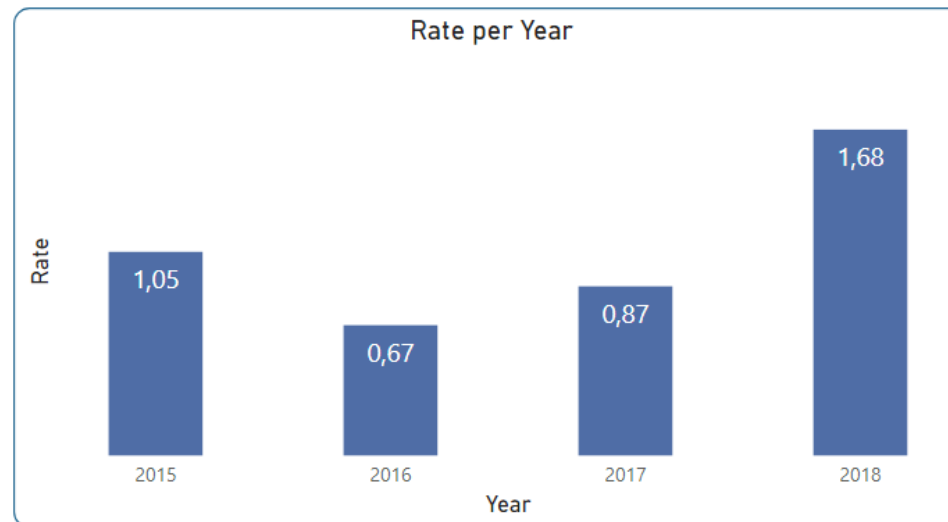
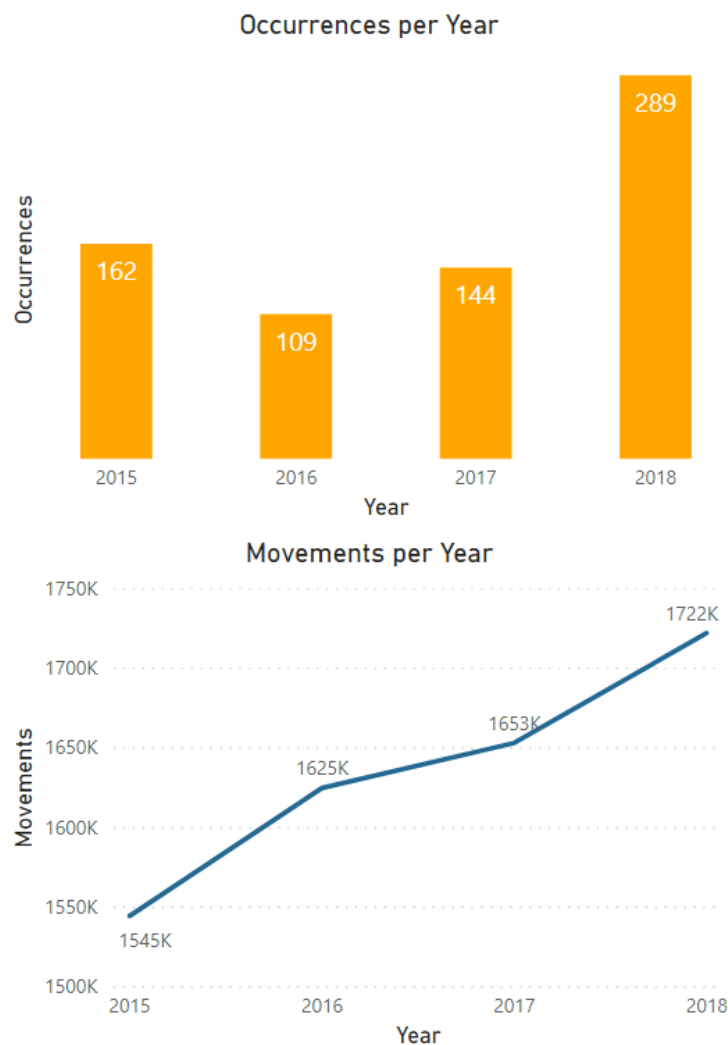
The trend over the four-year period of the **Fire or Smoke on Aircraft** does not show a particular increasing or decreasing trend, fluctuating around an average value of 0.202 from which it deviates slightly. For this reason, to establish the relative Safety Performance Target (which could be initially set equal to this average value), it is considered appropriate to wait for the year 2019 data to verify whether or not they confirm this oscillatory trend.

However the analysis of the data will also be appropriately assessed in the context of the MST.005 action of the ENAC Safety Plan which will be reviewed in the light of the aforementioned conclusions.





## SPI-O-10 LASER - Laser beam interferences with flight operations occurrences



The **Laser** attacks rate shows a decrease in year 2016 (if compared to the value of the year 2015) followed by a significant increase in the following two years, with a peak in the year 2018 (+ 30% in 2017 and + 93% in 2018).

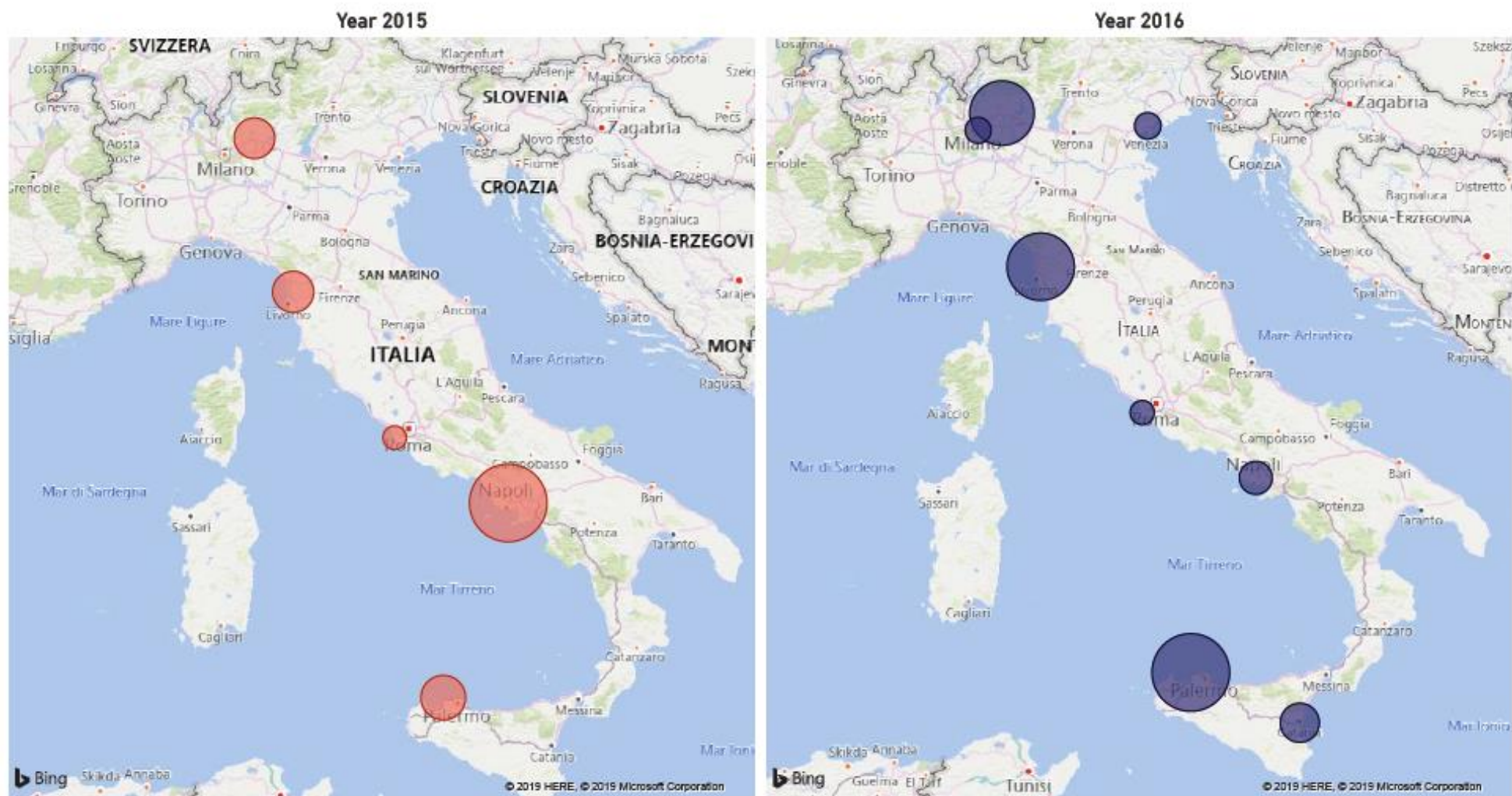
However to have a confirmation of such trend, as well as for the definition of the Safety Performance Target, it needs to wait for the year 2019 data.

The geographical distribution of the phenomenon is shown in the following pages where bubble diagrams of the events occurred in the vicinity of main Italian airports are provided.



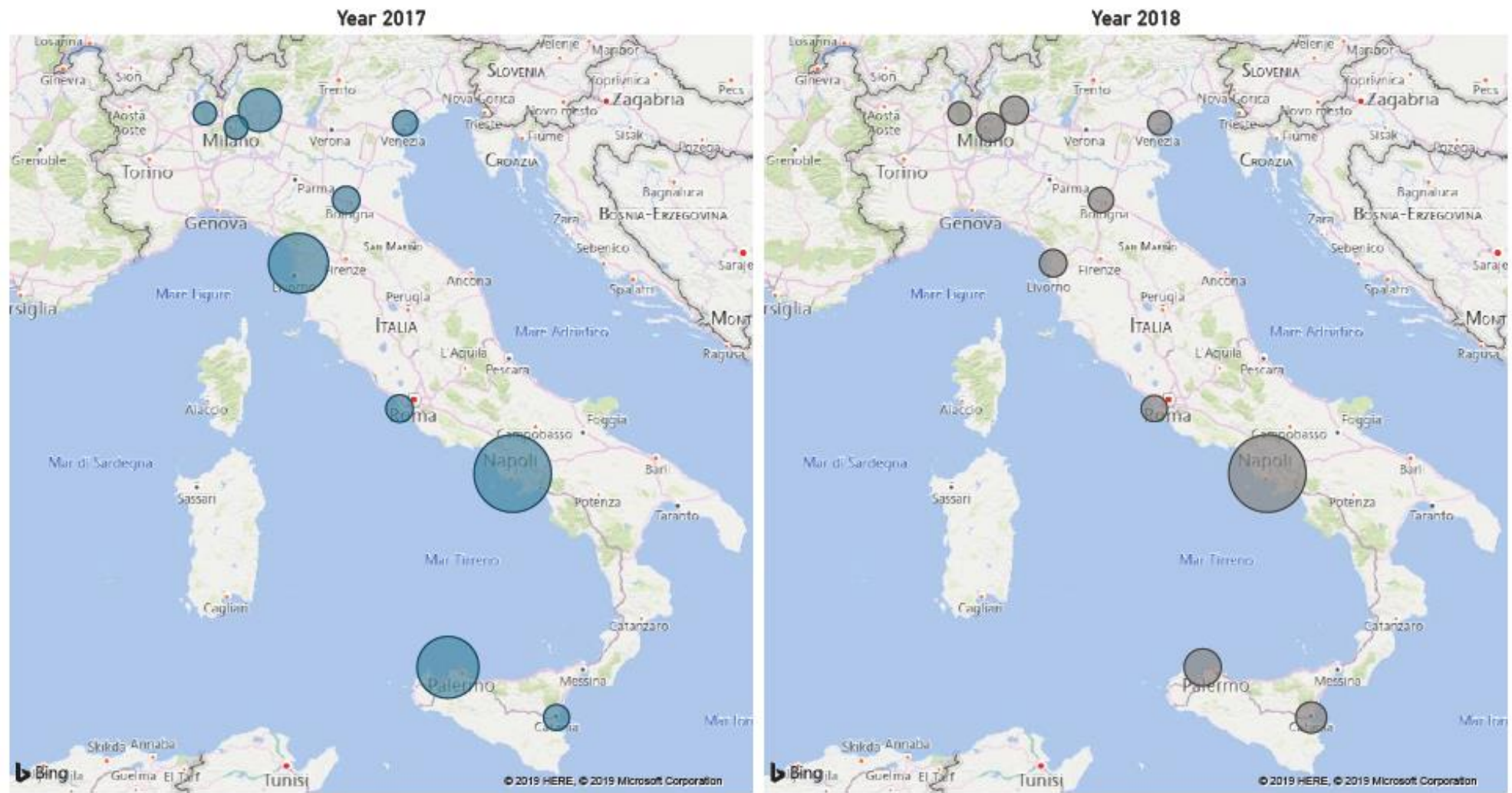
## (continue) SPI-O-10 LASER - Laser beam interferences with flight operations occurrences

The trend of **laser beam attack** shall be seen in the light of the single aerodrome because generally the phenomenon can be considered decreasing.





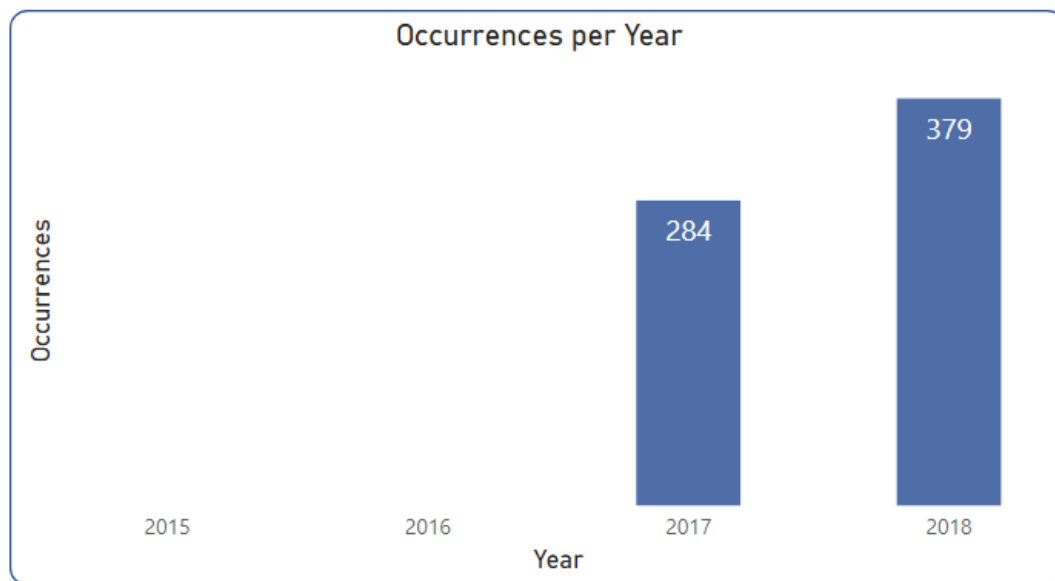
(continue) **SPI-O-10 LASER** - Laser beam interferences with flight operations occurrences







## SPI-O-12 UPA - Airspace Infringements



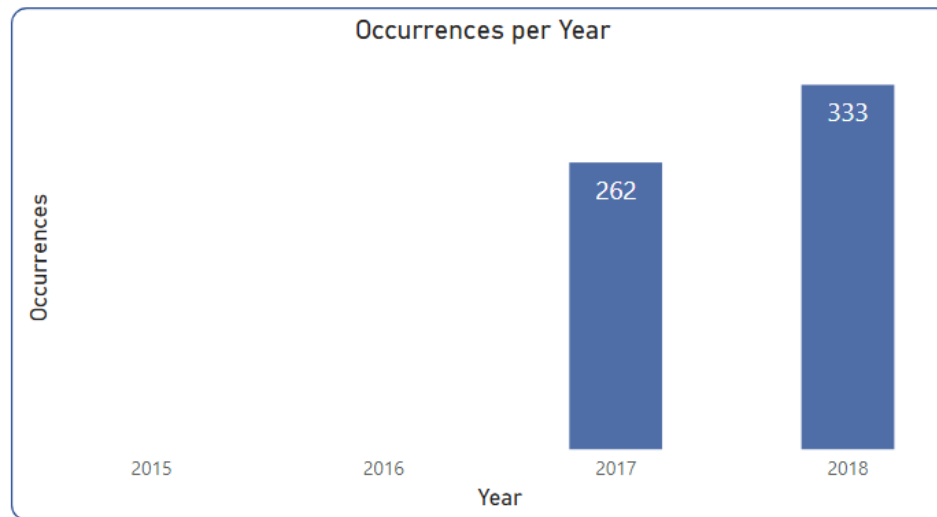
The number of **Unauthorized Space Infringements** (UPI) is available only since January 2017, when the main Italian ANSP began to regularly transmit reports to the eE-MOR system. Data available for the last two-year period 2017-2018 show a significant increase in the number of events but, to confirm such trend, as well as for the definition of the Safety Performance Target, it needs to wait for the year 2019 data.

However the apparently increasing trend of reported SMI will be appropriately assessed in the context of the MST.016 action of the ENAC Safety Plan.





## SPI-O-13 SMI - Separation Minimum Infringements

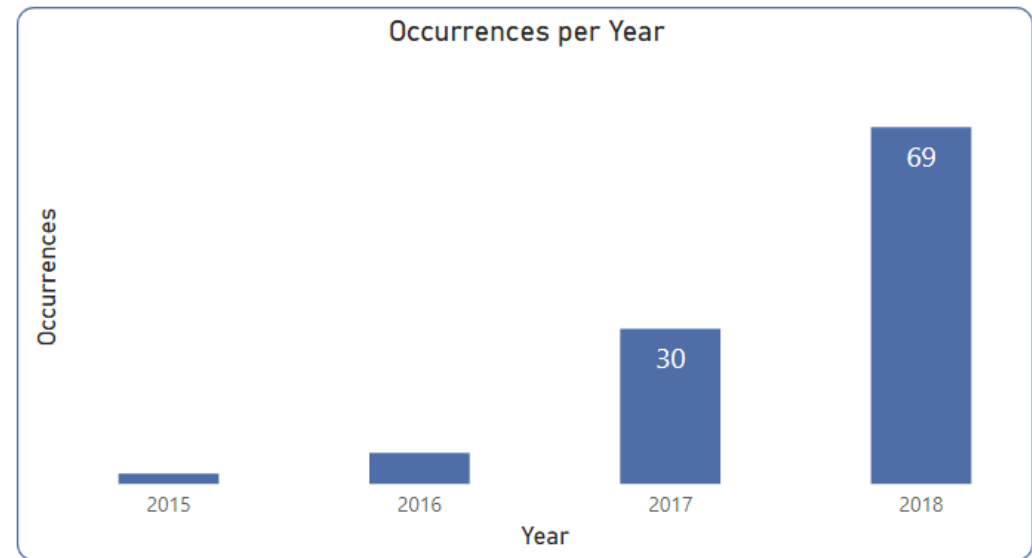


The number of **Separation Minimum Infringements** (SMI) is available only since January 2017, when the main Italian ANSP began to regularly transmit reports to the eE-MOR system. Data available for the last two-year period 2017-2018 show a significant increase in the number of events but, to confirm such trend, as well as for the definition of the Safety Performance Target, it needs to wait for the year 2019 data.





## SPI-O-14 ATM failure - Serious technical failures

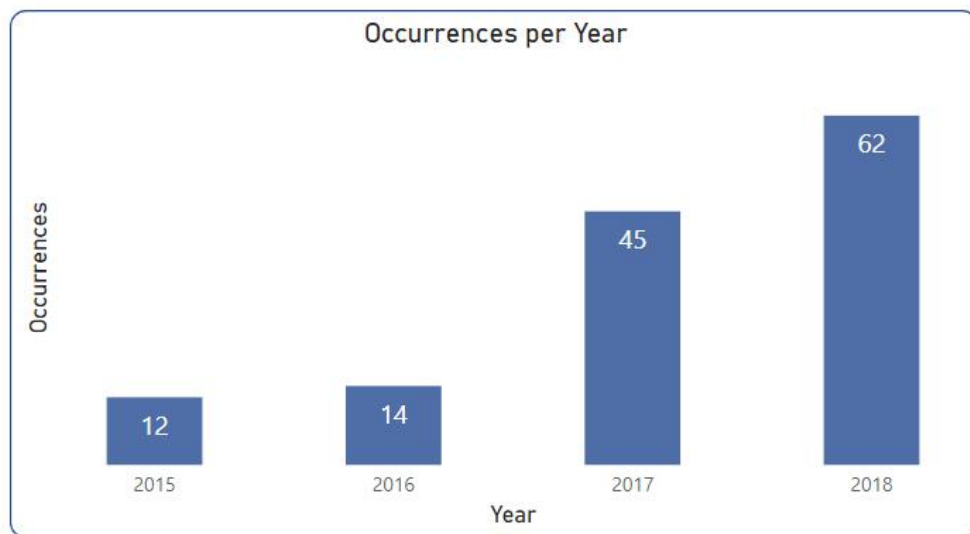


Even if some **ATM failures** have been notified in the years 2015 (2 events) and 2016 (6 events) a realistic number is available only since January 2017, when the main Italian ANSP began to regularly transmit reports to the eE-MOR system. Data available for the last two-year period 2017-2018 show a significant increase in the number of events but, however, to confirm such trend, as well as for the definition of the Safety Performance Target, it needs to wait for the year 2019 data.





## SPI-O-15 APR - Interferences of APR with manned aircraft during take-off or landing



The trend over the four-year period of **APR interferences with manned aircraft** shows a constant increase over the four years period with a big step in the year 2017 (+ 320%).

However to confirm such trend, and especially to establish a realistic value of the Safety Performance Target and, furthermore, to review the ENE.002 action of the ENAC Safety Plan, it is considered necessary to wait for the year 2019 data.







## 7.2 Process Oriented [systemic SPI]<sup>4</sup>

Codice	SPI	Indicator description	Data source [ref. § 3]
<b>SPI-S-01A</b>	Ramp Inspections performed	Ramp Inspections performed, on annual basis, in respect of EASA target	3.B
<b>SPI-S-01B</b>	ACAM inspection performed	ACAM inspection performed, on annual basis, in respect of ENAC target	3.B
<b>SPI-S-02<sup>5</sup></b>	Follow-up closure of MOR collected in eE-MOR system	Percentage, on an annual basis of occurrence reports collected in the eE-MOR system for which the follow-up has been completed in compliance with Reg. (EU) 376/2014	3.A
<b>SPI-S-03A</b>	Occurrences reported by private pilots	Number, on an annual basis, of occurrence reported by general aviation private pilot, in compliance with Reg. (EU) 2015/1018 Annex V, as indicator of the spread of Safety Culture principles in this sector	3.A
<b>SPI-S-03B</b>	Occurrences reported by APR pilot/operators	Number, on an annual basis, of occurrence reported by APR pilot/operators in compliance with ENAC Reg. "Mezzi aerei a pilotaggio remoto" art.29 as indicator of the spread of Safety Culture principles in this sector	3.A
<b>SPI-S-04</b>	Training activities on aviation safety	Product of the participants * number of course days for training activities carried out on subjects directly related to aviation Safety	Human Resources Unit
<b>SPI-S-05<sup>5</sup></b>	Annual rate (for each domain) of non-compliance raised to approved Organization for renewal	Ratio of number of non-compliances (findings), on an annual basis, raised to approved Organization and number of approvals renewal audits granted in accordance with EU regulations	EMPIC system
<b>SPI-S-06</b>	Reactivity index to Safety Recommendations issued by ANSV	Percentage, on an annual basis, between the number of Safety Recommendations received by ANSV and the number of FACTORS issued by ENAC within the terms of the Reg. (EU) 376/2014 (90 days)	Safety Unit
<b>SPI-S-07<sup>5</sup></b>	Reactivity index to findings arising by Quality Unit	Percentage, on an annual basis, of the completion of the corrective actions within the time limits established to the findings notified to the ENAC departments following audits carried out by the Quality Unit	Quality Unit

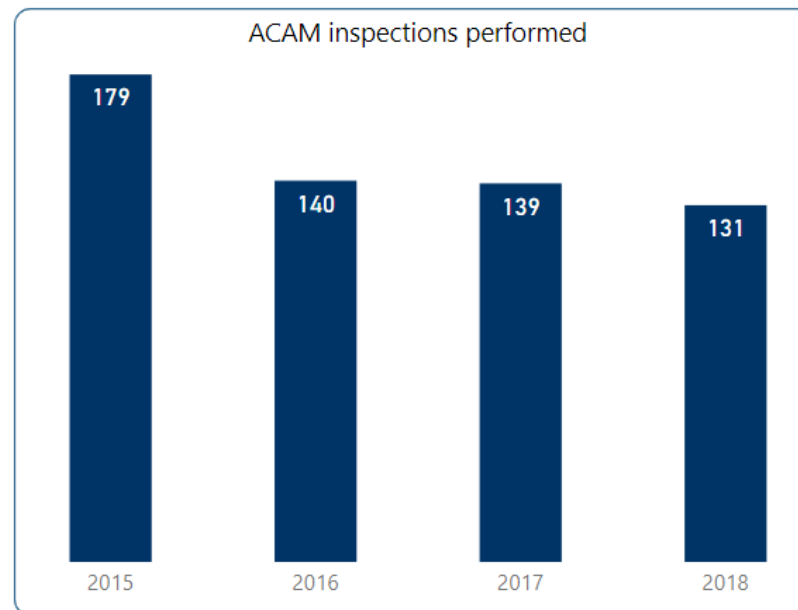
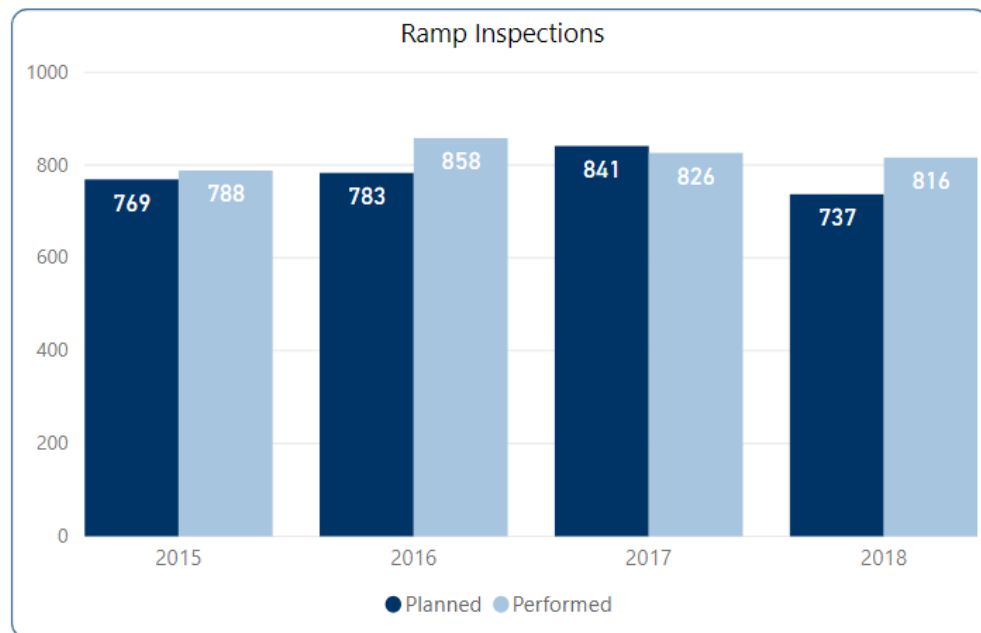
<sup>4</sup> some indicators, based on the experience gained during the analysis, could be slightly different from those listed in the ENAC SPI document.

<sup>5</sup> these SPIs will be analyzed in the next edition of the ENAC Safety Report.



## SPI-S-01A Ramp Inspections

## SPI-S-01B ACAM Inspections



Over the four-year period the number of Ramp Inspections performed annually remains very close to an average of 822 inspections per year, fluctuating around this value. Also the ratio of inspections carried out, compared to the planned ones, fluctuates but with a wider range. Therefore at the moment it is not yet possible to identify a Safety Performance Target and it need to analyse the year 2019 data for a more in-depth analysis.

In the case of ACAM inspections it is not possible to indicate the number of planned inspections since it has been repeatedly changed during each year. The number of inspections carried out, on the other hand, shows an evident continuous decreasing trend which must be verified with the year 2019 data.





## SPI-S-03A Occurrences reported by private pilots

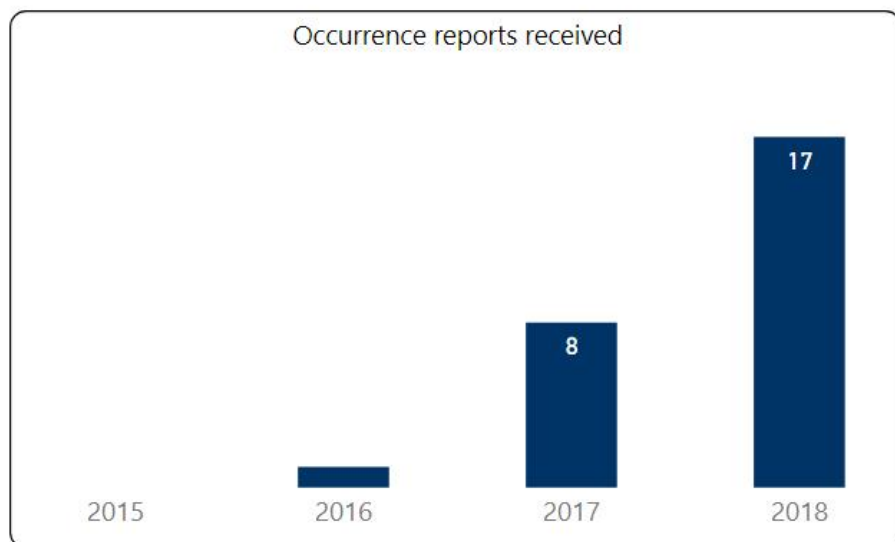


The limited number of MOR's received does not allow for a statistically valid analysis. The data currently available for year 2019 show, moreover, a substantial constancy of the value which appears clearly much lower than the safety events that have actually occurred.

Therefore a strong Safety Promotion action should be introduced in the next edition of the ENAC Safety Plan in order to promote the need to satisfy the obligation to report safety events to ENAC (regulation UE 376/2014)



## SPI-S-03B Occurrences reported by APR pilots/operators

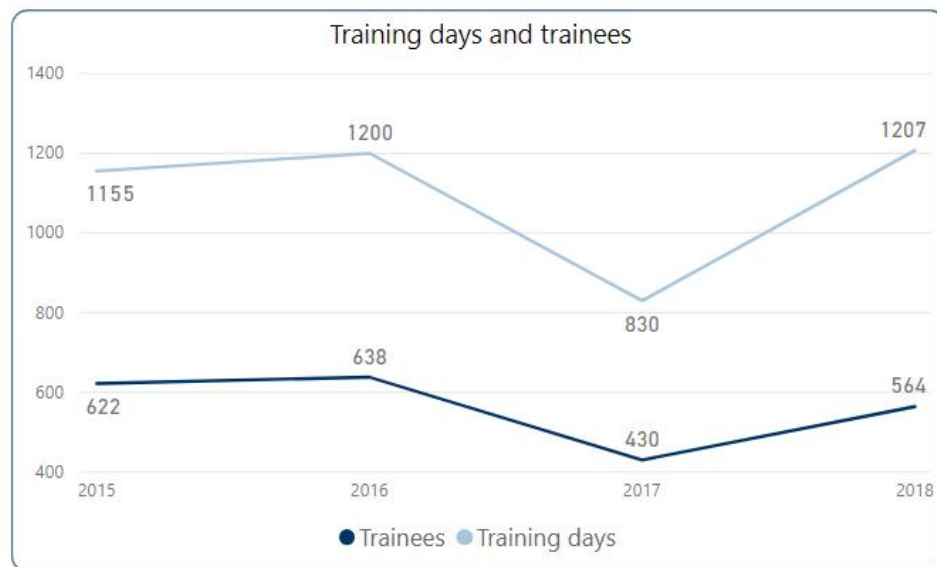


The limited number of reports received does not allow for a statistically valid analysis. The data currently available for year 2019 show, moreover, a substantial decrease of the value which appears clearly much lower than the events that have actually occurred. This can be partially explained by the regulatory framework that has been constantly evolving over the last few years.

However a strong Safety Promotion action should be required to be introduced in the next edition of the ENAC Safety Plan to promote the need to satisfy the obligation to report safety events to ENAC (ref. RPAS national regulation).



## SPI-S-04 Training activities on aviation safety



In past years training data have been aggregated differently from those required for the calculation of the SPI and, therefore, it is only possible to provide trends of the yearly training days and of the yearly trained persons.

Data, for both figures, show a minimum in the year 2017. Such minimum can be explained with the need to prioritize the training for administrative processes in that year. However the essential training for safety matters was nevertheless ensured.

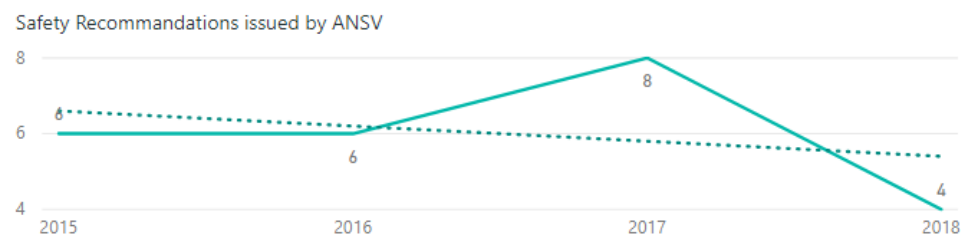
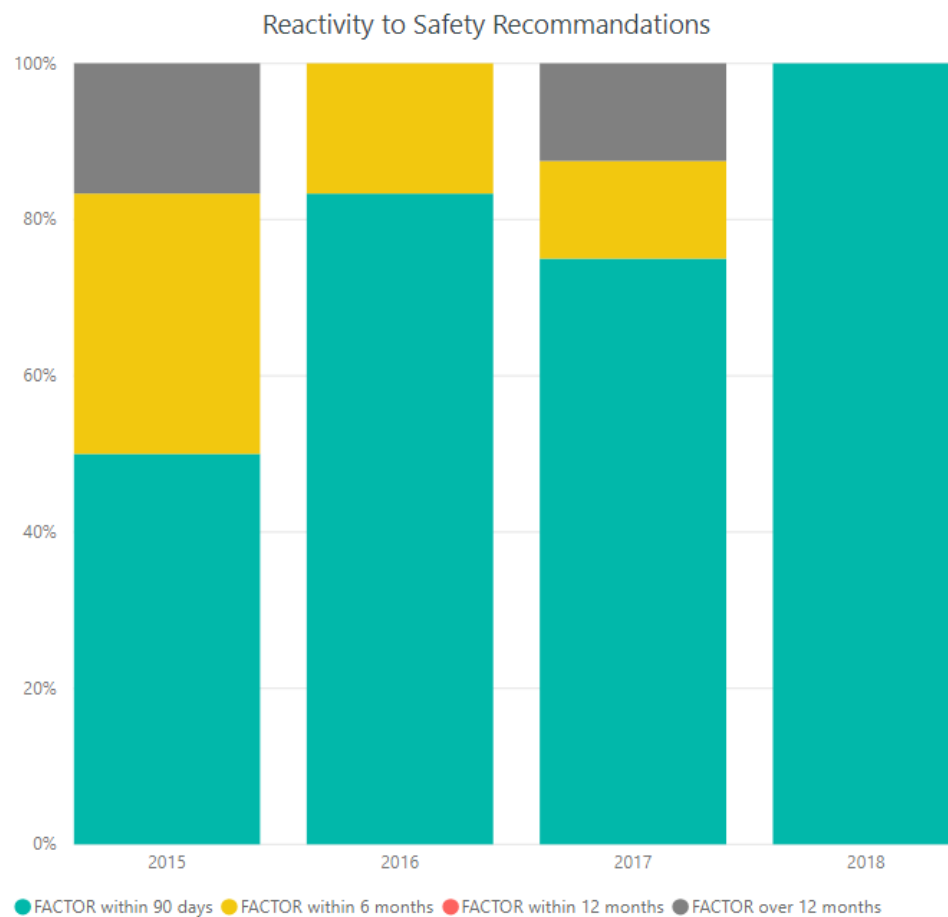
Due to above evidence Human Resources Unit from 2020 will reorganize its records in order to collect data in a format more appropriate to calculate the SPI.







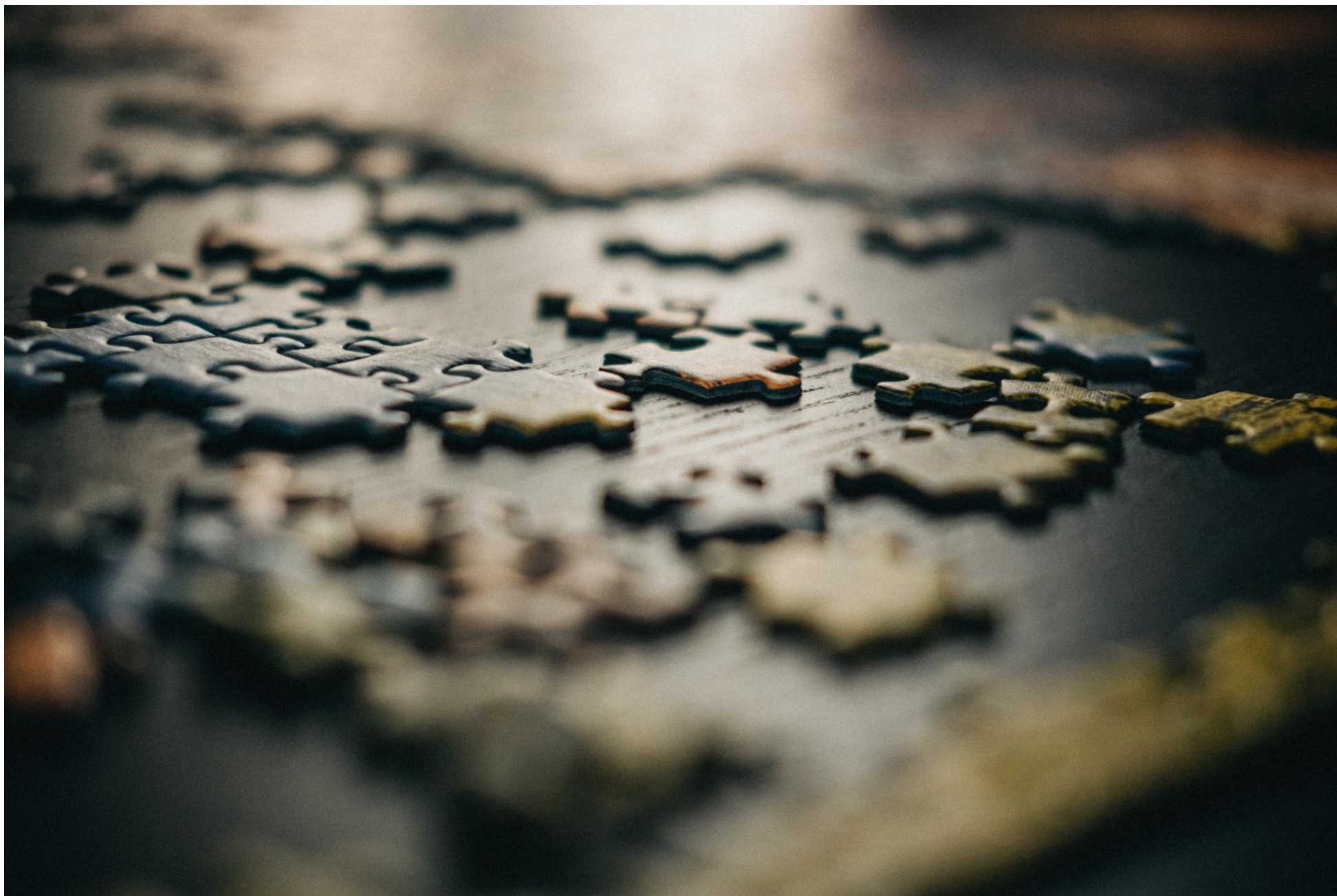
## SPI-S-06 Reactivity index to Safety Recommendations issued by ANSV



Excluding the year 2015, in the following years 2016-2018 ENAC responded to the ANSV Safety Recommendations by issuing the correspondent **FACTOR** (*Follow-up Action on Occurrence Report*) within 90 days at least in 75% of cases with a peak of 100% in 2018.

For this reason, for the year 2020, it is assumed to set a Safety Performance Target (SPT) of at least 80% FACTOR's issued within 90 days from receipt of the Safety Recommendations from ANSV.

Then this proposed SPT will be brought to the attention of the ENAC Safety Board for the acceptance in the framework of the ENAC Safety Plan 2020-2024.





## Conclusions

This Safety Report is the first report, published by ENAC, based on the analysis of safety data collected in the eE-MOR system after the entry into force of the Regulation (EU) 376/2014.

Data analyzed are those relating to the Safety Performance Indicators [SPIs] published in June 2019.

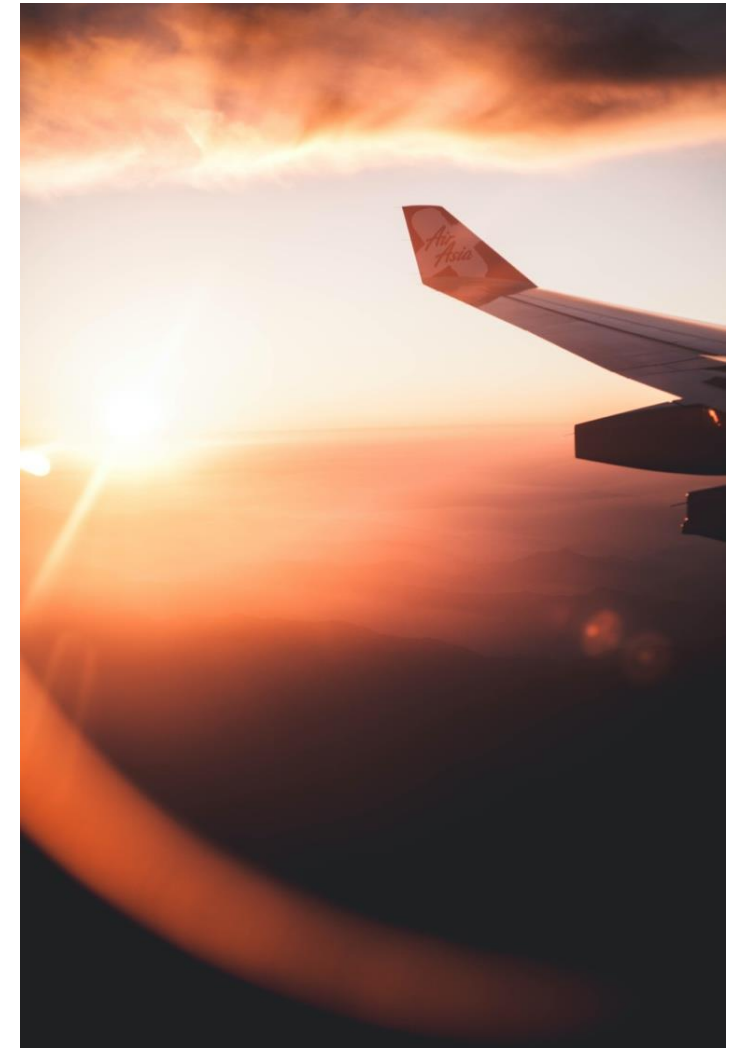
The analysis carried out had mainly the following purposes:

- ➔ verify SPIs trend in the four-year period 2015-2018 in order to identify, whether possible, is Safety Performance Targets [SPTs] can be identified
- ➔ verify if the SPIs chosen are realistic and significant and, eventually, to obtain suggestions to adapt or modify them
- ➔ be an assessment tool to verify the effectiveness of any action of the Safety Plan associated to each SPI.

The result is definitely positive and the data analysis provided the expected indications.

Although in the case of the Safety Performance Targets it is clear that is more appropriate to await the analysis of the 2019 data before formulating realistic hypotheses. Furthermore, a difficulty emerged in the acquisition of data relating to some systemic SPIs for which it seems necessary to perform a more deeply evaluation.

Finally, is intention of ENAC to integrate 2019 safety data in the analysis as soon as they are available in order to have a more detailed picture and to start with the identification of SPTs to be measured in 2020.



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Produced by



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