

**ENAC** Italian Civil Aviation Authority



# Report and Social Balance 2017

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## **Vito Riggio**

PRESIDENT  
ITALIAN CIVIL AVIATION AUTHORITY

## **Alessio Quaranta**

DIRECTOR GENERAL  
ITALIAN CIVIL AVIATION AUTHORITY

## **Alessandro Cardì**

DEPUTY DIRECTOR GENERAL  
ITALIAN CIVIL AVIATION AUTHORITY



**CONTRIBUTIONS**

## Vito Riggio

PRESIDENT  
ITALIAN CIVIL AVIATION AUTHORITY



In the famous fragment 119, Heraclitus seems to say that a man's character is his own fate. Leaving aside all the discussions and interpretations, we can agree that the principle implies that, in every human being, there are some invariants, a constant which corresponds to his personality's fundamental area and which defines the developing and the advance towards the target as well. That is what we call destiny and what the philosopher defines as daimon.

If we could apply the same idea also to legal entities, agencies, authorities that crowd the present world much more than the past, what would the Italian Civil Aviation Authority's character be like, considering that we know its legal form, physiognomy, structure and it is so familiar to us?

That is not just the legal status, which, from the foundation act celebrated in the twenty-year anniversary, is clearly outlined as non-economic public body to be transformed in economic public body before the 31 July 1999. It is about its structure, about the way its autonomy is expressed, about its capacity to propose and listen to the community, the community of the administration staff, of the air carriers, of the national aviation industry, of the airports and so on.

About its administrative and accounting activity; about its way to meet expectations, in one word it is about its actual constitution.

About being an body created through a governmental and legislative decision in order to meet an international expectation to ensure the update of some safety standards, and then, in the abstract, put in a position to gradually develop its identity in the world of the legal entities.

Above all, it is about being an institutional subject in communication with the supervising Ministry and in collaboration with other entities like ENAV, body which later has been transformed in a joint stock company and then partially - in my opinion, successfully - privatised and the other entities such as airports, air carriers, and the sector's industry.

All this thanks to its ability to convert the original entities, RAI (Italian Register of the aviation), Civil Aviation General Directorate of the Ministry of Transports, "Ente Nazionale della Gente dell'Aria" with its small staff, in a new experienced protagonist, with a strong international connotation, able to be recognised and appreciated by the public opinion and not only by the insiders.

In other words, ENAC's character definition is bonded with the effects of its actual administration, with the concreteness named by the fathers of the administrative law, from Orlando to Ranelletti and Romano, who explained us that the administration and the real actions in the real world



explain us the nature of the subjects, beyond their illusions and their constitutional expectations. Therefore, the constitution without administration can turn into a dream. The juridical definition is irrelevant if it is not supported by an analysis of the way the functions are performed, of the subject's inner language and comprehension structure, of the prevalent cultural education, of the exasperate bureaucratisation that is the management skill to light up the actions and give hope and confidence to the surrounding universe.

That is why in the twenty-year anniversary, I am not enchanted by the discussion about the legal nature if it represents just the formal transformation as provided for in the ignored article 1 of the founding legislative decree. The anniversary spell may have pushed to set a still valid date, but none of the excellent ministers that have succeeded in the last years (they have been 9) really wanted to respect.

The new millennium, imagined as a happy time that immediately became painful due to the Twin Towers' shock and to the Linate accident for us, in the meantime, suggested the formation of the body's character and to let the fusion go on, between difficulties coming from resistances, corporatism, differentiated competences and heterogeneous styles. Then it came the crisis that involved not only the major company, once monopolistic, and now still goes an affecting competitive market, occupational guarantees, competitiveness and efficiency; more recently, there has been the illusion, somehow clarified in literature, to be transformed in an Independent Authority, a service role overturning towards the supervising minister and the affirmation of a completely different scenario, but actually not coherent with someone's plan, afflicted by destructive illusion without result; in the end the economic crisis, the most devastating ever, which was faced without considering the differences, as many times reported, like in our case.

While the other entities were crying poor cause of the linear cuts, ENAC was able to develop a highly efficient financial system, oriented to an investment increase and then, once normalised the relationship with the air managing bodies and once reduced the personnel, to foster the changing. At the end of this process, that needs a much deeper examination in other specific context, even thanks to the collaboration of Prof. Sabino Cassese, who is great interpreter of the organization and author of the monograph published by Demetra, ENAC is not yet what maybe it should be, but for sure, it is not what some thought it would have been. The Europeanisation and the globalisation revolutionised the goal of the jurist to make fence to contain words and overwhelmed the dykes. Nowadays ENAC is a dynamic European reality. It is an expression of the limited sovereignty treated in the 1948 Italian Constitution. It is a body that obtained prestige thanks to the fact that, after the Linate accident, there have been zero death recorded, despite the extraordinary growth of traffic and airports expansion. Until now, it is wise to say, but for sure with luck and merits; as though making the protagonists feel always more responsible, creating a strong collaboration with them, giving the power to coordinate, as planned by the EU law. In other words, an element of character rather than legislative.

However, in Italy someone was planning to wickedly celebrate ENAC, replacing it with something else. Plan which is still alive but every day weaker in Italy, even if, at European level, it is still inexplicable why the technical and economic regulation are still under the same body.

That is valid for the three biggest Italian airports, which produced impressive results of quality, investment and in the relationship with the passengers, under the ENAC control, despite the



clumsy attempts of other subjects searching for space. Just think of the important result of Rome's Airports, Fiumicino in particular, which has been the best in the world! And Ciampino Airport, which gives big expectations. In other words, we do not really know ENAC's character. Sometimes it seems that a process of bureaucracy reduction, speeding up and community approaching succeeded. A strong, real, constant process of globalisation as showed the appreciated presence during the international and European bodies. Some time we sink down again in the swamp, in the fear, in the hesitation that characterise many public and private Italian businesses.

However, since the end is yet to come, although twenty years are a long enough period, to mention Camus, as every man is responsible for his face, it is necessary that ENAC, its staff and its partners work to let the character we have built, if there is any, emerge and appear.

Much depends on the ability to use the available resources to fill the gaps and to train always more specialised personnel, as required to meet the needs.





## Alessio Quaranta

DIRECTOR GENERAL  
ITALIAN CIVIL AVIATION AUTHORITY

In the twenty years, there have been a transformation of the national and European civil aviation and deep changes at global level.

Just think of the impetuous success on the market of the low cost air carriers that, in the last two decades, have revolutionised the traditional air transport idea making it a mass transport, enormously contributing to the development of the aviation sector and of the whole world economy.

The also achievement of the emerging markets has considerably contributed to move the axis of development of world air transport. Until twenty years ago, it was mainly based on the relations between North/South America and Europe; nowadays we can see an important growth of the Middle East region, in particular of the Persian Gulf and of the South-East Asia, which is where great investments hail from such as major orders of new aircrafts by the Arabian Peninsula's air carriers.

This situation forces the system of the "Old Europe" to face a new reality that is not simple but full of opportunities.

In Europe, during these years, we have seen an effective implementation and renovation of the liberalisation process of the air transport European market; it has started in the first half of the Nineties with the so-called "Third Package" and still not completed since it has been influenced by the international dynamics evolution and, in the past years, by the worst crisis from the birth of the commercial air transport, in the Forties.

We moved from the liberalisation of the European and national routes access for the companies with an EU licence, to the creation of a transparent system to manage the slots on the European congested airports, to the definition of a single reference framework for the booking system of the ticket offices, to the establishment of a fees and charges system for the airports oriented to the cost which permitted an infrastructure development always more often financed by the resources of the market.

Everything happened and it is happening through a leitmotiv, which places the passenger and its protection at the centre of the system, as the unifying element of the subsystems which would not have any right to exist without a mobility demand from the citizens.

In the light of the changes that affected the sector in the last twenty years it is necessary to rethink some axioms in function of the expected development. In particular, it would be needed to go



beyond some concepts that were at the basis of the European liberalisation process and which are not valid or cutting edge anymore in a sector characterised by an unprecedented dynamism. For example, the clause on substantial ownership and the effective control of the air carriers that in the nineties pursued the objective to overcome nationalism maintaining some protectionism despite the innovative atmosphere. It should be revised considering the new commercial dynamics that more and more require wide integrations and alliances that bear with difficulty geographical constraints.

If the maturity level reached by the air transport sector is clear, thanks also to ENAC's contributions in the twenty years as civil aviation authority, there is also the need to think to the future; a future to be imagined and built starting from the past experience and a clear analysis of current situation.

We must also remember the wide articulation of the original competencies given to ENAC by the Parliament with long term outlook; competences that have increased during the time and allowed the Italian civil aviation system evolution reinforcing ENAC's central role.

With regard to ENAC's ability to interpret the moment and find the most efficient and effective answers in response to the staff reduction caused by the public spending cuts, the ENAC's effort to ensure its functions, has to be highlighted. The challenge has been partially won also thanks to a careful simplification of the activities that allowed better use of personnel.

The same recent measures that permit new employments give a sort of tranquillity but they may not be a guarantee for the future, considering the growing rate in both traditional and emergent areas.

In the hope that the whole system may find its balance in a shared development, I want to wish the Italian civil aviation additional twenty years full of challenges like the ones just passed.





## Alessandro Cardi

DEPUTY DIRECTOR GENERAL  
ITALIAN CIVIL AVIATION AUTHORITY

As in all human events, together with maturity there comes the time for stock. The last twenty years took the civil aviation system to a level of full maturity: from being an exclusive way of transport, it has become a mass transport enriching the multimodal offer for the Italian and foreigner citizens. This leads to reflect on the activities carried out, above all in the achieving the safety levels expected by the citizens. In this period, the foundations for a European transport policy able to compete with the international systems have been laid down. It allowed an ENAC's active participation and a simple coordination with the Ministry of the Infrastructures and Transports to build the common European home. In these years, we have seen a complete competences' devolution from the national to the European level, from the aircraft airworthiness, design, building and maintenance, to flight operations, crew licences and, at a later stage, competences about airports and airspace. A challenging route that needed years of intense work and efforts of the European institutions and national authorities to reach a new and harmonised regulatory framework shared by all the EU Member States. It permitted the overcome of the several and different national codes strictly bonded with the culture which became part of the operations and procedures which had to be replaced.

It was not easy to update and transform the whole air transport industry, from the aircraft manufactures to the air carriers, from airport operators to air service providers to the new safety and liberalised market rules; the same can be said of ENAC that had to reshape the national framework to make it coherent with the European system and the wide EASA regulations, together with the changes of the operational models connected to the staff's cultural aspects.

The change happened in Europe has been epoch-making because a European authority with wide competencies overlapped the national authorities asking their help to build a more integrated European system where the national authorities are also in charge of some EASA tasks execution in a concept of partnership and collaboration. As known, big organisational and institutional changes can be an element of development or a critical issue on the basis of the results.

In this respect we ask ourselves if and how the safety has changed over this long period, if the system safety level has improved or not. I think that the answer to the first question is positive because the regulatory safety has objectively changed. Today it is going towards a new formulation, leaving the prescriptive model that often does not considers the technological innovation and the differences between the industry organisations in terms of complexity and operational environment to embrace a new approach based on the evaluation of risks and the performances of operators, the so called "performance based regulation". This trend predicts



another season of changes that will take the whole regulation framework to use the mentioned principles, leaving the prescriptive component for those standardised situations that may benefit from it.

A similar approach has been used for the oversight and supervising activities that today are oriented towards the evaluation of the risk connected to the supervised activities and to the performances of the single companies. For sure the management of safety has deeply changed in the last twenty years in the same way as the professional profile of the specialised and inspective ENAC staff has changed to enrich their abilities through high level training courses to get and maintain the required levels; training courses that are very demanding for the staff and burdensome for ENAC which has to ensure a high specialised staff not to be isolated by the European context.

On the other side, about ENAC regulation action results and the ability of the air transport industry to ensure the safety, a growth of all the civil aviation sectors has to be noticed, reaching, during the years, levels never seen before. A proof of that is the high safety level reached in the commercial air transport that recorded one accident every ten million flights for the western air carriers (Europe and Northern America) where the recurrence was ten times higher, one event every million flights, in the past years.

These goals give hope for the future and presuppose a constant and strong bond between the institutions and the sector's industry. Moreover, these goals may not be reached without the technology, the aviation operators' awareness and the constant effort of the civil aviation action of certification, approval and safety oversight.

A complex sector like the one of the air transport may evolve only if every component, ENAC included, is effective and proactive taking the related responsibilities.

I think it can be said that the competence devolution from the Member States to the EU and the EASA system foundation let the system have a considerable improvement of the safety in the last twenty years. The entire system has been subjected to a strong evolution, learning from its own mistakes and providing itself with new tools and regulatory approaches, investing in the quality of the resources. Italy as a country, with ENAC and the other companies, followed the European evolution, actively participating, being one of the creators, and achieving results sometimes better than the European average, in every stage of the sector.

With regard to safety, it has to be highlighted the intense ENAC's and airport managing bodies' efforts to realise the considerable change in the airport sector which, after the Linate accident in 2001, showed some cracks in both the infrastructure standards and the institutional roles and competences.

In a few years the system moved from a situation where standards and regulatory requirements were not univocal, generating a heterogeneous reality connected to every single airport, to an ENAC's more precise regulation and definition of the safety level to achieve and the abilities and competences required to obtain a certified system able to correct the discrepancies. Moreover, it allowed the airport system to make a qualitative leap in the transition to the EU Reg. 139/2014, realised in 2017 in line with the European expectations.



It is fair to highlight that the national events aimed at containing the public spending have considerably affected the ENAC's capacity to provide timely responses to the transport industry and with the correct level of in-depth problems analysis; indeed, always more often the structural lack of specialised personnel is causing delays in the approvals and authorizations. The activity overload is provoking, and will provoke in the future, potential deficiencies in the oversight ENAC is required to ensure and a damage to the operators that have to deal with a strong competitiveness.





## TWENTY YEARS AFTER ENAC'S FOUNDATION

In the 2017 Report and Social Balance, we set out to illustrate the development of the air transport system in the twenty years following the foundation of ENAC - Italian Civil Aviation Authority, occurred under Legislative Decree of July 25, 1997, 250/97, bringing together three pre-existing organisations, each one with its own prerogative: Civil Aviation General Directorate of the Ministry of Transports, National Aeronautical Registry and "Ente Nazionale della Gente dell'Aria". Through the addition of new competences on airspace as part of an important transformation plan to rearrange the Italian air transport, from 2004, ENAC has become the Italian single authority in regulation, supervision, certification and control of civil aviation.

ENAC's foundation has represented the synthesis of the Italian Parliament political will, which felt as necessary the evolution of the whole division, creating a new actor in the institutional setup provided with financial, organizational and regulatory autonomy: an independent authority that does not burden on public funds, provided with legal means and instruments to rule and control the Italian civil aviation system.

It is important to highlight that twenty years ago the air transport was an elite sector; over the course of time it has become a mass phenomenon which moves hundreds millions of passengers, over 174 million in 2017 in Italy. The airplane, nowadays accessible to every social class, enriches the mobility opportunities, by integrating the more traditional railways and roads.

The editorial about the ENAC's twenty years wants to describe the evolution, between 1997 and 2017, of the most important components of the air transport industry: from safety to security, from airports to economic regulation, from airspace to environment, with particular care of the passengers. The ENAC's activity has ensured a growth that has given Italy a high-quality air transport.



### SAFETY

The air transport safety acquired international relevance with the Chicago Convention in 1944, when the Convention on International Civil Aviation established International Civil Aviation Organization (ICAO), a specialized agency of the UN charged with coordinating and regulating international air travel.

From the beginning, ICAO has published 19 technical Annexes that define the standards and the recommended practices for the international civil aviation operations. To this day, the Member States are 192.

In May 2000, ENAC faced the first audit of the USOAP (Universal Safety Oversight Audit Programme) - ICAO when the structures National Aeronautical Registry and Civil Aviation General Directorate had just started a complex convergence progress in the management of its functions on flight safety.

The ICAO audit focused on the safety regulatory and organizational aspects, in that time limited

to flight licences, flight operations and airworthiness, using a voluminous survey (five sections: LEG, ORG, PEL, OPS and AIR) and specific tests to show the ICAO team that the Italian flight safety sector was controlled on both rule and aviation organisations surveillance point of view. The above-mentioned external audit, beyond the quite positive results, showed the importance of a structured approach to safety rules and univocal organization to preside over the sector with appropriate resources for the national and international expected actions, with skills and knowledge coherent with the competences of the local and European entities.

At that time, the creation of the European Aviation Safety Agency (EASA) was already outlined and it born two years later with the EU Regulation 1592/2002, which established the need for the Member States to be part of the European regulation and certification processes. For good reason, they said, "Europe joined Italy" and not vice versa, meaning that Italy was obliged to take part to the European contexts as an EU member.

In addition to the development of the technical function (at that time enough in terms of human resources but not to cover the new organizational needs imposed by the improved regulatory, surveillance and international participation processes), the recruitment of a considerable number of operational figures - flight inspectors - with previous working experience for air transport companies and valid professional licenses, was fundamental.

The teamwork of the engineers and flight inspectors in the flight operators' certification and surveillance processes, in the training courses and later in the airports, allowed different roles and mentalities to combine and to get rid of a dualism that did not facilitate an efficient safety management.

Furthermore, we achieved the awareness that the basic preparation and the professional experience have to be supported by training processes involving not only regulations, but also operating, managing and motivational growth.

The painful experience of the 8<sup>th</sup> October 2001 Linate accident, led to ENAC's Regulations emission to build and manage airports, and, in the following three years, to the certification of all the airports open to commercial traffic, fixing an important normative and technical surveillance lack.

All these factors contributed to reach a remarkable result in terms of plane crashes rate in Italy, comparable or lower than the European average for the last ten years and among the lowest in the world.

The ICAO audit of ENAC have been repeated in 2006 and 2011, including airports and airspace surveillance and plane crashes inquiries (Air Investigation Board - ANSV competence), showing positive results: the element that proves a civil aviation authority competence to ensure the Safety Oversight is the percentage of Effective Implementation - EI of the standards and recommended practices (SARPs), contained in the Technical annexes of the Chicago Convention on International Civil Aviation. The value has to be as high as possible: the Italian EI is currently 89,22%, considerably higher than the world average (60%) and among the highest in Europe. To fulfil the institutional mandate, one of the ENAC's first strategies has been to maximise the participation to international fora to promote national regulations and policies and to provide its contribution to aviation industry and national air transport.

At the beginning, only a few resources were involved, currently more than 100 organisms and



not occasional fora at ICAO, ECAC, EU, EASA, Eurocontrol, etc., oversee the air safety field. The Italian contributions during the fora have always being remarkable: among the others, those given by Eng. Giuliana Tamburro in avionics and remotely piloted aircraft systems and by Eng. Bruno Moitre in aircraft airworthiness and composite materials, both deceased prematurely. Furthermore, over the years, a considerable number of ENAC's employees reached management roles in the international fora (president of the body, committees, teamwork coordinator) as a sign of the growth of competences, skills and authority achieved through the international experience, training and participation.

From 2004, the introduction of the European rules developed at EASA - with ENAC's specialist contribution - replaced the JAR and national rules and made the regulatory and surveillance framework.

It permitted the elimination of the differences in regulations and applications, which have always caused complaints in general aviation connected to the preventive nature of the national aviation regulations and of their application compared to the neighbouring countries.

ENAC has been one of the first to take part to SAFA Programme (Safety Assessment of Foreign Aircraft), which consist of ramp inspections of the foreigner airplanes in airports of transit, born within ECAC and then absorbed by EASA in 2008.

In SAFA programme, whose president from 2004 to 2008 has been an ENAC manager, have been mainly employed airport inspectors qualified according to European standards, located in the main national airports. In collaboration with ENAC, they have done 800 - 1000 inspections per year, being one of the best authorities as number and quality of the inspections, giving an important contribution to the European inspections database, which is the primary source for the EU Safety List, European regulation 2111/2005.

The use of airport inspectors for ramp inspections showed that it is possible to enhance and qualify the staff, for specific technical activities, without a technical background, by leveraging their personal and team motivation. It has been a successful idea to choose the best ones for organizational and technical skills as national programme coordinators.

Thanks to Safety Management System introduction, ENAC has been among the first European authorities to develop, together with the Ministry of Infrastructures and Transport, ANSV, the Air force and ENAV, the State Safety Programme – Italy, published in 2011 and now at its 3<sup>rd</sup> edition. In the knowledge of the safety management principles, ENAC has introduced a computer system to collect the aviation events (crashes and inconveniences), eE-MOR, that is at the forefront in Europe.

The biggest challenge though, was for the civil aviation to find strategies with the aim of keeping the safety values at socially acceptable levels, bearing in mind that the absolute safety (no fatal crashes regardless of the considered period) cannot be achieved in any human activity.

As known, in response of an increasing use of airplanes, the safety improvement is based on technical, human and organizational factors. These have been subject of consideration in the recent past and this is where all the regulations about the organizational and monitoring of undertakings risk originate (Risk Based Oversight).

In 2014 ENAC introduced the Risk Management to implement the Safety Management System not only for aircraft operators, training centres and airports but also as organizational tool,



developing its own risk evaluation system applicable from technical certification and surveillance processes to the management and administrative processes.

In recognition that the organization as a whole, and not only its technical department, has to give its contribution to implement policies and strategies to improve flight safety.

With regard to Risk Based Oversight, ENAC has elaborated and it is applying the risk system evaluation to the inspective activities of the surveillance plans of the certified undertakings, answering to the European standards requirements. Moreover, it is laying the foundations for an optimised surveillance activity based on the undertakings organizational complexity, on the type of risk and on the subject characteristics.

Unfortunately, from 2011, the reduction of public spending slowed down the authority growth, preventing a generational turnover of the air security specialized staff (engineers and flight inspectors).

A gap-filling action is fundamental to face with the same capacity showed in the last years the complex challenges in the crucial sector of the civil air safety.

## SECURITY

In terms of security, understood as the set of all the activities concerning the ground, on-board and airport security to prevent illegal actions, from the seventies, the main international problem to face has been the aircraft hijacking (Italian law 694/74 "Regulation of firearms on board aircraft").

Tokyo (1963), The Hague (1970), Montreal (1971) Conventions were aimed to face the emerging phenomenon of terrorism; in the following years the new forms of criminal acts against transport security have made inappropriate the instruments indicated by the previous conventions. News reports showed that the terrorists' mentality was constantly evolving; just an example: we moved from a past where the hijackers needed an escape route after the hijacking to a new situation where they are ready to die in the name of a terroristic - political - religious ideal.

The 11<sup>th</sup> September 2001 terrorist attacks in the USA (and previously the explosion in the air of a Pan American aircraft over Lockerbie in December 1988) have provoked a shock in people's minds and a global reconsideration of the air transport security by the political institutions and civil aviation authorities. From this point of view, the legislation has been always more stringent to face more complex cases and a wider spectrum of potential ways to attack. Therefore, not only the aircraft but also the whole system needed protection: airports, air navigation services, airline companies and the last frontier of cyber-attacks.

The heavy digitalisation that involved the whole sector in the last years has concerned the aircraft itself (controls and on-board assembly), other areas like the connections with the air traffic control towers and the operational management of the airport. Therefore, the cybersecurity is an additional element of the terrorist attacks escalation, able to break the chain causing a domino effect and affecting the reliability of the transport system.

Nowadays we are in a structured regulatory environment that establishes specific obligations and conditions for the passengers to access the air transport: there have been important changes in the last twenty years, when the habits of the air transport users radically changed. In the past,



the boarding and the access to the security-restricted areas was easier and less structured, considered the intrinsic safety of the means of transportation – not considering hijacking. After September 2001 attacks, when the airplanes have been used as weapons, precautionary measures have been taken to avoid the repetition of similar phenomena, trying to intercept in advance the potential dangers over several checks. These advanced checks represent additional barriers with an impact on the transport access usability, but they have made the transport safer and they contributed to recover the system credibility and its attractiveness, since the air traffic growth is still a relentless economical phenomenon that tends to double in the next twenty years, despite the terrorist attacks.

In Italy, in the nineties, the C.I.S. Interministerial Committee for Security (now National Civil Aviation Security Committee) was created, and after September 2001 attacks, with Ministerial Decree 107 T 02/10/2001, ENAC took the role of Authority for security and the C.I.S.A. presidency.

The first structured National Security Programme was born in 2002 and it was divided by application areas.

At European level, the Regulation 2320/2002 was approved and it established “common rules for the civil aviation safety”; it was divided into 13 thematic areas based on Recommendations Doc. 30 ECAC.

Nowadays the rules emanated by EU, which are the reference framework for all the security measures, are collected in the Regulation 300/2008, often updated.

In this context, ENAC, since it got the role of Italian civil aviation security authority, invested resources and cared about the training of its staff and about their skills development. Today, as confirmed by the EU Commission inspections aimed at the verification of the implementation of community rules, behaviours and capacities of the national authorities, the ENAC’s success, in collaboration with other state authorities, in particular with the Police, is clear.

The legislative process shows that the security regulations are in constant evolution to be always efficient and updated in order to contrast and prevent illegal acts against civil aviation security. The rapid change of EU legislation, of national dispositions and, consequently, of the procedures adopted in Italy by ENAC, highlight that the battle to win is against the time; the legislation, practical and operational updates have to take account of the evolution speed of terrorists’ techniques; only a well-planned and shared action of contrast can be appropriate to prevent the risk of terroristic actions.

Therefore, the training and updating of the thousands of airport security guards is fundamental. ENAC, to pledge the best security culture dissemination, through a qualified teaching staff, issued a specific norm to regulate the achievement and the maintenance of the qualification of security instructor.

Today the security in the air transport sector is object of an increasing number of auditors and qualified staff, which guarantee the programmes fulfilment, and the application of measures to minimise the risk of terrorist attacks within certified entities (airport operators, service providers, aircraft operators, etc.).



## AIRPORTS

### The airport planning

The aviation sector development is one of the main driver of the country's socio-economic growth, sustaining citizens' mobility, the access to the global transport network and the economic exchanges between the international markets.

A fundamental element for the aviation sector growth is the airports infrastructural development, which is the access hub to the transport network. Its development cannot be separated from an appropriate planning of the airport infrastructure measures, which according to the traffic development prevision, represent the guiding principle to maintain the operational security and service quality level.

Until the end of the nineties, the strengthening interventions were planned and realised according to the necessities of the moment, without a medium and long-term plan and without considering the traffic estimation of growth. The interventions were accurate and sometimes expensive, but during the years, they could have turned out not being adequate to the airport needs.

A correct project plan has been achieved in the last years due to an accurate ENAC's activity that has brought almost the totality of the airports open to commercial traffic to have a Master Plan (Airport Development Plan). The main technical, planning and functional characteristics of the airport short, medium and long-term upgrades, defined to support the estimated traffic volume, are described in the Master Plans. Therefore, the Master Plans locate the works within the boundaries by ensuring a harmonic development in a time range.

In twenty years, we moved from a lack of a detailed planning to a system where each airport has the guiding instruments to realise upgrades, consisted of Master Plans and short-term intervention plan, at the basis of the Planning Agreements.

ENAC approves the Master Plans, prepared by the airport managing bodies, by verifying the coherence between the development strategies and the Presidential Decree no. 201/2015 that defines a list of airports of national interest and the National Plan for Airports.

Upon completion of the Master Plan approval process that implies the execution of the verification of environmental and urbanistic compatibility by acquiring the related authorisations, the Master Plans permit the immediate implementation of the project in the expected time. To support this, one only need think of the terminals extensions of Rome Fiumicino, Milan Malpensa and Venice airports that have upgraded the architectural and service quality offered to the users.

The sustainable development of the airports structures had a particular attention in the Master Plans evaluation and approval process, in accordance with ENAC mission to prevent, reduce and avoid that the air transport development may damage to the environment. A fundamental step in the Master Plan approval process is the Environmental Impact Assessment, made by ENAC as proposing entity, and disclosed at the Ministry of Environment and at Ministry of Cultural and Environmental Heritage.

Nowadays almost all the airports have a Master Plan and an Environmental Impact Assessment; new works realisation takes place in the utmost respect of the environment, by ensuring all the activities aimed at mitigating the impact generated by the realisation and use.



## Planning and levels of protection and service offered the passenger

The institutional activity directed by the ENAC's technical structures in the airport work projects evaluation and approval has been, in the years, oriented to the architectural quality of the proposed interventions, by a constant collaboration ensured to the architects and to the airport managers, during the plan elaboration and evaluation phases. Such activity wants to address the bond between shape and use towards technically quality interventions, capable of helping the airport development as an architectural-urbanistic organic system, integrated with the territory through the promotion of local cultural elements and excellences.

Referring to the airport terminals, the architectural quality has been treated during the design of the facades, volumes, external arrangements and internal spaces, to receive the incoming passenger and accompany the outgoing passenger by entrance that is the city's business card. In the project-developing phase, the technical supervisory activity has been aimed at ensuring a proper Level of Service (LoS) to the passenger, high levels of safety and security, respecting the environment and a correct cost-benefit ratio perceived by the passenger.

With regard to seismic risk, ENAC has started, together with the airport managing bodies, a specific seismic verification activity of the strategic buildings of all the commercial airports in Italy. In parallel a systematic planning and realisation of structural interventions to improve the airport buildings has started to reach an optimal building response in case of earthquake.

The whole airports structures, upgraded to have a better resilience in case of catastrophic event, represent an important element for the Civil Defence strategies, being immediately usable in case of national emergency.



## Concessions and Planning Agreements

Through the instrument of concessions, the public administration fulfils the primary responsibility for ensuring the Country's infrastructures and air transport services development. In this regard, the concession has the effect of transferring these tasks and responsibilities to a private entity with more freedom to operate in the market.

The reforms of airport concession system have started with the Law 537/93 and implemented with the ministerial decree 521/97 based on three important elements: externalisation to specific capital companies of services managements and infrastructure realisation, elimination of caps on public ownership and liberalisation of ground handling.

The goal was to transform the airports in a place of business to attract private capitals, to make profit allowing the infrastructures improvement without charge for the State, increasing the safety levels and the services quality.

The transformation has been stated in the art. 704 of the revised Italian Air Navigation Code where, beside the identification of the airport managing body as the main element of the infrastructural development strategies, enhanced the business and organisational aspects, by outlining the concession as an undertaking public service entrustment; it represents a constitutive concession where the relationship regulation originates from a negotiating activity where private and public aspects coexist.

The management's reform of airport concession system entrustment from a public held company

to a private company dealt with several difficulties connected with the innovation and with the concession procedure complexity, involving ENAC, Ministry of Infrastructures and Transport, Ministry of the Economy and Finance and Ministry of Defence. The process lasted longer than the law time limits, resulting in continued deferments until the recent years where the system moved from the old partial management's model to the model of total managements. The majority of the last twenty years has been committed to the system conversion to reach the complete management's privatisation of today.

The concessions model is the essential base for the system evolution with a transparent mechanism where the role of the public administration and the role of the concessionaire are well defined. ENAC keeps the supervisory power and all the activities concerning the public powers such as airfield and air navigation police.

Once the concession transformation phase finished, under the Law 537/93, all the principles stated in the art. 704 of Italian Air Navigation Code, such as public tendering procedures to find new airport managing bodies for the bankrupted airports, started to be applied.

In the actual layout, where the concession is the main tool in the national infrastructure management, the airport managing body, over the time, has obtained a wider role to coordinate the entire industry, including the airport infrastructures and their connections with the area. The airport managing body has specialised his vocation in order to separate the handling services from direct attributions and ensure the development.

In the last years in Italy, the evolution permitted the realisation of the liberalisation in the handling sector as described in the EU directives. In this context, ENAC elaborated a specific regulation about the safety in the handling functions that includes also the sub-contractors in the certification process of the main contractor.

A fundamental tool in order to give the airport managing body the role and the responsibilities as total manager of safety and efficiency of the whole infrastructure is the Planning Agreement, subscribed by ENAC and approved by the Ministry of Infrastructures and Transport and by Ministry of the Economy and Finance. The Planning Agreement is the mediation between investments, infrastructure operating costs, quality of the services and the profit that remunerate the private entity as support of the national public policies which remain in ENAC's and Ministry of Infrastructures and Transport's hands.

The Planning Agreements regulation, as a support of the public service concessions, starts from Interministerial Committee on Economic Programming that offers the first guidelines to norm the public service, updating the on a regular basis in 2000, 2005, 2007 and 2009.

The Interministerial Committee on Economic Programming resolution of 24 April 1996 is the foundation of the economic regulation of public services in Italy, called Guidelines for public services regulation "Linee Guida per la regolazione dei servizi di pubblica utilità". It represents the reference for all the public administrations in public services regulation, recognising the long standing Planning Agreement, stipulated between the competent administration and the contractor, as appropriate tool to reach the level of the competitive markets.

The Planning Agreements goals are included in the self-financing Investment plan definition, in the productivity, efficiency and quality targets setting and in the identification of the financial balance conditions, so that the contractor meets the commitments they have made.





The transition to the Planning Agreement is a turning point since it correlates the airport charges with the cost for the provision of the service. The aforementioned mechanism surpasses the previous scheme where the charges were decided in accordance with the ministerial decrees, which had not an investment logic, causing a stasis. These investments were often realised with public founding and they could not follow the market development. By contrast, the current situation is completely mature since almost all the airports have a valid Planning Agreement, giving the airport managing bodies the possibility to plan the investments, realise them and get a fair profit in the time expected in the traffic growth plan.

In order to incentivize the needed investment restart to expand and modernise the main national airports, the legislator authorised ENAC to sign Planning Agreements in derogation for Rome and Milan airport system and Venice airport if the investments use the managing body capital. Among the most important innovations introduced to create a stable regulatory framework, advantageous for the private investors, it has to be highlighted a set of rules valid for the whole concession duration and the extension of the contract period to ten years, articulated in 5 years long sub periods, to ensure a long-period intervention planning able to realise the upgrading and development process of the main Italian airport system. The Directive 2009/12/EC integration in the Italian legal system, concerning the airport charges and the National Surveillance Authority, as laid down by EU legislation, have changed the frame of reference for the airport charges and it has determined an important reform of the regulations, with an assignments and responsibilities reorganisation.

The National Surveillance Authority, in Italy identified with the Transport Regulation Authority, has started his activity in 2014 and it acts as the Surveillance Authority in the airport sector, pursuant the Directive 2009/12/EC, with responsibility for economic regulation, surveillance and charging system approval, on a multiannual basis. ENAC, instead, as stated by the Ministry of Transport in 2016, is the derogating Planning Agreements Surveillance Authority for the airport system of Rome, Milan and the airport of Venice, and it is the technical Authority responsible for the Action Plans, the traffic plans, quality and environmental standards plans approvals, which are preparatory for the Planning Agreements ex Legislative Decree 133/2014.

## Funding

With regard to the funding, it is important to underline how the system has deeply changed the infrastructure funding management, moving from a context where the majority of the funding was public, to a context where the airport infrastructure development is managed by the private entity in accordance with ENAC, ministries and regional authorities, in order to satisfy the market requirements. All the funding, in the airport structure sector represented by the four years plans for short-term investments and by the Master Plan for the medium and long-term ones, both at the Planning Agreements (ordinary and in derogation) basis, amount to EUR 4.1 billion for the short-term (2020-2022) and to EUR 11,2 billion for the medium and long-term (2025-2030).

Interestingly, the Italian choice to put a private entity as manager of a public function like the mobility infrastructure development, has produced un hoped-for results which today are giving new energy to the air transport system that is expected to double its capacity in the next 20 years and that needs important investments in airport infrastructure and in airspace management.

## ECONOMIC REGULATORY SYSTEM

### **Deregulation and abandonment of the monopoly**

From 1992, the EU has adopted a set of regulations to start a deregulation process in the air transport market that marked the transition from the national regulatory regimes, characterised by the flag air carriers' protectionism, to a liberalised market, open to the competition.

In particular, at European level a process of liberalisation and a process of harmonisation of the rules have been put in place.

Within the European market, the process of change reached a final form with the adoption of the third package of measures, which has set a standard regulation about the licences (EU airline) and common rules for the liberalised market creation, which, from April 1<sup>st</sup> 1997, allows the execution of cabotage services within each Member State from other's EU licenced air carrier. Nowadays EU air carriers can freely operate on every route in EU. This has provoked the switch from a monopolistic market, characterised by the flag air carrier and by the airport managed by the Member States, to a Single Market without any commercial restriction (limitation of route, number of flights and charges liberalisation). In this context, ENAC has always been the guarantor of the fair competition and of the market's access for the EU air carries in Italy. Moreover, ENAC participated in all the EU and international meetings (European Commission, ECAC, ICAO, and working groups) to implement the fundamental principles of the air transport liberalisation.

As described above, the last 20 years have been characterised by deep changes in the civil aviation sector.

Together with the air market liberalisation and regulatory harmonisation, a policy of openness has been developed in respect of international aeronautical agreements concerning traffic rights.

In addition, the EU has developed a strategy in line with the services and market liberalisation policy, intended as an opening to:

- freedoms in the Single Market, in particular the freedom of establishment of air carriers, allowed to operate towards extra EU countries;
- neighboring countries in the Mediterranean area and in eastern Europe to create a Common Aviation Area;
- the development of open sky agreements with other international key partners.

At national level, a policy of openness and market development has started under the Ministerial Directive July 7<sup>th</sup> 2000, got a complete application under the Law 2/2009, edited in 2014 with the Law 164.

In particular, as a consequence of Alitalia dehubbing from Malpensa Airport, from 2008, pursuing the government guidelines, the attention has been focused on the Malpensa and other national airports development. The mentioned regulations permitted the service liberalisation of third and fourth freedom, with a clear opening to fifth liberties, introducing a procedure for the issue of the authorisation from the Ministry of Infrastructures and Transport.

Basically, the responsibility to define new bilateral agreements and to modify the existing ones lies with the Ministry of Infrastructures and Transport and with the Ministry of Foreign Affairs,



while ENAC, with Ministry of Infrastructures and Transport permission, can issue temporary authorisations (in derogation to the existing agreements) to foreigner air carriers (including the authorisations to offer fifth freedom services) and with period of validity not less than 18 months. Several results have been obtained in terms of negotiations and signed agreements, in order to build the basis to develop the country connectivity. The concrete pursuit of this aim has been realised through the issue of flight authorisations for foreign air carriers, in derogation from the existing legislation, as established by the norms. In this context, from 2009, Italy has started an intense negotiation activity and has subscribed over 78 agreements to extend the traffic rights.

### **Air carriers and fleet**

At the time of entry into force of the ENAC establishing decree (1997), there were 106 active operating licences [20 class A ( $\geq 20$  pax), 86 class B ( $< 19$  pax)]; nowadays, after 20 years, the air carriers number with a license issued by ENAC decreased to 57 [11 class A (2 only cargo) and 46 class B (28 rotorcrafts, 15 fixed wing and 3 rotorcrafts and fixed wing)].

The agents of change of the air transport system which influenced the national air carriers in the last 20 years have been particularly intense and characterised by a clear competitiveness that involved first the intra-Community market and then, thanks to the globalisation, all the economic activities.

The 45% air carriers' reduction in Italy in the last twenty years is due to many factors, some of economic and financial nature, like some air carriers' bankruptcy, air carriers' fusion, and some others of a more general nature like the high-speed rail system development, which provoked a noticeable air traffic reduction on specific short routes.

Probably, in the considered period, the succession of ever more stringent EU laws could have been an element that influenced some air carriers' decision to leave the market or to find new collaborations and agreements in order to share risk, cost and responsibility.

In addition, the national air carriers' fleet composition changed (not only cause of needs for modernisation). In fact, in the last 20 years the national air carriers' aircrafts decreased from 213 to 188, despite the sharp traffic boost and the fact that the air carriers use bigger aircrafts also because of the missed increase of the traffic rights.

The air transport system and ENAC's activities evolution in the twenty years after its institution has to dwell on the theme of low cost air carriers.

In the free market, the low cost business model is an additional challenge in the Italian system; new air carriers draw the attention of the users becoming fundamental players and reaching important market shares with consequences for the airport infrastructures.

In Italy, country of high touristic and cultural interest, the low-cost phenomenon has recorded significant growth rates from 2004 and today the low-cost air carriers move averagely the 50% of the Italian air traffic, with peaks of 90% in specific airports. Even though there were some interesting initiatives, this business model has not produced any national low-cost air carrier, maintaining in the Italian market only the European ones.

In line with its role, described in the Italian Navigation Code (art. 687), ENAC, like the other national authorities in charge of the sector regulation, firmly maintained the priority of safety and security requirements respect for all the air carriers, including the foreigners, operating in



Italy. In the described frame, with new players' entrance in the Italian market whose licences were issued by EU Member States the level of correctness and the suitability of the economic commitments allocated to guarantee the safety, in line with the existing norms has been ensured and monitored over time.

In the twenty years' development of the civil aviation, we have to highlight that also the cargo sector, at the beginning a marginal phenomenon, has acquired noticeable dimensions, representing today an essential element in the economic growth of the country. It is no coincidence that some Italian airports are in the top positions in Europe for the cargo services connected to the cargo activity.

The evolution of air transport system, in the relatively short period of twenty years, has considerably changed not only the habits of the air carriers and the other sector's protagonists, but also their preparation and mentality.

The analysed transformations, besides having significantly affected the country's economic development, involved a challenge for ENAC since it had to change the rules, its way govern, control and interact with the market to play the role of regulatory Authority. The above-mentioned modernisation took place also thanks to a structural reorganisation characterised by the development of new professional profiles and important initiatives of human resources requalification in order to enable ENAC to interact in a system where the definition of the rules to implement at international level and their fulfilment at national level are interconnected.

Over the years, the relationship between ENAC and its interlocutors has deeply changed, becoming more efficient and transparent, and assimilating the international culture of civil aviation sector. In the public administration simplification process, in order to offer a straighter connection between the citizens and the operators, ENAC has allowed the interested subjects to participate in rules definition process to ensure impartiality and equal conditions.

To keep up with the civil aviation reality it has necessitated speeding up and simplifying the response time to the licit needs of the controlled sector.

The rules simplification carried out by ENAC in the last years has been aimed to reduce the bureaucracy and unload both its activity, by introducing IT platforms and databases, and the external subject one, by introducing a set of forms to start the request of a party procedure.

In this respect, it is interesting what has been achieved to issue the Accreditations and Authorisations for the air carriers that operated scheduled and not scheduled flights from and to countries outside the Union. Nowadays more than 300 non EU air carriers operate in Italy.

From several years, the air carriers relate to ENAC by an IT system that allows an immediate confirmation of their applications and that is essential in an evolving market that requires fast reaction times.

ENAC is now able to finalise the administrative activity in a much shorter time compared to the past; it is a remarkable result if you consider that the safety and security norms evolution of the last years, places ENAC as responsible for a series of activities always more stringent and heavy, involving also the passenger protection.

Many of ENAC's activities are run in cooperation with EASA. Among them there is the coordinated management of the operating licences for third country air carriers' commercial operations (TCO) for the safety aspects controlled by EASA. Thanks to the modern IT technology,



almost all the communication with EASA are carried by digital systems which are shared on accessible platforms and it puts the Member States' Authorities and EASA in condition to work to the best with the maximum information sharing. All what has been realised in the last twenty years from ENAC's foundation, has produced important results that represent the constant evolution and development of civil aviation.

## ENVIRONMENT

The emphasis given to environmental matters has always been a central objective for ENAC regulation and control activity and it represents one of its mission as Italian Civil Aviation Authority. The challenge for ENAC over the last twenty years has been ambitious and it could be met only with ICAO, ECAC, European Commission, EASA and other aeronautical Authorities constant cooperation. At national level, there is a constant confrontation with the competent Ministries: Ministry of Infrastructures and Transport, Ministry of Environment, Ministry of Economic Development, Italian Air Force, and all the involved stakeholders like the air carriers, airport operators and ENAV.

From its foundation, ENAC and its experts, represent Italy in the ICAO Council Advisory Committee for environmental protection in air transport (CAEP), organism committed to the update and development of the normative about the environmental aspects of the international civil aviation, included in the Annex 16 of Chicago Convention.

The commitment to combine the environmental needs with the constant air traffic growth has been oriented to elaborate actions in order to minimise the adverse effects caused by the civil aviation. The main goals are three: restrict the number of the people affected by the noise produced by the aircrafts, restrict the aircraft gas impact on the air quality and restrict the greenhouse gas impact on the global climate.

One of the most important element is the harmonisation of the development with the environmental protection: from the infrastructure extension and development which inevitably have an environmental impact to the flights' growth that contributes to the greenhouse gas production. It is also clear that if the seek for a balance between environmental protection and infrastructure development fails, it would be difficult to meet the expected capacity level and service quality.

The theme is directed by the planning capacity and the Master Plans, which determine the infrastructure development and the relationship with the local area, benefit of an environmental impact assessment that, in case of negativity, stops the Master Plan approval.

From this point of view, we can conclude that with the Master Plan the infrastructure development coherence and compatibility considered as fundamental the environmental protection: it means that nowadays the airport development takes place respecting the environment.

The noise produced by the air traffic is one of the most perceived source of pollution by the population living near the airports. The ENAC activity tries to find the best solution to ensure a sustainable growth of the aeronautical activities following the ICAO principle of "Balanced Approach" and the EU law that executed it. The areas of action are the noise certification of the registered aircrafts in Italy, the noise zoning of the airport area, the noise reduction operating



procedures and the restriction of the airports operating capacity. Because of the Framework Law about noise pollution 447/1995, the noise local management is carried out by the airport Commissions set up at the Airport Depts. With a constant debate with the citizens' associations, the local Authorities, the Ministry of Environment, the regional Environmental Agency, ENAV, the air carriers and the airport managing body participate in it.

In the fight against the climate change, the legislation has been influenced by the Kyoto Protocol (1997), which established an action plan essential to reduce the greenhouse gas emission and to limit the global warming. The political commitment at international level has been gradually endorsed by all the countries, aware of the impact and of the consequences of the gas pollution in the environment. The EU introduced, in 2003, more stringent norms to restrain the CO<sub>2</sub> emissions, main responsible of greenhouse effect, through the mechanism called ETS – Emission Trading Scheme, which implies a commercialisation of the allowances for emissions allocated for free under a specific threshold, with effect of long-term emissions reduction.

ENAC participated in the phase of transposition of the European directive that has extended from 2012 the ETS system to the air transport sector. Moreover, from some years, ENAC joined the National Committee for the ETS Directive implementation, interministerial body chaired by the Ministry of the Environment, which has the role of national competent Authority for the Kyoto Protocol required actions management.

The Italian Action Plan to reduce the CO<sub>2</sub> emission is the Italian contribution to the international shared goals, collecting the experiences of the main national stakeholders: air carriers, airport managing bodies, ENAV, aeronautical industry and aeronautical research entity. The document, updated and published from 2012 by ENAC following the ICAO guidelines, represents the complete picture of the Italian and European efforts to limit the gas emissions at technological, operative, air navigation, infrastructural and scientific research level, by quantifying the short medium-term advantages.

The attention to the environmental aspects determined a new regulatory approach regarding the infrastructural interventions, in order to plan and develop in a sustainable way the airports. It is fundamental for the airport managing body and the handling operators to prearrange the environmental protection plan and to introduce in the Planning Agreements the specific goals and the related environmental indicators. Other important results have been reached in the last years through the realisation of the Regional Operational Programme for development of renewables and energy efficiency measures; this initiative, in collaboration with the Ministry of Environment, defined a picture of a significant number of airports' energy performances, consolidating the procedures to be applied in the other national airports.

The aviation is the quickest way of transport for people and things on the long distance and its considerable development in the last years is one of the distinguishing features of the contemporary society whose effects affect the whole planet. The winning strategy may be the convergence of all the States to protect the environment. A lot has been already done, but many efforts are still needed. Therefore, ENAC keeps cooperating in the international projects, like the forthcoming implementation of the scheme CORSIA (Carbon Offsetting Reduction Scheme for International Aviation), the global mechanism for all the international flights based on the CO<sub>2</sub> emitted shares compensation, the optimisation of the ground and route air navigation services,



the alternative fuels legislative framework development as a tool to reduce the greenhouse gas emission and the constant efficiency improvement of the aircrafts' engines.

That takes place in the awareness that the 20 years ENAC's experience and the competence will contribute to the development of a sustainable civil aviation.

## PASSENGERS

In the liberalised air transport system there has been the necessity to ensure the passenger a protection to offer a set of essential rights in case of disruption.

ENAC, always careful with passengers' needs and to confirm its commitment to update promptly and transparently those passengers who choose the aircraft to move, in May 2001, one of the first in Europe, published the 1<sup>st</sup> edition of the Charter of Passengers' Rights, later also in Braille. In 2004 the EU Parliament and Council adopted the Regulation (EC) 261 establishing shared rules about compensation and assistance to passengers in case of denied boarding, flight cancellation or long delay, as a result of the unsuccessful attempt of ensuring the passenger protection by voluntary commitments from the airport management bodies and air carriers, started under the aegis of EU Commission and ECAC.

In that regard, the Italian State designated ENAC as the National Enforcement Body responsible for the correct application in the Italian airports of the EU laws about passengers' rights protection with a sanctioning power in case of regulation's violations.

The passengers' protection, in full respect of the Mission, has represented for ENAC an ongoing commitment implemented by a set of divulgation and regulation initiatives, by inspection and sanctioning activities, in addition to be proactive in the international, European and national civil aviation fora.

After twenty years from ENAC foundation, we can state that the Italian system of passengers' protection in case of disruption - as attested by the European control bodies - is one of the most advanced in Europe and represents a best practice for the ENAC organisation, also considering the airport inspection boards that ensure a passengers' rights systematic protection to offer high quality services.

The high quality passenger protection has been reached thanks to the care that the institutions devoted to the services, the usability, the accessibility and the respect of the rights and it has to be considered a premium feature of the European and Italian civil aviation.

In addition to the inspective activity, ENAC introduced a centralised Audit to reinforce its supervisory role, in accordance with its institutional mandate, and it represents a strength that consolidate the cooperation between ENAC management teams responsible for the infrastructural activities and give the possibility to realise a synergy towards the airport management body.

With regard to passenger protection, the initiatives of ENAC for Passengers with Reduced Mobility (PRM) deserve a special mention. As result of the EU Regulation 1107 from 2006 and in force since 2008, aimed at ensuring that people with reduced mobility have the possibility to travel by airplane in similar conditions compared to the other citizens, ENAC has been designated as the National Enforcement Body in charge of the regulation application in Italy.

Moreover, ENAC has been, proudly, the only one in Europe to have defined in an advisory



circular the contents and the timing for the training that involves the airport managing bodies and the air carriers. Therefore, ENAC is in charge of the implementation of the legislation, of the system quality supervision at both airport and air carrier levels and of the sanctioning application. The quality of the services for the PRM is essential and ENAC has not only defined the minimum standards offered by the air management bodies and the air carriers, but it has also started a set of constantly updated activities to guarantee the ENAC's strategies realisation and respect. ENAC's project "Autism, traveling through airport" deserves a special mention among the initiatives in support of the PRM: created in 2015 with Assaeroporti collaboration with the aim of giving advices to help autistic people and their helpers to serenely experience the travel, by permitting them at the same time to see in advance the airport through a specific path. Today all the major Italian airports are involved in the project.

It should also be recalled another important initiative to take care of the victims of civil aviation accidents and their relatives: ENAC, answering to the ICAO recommendations (documents no. 9973 and no. 9998) and to requirements of the Art. 21 of the EU regulation 996 from 2010, in collaboration with Foundation 8<sup>th</sup> October 2001, elaborated, in 2014, an advisory circular, later presented at the ICAO High Level Safety Conference.

Therefore, Italy and Spain are the first European countries to ensure a coordination to organise the assistance for the victims and their relatives in case of plane crash and that all the registered air carriers have a proper assistance plan.

## AIRSPACE

The sectors of airspace and the navigation services provision, during the last twenty years, have deeply changed in their quality and costs. The changes have also affected the state structure giving as result the separation between the airspace sectors and the roles of regulation and surveillance; under law 265/2004, ENAC was allocated core competencies related to management and use of the airspace, to control and certification of the air navigation services providers, becoming the only regulator body and responsible for the EU law application.

The structure established in the eighties after the airspace control demilitarisation and the foundation of the "Azienda Autonoma di Assistenza al Volo per il Traffico Aereo Generale", lately became ENAV, split the sectors of the airspace into civil and military elements, charged of self-ruling their services in a partitioned airspace. The perceived limits of the previous structure, pointed out during the 2001 Linate crash investigation, have been passed with EU commission initiative called Single European Sky, which introduces the separation between the functions of regulation and services provision, asking the Member States to create a National Supervisory Authority in charge of certifying and supervising the air navigation services providers. Moreover, the EU regulations established that the above-mentioned authority was competent in the use and management of the airspace, in order to guarantee transparent rules for all the airspace users and a set of common norms for the national and international services providers in freedom of competition.

The switch from the self-ruled system to the new regulatory framework required a major effort to all the involved entities, asking in particular the civil providers to change their organisational





procedures to comply with the new stringent EU regulations, going from voluntary actions to being able to prove their action.

In addition, the military entities are affected by the EU regulations because, even if they are not directly subjected, they must certify their air navigation services offered to the civil aviation according to the standards agreed with ENAC.

From 2009, the second set of regulations of the Single European Sky, named Single Sky II, entrusted the EASA with the airspace regulation (now ATM/ANS, in respect of the EU terminology), leaving the role of regulator, following the subsidiarity principle, to the national authorities, and enhancing its cooperation role in the EU decision-making. In this second period which have been a mix between consolidation and expansion, ENAC dealt the Functional Airspace Block BLUE MED FAB, with Malta, Cyprus and Greece, and with the performance and charging scheme under the Single Sky II.

In the last decade the air navigation services' costs charging scheme has deeply changed going from a national to a European sphere, at least for the airports whose traffic is over 50,000 passengers per year. Nowadays the charging scheme depends on specific performance parameters, with improvement requirements in the reference period, and, even if particularly challenging, it helps to minimise the air transport costs.

Today the overview is quite satisfying in terms of application of the EU commission and EASA updated legislation; in the meanwhile, EASA implemented the EU mandate to supervise also the sector of the Air Traffic Management. The last audits returned a positive feedback on the ENAC efforts, including the certification's quality of the air navigation services suppliers, like ENAV.

Looking towards an essential component of the national system like ENAV, you can see a big evolution which took the national provider from the previous unspecified role where it supplied services according to its rules, managed the airports luminous visual aids (relevance of the airport managing bodies) and overlapped the civil aviation authority, to the current clarity of the activities, safety standards and roles in relation to the Italian Civil Aviation Authority, ENAC.

That has led to the ENAV evolution towards more appropriate legal forms, to develop its industrial nature and to manage its assets following the market principles, in order to reach an international role, which is advantageous for the country.

In addition, ENAC faced a long and intense period to face the new tasks and develop competence and capacity, non-existent when its duties have been expanded, by relying on the staff reconversion and on the use of the military staff, provided by the Italian Air Force under the Law 265/2004.

The regulation dimension and the specific required competences make the process particularly complex and still nowadays, due to the public finance measures that makes hiring people difficult, the 50% of the staffing needs is met by the Italian Air Force.

ENAC took part to important international fora at the EU Commission and at Eurocontrol.

In general, we can say that the last twenty years have been a revolution for the airspace and for the air navigation services, today involved in the technological leap of the transition to the satellite navigation system, leaving behind the previous system and the ground radio assistance.

## FUTURE CHALLENGES

The last twenty years have been a period of a profound change for the civil aviation that has led to a general improvement where no sector has remained the same.

From its foundation, ENAC has been part of this change by adapting itself to the mutation caused by external factors such as devolving competence from the State Members to the EU, by taking on an active role and by supporting the change generated by the new intra-Community market. We were present at the continuous adaptations of the national competences, airworthiness, flight operations, licences, flight crew, airports and airspace provoked by the Single European Sky. It brought to new equilibria and evolving functions such as the competences in the field of passengers' rights security and in the airspace.

To face the changes that involved the authority over the years, after the first organisational model that unified the previous authorities, ENAC went through deep reorganisations to make the management and the decision-making more efficient in order to perform in the best possible way its functions and to be an effective point of reference for the transport industry.

A further challenge was to cope with the shortage of staff, at beginning cause of lack of flight inspectors, later cause of a hiring freeze. The challenges involved the capacity to improve and simplify the work process to benefit the users involved in new scenarios caused by the market competition. For over ten years, because of specific analyses, the work processes have been re-engineered to save resources in order to face the staff depletion.

Making the organisation efficient and the work processes simplified, ENAC managed the change involving the decreasing of the management structures from 75 to the current 41. However, it should be noted that over the years, also the staff suffered important cuts, as consequence of the turnover block: engineers, consultants and surveyors from 271 to 171, technicians-clerks from 921 to 556 and flight - air traffic inspectors from 50 to 26; in total from 1.317 units (including the executive staff) to 794 to 31<sup>st</sup> December 2017. In this context, it is important to highlight that the staff is not determined on a scientific analysis of the needs but it is the result of the linear cut required by laws to restrain public spending. These laws, from 2005, have involved also an economically autonomous public authority like ENAC, able to bear the cost for the staff necessary for its operation.

Considering the previous challenges, we have to ask ourselves if what we have expressed until now is enough and if the air transport industry (manufacturers, air managing bodies, air carriers, etc.) can still rely on the authority support.

The productivity of the economic entities operative in the civil aviation sector are extremely dependent on the national authorities' decisions, such as approvals, authorisations, certifications, etc.

The success of the aviation enterprise and the competitiveness maintenance towards the competitors is strongly dependent on the efficiency and efficacy the authority's acts are implemented. The authority, due to the staff reduction, despite having optimised all the work processes and decision-making, starts to struggle with giving quick answers to the operators. Facts that have been pointed out during the European international inspections. The big traffic growth, which is expected to double between 2030 and 2040, entail a boost of the ENAC's supervision and certification activity of both Italian and the foreigner air carriers that operate regularly in Italy, according to the EU regulation cooperative oversight and in coordination with





the counterpart foreigner authorities. In the authority's needs evaluation it has been observed that the intra-Community market creation and the strong homogenization caused by the EU regulations, in practice are taking the civil aviation national authorities to a competition. Always more often the industrial actors move their headquarters in the closest countries where they receive or expect to receive a better treatment from the answers and supervising speed point of view. The elements of speed and efficiency in the approvals and supervisions are fundamental for the industry and the lack of them cause a competitive disadvantage for the country and a consequential market loss for both the businesses and ENAC.

The current European requirements that the national authorities have to satisfy are particularly stringent and onerous and they are subject to constant verifications of EASA and of the Commission; their non-compliance implies EU infringement procedures and in the next future the replacement of the national authority by EASA or by other European authorities.

Participating actively implies the achievement and the maintenance of high quality standards and represents the first challenge for the authority's and the entire civil aviation system's future. New challenges connected to technologies appearance, such as drones, cybersecurity and suborbital commercial transport may emerge areas characterised by a quick evolution, which may bring advantages to the country industrial system.

Drones have stimulated a strong interest in developing technologies and control systems to take advantage of their potentialities, which permit to execute industrial and commercial high value-added activities. These systems' development is fundamental to supply industrial monitoring services, to assist people in case of danger, to intervene in case of emergency and catastrophes with high impact on life preservation. The first initiatives to transport people in urban and suburban scenarios, strongly connected to the safety, should not be undervalued.

The suborbital commercial transport development is fundamental to realise the government policies about space economy, which would offer the country an autonomous and inexpensive access to the space. The areas of application, such as research in zero gravity condition or satellites positioning, are various and with a considerable benefit. An efficient development of the mentioned activities in Italy would put the country in a privileged position able to attract foreign business. In this perspective, the Ministry of Infrastructures and Transport recognised ENAC as the institutional player to elaborate a sectorial regulatory framework in order to carry out suborbital commercial operations by 2020.

The cybersecurity topic has considerable consequences in the whole air transport sector, since it requires a complete review of the systems, procedures and culture of prevention, to have the capacity to account for every subject of the sector, in order to get to the required level of resilience to guarantee the regularity of the transport and the flight safety conditions. The ability to address and control the sector emerging technologies requires that ENAC hire new specialised resources not available in the current staff.

By the way, ENAC have been of service to the country by elaborating strategies and propaedeutic activities in order to develop these technologies so that the civil aviation system is competitive and to support the national industry system.

We could affirm that the challenges faced in the first twenty years have been successfully managed, working on the variables and using all the available tools; however, to give a proper

answer to all the changes related to the civil aviation system in the next years, new tools are needed, together with a different interpretation of the organisational needs and renewed flexibility and autonomy.

At the beginning ENAC could fall back on statutory legal instruments such as the organisational freedom to define its staff according to the needs or the freedom of contract to hire new employees and specific professionals; today the repeated public finance interventions dispelled the mentioned potentialities and the possibility to hire the staff to cover new needs.

The challenges ahead of us require precise requirements in terms of quantity and quality of the necessary resources to carry out the duties and to support the emerging sectors developments. Investments in high-specialised profiles in the different areas where ENAC carries out the duties are required, in particular considering that some years are needed to build capacity and prestige. To face and win the current and future challenges and to be protagonist of the change, it is required to reaffirm the political vision, which, as in the first part of its history, goes beyond the phase of extraordinary measures and gives ENAC back the capacity to manage its necessities independently.





**ITALIAN AIR  
TRANSPORT IN  
2017**

## Overall domestic and international commercial traffic 2017

Scheduled and non-scheduled flights (arrivals + departures)

| AIRPORT            | Movements        |                     | Passengers         |                     | Transit        |                     | Cargo            |                     |
|--------------------|------------------|---------------------|--------------------|---------------------|----------------|---------------------|------------------|---------------------|
|                    | Number           | Var. %<br>2017/2016 | Number             | Var. %<br>2017/2016 | Number         | Var. %<br>2017/2016 | Tons             | Var. %<br>2017/2016 |
| 1 ALGERO           | 9.274            | -5,5                | 1.318.210          | -1,8                | 2.284          | -13,6               | 8                | -20,1               |
| 2 ANCONA           | 6.857            | -8,5                | 477.472            | 0,1                 | 2.493          | 128,9               | 6.423            | 5,7                 |
| 3 BARI             | 34.990           | 5,7                 | 4.669.277          | 8,4                 | 12.366         | 65,5                | 1.573            | -28,6               |
| 4 BERGAMO          | 84.554           | 7,9                 | 12.230.942         | 10,6                | 3.356          | 26,0                | 125.888          | 7,0                 |
| 5 BOLOGNA          | 67.088           | 2,5                 | 8.181.654          | 6,8                 | 8.218          | -28,8               | 41.986           | 12,1                |
| 6 BOLZANO          | 136              | 4,6                 | 5.912              | -4,5                | -              | 0,0                 | -                | 0,0                 |
| 7 BRESCIA          | 2.907            | 5,9                 | 8.057              | -37,0               | -              | 0,0                 | 19.434           | 129,6               |
| 8 BRINDISI         | 15.831           | -2,9                | 2.314.619          | -0,2                | 3.053          | -13,2               | 54               | 305,0               |
| 9 CAGLIARI         | 31.351           | 6,4                 | 4.149.585          | 11,8                | 2.447          | -13,2               | 2.839            | -5,4                |
| 10 CATANIA         | 66.156           | 11,7                | 9.027.604          | 15,3                | 6.684          | -15,5               | 6.686            | 5,0                 |
| 11 COMISO          | 2.796            | -7,2                | 436.633            | -4,9                | 291            | 19,3                | -                | -100,0              |
| 12 CUNEO           | 776              | -17,5               | 116.343            | -10,6               | 2.012          | -28,1               | -                | 0,0                 |
| 13 ELBA            | 854              | -10,4               | 9.227              | 0,4                 | -              | 0,0                 | -                | 0,0                 |
| 14 FIRENZE         | 29.068           | 0,9                 | 2.646.050          | 5,7                 | 163            | 365,7               | 62               | -12,3               |
| 15 FOGGIA          | 2                | 0,0                 | 70                 | 100,0               | -              | 0,0                 | -                | -100,0              |
| 16 GENOVA          | 12.861           | 0,1                 | 1.241.502          | -1,6                | 1.686          | 32,0                | 158              | -23,7               |
| 17 GROSSETO        | 86               | 975,0               | 7.774              | 3.009,6             | -              | 0,0                 | -                | 0,0                 |
| 18 LAMEZIA TERME   | 17.302           | -1,8                | 2.539.233          | 1,0                 | 7.094          | -7,2                | 987              | -16,5               |
| 19 LAMPEDUSA       | 3.924            | 7,1                 | 253.710            | 13,1                | -              | 0,0                 | 15               | 7,5                 |
| 20 MILANO LINATE   | 96.467           | -1,4                | 9.503.065          | -1,4                | 984            | -56,7               | 13.814           | -10,1               |
| 21 MILANO MALPENSA | 174.754          | 7,4                 | 22.037.241         | 14,1                | 122.849        | 22,7                | 589.719          | 7,5                 |
| 22 NAPOLI          | 66.856           | 21,2                | 8.552.223          | 26,6                | 13.968         | 51,4                | 8.643            | 3,2                 |
| 23 OLBIA           | 22.922           | 6,8                 | 2.785.263          | 10,6                | 3.001          | -33,8               | 189              | 9,1                 |
| 24 PALERMO         | 44.021           | 4,8                 | 5.753.046          | 8,3                 | 16.336         | 49,0                | 324              | -20,4               |
| 25 PANTELLERIA     | 3.339            | 1,5                 | 151.917            | 8,6                 | -              | 0,0                 | 25               | -5,7                |
| 26 PARMA           | 1.108            | -14,8               | 157.463            | -16,4               | 659            | 229,5               | -                | 0,0                 |
| 27 PERUGIA         | 1.772            | -18,6               | 246.543            | 12,9                | 14             | 100,0               | -                | 0,0                 |
| 28 PESCARA         | 5.431            | 5,2                 | 658.412            | 18,7                | 518            | 100,0               | 16               | 0,2                 |
| 29 PISA            | 37.536           | 2,6                 | 5.222.427          | 4,9                 | 2.283          | -36,2               | 10.208           | 3,0                 |
| 30 REGGIO CALABRIA | 3.317            | -21,6               | 380.062            | -20,7               | -              | -100,0              | 33               | -10,2               |
| 31 RIMINI          | 1.977            | -5,8                | 300.774            | 27,0                | 719            | -56,5               | 4                | -9,3                |
| 32 ROMA CIAMPINO   | 35.412           | 5,7                 | 5.855.450          | 9,1                 | -              | 0,0                 | 17.041           | 7,9                 |
| 33 ROMA FIUMICINO  | 294.790          | -5,2                | 40.841.141         | -1,8                | 127.615        | -24,7               | 185.590          | 15,4                |
| 34 SALERNO         | 140              | -1,4                | 3.028              | 3,6                 | -              | 0,0                 | -                | 0,0                 |
| 35 TARANTO         | 346              | 83,1                | -                  | -100,0              | -              | 0,0                 | 6.235            | 16,4                |
| 36 TORINO          | 39.725           | 4,7                 | 4.165.930          | 5,8                 | 2.935          | -39,0               | 417              | -72,7               |
| 37 TRAPANI         | 9.002            | -12,2               | 1.291.186          | -13,4               | 317            | -66,1               | 35               | 51,2                |
| 38 TREVISO         | 17.868           | 12,9                | 2.982.741          | 14,5                | 563            | 0,9                 | 0                | -48,3               |
| 39 TRIESTE         | 8.663            | 2,9                 | 777.575            | 7,3                 | 190            | -60,3               | 106              | 70,9                |
| 40 VENEZIA         | 85.324           | 1,1                 | 10.282.611         | 7,7                 | 7.828          | 14,2                | 52.038           | 6,1                 |
| 41 VERONA          | 26.981           | 5,1                 | 3.046.269          | 10,8                | 15.121         | -42,1               | 375              | -0,9                |
| <b>TOTAL</b>       | <b>1.364.564</b> | <b>2,4</b>          | <b>174.628.241</b> | <b>6,2</b>          | <b>368.047</b> | <b>-6,5</b>         | <b>1.090.923</b> | <b>9,2</b>          |

## Overall domestic commercial traffic 2017

Scheduled and non-scheduled flights (arrivals + departures)

| AIRPORT            | Movements      |                     | Passengers        |                     | Cargo         |                     |
|--------------------|----------------|---------------------|-------------------|---------------------|---------------|---------------------|
|                    | Number         | Var. %<br>2017/2016 | Number            | Var. %<br>2017/2016 | Tons          | Var. %<br>2017/2016 |
| 1 ALGHERO          | 7.244          | -3,8                | 993.318           | -0,5                | 8             | -20,1               |
| 2 ANCONA           | 3.362          | -8,4                | 163.420           | -2,7                | 6.068         | 7,6                 |
| 3 BARI             | 21.168         | 2,2                 | 2.833.316         | 2,1                 | 1.416         | -7,3                |
| 4 BERGAMO          | 21.292         | 2,6                 | 3.242.551         | 4,6                 | 15.565        | 10,5                |
| 5 BOLOGNA          | 14.566         | 3,4                 | 1.935.193         | 1,2                 | 4.089         | 6,6                 |
| 6 BOLZANO          | 97             | 29,3                | 5.331             | 18,1                | -             | 0,0                 |
| 7 BRESCIA          | 2.468          | -0,7                | 74                | -97,5               | 9.005         | 10,0                |
| 8 BRINDISI         | 12.380         | -3,4                | 1.805.930         | -1,3                | 7             | -44,4               |
| 9 CAGLIARI         | 24.794         | 3,7                 | 3.266.674         | 6,6                 | 2.802         | -2,4                |
| 10 CATANIA         | 45.648         | 10,5                | 6.134.148         | 13,9                | 5.781         | 5,0                 |
| 11 COMISO          | 1.650          | -13,8               | 262.457           | -10,8               | -             | 0,0                 |
| 12 CUNEO           | 437            | -28,0               | 77.306            | -17,8               | -             | 0,0                 |
| 13 ELBA            | 526            | -19,0               | 4.006             | -11,0               | -             | 0,0                 |
| 14 FIRENZE         | 4.402          | 13,2                | 384.556           | 0,2                 | 13            | -40,8               |
| 15 FOGGIA          | 2              | 100,0               | 70                | 100,0               | -             | 0,0                 |
| 16 GENOVA          | 7.039          | 5,8                 | 713.353           | 3,8                 | 68            | -44,1               |
| 17 GROSSETO        | -              | 0,0                 | -                 | 0,0                 | -             | 0,0                 |
| 18 LAMEZIA TERME   | 13.133         | -7,7                | 1.928.665         | -5,2                | 982           | -16,5               |
| 19 LAMPEDUSA       | 3.860          | 7,5                 | 252.571           | 13,7                | 15            | 7,5                 |
| 20 MILANO LINATE   | 50.394         | 2,5                 | 4.927.688         | 0,6                 | 1.264         | 13,0                |
| 21 MILANO MALPENSA | 22.024         | 4,5                 | 3.164.224         | 17,5                | 1.167         | -26,5               |
| 22 NAPOLI          | 28.113         | 20,9                | 2.976.752         | 26,5                | 8.116         | 5,1                 |
| 23 OLBIA           | 12.681         | 2,6                 | 1.439.692         | 6,9                 | 176           | 4,5                 |
| 24 PALERMO         | 34.200         | 2,7                 | 4.399.691         | 6,3                 | 318           | -21,8               |
| 25 PANTELLERIA     | 3.339          | 1,5                 | 151.917           | 8,6                 | 25            | -5,7                |
| 26 PARMA           | 808            | -4,2                | 124.127           | -4,2                | -             | 0,0                 |
| 27 PERUGIA         | 583            | -32,4               | 73.124            | 73,6                | -             | 0,0                 |
| 28 PESCARA         | 3.081          | 9,5                 | 303.124           | 19,1                | 0             | -9,2                |
| 29 PISA            | 11.083         | -0,4                | 1.429.703         | 3,1                 | 2.599         | 30,8                |
| 30 REGGIO CALABRIA | 3.317          | -21,6               | 380.062           | -20,7               | 33            | -10,2               |
| 31 RIMINI          | 38             | -62,7               | 565               | -58,3               | -             | 0,0                 |
| 32 ROMA CIAMPINO   | 1.320          | -14,2               | 218.880           | -10,0               | 75            | 24,1                |
| 33 ROMA FIUMICINO  | 98.780         | -7,1                | 11.469.811        | -8,0                | 3.585         | -26,3               |
| 34 SALERNO         | 22             | -62,1               | 343               | -74,2               | -             | 0,0                 |
| 35 TARANTO         | 115            | 100,0               | -                 | 0,0                 | 27            | 100,0               |
| 36 TORINO          | 17.755         | 10,3                | 2.123.193         | 6,2                 | 89            | -49,4               |
| 37 TRAPANI         | 6.755          | -17,2               | 923.176           | -19,8               | 20            | -14,8               |
| 38 TREVISO         | 5.538          | 22,3                | 955.480           | 22,6                | 0             | -80,3               |
| 39 TRIESTE         | 5.600          | 9,4                 | 514.552           | 15,0                | 25            | -55,3               |
| 40 VENEZIA         | 12.516         | 1,6                 | 1.349.932         | 3,5                 | 2.068         | -3,8                |
| 41 VERONA          | 10.120         | 3,5                 | 1.012.497         | 14,2                | 7             | -73,9               |
| <b>TOTAL</b>       | <b>512.250</b> | <b>1,1</b>          | <b>61.941.472</b> | <b>2,7</b>          | <b>65.411</b> | <b>3,2</b>          |

## Overall international commercial traffic 2017

Scheduled and non-scheduled flights (arrivals + departures)

| AIRPORT            | Movements      |                     | Passengers         |                     | Cargo            |                     |
|--------------------|----------------|---------------------|--------------------|---------------------|------------------|---------------------|
|                    | Number         | Var. %<br>2017/2016 | Number             | Var. %<br>2017/2016 | Tons             | Var. %<br>2017/2016 |
| 1 ALGHERO          | 2.030          | -11,2               | 324.892            | -5,8                | -                | 0,0                 |
| 2 ANCONA           | 3.495          | -8,6                | 314.052            | 1,6                 | 355              | -18,4               |
| 3 BARI             | 13.822         | 11,6                | 1.835.961          | 19,7                | 157              | -76,8               |
| 4 BERGAMO          | 63.262         | 9,8                 | 8.988.391          | 12,9                | 110.323          | 6,5                 |
| 5 BOLOGNA          | 52.522         | 2,2                 | 6.246.461          | 8,6                 | 37.897           | 12,7                |
| 6 BOLZANO          | 39             | -29,1               | 581                | -65,4               | -                | 0,0                 |
| 7 BRESCIA          | 439            | 69,5                | 7.983              | -19,0               | 10.429           | 3.640,2             |
| 8 BRINDISI         | 3.451          | -0,9                | 508.689            | 3,9                 | 47               | 12.274,1            |
| 9 CAGLIARI         | 6.557          | 18,1                | 882.911            | 36,7                | 37               | -71,3               |
| 10 CATANIA         | 20.508         | 14,5                | 2.893.456          | 18,4                | 905              | 4,9                 |
| 11 COMISO          | 1.146          | 4,2                 | 174.176            | 5,8                 | -                | -100,0              |
| 12 CUNEO           | 339            | 1,5                 | 39.037             | 8,2                 | -                | 0,0                 |
| 13 ELBA            | 328            | 7,9                 | 5.221              | 11,4                | -                | 0,0                 |
| 14 FIRENZE         | 24.666         | -1,0                | 2.261.494          | 6,7                 | 49               | 0,4                 |
| 15 FOGGIA          | -              | -100,0              | -                  | 0,0                 | -                | -100,0              |
| 16 GENOVA          | 5.822          | -5,9                | 528.149            | -8,1                | 90               | 4,9                 |
| 17 GROSSETO        | 86             | 100,0               | 7.774              | 100,0               | -                | 0,0                 |
| 18 LAMEZIA TERME   | 4.169          | 22,9                | 610.568            | 27,5                | 5                | -6,1                |
| 19 LAMPEDUSA       | 64             | -9,9                | 1.139              | -47,5               | -                | 0,0                 |
| 20 MILANO LINATE   | 46.073         | -5,3                | 4.575.377          | -3,4                | 12.551           | -11,9               |
| 21 MILANO MALPENSA | 152.730        | 7,9                 | 18.873.017         | 13,6                | 588.552          | 7,6                 |
| 22 NAPOLI          | 38.743         | 21,4                | 5.575.471          | 26,7                | 527              | -19,9               |
| 23 OLBIA           | 10.241         | 12,5                | 1.345.571          | 14,8                | 13               | 165,1               |
| 24 PALERMO         | 9.821          | 12,7                | 1.353.355          | 15,7                | 6                | 780,5               |
| 25 PANTELLERIA     | -              | 0,0                 | -                  | 0,0                 | -                | 0,0                 |
| 26 PARMA           | 300            | -34,4               | 33.336             | -43,4               | -                | 0,0                 |
| 27 PERUGIA         | 1.189          | -9,5                | 173.419            | -1,6                | -                | 0,0                 |
| 28 PESCARA         | 2.350          | 0,0                 | 355.288            | 18,3                | 16               | 0,4                 |
| 29 PISA            | 26.453         | 4,0                 | 3.792.724          | 5,6                 | 7.609            | -4,0                |
| 30 REGGIO CALABRIA | -              | 0,0                 | -                  | 0,0                 | -                | 0,0                 |
| 31 RIMINI          | 1.939          | -2,9                | 300.209            | 27,4                | 4                | -9,3                |
| 32 ROMA CIAMPINO   | 34.092         | 6,6                 | 5.636.570          | 10,0                | 16.966           | 7,8                 |
| 33 ROMA FIUMICINO  | 196.010        | -4,2                | 29.371.330         | 0,9                 | 182.005          | 16,7                |
| 34 SALERNO         | 118            | 40,5                | 2.685              | 68,8                | -                | 0,0                 |
| 35 TARANTO         | 231            | 22,2                | -                  | -100,0              | 6.207            | 15,9                |
| 36 TORINO          | 21.970         | 0,5                 | 2.042.737          | 5,3                 | 328              | -75,8               |
| 37 TRAPANI         | 2.247          | 7,2                 | 368.010            | 8,3                 | 15               | 0,0                 |
| 38 TREVISO         | 12.330         | 9,2                 | 2.027.261          | 11,1                | 0                | -25,4               |
| 39 TRIESTE         | 3.063          | -7,2                | 263.023            | -5,0                | 82               | 1.076,9             |
| 40 VENEZIA         | 72.808         | 1,1                 | 8.932.679          | 8,3                 | 49.970           | 6,6                 |
| 41 VERONA          | 16.861         | 6,1                 | 2.033.772          | 9,1                 | 368              | 5,1                 |
| <b>TOTAL</b>       | <b>852.314</b> | <b>3,2</b>          | <b>112.686.769</b> | <b>8,3</b>          | <b>1.025.512</b> | <b>9,6</b>          |

## Air taxi and General Aviation Traffic 2017

| AIRPORT              | Air taxi      |               |            |           | General Aviation |                |              |            |
|----------------------|---------------|---------------|------------|-----------|------------------|----------------|--------------|------------|
|                      | Movements     | Passengers    | Transits   | Cargo (T) | Movements        | Passengers     | Transits     | Cargo (T)  |
| 1 ALBENGA            | -             | -             | -          | -         | 3.807            | 2.986          | -            | -          |
| 2 ALESSANDRIA        | -             | -             | -          | -         | 335              | 62             | -            | -          |
| 3 ALGHERO            | 174           | 448           | -          | -         | 534              | 672            | 62           | -          |
| 4 ANCONA             | 2.187         | 3.494         | 9          | -         | 2.030            | 1.549          | -            | -          |
| 5 AOSTA              | 60            | 135           | -          | -         | 7.739            | 3.871          | -            | -          |
| 6 BARI               | 2.054         | 1.821         | 44         | -         | 1.322            | 1.860          | 8            | 0          |
| 7 BERGAMO            | n.a.          | n.a.          | n.a.       | n.a.      | 1.559            | 1.993          | -            | -          |
| 8 BIELLA             | -             | -             | -          | -         | 6.987            | 12.948         | -            | -          |
| 9 BOLOGNA            | n.a.          | n.a.          | n.a.       | n.a.      | 4.790            | 8.284          | -            | -          |
| 10 BOLZANO           | -             | -             | -          | -         | 12.034           | 9.782          | 212          | -          |
| 11 BRESCIA           | -             | -             | -          | -         | 5.271            | 5.658          | 30           | -          |
| 12 BRINDISI          | 1.230         | 1.030         | 54         | -         | 1.133            | 2.218          | 6            | -          |
| 13 CAGLIARI          | 1.656         | 4.189         | 71         | 21        | 1.162            | 1.199          | 26           | -          |
| 14 CAPUA             | -             | -             | -          | -         | 5.128            | 2              | -            | -          |
| 15 CASALE MONFERRATO | -             | -             | -          | -         | 371              | -              | -            | -          |
| 16 CATANIA           | 1.362         | 2.795         | -          | -         | 652              | 1.689          | -            | -          |
| 17 COMISO            | 93            | 180           | -          | -         | 837              | 405            | -            | -          |
| 18 CUNEO             | 327           | 1.296         | 2          | -         | 3.736            | 2.012          | -            | -          |
| 19 ELBA              | 148           | 158           | -          | -         | 3.274            | 4.772          | -            | -          |
| 20 FANO              | -             | -             | -          | -         | 1.328            | 111            | -            | -          |
| 21 FIRENZE           | 3.202         | 6.792         | 11         | -         | 3.089            | 4.895          | -            | -          |
| 22 FOLIGNO           | -             | -             | -          | -         | 414              | 50             | -            | -          |
| 23 FOGGIA            | 38            | 90            | -          | -         | 611              | 369            | 3            | -          |
| 24 GENOVA            | n.a.          | n.a.          | n.a.       | n.a.      | 6.075            | 6.186          | -            | -          |
| 25 GROSSETO          | 1.160         | 2.125         | -          | -         | 627              | 863            | -            | -          |
| 26 L'AQUILA          | -             | -             | -          | -         | 2.078            | 1.064          | -            | -          |
| 27 LAMEZIA TERME     | n.a.          | n.a.          | n.a.       | n.a.      | 4.528            | 876            | -            | -          |
| 28 LAMPEDUSA         | 599           | 1.273         | -          | -         | 261              | 224            | -            | -          |
| 29 MILANO LINATE     | n.a.          | n.a.          | n.a.       | n.a.      | 21.263           | 44.314         | 305          | -          |
| 30 MILANO MALPENSA   | n.a.          | n.a.          | n.a.       | n.a.      | 4.199            | 9.077          | 223          | -          |
| 31 NAPOLI            | n.a.          | n.a.          | n.a.       | n.a.      | 7.227            | 11.316         | -            | -          |
| 32 NOVI LIGURE       | -             | -             | -          | -         | 2.796            | -              | -            | -          |
| 33 OLBIA             | -             | -             | -          | -         | 11.121           | 23.120         | 20           | -          |
| 34 PALERMO           | 1.343         | 2.858         | 26         | -         | 457              | 843            | 63           | -          |
| 35 PANTELLERIA       | 326           | 359           | -          | 2         | 121              | n.d.           | -            | -          |
| 36 PARMA             | 1.019         | 1.867         | 8          | -         | 2.935            | 1.679          | -            | -          |
| 37 PERUGIA           | 1.382         | 2.434         | -          | -         | 717              | 1.142          | -            | -          |
| 38 PESCARA           | 1.350         | 706           | 2          | 3         | 1.510            | 1.398          | 10           | -          |
| 39 PISA              | 3.045         | 5.904         | 57         | -         | 1.246            | 2.595          | 12           | 0          |
| 40 REGGIO CALABRIA   | n.a.          | n.a.          | n.a.       | n.a.      | 2.333            | 1.397          | -            | -          |
| 41 RIMINI            | 1.155         | 2.278         | 67         | -         | 653              | 1.032          | 31           | -          |
| 42 ROMA CIAMPINO     | 8.969         | 18.310        | -          | -         | 9.855            | 12.052         | -            | 1          |
| 43 ROMA FIUMICINO    | 145           | 331           | -          | -         | 2.556            | 2.794          | -            | 313        |
| 44 ROMA URBE         | -             | -             | -          | -         | 26.298           | 1.267          | -            | -          |
| 45 SALERNO           | 910           | 2.017         | -          | -         | 1.559            | 1.309          | -            | -          |
| 46 SIENA             | 224           | 367           | -          | -         | 907              | 765            | -            | -          |
| 47 TARANTO           | 42            | 59            | -          | -         | 790              | 97             | -            | -          |
| 48 TORINO AERITALIA  | -             | -             | -          | -         | 21.123           | 4.414          | -            | -          |
| 49 TORINO CASELLE    | n.a.          | n.a.          | n.a.       | n.a.      | 8.130            | 7.700          | -            | -          |
| 50 TRAPANI           | 318           | 666           | 4          | -         | 216              | 417            | -            | -          |
| 51 TRENTO            | -             | -             | -          | -         | 20.760           | 15.605         | -            | -          |
| 52 TREVISO           | 1.411         | 2.478         | 30         | -         | 1.972            | 1.338          | 20           | -          |
| 53 TRIESTE           | 819           | 1.178         | 34         | -         | 5.484            | 1.518          | 32           | -          |
| 54 VENEZIA           | 725           | 1.131         | -          | -         | 5.920            | 14.267         | 21           | -          |
| 55 VERCELLI          | -             | -             | -          | -         | 3.934            | 482            | -            | -          |
| 56 VERONA            | n.a.          | n.a.          | n.a.       | n.a.      | 3.411            | 6.496          | 12           | -          |
| <b>TOTAL</b>         | <b>37.473</b> | <b>68.769</b> | <b>419</b> | <b>25</b> | <b>251.205</b>   | <b>245.034</b> | <b>1.096</b> | <b>314</b> |

Airports not in the list have not provided data.  
n.a.: not available.

## 2017 Ranking of the Italian airports based on total number of passengers carried

| AIRPORT            | Total passengers<br>(number) | Var. %<br>2017/2016 | Overall incidence<br>(%) | Distribution (%) |               |
|--------------------|------------------------------|---------------------|--------------------------|------------------|---------------|
|                    |                              |                     |                          | Domestic         | International |
| 1 ROMA FIUMICINO   | 40.841.141                   | -1,8                | 23,4                     | 28,1             | 71,9          |
| 2 MILANO MALPENSA  | 22.037.241                   | 14,1                | 12,6                     | 14,4             | 85,6          |
| 3 BERGAMO          | 12.230.942                   | 10,6                | 7,0                      | 26,5             | 73,5          |
| 4 VENEZIA          | 10.282.611                   | 7,7                 | 5,9                      | 13,1             | 86,9          |
| 5 MILANO LINATE    | 9.503.065                    | -1,4                | 5,4                      | 51,9             | 48,1          |
| 6 CATANIA          | 9.027.604                    | 15,3                | 5,2                      | 67,9             | 32,1          |
| 7 NAPOLI           | 8.552.223                    | 26,6                | 4,9                      | 34,8             | 65,2          |
| 8 BOLOGNA          | 8.181.654                    | 6,8                 | 4,7                      | 23,7             | 76,3          |
| 9 ROMA CIAMPINO    | 5.855.450                    | 9,1                 | 3,4                      | 3,7              | 96,3          |
| 10 PALERMO         | 5.753.046                    | 8,3                 | 3,3                      | 76,5             | 23,5          |
| 11 PISA            | 5.222.427                    | 4,9                 | 3,0                      | 27,4             | 72,6          |
| 12 BARI            | 4.669.277                    | 8,4                 | 2,7                      | 60,7             | 39,3          |
| 13 TORINO          | 4.165.930                    | 5,8                 | 2,4                      | 51,0             | 49,0          |
| 14 CAGLIARI        | 4.149.585                    | 11,8                | 2,4                      | 78,7             | 21,3          |
| 15 VERONA          | 3.046.269                    | 10,8                | 1,7                      | 33,2             | 66,8          |
| 16 TREVISO         | 2.982.741                    | 14,5                | 1,7                      | 32,0             | 68,0          |
| 17 OLBIA           | 2.785.263                    | 10,6                | 1,6                      | 51,7             | 48,3          |
| 18 FIRENZE         | 2.646.050                    | 5,7                 | 1,5                      | 14,5             | 85,5          |
| 19 LAMEZIA TERME   | 2.539.233                    | 1,0                 | 1,5                      | 76,0             | 24,0          |
| 20 BRINDISI        | 2.314.619                    | -0,2                | 1,3                      | 78,0             | 22,0          |
| 21 ALGHERO         | 1.318.210                    | -1,8                | 0,8                      | 75,4             | 24,6          |
| 22 TRAPANI         | 1.291.186                    | -13,4               | 0,7                      | 71,5             | 28,5          |
| 23 GENOVA          | 1.241.502                    | -1,6                | 0,7                      | 57,5             | 42,5          |
| 24 TRIESTE         | 777.575                      | 7,3                 | 0,4                      | 66,2             | 33,8          |
| 25 PESCARA         | 658.412                      | 18,7                | 0,4                      | 46,0             | 54,0          |
| 26 ANCONA          | 477.472                      | 0,1                 | 0,3                      | 34,2             | 65,8          |
| 27 COMISO          | 436.633                      | -4,9                | 0,3                      | 60,1             | 39,9          |
| 28 REGGIO CALABRIA | 380.062                      | -20,7               | 0,2                      | 100,0            | 0,0           |
| 29 RIMINI          | 300.774                      | 27,0                | 0,2                      | 0,2              | 99,8          |
| 30 LAMPEDUSA       | 253.710                      | 13,1                | 0,1                      | 99,6             | 0,4           |
| 31 PERUGIA         | 246.543                      | 12,9                | 0,1                      | 29,7             | 70,3          |
| 32 PARMA           | 157.463                      | -16,4               | 0,1                      | 78,8             | 21,2          |
| 33 PANTELLERIA     | 151.917                      | 8,6                 | 0,1                      | 100,0            | 0,0           |
| 34 CUNEO           | 116.343                      | -10,6               | 0,1                      | 66,4             | 33,6          |
| 35 ELBA            | 9.227                        | 0,4                 | 0,0                      | 43,4             | 56,6          |
| 36 BRESCIA         | 8.057                        | -37,0               | 0,0                      | 0,9              | 99,1          |
| 37 GROSSETO        | 7.774                        | 3.009,6             | 0,0                      | 0,0              | 100,0         |
| 38 BOLZANO         | 5.912                        | -4,5                | 0,0                      | 90,2             | 9,8           |
| 39 SALERNO         | 3.028                        | 3,6                 | 0,0                      | 11,3             | 88,7          |
| 40 FOGGIA          | 70                           | 100,0               | 0,0                      | 100,0            | 0,0           |
| 41 TARANTO         | -                            | -100,0              | 0,0                      | 0,0              | 0,0           |
| <b>TOTAL</b>       | <b>174.628.241</b>           | <b>6,2</b>          | <b>100,0</b>             | <b>35,5</b>      | <b>64,5</b>   |

## Top 50 airlines operating in Italy ranked on passengers carried - 2017 vs 2016

| AIRLINE                                 | NATIONALITY          | PASSENGERS CARRIED* |            | Var. %<br>2017/2016 |
|---|----------------------|---------------------|------------|---------------------|
|   |                      | 2017                | 2016       |                     |
| 1 Ryanair                               | Ireland              | 36.272.693          | 32.615.348 | 11,2                |
| 2 Alitalia                              | Italy                | 21.765.476          | 23.106.354 | -5,8                |
| 3 Easyjet - Easyjet Switzerland         | Great Britain        | 16.526.021          | 14.949.980 | 10,5                |
| 4 Vueling Airlines                      | Spain                | 5.873.506           | 5.901.919  | -0,5                |
| 5 Deutsche Lufthansa                    | Germany              | 4.529.777           | 4.287.095  | 5,7                 |
| 6 Wizz Air                              | Hungary              | 4.307.344           | 3.517.535  | 22,5                |
| 7 British Airways                       | Great Britain        | 3.391.785           | 3.109.075  | 9,1                 |
| 8 Air France                            | France               | 2.784.450           | 2.598.309  | 7,2                 |
| 9 Meridiana Fly - Air Italy             | Italy                | 2.474.714           | 2.627.654  | -5,8                |
| 10 Volotea                              | Spain                | 2.295.845           | 1.825.076  | 25,8                |
| 11 Emirates                             | United Arab Emirates | 1.936.043           | 1.850.198  | 4,6                 |
| 12 Klm Royal Dutch Airlines             | Netherlands          | 1.917.342           | 1.802.234  | 6,4                 |
| 13 Blue Air                             | Romania              | 1.786.026           | 1.336.070  | 33,7                |
| 14 Turkish Airlines                     | Turkey               | 1.552.095           | 1.554.768  | -0,2                |
| 15 Eurowings                            | Germany              | 1.532.528           | 353.541    | 333,5               |
| 16 Blue Panorama Airlines               | Italy                | 1.443.652           | 1.210.902  | 19,2                |
| 17 Air Berlin                           | Germany              | 1.353.084           | 1.873.891  | -27,8               |
| 18 Iberia                               | Spain                | 1.333.050           | 1.287.938  | 3,5                 |
| 19 Neos                                 | Italy                | 1.163.808           | 1.056.137  | 10,2                |
| 20 Swiss Air International              | Switzerland          | 1.079.460           | 1.068.882  | 1,0                 |
| 21 Aeroflot                             | Russia               | 1.068.881           | 889.813    | 20,1                |
| 22 Brussels Airlines                    | Belgium              | 1.041.499           | 854.828    | 21,8                |
| 23 Tap - Air Portugal                   | Portugal             | 970.713             | 890.762    | 9,0                 |
| 24 Air Dolomiti                         | Italy                | 912.228             | 782.566    | 16,6                |
| 25 Qatar Airways                        | Qatar                | 850.455             | 791.612    | 7,4                 |
| 26 Delta Air Lines                      | Usa                  | 835.817             | 843.970    | -1,0                |
| 27 Basiq Air - Transavia                | Netherlands          | 831.501             | 891.026    | -6,7                |
| 28 American Airlines                    | Usa                  | 830.791             | 729.671    | 13,9                |
| 29 German Wings                         | Germany              | 775.791             | 1.359.949  | -43,0               |
| 30 Scandinavian Airlines System (Sas)   | Sweden               | 752.297             | 717.068    | 4,9                 |
| 31 Norwegian Air International          | Norway               | 729.810             | 567.674    | 28,6                |
| 32 Austrian Airlines                    | Austria              | 674.074             | 577.134    | 16,8                |
| 33 Aer Lingus                           | Ireland              | 566.667             | 528.703    | 7,2                 |
| 34 Aegean Aviation                      | Greece               | 557.055             | 487.056    | 14,4                |
| 35 Mistral Air                          | Italy                | 542.916             | 374.094    | 45,1                |
| 36 Air Europa                           | Spain                | 507.694             | 494.534    | 2,7                 |
| 37 United Airlines                      | Usa                  | 462.949             | 473.579    | -2,2                |
| 38 Ethiad Airways                       | United Arab Emirates | 441.873             | 376.147    | 17,5                |
| 39 El Al Israel Airlines                | Israel               | 434.866             | 417.201    | 4,2                 |
| 40 Air Malta                            | Malta                | 426.825             | 363.243    | 17,5                |
| 41 Air China International              | China                | 415.923             | 376.168    | 10,6                |
| 42 Finnair                              | Finland              | 409.891             | 389.406    | 5,3                 |
| 43 Jet 2 / Channel Express Air Services | Great Britain        | 409.415             | 360.282    | 13,6                |
| 44 Royal Air Maroc                      | Morocco              | 394.477             | 352.697    | 11,8                |
| 45 Norwegian Air Shuttle                | Norway               | 387.350             | 384.741    | 0,7                 |
| 46 Transavia France                     | France               | 381.029             | 435.130    | -12,4               |
| 47 Ukraine International Airlines       | Ukraine              | 373.769             | 313.170    | 19,4                |
| 48 Pegasus Hava Tasimaciligi            | Turkey               | 372.413             | 343.217    | 8,5                 |
| 49 Thomson Fly                          | Great Britain        | 370.954             | 401.685    | -7,7                |
| 50 Monarch Airlines                     | Great Britain        | 333.404             | 377.566    | -11,7               |

\* In order to ensure a correct ranking, the number of domestic passengers includes only departures.

## 2017 Ranking of the first 20 airlines operating in Italy according to the number of passengers carried

### Domestic traffic

|    | AIRLINE                       | NATIONALITY    | PASSENGERS<br>(departures) |
|----|-------------------------------|----------------|----------------------------|
| 1  | Alitalia                      | Italy          | 12.151.108                 |
| 2  | Ryanair                       | Ireland        | 11.104.596                 |
| 3  | Easyjet - Easyjet Switzerland | Great Britain  | 2.828.289                  |
| 4  | Volotea                       | Spain          | 1.617.120                  |
| 5  | Meridiana Fly - Air Italy     | Italy          | 1.345.741                  |
| 6  | Blue Air                      | Romania        | 735.879                    |
| 7  | Vueling Airlines              | Spain          | 587.904                    |
| 8  | Blue Panorama Airlines        | Italy          | 244.878                    |
| 9  | Mistral Air                   | Italy          | 185.072                    |
| 10 | Neos                          | Italy          | 68.744                     |
| 11 | Air Horizon                   | Spain          | 24.779                     |
| 12 | Albastar                      | Spain          | 23.943                     |
| 13 | Air Baltic Corporation        | Latvia         | 12.337                     |
| 14 | Air Dolomiti                  | Italy          | 11.511                     |
| 15 | Austrian Airlines             | Austria        | 5.556                      |
| 16 | Silver Air                    | Czech Republic | 3.870                      |
| 17 | Ural Airlines                 | Russia         | 3.403                      |
| 18 | Siavia                        | Slovenia       | 2.559                      |
| 19 | Adria Airways                 | Slovenia       | 2.268                      |
| 20 | Med Avia                      | Malta          | 2.007                      |

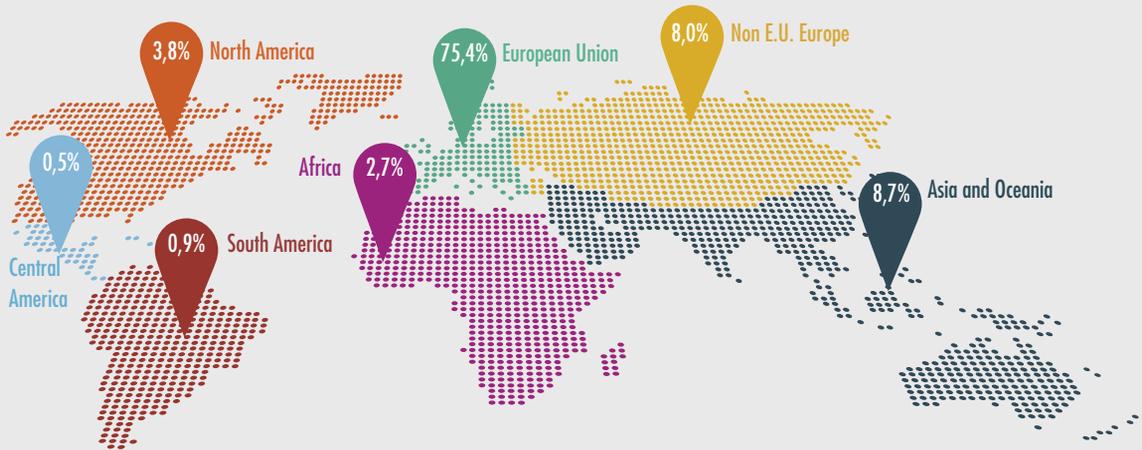
### International traffic

|    | AIRLINE                       | NATIONALITY          | PASSENGERS<br>(arrivals+departures) |
|----|-------------------------------|----------------------|-------------------------------------|
| 1  | Ryanair                       | Ireland              | 25.168.097                          |
| 2  | Easyjet - Easyjet Switzerland | Great Britain        | 13.697.732                          |
| 3  | Alitalia                      | Italy                | 9.614.368                           |
| 4  | Vueling Airlines              | Spain                | 5.285.602                           |
| 5  | Deutsche Lufthansa Ag         | Germany              | 4.529.474                           |
| 6  | Wizz Air                      | Hungary              | 4.307.344                           |
| 7  | British Airways               | Great Britain        | 3.391.785                           |
| 8  | Air France                    | France               | 2.784.450                           |
| 9  | Emirates                      | United Arab Emirates | 1.936.043                           |
| 10 | Klm Royal Dutch Airlines      | Holland              | 1.917.251                           |
| 11 | Turkish Airlines Inc.         | Turkey               | 1.552.095                           |
| 12 | Eurowings Ag                  | Germany              | 1.532.528                           |
| 13 | Air Berlin Gmbh               | Germany              | 1.353.084                           |
| 14 | Iberia                        | Spain                | 1.333.050                           |
| 15 | Blue Panorama Airlines        | Italy                | 1.198.774                           |
| 16 | Meridiana Fly - Air Italy     | Italy                | 1.128.973                           |
| 17 | Neos                          | Italy                | 1.095.064                           |
| 18 | Swiss Air International       | Sweden               | 1.079.460                           |
| 19 | Aeroflot                      | Russia               | 1.068.834                           |
| 20 | Blue Air                      | Romania              | 1.050.147                           |

## Main airline operating on each Italian airport 2017

|    | AIRPORT         | AIRLINE                   | NATIONALITY    |
|----|-----------------|---------------------------|----------------|
| 1  | Alghero         | Alitalia                  | Italy          |
| 2  | Ancona          | Ryanair                   | Ireland        |
| 3  | Bari            | Ryanair                   | Ireland        |
| 4  | Bergamo         | Ryanair                   | Ireland        |
| 5  | Bologna         | Ryanair                   | Ireland        |
| 6  | Bolzano         | Austrian Airlines         | Austria        |
| 7  | Brescia         | Mistral Air (Cargo)       | Italy          |
| 8  | Brindisi        | Ryanair                   | Ireland        |
| 9  | Cagliari        | Alitalia                  | Italy          |
| 10 | Catania         | Ryanair                   | Ireland        |
| 11 | Comiso          | Ryanair                   | Ireland        |
| 12 | Cuneo           | Ryanair                   | Ireland        |
| 13 | Elba            | Silver Air                | Czech Republic |
| 14 | Firenze         | Vueling Airlines          | Spain          |
| 15 | Genova          | Alitalia                  | Italy          |
| 16 | Grosseto        | Smartwings Travel Service | Czech Republic |
| 17 | Lamezia Terme   | Ryanair                   | Ireland        |
| 18 | Lampedusa       | Mistral Air               | Italy          |
| 19 | Milano Linate   | Alitalia                  | Italy          |
| 20 | Milano Malpensa | Easyjet                   | Great Britain  |
| 21 | Napoli          | Easyjet                   | Great Britain  |
| 22 | Olbia           | Meridiana Fly             | Italy          |
| 23 | Palermo         | Ryanair                   | Ireland        |
| 24 | Pantelleria     | Alitalia                  | Italy          |
| 25 | Parma           | Ryanair                   | Ireland        |
| 26 | Perugia         | Ryanair                   | Ireland        |
| 27 | Pescara         | Ryanair                   | Ireland        |
| 28 | Pisa            | Ryanair                   | Ireland        |
| 29 | Reggio Calabria | Alitalia                  | Italy          |
| 30 | Rimini          | Ural Airlines             | Russia         |
| 31 | Roma Ciampino   | Ryanair                   | Ireland        |
| 32 | Roma Fiumicino  | Alitalia                  | Italy          |
| 33 | Salerno         | VLM Airlines              | Slovenia       |
| 34 | Taranto         | Atlas Air (Cargo)         | Usa            |
| 35 | Torino          | Ryanair                   | Ireland        |
| 36 | Trapani         | Ryanair                   | Ireland        |
| 37 | Treviso         | Ryanair                   | Ireland        |
| 38 | Trieste         | Alitalia                  | Italy          |
| 39 | Venezia         | Easyjet                   | Great Britain  |
| 40 | Verona          | Volotea                   | Spain          |

### Passenger traffic distribution by origin/destination - Worldwide



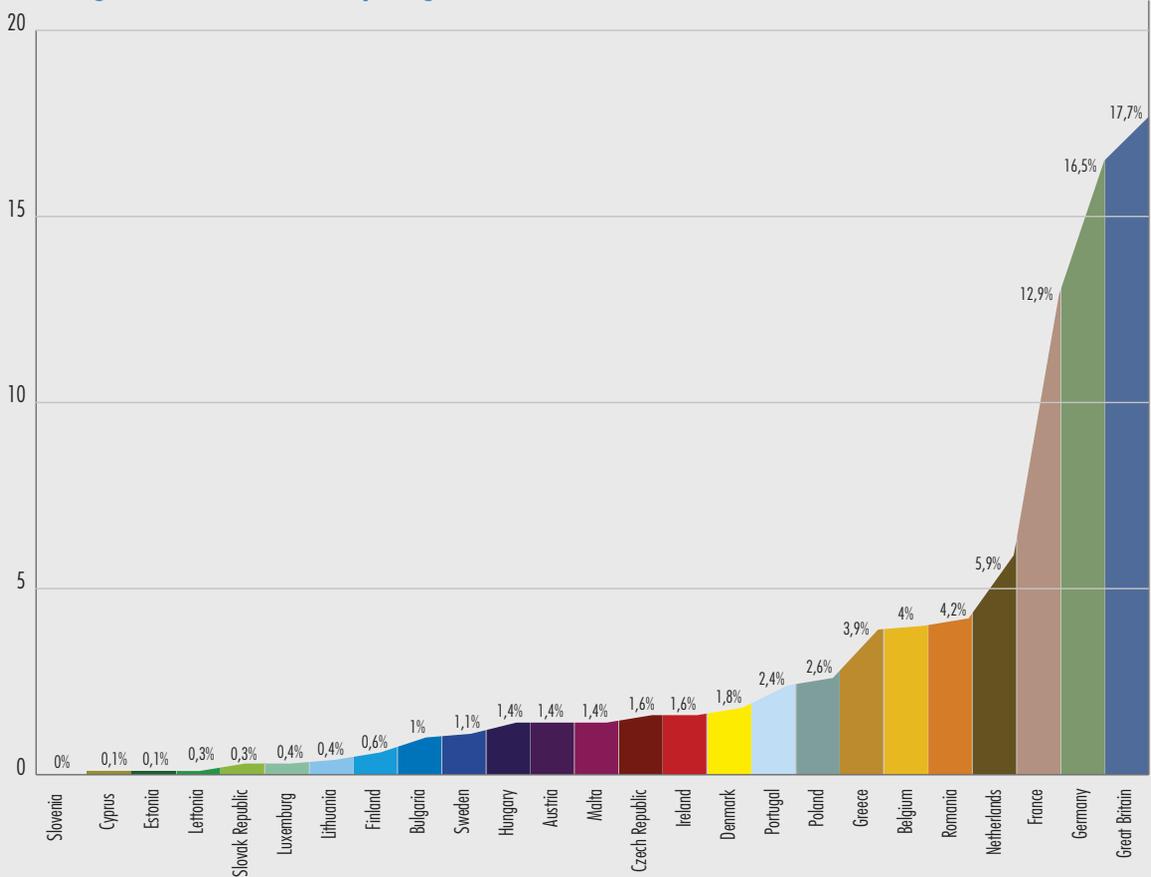
### Monthly passenger traffic 2016 vs 2017



### Monthly cargo traffic 2016 vs 2017



Passenger traffic distribution by Origin/Destination - EU Countries

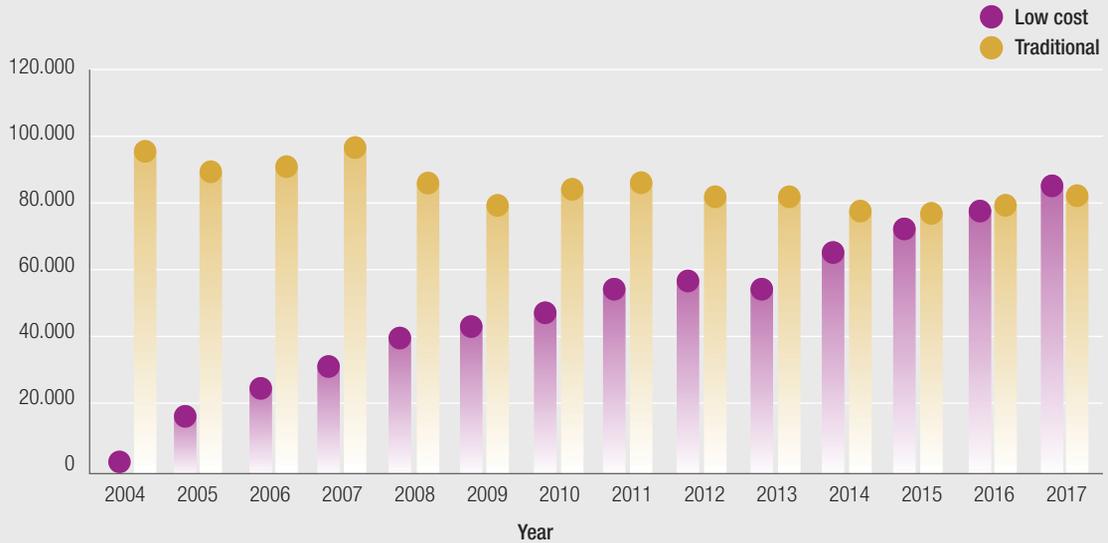


2017 Italian market share between traditional and low cost airlines

|                             | Domestic Passengers* (arr. + dep.) | Share %       | Var.% 2017/2016 | International Passengers (arr. + dep.) | Share %       | Var.% 2017/2016 | Total Passengers (arr. + dep.) | Share %       | Var.% 2017/2016 |
|-----------------------------|------------------------------------|---------------|-----------------|--|---------------|-----------------|--------------------------------|---------------|-----------------|
| <b>Low cost airlines</b>    | 33.815.904                         | 54,6          | 8,69            | 55.004.433                             | 48,8          | 9,62            | 88.820.337                     | 50,9          | 9,27            |
| <b>Traditional airlines</b> | 28.125.568                         | 45,4          | -3,73           | 57.682.336                             | 51,2          | 7,08            | 85.807.904                     | 49,1          | 3,28            |
| <b>Total</b>                | <b>61.941.472</b>                  | <b>100,00</b> |                 | <b>112.686.769</b>                     | <b>100,00</b> |                 | <b>174.628.241</b>             | <b>100,00</b> |                 |

\* The number of national passengers have been calculated in order to exclude double counting by taking into account the total number of airports.

Italian market share between traditional and low cost airlines - Trend 2004-2017



Traffic Data Legend

**Cargo:** airfreight + airmail (stated in tonnes).

**Freight:** any properties carried on an aircraft, including diplomatic baggage and urgent shipping except mail, in-flight supplies and passenger and crew baggage.

**Movement:** take-off/landing. According to the airport traffic survey, the arrival and departure of the same aircraft are counted as two movements.

**Passengers:** departing or arriving passengers from a stopover. Passengers travelling on a domestic connection are counted as one unit-passenger on departure from the airport of origin and as one unit-passenger on arrival at the airport of destination, whereas passengers on an international connection are counted as a single traffic unit in domestic stopovers. Consequently, the overall traffic registered in domestic airports results from the double counting of the number of passengers who have travelled on domestic route, added to those who have travelled on international route counted only once.

**Transits at a specific airport:** passengers passing through an airport and departing using an aircraft with the same arrival flight number.

**Scheduled flight services:** air transport services for passengers and freight offered on payment, available to the public and operated according to a published timetable regularity and frequency characteristics as to represent an evident systematic series of flights.

**Non-scheduled flight services:** flights involving passenger and freight transport based on a rental agreement entered into by one or more parties for the usage of the whole aircraft.

**Commercial air transport:** air traffic carried out to transport passengers or goods on payment. It, thus, includes airline transport, charter flight and air taxi.

**Non commercial air transport or general aviation:** transport other than a commercial air transport, essentially including the activities of aero-clubs, flying schools and small private planes, etc.

**International air transport:** air transport carried out through connections with airports located outside the national boundaries.

**National or domestic air transport:** air transport carried out through connections between Italian airports.



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# **1**

## **THE INSTITUTION**

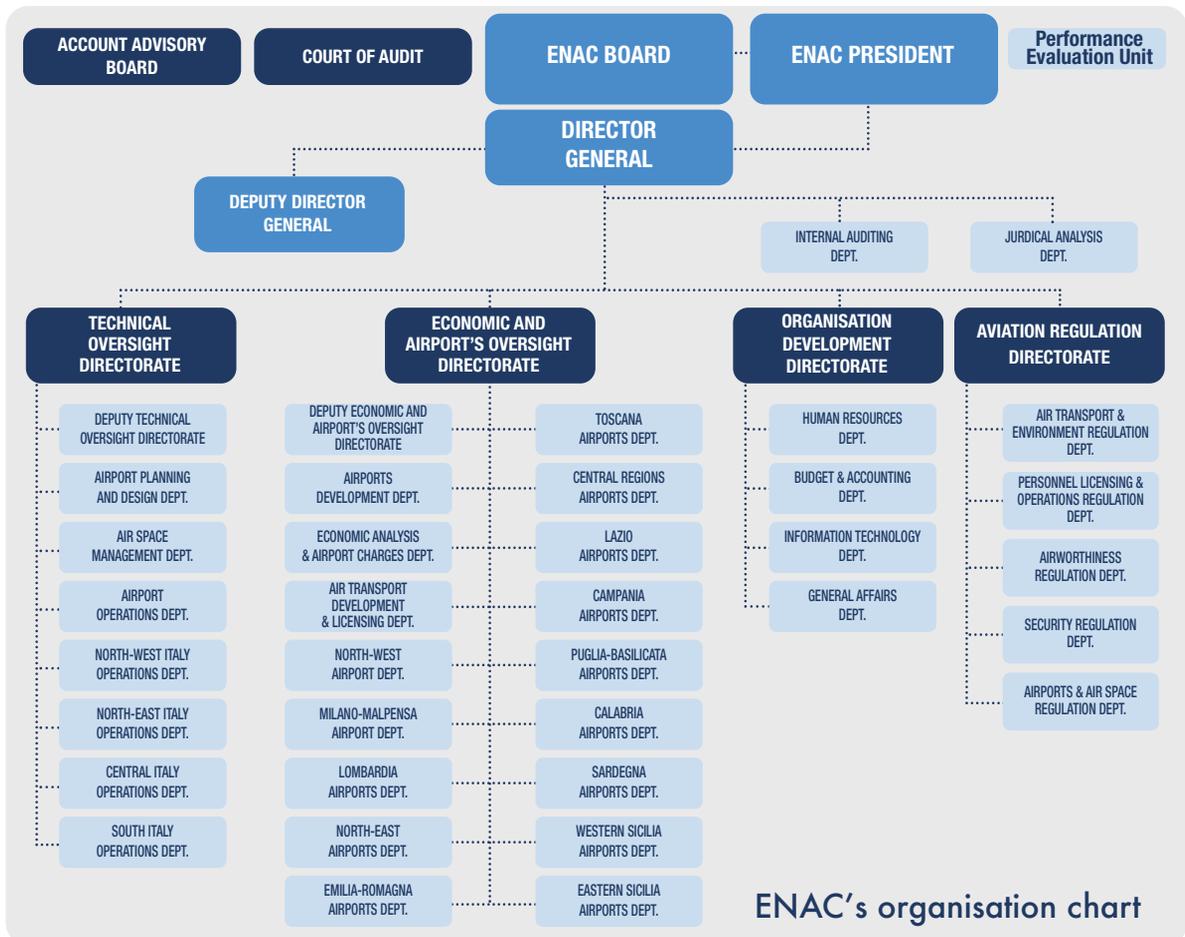
# ROLE AND ORGANISATION

ENAC is the Italian single authority in the technical regulation, certification, supervision and control of civil aviation with powers conferred by the Italian Navigation Code. Its primary objectives are set forth in the statutory mandate and highlighted in its Mission:

ENAC, the Italian Civil Aviation Authority, in carrying out its functions of safety regulation, certification, surveillance and oversight in the civil aviation field, supports the development of the civil aviation by ensuring the Country, especially consumers and industry, the safety of aviation activities, the preservation of rights, the quality of services and fair competition within an environmentally friendly approach.

ENAC has established a strong connection with a number of international bodies and cooperates and holds a leadership position in: ICAO

(International Civil Aviation Organization), the United Nations specialized agency charged with the task of defining common regulatory and technical civil aviation standards within its member countries and, as a member of the ICAO Council, Italy provides its contribution in the following areas: Technology and development policies; European Union; ECAC (European Civil Aviation Conference), an intergovernmental organization for convergence and cooperation in the field of air transport at pan-European level; EASA (European Aviation Safety Agency), an EU agency responsible for defining common levels of safety and environmental protection in civil aviation within the EU member countries; Eurocontrol, an organization that plans and coordinates the implementation of a harmonized European air traffic management system.



ENAC's organisation chart

# HUMAN RESOURCES

ENAC can count on a highly specialised staff. At 31 December 2017, ENAC counted 705 members employed in four separate areas.

| ENAC staff serving at 31 December 2017   |            |            |
|--|------------|------------|
| AREAS OF ACTIVITY  | UNITS      | %          |
| Executives   | 38         | 5,4        |
| Professionals<br>(125 graduates and 21 high school graduates)                              | 146        | 20,7       |
| Operational<br>(15 flight inspectors, 4 air traffic inspectors and 197 airport inspectors) | 216        | 30,6       |
| Technical and Economic-Administrative  | 305        | 43,3       |
| <b>TOTAL</b>   | <b>705</b> | <b>100</b> |

After many years of public spending reduction where the recruitment possibility was limited, the 2018 Budget Law (205/2017), with clause 576, considering ENAC's demands, authorised the recruitment 93 specialised and operational staff members, in order to guarantee the safety standards established by the international legislation.

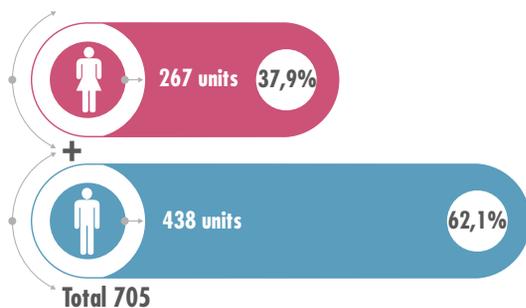
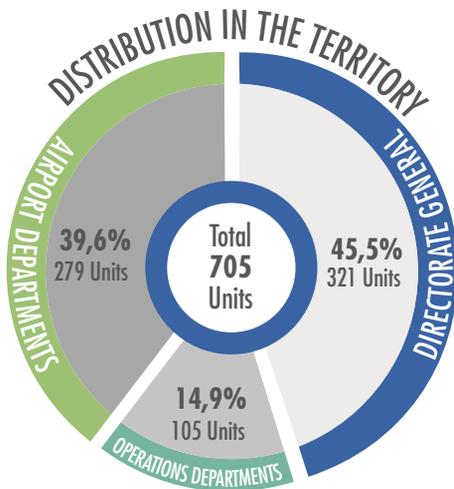
As a result of the hiring process which follows the public selection procedures and the remaining recruitment power, it will be possible to cover the actual staff number.

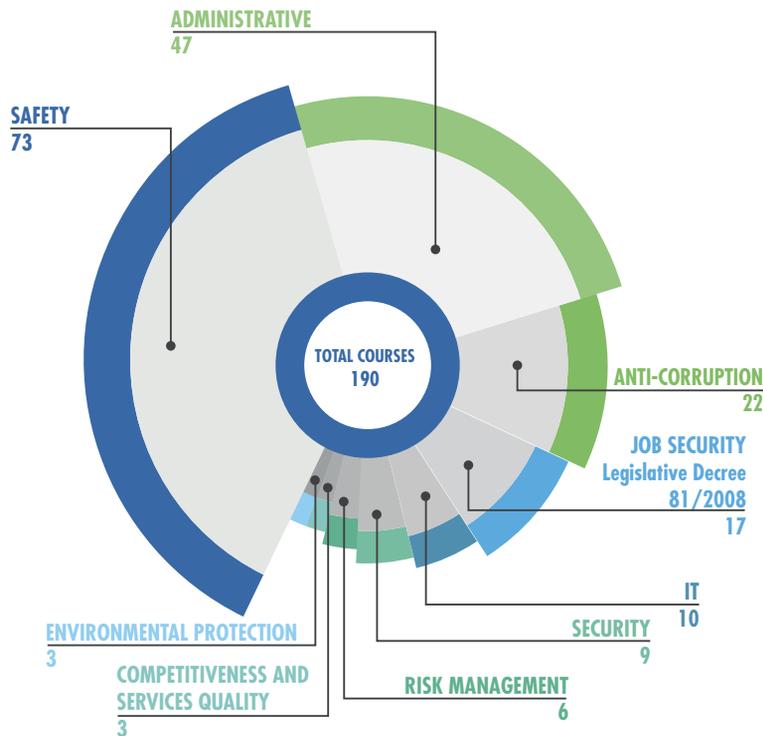
## Internal staff training

Training activities envisaged by the Three-year Plan 2014-2016 were continued in 2017 since they were still current and part of the year's planning.

In 2017 ENAC started the Project Update of the Three-year training Plan in order to have a more efficient management tool, to keep up with the requirements and the best practises requested, and to support and improve the atmosphere within the authority; the project activities will end up with the training document revising, with the ENAC staff qualifying and with the realisation of the new Three-year Plan, after having considered the training needs of the staff.

In 2017 ENAC's staff took part in 190 training initiatives, including external courses. In the following diagram are represented the courses attended for each domains.





The staff attended some 2,580 days of training, with an average - calculated on the total staff - of 3,6 days of training per person. The in-house course has been the most adopted modality (60% of the total). External companies with ENAC staff in have carried out the personalised training as lecturer.

With regard to safety, the training activity to retain and achieve the qualification for the Safety Oversight inspection staff has continued, following the international and ENAC’s internal procedures, with particular reference to ramp inspections.

There have been refresher trainings for the inspection staff specialised in Security, Bill of rights and quality of services; new airport inspectors have started attending the training to obtain the qualification in the different domains.

The 2017 anti-corruption trainings wanted to support and improve the strategy of corruption risk

management, by developing the needed professional competences of the staff.

The 2017 programming approach was a tangible series of actions to contrast illegality and not just mere activities to comply with the legislation; the activity has been focused on custom-made courses, translating the norms general topic in languages congruent with ENAC operational context.

For these reasons, specialistic activities for the professional categories working in the highest risk areas have been planned. All the players involved in ENAC’s negotiations (works, goods and services, concessions) took part to a modular training course about the new Code on public contracts. After the general course about the new Code dedicated to the management, the specific training activity focused on the following areas:

## Sheet 1.2 Human resources

- Areas and airport buildings concessions (three editions)
- Concessions of services and supplies related to report (single edition)
- Public Works (three editions)
- Above and below threshold goods and services purchases (single edition)

Refresher seminars for the authority's management and for the organising position holders were carried out due to the changes introduced by the

corrective Decree of the Contracts' code. Furthermore, the training to develop the skills to use the Consip platform (MePA) for the staff in charge of goods and services purchase, continued.

### Training for external personnel

In 2017, some 950 participants (in total about 900 days per member) took part in various training courses and workshops aimed at promoting a culture of safety.

| COURSE   | RECIPIENTS                                 |
|--|--|
| Reg. (EU) 748/2012 Part 21 DOA   | Magnaghi Aeronautica                       |
| Reg. (EU) 748/2012 Part 21 DOA   | Officine Meccaniche Irpine                 |
| Reg. (EU) 748/2012 Part 21 Subpart J DOA   | Giannuzzi Srl                              |
| State of the art and evolution of Remotely Piloted Aircraft System: from light drones to the heavier ones for goods transportation | Order of Engineers of the province of Rome |
| Examiner Refresher Seminar TRE (A) MP and SP/HPA Complex and (H) ME SP/MP Complex (8 editions)                                     | Flight examiners on behalf of ENAC         |
| Examiner Standardization Course TRE (A) MP and SP/HPA Complex and (H) ME SP/MP Complex   | Flight examiners on behalf of ENAC         |
| Familiarisation with LICENZE - LIC 13 (40 editions)  | Flight examiners on behalf of ENAC         |
| Seminary CRE (A) TRE (H) SE SP   | Flight examiners on behalf of ENAC         |
| Seminary FE/FIE/IRE  | Flight examiners on behalf of ENAC         |
| Security certified instructors of State Insitutions  | Security instructor of state institution   |

## Master's Program in collaboration with ENAC

### Civil Aviation Management – second cycle

In 2017, ENAC confirmed the collaboration agreement with the University of Rome Sapienza for the 2017-2018 edition of the Master Universitari which provides training on Italian and European Civil Aviation, with particular reference to civil aviation studies. It will help develop skills required by companies and organizations such as airlines, maintenance operators, airports, ENAC, ENAV, ANSV.

### Design, Application, Regulation of RPAS (Remotely Piloted Aircraft System) – first cycle

In 2017 ENAC, signed a collaboration agreement with Rome Tor Vergata University to activate a Master's Program with the participation of companies and schools. The course is based on the supposed increasing use of the Unmanned Aerial Vehicles, known as drones, in several application and research areas. The Master's Program goal is to build a new class of professionalities able to design system of knowledge based on the Remotely Piloted Aircraft System, with a special focus on the operational aspects.

## FINANCIAL RESOURCES

ENAC's sources of funding are public financing and internal resources to run its administration and

implement the activities involved with ENAC's institutional duties.

| PUBLIC FINANCING   |                     | ENAC REVENUE  |                      |
|--|---------------------|---|----------------------|
| Funding provided by the EU to support the implementation of infrastructure projects                    | € 206,600           | <b>TRANSFER</b><br>Transfers from the State for ENAC's institutional tasks  | € 22,172,308         |
| State financing for airport investment: PON NETWORKS AND MOBILITY funding                              | € 7,000,000         | <b>OWN</b><br>Fees from airport management concessions (l. 2 August 1985, n. 449, Art. 7 amended)                     | € 98,806,000         |
| Ordinary capital transfer  | € 7,000,000         | Fees from services  | € 23,534,410         |
| Emission allowances of the aviation sector allocated for the research for the greenhouse gas reduction | € 4,332,251         | Route and terminal charges - share transferred by ENAV  | € 4,742,399          |
|  |                     | Contributions and certification/documentation fees of members belonging to registers and "Albi" (professional bodies) | € 900,000            |
|  |                     | Interests that accrue on loans, mortgage lending and current accounts   | € 41,000             |
|  |                     | Income from ENAC's immovable property   | € 94,000             |
|  |                     | Other income  | € 367,451            |
| <b>TOTAL</b>   | <b>€ 18,538,851</b> | <b>TOTAL</b>  | <b>€ 150,657,568</b> |
| <b>OVERALL TOTAL € 169,196,419</b>   |                     |   |                      |

# STAKEHOLDERS

Stakeholders involved with the activities, services and results achieved by ENAC. The stakeholder portfolio is divided into 6 categories, grouped in 3 homogeneous classes according to the type of

interaction with ENAC.

ENAC identifies its strategic stakeholders through the interest/influence matrix of the Copenhagen Charter.

|       |               |   |          |
|-------|---------------|---|----------|
| CLASS | REGULATORS    | INSTITUTIONS<br>REGULATORS  | CATEGORY |
|       | OPERATORS     | PROVIDERS OF GOODS/SERVICES<br>INDUSTRY ASSOCIATIONS<br>EMPLOYEES |          |
|       | BENEFICIARIES | USERS/BENEFICIARIES   |          |

| CLASS         | CATEGORY                    | KEY STAKEHOLDERS   |
|---------------|-----------------------------|--|
| OPERATORS     | INDUSTRY ASSOCIATIONS       | Assaeroporti, Assaereo, Assoclearance, Assohandling, IATA  |
|               | EMPLOYEES                   | ENAC Employees, Airport staff  |
|               | SUPPLIERS OF GOODS SERVICES | Supplier of air navigation services, Airport operator, Airline carrier, Aircraft manufacturer, Technical management and aircraft maintenance company, Remotely Piloted Aircraft (drone) Operators  |
| REGULATORS    | INSTITUTIONS                | Italian Air Force, Italian agency for state property management, Italian Body for Aircraft Accidents and Serious Incidents Investigation (ANSV), Judicial Authority, Department of Public Administration, Regions and Local Authorities, Authority for the Regulation of Transports (ART), Ministry of Foreign Affairs, Ministry of Environment, Defense Ministry, ANAC, Ministry of Infrastructures and Transport, Ministry of Economy and Finance, Interior Ministry, Health Ministry, National Police, Civil protection, Fire Fighters Body, Ministry of Economic Development |
|               | REGULATORS                  | ICAO, European Commission, ECAC, EASA, Eurocontrol, Foreign Civil Aviation Authorities   |
| BENEFICIARIES | USERS/BENEFICIARIES         | Passengers, Environmental groups, Consumer associations, Economic Operators, Population surrounding airports, Tour Operators, Media  |

# PERFORMANCE PLAN

ENAC’s Performance Plan is the strategic planning and social reporting tool published in compliance with the provisions set forth by Legislative Decree no. 150/2009. A greater transparency and visibility of policies and strategic actions helps stakeholders better understand ENAC’s role in governing the Italian civil aviation sector. The Performance Plan is part of the so-called “Integrated Performance Cycle”, which combines performance, standards of service, quality standards, transparency and integrity and a plan to prevent and contrast corruption. Potential areas of action are defined via an analysis of the internal and external context and stakeholders needs: it allows a better definition of the current operational framework and the future scenarios of the civil aviation sector.

ENAC’s priorities are set considering its four strategic areas (Safety, Security, fair competitiveness and quality of services, environmental protection). The aim is to promote the safety and quality of services in the aviation sector, encourage and manage the interaction

with all civil aviation system stakeholders and promote the development of airport infrastructures respecting the principles of legality, transparency and integrity, at the heart of ENAC’s activity.

ENAC pursues strategic objectives that are set for a period of three years and follows yearly operational objectives derived from the strategic ones. All the operational local objectives aimed at streamlining the managements’ processes are defined. The professional staff and the staff holding non-executive positions are assigned specific individual objectives that are not included in the Performance Plan.

In 2017, ENAC published the 2016 Performance Report aimed at illustrating the results achieved in the previous year to public bodies and stakeholders, both internal and external.

The document reports on the performance of the organisation and employees based on the planned objectives and on the available resources. The Performance Report of 2016 showed that all the planned objectives had been fully achieved.

## Model used to assign objectives



| STRATEGIC AREA   | STRATEGIC OBJECTIVES 2016-2018   | STRATEGIC ACTIONS  |
|--|--|--|
| SAFETY   | Rationalisation of the actions to ensure the safety of the infrastructures, of the airport and air navigation services, in line with the EU standards and programmes   | Conversion of the airport Certificates (EU Reg. no. 139/2014)  |
|  |  | Introduction of a Risk Based Oversight System  |
|  |  | Introduction of the activities provided for in EASA European Plan for safety aviation 2016-2020 (EPAS)                             |
|  |  | Development of the sector of Remotely Piloted Aircraft Systems (RPAS)  |
| SECURITY   | Reinforce the effectiveness of security controls of the infrastructures, of the airport and air navigation services, in line with the EU standards and programmes. i programmi e gli standard europei                            | Reinforce airport and National Aviation Security Quality Control Team inspections; supervise the related results                   |
|  |  | National program to certify security and supervising inspectors  |
| FAIR COMPETITIVENESS AND QUALITY OF SERVICES   | Develop and implement systems for cataloging and monitoring the players and the quality services of the air transport sector; revision of the general aviation structure in synergy with the airports open to commercial traffic | Valorisation of the general aviation sector  |
|  |  | Increase the efficiency of the transports system (Investment Plan – Business Plan – four-year planning agreements)                 |
| ENVIRONMENTAL PROTECTION   | Consolidate ENAC's role in the environmental field by promoting the adoption of measures aimed at reducing the environmental impact of air transport   | Implement the initiatives to realise projects in coherence with the ICAO Action Plan   |
| TRASVERSAL   | Improve the quality of corruption prevention measures  | Limit opportunities for corruption   |
|  | Improving the overall IT level of ENAC   | Implement IT user interaction systems  |
|  |  | Set-up IT systems for operational process management   |
|  | Develop a management system for ENAC based on the EASA model. Introduce Risk Management principles in all organizational areas   | Enforce Risk Management in all of ENAC's processes   |
|  | Support the country by promoting the Italian companies' competitiveness and the internationalisation in the certification and omologation procedures, in relation with EASA  | Support the country by promoting the Italian companies' competitiveness and the internationalisation in the relationship with EASA |
|  | Enhancement and protection of ENAC's real estate   | Implement initiatives to enhance and protect ENAC's real estate  |
|  | Promote the research in the air transport and aeronautic field   | Define and plan the research activities in fields which are strategic for ENAC   |
| Evaluate and enhance the research research activities in fields which are strategic for ENAC |  |  |

## PREVENTION OF CORRUPTION AND TRANSPARENCY

The existing provisions for the prevention and repression of corruption and lawlessness in the public administration established corruption prevention strategies at two levels: the national level, through the adoption of the National Anti-Corruption Plan, and a decentralized system under which each public administration defines and adopts a Three-Year Corruption Prevention Plan of its own. The National Anti-Corruption Plan merged the Three-Year Corruption Prevention Plan and the Three-Year Program on Transparency and Integrity. ENAC's Three-Year Corruption Prevention Plan is a Three-Year plan that defines ENAC's anti-corruption strategy, drawn up in accordance with the provisions set forth in the ANAC's determinations and is linked to ENAC's performance plan.

ENAC's processes (institutional, support, management and control) are evaluated and assigned a risk rating based on the size and discretionary nature of activities. The process defines the concept of corruption and risk and takes into account the general context and the results of the monitoring plan of the previous year. The processes that are identified as high-risk are then further divided according to the area and subarea of risk. The actual probability of the

occurrence of corruption is assessed along with the economic, organizational and reputational risk (the so-called "concrete" risk). The event that could possibly lead to corruption is identified along with the common measures (mandatory and transversal) that are deemed suitable to contain the risk of its occurrence.

The objectives of transparency and prevention of corruption are tightly connected to the performance of the organization and individuals. These objectives are entrusted to Directors, technical staff and other staff members, and are measured and evaluated to assess the performance of the organization and of individuals. The Plan is updated annually and takes into account the results of the monitoring activity carried out by the Manager in charge of Prevention of Corruption and Transparency.

In 2017, ENAC implemented a number of planned risk containment measures, continuing on the important task of holding training courses concerning ethics and legality and collecting and managing reports from whistleblowers. Furthermore, ENAC published documents, information and data in the specific section "Transparent Administration" webpage and implemented the Freedom of Information Act.

### Transparency - Specific actions carried out in 2017

- Implementation of the section "Transparent Administration" webpage through the Transparent Administration Portal that provides a smooth, simple management of information and data required to fulfill the obligations of advertising, transparency and dissemination of information set forth by existing regulatory provisions.
- Implementation of bidirectional communication and information channels with citizens in ENAC's website.
- Implementation of ENAC's communication channel on YouTube to increase the effectiveness of awareness raising campaigns on issues concerning transparency.
- Internal training aimed at employees on issues related to the prevention of corruption, legality, ethics and transparency.
- Organization of the "Days for Transparency".

### Service Charter

ENAC's Service Charter is an information tool aimed at providing users with information on a variety of services it provides and on their standards of quality. In 2017 ENAC continued its activities aimed at monitoring the expected and actual quality standards for the year. The indicators related to the quality of services were defined according to three variables: Accessibility, Timeliness and Transparency.

# QUALITY OF AIRPORT SERVICES AND ENFORCEMENT OF PASSENGERS' RIGHTS

## Auditing

Throughout 2017, ENAC's Team of Auditors continued its activity, started in 2014, concerning the quality of airport services provided by airport managing bodies, conducted on the airports of Naples, Pisa, Bologna, Olbia and Milan Linate. Auditing activities have the goal to analyse the Quality Management System adopted by the airport managing bodies, their inclination and capacity to prevent and eliminate non-compliances and difficulties in the evaluation of the data required for the Service Charter approval and the Quality Plan monitoring

included in the Planning Agreement.

Auditing activities were carried out to ensure a constant improvement of the quality standards of the airport services, especially those identified by ENAC as central to passenger satisfaction and care.

In this context, the auditing activity is used to verify the correct application of the EU Reg. 1107/2006 and of advisory circulars ENAC GEN 02A and GEN 06 with reference to Service Charter section about Passengers with disabilities or Reduced Mobility (PRM).

In 2017, 83 criticalities have been detected.

### Criteria for the non-compliances level allocation

| Detected non-compliances  | Level of criticality |
|---|----------------------|
| European/international regulation<br>Italian regulation<br>ENAC's Regulations and Circulars | L1                   |
| Technical requirements<br>Infrastructural requirements<br>Organisational requirements       | L2                   |
| Incorrect application of the procedures   | L3                   |
| Best practices related observations   | L4                   |



Most frequently detected criticalities:

- lack of procedures;
- training;
- comfort of the airport;
- cleanliness of the toilet facilities;
- absence, state of maintenance, coherence with the tactile plantar routes points of interest and the related tactile maps;
- accessibility and state of maintenance of the call points;
- comfort of Sala Amica;
- land-side baggage handling area.

The monitorings, analysed by the Committee for Regularity and Quality of the Airport Services, showed that the corrective actions implemented by the airport managing bodies, as a consequence of the audit team findings, produced a considerable improvement of the indicators that are the most important for the users:

- flight delays ascribed to the airport managing body;
- total departure delays of the aircrafts;
- transit time recover for the flights landed late;
- waiting time to start the disembarkation of the first passenger;
- waiting time to disembark the passengers with reduced mobility after the last passenger;
- total number of baggages not handed back at the baggage claim of the destination airport due to the glitch in the departure airport;
- reliability of the baggage handling system;
- delivery time of the last baggage from the aircraft block-on;
- cleaning frequency of the toilet facilities;
- efficiency of the passengers moving systems in the airport (lifts, tapis-roulant, escalators, people mover, etc.);
- check-in waiting time;
- security checks waiting time.

All this is possible thanks to a consolidated surveillance system based on a ENAC regulation (ENAC advisory circulars: GEN 06 on the Service Charter, GEN 02A on the quality of the services offered to PRM and APT 19 on the regulation of the airport), unique in Europe. The results of the 2017 checks were positive, since for all the relevations appeared during the audits, the airport managing bodies responded appropriately. When it was not possible, due to maintenance/renovation works, the ENAC auditors' team to respond to requested improvement needs has implemented mitigating actions.

The spirit of facilitation at the base of the actions implemented to improve the organisational operational efficiency of the controlled subjects, has been understood.

### Passengers' rights Reg. (EC) 261/2004

ENAC is responsible for enforcement of the rights of Passengers in case of denied boarding, flight cancellation or long delays. When a passenger lodges a complaint, ENAC assesses the possible violations with a view to impose sanctions on the defaulters and monitor the quality of services provided to passengers. ENAC cannot decide on compensation following passengers' claims, nor can it provide legal advice or consulting services. Violations are assessed by ENAC on either its own accord or following passenger complaints, by collecting information and conducting inspections and investigations. ENAC's Airport Depts. where the disruption occurred handle the complaint: with a view of making the process transparent, ENAC informs passengers on the steps it took following their claim (such as the sanctions imposed).

**Sanctions Reg. (EC) 261/2004**

|                            | 2015        | 2016         | 2017         |
|----------------------------|-------------|--------------|--------------|
| <b>AMOUNT</b>              | € 50,817.62 | € 362,908.28 | € 108,288.17 |
| <b>NUMBER OF SANCTIONS</b> | 40          | 38           | 23           |

Note: The annual amounts do not have direct correspondence with the number of sanctions undertaken in the reporting year: the sanctioning process is in fact divided into several stages beginning with the assessment (the number of penalties reported per year), followed by a phase during which the air carrier has the opportunity to present written pleadings, hearing requests and pay at a reduced rate (oblation). The order for payment or dismissal follows. If a payment order is issued and the carrier does not fulfill it, the order is enforced. The carrier may appeal to ENAC's decision in court with three instances of proceedings.

**Passengers' complaints**

ENAC employs an up-to-date computerized management system for passengers' complaints.

| Complaint forms 2017<br>Reg. (EC) no. 261/2004   | 2015         | 2016         | 2017         |
|--|--------------|--------------|--------------|
| Denied boarding (art.4)                          | 282          | 306          | 243          |
| Flight cancellation (art.5)                      | 1,549        | 1,718        | 1,296        |
| Flight delay (art.6)                             | 3,745        | 3,836        | 2,624        |
| Lack of information on passenger rights (art.14) | 90           | 76           | 46           |
| <b>TOTAL</b>                                     | <b>5,666</b> | <b>5,936</b> | <b>4,209</b> |

**Legend**

**BLND:** Blind or low vision passengers.

**WCHR:** Passengers with a walking disability who can manage steps and can move unaided.

**WCHS:** Passengers with a severe walking disability who cannot manage steps but do not need assistance in the cabin.

**WCHC:** Passengers who are unable to walk and cannot move unaided. They need total assistance.

**DEAF:** Passengers who are hearing-impaired.

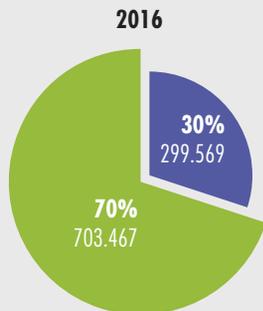
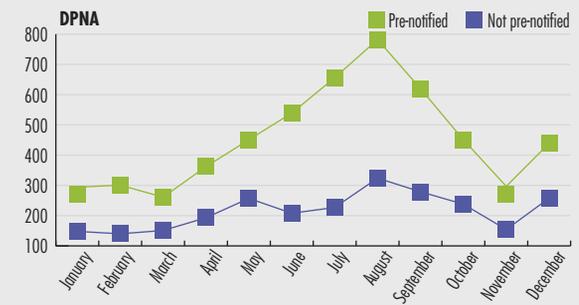
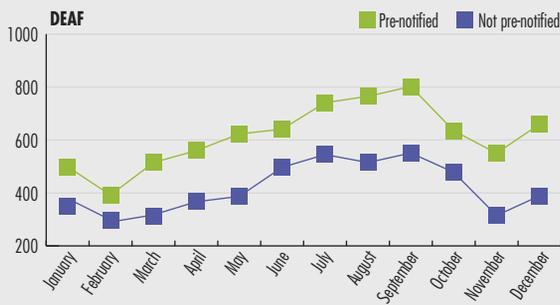
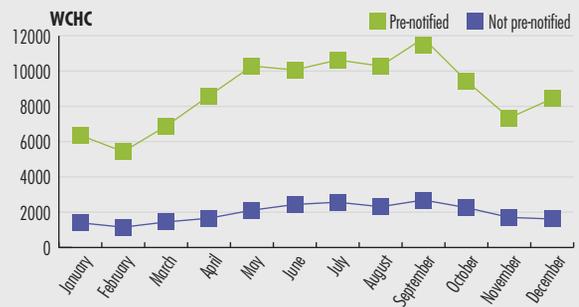
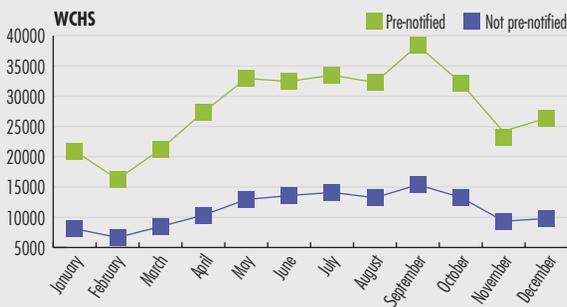
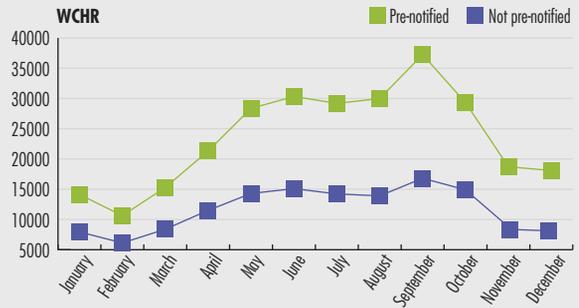
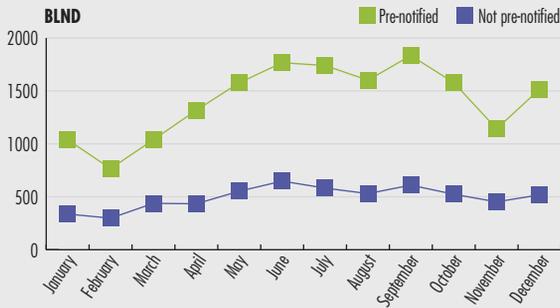
**DPNA:** Passengers with intellectual and behavioral disabilities.

## Rights of Passengers with Reduced Mobility (PRM)

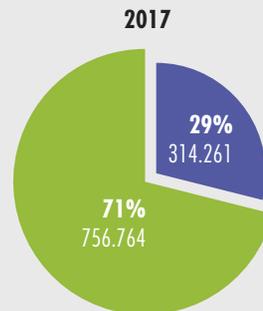
To ensure that air transport be provided without any discrimination and at no additional costs, the EU adopted some common rules that give

Passengers with Reduced Mobility a dedicated assistance in EU airports. This special assistance should be requested by the PRM passengers ahead of their flight.

### Assistance to PRM 2017



Pre-notified Not pre-notified



## Autism, travelling through the airport

In 2017 the promotional and sharing activities of the project "Autism, Travelling Through the Airport" continued. The project, created by ENAC in collaboration with ASSAEROPORTI and sectors' Associations, offers advices to help autistic people and their helpers to engage serenely the travel experience offering them the possibility to visit the airport in advance.

Today the project is operational in the following airports:

- Bari, Brindisi e Foggia - Aeroporti di Puglia SpA;
- Bergamo - SACBO SpA;
- Olbia - GEASAR SpA;
- Rome Fiumicino and Ciampino - ADR SpA;
- Milan Malpensa and Linate - SEA SpA;
- Naples - GESAC SpA;
- Venice - SAVE SpA.



During the year, the airport managing Bodies of Milan, Rome and Bergamo, with ENAC collaboration, carried out workshops to share the results of the experience with the Associations involved in the initiatives.

In 2017, the following airport managing bodies joined the project and started the implementation phase:

- Pisa and Florence - Toscana Aeroporti SpA;
- Genova - Aeroporto di Genova SpA;
- Turin - SAGAT SpA;
- Bologna - Aeroporto Guglielmo Marconi di Bologna SpA;
- Catania - SAC SpA;
- Palermo - GESAP SpA.

## Reg. (EC) 261/2004 revision status

Since the date of first application (February 2005) Reg. (EC) 261/2004 has been subject of numerous interpretative judgments by the European Court of Justice, following which in 2013 the European Parliament and Council decided to revise the regulation to take into account the case law and give national air carriers and national bodies appointed by the Member States a clear-cut and well-defined framework on air passenger rights.

The sought-after resumption of works did not start even in 2017 and the Interpretative Guidelines for Reg. (EC) 261/2004 of the European Parliament and Reg. (EC) 2027/97 of the Council on the liability of air carriers in the event of accidents as amended by Reg. (EC) 889/2002 of the European Parliament and of the Council was published in European Union C214/5 of 15 June 2016, could not completely fix interpretative criticalities and fill the gaps appeared during the application phase and that are still frequent.

Currently, the always more common multimodal trips (which involves different ways of transport in a single contract), are not included in the regulation. Today, if a passenger misses his flight cause of a train delay in the multimodal trip, he will only benefit from a refund and assistance as stated in the Reg. (EC) 1371/2007 and only if the delay is over 60 minutes at the destination.

In 2017, EU Commission started a Member States' policies analysis about multimodal transports. A service company made the analysis, by interviewing the designed Entities of several Member States, including Italy, to have updated pictures of the situation in order to outline the possible EU legislative action.

In 2017 ENAC received a EU Court of Audit that carried out an audit on the EU Commission activities about the passengers' rights, not only in the air transport but also maritime and rail ones. During the visit, the audit team examined in depth the organisation and the operational procedures about passenger' rights implemented by ENAC as Italian Entity, and recognised the high Italian standards.

The visit was part of a programme that involved 10 EU Member States.



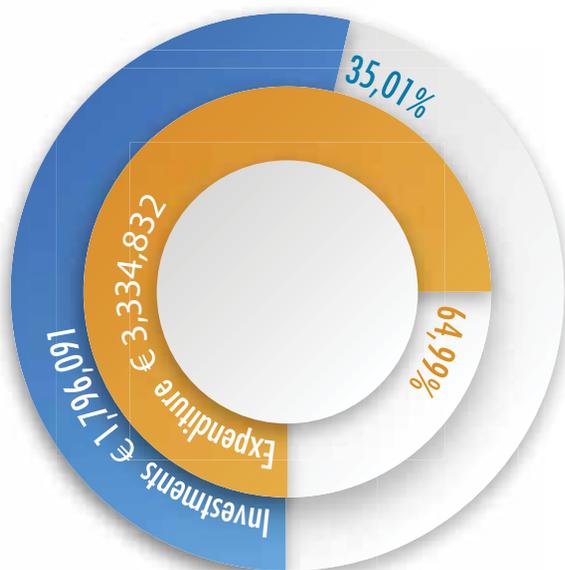
## TECHNOLOGICAL INNOVATION

In the last years, ENAC focused a considerable part of its IT systems on the online services development by implementing a Smart Working system for its staff with the following goals:

- Reduce with the IT help the efforts needed to manage the administrative and institutional procedures;
- Improve the quality and the efficiency of the services offered to the users and the businesses;
- Extend the ENAC staff that use the Smart Working System, offering virtual workstations that are similar to those in the headquarters for allowing the staff to work without being influenced by the place where they are and the device they use.

The ENAC investments in the sector in 2017 have been considerable and equal to € 5,130,923, more than one third of those (35,01%) dedicated to the innovation of systems and IT structures.

In the last year, 50 IT project of the three-year plan 2016-2018 have been completed and launched.



These projects involved both the IT infrastructure evolution and the system development according to the requests; in this last case, the 84% of the commissioned projects has been launched in the planned time, while the rest has been replanned and updated. Digitalization through web platforms, allowed obtaining considerable results in respect of the prefixed goals.

The online payment service registered 12,584 transactions in 2017; considering that this process permits the payment and the automatic emission of the invoice, an average 900 FTE (Full Time Equivalent) saving can be estimated.

In the following chart the processes with the indication of the savings in terms of FTE they generated in 2017, are listed.

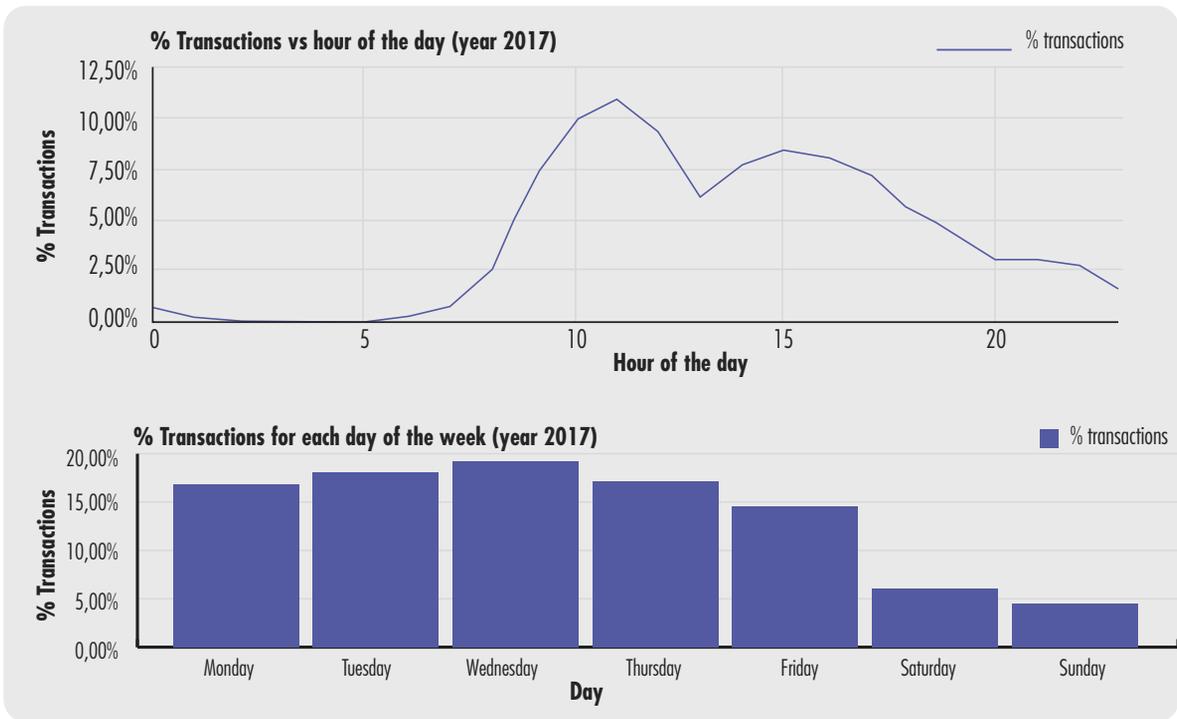
| Online process                                       | Procedures | FTE Savings |
|--|------------|-------------|
| Air Crew Examinators Reporting                       | 6,615      | 441         |
| Communications of the drones' pilot training centers | 6,668      | 445         |

Through the online services, ENAC offers to the users the possibility to benefit from provisions with innovative, quick and digital modalities out of the office working time.

The following chart shows, for each hour of the day, the average percentage of the recorded transactions compared to the total.

The 2017-recorded data's analysis shows that the online systems permit to handle the 38,09% of the operations out of the office working time. In addition, the analysis of the daily transactions show that the 10,51% of them are done in the weekend.

On the basis of the positive results, also for the 2018 and 2019, new investments to develop the ENAC's online services are planned. In particular, the new institutional portal and new digital



services using innovative technologies like the SPID (Digital Identity Public System), to access and

subscribe requests, and digital stamp will be launched.

### Smart Working

The Smart Working system provides the ENAC’s staff with virtual workstations that are similar to the ones in the headquarters. In such a way the activities’ execution is ensured no matter the place and the device used. In 2017 220 ENAC’s staff members used the system compared to the 120 in the 2016.

The Smart Workink let the authorised staff access:

- Internal software system;
- Document management system;
- Internal file folder of each business unit;
- Documents in the personal file folder;
- Digital signature system;
- EMPIC, Enterprise aviation processing system.

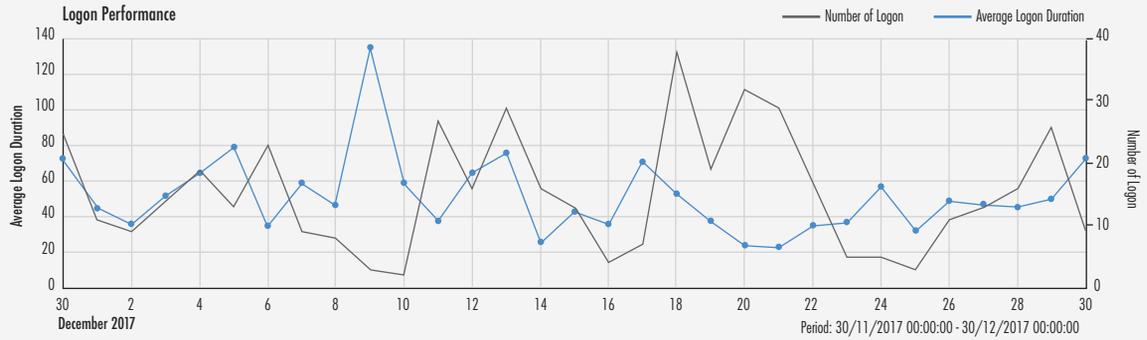
In conclusion, through the Smart Working, ENAC reached the following goals:

- Make the internal applications usable externally no matter the technology of implementation;
- Obtain a integrated management with the previous IT systems;
- Integrate the Smart Working with the centralized authentication system, with the workstations management system and with ENAC applications portal;
- Eliminate the cost of online publishing of the next ENAC’s applications;
- Implementing data protection laws.

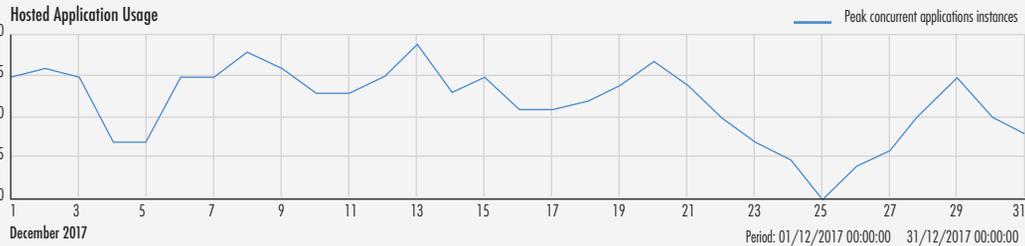
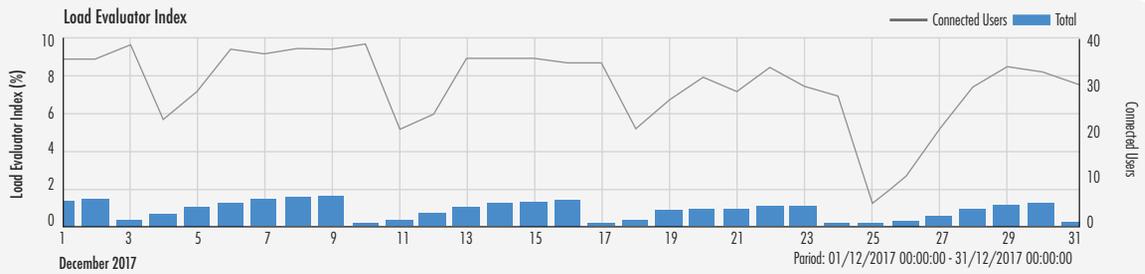
Considered the 2017 positive results, ENAC plans to increase the Smart Working staff of 80 units and to improve the system with tools to actively monitor it. In particular:

- Update of the system architecture to improve the logon performances;
- Intergrate the system with Cloud Base technologies.

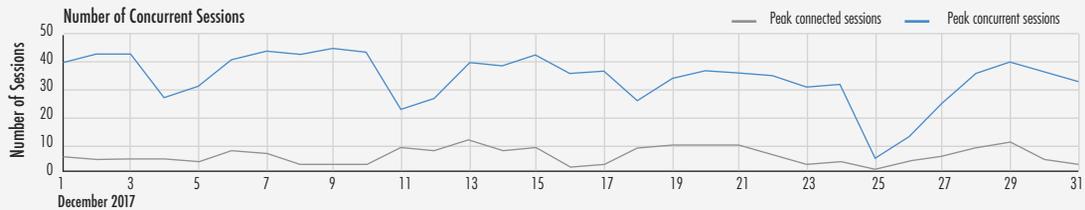
Below some charts that shows the trend of the system and connections of the ENAC's staff in December 2017:



The graph shows the accesses to the system and the average duration of staff's sessions; the 18<sup>th</sup> December an access peak has been recorded: some 40, with an average duration of 50 seconds.



The graphs show how the system reacted, in terms of performances, to the high number of connections; the decrease of the connections on Christmas day should be noticed.



As regard the number of the users which are simultaneously using the Smart Working system, the graphs show how it can easily manage some 50 connections.

## LEGAL ACTIVITY

ENAC produced a set of legal opinions on matters pertaining to its areas of competence or related to the public administration, used both in the judicial and extrajudicial field.

ENAC also obtained favorable rulings over 145 ordinances that ENAC issued against air carriers for failure to assist passengers after the closing of European airports due to the ash caused by the eruption of the Icelandic volcano Eyjafjöll.

ENAC has also been involved in drafting set opinions in favor of internal departments and the "Avvocatura Generale dello Stato", called to represent the Italian State before the European Court of Justice for a number of preliminary rulings submitted by the courts of other Member States, particularly regarding the interpretation of the provisions of Reg. (EC) 261/2004 that calls for an enhanced protection of passengers involved in the disruption of air transport.

Also in 2017, the ruling passed by ENAC has facilitated the interpretation of the EC regulation, and reduced the number of litigations brought by air carriers against the sanctions.

As to relations with air carriers, some of them filed a suit against the decree that liberalized air traffic in the Milan airport system and deregulated the allocation of airport reference slots with the aim of promoting passenger mobility rights. Although in the first instance the administrative judge,

annulled the contested decree based on procedural irregularities, it concluded that it was nevertheless fully compliant with domestic and European legislation on the allocation of airport traffic.

As to airport managing, the administrative judge confirmed the legitimacy of ENAC's work to entrust a thirty years total management of some commercial airport, considering the tendering procedure compliant with the new Code for public contracts and with the principles of transparency, equal treatment and non-discrimination.

The dispute over the concession of property belonging to the state civil aviation that, according to art. 693 of the Italian Air Navigation Code assigned free of charge to ENAC that grants them following public procedure to associations and non profits in the sports and educational field for the period before the entry into force of the new regulation, is still pending.

Finally, as to the interactions between airports and territory, the activity in the judicial field has been characterised by ENAC appeal to Consiglio di Stato for the regional administrative court' verdict that rejected the ENAC's complaint for the integration to the Territorial Plan approved by a region, in contrast with the technical indications of the civil aviation authority.



# INFORMATION AND COMMUNICATION

## Relations with users

ENAC's customer service follows the principles of transparency and effective communication to receive the users' requests, provide them with needed information, granting them access to documents. To this end, ENAC uses a pool of resources and tools aimed at promoting and optimizing relations with the various target audiences.

## Events

To promote and develop the civil aviation culture, ENAC organizes institutional events on industry issues aimed at both Italian and international stakeholders. During 2017, ENAC organized some 60 seminars, workshops and conferences in Rome's conference hall at its headquarters, which can accommodate about 100 participants.

## Toll free Number

The Toll-Free Number 800 898 121 is one of the channels through which ENAC responds directly to users' inquiries on air transport. The toll-free number also provides information on passengers' rights in case of poor services provided in Italian flights and airports, on the EU Safety List, and on the procedure involved with security checks. The staff devoted to this service, internal to ENAC and coordinated centrally, is endowed with the professional skills and knowledge required to address the very complex inquiries pertaining to civil aviation. In 2017, ENAC's toll free number received some 5,800 calls.



## Website

In 2017, the website [www.enac.gov.it](http://www.enac.gov.it), which represents one of the main ENAC's communication tools, with 3,000 updates, recorded over 1 million accesses. In parallel, ENAC started the project to realise a new institutional portal, online in 2018, respecting the guidelines

for the PA websites. The developing activity was addressed to offer a new modern and innovative graphic, reorganising the contents through a layout that simplifies the research and the navigation to find the topics of interest and to implement online services.

## Institutional communication campaigns

In addition to campaigns on passenger rights in Italian airports, conducted with other relevant stakeholders, in 2016 ENAC continued its campaign aimed at familiarizing people with autism with airport environments called "Autismo, in viaggio attraverso l'aeroporto". ENAC participated in the campaigns called "Acque d'Italia" and "Viaggiare sicuri e Dove siamo nel mondo", offering its collaboration to the Presidency of the Council of ministers and to the Crisis Unit of Foreigner Affairs Ministry. It also took part to the 2017 edition of the "Festa della Musica" promoted by the Ministry of Culture.

## Press releases

The processing and dissemination of press releases is a prominent part of ENAC's activity. It includes the management of relations with the press, the garrison of information relevant to ENAC, organizing interviews, conferences, meetings and press events and preparing material for journalists. ENAC's press releases provide timely information to the media and citizens on the more important activities related to its institutional mandate. The press releases, in addition to being disseminated to the media, are published in real time on ENAC website, where press releases from 2001 onwards can be consulted. In 2017 ENAC issued 103 press releases.

## EnacChannel

EnacChannel on YouTube was designed to convey direct and effective information to citizens such as to help them better understand ENAC's activities and the functioning of a sensitive sector such as air transport. In 2017, some 21 video services were aired on a variety of topics: institutional, current affairs, in depth studies, interviews with

top management. The channel also has links to 32 relevant radio and television information. In 2017 EnacChannel hosted the live streaming of events, meetings and workshops organized by ENAC.

### Acts of Parliamentary Inspection

In 2017, a total of 116 formal answers and 13 updates were provided to questions lodged from the Parliament that involved primarily the air transport and airports.



### Patronage

ENAC supports without funding, cultural, scientific, social, educational and sports initiatives aimed at promoting the aeronautical culture. In 2017, ENAC has supported a total of 25 projects.

### RAI Isoradio

ENAC and some airport managing bodies provide the most relevant news and information bulletins to travellers through Isoradio (FM 103.3). The bulletins, that are broadcast in the afternoon, provide interesting information on airport operations and traffic forecasts. In 2017, 240 news bulletins were broadcast.

### Library

ENAC's library includes a total of 10,000 documents related to the Italian and foreign civil aviation sector literature and acts as a reference hub for students and scholars. Its search engine, that can be accessed both on premise and on-line, includes books in its catalog or in other catalogs of the OPAC network.

## ENAC's Crisis Room



ENAC's Crisis Room or Crisis Management Team (CMT) reports directly to the Director General and is entrusted with the task of managing crisis situations in coordination with other relevant government agencies, handling the operational aspects in case of serious events involving the air transport.

The Crisis Room also supports ENAC structures in providing clear and coherent information to the media, citizens and passengers, supporting also other institutional players involved in emergency management, in full coordination with ENAC's Airport Depts. Located throughout the Italian territory. The CMT is a member of EACCC (European Crisis Coordination Cell), a body set up by the European Commission and Eurocontrol with the aim of coordinating the management of crisis responses in the European network ATM (Air Traffic Management).

The Head of ENAC's Crisis Room was also designated State Focal Point of EACCC as well as member of the Italian Civil Protection committee.

Main activities of ENAC's CMT in 2017:

- crisis management related to the earthquake in central Italy;
- managing at Operative Committee of the Italian Civil Protection of intense weather events (snow/flood) which affected the airport operation;
- managing of summer fires which limited the air traffic;
- Etna volcanic activity monitoring and related activities by relevant Airport Depts.;
- monitoring of emergency plans in case of eruption of the volcano Vesuvius, the volcano Stromboli and Campi Flegrei and Tsunami risks, in collaboration with the Civil Protection;
- simulations of accidents by Airport Depts. and simulation of Crisis Room opening;
- management of aircraft accidents and serious incidents;
- participation in workshops and international drills;
- participation in drills organised by Ministry of Defense and Italian Civil Protection.

- 
- Sheet 2.1 **69** Flight safety
  - Sheet 2.2 **74** Certification activities
  - Sheet 2.3 **78** Approval and oversight of certified organisations
  - Sheet 2.4 **86** Personnel certification
  - Sheet 2.5 **91** Inspection audits by international bodies



## **2** **SAFETY**

# FLIGHT SAFETY

## Safety

Safety involves a coherent set of activities and actions aimed at protecting flight safety such as to protect the persons and goods involved in any aeronautical activity. This is one of the key features of the Italian civil aviation governance system.

### State Safety Programme (SSP)

To ensure that actions of the countries are carried out to the highest possible level of civil aviation safety, ICAO Annex 19 requires contracting countries to develop a national programme called State Safety Program (SSP). In Italy, the SSP (National Civil Aviation Safety Program) has come to the third edition and is governed by a High-Level Coordination Committee chaired by the Director General of ENAC, under delegation of the Minister for Infrastructures and Transport as Executive Accountable.

The committee meets regularly and plays an important role in guiding and addressing any safety issues. The Committee is comprised of top executives from the ANSV, the Italian Air Investigation Board, the Ministry of Infrastructures and Transport, the Italian Air Force, the Italian Air Navigation Service Provider (ENAV) and Aero Club d'Italia.

The State Safety Programme is the manifesto of the Italian State that describes the set of policies, activities and safety goals in order to reach and maintain a good safety level, to be realised through a continuous improvement of the institutional activities of regulation, certification and oversight.

According to the ICAO Annex 19 indications, the determination of the acceptable Civil Aviation Safety level presupposes that the level has been determined, shared and supported by the State that must use it, as planned by ICAO standards, to check the performances of the whole Civil Aviation System. Establishing the acceptable level and a plan to reach it require the integration of the current complied-based safety management with a performance-based / risk based approach. The study and evolution of the Safety Performance

Indicators are under way. In the next version of the document, they should improve the identification of the safety goals fixed by the Italian State.

### ENAC Safety Plan

The Safety Plan, implemented by ENAC within the SSP, describes ENAC's activities in safety, including regulatory, certification, oversight and promotion activities, towards the achievement of coordinated and shared goals. In particular, in the Safety Plan, there are both the safety actions that the European Plan for Aviation Safety (EPAS) confer to the EASA State Members and the safety actions identified by ENAC based on its certification, oversight and control activity. In this respect, it has to be pointed out that at national level, the emerging issues impacting the civil aviation development in Italy, such as Remotely Piloted Aircraft System (RPAS), airport traffic remotely controlled or suborbital flights, have a particular importance;

ENAC's goals of Safety Plan are:

- Realisation of the strategical decisions of the State Safety Programme;
- Implementation of the safety actions attributed to the State Members by EASA;
- Implementation of the safety actions at national level;
- Implementation of the actions to mitigate the identified risks.

The Safety Plan is not a static document, but it evolves based on the EASA indications, through the EPAS periodical update and through the analysis of the data and information collected at national level. At the head of the Safety Plan, there is the Safety Board, which meets regularly to monitor the progress of the plan and to make any changes or updates. In 2017, ENAC published the

2017-2021 edition, elaborated following the indication of the alike edition of EASA's EPAS and started to develop the included actions by activating a monitoring system.

### Safety recommendations

ANSV is the agency in charge of investigating accidents and serious incidents in the civil aviation sector in Italy. According to EU Reg. 996/2010, at the conclusion of investigations, ANSV can issue safety recommendations aimed at preventing aviation accidents and serious incidents. Safety recommendations may be addressed, among others, to relevant aeronautical authorities, such as ENAC that will then take measures to safeguard and improve flight safety. ENAC carefully evaluates the content of these safety recommendations and, if required, decides on remedial measures. The position taken by ENAC on recommendations submitted by ANSV is published in ENAC's website in the Follow-up Action on Occurrence Report (FACTOR). For each individual safety recommendation, a FACTOR model is issued containing data that identifies the event with a summary description and measures taken to offset the event along with their implementation status.

During 2017, 5 FACTOR models to answer as many ANSV recommendations were issued.

### Reporting and analysis of aeronautical events

Mandatory reports of aeronautical events (accidents and serious incidents), are sent through the eE-MOR (Electronic ENAC Mandatory Occurrence Reporting) system, which complies with Reg. (EU) 376/2014. The eE-MOR system is based on the Eccairs software of the European Commission. Information is inputted directly by operators using a web interface (Webdas) and is seamlessly transferred to the national database managed by ENAC.

In 2017, the eE-MOR system has been further developed with the full integration of the ENAV reports and with the Eccairs platform development which is dedicated to the Italian Air Force and

came into operation last December.

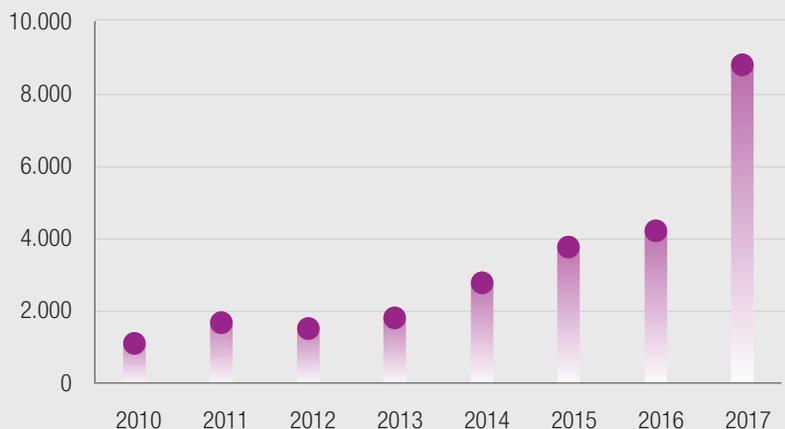
Two new interfaces have been developed and activated: one to collect the highlights related to Remotely Piloted Aircrafts (RPA) as required by the regulation and the other to collect the reports related to the events occurred during the Dangerous Goods transport.

All the reports of the events occurred during the aeronautic activities are now integrated in a single reporting system, which will allow a more efficient planning of the Performance Based Oversight (PBO) and an in-depth analysis of the events, in order to evaluate the risks and the accident prevention.

The reports received in 2017 were 9,078, recording a consistent increase compared to the previous year due to the ENAV reports integration in the ATM sector.



## Trend of the reports



## Events 2017 - ADREP categories (ICAO)

|  |              |
|--|--------------|
| <b>ADRM:</b> Aerodrome Runway incursion - vehicle, aircraft or person    | 201          |
| <b>AMAN:</b> Abrupt manoeuvre  | 90           |
| <b>ARC:</b> Abnormal runway contact                                      | 44           |
| <b>ATM:</b> ATM/CNS  | 161          |
| <b>BIRD:</b> Bird strike   | 2,661        |
| <b>CABIN:</b> Cabin safety events  | 32           |
| <b>CFIT:</b> Controlled flight into or toward terrain                    | 47           |
| <b>CTOL:</b> Collision with obstacle(s) during take-off and landing      | 12           |
| <b>EXTL:</b> External load related occurrences                           | 14           |
| <b>F-NI:</b> Fire/smoke (non-impact)                                     | 44           |
| <b>F-POST:</b> Fire/smoke (post-impact)                                  | 2            |
| <b>FUEL:</b> Fuel related  | 19           |
| <b>GCOL:</b> Ground Collision  | 17           |
| <b>GTOW:</b> Glider towing related events                                | 9            |
| <b>ICE:</b> Icing  | 5            |
| <b>LALT:</b> Low altitude operations                                     | 17           |
| <b>LOC-G:</b> Loss of control - ground                                   | 10           |
| <b>LOC-I:</b> Loss of control - inflight                                 | 33           |
| <b>LOLI:</b> Loss of lifting conditions en route                         | 1            |
| <b>MAC:</b> Mid Air Collision  | 643          |
| <b>MED:</b> Medical  | 155          |
| <b>NAV:</b> Navigation errors  | 1,206        |
| <b>OTHR:</b> Other   | 233          |
| <b>RAMP:</b> Ground handling   | 682          |
| <b>RE:</b> Runway Excursion  | 28           |
| <b>RI:</b> Runway Incursion  | 189          |
| <b>SCF-NP:</b> System/component failure or malfunction [non-power plant] | 844          |
| <b>SCF-PP:</b> power plant failure or malfunction                        | 149          |
| <b>SEC:</b> Security related   | 757          |
| <b>TURB:</b> Turbulence encounter  | 36           |
| <b>UIMC:</b> Unintended flight in IMC                                    | 1            |
| <b>UNK:</b> Unknown or undetermined                                      | 541          |
| <b>USOS:</b> Undershoot/overshoot  | 6            |
| <b>WILD:</b> Collision Wildlife  | 159          |
| <b>WSTRW:</b> Windshear or thunderstorm                                  | 132          |
| <b>TOTAL</b>   | <b>9,180</b> |

## Safety Report

In accordance with the EU Reg. 376/2014, at the beginning of 2017, the Safety Report, based on the eE-MOR system contents, has been released for the first time. The report, presented to the aeronautic community in March 2017 during a single event, contains the analysis of the data

collected in the period 2014/2015 and it is available on ENAC website.

During the year, new activities to extend the analysis to 2016 data have started, to have a three-year analysis which will be useful to define the Safety Plan updates.

### Investigations on parachute accidents

ENAC, based on its institutional mandate, conducts investigations about parachute accidents and serious incidents in order to prevent similar events.

The aim of the investigation is to discover the dynamic, the causes and the causal factors that determined the accident, in order to add elements to improve the safety of the Civil Aviation System, without attributing responsibilities.

During 2017 three investigations have been opened to discover the causes of three fatal accidents happened during the year.

A report system for the parachute sector designed and realised by ENAC, with the aim to collect reports about parachute serious incidents and accidents, is in a developing phase.

The mentioned system, beside improving the Risk Analysis, is a tool for a culture change, driven by the Just Culture also in the skydive world.

### Wildlife strike

Wildlife strike is the violent impact between an aircraft and one or more birds or other species of wildlife, with more or less serious consequences both for aviation safety and for economic costs caused by the event. The professionals who deal with wildlife strikes are organized in international and national bodies, such as the World Birdstrike Association or Birdstrike Committee Italy that operates in Italy in ENAC context.

The matured experience in Italy is well known at international level from 1992, when members of the Birdstrike Committee Italy started to work in several international teamwork, also with project leader role (2012). In 2015, there has been an additional international recognition with the designation of the Birdstrike Committee Italy president in the Steering Committee of the World Birdstrike Association Europe. Currently the BSCI databank stores all the wildlife strike events happened in the Italian airports from 2002.

A study of the data has established that 81,72% of reported civil aviation impacts take place on-

site or near airports, especially during take-off or landing. This is due, among other reasons, that the airports are an ideal habitat for many different bird species, including gulls, starlings and various birds of prey: all species that are particularly dangerous for the safety of air navigation. From 2002 till today, in the events happened below 300 feet (airport pertinence), in the 3,1% of them aircraft's damages have been recorded, in the 12,3% there has been multiple strikes, in the 2,5% there has been an engine ingestion and in the 2,7% there have been considerable effects on the flight (delays, aborted take-off, precautional landing and/or flight cancellation).

The worst affected species are swift (24%), kestrel (15%) and seagull (14%). The pigeon weighs for the 5%. From 2006, there have been more than 400 strikes with hares.

The 2017 data owned by ENAC are still temporary and subjected to changes since they have not been compared yet with the data collected by the airport managing bodies, which are responsible for the wildlife risk control and

whose risk management area concerns the strikes below 300 feet.

A general analysis of the aggregated partial data shows that the number of reported airport impacts below 300 feet has been greatly reduced compared to previous years. This testifies to the growing attention paid to this phenomenon, which involved detailed studies and the implementation of deterrent strategies aimed at reducing or at least keeping under control the presence of wildlife, a natural phenomenon that involves many variables and is difficult to predict. In order to

optimise and rationalise the ENAC resources dedicated to the visits in the Italian airports, important to monitoring the air managing body's activity about wildlife strike, the BSCI has elaborated during the year the ENAC information note NI/2017/011 where 12 performance indicators based on objective criteria (norm application, risk assessment, etc.) were indicated. They have to be considered to evaluate the possibility to make a monitoring visit in a given airport.

| YEAR  | <300 ft | Damages | Multiples | Ingestions | With effects |
|-------|---------|---------|-----------|------------|--------------|
| 2009  | 620     | 20      | 91        | 13         | 15           |
| 2010  | 719     | 18      | 87        | 14         | 11           |
| 2011  | 802     | 29      | 87        | 19         | 20           |
| 2012  | 961     | 34      | 80        | 25         | 27           |
| 2013  | 982     | 21      | 54        | 21         | 18           |
| 2014  | 961     | 20      | 64        | 20         | 8            |
| 2015  | 933     | 37      | 92        | 18         | 30           |
| 2016  | 998     | 41      | 81        | 27         | 32           |
| 2017* | 761     | 9       | 79        | 21         | 7            |

\* Partial data to be verified with the ones from the airport managing body.

### 2017 ENAC regulation about safety

- Regulation about use, flight and service time limits and rest requirements for the crew of passengers' transport helicopters to and from oilrigs, for emergency medical service and for mountain rescue and research - Edition 2 - Amendment 1 of 24 March 2017.
- Remotely Piloted Aerial Vehicles (RPA) Regulation - Edition 2, amendment 3 of 24 march 2017.
- Regulation about aircrafts navigation whose airworthiness certificate is not in line with ICAO standards - Edition 3 of 4 July 2017.
- Regulation about the firefighting air operations requirements and aspect of the specialised operations and not commercial, not included in the EU Reg. 965/2012 - edition 1 of 17 November 2017.
- Advisory circular LIC-13 of 17 January 2017 - Designation of the examiners and exam procedure for releases, renewals and restoration of licences, habilitations and flight certifications.
- Advisory circular NAV-74B of 13 July 2017 - Flyover and layover on the national territory of aircrafts whose Airworthiness certificate is not in line with the ICAO standard model.
- Advisory circular NAV-68C of 12 September 2017 - Part 66 - Conversion of the technical suitability Certificate as Certifying Staff in limited Licence of Aeronautic Maintainer.

## CERTIFICATION ACTIVITIES

### Certification of products

The certification activities of ENAC are aimed at establishing whether aircrafts, components, infrastructures and systems are compliant with the EU and EASA safety requirements. To date, EASA is responsible for the certification of aircrafts, engines, propellers and components. The certification of aircrafts listed in Annex 2 to the Reg. (EC) 216/2008 (Basic Regulation) and the airport infrastructures are a national prerogative. In 2017 ENAC carried out this certification task upon delegation by EASA, based on a cooperation agreement, and for activities of its own competence.

### Activity under EASA remit

ENAC has carried out certification and oversight activities on behalf of EASA in relation to some 550 projects and issued for EASA: 85 Technical Visa for Issuing Certificates Approving Modifications, 6 Flight Condition Approval Proposals, 14 Flight Permits for EASA Aircrafts.

In addition, ENAC has ensured the supervision of the continuing airworthiness management of Italian products made by Leonardo Helicopters Division, General Avia, Leonardo Aircraft Division, Piaggio Aero Industries, Tecnam, Vulcanair, Magnaghi, OMA SUD, GT Propellers, DieselJet and of the products for which ENAC was delegated by EASA, such as the Piper PA-60/PA-31, PA-42, PA-30, PA-39 & PA-40, Commander 100, 112, and 114 series, 200D, 500, 680, 690 & 700 series, Bellanca Champion 7, 8, 17-31 ATC, 14-13-3, helicopters Bell 204/205/210/214, Erickson S-64F, seaplane Lake 250 & LA-42 series and Glider Calif A-21.

As part of the Safety Oversight, ENAC, for EASA, audited the following Italian companies and products: Leonardo Aircraft Division, Alitalia, Avionica, Diesel Jet, Jet Avionics, LEAT, Mecaer, Northern Avionics, OMA SUD, Piaggio and Vulcanair. ENAC also allocated for some specific

projects some resources to EASA to release the DOA (Design Organization Approval) for specific projects to Giannuzzi and Interiors CS.

ENAC was also delegated by the Federal Aviation Administration (FAA) to renew the Tilt Rotor AgustaWestland 609 Special Airworthiness Certificate.

As part of the Service Agreement signed with EASA, ENAC has carried out certification and oversight activities for companies in non-European countries, such as the maintenance companies - MOA: Asia Technical Aviation Services Ltd, ST Aerospace Technologies Co. Ltd, Tulpar Interiors Group LLC, Tulpar Technologies LLC, Beijing Cronda New Technology Co. Ltd, China Air Lines, Challenge Airport and the new assignment PJSC UEC-Saturn.

As for manufacturers - POA: Havelsan Hava Elektronik Sanayi, Aspilsan Askeri Pil Sanayi A.S., Tusas Aerospace Industries and Selex Communication.

ENAC, through certification programs managed by EASA, has:

- provided professionals for the Agusta AW 169 and AW189 helicopters, Sukhoi Civil Aircraft Superjet 100, helicopter Bell 429, Piaggio P180 Avanti II;
- secured the continuing airworthiness management of the aircrafts Sukhoi Civil Aircraft Superjet 100, P180 Avanti II;
- participated in the activities of the MRB (Maintenance Review Board) Process for ATR 42/72;
- provided assistance for third country validation of national products;
- realised 13 Flight Simulator Training Devices (FTSD) qualifications, flight-training device (FTD) for flight personnel Piaggio P180, AW139, B412EP, CE525, CE560XI, CE750 and 2 audits about flight simulators organisations.

In 2017, ENAC, as part of activities defined in the Service Agreement with EASA, had a turnover of around € 450,000.

## Most significant certification activities in 2017 for EASA

### Aircrafts:

As for aircrafts built in Italy, ENAC was involved in the approval processes of significant changes on the helicopters Leonardo A109 and A139, aircrafts Tecnam P2006T, P2002 e P92, Vulcanair P68 e V1 e Piaggio P180. ENAC certified AW 609, AW149, AW169 e EH 101.

As for aircrafts built abroad, ENAC was involved in the approval processes of major changes of the type certification of Boeing MD 80, ATR Avions De Transport Region ATR 42/72.

### Assistance on obtaining certifications by foreign authorities:

ENAC provided assistance to validate national products in third countries: in China aircrafts Tecnam P92JS e P2006T; in Peru aircraft Tecnam P2006T; in several foreign countries, major changes concerning helicopters Leonardo AW139, AW109/119; in Canada type major changes for the regional aircraft ATR 42/72.

### Engines:

In 2017, the EASA certification activity of the engine CMD 22 - Costruzioni Motori Diesel (CMD) has been completed. In this process, ENAC has been deeply involved by providing some experts to EASA.

### Propellers:

In 2017 the continuing airworthiness management oversight of the GT Propellers - Tonini has continued.

## Certification under ENAC remit

### 2017 main Activity of certification and authorisation

|  |     |
|--|-----|
| Infrastructures, systems, visual aids, airport radio aids projects approval and changes surveys                  | 154 |
| Issuance of aircraft dry-lease authorisations  | 46  |
| Issuance of aircraft wet-lease authorisations  | 19  |
| Issuance of aircraft export certificates   | 134 |
| Issuance of certificates of airworthiness (EASA and Annex II)  | 65  |
| Issuance of radio station testing attestations   | 124 |
| Issuance of radio station temporary attestations of validity   | 33  |
| Issuance of permit to fly for Remotely Piloted Aircrafts (RPAS)  | 3   |
| Issuance of permit to fly for aircraft (EASA)  | 70  |
| Issuance of permit to fly for aircraft (Annex II)  | 26  |
| Issuance of aircraft export certificates of airworthiness - used aircraft with airworthiness review done by CAMO | 4   |
| Issuance of permit to fly for recreational aircrafts   | 39  |
| Renewal of permit to fly for recreational aircrafts  | 18  |
| Issuance of historical permit to fly   | 12  |
| Issuance of recreational radio station testing attestations  | 21  |
| Authorisation/exemption/approval dangerous goods (Doc. ICAO 9284)  | 87  |
| Flyover authorisations to aircrafts in possession of certification not complying with the ICAO Annex 8 66        | 78  |
| Approval of maps for obstacles and dangers for air navigation  | 2   |
| Authorisation to install permanent obstacles for air navigation  | 75  |
| Authorisation to install temporary obstacles for air navigation  | 482 |
| Master Plan/Development Plans approval   | 5   |
| Risk assessment on the interaction between airport and territory   | 2   |

## National Aeronautical Registry and Construction Registry

ENAC keeps track of all civil aircrafts registered in Italy to which the Civil Code attributes the status

of registered mobile property. This is done through the National Aeronautical Registry/Construction Registry.

| National Aeronautical Registry and Construction Registry | 2016  | 2017  |
|--|-------|-------|
| Registration in the Registry of Construction             | 108   | 276   |
| Reserves of Registration Marks                           | 93    | 76    |
| Registrations  | 67    | 67    |
| Transcriptions of Ownership Certificate                  | 711   | 633   |
| Transcriptions of Finance/Operating Lease                | 440   | 289   |
| Deregistrations  | 98    | 92    |
| Surveys/Certifications                                   | 2,448 | 1,617 |

### Remotely Piloted Aerial Vehicles (RPA)

The Remotely Piloted Aerial Vehicles, known as drones also at regulatory level, are always more popular and used for photo shootings, television scenes, buildings, electrical towers and pipelines inspections, etc. in this context ENAC is focused on two aspects.

The first one is the definition of the criterias to authorise their use also in the most critical situations, like nearby the airports. In this case it is needed to evaluate the interaction with take-off and landing not to decrease the safety level and, at the same time, not to limitate the operability of the involved airports.

The second aspect concerns the criteria definition for the BVLOS (Beyond Visual Line of Sight) operations. It is a very important goal because it permits mission profiles much more extended (for example the inspection of entire electrical lines or gas pipelines).

In 2017, the BVLOS experimental activity has continued in order to validate the "Concetti Operativi - CONOPS", decided with ENAV based on an agreement signed in August 2016. The testing consisted in doing specialised operations using drones whose maximum weight was below 25kg and could not be controlled at pilot's sight.

The operation's goal is to identify the essential requirements to introduce in the ENAC "Remotely Piloted Aerial Vehicles" regulation, to let these operations safely happen in the entire Italian territory. ENAC had exchanges with the major national stakeholders to understand their needs and simulate possible scenarios in order to demonstrate the safe realisation of the operations made with drones operated in a BVLOS modality.

The BLVOS activity is necessary, in particular, when a monitoring of the road, rail, environmental and territory infrastructures. The experimentation consisted in three different exercises groups with multicopter drones and fixed wing in three different locations simulating monitoring operations in a territory portion with environmental scopes, over a fish farming system to prevent illegal actions and on an electric line to detect breakdowns.

The experience has been useful to obtain more information on the problems related to night flight. The results were the basis to identify the technological and procedural enabling factors to be reported in the legislation at ENAC disposal. Considering the need to consolidate the collected data with a wider statistical sample, it has been decided to continue the data collecting planning in the 2018 a campaign of further experimentations.

The ENAC activity related to the Remotely Piloted Aircraft Systems sector, which is in expansion also in 2017, regarded:

- evaluation of 2,697 declarations of RPAS operators for not critical specialised operations;
- emission of 824 authorisations for critical specialised operations (891 evaluated);
- emission of 3 flight permissions for RPAS with total mass over 25 kg;
- expert advices and participation to the ICAO, EASA and JARUS groups' activities;
- participation to research programmes.

## Suborbital commercial transport

The suborbital commercial transport activity starts with the “Memorandum of Cooperation in the Development of Commercial Spatial Transportation” signed by ENAC and the Federal Aviation Administration in 2014 and renewed in 2016 with the Italian Space Agency participation. In this context, ENAC provides the project management support together with the competencies related to the operational and safety aspects following an operation-centric approach based on the risk evaluation.

In 2017, ENAC established, under the Ministry of Infrastructures and Transport auspice, the teamwork Spazioporti, including the Italian Air Force, Italian Space Agency and the company ALTEC, active in the spatial logistic field. The group has met several times to define the operational scenario for the suborbital flights with vertical take-off and landing (HOTOL) and the operational and logistic necessities of the spaceport.

Recognising the ENAC preliminary work from 2014, in July 2017, the Ministry of Infrastructures and Transport adopted with a decree the official Guidelines about the sustainable development of the suborbital commercial flights sector, which identifies ENAC as the implementing body in charge of elaborating, within its regulatory autonomy and in the Space Economy framework, a project to define in three years the regulatory framework for the realisation of the suborbital commercial transport operations in Italy, defining also an appropriated safety level for both the third parties on the ground and for the occupants, in line with the state of the art and the sector technological development.

With this act, ENAC was designated to define the selection criteria and to propose to the minister the identification of a national spaceport in the strategic planning prerogatives of the transport infrastructures (ENAC document “Criteri di individuazione degli spazioporti”).

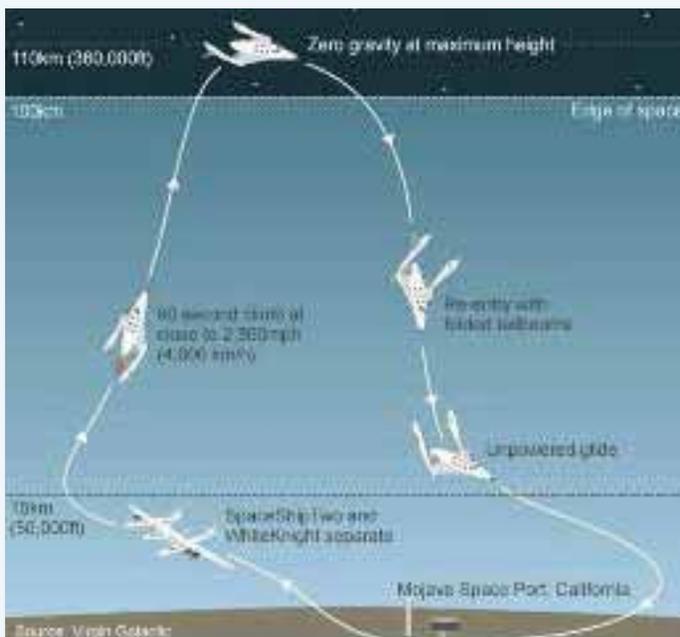
After the official Guidelines, ENAC has established a task force for the elaboration and development of the project, coordinating the elaboration of the document “Commercial Suborbital Transportation Regulatory Framework-Work Breakdown Structure” (WBS) as tool for the operational management of the project. The WBS identifies 54 work packages in terms of scope, activity description, expected criticalities, input and output, in order to write a Spaceport regulation, a regulation for the operations and to define the structure of the future bilateral agreement with USA.

With respect to the international activity, ENAC takes part to the Space Learning Group ICAO that have monthly

teleconferences and meets twice a year in order to monitor the initiatives and the regulatory experiences about the spatial commercial transport at world level to analyse the impact and to define the possible harmonisation of the possible integration in the international civil aviation system.

Furthermore, ENAC participated, with the Italian delegation, the third symposium ICAO SPACE 2017 in Wien and the 9<sup>th</sup> international Conference of IAASS (International Association for the Advancement of Space Safety) in Toulouse. During these meetings, ENAC presented a paper about the regulatory model for the suborbital commercial transport currently discussed in Italy (“A model for setting a regulatory framework for the development of suborbital operations in Italy”), subsequently published on the Journal of Space Safety Engineering (JSSE), 4 (2017).

### Operational scenario



# APPROVAL AND OVERSIGHT OF CERTIFIED ORGANISATIONS

In accordance with national and international standards, approval and oversight activities are carried out by ENAC based on a National Oversight Program of Certified Organisations through two main types of inspections:

- Audits, formal programmed and unplanned inspections conducted on organizations, infrastructures, staff, equipment,

documentation, procedures, processes and products, to verify compliance with certification requirements and monitor technical and/or operational processes.

- Inspections, so-called “deep cut” inspections on a particular topic or activity, both on land and in flight, programmed and unplanned, possibly even unannounced.

| Certified organisations as of 31/12  | 2015 | 2016 | 2017 |
|--|------|------|------|
| <b>ADR</b> Airports open to commercial traffic   | 44   | 45   | 43   |
| <b>ANSP</b> Air Navigation Service Provider  | 8    | 7    | 7    |
| <b>POA</b> Production Organisation Approval (Part 21 subpart F) - Production Organisations without certification privilege   | 3    | 6    | 4    |
| <b>POA</b> Production Organisation Approval (Part 21 subpart G) - Production Organisations with certification privilege  | 48   | 49   | 52   |
| <b>AMO</b> Approved Maintenance Organisation (Part 145) - Maintenance Organisations of aircraft classified as “Large aircraft” or used for Commercial Air Transport and/or their components                | 151  | 134  | 128  |
| <b>AMTO</b> Approved Maintenance Training Organisation (Part 147) - Training Organisations for technical personnel operating in maintenance organisations  | 14   | 15   | 14   |
| <b>AMO</b> Approved Maintenance Organisation (PART M Subpart F) - Maintenance Organisations of aircraft except those classified as “Large aircraft” or used for Commercial Air Transport and/or components | 46   | 43   | 37   |
| <b>CAMO</b> Continuing Airworthiness Management Organisation (Part M subpart G) - Organisations for the management of aircraft airworthiness   | 140  | 130  | 123  |
| <b>COA/AOC</b> Wing-Fixed/ Helicopter Air Operator Certificate - Air operators performing public transport for passengers/cargo  | 62   | 59   | 57   |
| <b>COLA</b> Aerial Work Operator Certificate (not COAN and NON EASA) - operators performing aerial work, such as crop spraying, aerial displays, aerial surveys, radio measurements.                       | 86   | 78   | 23   |
| <b>SPO</b> Not critical operations Aerial Work Operator Certificate - operators performing aerial work, such as crop spraying, aerial displays, aerial surveys, radio measurements.                        | -    | -    | 69   |
| <b>SPO</b> critical operations Aerial Work Operator Certificate - operators performing aerial work critical operations   | -    | -    | 30   |
| <b>AeMC</b> Aero Medical Centers - Aero Medical Centers for the issuance of psychophysical medical certificate for flight crew and air traffic controllers   | 3    | 3    | 3    |
| <b>OR</b> Registered Organisations - Organisations that provide training for private pilots  | 80   | 67   | 63   |
| <b>ATO</b> Approved Training Organisation - Organisations conducting approved courses of flight training   | 74   | 74   | 78   |
| Air Transport Operating Licences   | 59   | 58   | 57   |
| Laboratories - Organisations conducting tests/examinations on aircraft, engines, propellers, parts, systems or aerospace materials   | 7    | 6    | 6    |

## National Oversight Programme of Certified Companies

The core principle of ENAC's Performance Based Oversight (PBO), introduced in 2016 with the first edition of the document "National Oversight Programme of the Certified Companies", consists of the application of the Risk Management criteria to the oversight activity of the certified organisations and of the drawing up of the oversight programmes that consider the performances and the risk exposition of the certified subjects, by using indicators.

With Performance Based Oversight (PBO), ENAC can quantify and schedule oversight activities based on the performance of the organisation and its ability to handle associated risk scenarios. PBO, integrated with traditional Compliance Based Oversight, is the key element to move from

a static oversight to a more dynamic-predictive one. In 2017 ENAC issued the second edition of the manual and of the IT applications that permits the automatic elaboration, approval and archiving of all certified companies' oversight plan, simplifying and optimising the work. The realised model, over the time, will level the oversight planning and quantification criteria on the basis of each certified organisation's peculiarity, and will give the possibility to manage and analyse the data in order to improve the available resources' use.

### Main oversight Activity in 2017 in terms of Number of Audits performed

|                 |     |
|-----------------|-----|
| Aerodromes      | 195 |
| AMO F           | 45  |
| CAMO G (TP)     | 115 |
| CAMO G (non TP) | 171 |
| COA             | 280 |
| CVRP            | 13  |
| ATO             | 130 |
| COLA            | 50  |
| SPO             | 19  |
| Laboratory      | 4   |
| OR              | 50  |
| AMO Part 145    | 338 |
| AMTO Part 147   | 39  |
| POA F           | 8   |
| POA G           | 160 |
| APR             | 16  |
| FSTD            | 42  |

| Type of certification | Organisations with PBO |
|-----------------------|------------------------|
| COA                   | 60                     |
| CAMO                  | 117                    |
| AMO 145               | 136                    |
| AMO F                 | 37                     |
| POA (F+G)             | 54                     |
| ATO                   | 78                     |
| Part 147              | 14                     |
| ADR                   | 6                      |
| ANSP                  | 7                      |
| <b>TOTAL</b>          | <b>509</b>             |

### Airport inspections conducted in 2017

|  |       |
|--|-------|
| Flight Safety  | 1,821 |
| Aerodrome Safety   | 608   |
| Handling   | 1,588 |
| Security   | 1,833 |
| Security (National Aviation Security Quality Control Team) | 39    |
| Handling (National Aviation Handling Quality Control Team) | 35    |
| Charter of Rights and Quality of Services                  | 1,619 |

## Conversion of aerodrome certificate

Under the EC Reg. 216/2008 and any subsequent modifications and supplements (Basic Regulation), the airports open to the public that offer commercial air transport services must have a certificate released in accordance with the Community legislation, if operations that use instrument approach and departure procedures are carried out or if they have a paved runway of 800 metres or above or serve only the helicopter traffic. Despite being excluded, the military structures must have a safety level equivalent to the one provided for in the EU regulation.

With the entry into force of Reg. (EU) 139/2014, a new legislative-regulatory framework was established for all European airports, including Italian ones. The new framework involves the entire airport sector for the management, operational and regulatory aspects.

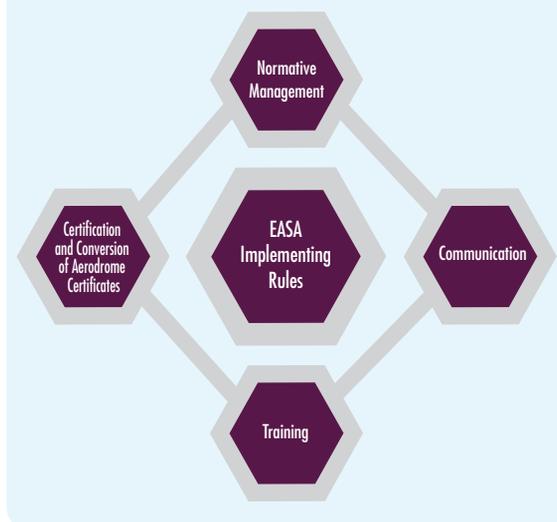
As to Italy, the regulation involves ENAC, the Italian Civil Aviation Authority that is in charge of the certification and oversight of certified airports, airport managing bodies and Apron Management Service (AMS) suppliers. All of them will have to comply with the Regulation by 31 December 2017 (Transition to EU Rules). By the way, the provisions about AMS included in the Reg. (EU) 139/2014, will be effective only after the specific Amendment (art. 11, clause 5) of the Regulation itself will entry into force.

To this end, ENAC promoted, from the Community Regulation publication on Gazzetta Ufficiale, a series of initiatives aimed at facilitating the implementation of the regulation, including information campaigns and meetings with the involved stakeholders.

In order to ensure a smooth transition to EU airport rules of the Italian airport system, ENAC established a Road Map that defines all activities that need to be undertaken.

On the basis of Regulation (EU), ENAC communicated to EASA the list of the Italian airports that are included in the art. 4 clause 3 bis of the Reg. (EC) 216/2008 (Italian airports under

### The 4 macro areas of the Road Map



EASA scope).

Among the most significant aspect of the European regulations is the conversion of National Airport certificates issued by Member State legislations. Under Article 6 “Converting certificates” of Reg. (EU) 139/2014, Certificates issued by the competent authority before 31 December 2014 based on national regulations, will remain valid until they are converted.

Therefore, by 31 December 2017 the national certificates (released under the ENAC Regulation to build and manage airports) of 33 Italian airports have been converted to European certificates (under EU Reg. 139/2014), failing which the certificate will have to be revoked.

As to the airport Pantelleria, that is operated directly, it is the first certification release and it is still valid.

In 2017, ENAC’s portal page devoted to Reg. (EU) 139/2014 maintained available information to help users and ENAC’s employees convert the certificates consistently, based on shared common rules in order to simplify the conversion process of the airport certificates and the European legislation implementation.

## Activities connected to the aerodrome certificate conversion Reg. (EU) 139/2014

43 national airports fall within the scope of the new community regulation and 42 of them already have a certificate under the ENAC Regulation to build and manage airports. The list of the airports with a certification at 31 December 2017.

Certified airports under Reg. (EU) 139/2014 at 31 December 2017

|          |                |                |
|----------|----------------|----------------|
| Alghero  | Cuneo          | Perugia        |
| Ancona   | Florence       | Pescara        |
| Bari     | Genova         | Rimini         |
| Bergamo  | Lamezia Terme  | Rome Ciampino  |
| Bologna  | Lampedusa      | Rome Fiumicino |
| Bolzano  | Milan Linate   | Taranto        |
| Brescia  | Milan Malpensa | Turin          |
| Brindisi | Naples         | Treviso        |
| Cagliari | Olbia          | Trieste        |
| Catania  | Palermo        | Venice         |
| Comiso   | Parma          | Verona         |

With respect to the remaining airports, it is highlighted as follows:

- Albenga, Aosta, Foggia, Grosseto and Salerno, already certified according to the Regulation to build and manage airports, are characterised by low traffic levels (less than or equal to 10,000 passengers and 850 movements related to cargo operations per year: ENAC availed itself of the derogation provided for in the Reg. (EC) 216/2008;
- Crotone: Exemption required since the airport is no longer active after the airport managing body's bankruptcy;
- Reggio Calabria and Pantelleria: 6 months' derogation required, from 01/01/2018 in relation to local specific situations;
- Trapani and Pisa: derogations required to EASA since they are military airports whose certificate conversion processes are ongoing but an additional period is required to improve the disposal already in force between the airport managing body and the Italian Air Force, no later than 30 June 2018.

The national airports certificate conversion to the Community legislation had a considerable effect, changing the culture and the organisation of the airport managing bodies and implying the adaptation of the professionals and ENAC structures involved in the airport infrastructures.

ENAC, to implement some provisions of the Reg. (EU) 139/2014 took the role of facilitator to define specific agreements between airport managing bodies and the main third subjects involved in the process:

- ENAV: drafting a sample scheme of Framework Agreement Airport managing body/ENAV, to identify the procedures to integrate the air navigation services with the airport operations, in order to ensure a full application of the European legislation about the air navigation services supply on the manoeuvring area and in the air space of competence.
- Fire fighters (as suppliers of the Emergency and fire-fighting services): identification of the procedures of interaction between the airport operations and the supply of the Emergency and fire-fighting services.

Flexibility measures in the context of the conversion activity have been approved, in accordance to the regulation. In total: 3 Alternative Mean Of Compliance (AltMOC) in order to adapt the airport managing bodies organisational model, 373 Deviation Acceptance and Action Document (DAAD) in order to adapt the airport infrastructural level and ensure the requirements compliance, 12 Equivalent Level of Safety (ELOS) to accept an equivalent safety level, 92 Special Conditions (SC) which are needed when the planning characteristics of the airport or the service experience make one of the Certificate Specification (CS) inappropriate and inadequate to ensure the conformity with the essential requirements.

Overall, a substantial commitment from the airport managing bodies to improve the infrastructural level, by planning the majority of the re-entry procedures in a couple of years, has emerged.

The main DAAD typologies issued concern:

- Road marking and vertical signing adaptation;
- Obstacles elimination in STRIP;
- RESA dimensions adaptation, when possible, in relation to the availability of the area within the boundaries or in anticipation of new areas acquisition.

## Air Navigation Services Providers (ANSP)

Among ENAC's institutional tasks, there are the certification and surveillance activity of the following organisations that operate in the air navigation services context:

- Air navigation services providers (air traffic-ATS, aeronautic meteorology-MET, aeronautic information-AIS, communication, navigation, surveillance-CNS);
- Training of the staff involved in the air navigation services, in particular the Air Traffic Controller (ATCO), meteorologists, Flight Information Service Operators (FISO);

- Organisations for the instrument flight procedures planning.

As in the case of the certified organisations in other fields, the approval and oversight activities are carried out on the basis of a National Oversight Programme, by two main typologies of inspective activities: audit and inspections.

From 2017, the oversight programme for the air navigation services providers has been elaborated following the principles of the Performance Based Oversight (PBO), by planning the oversight activity based on the safety complexity and performances of the certified organisations that are provided with a safety management system (SMS).

### Main oversight activities in 2017

|   |    |
|---|----|
| Audit on the air navigation services providers  | 22 |
| Audit on the staff training organisations (ATCO, FISO)  | 7  |
| Audit on the flight procedure planning organisations  | 3  |
| Review of Risk Assessment documents concerning the ATM functional system's modifications                            | 7  |
| Examined Declaration of Verification (DoV) concerning the commissioning of systems and/or air navigation procedures | 14 |

The ENAC's activity in this field is also aimed at ensuring the integration and the interoperability of the national traffic managing systems in the European Air Traffic Management Network-EATMN by a quick and coordinated introduction of the new technologies in the air traffic management in accordance with the SESAR European programme.

Among the main projects implemented in 2017 under ENAC supervision there are:

- Free Route Airspace above 335 flight level that permits that allows the aircraft to use more direct routes, save fuel and reduce the exhaust, eliminating the previous national system of established routes ATS;
- Data Link Service (CPDLC) in the Italian airspace that will replace part of the vocal communications between the pilot and the ATC controller, thereby reduction of the work charge and the possible human error;
- Conversion of the COM2 aeronautic frequencies from 25kHz to 8.33kHz in order to increase the available frequencies;
- Introduction, in Rome Fiumicino Airport, of new

approach procedures in accordance with the Area Navigation criteria. These Performance Based Navigation procedures allow an easier air traffic management in the terminal area by sequencing the aircrafts on established paths so that there is no need for the air traffic controller to instruct the pilots to follow a set of directions (magnetic headings) to approach the airport.



PBN Procedures for Rome Fiumicino.

## Aircraft Continuing Airworthiness Monitoring Programme

ENAC, in accordance with the Annex II of the Reg. (EU) 1321/2014, carries out a programme of random control on the national fleet airworthiness state (ACAM Programme), conducted by three different kinds of inspection (In-depth, Ramp, in Flight), in which an aircraft physical check has always carried out, even if it is not needed to make all three kinds of

verification at the same time. The verifications are grouped in the Key Risk Elements-KRE, defined by the applicable legislation, in order to simplify the non-compliance control strategy elaboration, also categorised under KRE.

| Year | Number of inspections | Number of findings | Findings/inspections ratio |
|------|-----------------------|--------------------|----------------------------|
| 2016 | 140                   | 134                | 0.9571                     |
| 2017 | 139                   | 90                 | 0.6475                     |

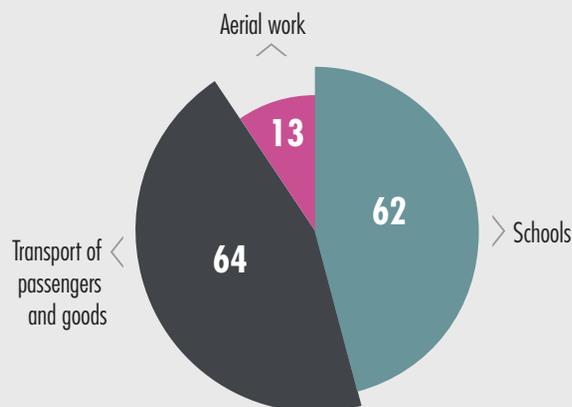
### Findings per risk element

| KRE          | Description                        | Examined | Findings 2016 | Findings 2017 |
|--------------|------------------------------------|----------|---------------|---------------|
| A.1          | Type project and its modifications | 94       | 1             | 5             |
| A.2          | Airworthiness limitations          | 98       | 6             | 9             |
| A.3          | Airworthiness Directives           | 104      | 4             | 3             |
| B.1          | Aircraft's documents               | 119      | 4             | 5             |
| B.2          | Flight manual                      | 114      | 2             | 7             |
| B.3          | Mass and balancing                 | 94       | 2             | 4             |
| B.4          | Labelling and tags                 | 106      | 15            | 17            |
| B.5          | Operational requirements           | 97       | 8             | 3             |
| B.6          | Flaws management                   | 78       | 42            | 6             |
| C.1          | Maintenance programme              | 112      | 27            | 13            |
| C.2          | Components' control                | 94       | 2             | 4             |
| C.3          | Restorations                       | 64       | 2             | 1             |
| C.4          | Registrations                      | 114      | 19            | 13            |
| <b>TOTAL</b> |                                    |          | <b>134</b>    | <b>90</b>     |

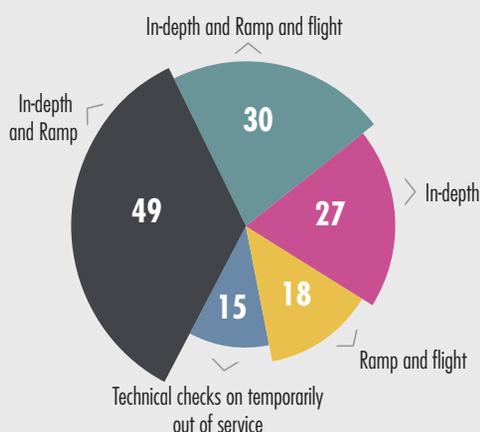
In 2017, 19 inspections on aircraft used by Italian operators but registered abroad have been performed, increasing compared to the 16 of the

year before. Inspections have been carried out on all kinds of aircraft, in proportion to fleet size.

### As regards to the prevalent use



### ACAM inspections type 2017



## HEMS standardisation

In 2017, ENAC performed a campaign of extraordinary inspections among the Italian operators certified for HEMS activity (helicopters used for commercial air transport emergency medical service operations), with double scope to standardise at national level the inspection activities modalities and to open a debate with the contracting authority to clarify the extent and the connected risks. Furthermore, the possibility to carry out a transport of sick people in the context of the Commercial Air Transport as Air Ambulance has been clarified. The operators have been informed that the European legislation attribute the responsibility to decide the transport type in relation to the patient medical conditions to the exclusively to the medical staff and an in-depth analysis of the characteristics and composition of the crew has been developed.

The activities results have been positive and will let ENAC elaborate normative documents to support the involved companies.

## Oversight on foreign operators

### Ramp inspections

Ramp inspections were conducted to check on the aircraft safety conditions during the transit time and verify that pilots and crews hold the certifications, licenses and qualifications required for air transport services. The objective is to identify any noncompliance of foreign operators to the standards.

Inspections are currently being conducted in 47 countries: all European countries (with the exception of Russia, Belarus and Azerbaijan), and 6 non-European ones (Turkey, Israel, Morocco, the United Arab Emirates, Singapore and Canada). At national level the inspection program is managed by a national coordinator that schedules the inspections according to priorities based on several factors (results of previous field inspections, an analysis of European inspections, priority indications provided by EASA based on data received from various national authorities). The inspection data can be verified by ENAC in real time via the EASA confidential access database. It should be noted, however, that ramp inspections take place over a short period of time when aircrafts are in transit at airports. As such they do not involve checks on the aircraft's internal structure and equipment nor on the compliance with maintenance program set by the aircraft

manufacturer and the Foreign Surveillance Authority. Any non-conformity is classified as finding in a report issued at the end of the inspection, ranked based on the potential impact on flight safety. If the finding has a major impact on safety, ENAC may request that the non-conformity be solved prior to the aircraft's departure. For repeated nonconformities, a formal procedure is launched to include the carrier in the EU Safety List. The data on inspections is held in a single database managed by EASA that can be consulted by each member State and European institutions (European Commission, EASA, etc.) to conduct studies.

ENAC also takes part in the European Commission's Air Safety Committee, which decides on possible traffic limitations of non-EU carriers flying to EU States, also based on the results of ramp inspections. In 2017, 826 inspections on foreign operators have been carried out. The following chart shows the data of the inspections performed in Italy in relation to the findings, with a comparison with the data of the last three years. The significant findings require a communication also to the authority that approved the operator; the serious findings are those who need a corrective action before the flight departure.

## Ramp inspections - Finding per inspection ratio

| Inspections                                     | 2015       |             | 2016       |             | 2017       |             |
|---|------------|-------------|------------|-------------|------------|-------------|
|   | Count      | Percentage  | Count      | Percentage  | Count      | Percentage  |
| No finding                                      | 388        | 52,6%       | 448        | 52,2%       | 457        | 55,3%       |
| Only minor findings                             | 109        | 14,8%       | 110        | 12,8%       | 81         | 9,8%        |
| At least a significant finding but no major one | 108        | 14,7%       | 151        | 17,6%       | 143        | 17,3%       |
| At least one major finding                      | 132        | 17,9%       | 149        | 17,4%       | 145        | 17,6%       |
| <b>TOTAL</b>                                    | <b>737</b> | <b>100%</b> | <b>858</b> | <b>100%</b> | <b>826</b> | <b>100%</b> |

In 2017, the number of no finding inspections has improved, reaching over 55% of the findings; the data about inspections with at least one major finding (around 17%) and the inspections that required a follow-up with the operator to implement corrective actions in order to prevent the non-compliance repetition, remain stable; in last case, the number is one third of the total inspections from some years.

### Cooperative oversight activity

Besides the ramp inspections, ENAC carries out the following activities connected to the commercial operations of the foreigner operators in Italy:

- Monthly exam of the inconvenience reports received by the eE-MOR system regarding some foreign air carriers with a big traffic in Italy that carry out domestic flights;
- Coordination of the ENAC inspectors' participation to oversight activities carried out in Italy by foreign countries authorities;
- Evaluation and acceptance of the Standard Operating Procedures (SOP) and risk assessment of foreign air carriers in the authorisation processes under the Reg. (EU) 965/2012.

The ENAC oversight activities do not involve only the subjects approved by ENAC itself, but as established by the Reg. (EU) 965/2012, they have to be extended to subjects approved by other authorities that carry out their aeronautic activities in Italy, if a safety priority exists.

In order to establish a risk profile for the operators

more present in Italy, the inconvenience reports communicated by the eE-MOR system are analysed to individuate those where the operators' responsibility can be hypothesized.

The reports are compared with the operator movements number to have a risk ratio connected to the general inconveniences and analysed to find possible negative trends for the safety.

In 2017, a detailed monitoring of all the inconvenience reports that involve the first five foreign low-cost air carriers that make the 58% of the movements of the European air carriers in Italy, has been activated. The results of the monitoring show modifications or the events' number every 1,000 landings between 0,7 and 3. The data are communicated to the competent authorities for each air carrier.

The analysis has been carried out also for the company Darwin, but it has been aborted after its bankruptcy. ENAC took part, in combined surveillance activity, to 5 audits carried out by the competent authorities for the single operator in Italy.

### Aerial work in Italy by foreign operators

With the entry into force of the SPO part of Regulation 965, on the 21 April 2017, ENAC must issue an authorisation to the authorities of the European countries whose operators want to carry out specialised commercial operations in Italy, which are considered by ENAC as high risk. During 2017, 9 requests from 6 European countries have been completed.

## PERSONNEL CERTIFICATION

### Flight crew

The conversion and substitution process of flight personnel licenses, certifications and authorizations continued in 2017 in accordance with the new EU legislation and more specifically

in application of Regulation (EU) 1178/2011 and subsequent amendments.

The table shows the number of licenses, divided by typology, aircraft category and reference regulations.

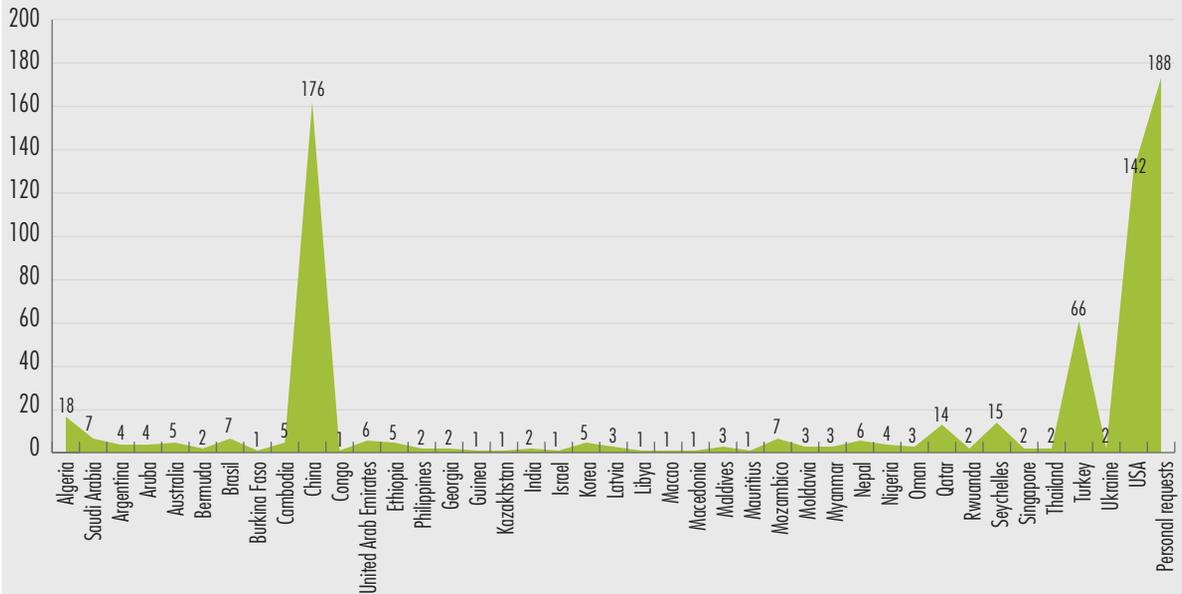
| Licence      | REG  | Issued in 2017 | In the database at 31 December 2017 |
|--------------|------|----------------|-------------------------------------|
| ATPL (A)     | EASA | 344            | 4.242                               |
|              | JAR  | -              | 778                                 |
|              | NAZ  | -              | 885                                 |
| ATPL (H)     | EASA | 25             | 512                                 |
|              | JAR  | -              | 66                                  |
|              | NAZ  | -              | 59                                  |
| CPL (A)      | EASA | 220            | 1.710                               |
|              | JAR  | -              | 572                                 |
|              | NAZ  | -              | 1.003                               |
| CPL (H)      | EASA | 104            | 859                                 |
|              | JAR  | -              | 124                                 |
|              | NAZ  | -              | 839                                 |
| PPL (A)      | EASA | 1.018          | 6.200                               |
|              | JAR  | -              | 2.130                               |
|              | NAZ  | -              | 3.799                               |
| PPL (H)      | EASA | 86             | 760                                 |
|              | JAR  | -              | 318                                 |
|              | NAZ  | -              | 543                                 |
| MPL          | EASA | 15             | 23                                  |
| LAPL         | EASA | -              | 7                                   |
| GL           | NAZ  | 107            | 4.163                               |
| CCA          | EASA | 2.007          | 6.219                               |
| <b>TOTAL</b> |      | <b>3.926</b>   | <b>35.811</b>                       |

**ATPL**, Airline transport pilot licence; **GL**, Glider pilot licence; **A**, Aircraft; **H**, Helicopter; **CPL**, Commercial pilot licence; **PPL**, Private pilot licence; **CCA**, Cabin crew attestation; **LAPL**, Light aircrafts pilot licence. **MPL** multi-crew pilot licence.

724 certificates authentication of extra EU aeronautical titles have been released. In the

following chart, the data are reported in relation to the percentage of the involved countries.

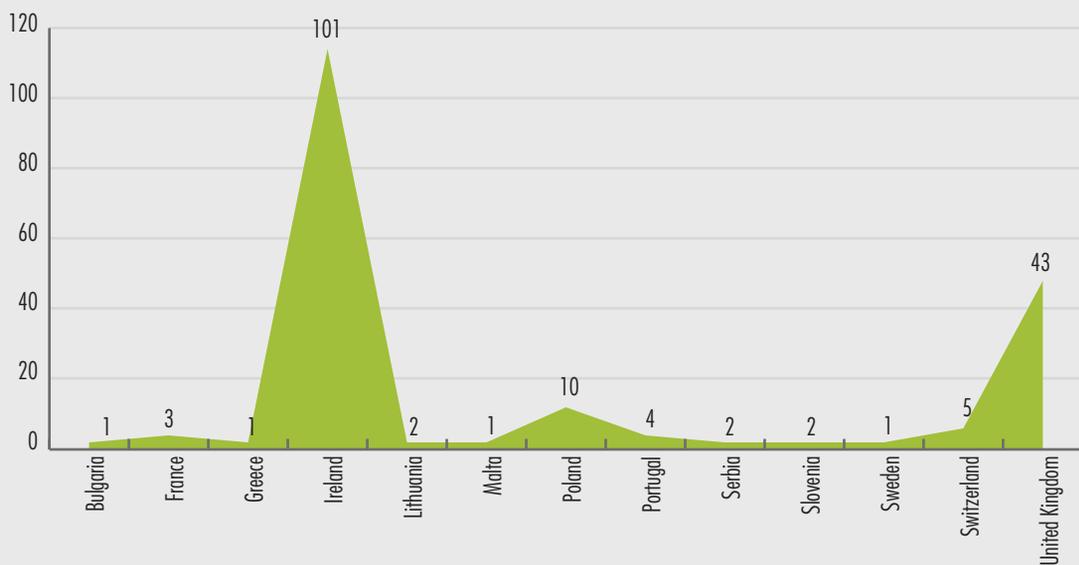
### Verification activities of the aeronautic titles of extra EU countries



176 certificate to transfer the release country of the aircrafts and helicopters licences have been released, in the context of the agreements with

other EASA aeronautical authorities. In the following chart, the data are reported in relation to the percentage of the involved countries.

### Attestation for the transfer of State of the aeronautic licences in EASA context



In this context, 39 licences after the transfer from

EU State to Italy have been released.

### 2017 activity

- 60 training days to update the pilots' examiners
- 146 certification of ATPL/CPL/IR theory exams
- 259 authorisations/licence for examiner
- 568 instructor's licence (TRI/FI/CRI/SFI).
- 14 theory exams sessions for licences ATPL/CPL and instrument licence for aircraft and helicopter. In 6 of the 14 sessions, exams for MPL candidates took place. Many sessions included classes in both morning and afternoon, increasing the number. The sessions took place in IT rooms specifically equipped in Rome and Milano Malpensa, lasting 5 days for ATPL and MPL exams and 3 days for CPL exam and IR qualification. Since October the theory exams follow the version 4 of the IT procedure that uses EASA ECQB (EASA Central Question Bank) database.
- 29 theory exam sessions in the peripheral headquarters to get not professional licences of aircraft, helicopter and glider.
- 15 theory exam sessions to get Licence of parachute in the Airport Dept.
- 3 exam sessions to get the certification as Parachute instructor.
- 1 release and 8 renewals Certificate parachuting training school.
- 5 disciplinary actions with sanction towards pilots that break the navigation safety laws.
- 25 certificates of approval of Training Centers APR released.
- 52 certificates of APR examiner issued.

### Technical maintenance personnel

Under Art. 5 of the Reg. (EU) 1321/2014, and subject to the exceptions, the authorised personnel to issue the certificate of readmission to service (CRS) after maintenance on aircrafts and helicopters included in the Regulation (EC) 216/2008 (EASA aircrafts as follows) must be qualified in accordance with Part 66. The qualified personnel receive the Aircraft Maintenance License - AML with a list of the related rating and limitations.

For the EASA aircrafts different from airplanes and helicopters (gliders, balloons, airships) and for the installed components, for which the Part 66 does

not establish any requirement at the moment, the authorised personnel to issue the CRS after the maintenance on these products, must be qualified in accordance to the aeronautical regulation in force in the competent EU State member. In Italy the mentioned requirements are described in the ENAC Technical Regulation and the qualified personnel get the National Certificate for Certifying Staff, applicable also to the personnel authorised to issue the CRS after maintenance on every aircraft not included in the Reg. (EU) 216/2008 (as described in the Annex II of the mentioned regulation) and on the installed products.

### Activities

- 63 Aircraft Maintenance Licenses issued and 595 renewed.
- 46 National Certificate for Certifying Staff maintenance personnel released.

## Registry of Flight Personnel and “Albo”

ENAC is in charge of the maintenance and operation of the Flight Personnel Registry and “Albo”. It determines enrolment requirements according to Air Navigation Code and ENAC’s Regulations concerning the registration of flight personnel. The Italian Air Navigation Code also provides that the crew

of national aircrafts must be entirely made up of members enrolled in the “Albo” and in the flight crew register. Crew member on Italian aircrafts may be either Italian citizens or foreigners. The flight crew includes three categories with relevant

professional titles (art. 732 Air Navigation Code): operator of aircrafts (commander, pilot, test driver, instructor); operator of equipment and on-board installations (flight technician, flight technician for testing); complementary on-board services (flight attendant). The payment of the subscription or renewal fee for the Albi and the Registry can be carried out through ENAC’s Online Services available on ENAC’s website, that has simplified the procedure and sensibly reduced processing time. Flight personnel enrolled in the Albi and the Register included about 12,000 people.

| ACTIVITY  | 2016 | 2017 |
|---|------|------|
| Enrolment in the Pilots List (Albo)   | 156  | 166  |
| Enrolment of Flight Technicians   | -    | -    |
| Enrolment of Flight Attendants  | 112  | 182  |
| Enrolment extracts from the Albi and the Registry   | 320  | 391  |
| Appointments to aircraft and helicopter captains  | 48   | 100  |
| Suspension of registration in the Albi and Registry for interruption of professional activity       | 79   | 127  |
| Revocations of suspensions at the Albi and the Register for the resumption of professional activity | 25   | 44   |
| Deletion from the Albi and Registry   | 83   | 314  |

## Air Traffic Controller and FIS Operator

In 2017, ENAC issued, modified, and updated licenses for ATCL controllers, SATCL student controllers and flight information service operators (FIS). This activity involved the licenses themselves and their use by ANSPs (Air Navigation Services Providers).

In 2017, ENAC issued:

- 43 releases ATCL;
- 99 releases FISO;
- 3,029 updates ATCL.

ENAC also established a procedure to distribute ATCL licenses to Air Traffic Controllers in service at Certified Service Providers via email through a dedicated Platform, in real time and with a digital signature. This system, which is unique in Europe, is part of a broader project launched in 2012 that allows ENAC to replace ATC licenses in a very short time and practically at no cost.



Source ENAV

## Aero-medical certification

On the 31 December 2016, the Reg. (EU) 340/2015 entered into force in Italy. It cancelled the Reg (EU) 805/2011 and it introduced the new technical requirements and the new administrative procedures about licences and certificates of Air traffic controllers. In particular, with the new legislation, the medical requirements and the procedures for the medical Class 3 certification of psych-medical integrity requested to the ATCO licence owners. It made necessary the revision of the national legislation about medical integrity's certification, that is the ENAC regulation "Aero-medical Organization and medical fitness certificates for the issue of flight licences, certificates and attestations in civil aviation" and the related advisory circular MED. These are two legislative tools aimed at providing the procedures and the criteria to promote the availability of the general disposition and at disciplining the aspects not included in the community regulation about the crew members, the students, the air traffic controllers and the skydivers. ENAC, by its Aeromedical Section, over 2017 coordinated the updating process of the Medical Regulation and related advisory circular, achieving a consolidated text, product of the agreement reached with the Ministry of Infrastructures and Transport, Defence and Health.

The growing safety requests, even more pressing after the Germanwings accident on the 24 March 2015, affect in a significant way the legislation update and development also in the aeronautic medicine sector.

From a risk management and prevention perspective, ENAC gave an impetus to the Peer Support Program - PSP introduction by the air operators and the flight assistance services suppliers, on the basis of the indications and under the ENAC oversight.

The 2017 has been an intense year in the training activity addressed, in particular, to the Aeromedical Examiners (AME) Class 1 operating at the national aeromedics centres and to the AME with the privileges for the certification Class 3, in view of the introduction, from 20 September

2017, of the MED module of the software EMPIC-EAP®: thanks to this platform, all the data of the aeromedical visits carried out in the national territory go in the medical database of the ENAC Aeromedical Section. The goal has been achieved in the way to an optimal management of the ENAC oversight activities, that also in 2017, was monitored the Aeromedic Centres and the private AME, certified in accordance with the requirements of the community law.

In total 3 are the AeMC certified in Italy and surveilled by ENAC and 83 are the private AME authorised at release and renewal of the aeromedical certificates Class 2/LAPL and the Cabin Crew Medical Report, 8 of which have the privileges to certify for the medical check Class 3. The surveillance activity on the Aeromedical Examiners is extended also to the 21 AME in the SASN of the Ministry of Health in the national territory.

The training activity oriented to the introduction of the EMPIC-MED has been joined by other initiatives to update the Medical Doctor examiners, where ENAC participated with its own doctors (medical assessors) or authorising training events organised by medical and scientific companies and academic institutions.



## INSPECTION AUDITS BY INTERNATIONAL BODIES

ENAC implements all the required actions in order to deal with ICAO and EASA standardization visits and manages the EASA accreditations in various areas of competence.

### EASA standardization and accreditation audits

The purpose of these inspections is to monitor the application of common requirements and reporting results to the European Commission. The implementation procedures are contained in Reg. (EU) 628/2013. According to this regulation, inspections are classified according to their actual or potential consequences: "C" non-compliance with effect on the standardisation, "D" non-compliances with effect on the safety if not corrected, "G" immediate consequences on the air security.

In September 2017, ENAC received the EASA standardisation inspection about Airworthiness domain, that includes the initial one (aircrafts production) and the continuous (aircrafts airworthiness continuous maintenance and management), the technical training personnel organisations and the issue of the licenses for the maintenance personnel. The inspection involved, beyond the ENAC structures, also several aeronautical organisations in Lazio, Lombardia, Piemonte and Sardegna Regions. The result has been positive, confirming the suitability of the standards ensured by ENAC in the activities execution.

Always in September, another inspection about the Airspace domain took place. It belongs to the continuous control activity of the EASA Basic Regulation implementation and the related Implementing Regulation. It was the third Air Space domain inspection after 2013 and 2015 ones. The 2017 goal was to verify the application of the regulation concerning the air navigation services supply, the training organisation of the air traffic controllers and their licences, the European air's rules, the interoperability of the European ATM network system. The EASA team carried out also

direct verifications of the certification requirements implementation at Rome ENAV's headquarters and on the plants of the Brindisi airport, recently passed from the Italian Air Force to ENAV.

In the conclusions of its report, the EASA Team observed considerable improvements compared to the previous inspections, by highlighting the different strengths of the oversight carried out by ENAC such as: qualification and competence of the inspective personnel; improvement of the oversight processes; rigorous implementation of the new Reg (EU) 340/2015; increase of the human resources in the Airspace domain.

Regarding the few findings, ENAC started the analysis in order to identify the most appropriate corrective actions.

In October, ENAC has been inspected again in the Flight Operations domain. The EASA team, at the same time, visited two air carriers, one fixed wing in Rome and one rotorcrafts in Piemonte.

The results, that discovered only 4 non-compliances, have improved in comparison with previous occasions. The conclusions highlighted, beside the areas to be optimised such as the lack of personnel, the following strengths in OPS context: internal function of compliance monitoring; personnel motivation.

ENAC started a corrective action plan that will be focused on hiring new inspectors and on the evaluation of possible organisational changes.

### Inspection in the FAA Sampling Inspection System (SIS) context in the EU countries

In February 2017, ENAC received the inspection of a Federal Aviation Administration team to verify the suitability of the certification and oversight activities carried out by ENAC on the Italian maintenance companies that obtained the approval to operate in accordance with FAA's FAR 145, on the basis of the procedures included in the bilateral agreement between EU and USA. The inspection involved also two aeronautical organisations in Lazio and Lombardia Regions and it confirmed the standard ensured by ENAC.



**3**  
**SECURITY**

# SECURITY REGULATION

## Security

A coherent set of activities and actions aimed at promoting security on land, in aircrafts, inside and outside airports, such as to prevent the occurrence of unlawful acts.

### Regulatory development in aviation security area

In 2017, the activity to implement, and if possible, to simplify the security legislation in order to adapt it to the European disposals. With the enter in force of the Circular ENAC SEC 09 that regulates the role of the "EU Civil Aviation Security Validators", as required by the EU regulations, the candidates' selection process has started. To this purpose a specific Commission has been nominated, whose activity finished by authorising two candidates to take part to the specific training course organised by IATA "Aviation Security Independent Validators EU ACC3" ad recognised by ENAC. The new Italian security validators of the EU civil aviation have been added to the European Commission database.

Considering the market's necessities, which have highlighted the lack of needed professional figures to train the security staff and to implement what required by the Circular ENAC SEC 01A about the security instructors' certification, training courses for the new instructors, held by organisations recognised by ENAC, have been approved.

Following the application for the new certifications, a commission to evaluate the applications and, later, the candidates' tests, has been nominated. Once the commission's activity will be done, we expect that the number of the trained security instructors and with the needed experience in the area can be enough to spread the culture of security, answering one of the global priorities in the aviation security.

In accordance to the ICAO periodical checks, ENAC has been audited in January 2017 in order to verify the implementation at national level of the Annexes 17 and 9, not yet disciplined by EU.

In this respect, ICAO acknowledged the ENAC progresses in the security legislation, by inspecting the ENAC recovery plan and the implemented actions. In March 2017, ENAC, as the national authority responsible for security, was inspected by the EU Commission. The scope of the inspection was to monitor the application level of the EU legislation about security, and in particular referring to the national Program of quality controls in the sector of civil aviation security and to the inspections reports. The EU inspectors activity, which involved also the Venice Airport, did not point out any critical issues.

### National Civil Aviation Security Program (NASP) and National Quality Control Program of security of civil aviation (NQCP)

After the EU Implementing Regulation 2017/815 and the Implementing Decision C(2017) 3030 entered into force, it has been necessary to start the revision activity of NASP and NQCP, in order to update them to the new EU Commission disposals. The revision is ongoing.

### Notifications

To ensure the continuous monitoring of security procedures and measures enforced at domestic airports and the timely implementation of compensatory measures in case of deficiencies, ENAC has set up a reporting system for security related issues. Passengers, airline operators, stakeholders involved in the air transport of passengers, mail and cargo, and ordinary citizens, can report, via e-mail, security issues encountered in domestic airports.

Some reports are transmitted by the online form of the passenger rights' dedicated section and by the eE-MOR (electronic ENAC - Mandatory Occurrence Reporting), application that complies

Sheet 3.1 Security regulation

with the EU Reg. 376/2014 and that offers two kinds of report: mandatory and voluntary. The mandatory reports come from the subjects identified in the Regulation (airport subjects) and concern significant events in terms of safety prevention and improving. Through the voluntary reports, managed by eE-MOR, every citizen can report events, which, even if not properly included in the safety field, are significant for the air security. Each report is managed at central level or by the competent Airport Dept. that informs the involved

operators (airport managing body, air carrier, handler). The replies are forwarded to the subject that transmitted the report. All the reports are confidential. The system prevision is aimed also at sensitise and spread the culture of security between the passengers and all the subjects that spend time in the airports, highlighting the necessity of collaboration by reporting all the suspect episodes. Below the data about origin and type of the reports arrived during the year.

| Report Type |         |                   |                     |                                      |   |                         |
|-------------|---------|-------------------|---------------------|--------------------------------------|---|-------------------------|
| Passenger   |         | Airport operators | Foreign authorities | 1                                    | 2   | 3                       |
| National    | Foreign |                   |                     | Lack of document control at the gate | Items permitted on board - LAGs - baby food - medicines | General security issues |
| 28          | 4       | 36                | 3                   | 11                                   | 31  | 29                      |

The chart shows that the relevant data is the one related to the information request about the items permitted on board, liquids, aerosols and gels, baby food and medicines. Another significant data is the one in the column 3: it is about passengers who noticed particular situations or that were involved in events dangerous for the airport security and situations that required the Police intervention

**Security Equipment**

The airport managing bodies, responsible for the airport security, need to know the certification data of the security devices to install in the managed airports. ENAC has updated the lists posted on its website concerning the equipment employed for prescribed security checks at airports in compliance with requirements set forth in chapter 12 of Reg. (EU) 2015/1998, such as to make this information more readily available to airport managing bodies

and improve transparency:

- X-ray equipment;
- EDS, ETD, SSc, MDE equipment;
- LEDS Safety devices.

| TYPE OF DEVICES | CERTIFICATES ISSUED in 2017 (ENAC advisory circular SEC 07A) |
|-----------------|--|
| EDS             | 7  |
| ETD             | 3  |
| LEDS            | 3  |
| MDE             | 0  |
| SSc             | 1  |
| EDSCB           | 13   |
| <b>TOTAL</b>    | <b>27</b>  |

With reference to the X-ray equipment in the year 2017, 12 certificates of compliance were released. The Expert Committee (made up of representatives of ENAC, Ministry of Infrastructures and Transport and the Ministry of Interior) attested their compliance with the minimum functional requirements.

## Security procedures for freight and mail shipped to EU from third countries (ACC3)

Any air carrier that wishes to carry cargo or mail from an airport in a third country (some exceptions allowed) for transfer, transit or unloading at one of the airports Union, must be designated as "air carrier for goods or operating union-mail from an airport in a third country" (ACC3). ENAC, in Italy, is responsible for the designation.

The requirements to design an air carrier as ACC3 have to be validated by a EU civil aviation security validator, based on a visit of the third country

airport where the air carriers operates. The validator transmit ENAC a report and based on that, ENAC put the air carrier's and non-EU airport data in the specific EU database (Union database on supply chain security).

In 2017, 7 new ACC3 designations granted to three domestic and 1 non-EU air carrier.

The activity to meet the requests for exemption ACC3 for specified flights included from the existing community legislation has continued: in 2017 12 flight have been exempted.

### Union database on supply chain security

In order to create a union database of the suppliers of ship's stores, the data related to the suppliers have been collected and sent to the EU commission. The new database is part of the bigger EU database on supply chain security, managed by the competent authorities of the EU member states: it contains the data related to ACC3 air carriers, regulated agents, known consignor, regulated supplier of ship's stores and EU security validators. ENAC manages the Italian database adding the information related to the designed subjects.

### National Aviation Security Quality Control Team

The National Aviation Security Quality Control Team has the role of quality control and monitoring, in order to verify the compliance of the applied security measures in the national airports open to commercial traffic to the EU legislations.

| 2017 activity        |    |
|----------------------|----|
| Inspections          | 36 |
| Follow up            | 3  |
| Covert Test Campaign | 1  |
| Cargo Campaign       | 1  |

During the inspective activity, the National Aviation Security Quality Control Team carried out 448 covert test

(an inspector behaves like an outbound passenger so he has pass the security checks. He hides in his hand baggage or in his clothes a prohibited article and verifies the screening staff member's ability to find the item).

The National Aviation Security Quality Control Team composition has been extended in 2017: 19 new inspectors have been certified, after finishing their training on the job.

The National Aviation Security Quality Control Team activity works alongside with the airport security inspectors that, at local level, carry out the inspections based on a yearly plan.

In 2017 there have been 1,833 inspections, with a significant increase compared to the 968 in 2016. Very relevant has been the workshop about security update in January 2017 when the results of the inspective activity have been illustrated.

### ENAC regulation issued in the field of security in 2017

Advisory circular SEC 01A of 5 January 2017 - Instructors certification.

Sheet 4.1

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Planning and development of infrastructural interventions

Sheet 4.2

106

EU funding programs for airport infrastructures



# 4 AIRPORTS

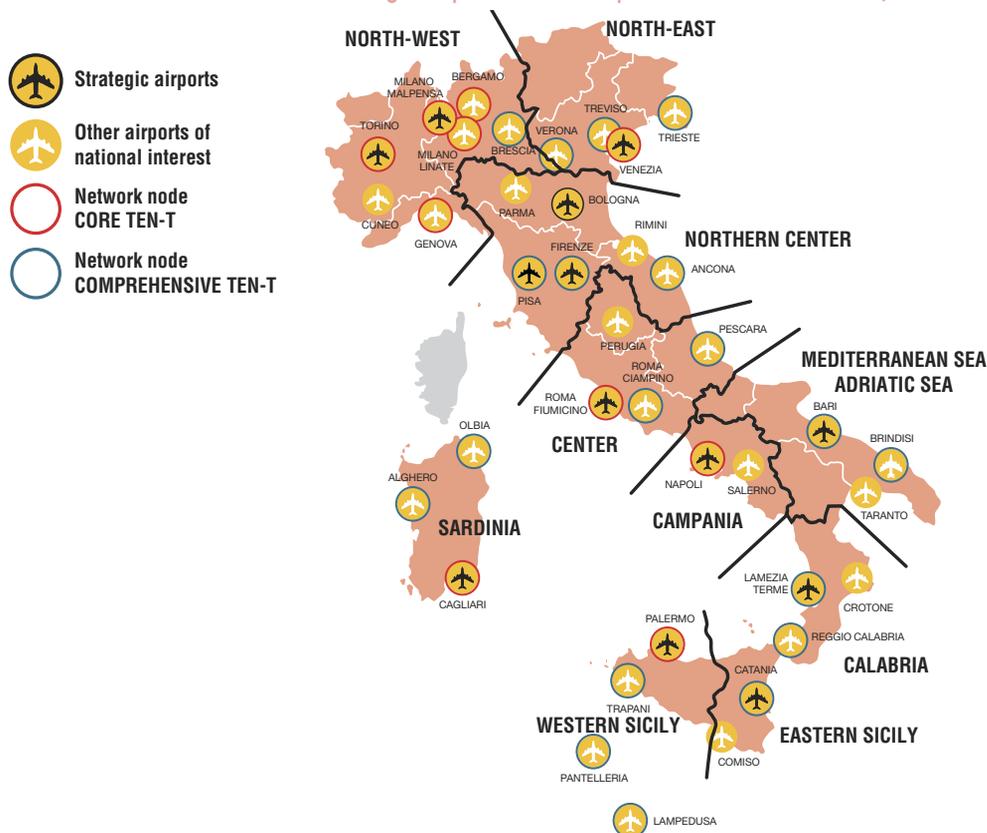
## PLANNING AND DEVELOPMENT OF INFRASTRUCTURAL INTERVENTIONS

In 2017, ENAC's activity about the procedure Strategic Environmental Assessment has continued, ongoing at the Ministry for the Environment and the Protection of Territory and Sea, on the National Plan for Airports. The Strategic Environmental Assessment procedure has two stages: a preliminary one when the application fields and the related levels of in-depth are defined and a consequent one for the final evaluation of the environmental strategy of the examined plan. In 2017, the Ministry for the Environment and the Protection of Territory and Sea, competent for the procedure, expressed its opinion about the Preliminary Environmental Report prepared by ENAC under the Ministry of Infrastructure and Transport delegation. The Preliminary Environmental Report evaluation procedure involved competent subjects in the environmental field identified in the entire country. Based on the Preliminary Environmental Report contents and the indications of the Ministry for the Environment and the Protection of Territory and Sea, it will be

possible to elaborate an Environmental Report, subject to a specific and preparatory confrontation with Ministry of Infrastructures and Transport. The Strategic Environmental Assessment procedure conclusion at the National Plan for Airports will permit the creation of a reference framework to develop the air transport also considering the aspect of environmental coherence in the national framework.

The National Plan for Airports, developed by the Ministry of Infrastructures and Transports, with the technical support of ENAC, is based on Presidential Decree no. 201/2015, that defines and approves a list of airports of national interest. The Plan was approved following an agreement of the State-Regions Conference that classifies airports and defines their roles and peculiarities. Among the airports of national interest there were also those of strategic importance. Under the decree, the national network is divided in ten traffic areas, each of which hosts strategic airports or national interest ones.

### Identification of catchment areas and strategic airports and of airports of national interest (d.P.R. no. 201/2015)



## Airport Master Plans

Airport managing bodies have a contractual obligation to present and drafting Master Plans aimed at meeting and maintain the required levels of safety and service quality. Master Plans are the tools to manage airport development projects according to their specific infrastructures, accessibility, conditions and local requirements. The Master Plan approval process, regulated by the National Law no. 351/95, provides that, after the ENAC technical approval, they are submitted to the Environmental Impact Assessment procedures at Ministry for the Environment and the

Protection of Territory and Sea and to the urban compliance plan at Ministry of Infrastructure and Transport. To this day, almost all the Italian airports have a Master Plan, technically approved by ENAC, whose environmental and urban procedures are ongoing. In particular, as regards the aspects of environmental sustainability, ENAC wants to pursue the objective to complete in a short period the activation of the environmental compatibility procedures in all the airports. The following tables show a list of Master Plans by airport, airport managing body, year and cost updated at the 31 December 2017.

### Master Plans with urbanistic assessment closed at the 31.12.2017

| AIRPORT                        | AIRPORT MANAGING BODY | PLAN / PROJECT   | COST WORKS (MILLION EUR) |
|--------------------------------|-----------------------|------------------|--------------------------|
| Bologna                        | S.A.B. SpA            | Master Plan 2023 | 371                      |
| Bergamo *                      | SACBO SpA             | Master Plan 2015 | 187.5                    |
| Bolzano                        | ADB SpA               | Master Plan 2020 | 25.8                     |
| Cagliari                       | So.G.Aer. SpA         | Master Plan 2024 | 93.9                     |
| Catania *                      | SAC SpA               | Master Plan 2015 | 219                      |
| Genova                         | A.d.G. SpA            | Master Plan 2027 | 108.4                    |
| Rome Fiumicino - Southern area | ADR SpA               | Master Plan 2020 | 1,658.5                  |
| Pescara                        | SAGA SpA              | Master Plan 2020 | 33.5                     |
| Lamezia Terme                  | SACAL SpA             | Master Plan 2027 | 195.5                    |
| Pisa                           | TOSCANA AEROPORTI SpA | Master Plan 2028 | 260                      |
| Turin                          | S.A.G.A.T. SpA        | Master Plan 2015 | 47.4                     |
| Venice                         | SAVE SpA              | Master Plan 2021 | 630                      |

\* new Master Plan under investigation

### Master Plans with ongoing urban conformity procedure 31.12.2017

| AIRPORT | AIRPORT MANAGING BODY                               | PLAN / PROJECT   | COST WORKS (MILLION EUR) |
|---------|---|------------------|--------------------------|
| Olbia   | GE.A.SAR. SpA                                       | Master Plan 2020 | 114                      |
| Verona  | Aeroporto Valerio Catullo di Verona Villafranca SpA | Master Plan 2030 | 134                      |
| Palermo | GE.S.A.P. SpA                                       | Master Plan 2025 | 322.9                    |

### Master Plans with Environmental Impact Assessments measures issued 31.12.2017

| AIRPORT  | AIRPORT MANAGING BODY   | PLAN / PROJECT  | COST WORKS (MILLION EUR) |
|----------|-------------------------|---|--------------------------|
| Bari     | Aeroporti di Puglia SpA | Master Plan 2022  | 255.6                    |
| Brindisi | Aeroporti di Puglia SpA | Project aimed at improving infrastructures and operations       | 256.6                    |
| Florence | TOSCANA AEROPORTI SpA   | Master Plan 2029  | 337                      |
| Foggia   | Aeroporti di Puglia SpA | Development of infrastructure and extension of runway RWY 15/33 | 14                       |

## Master Plans with ongoing Environmental Impact Assessments procedures 31.12.2017

| AIRPORT                      | AIRPORT MANAGING BODY                     | PLAN / PROJECT   | COST WORKS (MILLION EUR) |
|------------------------------|---|------------------|--------------------------|
| Rome Ciampino                | ADR SpA                                   | Master Plan 2044 | 80.6                     |
| Salerno                      | Aeroporto di Salerno - Costa d'Amalfi SpA | Master Plan 2025 | 39.8                     |
| Treviso                      | AERTRE SpA                                | Master Plan 2030 | 53.2                     |
| Milan Linate                 | SEA SpA                                   | Master Plan 2030 | 545                      |
| Rome Fiumicino (medium term) | ADR SpA                                   | Master Plan 2030 | 4,800                    |

## Master Plans with ENAC technical approval 31.12.2017

| AIRPORT                    | AIRPORT MANAGING BODY                               | PLAN / PROJECT   | COST WORKS (MILLION EUR) |
|----------------------------|---|------------------|--------------------------|
| Albenga                    | A.V.A. SpA  | Master Plan 2020 | 7.6                      |
| Rome Fiumicino (long term) | ADR SpA   | Master Plan 2044 | 6,400                    |
| Milan Malpensa *           | SEA SpA   | Master Plan 2030 | 2,036                    |
| Taranto                    | Aeroporti di Puglia SpA                             | Master Plan 2025 | 55.1                     |
| Naples                     | Ge.S.A.C. SpA                                       | Master Plan 2023 | 128                      |
| Trieste                    | Aeroporto Friuli Venezia Giulia SpA                 | Master Plan 2024 | 34.2                     |
| Bergamo                    | SACBO SpA   | Master Plan 2030 | 435.2                    |
| Brescia                    | Aeroporto Valerio Catullo di Verona Villafranca SpA | Master Plan 2030 | 113.1                    |
| Alghero                    | So.Ge.A.Al. SpA                                     | Master Plan 2025 | 13                       |

\* new Master Plan under review after the withdrawal of the Environmental Impact Assessments procedure

## Master Plans under ongoing ENAC investigation 31.12.2017

| AIRPORT        | AIRPORT MANAGING BODY | PLAN / PROJECT   |
|----------------|-----------------------|------------------|
| Catania        | SAC SpA               | Master Plan 2030 |
| Milan Malpensa | SEA SpA               | Master Plan 2030 |
| Parma          | SO.GE.A.P. SpA        | Master Plan 2033 |
| Trapani        | Air.Gest. SpA.        | Master Plan 2025 |

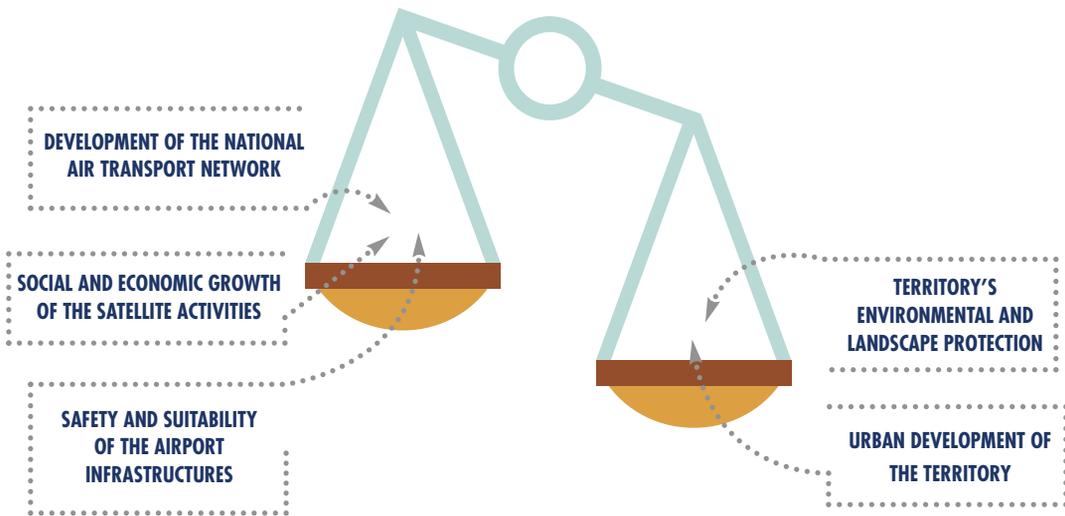
## Master Plans that have not been submitted yet 31.12.2017

| AIRPORT | AIRPORT MANAGING BODY | PLAN / PROJECT |
|---------|-----------------------|----------------|
| Ancona  | Aerdorica SpA         | Master Plan    |
| Cuneo   | GE.A.C. SpA           | Master Plan    |
| Perugia | S.A.S.E. SpA          | Master Plan    |
| Rimini  | AIRimum 2014 SpA      | Master Plan    |

## Interaction airport-territory

The growth of the traffic volume recorded and expected in the next years for the national airport system, cannot be separated from a careful evaluation of the connection with the territory in

order to harmonise the airports development with the territories where they are. In this view, beyond the procedures of environmental and urban compatibility evaluation, ENAC gives attention to the management of the interaction airport-territory.



The interaction sustainability is guaranteed by ENAC through different institutional activities that fall under the Italian Air Navigation Code and impose specific constraints in terms of both safety of air navigation and protection of the territory from the related risks. In 2017 both the elaboration of obstacles and dangers limitation maps and the ENAC evaluation of almost all the risk plans for the airport open to commercial traffic, prepared by the municipalities pursuant the Art. 707 - Fifth paragraph of the Italian Air Navigation Code.

All what is above mentioned makes the building's realisation in the areas nearby the airports coherent with the existing legislation on the subject.

### Airport design

As to the airport design, in 2017, ENAC concluded over 150 preliminary procedures. The most significant approved or ongoing projects are listed below.

## ROME FIUMICINO AIRPORT

### Terminal system east side

The project was established as part of the interventions to extend and update the "Terminal Subsystem – East side" that partly develop east from the Terminal 1 and partly in its nearby, northwards, and can be outlined as follows:

- Realisation of the new extension of Terminal 1;
- Realisation of the new Pier A, Departure Hall A;
- Realisation of the Aisle between the extension and the departure Hall A;
- Terminal 1 reconfiguration.

The work began in October 2017 and the expected entry into operation is in 2020. The intervention will cause a capacity increase of approximately 6 million passengers, 32,000 square meter of operative surface distributed on two levels, 13 new stands with loading bridges, 10 new bus gates. The cost of the project of the entire work is estimated around € 300,000,000.

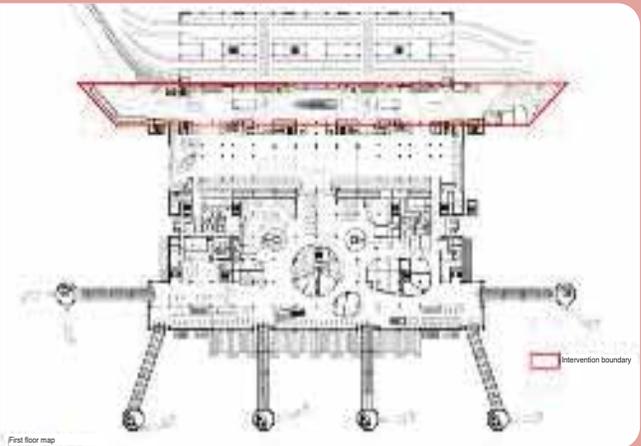


## VENICE AIRPORT

### Terminal extension

The new traffic forecast and the verification of the needs evaluation (Level of Service) provided the data for the terminal expansion project. The project provides for two elements of expansion: northward and southward from the current terminal that will remain the fulcrum of the entire passengers' terminal complex, preserving the architecture of the building, which recalls the Venice dock.

The northward expansion is dedicated to the new area for the security controls and for Schengen passengers; the southward expansion is dedicated to the extra-Schengen passengers. The project provides an extension about 95,000 square meters, taking the total surface to 160,000 square meters, with an improvement of the comfort level and of the services offered to the passengers following



the standards like the main international Hub. Currently it has been executed the first batch of work called "lotto 1", become operational in June 2017. This intervention ensured a decongestion of the check-in area and the accessibility to the upper floor thanks to a land side surface increase around 11,000 square meters and to a growth of the lifts, escalators and freight elevators. The cost of the project of the first enlargement is about € 70,000,000.



### Upgrade of airport infrastructures

In accordance to the traffic growth, it is planned to potentiate the current airport infrastructures, the enlargement

of the aircraft parking stands in more subsequent functional batches, the rationalisation of the junctions and of the entire circulating system of the ground handling. The interventions will ensure:

- The increase of the runway and service areas operational capacity;
- The reduction of the runway use time;
- The reduction of the taxiing time and gate delays;
- The improving of the ground circulation system and a reduction of fuel consumption and air pollution.

To this day, the work to update the flight infrastructure "lotto 1A and 1B", by which the new junction to enter the aircraft service area and a new taxiway northward the runway, has been completed. In 2017, the "lotto 2" planning, concerning the update of the main and side runways and the junctions, has been completed. The work conclusion is expected by the end of 2020. The cost of the project of the entire work is over € 120,000,000.



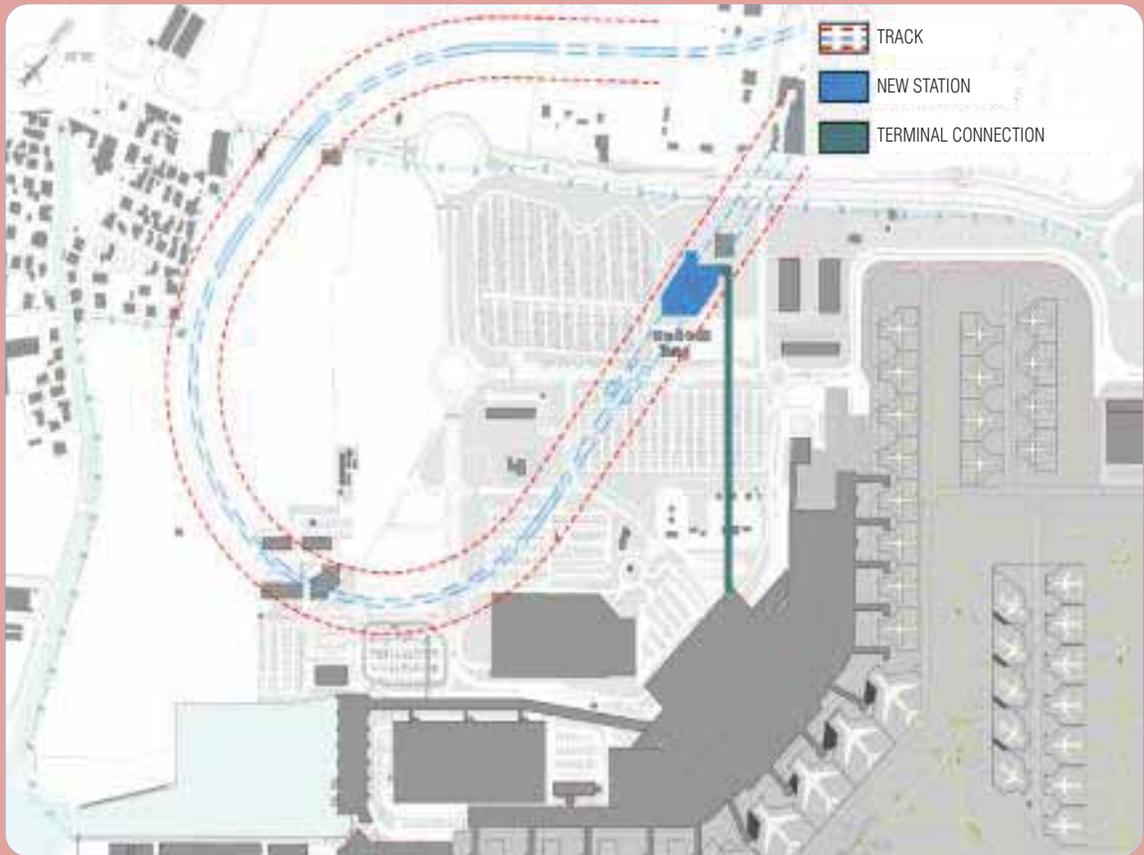
## VENICE AIRPORT

### Railway connection and station

The intervention scope is to connect the airport with the national railway network. It has been signed a framework agreement between ENAC, SAVE and RFI to design and realise this important intervention for the territory having a hypogeum route designed by ITALFERR within the aerodrome's boundary.

It has been supposed a new elevated route to connect the FFSS Station with the Terminal, which will have a comfortable connection with the water transport through the moving walkaway and the dock.

The definitive project drafting is ongoing and the environmental impact assessment is about to be completed.



## PALERMO AIRPORT

### Railways pavement upgrade and ancillary works

The intervention included the upgrade of both the runways (07-25 and 02-20) pavement and of part of the taxiways and the rebuilding of the runways night flight installation with LED technology, which permits an optimal visibility and considerable energy saving in favour of environmental sustainability.



The cost of the project of the entire work is around € 23,000,000. The work, started at the beginning of November 2017, were finished around the half of December 2017.

### Airport Interventions Monitoring

In 2017, ENAC provided the monitoring of the airport work progress, in 2016 final balance and progress at 31/08/2017 and at 30/09/2017, through the Airport Interventions Monitoring system.

#### Airports with Planning Agreement in derogation

- Milan Linate and Malpensa - SEA SpA
- Rome Ciampino and Fiumicino - ADR SpA
- Venice - SAVE SpA

#### Airports with ordinary Planning Agreement signed under Legislative Decree 133/2014

- Bologna - SAB SpA
- Florence and Pisa - Toscana Aeroporti SpA
- Naples - GESAC SpA
- Olbia - GEASAR SpA
- Genova - Aeroporto di Genova SpA
- Turin - SAGAT SpA
- Trieste - Aeroporto FVG SpA
- Verona - Aeroporto Valerio Catullo di Verona SpA
- Palermo - GESAP SpA

By the Airport Interventions Monitoring system, ENAC and airport managing bodies

representatives verify and validate a new interventions' or extraordinary maintenance progress. In both cases, the activities are executed with an effective approach that retrace the realisation procedures instructed by the tenders' regulation.

The use of the reports generated by the system permits an immediate comparison between the intervention's plan and the current progress. During the year, a form included in the Airport Interventions Monitoring system for the monitoring, presentation and communication in terms of workflow of all the activities related to the planning phase of the airport intervention plan has been implemented.

The activity allowed, also in 2017, to interface the system with the "Opencantieri" portal of the Ministry of Infrastructures and Transport, which informs the citizens on the public infrastructures investments, with the progress data regarding the airport infrastructure realisation. The data related to the airport sector have been published in the open data Ministry of Infrastructures and Transport catalogue, in ENAC's session <http://dati.mit.gov.it/catalog/organization/enac>.

## EU FUNDING PROGRAMS FOR AIRPORT INFRASTRUCTURES

ENAC provides for the management and implementation of investment programs funded through national and EU funds, aimed at:

- enhancing airport infrastructures;
- creating intermodal connections and improving airport accessibility;
- Increasing the level of services offered to passengers, ensuring the achievement of international standards, especially in terms of safety and quality;
- Promoting an efficient and sustainable development and use of airport infrastructures.

In this context, ENAC is currently engaged in the management and implementation of the Cohesion Action Plan that uses national resources to promote projects deemed as a priority for the development of Italy, which has previously been included in ERDF 2007-2013.

The Ministry for Infrastructures and Transport, that is responsible for the management of the Cohesion Action Plan, has entrusted ENAC, under Reg. (EC) 1083/2006, as an “Intermediate Body” for the performance of certain task belonging to the Management Authority such as the financed interventions. As such, ENAC selects, manages, reports, and monitors all interventions eligible for funding.

The Cohesion Action Plan ensures financial coverage of 8 projects at the airports of Bari and Lamezia Terme, for a total of about 30 million Euro.

The planned interventions in the Lamezia Terme airport concern the runway strip, the completion of the installation and the extension of the taxiway required by the lengthening of the runway, the realisation of work to replace the Visual Aids and the enlargement of the aircraft service area.

As regards to Bari airport it has been about pavement upgrade interventions of the junction C and D and of the aircrafts service areas, the implementation and installation of the Visual Aid,

the upgrade of the airport infrastructures to RESA (Runway End Safety Area) regulation and lengthening of the runway.

All the interventions/testing are ongoing and the planning expected end is in 2019.

In addition, ENAC, in accordance with the guidelines of the European Commission for the development of an integrated and coordinated system of trans-European transport networks (TEN-T) according to Reg. (EU) 1315/2013, promotes the implementation of air transport projects aimed at improving intermodality and airport accessibility along the Europeans corridors which are the backbone of the trans-European transport networks (TEN-T).

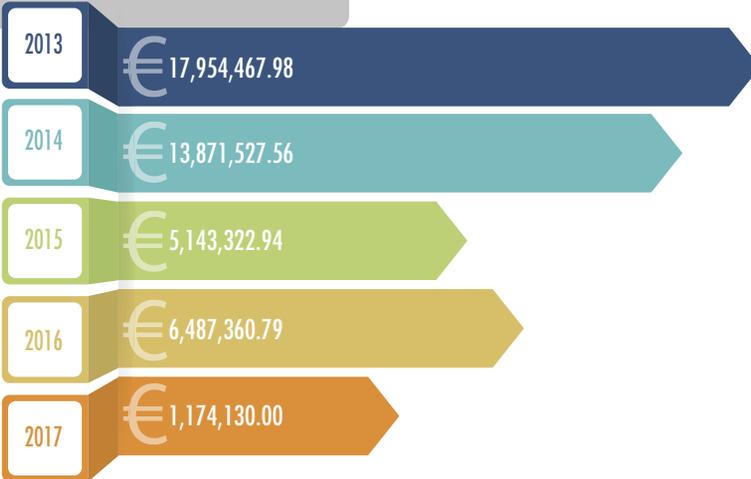
Connections between airports and railways, subways, roads and highways (intermodality) are essential to promote a safe, sustainable and unimpeded mobility of people and goods and provide adequate infrastructures and service levels for present and future traffic.

The EU Commission, through specific funding programmes and annual and multi annual calls for the award of grants, supports projects of common interest, composed by studies and works that pursue the goal of developing integrated, multimodal, efficient and sustainable transport infrastructures.

ENAC and Ministry of Infrastructures and Transport take part at meetings and round tables promoted by the European Commission DG MOVE for the identification and definition of TEN-T network development measures and the selection of projects amenable to forms of financial support in line with the principles laid down by the Commission. The activities carried out by ENAC in the management of national and EU funding programs is of course subject to compliance testing and best practices from relevant national and EU authorities.

### Funding resources by type of airport

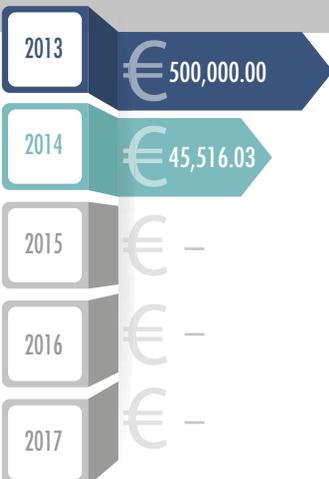
#### Southern Italy airports (only EU funds)



#### Airports located throughout the country, including southern Italy (only national resources)



#### Airports located throughout the country, including southern Italy - Ten-T European Commission (EU funds only)



- 
- Sheet 5.1 **109** National air carriers
  - Sheet 5.2 **112** Air transport agreements with non-EU countries
  - Sheet 5.3 **114** Protection of the right to mobility
  - Sheet 5.4 **116** Observatory on airport management
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**5**  
**ECONOMIC  
REGULATION**

## NATIONAL AIR CARRIERS

Companies wishing to operate as air carriers and transport passengers, mail or cargo must obtain an air transport operating license. The license is issued and monitored by ENAC in accordance with Reg. (EC) 1008/2008 (Regulation) that sets common rules for the operation of air services in the European Community and establishes the organizational and financial requirements required to obtain a license.

Licenses are granted after careful administrative, financial and technical audits conducted to ensure that air carriers are viable and healthy, can conduct operations safely and meet their commitments with customers.

This is even more true according to European regulations that recognize a potential correlation between the financial soundness and the safety of operations conducted by the air carriers. It should also be noted that the European Commission, pursuant to this Regulation, has confirmed the need to intensify the monitoring of economic and financial conditions carried out by civil aviation authorities of Member States in a communication to the Parliament (COM 2013 - 129 final). Art. 8 of the Regulation establishes that air operating licenses remain valid as long as air carriers continue to meet the conditions required for their issuance and entrusts ENAC with the task of monitoring compliance, particularly with economic and financial requirements.

ENAC is entitled to verify, at any time, the financial results of an air carrier, by requesting all relevant information and of confirming the license or suspending and revoking it whenever it finds that an air carrier is no longer able to meet its current and future commitments for a period of over twelve months. Italian carriers belonging to "A class", employing aircrafts with a maximum mass at take-off of over 10 tons or having more than 19 seats, are required, every month or

quarter, to fill in forms with their economic, financial and operational situation, that are checked by ENAC to check on the compliance with financial requirements.

"B class" air carriers are those that use aircrafts with a maximum take-off mass of less than 10 tons and/or less than 20 seats. In this case, the Regulation requires proof of possession of a net capital of at least 100,000 Euro. Pursuant to the Regulation ENAC has initiated the monitoring also of "class B" air carriers providing scheduled air services, with a turnover exceeding 3 million Euro annually or that provide Helicopter Emergency Medical Services.

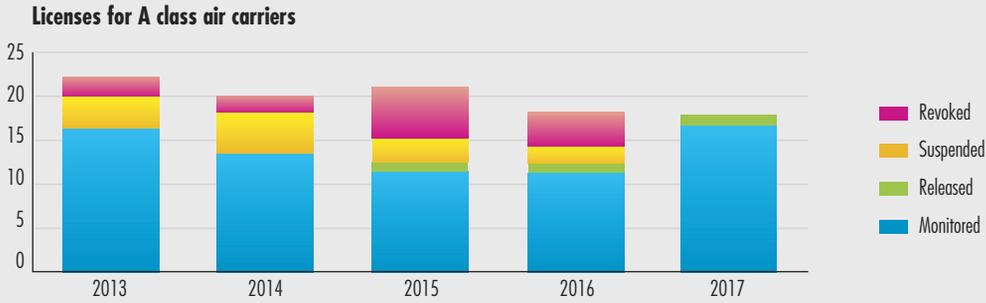
### A class air carriers

The supervisory activity of ENAC on the financial health of air carriers is conducted by a number of departments. If any problems of insolvency are found, the air carrier is banned from taking off, in accordance with art. 802 of the Italian Air Navigation Code. More specifically, ENAC cross-checks the financial and operational data it possesses, with data reported by air carriers and acquired by Eurocontrol and airport managing bodies.

In 2017, only one air transport operating license (passengers and goods) has been issued to the company Ernest SpA. Over the year, in the context of the extraordinary administration procedure of the companies belonging to Alitalia group (Alitalia SAI SpA and Alitalia CityLiner SpA), the air transport operating license have been suspended and, in parallel, released the temporary ones.

As a result of the measures implemented by the special administrators, those licences have been restored; in the restoring provision the air carriers had to monthly provide the economic-financial data, based on the forms found on ENAC website.

**ENAC's activity 2013-2017**



For the 2017, the activity of B class air carriers equalised to the A class ones has been carried out.

**Fleet of A class air carriers**

The following table shows the total number of

aircrafts (property/dry lease) used by national carriers which are 180 by end 2017.

| A class air carriers fleets | 2016        |              |            | 2017        |              |            |
|-----------------------------|-------------|--------------|------------|-------------|--------------|------------|
|                             | Short range | Medium range | Long range | Short range | Medium range | Long range |
| Air Dolomiti                | 10          | -            | -          | 11          | -            | -          |
| Air Italy                   | -           | 9            | 4          | -           | 8            | 4          |
| Air Vallée*                 | 1           | -            | -          | -           | -            | -          |
| Alitalia CityLiner          | 15          | 5            | -          | 15          | 5            | -          |
| Alitalia SAI                | -           | 78           | 24         | -           | 74           | 26         |
| Blue Panorama Airlines      | -           | 6            | 3          | -           | 7            | 3          |
| Cargolux Italia             | -           | -            | 4          | -           | -            | 4          |
| Ernest**                    | -           | -            | -          | -           | 2            | -          |
| Meridiana Fly***            | -           | 7            | -          | -           | 1            | -          |
| Mistral Air                 | 6           | 2            | -          | 7           | 1            | -          |
| Neos                        | -           | 6            | 3          | -           | 6            | 4          |
| SW Italia                   | -           | -            | 1          | -           | -            | 2          |
| <b>Subtotal</b>             | <b>32</b>   | <b>113</b>   | <b>39</b>  | <b>33</b>   | <b>104</b>   | <b>43</b>  |
| <b>Total</b>                | <b>184</b>  |              |            | <b>180</b>  |              |            |

\* License revoked on 5 December 2016.  
 \*\* License released on 11 April 2017.  
 \*\*\* In 2017 the aircraft fleet dismantlement has continued.

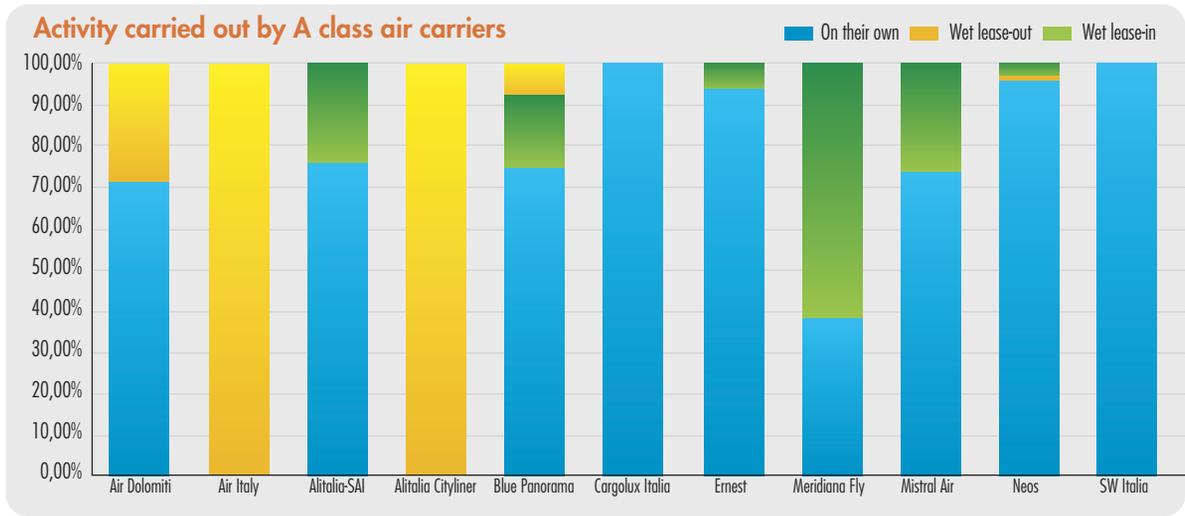
**Flight activity of A class air carriers**

The following graph, based on data from Eurocontrol flight plans with reference to the

number of landings on Italian airports, shows “dry,” wet lease in and wet lease out data for each A class air carrier. Alitalia group (Alitalia

SAI and Alitalia Cityliner) and Meridiana (Meridiana Fly and Air Italy) make extensive use

of wet lease in or wet lease-out within intra-group operations.



**Dry lease:** the air carrier leases aircrafts and performs flight operations under their responsibility and with crews of their own.

**Wet lease:** the air carrier rents aircrafts and crew provided by other air carriers. The flight operations and technical management are the responsibility of the latter.

**Wet lease-in:** Lease of services offered by a third-party carrier to complement flight operations.

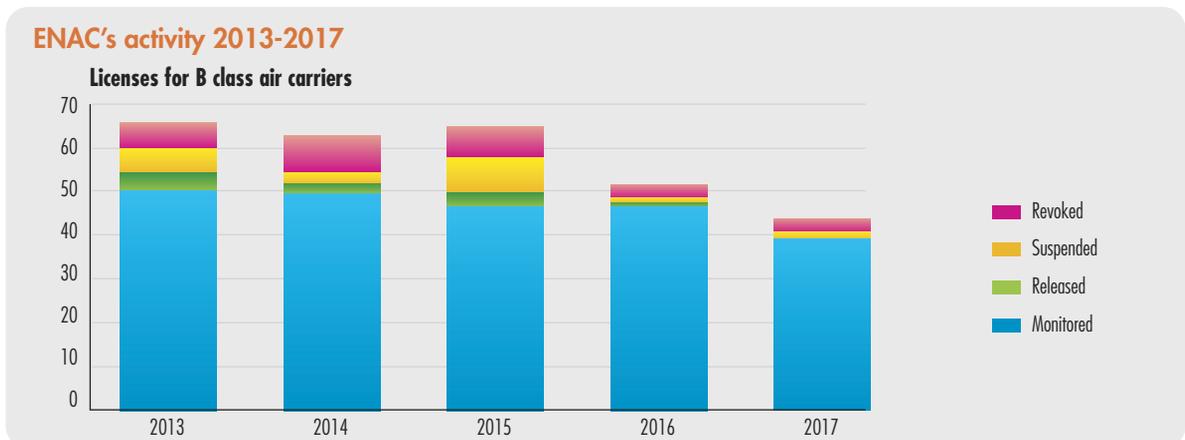
**Wet lease-out:** Air carriers offering services to other air carriers.

**B class air carriers**

As to class B air carriers the following table for the period 2013-2017 shows that in 2017, one license was suspended and three were revoked.

**Fleet of B class air carriers**

The total number of aircrafts used in air transportation from class B air carriers are equal to 284 (224 rotorcrafts and 60 fixed wing), compared to the 295 from 2016 (230 rotorcrafts and 65 fixed wing).



## AIR TRANSPORT AGREEMENTS WITH NON-EU COUNTRIES

### Development of traffic rights and country's connectivity

Air services within the EU have been liberalized for quite some time based on a set of regulations of which the most recent is Reg. (EC) 1008/2008. Connections to destinations outside the EU, on the other hand, are governed by bilateral air agreements signed with the different countries.

In the past ten years Italy has pursued a process aimed at developing connectivity and supporting the national air industry and airports. From 2009 onwards, over 78 agreements were signed with non-EU countries. In 2017 agreements were made with: Argentina, Australia (2 agreements), Botswana, Cameroon, Ethiopia, Russian Federation, Gambia, India, Kazakhstan, Kenya, Nigeria, Ruanda and Sri Lanka. Negotiations with these countries were carried out by ENAC upon delegation of the Ministry of Infrastructures and Transport and allowed the stipulation of new agreements with Botswana, Gambia, Kazakhstan, Ruanda, countries that previously were not included in any agreement and a significant development of the existing relationships with the above mentioned countries. Considered the strong attraction that Italy holds for Russia not only in the touristic field, a specific recall has been done this country in order to reach a new agreement that extended the traffic possibilities with Italy, by providing also more possibilities to use the Tran Siberian routes, fundamental to increase the connections with China and other countries in the far east, area of major importance for Italy.

It is also worth mentioning the developments with Argentina since the renewed agreement will bring a significant traffic growth, with reciprocal benefit. In general, in a view of a sector and economy development, the intent was to allow the increase the traffic with the mentioned foreign countries in order to start new connections and increase the air carriers' number that can operate the routes. It is important to highlight the pursued goal of

ensuring more operational flexibility.

As a result, the number of carriers, routes and services has increased and airports have been extended to ensure the development of the network. Code-sharing and aircraft leasing has allowed carriers to step up their collaborations with partners and make their programming more efficient owing to a greater operational flexibility allowed by the new agreements. To implement the existing laws that have as goal an overall increase of the international connections and the occupation levels, also in 2017, tens of connections in favour of foreign air carriers have been authorised in derogation to the agreements. The connections regarded Russia, Turkey, Tunisia, Indonesia, China, Chile, Peru, Lebanon, and Belarus with positive effects on several Italian airports (Bergamo, Rome, Milan, Venice, Verona, and Bologna).

Considered that often the agreements include limited traffic rights, to assign them it was necessary to activate transparent and non-discriminatory procedures, so that the rights, not sufficient to satisfy the applicant companies interests, were treated respecting the principles of impartiality and proper running of the administrative action and the freedom of competition.

In 2017, some 39 disposals to issue/revoke traffic rights related to non-EU non-liberalised routes were issued. The concessions were subsequently monitored with the aim of at assessing whether the assigned rights had been actually used and the best administrative efficiency.

### Operator authorization of air carriers

The operational authorisations are issued by ENAC based on the agreements contents in force between the State Members and the third countries in the air services field. The contents regard both the commercial opportunities (traffic rights) and the security and safety requirements, responsibilities of the air carrier.

The technical approvals issued by EASA, under EU Reg. 452/2014, is a precondition to the issuance of operating permits by ENAC, in particular in the framework of existing air service agreements between member States and third countries. The control and monitoring of operability conditions of third countries carriers is aimed at ensuring flight safety.

In 2017, the most active air carriers in Italy and the new entries showed to have completely implemented the new regulatory framework and the modification of the ENAC procedures in accordance with the EASA disposals.

In 2017, ENAC approved 260 scheduled programs for connections to third countries: 11 companies were established in Italy, 40 companies had a license granted by another EU State and about 100 carriers held a license from non-EU countries.

According to IATA 2017 presented programmes, operations and destinations served in code sharing have increase compared to 2016. The increase is attributable to the concluded agreements with several foreign countries, which enlarged the routes, the frequencies, the commercial opportunities for the operation carried out in code sharing and the leasing operations.

The number of code-sharing requests submitted by airlines to ENAC were more than 115, including 45 bilateral ones and the use 70 aircrafts in Aircraft Crew Maintenance Insurance (ACMI) have been approved.

As regards the charter passenger's flights, the positive trend of the 2016 for the cargo flights, has further incremented in 2017 in terms of operated flights number and inbound and outbound flights from national airports. Considered the political crisis of the North African countries, from many years the charter flights market to this area is heavily decreasing, while maintaining a small traffic to Egypt and Tunisia.

About security, in order to protect cargo and mail entering into the EU from other countries, ENAC has screened the accreditations of all air carriers to unload goods coming from third countries in accordance with the Reg. (EC) 300/2008, confirming existing licenses to or issuing new ones for inbound operations in Italy as first stop in Europe.

In the same way, the cargo operations in favour of air carriers not in possession of ACC3 certification (exempted by ENAC); permissions for material classified as Dangerous Goods for air transport based on specific conditions; 84 diplomatic clearances have been released and inbound flights from Libya subjected to Notam of closure of the Italian airspace have been managed. In 2017, 23 new air carriers received accreditation and 70 new authorisations to use rented aircrafts on ACMI base have been released. The total 2017 operational authorisations were 1,222.



## PROTECTION OF THE RIGHT TO MOBILITY

ENAC's activity is also aimed at maintaining essential air services in case of strike and guaranteeing the territorial continuity principle, such as to protect citizen's right to mobility.

### Definition of guaranteed minimum services in case of strike

In the event of civil aviation staff strikes, based on the "Temporary regulation of the right to strike in the air transport", approved by decision of the Commission to ensure the right to strike 14/387 of 13 October, ENAC identifies the essential minimum services such as to limit the inconvenience to citizens and ensure the transport of perishable goods, live animals, medicines, basic goods and goods essential for the population and for the continuity of productive activities. In addition, it takes action, together with ENAV and Eurocontrol to address and resolve any critical operating issues connected to the strike such as the closing of the Italian airspace. In 2016, the European Commission has invited ENAC to take part in a study concerning air traffic management strikes (ENAV). The request has been done considering the important role of Italy in the sector. The study is aimed at the elaboration of guidelines and European legislation to harmonise, in the context of the European air traffic management systems, the minimum air traffic services during strikes of the personnel which have to be ensured to protect the passengers.

In 2017, the EU commission - DG MOVE, to the outcome of the analysis study, started the year before, on the European air traffic management during the ATC personnel's strikes of the State members, shared a working paper that highlights the negative consequences at operational and financial level of the air traffic interruptions that, during every strike, affect the passengers and the industry in the entire European network. Taking as example some measures implemented in Italy, they have been more efficient in the strike consequences mitigation in comparison with other

State Members.

In 2017, ENAC took part, on the invitation of the Warranty Commission, to a meeting aimed at evaluate the possible modifications to be made to the reference text (Decision 14/387), in order to harmonise, as requested by the Sardinia region, the right to strike with the right to move of the people resident in Sardinia as planned by the territorial continuity principle.

In 2017, following strike announcements, ENAC conducted 31 assessments on airline flight schedules, to verify that the minimum essential services to users were actually being provided.

### The safeguarding of the principle of territorial continuity

Following the liberalisation of air transport, carriers have invested in the more commercially viable routes and have abandoned the less attractive ones to islands and peripheral or developing regions, thereby undermining the citizens mobility right and cases of market failure. ENAC, in collaboration with the Ministry for Infrastructures and Transport and the regions concerned, is committed to taking action to uphold the principle of territorial continuity and the EU Reg. 1008/2008, that is essential to connect the disadvantaged areas with other Italian regions.

As part of a European tendering procedure ENAC was asked to select carriers operating, with exclusive rights, on these routes under a public service obligation with financial compensation. As regards to the connections with Sardinia, the air carriers are selected by the Autonomous Region of Sardinia, in compliance with the regulation.

| Public service obligations in 2017   |   |
|--|---|
| Tuscany Region   |   |
| Routes:<br>Elba - Florence and vice versa<br>Elba - Pisa and vice versa<br>Elba - Milan Linate and vice versa  | On these three routes, public service obligations have been imposed by Ministerial Decree n. 328 of 6 September 2013 amended by the Ministerial Decree n. 26 of 29 January 2014.<br>The airline Air Silver of the Czech Republic, that was the successful bidder in the tender and awarded the agreement for these routes for three years from the 26 October 2014, operated the connections until the 25 October 2017, expiring date of the agreement.   |
| Sicilian Region  |   |
| Routes:<br>Pantelleria - Palermo and vice versa<br>Lampedusa - Palermo and vice versa<br>Lampedusa - Catania and vice versa<br>Pantelleria - Trapani and vice versa  | On these routes, public service obligations have been imposed by Ministerial Decree n. 5 of 15 January 2014. The Alitalia SAI company, that awarded the contract for the exercise of the routes for three years with effect from 1 July 2014, regularly operated its services until the 30 June 2017, expiring date of the agreement. For one year from the 1 July 2017, the routes are operated by Mistral Air, awarded the agreement for the service exercise.  |
| Autonomous Region of Sardinia  |   |
| Since 2010 the Autonomous Region of Sardinia is directly in charge of territorial continuity and its financing.<br><br>Routes (CT1):<br>Alghero - Milan Linate and vice versa<br>Alghero - Rome Fiumicino and vice versa<br>Cagliari - Milan Linate and vice versa<br>Cagliari - Rome Fiumicino and vice versa<br>Olbia - Milan Linate and vice versa<br>Olbia - Rome Fiumicino and vice versa | On the six routes of Sardinia, public service obligations have been imposed by Ministerial Decree no. 61 of 21/02/2013 as amended by Ministerial Decree no. 133 of 21 April 2013.<br>The routes were awarded under the European tendering procedure as from 27 October 2013 for a period of four years. The service was regularly provided until the 8 November 2017 by the carrier Alitalia-SAI on routes departing from Alghero and Cagliari and by the carrier Meridiana on routes departing from Olbia.<br>The Sardinia Region revoked the tendering because of EU Commission findings about the new territorial continuity system that should have entered into force on the 9 November 2017. In the arrears of a new charging procedure, in order to ensure the Sardinian citizens mobility, the air service have been prolonged until the 8 June 2018. |

### As to territorial continuity, in 2017

- 7,781,858.42 Euro were spent from state funding;
- 1 new agreement was signed with an air carrier to regulate the award of the air transport service routes;
- One consultation with relevant stakeholders ("conferenza di servizi") were held;
- 14 interventions were carried out to ensure the correct enforcement of conventions;
- 5,971 flights were guaranteed with the financial support of the State;
- 198,675 passengers were transported with the financial support of the State.

## OBSERVATORY ON AIRPORT MANAGEMENT

Airport managing bodies are called by law and by contract, to administer and manage airport facilities or airport networks and coordinating and controlling the activities of the carriers (articles 704 and 705 of the Italian Air Navigation Code).

Airport managing bodies licenses are issued with a decision adopted by the Ministry of Infrastructures and Transport in consultation with the Ministry of Economy and Finance and, limited to military airports open to civilian traffic, with the Ministry of Defence. The license, with maximum duration of 40 years, is awarded on proposal of ENAC following a public tender selection, and the signing of an agreement between the operator and ENAC. It is about being depleted the other modality to grant the airport managing through an administrative procedure governed by the Ministerial Decree 521/1997, which essentially granted preferential lanes to outgoing airport managing bodies already entitled with the partial and/or temporary management of an airport.

The Lampedusa and Rimini airports have been the first airports entrusted with a public tendering, under the art. 704 of the Italian Air Navigation Code. In 2017, the public tendering for the management of the airports of Reggio Calabria and Crotona has concluded with success, privileging the entrustment to a single body to facilitate the potentially interested economic operators, by exalting the attractiveness in terms of users' number and synergies between the two airports. Furthermore, to execute this tendering, ENAC had to consider the countless innovations

introduced by the new Code of Tendering and Concessions (Legislative Decree 50, 18 April 2016) and the subsequent corrective Decree (Legislative Decree 56, 19 April 2017).

In the surveillance context, ENAC carries out the monitoring of compliance on the part of operators of conventional obligations with a variety of mean, including scheduled inspections with Inspectorate of Finance. If the operator is found to be noncompliant, ENAC identifies the required corrective actions to be implemented within an agreed time. If no corrective actions are implemented, sanctions are levied, based on the seriousness of the noncompliance. In severe cases, when essential requirements are missing, such as those that pertain to the financial domain, there is a concession's loss. Moreover, in the procedures to sell public shareholding of the share capital started by the airport managing body, ENAC offers its support to Ministry of Infrastructures and Transport, which has to authorise the operations, issuing a report about the tender documents.

ENAC's web site publishes the updated data for the various types of airport management, divided as follows:

- total management;
- partial operations also in precarious regime;
- direct management by ENAC;
- concessions awarded according to the regulations on state-owned airports for General Aviation.

### The monitoring of the handling market

Handling and self-handling include: administrative ground services and supervision, passenger, baggage, freight and mail handling, ramp handling, cleaning and terminal services, fuel and oil, aircraft maintenance, flight operations and crew administration, ground transportation, catering.

Handling requires a certification which is issued by ENAC to parties that comply with the requirements of art. 13 of Legislative Decree 18/99. The certificate includes the specifications of the airports and the categories of activities listed in Annex A of the Decree 18/99 for which the operator has demonstrated to have adequate financial, human, organizational and instrumental resources. It is rather common for certified operators to operate on more

than one airport.

The monitoring of the handling market is related to the compliance with provisions of art. 17 of Legislative Decree 18/99 and art. 50 of Law 99/2009.

In 2017, 4 ground handling service certificates were issued and 5 were revoked. As of 31 December 2017, the total number of active certificates were 156.

The following airports have achieved the traffic threshold envisaged by art. 6 of Legislative Decree 18/99 concerning free access to the ground handling services market:

Bari, Bergamo, Bologna, Brindisi, Cagliari, Catania, Florence, Lamezia Terme, Milan Linate, Milan Malpensa, Naples, Olbia, Palermo, Pisa, Rome Ciampino, Rome Fiumicino, Turin, Treviso, Venice and Verona.

Due to the saturation of spaces at the Naples airport, from 20 July 2017, only 2 handlers for the commercial aviation and 4 for the general one can take care of baggage, good and post and ramp operations. 3 handlers can execute the fuelling and oil assistance.

Also the Venice airport, from 19 October 2017, has been limited to 2 handlers for the commercial aviation and 2 for the general one for baggage, good and post and ramp operations. The handlers will be selected since the candidates are more than needed. The airport managing bodies of the airport of Milan Malpensa, Milan Linate, Florence, Olbia, Pisa and Cagliari had handling inconveniences caused by the lack of capacity and space; in this respect ENAC decided to verify each one the above mentioned airport.

### Incentives for starting and developing routes

In 2017, ENAC conducted a survey on domestic airports that showed that the majority of managers had published the "commercial policy" on their website. The survey also showed that incentives:

- require contracts under which airport managing bodies undertake to pay to the carriers a financial contribution, with the obligation of the latter to ensure, for a given period of time, a minimum number of daily or weekly flights;
- are commonly carried out by the airport managing bodies in order to increase the level of passenger traffic in their airports and consequently, their revenues, regardless of the volume of traffic;
- allow airport managing bodies to attract investments by carriers and participate in the positive results of these investments through returns from the airport traffic generated by the service.

### Airport concession for the General Aviation

The airport for the General Aviation are intended to host sport, touristic, training activities, services of aerial work, air rescue, medical emergency, civil defence support, scientific and experimenting activity, business aviation operations included the services of airtaxi and any other activity compatible with the airport vocation.

Many of these airports are directly managed by ENAC with its means and staff, however the situation is not bearable anymore cause of the measures to contain the public spending that affect ENAC human resources.

Since these airports are an essential tool for the territory to ensure the aeronautic activities prosecution which are important for the community, ENAC, to guarantee their safe operability and safeguard the public interest, started tendering procedures. That allows the economic operators to participate to transparent and non-discriminatory selections and at the conclusion the candidate able to propose the best management project, will be chosen.

The ENAC's choice has been innovative and comported a considerable activity of in-depth analysis after the entry into force of the New Code of the Contracts, in 2016 and its subsequent modifications in 2017.

The tendering procedures start to entrust the airport for the General Aviation represents ad new stimulus to the collaboration between ENAC, Operators, users and territory that requires a constant improvement effort to all the components, in order to guarantee the safe operability of these airports and prevent their closing.

In 2017 the first tendering procedures for the concession of the airport for the General Aviation of Arezzo, Bresso, Capua and Casale Monferrato have started.

## PLANNING AGREEMENTS

### The 2017 regulatory framework

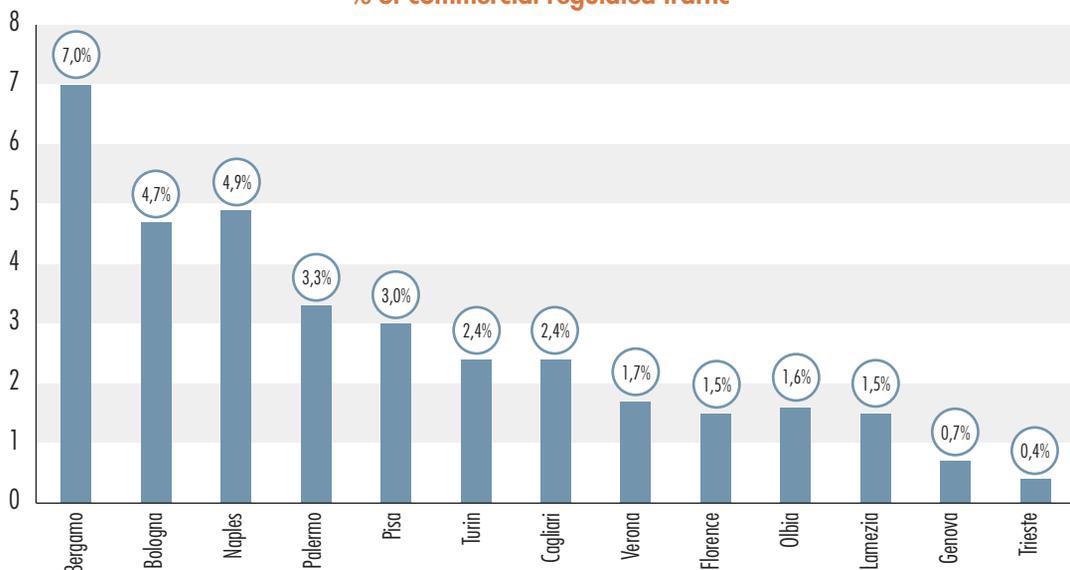
In the new institutional framework, in which roles and responsibilities among the various relevant institutional actors called to intervene in technical and economic regulation of the national airport system has been effectively clarified by the Minister of Infrastructures and Transport with the 05/08/2016 Act of address, ENAC, in addition to be the Supervisory Authority, under Directive 2009/12/EC 11/03/2009, with reference to the Planning Agreements in derogation, presides over the drafting of Planning Agreements ex Legislative

Decree 133/2014, of which is a party to the contract with the airport managing body.

Based on the new regulatory framework, in 2017 ENAC signed new Planning Agreements with the airport managing bodies of the airports of Cagliari, Bergamo and Lamezia.

These Planning Agreements has to be added to those signed in the previous years with the airport managing bodies of the airports of Bologna, Naples, Olbia, Palermo, Turin, Trieste, Genova, Verona, Pisa and Florence, reaching the 35,1% of commercial passenger traffic of 2017.

Planning Agreements ex Legislative decree 133/2014  
% of commercial regulated traffic



Commercial traffic repartition of the ordinary Planning Agreements ex Legislative decree 133/2014, signed by ENAC.

For the aforementioned Agreements, by virtue of the binary system created with the implementation of Directive 2009/12/EC, airport charges determination and periodical update supervisory activity falls within the competence of Transport Regulation Authority, whereas the investments and

business plan evaluation, traffic development and airport quality and environmental performances improvement falls within ENAC, in both the preliminary definition of the infrastructure development targets and multi-year airport charges adjustment, and the subsequent annual

monitoring carried out after the four years have elapsed, aimed at checking that investments were actually made, that the objectives of quality and environmental protection were achieved, and that airport charges can be updated.

As regards the contractual framework, approved by the Board with resolution no. 20 - 23 September 2015 and subsequently amended by resolutions no. 42/2015 and no. 10/2016, ENAC has elaborated, in 2017, a proposal for revision of the current framework, based on the experience acquired with the previous Planning Agreements and to balance the text with the Airport agreement model.

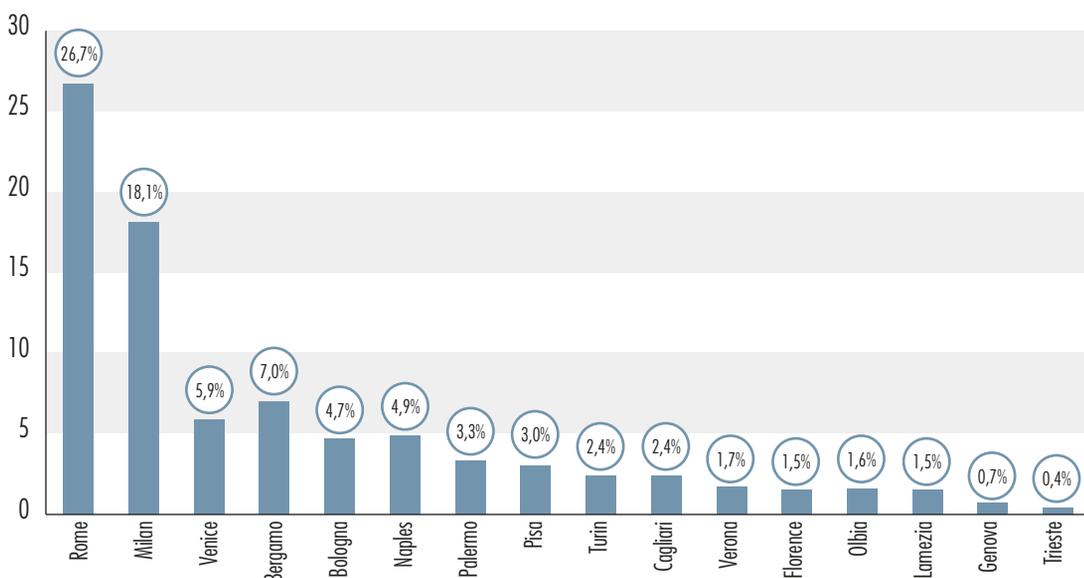
It has officially introduced the concept of "Four-year interventions plan" that includes: the four-year investments plan, the traffic prediction and the economic-financial Plan. The latter are not anymore attached to the Agreement but become part of a single Plan, those of the interventions and are part of a single Attachment. In the same way, in order to rationalise and simplify the Agreement, the quality plan, the environmental protection plan that originally were two plans and two distinct

attachments, are now combined in a single "Quality and environmental protection plan", presented by ENAC as a single attachment.

From a content point of view, the contract scheme modification involved the terms of presentation of the economic-financial plan, that in the original Agreement's form, had to be disclosed to ENAC within 60 days from the Agreement subscription, since they are two correlated documents, in order to approve the Interventions Plan.

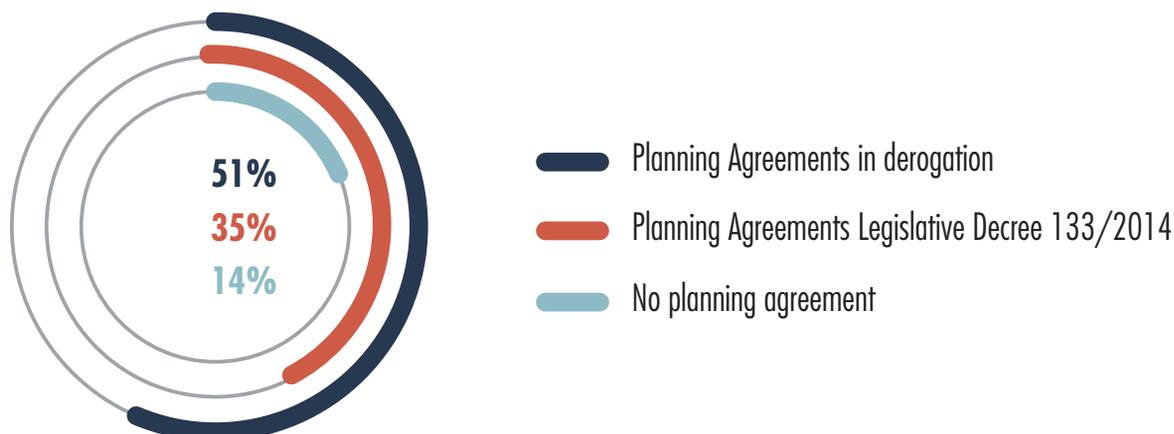
As depicted in the introduction, ENAC, simultaneously to the activity dedicated to the subscription of the Planning agreements ex Legislative Decree 133/2014, is the surveillance authority for Planning Agreements in derogation, and it has both the technical and financial aspects, related to the periodical elaboration and monitoring of the airport charges over the years. If we consider the contracts signed under ex Legislative Decree 133/2014 and the Planning Agreements in derogation, which account for 50,7% of total traffic, a total of 85,8% of passenger traffic is regulated in 2017.

### Planning Agreements under ex Decree 133/2014 and the Planning Agreements in derogation % of regulated commercial traffic



Repartition of the commercial traffic in Planning Agreements under ex Decree 133/2014 and the Planning Agreements in derogation.

### Passengers traffic partition in relation to type of agreement



#### The Puglia Region's airport network

Among the most significant news of 2017, the development of the preliminary activity to adopt the interministerial decree Transports-economy to design the airport network of Puglia deserve attention (under Art. 74, 1 of the legislative decree 24 January 2012 no.1, converted with modification in Law the 24 March 2012, no.27.).

This recognition represents the formal and substantial assumption in order to adopt a shared and transparent charging system to be applied to the entire network. Following the guidelines of the Ministry of Infrastructures and Transport in 2016 to design the Italian airport network, ENAC, upon request of the Aeroporti di Puglia SpA (the airport managing body), conducted the preliminary procedure to verify the subsistence of the market and technical-economic conditions necessary for the airport network status recognition, according to what provided by the guidelines.

At the end of the analysis of the documentation provided by the manager to support its request, ENAC expressed many times a favourable opinion to set up the Puglia airport network, being convinced, based on economical and Puglia airport market evaluations, that this organisational model represents for Aeroporti di Puglia SpA, a strategic choice in terms of costs rationalisation and organisational and management optimisation. Furthermore, it is an opportunity in terms of mobility demand meeting thanks to the network airports diversification and specialisations.

To conclude a long and articulated process, the ministries, in 2017, have drafted the scheme of a decree to design the Puglia's airport network, over which the "Conferenza Unificata" gave a favourable opinion on 21 December 2017.

#### Planning Agreements monitoring

In 2016, ENAC conducted the annual recurring monitoring aimed at assessing the effective implementation of investments and achievement or failure to achieve the objectives of quality and environmental protection, for the Planning Agreements in derogation signed with the airports of Rome, Milan and Venice. ENAC also monitored the Planning Agreements signed under Decree 133/2004, for the airports of Pisa, Florence,

Olbia, Bologna and Naples.

ENAC is completing the implementation of the computerized system for Monitoring Airport Interventions such as to replace all paper documentation on investments with a database populated by the airport managing bodies themselves. This innovation involves two phases. In phase one airport managing bodies will be required to enter in the Monitoring Airport Interventions system the data relating to their

Four-Year Intervention Plans. In phase two the database will be populated with data on the SAL (Works Advancements State) and will be audited by ENAC for all public works exceeding one million euros and by Cost Auditors (RAC) appointed by the operator, for all other public works of less than one million Euro or those that are self-financed.

The Monitoring Airport Interventions system will allow for a near real time monitoring of the progress of infrastructural interventions. As such it will be a very important tool to verify that deadlines are met and to levy sanction when they are not.

In order to proceed with the 2018 airport charges updates for the Planning Agreements pursuant to Decree 133/2014, ENAC has sent Transport Regulation Authority the work progress pertaining to the 31/08/2017 and it has communicated the achievement or not of the targets established in the Quality and environmental protection plan with regard to 2016.

During monitoring, ENAC has updated airport charges for 2017 for those airport managing bodies that signed a Planning Agreement in derogation, for which the regulatory competence remains in the hands of ENAC.

The administrative-accounting verification carried out by ENAC in the place of the roman airport managing body are an innovation of the agreements in derogation monitoring.

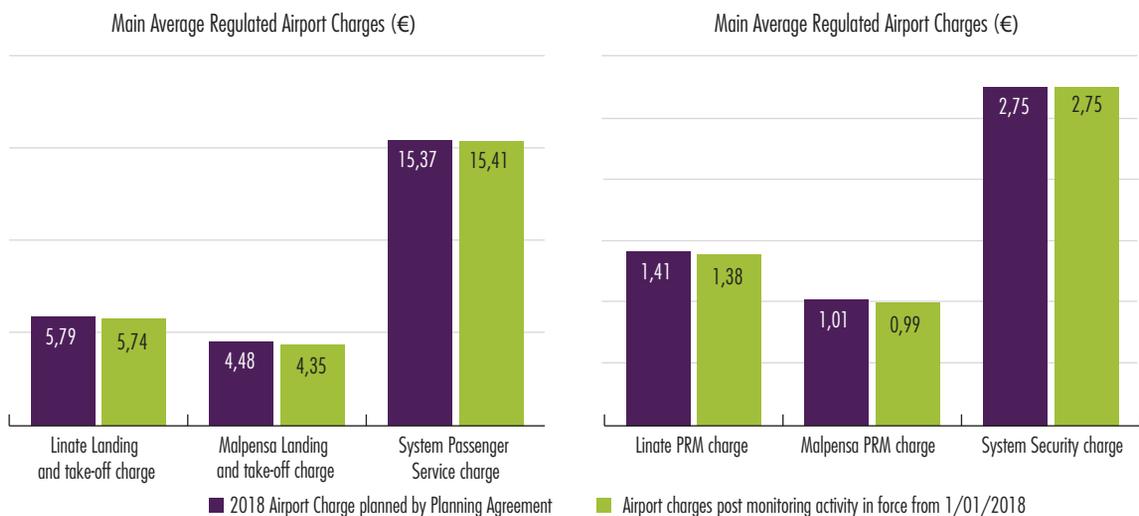
As follows, the graphs that show, for the main charges for the users, the comparison between the average level of the monitoring activity carried out ex-post, the programmatic one ex ante and the 2017 one. The 2018 charges record, in comparison with the previous year, some increases and reductions caused by the combined effect of the positive or negative adjustment carried out over the 2017 data. They are affected by the effective investments, the resulting discontinuity incurred by the airport managing bodies and by the quality and environmental protection indicators impact, directly reflecting on 2018 charges.

### Milan Linate and Malpensa

For the airports in Milan Linate and Malpensa airport charges were determined for boarding passengers and security checks, already starting from 2011. In addition, as of 2016 a new single payment system is used that takes into account passing checks, carry-on baggage and checked-in baggage.

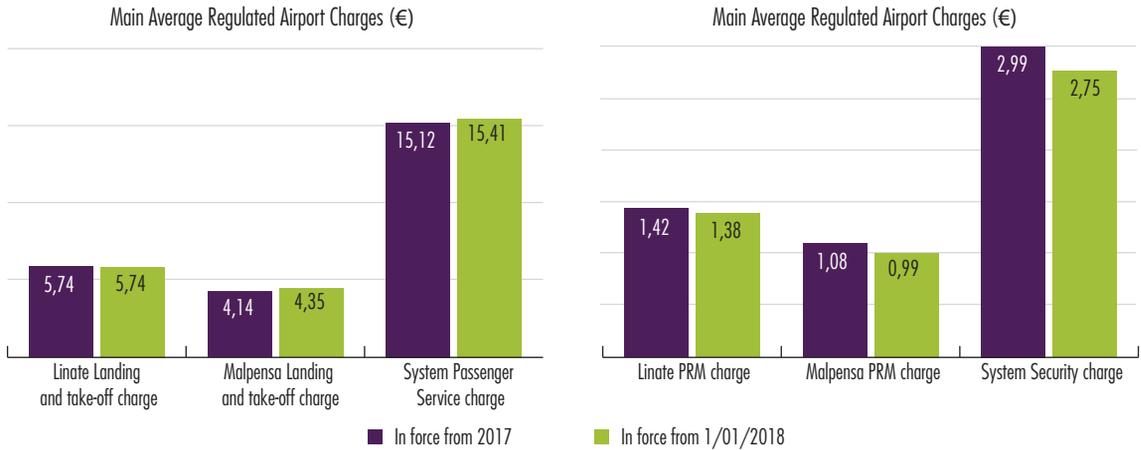
## Milan Linate and Malpensa

### 2018 Planned Airport Charges in force from 1 January 2018



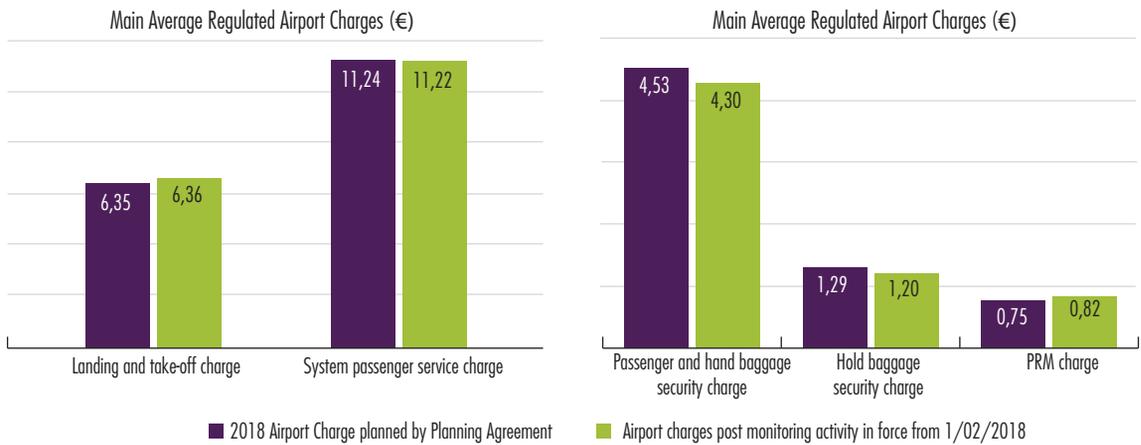
Milan Linate and Malpensa

2018 Planned Airport Charges in force from 1 January 2018

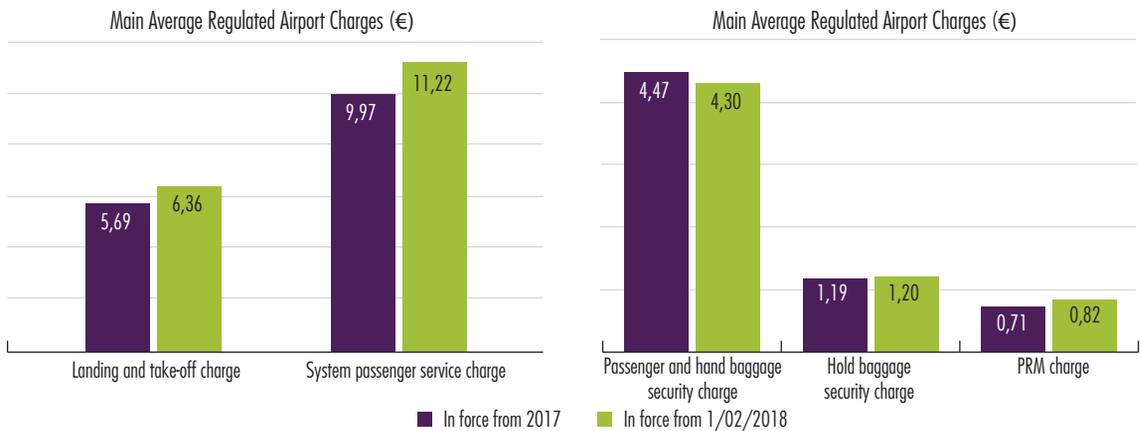


Venice

2018 Planned Airport Charges in force from 1 January 2018

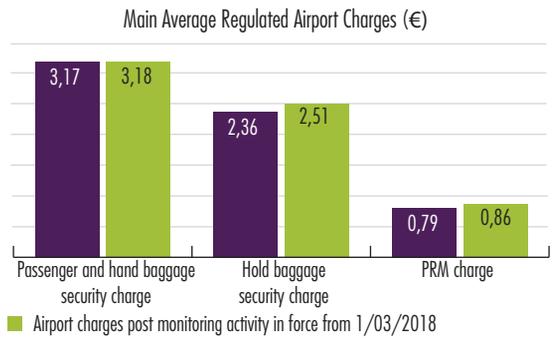
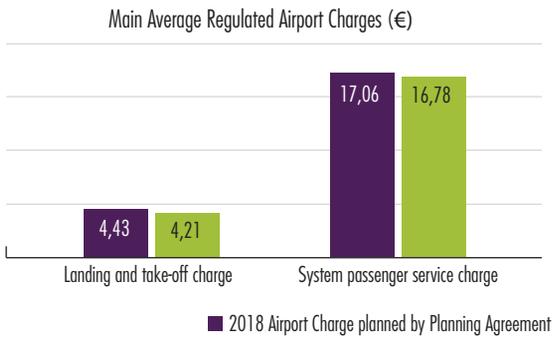


2017 Planned Airport Charges in force from 1 January 2018

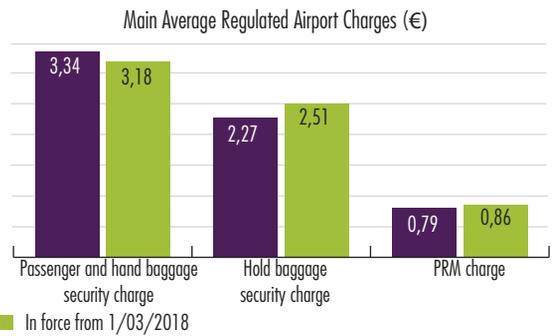
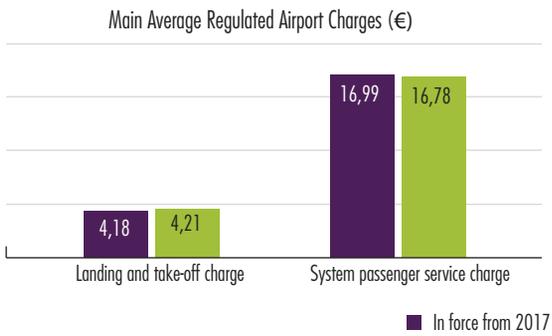


## Rome Fiumicino

### 2018 Planned Airport Charges in force from 1 March 2018

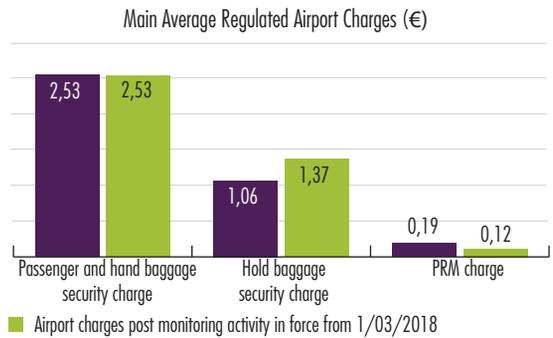
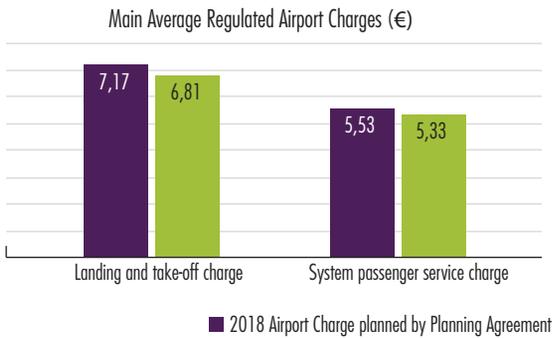


### 2017 Planned Airport Charges in force from 1 March 2018

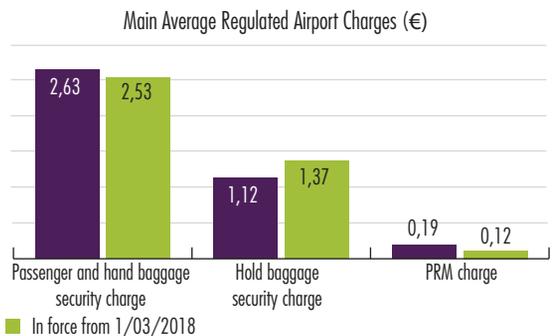
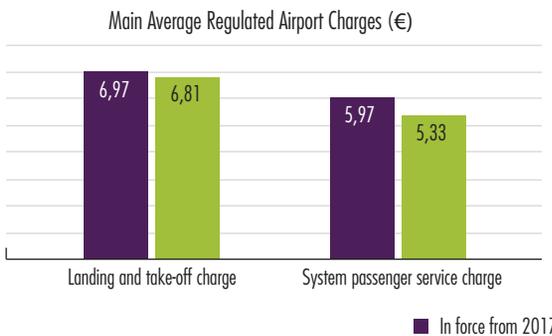


## Rome Ciampino

### 2018 Planned Airport Charges in force from 1 March 2018



### 2017 Planned Airport Charges in force from 1 March 2018



### Supervision of charges connected to the use of centralised infrastructures, common and exclusive use assets

Decree no. 18/99 on free access to the EU ground handling services market has entrusted ENAC with the task of checking that the airport users service charges are in line with the costs incurred with the airport management and the development of centralised infrastructures and common and exclusive used assets. To this end, ENAC carried out in 2017, the vigilance on the charges for the fuel storage and distribution activity performed at the airports of Naples, Rome Fiumicino, Milan Malpensa by Skytanking srl, Seram SpA and Disma SpA. For the airports of Rome and Milan, it should be noted that setting these charges falls beyond the scope of the Planning Agreements in derogation, since the centralised infrastructure for fuel storage of these airports are fully owned and managed by specialized third parties on the basis of sub-concession contracts.

### Supervising activity on handling charges and on Passengers with Reduced Mobility (PRM) charges

With regard to PRM assistance, airport charges and handling rates in monopoly, the EU Directive

2009/12/EC on airport charges expressly excluded them from its scope, since they were already being regulated by Directive 96/67/EC of 15/10/1996 (ground handling) and Reg. (EC) 1107 of 5 July 2006 (assistance to PRM). Airport charges supervision over such activities remains, therefore, an exclusive prerogative of ENAC. In 2017 ENAC has updated the PRM for the airports of Rome, Milan, Venice, Bergamo, Bologna, Cagliari, Catania, Genova, Lamezia, Naples, Olbia, Palermo, Turin, Pisa, Florence, Trieste, Verona and for the airports of Puglia Region.

### Financial analysis of the public service obligation regime

In the effort to streamline resources and reduce costs, the study is aimed at assessing the financial results obtained by air carriers on routes burdened by public service obligations, for the purposes of calculating the financial compensation that is due to them in case of financial losses. In the past the study was carried out with the support of external consultants, now it is carried out in house by ENAC, using a specific analysis model.

In 2017, ENAC has audited the activities carried out by the carrier Silver Air Spol S.r.o and Alitalia SAI SpA, entrusted with flights to the island of Elba

#### Analysis of traffic data

In 2017, ENAC published the commercial and general aviation traffic data from the previous year and the three-month updates of the current year, divided by type of passenger, cargo and mail, type of flight (national and international, scheduled or non-scheduled). In order to keep the data as current as possible, ENAC provided updates as of 31 March, June 30 and September 30, 2017. This data is a useful analytical tool for all operators and is particularly important to calculate airport charges and the fire prevention contribution.

ENAC uses statistical data on air traffic performance to study the market and the industry and carry out a financial evaluation of non-EU routes on which it intends to make bilateral air traffic agreements.

For the statistical analysis ENAC uses a database populated with traffic data relating to movements, passengers and cargo along with the concerned routes. The database also contains information relating to the seats offered, the load factor of the aircrafts and the annual growth rates used to derive and assess trends. Starting from historical data pertaining to one single route, an estimate is made of the number of passengers, goods and cargo. The estimate is then projected in the future to predict traffic both for arrivals and for departures.

In 2017, ENAC analysed and evaluated the traffic data preliminary to the negotiation of 14 international bilateral agreements, 12 of those were concluded and refined in occasion of the Air Services Negotiation Event, organised by ICAO in Sri Lanka where Italy participated for the second year in a row. ICAN's goal is to ensure an event where the countries can meet and, over a period of time of some days, conduct bilateral or regional negotiations and preliminary analysis to the air traffic agreements conclusion.

and Sicily for the period 2014-2017. The check has verified that the financial results obtained by the airline in the second and first operating annuity (26 October 2015 - 25 October 2016 for Silver Air Spol; 1 July 2014 - 30 June 2015 for Alitalia SAI SpA) are appropriate, relevant and reliable.

### Supervision of air navigation charges

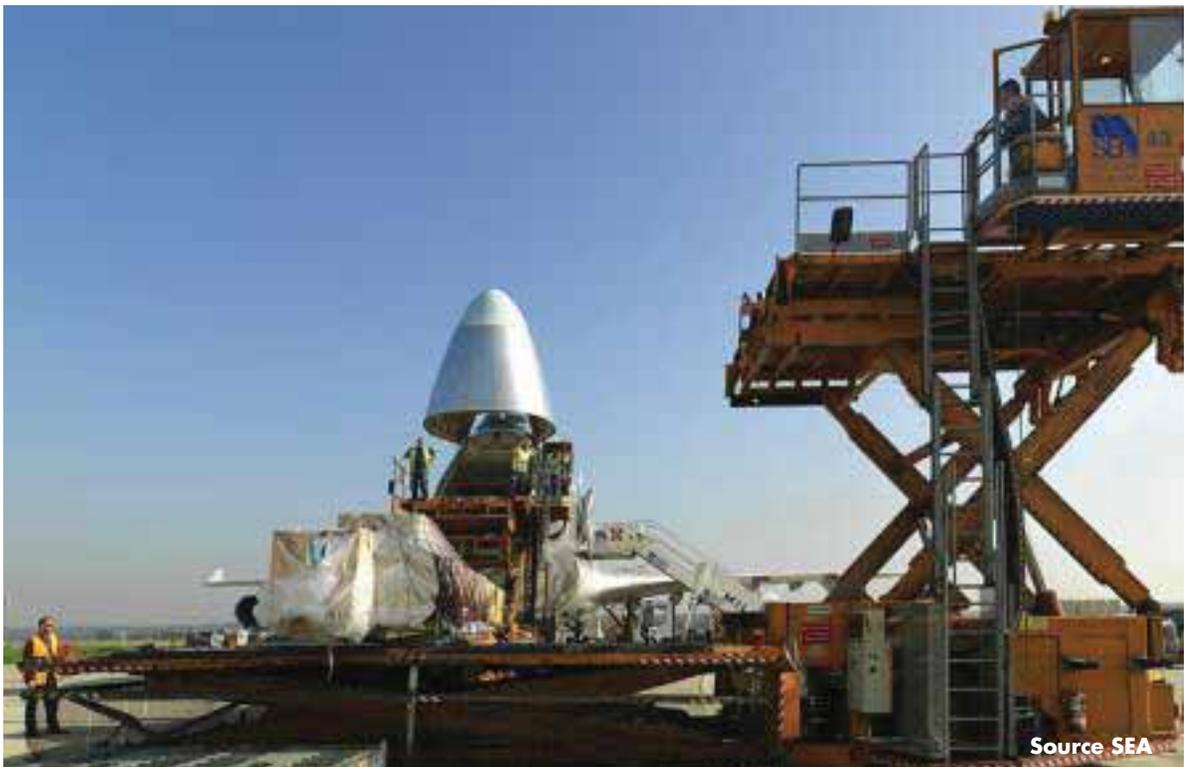
In addition to the surveillance and economic regulation functions of the charges applied by the airport managing bodies to exclusive services, ENAC verifies the air navigation services charges applied by ENAV at national and international level every year. The preliminary investigation to determine the “band III” terminal charges for 2018, whose regulation is disciplined at national level and the yearly monitored tariffs regulated at European level for air navigation services route and terminal charges of “I-II band”.

### “Position paper” on cargo

In 2017 ENAC contributed, together with other institutions and representatives of the air cargo sector, to the technical board’s works created by

the Ministry of Infrastructures and Transport and coordinated by the “Struttura tecnica di missione”. At the conclusion of the various meetings and contributions provided by each actor, a “position paper” has been elaborated. It identifies the state of the art of the cargo sector, the criticalities that prevent the complete development and the possible action lines in order to strengthen the air cargo transport field.

In this context, the necessity to identify the investment priorities aimed at improving the intermodality and to potentiate the logistic networks has been highlighted. In coordination with the board’s activities, the update of the National Airports Plan will take place, to include the infrastructural interventions necessary to the cargo sector development in a coordinated and simultaneous way with the Logistic National Plan. ENAC worked to make the cargo service chart binding for the main cargo airports, with reference to the possible actions to implement in order to improve the quality of the services.



Source SEA



**6**  
**REGULATION  
OF AIRSPACE**

## REGULATION AND PLANNING ACTIVITIES

### Single European Sky (SES)

The Single European Sky (SES) is a flagship European initiative aimed at reforming the EU air traffic control system such as to meet future requirements in terms of capacity and safety. Compared to the 2000 traffic levels, the full implementation of the SES is set to:

- strengthen safety by ten times
- tripling airspace capacity
- reducing air traffic management costs by 50%
- reducing the impact of each flight on the environment by 10%.

In order to reach the goals, the SES is based on four pillars:

- **Functional Airspace Blocks (FAB):** under the SES, the national bodies involved with air traffic control will work together in regional functional airspace blocks such as to improve efficiency, cut costs and reduce emissions.
- **Objectives:** fundamental performance objectives have to be achieved nationally, while safety, capacity, economic efficiency and environmental impact have to be achieved within functional airspace blocks. All the objectives stimulate the reform process while other part of the initiative are aimed at its implementation. National targets are set by each Member State based on EU-level targets agreed with the European Commission.
- **Network Manager:** Eurocontrol, the network manager, supports the process with tasks such as the design of routes or the coordination of radio frequencies that are more efficient if managed centrally. It is also responsible for coordinating air traffic flows between national service providers.
- **New technologies:** Following the installation of SESAR, the technological arm of the Single European Sky, outdated systems and procedures that have been operational for decades, will be modernized.

SES was launched in the late nineties. SES I was

adopted in 2004 and SES II in 2009. SES II + was defined by the working group on aviation of the Council of Europe during the 2014 Italian Presidency in a recast of the four traditional regulations of the Single European Sky and the synchronisation with the basic regulation EASA (216/2008). This version includes some features required by the European Commission and extends the responsibility of SES to tasks, such as air navigation and air traffic management, previously managed by each ICAO Member State. The approval of the SES II + package has currently reached a standstill due to a dispute arisen between the United Kingdom and Spain on its implementation in Gibraltar.

As the Italian Civil Aviation Authority, ENAC will oversee on the implementation of the Single European Sky regulations and will represent Italy in the institution's highest forum, the Single Sky Committee.

### Performance System

At the heart of the Single European Sky initiative there is Performance System, that was introduced with the SES II package aimed at assessing the achievement of objectives. The Performance System defines some essential performance indicators linked to European goals that must be achieved within specific time frames, called reference periods. The first reference period went from 2012 to 2014, the second from 2015 to 2019 and the next one from 2020 to 2024.

Each FAB (Functional Airspace Block) and Member State is called to prepare a performance plan that defines the contribution given towards the achievement of SES objectives.

Through an articulated assessment process, the Commission will decide whether the local contribution is appropriate. If it is deemed sufficient it will endorse the performance plan. Otherwise it will ask the FAB or Member State to improve it.

The results achieved during the reference period are monitored by relevant national authorities and

by the European Commission that authorizes the payment of economic incentives if objectives are achieved or calls for disincentives and corrective actions if objectives are not met.

In the second reference period, the performance plans became mandatory, at FAB level where Italy offered its contribution to the European goals within the FAB Blue Med performance plan. Although the excellent and persistent performance of Italy and Malta, the Commission has not approved the FAB Blue performances plan. The performances in terms of delay of Greece and Cyprus are insufficient. They are suffering for the fact that the air traffic services provider is part of the public administration and so it is limited in the operations by the restrictions on public spending imposed by the European support mechanism. Despite these difficulties, the 2017 has been a good year in terms of FAB Blue performances, which contradicted the worries of delays that may

affect the airspace users and ended with 0.23 minutes of average flight delay caused by the air traffic management, barely above the reference value of 0.17 minutes. In 2015, the recorder value was 0.64 minutes per flight, while in 2016 it was 0.13 minutes. This result has been achieved despite the considerable traffic increase due to the airspaces shutdowns in the Middle East and the air military activities increase that restrict always more the airspace for the civil traffic. As regard Italy, it is pointed out the continued shutdown of the Libyan airspace as motivation for a lower than expected traffic growth as written in the plan (-6.3% compared to the base scenario of STATFOR - Statistics and Forecast Service of Eurocontrol, while in the SES area it has been recorded a 4.5% increase compared to 2016).

The mentioned data emanates from Eurocontrol, since the 2017 official data evaluation made by EU Commission it is still not available at the closing moment of this document.

### FAB Blue Med

The Blue Med Functional Airspace Blocks is the airspace block established in 2012 by Italy, Malta, Greece and Cyprus. In Europe, in conformity with the article 9a of the regulation of the European Council and Parliament 550/2004 about the services supply of 10 March 2004, 8 more FAB have been established.

According to the European Law a FAB is an airspace block based on operational requirements that operates beyond State boundaries. The provision of performance-driven and optimized air navigation services and related functions is aimed at enhancing cooperation among providers of air navigation services or, where appropriate, integrated providers, in each functional airspace block.

With the establishment of Blue Med, the countries of Italy, Malta, Greece and Cyprus have made an important step towards the integration of service providers in the South-Eastern Mediterranean, a process that may be extended to other countries.

Many countries have expressed a marked interest in the initiative, such as Israel that already participates as an observer in FAB works and in addition to other benefits for air traffic, it would serve as a concrete measure to help stabilize an afflicted area.



Source Eurocontrol

In Blue Med FAB, Italy is represented by ENAC within its Governing Board and Committee of Supervisory Authority (NSA Committee); by the Italian Air Force and ENAV in the Committee for civil-military cooperation and, finally, by ENAV in the Committee of Air Navigation Services Providers. ENAC also participates in the FAB workgroups that require a representation of national authorities.

## Satellite navigation

Satellite navigation based on GNSS (Global Navigation Satellite System) and GPS (Global Positioning System), has grown at increasingly rapid rates, due to the advantages it offers in terms of increased safety, traffic capacity, reduction of fuel consumption, CO<sub>2</sub> and noise, such that it is nowadays the most popular means of civil aviation navigation. From several years in Italy, instrument flight procedures based on GNSS/GPS have been implemented, developed on the main national airports. The next goal is to make them available also for minor airports.

For this purpose, ENAC, with ENAV, coordinated and implemented a plan for monitoring the compliance of GPS signals in Italy. This study will allow the use of GNSS, in minor airports where flight procedures are still based on traditional radio aids. The use of GNSS would provide added safety and accessibility even in more severe weather conditions.

The GNSS has been used also in the helicopter's sector. ENAC coordinated the project for the creation of a network of routes and flight procedures based on the GNSS system used by helicopter air ambulances in the Regions of Piedmont and Trentino. At the end of 2017, in Trento (route Trento - Cles) the first instrument flight procedure for helicopter's low-level flights has been published, making Italy on the cutting edge at international level; indeed, the countries that implemented similar procedures are not many. ENAC took an active part in the definition of the European technical criteria.

The goal of the project is to set up helicopter links between the regional hospitals that will allow patients requiring special assistance to fly to hospitals that are more specialised. These flight procedures are very innovative: they are instrumental and thus can be flown also at night or in bad weather conditions, a precondition to ensure 24/7 connections between the various hospitals, whenever needed; they are at low altitude, and therefore much more suitable for helicopter operations.

All of that makes the planning and the following implementation of the routes and of the flight procedures very demanding, above all

considering the orography where they are developed.

## Flexible use of the airspace

ENAC has an important role in the application of the Reg. EC no. 2150/2005 that regulate the flexible use of the airspace. According to this norm, the national airspace, important resource for the state, has to be used in the most efficient possible way: when there is the need of an exclusive use of the airspace, it has to be limited in time and dimensions. As an alternative, it is recommended a management following the AMC Manageable concept, where a user who want to use a restricted airspace has to put in a request in advance: a specific cell (AMC: Air Management Cell) will manage all the applications after the coordination with the applicants.

ENAC is working with the Air Force for a correct application of the EU Regulation and the drafting of a document to define the criteria for the national airspace management is ongoing.

## Attribution of airspace portions

The heterogeneous and articulated activity related to the regulation and segregation of the airspace in various ways (Advisory circulars ENAC ATM 3B and ATM 5A) is ensured by ENAC is synergy with the users/applicants and by collaborations and advices of the national Service Providers and/or the other State Administrations (such as Prefecture and Prison Administration Department). This activity keeps being substantial and constant: in 2017 over 160 requests to institute/extend the validity/modify/cancel the restricted zones for the different flight activity (parachuting, aerobatics, aerial work activity and aero club, model airplanes activity and APR, recreational and sport flight, laser beam emission, weather balloon).

Also additional applications of areas to protect natural parks and/or wildlife reserves, no-fly zones over sites of interest (such as monumental areas) or industries and technical installations.

Together with Prison Administration Department, it has been carried out a check on the national territory in order to institute new no-fly zone over prisons, if not existing (57 new bans), remove

some of them (5 cases) and resize and/or correct the geographical position in 50 cases.

Equally important the consultancy work provided to the users in relation to queries about their activity and/or for the legislative aspects which are daily replied.

### Coordination of Air Navigation Services Transit between the Italian Air Force and ENAV

In 2017, ENAC kept coordinating the activities involved with the passage from Italian Air Force to ENAV of the Air Navigation Services (ANS) on the airports of Brindisi, Pantelleria and Rimini Miramare.

In particular, as regards the Brindisi airport the transit of the weather service (from 16 January 2018) has been finalised. Many activities to draft the transit plan for the weather and communication service over the airport of Pantelleria and for the weather service on the

airport of Rimini Miramare have been carried out. The activities have been carried out with the joint development (ENAC, AM and ENAV) of specific documents of analysis and planning for each airport, in order to discipline the transit by identifying technical and operational modalities and collaborations between the Air Force and ENAV for the turnover in the ANS supply. The turnovers between Air Force and ENAV are direct consequence of the Transit Plan of the military airports to the civil aviation in order to rationalise the resources on the Italian airport in relation to their military or civil interest and optimise the ANS performances levels.

The total plan of the ANS transits from the military management to the civil one should be completely done by the end of 2018 with the above mentioned services handover on the airports of Rimini and Pantelleria.

#### ENAC regulation issued in the field of airspace in 2017

- Regulation Rules of the Air - Italy - Ed. 3 amendment 1 of 17 November 2017.
- Regulation Meteorology for air navigation - Ed. 2 amendment 1 of 17 November 2017.
- Advisory circular ATM-08 of 16 May 2017 - Aeronautical Phraseology.

#### Free Route Airspace

The concept of Free Route Airspace (FRA) has been applied in Italy from 2016. It is a new operational concept to manage the air traffic that defines portions of the airspace where a user can freely plan a route from some specified entry and exit point: it is active above 11,000m (33,500 ft.) and allows the choice of a direct route, without referring to the traditional ATS (Air Traffic Service) routes, based on default paths.

It takes many advantages: in the Free Route Airspace the aircrafts can fly following the best paths (trajectory-based) obtaining a considerable flight efficiency, with consequent environmental impact improvement due to lower consumption, CO<sub>2</sub>, flight times and costs reduction.

The 2017 data are very positive: with Free Route, in the national airspace, there has been a clear improvement of the flight efficiency, saving:

- About 30 million kg of fuel (lower CO<sub>2</sub> emission around 95 million kg);
- Over 22 million € of fuel (considering an average cost of 0,74€ per kg).

The possibility to make shorter routes permitted, in 2017, the acquisition of new routes that in the past were not in the Italian airspace and the increase of the frequency and average travel time above Italy. In this context, the impact of an additional phase of the project has been evaluated: the extension of the airspace managed with Free Route criteria from 335 level (33.500ft) to 305. Following a successful evaluation overcome, the modification will entry into force in the first half of 2018.



Source AIP Italia



7

ENVIRONMENT

## ENVIRONMENTAL PROTECTION

In 2017, ENAC confirmed its commitment to promote actions, at both national and international level, to reduce the noise and gas emissions produced by air transport activities, with particular regard to the initiatives to prevent climate change.

The goal is to ensure a sustainable development of air transport, so that the enormous increase of air traffic expected in the next years can guarantee the economic and social growth, while respecting the environment.

ENAC represents Italy in the ICAO's Committee on Aviation Environmental Protection (CAEP) and in particular in its working groups, where international experts contribute to the definition of the future policies, rules, standards and recommended practices of civil aviation, in line with the goals established by ICAO Assembly.

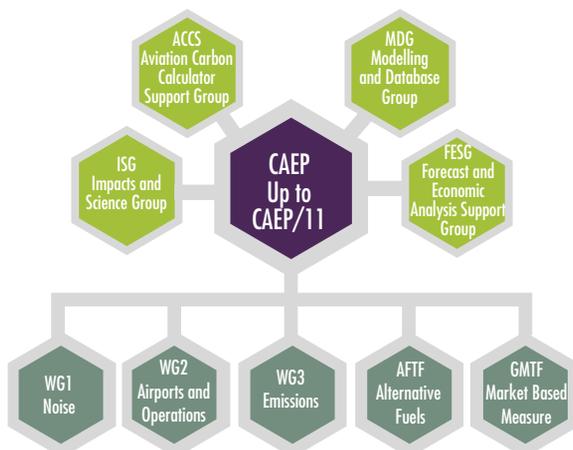
During the past year, ENAC took part with its staff to the following working group programmes within the 11<sup>th</sup> cycle of CAEP:

- Emissions of the future supersonic aircraft and helicopter noises; study on the effects of the sonic boom of aircraft recently certified and soon available on the market; analysis of helicopter noise reduction, in view of the

revision of the current legislation. (WG1)

- Emissions reduction by increasing the efficiency of operations and of airports; improvement of air traffic management and of new ATM technologies; involvement of communities affected by emissions; evaluation of the impacts on climate and plans to recycle the aircraft at end-of-life. (WG2)
- Identification of criteria for the application of the Particulate Matter Standard (highly harmful for the health), which should be adopted during the next CAEP cycle (WG3).
- Modelling and economic forecasting related to the Standard elaborations (MDG/FESG);
- Containment and compensation of the effects of CO<sub>2</sub> emissions through environmental projects; road map to implement the future global emissions reduction scheme "CORSA" (Carbon Offsetting Reduction Scheme for International Aviation); adoption of alternative fuel sustainability criteria in aviation and, in particular, of those included in CORSIA scheme (GMTF);
- Study on alternative fuels with a low environmental impact; definition of criteria for their use according to CORSIA scheme (biofuels, provided with a specific sustainability certification, will be included in the counting of CO<sub>2</sub> shares and therefore be compensated as provided for in CORSIA scheme (AFTF).

### CAEP Structure



ENAC contribution to CAEP and to its subgroups is consistent with the environmental strategic goal established by ECAC and with the EU environmental strategies (DG MOVE and DG CLIMA).

In order to provide a top level technical and scientific contribution in the international fora, ENAC's experts are supported by the main stakeholders' representatives and by personalities of high standing from the academic world.

### Workshop CORSIA - Carbon Offsetting Reduction Scheme for International Aviation

In view of the 39<sup>th</sup> session of the ICAO General Assembly (October 2016) Italy and the other 43 ECAC's States, committed to participate to the voluntary stage phase (2021-2023) of CORSIA implementation, the global scheme based on market measures that, with other environmental actions (technological development, use of alternative fuels, routes optimisation), will permit the achievement of CO<sub>2</sub> zero growth goal from 2020, in line with Kyoto Protocol and the United Nations Climate Change Conference COP21.

ENAC played an active role in ICAO CAEP activities for the preparation of the global scheme for accounting and compensation of CO<sub>2</sub> emissions and in July 2017, in view of the forthcoming definition of ICAO legislation, it organised a workshop mainly addressed to air operators involved in the future implementation of CORSIA. The event took place in ENAC Headquarters and also involved representatives of the Ministry of Infrastructures and Transport, Ministry of Environment, Territory and Sea, Ministry of Economic Development, Ministry of Defence, ENAV, IATA, Assaereo and operators in the field of civil aviation. The workshop gave the opportunity to illustrate the main aspects of CORSIA and to contextualize them in the wider context of the international air transport and environmental protection, analysing in depth the essential elements of the scheme established by ICAO Resolution A39-3, the use of alternative and sustainable fuels, the technological development, the routes optimisation, the infrastructural improvements.

A focus on CORSIA, with the scheme details, can be found in the "International Activity" section.

### Emission monitoring

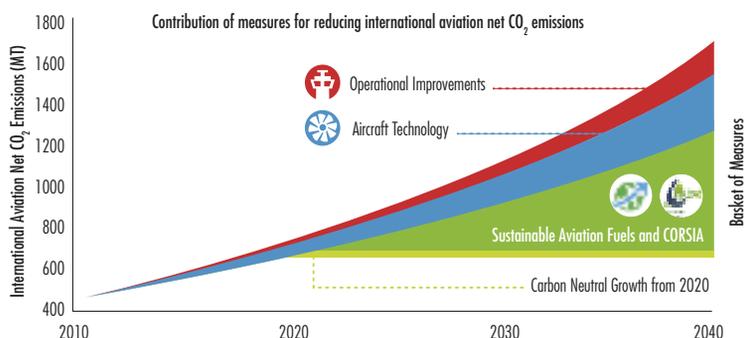
In 2017, in view of the update of National Action Plan to reduce CO<sub>2</sub> emission for the year 2018, ENAC, in collaboration with ENAV, conducted a study on the definition of the monitoring modalities of the emissions produced by civil aviation aircraft.

The study focused on the actions put in place to improve the efficiency of the conventional existing and future routes in the application of ENAV Flight Efficiency Plan, by quantifying the CO<sub>2</sub> emissions saving in tons/year and by identifying any possible action to be implemented in the future. The study also identified potential areas of improvement, supposing specific intervention plans and estimating the possible environmental benefits, in particular in the field of flexible management activities of the civil/military

airspace, of free routing flights, of performance based navigation and of traffic surveillance based on satellite infrastructure rather than on ground conventional radio assistance.

At the end of 2017, ENAC started a research with the purpose to realise a management tool able to quantify the current emissions and to evaluate the trend of the future ones, also in consideration of the evolution of technology of aircraft, engine systems, infrastructure, management, control and surveillance of air traffic, the technical solutions made available to airports such as the use of internal transport means with low environmental impact.

The initiative is financed by research funds resulting from the Emissions Trading Scheme (ETS) bids, made available to ENAC by the Ministry of Infrastructures and Transport.

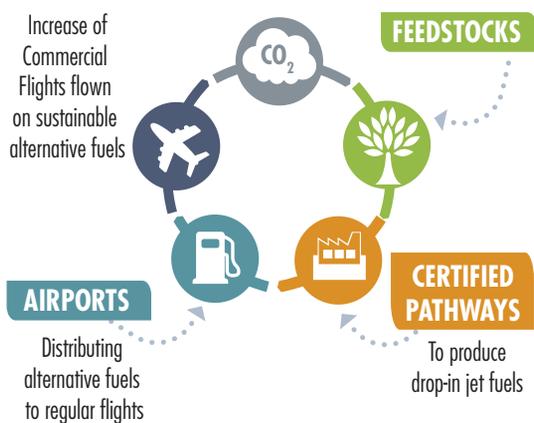


Source ICAO

## Alternative fuels

In 2017, ENAC performed the selection procedure to assign a contribution for the research of an alternative fuel originated from unicellular algae, one of the most promising biofuel in terms of CO<sub>2</sub> emissions reduction in the atmosphere. The main advantages of this fuel are the low impact the cultivation of microalgae has on the Land Use Change and the production cycle used that may considerably reduce the greenhouse gas emissions compared to those produced by using fossil fuel.

The research project is financed by the funds of the ETS system and is divided into two phases: the first phase, whose expected conclusion is in 2018, is oriented to the identification of an alga strain with a high efficiency in oil production (to convert into biofuel); the second one will be characterised by the implementation of a pilot plant for the consequential conversion of the oil into biofuel.



## Emissions Trading Scheme (ETS)

The ETS system, at national level, is managed by the Interministerial Committee provided for by Legislative Decree 30/2013 as Competent National Authority for the implementation of European Directive 2003/87. The Committee, reconstituted in October 2016, is chaired by the

Ministry of Environment, and is composed, as regards to the air transport activities, by four ENAC representatives and by representatives of the Ministry of Infrastructures and Transport, the Ministry of Economic Development and other Administrations with advisory function.

ENAC provides contribution to the Governing Council and to the Technical Secretariat of ETS Committee, in order to identify the air operators managed by Italy, to release the emission shares, to approve the monitoring plans and for other procedures regarding the air operators.

Part of the ETS system's revenues are allocated to finance a research plan aimed at greenhouse gas reduction in the air transport field. For this purpose, ENAC, through financial resources provided by the Ministry of Infrastructures and Transport, activated two research initiatives, the first one to aim producing sustainable alternative fuels, the second one to create an accounting system for the CO<sub>2</sub> civil aviation aircraft emissions.

## Airport noise pollution

Regulation (EU) 598/2014, applicable from 13 June 2016 to the airports whose yearly traffic is above 50.000 civil vehicle movements, has introduced new noise-related operating restrictions at EU airports, in accordance with ICAO balanced approach methodology. Consequently, ENAC started an analysis of the impact of the new provisions on the Airport Commissions activities provided for by Ministerial Decree 31 October 1997, in order to update the national legislative framework and, in particular, to revise ENAC Advisory Circular APT 29, the ENAC legislation under revision is aimed at ensuring both the need to improve the noise climate around the airport and the development of air traffic, by providing that at each airport procedures are implemented in order to evaluate in a transparent way costs and benefits of each measure for the management of the acoustic issues (noise reduction at its origin, territorial planning, operational procedures, operational restrictions).

**8**

**INTERNATIONAL  
ACTIVITY**

## ENAC IN THE INTERNATIONAL CONTEXT

In carrying out its institutional mission, ENAC represents Italy in the major international civil aviation organizations such as the International Civil Aviation Organization (ICAO), the European Civil Aviation Conference (ECAC), the European Union (EU), the European Aviation Safety Agency (EASA) and the European Organisation for the Safety of Air Navigation (Eurocontrol).

ENAC cooperates with these institutions in all activities aimed at regulating and controlling the sector and promoting the development of civil aviation. Within these organizations, ENAC supports the position of Italy on various issues of strategic interest such as safety, security, quality of airport services and enforcement of passengers' rights, the development of airport infrastructures, economic and air transport regulation, EU External Relations, airspace regulation and environment.

Among the most relevant activities at European level in 2017, there is the 10<sup>th</sup> edition of the "Dialogue" ECAC/EU with the European industry of air transport, organised by ECAC and EU Commission, with ENAC collaboration from the 26<sup>th</sup> to the 28<sup>th</sup> of June 2017 in Rome.

The event was attended by the ICAO Secretary General, Fang Liu, and the Minister of Infrastructures and Transports, Graziano Delrio, among the others; it represented for the over 150 delegates of Institutions, air carriers, airports, air navigation services providers and aeronautic industry, the occasion to discuss about the best solutions to promote the investments and optimise the use of the socio-economic potential of this sector, fundamental for the economy.

The event was focused on the theme of funding and investments in the civil aviation, aimed at identify effective and innovative solutions to ensure the sector competitiveness in both the short and long term.

The event showed that Italy made important steps forward, compared to other European realities, in the sector's investments, in particular on the most

important Italian airports in the last 5 years and in the investments foreseen in the immediate future. They allowed the country's airport system to be competitive in Europe, financing a fair and sustainable aviation development, at the same time.

Among the 2017 international activities in which ENAC participated there is the 6<sup>th</sup> World Civil Aviation Chief Executives Forum, which took place in Singapore from the 11<sup>th</sup> to the 13<sup>th</sup> of July. It gathered the civil aviation world leaders about the themes of growth and safe, efficient and sustainable sector's development by comparing operators, industry and aeronautic authorities. The forum in particular has been centred on the three Panel's activities, dedicated to the environmental protection reinforcement, on safety and on the optimal management of the air navigation in order to make even more harmonised the global air transport system.

ENAC intervened on the Panel about the environmental sustainability in the civil aviation and on the financial and industrial considerations connected to the Global Market-Based Measure implementation, by which the air carriers will compensate their CO<sub>2</sub> emissions growth after 2020 and that will contribute to reach the objectives of the COP21 Paris Agreement.

With regard to aeronautic training, there has been, in Larnaca, Cyprus, on 10<sup>th</sup> November 2017, the first General Assembly of European Association of Aviation Training and Educational Organisations (EATEO), whose ENAC's Director General, Alessio Quaranta, was appointed President. EATEO is a non-profit association and it has been founded in Cyprus in June 2016 in order to create a common forum for all the aeronautic training providers. The goal is to contribute in associate form to the safety and the development of the civil aviation, by coordinating the common stances to be represented in the European and international fora. EATEO's aspiration is to become the guiding voice in

Europe for the best practices related to aviation education and training. The EATEO's General Assembly took place at the end of an international conference dedicated to the cooperation between all the subjects involved in aeronautic educational and training activity, whose title was "Training and education: need of cooperation between all stakeholders to satisfy the current and future needs of air transport". The meeting took place in Larnaca, between the 9<sup>th</sup> and the 10<sup>th</sup> of November, and it was organised by EATEO together with JAA-TO and Flight Safety Foundation, with ICAO, ECAC and Cyprus Dept. of Civil Aviation participations and contributions. Entities and national/regional associations, universities, schools and European institutions involved in aeronautic educational and training activity may ask to join EATEO.

### Permanent Italian Delegation at ICAO

ENAC, together with the Ministry of Foreign Affairs and International Cooperation, represents Italy in ICAO's Council, its governing body, composed of 36 State Members.

In 2017, besides participating to the meetings of the Council, Committees and Air Navigation Commission, where Italy has the role of observer, the Delegation, in accordance with ENAC Director General's indications, started a set of

activities to bring a wider integration between the Italian sector's industry and the Organisation.

In this regard it is important to highlight the work carried out to support the ICAO legislation update in order to include the Tilt Rotor specifications (hybrid aircraft able to operate as helicopter and airplane), a bigger participation of the industry representatives in the technical Panels and an intense information activity towards the industry on the possibilities offered by the Organisation, underlined by the official visit in Italy of the ICAO Secretary General, that appreciated the excellence of the national aerospace industry.

The Delegation has been constantly involved on the most interesting ICAO themes such as CORSIA (Carbon Offsetting Reduction Scheme for International Aviation), the Cybersecurity and the crisis that caused the ban of some air spaces to aircrafts operated by air carriers from Qatar; moreover, the Delegation has been working to support the Italian adhesion to the PKD (Public Key Directory) project, that facilitate a faster and safer exchange of the passport data between the States. It is important to highlight the effective ENAC contribution, as speaker at the symposiums "Drone Enable" and "RPAS2017" and to organise the Italian stage of the project "Dreams Soar", a solo flight around the world of a woman pilot.

| BODY | 2017 INTERNATIONAL ACTIVITIES OF THE DIRECTORATE GENERAL AND DEPUTY DIRECTORATE GENERAL  |
|------|--|
| ICAO | <p><b>ICAO Council</b> - Montreal: 210<sup>th</sup>, Committee phase, 9-27 January; Council phase, 20 February-10 March; 211<sup>th</sup>, Committee phase, 24 April-12 May; Council phase, 5-23 June; 212<sup>th</sup>, Committee phase, 18 September-6 October; Council phase, 30 October-17 November</p> <p><b>DRONE ENABLE, ICAO's Unmanned Aircraft Systems (UAS) Industry Symposium:</b> Montreal, 22-23 September</p> <p><b>European and North Atlantic Office - 2017 Meeting of Directors General of Civil Aviation:</b> EUR-NAT DGCA/2017 - Paris, 5 May</p> <p><b>Global Air Navigation Industry Symposium (GANIS/2):</b> Montreal, 11-13 December</p> <p><b>Safety and Air Navigation Implementation Symposium (SANIS):</b> Montreal, 14-15 December</p> <p><b>Second Global Remotely Piloted Aircraft Systems (RPAS) Symposium:</b> RPAS-SYMP/2 - Montreal, 19-21 September</p> <p><b>Third ICAO/UNOOSA Aerospace Symposium (SPACE 2017):</b> Wien, 29-31 August</p> |
| UE   | <p><b>Meetings of the EU Directors-General (EU-DGCAs)</b> - Bruxelles: 12 June; 16 November</p> <p><b>AIR Safety Committee</b> - Bruxelles: 25-27 April; 13-15 November</p> <p><b>Blue Med Governing Board:</b> Athens, 18 May; Malta, 2-4 October</p> <p><b>EASA Committee</b> - Bruxelles: 15-16 February; 28-29 June; 24-25 October</p> <p><b>Twinning between ENAC and the Egyptian Civil Aviation:</b> Closing ceremony - Cairo, 27 April</p>   |

| ORGANISMO     | ATTIVITÀ INTERNAZIONALI 2017 DELLA DIREZIONE GENERALE E DELLA VICE DIREZIONE GENERALE   |
|---------------|---|
| EASA          | <b>Management Board:</b> MB 2017/01 - Bruxelles, 13 June; MB 2017/02 - Colonia, 11-12 December<br><b>High Level Conference on Cybersecurity in civil aviation:</b> Cracov, 8-9 November   |
| ECAC/UE       | <b>ECAC/EU DIALOGUE with the European air transport industry:</b> Rome, 27-28 June  |
| ECAC          | <b>Regular Meetings of the Directors General</b> - Paris: DGCA/148, 4 May; DGCA/149, 7 December<br><b>Special meetings of the General Managers:</b> DGCA/SP(64) - Reykjavik, 30 August-2 September<br><b>Coordinating Committee:</b> CC/178 - Paris, 29 March; CC/US/22 - Washington, 31 May; CC/179, Rome, 28 June; CC/180 - Paris 14-15 November<br><b>Security Programme Management Group:</b> SPMG/25 - Rome, 17 May; SPMG/26 - Rome, 24 October<br><b>Forum:</b> FORUM/10 - Paris, 6 December<br><b>Security Programme Management Group</b> - Rome: SPMG/25, 17 May; SPMG/26, 24 October<br><b>Legal Task Force</b> - Paris: LEGTF/31, 2 February; LEGTF/32 26 October           |
| JAA-TO        | <b>Joint Aviation Authorities - Training Organisation:</b> Amsterdam, 21 September  |
| EASTI         | <b>European Aviation Security Training Institute:</b> Bruxelles, 9 February   |
| EATEO         | <b>European Association of Aviation Training and Educational Organisations (EATEO) - International Conference and General Assembly:</b> Larnaca 9-10 November   |
| EUROCONTROL   | <b>DG selection Group (DSG):</b> Bruxelles, 1 February; 27 March<br><b>Provisional Council (PC)</b> - Bruxelles: ad-hoc PC (Network Manager), 28 March; ad-hoc PC (DG appointment), 16 June; PC/47, 22 June; PC/48, 30 November-1 December<br><b>Enlarged Provisional Council President's Bureau (ePCPB)</b> - Bruxelles: ePCPB/2017/1, 21 June; ePCPB/2017/2, 29 November<br><b>Provisional Council Coordinating Committee (PCC)</b> - Bruxelles: PCC/42, 10 May; PCC/43, 10 October<br><b>Workshop on Network Manager Review &amp; Action Plan:</b> Bruxelles, 30 January<br><b>Amendment of the Maastricht Agreement</b> - Bruxelles: 31 January; 15 March; 12 April; 18 September |
| CAA Singapore | <b>6<sup>th</sup> World Civil Aviation Chief Executives Forum (6WCACEF):</b> Singapore, 11-13 July  |

## Safety

### EASA Basic Regulation

In 2017, in the context of the Aviation Group of the EU Council, the examination of the proposal of a new Basic Regulation that abrogates the Regulation (EC) 216/2008 of the European Parliament and Council has continued.

The initiative is part of the European Commission's 2015 "Strategy to improve the competitiveness of the EU civil aviation sector". The goal is to prepare a regulatory framework that addresses the safety needs of air traffic, meets the challenges of the next ten or fifteen years, while guaranteeing a safe and environmentally friendly air transport.

The initiative is based on over twelve years of experience in the application of the Reg. (EC) 216/2008 and the previous one, 1592/2002. Safety, security, environmental protection, noise and emission's containment are essential to

promote the competitiveness of the Civil Aviation sector. The proposal's goal is to guarantee that the system keeps an incidents number as low as the current one, permitting the sector to grow in a safe way and to develop its competitiveness. This initiative adopts a risk and performance based approach for safety regulations that takes into greater account the links between safety, security and environmental protection. The updated version promotes growth, jobs and in general the development of EU as main actor of the civil aviation world. Another fundamental objective of the proposed amendment of the regulation is to answer to the State Members, the industry and the users that ask for a more proportioned and flexible approach of safety regulation by removing constraints that may stifle entrepreneurship, because they are either too prescriptive or not proportionate.

The initiative introduces a modular regulation framework that recognises the differences between the different parts of the civil aviation and the related risks. This approach will benefit the entire aviation sector of the Union and will be especially adequate to meet the needs of small and medium companies.

Another fundamental goal of the amendment proposal of the basic regulation is to introduce, for the first time, a European framework to integrate in the EU airspace, in safe conditions, the remotely piloted aircrafts, so called drones, without mass limit at take-off. In the end, the proposal treats some national aeronautic authorities' problems to ensure adequate human and financial resources to carry out the certification and surveillance activities established by the regulation.

With this aim, the initiative proposes a framework to share the technical resources between the national authorities and EASA, a pool of expert, which includes the possibility to voluntary transfer the competences to implement the EU legislation to the Agency or to other State Members.

During the regulation proposal, the Italian Delegation considered the indications included in the parliamentary act of address, adopted by the 8<sup>th</sup> and 14<sup>th</sup> Senate Committee on 16 February 2016. Proof of that is the text adopted by the EU council the 1 December 2016, named "Council General Approach", that reflects the indications of the parliamentary act of address except for the ground and handling service providers, licences for drone pilots and on the art. 124, about investigations for air safety. The Italian position has been in the minority compared to the ones expressed by the other state members. In 2017, the presidency of Malta and Estonia launched the discussion with the European Parliament by the so-called dialogues.

The debate has been characterised by very different opinions in particular for: use of delegated acts; transfer of a State member's functions to the Agency in case of potential risks for the air safety emerged during the EASA standardisation inspections; reallocation of the responsibilities from the State Member to the

Agency in case of companies or group of companies that have a considerable number of headquarters in EU out of the national territory; the need to establish an executive board, located between the Agency's Executive Director and the Management Board, whose participation is limited to a few State Members not to grant anyone a dominant position.

In order to reach an acceptable compromise with the EU Parliament, it has been necessary to rephrase, in particular for the above-mentioned topics, some positions that were in line with the Italian parliament act of address. Nevertheless, the final text of the Council ST 5218/18 of 11 January 2018, agreed with the EU Parliament the 22 December 2017, is a good common ground and significant evolution compared to the Reg. (EC) 216/2008, which will surely ensure development to the civil aviation in Europe maintaining the excellent safety levels that characterised 2017 and the previous years.

#### **EASA Committee**

The EASA Committee is the EU entity that decides about the regulation adoption and possible derogations regarding the air safety, upon EASA proposal.

In 2017, Italy participated in all the Committee meetings, providing its contribution shared at national level with the involved parts and ensuring the favourable opinion in all the votes.

The Committee approved measures in 2017 are the following:

- Set of amendment of the Reg. (EU) 1178/2011 regarding the European data bank institution to collect the medical certifications of the air crew and other modifications brought on by the Germanwings accident;
- Reg. (EU) 139/2014 modification, to adopt the new runways classification, following the Performance Based Navigation - PBN approaching technique, flight mode based on the data and information to control the route generated by a satellite system;
- New regulation Rule Book, dedicated to air balloon operations;
- Reg. (EU) 1178/2011 modification,

regarding the simplification of the administrative and technical system for the General Aviation flying schools (Declared Training Organisation);

- Reg. (EU) 1178/2011 to adjust the ICAO regulation, insertion of pilot training courses for PBN operations and in unusual attitudes and to extend some dates of applicability.

The articulated debate over the other set of norms related to the Germanwings accident deserves evidence. A shared solution between the State members, the imposition of random alcohol tests for the flight crew in airport and in ramp and similar drug tests as proposed in October 2017 and adopted in February 2018, have still not been found.

**Air Safety Committee**

The 2017 activity of the Air Safety Committee involved the usual update of the EU Safety List, list of the banned air carriers in Europe, and the analysis of the possible amendments of the Reg. (EU) 2111/2015 that implemented the above-mentioned list.

The Regulation needs updates connected to the beginning of the Third Country Operator Authorisation (TCO) process by EASA came into fully effect in November 2016. As a result of that, overlaps of the Commission work with the EASA one have been generated and they determine duplications and potential competence conflicts. In particular, there is the need to define in a better way the inserting and deleting procedures of the air carriers from the EU Safety List when their TCO request of authorisation is denied by EASA with motivations connected to safety.

The Committee meetings produced Regulations of EU Safety List update and there have been both new inclusions and cancellations from the list published online on the DG MOVE website.

**Occurrence Reporting**

ENAC continued its participation to the activities organised by EASA and EU Commission for a full implementation of the Reg. (EU) 376/2014 about aeronautic events reporting.

The correct application the regulation concerning the reporting, analysis and monitoring of civil aviation sector events, called for an intense exchange of information and coordination at European level. To this end, ENAC took part in the ECCAIRS Steering Committee (ESC), ECCAIRS Steering Board (ESB) and EASA Network of Analysts (NoA).

The ECCAIRS (European Coordination Centre for Accident and Incident Reporting System) is the software developed by EU that must be used by the national Authorities, under Reg. (EU) 376/2014, to receive reports of aeronautical events.

ENAC, representing Italy, is a member of the Executive Committee (ECCAIRS Steering Committee) and was elected as one of the nine members of the Board, the governing body of ECCAIRS. In this capacity, ENAC took part, through its representatives, at the annual meeting of the ESC and at the Eccairs Steering Board meetings.

ENAC is also actively participating in the activities of EASA’s Network of Analysts, which met periodically to support the activities of the European Commission in the occurrence-reporting sector.

| BODY | 2017 INTERNATIONAL ACTIVITIES IN THE SAFETY FIELD   |
|------|---|
| ICAO | <b>Accident Investigation Panel (AIGP):</b> Montreal, 18-21 July  |
|      | <b>Collaborative Arrangements for the Prevention and Management of Public Health Events in Civil Aviation (CAPSCA):</b> 6 <sup>th</sup> meeting - Minsk, 11-14 July                               |
|      | <b>Dangerous Goods Panel (DGP) -</b> Montreal: DGP-WG/17, 23-28 April; DGP/26, 16 -27 October   |
|      | <b>Flight Operations Panel: FLTOSP/4 -</b> Montreal, 4-8 December   |
|      | <b>Flight Operations Panel Working Group Meeting - Fourth Meeting:</b> FLTOSP/WG/4 - Dubai, 15-19 May   |
|      | <b>ICAO/ACI Wildlife Strike Hazard Reduction Symposium (WSHRS):</b> Montreal, 15-18 May<br><b>ICAO Space Learning Group:</b> Washington 5-10 February; Montreal , 23-26 May; Vienna, 29-31 August |

| BODY | 2017 INTERNATIONAL ACTIVITIES IN THE SAFETY FIELD   |
|------|---|
| ICAO | <p><b>Regional Safety Management Symposium:</b> Tallinn, 16-18 October</p> <p><b>Safety Management International Collaboration Group (SMICG):</b> Gatwick, 14-20 May; Dubai, 4-9 November</p>   |
| UE   | <p><b>AIR Safety Committee</b> - Bruxelles: 2017-1, 25-27 April; 2017-2, 13-15 November</p> <p><b>EASA Committee</b> - Bruxelles, 15-16 February; 28-29 June; 24-25 October</p> <p><b>ECCAIRS Steering Board</b> - Bruxelles, 22 June; 16 October</p> <p><b>ECCAIRS Steering Committee:</b> Bruxelles, 17 November</p>  |
| EASA | <p><b>2<sup>nd</sup> Aerodromes Standardisation Meeting:</b> Colonia, 28-29 November</p> <p><b>3<sup>rd</sup> Flight Test &amp; Human Factors Conference:</b> Colonia, 21-23 June</p> <p><b>Aerodrome and Ground Handling Collaborative Analysis Group</b> - Colonia: 23 March; 4-5 October</p> <p><b>Commercial Aviation Transport - Collaboration and Analysis Group (CAT-CAG):</b> Colonia, 16-17 May</p> <p><b>Common Training Initiative Group</b> - Colonia: CTIG/16, 22 June; CTIG/17, 9-10 November</p> <p><b>Large Aircraft Program Certification Manager (LA PCM)</b> - Colonia: 12-13 June; 6-7 November</p> <p><b>General Aviation Program Certification Manager (CT2):</b> Colonia, 19-21 June</p> <p><b>EASA Air Operations Workshop: Bracing for Part-SPO (Specialised Operations) implementation:</b> Colonia, 12 January</p> <p><b>European Chief Medical Office Forum:</b> Malta, 12-14 February; Skopje 25-28 September</p> <p><b>Flight Test &amp; Human Factors Conference:</b> Colonia, 21-22 June</p> <p><b>Flight Simulation Training Device (FSTD) Expert Group:</b> FSTD Certification Service Provider Workshop - Colonia, 25-26 October</p> <p><b>Global Manufacturing Conference</b> - Colonia: 6-9 February; 15-17 November</p> <p><b>Meteorology regulation(MET):</b> Colonia, 5-7 September</p> <p><b>ICAO-EASA Joint pan-European National Continuous Monitoring Coordinator (E-NCMC) Meeting:</b> Colonia 4 May</p> <p><b>Joint Authorities for Rulemaking on Unmanned System's (JARUS-UAS):</b> Stockholm, 15-17 February ; 1<sup>st</sup> annual Plenary &amp; WGs Meeting - Bucharest, 26-31 March; 2<sup>nd</sup> annual Plenary Meeting - Cape Town, 30 September-7 October; Forth Worth (US), 14-18 November</p> <p><b>Member States Advisory Body (MAB) Strategic Group:</b> Colonia, 29-30 March</p> <p><b>Medical Expert Group</b> - Colonia: 29-31 March; 4-6 October</p> <p><b>Medical Standardisation Inspection:</b> Madrid, 18-23 June</p> <p><b>Maintenance Organisation Approval Procedures (MOAP) Meeting:</b> Colonia, 7 December</p> <p><b>Network of Analysts (NoA)</b> - Colonia: 13-16 March; 26-28 June; 24-26 October</p> <p><b>Tilt Rotor Familiarisation Meeting (PROJECT 0010017920-001):</b> Colonia, 4-6 April</p> <p><b>Flight Simulation Training Device Evaluation Recurrent- Flight simulators P180:</b> Miami, 16-21 October</p> <p><b>Ramp Inspection Coordination and Standardisation (RICS):</b> London, 21-22 March; Colonia 18-22 September</p> <p><b>Rotorcraft Project Certification Manager Meeting</b> - Colonia: PCM/22, 14-16 March; PCM/23, 27 September</p> <p><b>Rulemaking Group for Task RMT 0.196</b> - Colonia: 23 January; 5-9 June</p> <p><b>Rulemaking Group RMT.0704:</b> Colonia, 25-27 October</p> <p><b>Rulemaking Group HEMS</b> - Colonia: 20-21 April; 22-23 June; 29-30 June</p> <p><b>Rulemaking Group M.029 (RMT.0217) e RMT.0546:</b> Colonia, 24 January</p> <p><b>Rulemaking Group RMT.0320</b> - Colonia: 23-24 January; 1-3 March; 4-5 July; 22-24 November</p> <p><b>SAFA (Safety Assessment Foreign Aircraft) Regulators and Industry Forum</b> - Colonia: 21 February; 22 September</p> <p><b>Safety Management International Collaboration Group (SMICG):</b> Gatwick, 14-20 May; Dubai, 4-9 November</p> <p><b>Safety Promotion Network (SPN):</b> London, 27-28 September</p> |

| BODY | 2017 INTERNATIONAL ACTIVITIES IN THE SAFETY FIELD   |
|------|---|
| EASA | <b>Space Weather information provision - ICAO Space Weather service</b> - Bruxelles: 1 <sup>st</sup> joint meeting, 1 September; 2 <sup>nd</sup> joint meeting, 5 October |
|      | <b>Technical Body - Aerodromes</b> : Colonia, 12-15 November  |
|      | <b>Technical Body - Air Crew</b> - Colonia: 5-7 June; 20-22 September   |
|      | <b>Technical Body - ATM/ANS</b> - Colonia: 12-13 June; 13-15 November   |
|      | <b>Technical Body - General Aviation</b> - Colonia: 31 May-1 June; 2-3 November   |
|      | <b>Technical Body - Production and Continuing Airworthiness</b> - Colonia: 15-17 May; 6-7 December  |
|      | <b>Technical Body - Safety Management</b> : TeB 1-2017 - Colonia, 29-30 May   |

## Airspace

### Single Sky Committee

Over 2017, the Single Sky Committee has mainly worked for the preliminary activities of the third reference period (2020-2024) of the ATM/ANS performance system - Air traffic/air navigation systems management. This is the background where the modifications to apply to the two EU regulations in order to better adapt the next regulation to the real needs and to overcome some difficulties appeared over the second reference period have been discussed.

In particular, the EU Commission expressed the need to ensure a wider autonomy to the Performance Review Body and making it more independent from Eurocontrol.

Furthermore, an impact evaluation study of the set of Regulations (EU) 2013/390 Performance system for ATM/ANS and 2013/391 Air navigation services charging scheme (which are strictly connected) has started, in order to collect findings useful to their modification. These activities included several workshops open to the State Members and to all the interested people. Among the other significant treated topics during the year, the update of the Reg. (EU) 677/2011 stands out. It is about the network functions for the air traffic and the long development of the legislation about the satellite navigation application (PBN). Both regulations will be presented to the Committee in 2018 to receive the needed opinion about the competence.

| BODY | 2017 INTERNATIONAL ACTIVITIES IN THE AIRSPACE REGULATION FIELD   |
|------|--|
| ICAO | <b>Airworthiness Panel</b> : AIRP/5 - Montreal, 6-10 November  |
|      | <b>EUR/NAT Final Approach Operations Symposium</b> - Bruxelles: 31 January - 2 February  |
|      | <b>Joint meeting of ICAO EUR/NAT Performance-Based Navigation (PBN) Task Force and EUROCONTROL Navigation Steering Group (NSG/25)</b> : Bruxelles, 12-14 September |
|      | <b>Meteorological Information Exchange Model Implementation Workshop</b> : Paris, 16-18 May  |
|      | <b>Meteorology Group European Air Navigation Planning Group: EANPG-METG/27</b> - Paris, 19-22 September  |
|      | <b>Navigation Systems Panel</b> - Montreal: NSP/3, 18-24 June; NSP/4, 15-20 October  |
|      | <b>Second Global Aviation Cooperation Symposium</b> : GACS/2 - Athens, 11-13 October   |
| UE   | <b>BLUEMED FAB National Supervisory Authority Committee (NSAC)</b> : Athens, 17 May; Malta, 2-4 October; Bruxelles, 23 November                                    |
|      | <b>Single Sky Committee</b> - Bruxelles: SSC/64, 21-22 February; SSC/65, 13 July; SSC/66, 24 October; SSC/67, 12-13 December                                       |
|      | <b>National Supervisory Authority Coordination Platform Performance</b> - Bruxelles: 15-16 March; 20-22, 26-27 June; 13-15 November                                |
|      | <b>National Supervisory Authority Coordination Platform Plenary</b> : Bruxelles, 4-5 September   |
|      | <b>SESAR Master Plan meeting</b> : Bruxelles, 18-20 September  |

| BODY   | 2017 INTERNATIONAL ACTIVITIES IN THE AIRSPACE REGULATION FIELD   |
|--|--|
| EUROCONTROL  | <b>2017 Safety Forum: Preventing Runway Collisions:</b> Bruxelles, 6-7 June  |
|  | <b>5-LIVES Advisory Group (FLAG) Meeting:</b> Barcelona, 6-7 February  |
|  | <b>Aeronautical Information Regulators Working Group (ARWG)</b> - Bruxelles: 29-30 March; 10-12 October  |
|  | <b>Annual Summary Template Focal Points (AST-FP) Group AD-HOC Meeting</b> - Bruxelles: 31 January - 2 February; 12-13 September                                |
|  | <b>Bluemed NSAC and Bluemed Governing Board:</b> Athens, 16-18 May   |
|  | <b>European Civil Aviation Coordination Cell (EACCC)</b> - Bruxelles: 13-14 June; 6-7 November   |
|  | <b>Power 17 Exercise:</b> Bruxelles, 1-2 February  |
|  | <b>Final approach operations symposium:</b> Bruxelles, 31 January - 2 February   |
|  | <b>Joint meeting EUROCONTROL Navigation Steering Group (NSG/25) and ICAO EUR/NAT Performance-Based Navigation (PBN) Task Force:</b> Bruxelles, 12-14 September |
|  | <b>Member States' Volunteers Groups - Stakeholders (CN-SG V1)</b> - Bruxelles: 1 March; 16 May; 3 October  |
|  | <b>Navigation &amp; Surveillance (CNS) Infrastructures Team</b> - Bruxelles: 16-17 May; 20-22 November   |
|  | <b>NEASCOG - NATO EUROCONTROL ATM Security Coordinating Group:</b> NEASCOG/44 - Bruxelles, 8 December  |
| <b>RADio Frequency funcTION group (Reg. EU 677/2011):</b> RAFT/11 - Bruxelles, 2-5 May |  |
| <b>RAISG - RNAV Approach Implementation Support Group:</b> Bruxelles, 30-31 May        |  |
| <b>SES navigation strategy and PBN:</b> Bruxelles, 19-20 March                         |  |
| OTHER  | <b>CANSO 2017 ATM Global Summit:</b> Copenhagen, 12-13 June  |

## Airports

### ICAO - Aerodrome Design and Operation (ADOP) Panel

ENAC, as Italian representative, is permanent member of ADOP, the ICAO group of experts that has the task to ensure a constant update and adaptation of the Annex 14 - Aerodromes.

Among the 2017 activities, it is particularly important the modification proposal of some infrastructural standards in order to optimise a set of parameters connected with the dimensions of the airport infrastructures based on the aircraft performance improvement and in-depth studies about airport systems. Among them the update of the norms about the set of surfaces of protection from obstacles and dangers for navigation are ongoing.

ENAC participates in the ADOP Task Force to update the Airport Planning Manual, which is relevant for the restrictions imposed on the airports nearby area.

### Global Runway Safety Symposium ICAO

In November 2017, ICAO organised the Second Global Runway Safety Symposium that took place

in Lima and hosted by the Ministry of Transport and Communications of Peru.

The symposium represented a platform to develop and improve the airport infrastructures' safety at world level by a global collaboration and an experiences, strategies and best practices exchange.

The event has been supported by the biggest sector's organisations including Eurocontrol, EASA at European level and the major experts at global level for the airport safety related aspects participated in it.

ENAC's intervention, included in the New Runway Safety Technologies and Initiatives section, regarded the approach and national experiences description regarding the protection of the areas nearby the airport. In this occasion, the software developed by ENAC with Sapienza University has been showed.

The software, already appreciated and used by ICAO, is equipped with a database of the registered accidents of the last twenty years and permits the analysis of the different type of event, permitting the development of statistical studies useful to support the decisions and updates of the

sector indications. The ENAC interventions has been particularly appreciated.

**EU airport capacity monitoring centre**

The permanent monitoring centre in the bosom of EU DG MOVE, develops its activity by making studies about thematic related to the performance improvement of the different components of the aviation sector linked to the air transport capacity levels with the aim of satisfying the expected growing traffic demand in Europe in the medium and long term.

In 2017, the monitoring centre, where ENAC represents Italy, oriented its activity to the definition of a common approach at European level in terms of used parameters, applied study methodologies and connectivity levels that characterises the offer of transport in the EU State Members. The activity, whose conclusion is expected for 2019, is aimed at the definition of single connectivity indicators able to analyse and allow improvements of the air transport network by the EU citizens.

| BODY | 2017 INTERNATIONAL ACTIVITIES IN THE AIRPORTS FIELD  |
|------|--|
| ICAO | <p><b>Aerodrome Design and Operations Panel:</b> ADOP WG - Montreal, 2-8 July</p> <p><b>Airport Planning Manual Task Force:</b> London, 19-21 March</p> <p><b>Global Runway Safety Symposium 2:</b> Lima, 18-24 November</p> <p><b>Visual Aids Working Group: VAWG/15</b> - Colonia, 26-31 March; JC18 (LED SUBGROUP) of VAWG - Tolosa, 26-30 June</p> |
| UE   | <p><b>International Electrotechnical Commission (IEC) - Technical Committee N.97 - Secretariat Role:</b> Amsterdam, 6-9 February</p> <p><b>Observatory on airport capacity</b> - Bruxelles: 17-18 January; 18-19 May</p>   |
| ECAC | <p><b>European Civil Aviation Conference - Technical Task Force:</b> Paris, 1-2 February; Arezzo, 7-9 June; Paris, 1-2 February</p>  |

**Security and Facilitation**

**EU Committee for Civil Aviation Security (AVSEC)**

During 2017, ENAC participated in the activity of the EU AVSEC Committee that has been characterised by the discussion of some recurring thematic. Some of them have a particular significance: land side security measures, the additional security measures required by the Transportation Security Administration (TSA) for the flights to USA, the extension of One Stop Security (OSS) to some non-EU countries, some countries’ positions regarding amendments to the current legislation about specific measures, the presentation of a new ECAC approved kit to verify the precision of the devices to detect explosive material, the different interpretations of the legislation about cargo and in particular about the discipline of the goods from third countries.

**ECAC Security Forum**

ENAC hosted at the Directorate General in Rome, on 11 and 12 October 2017, the 24<sup>th</sup> edition of the Security Forum organised by the European Conference.

The forum, that gathers the ECAC State Members’ representatives and the delegates of the countries and the organisations that participate as observer, has the role to ensure the coordination and the information exchange between all the involved actors.

The aim is to harmonise the common rules of the air system for the security of the passengers, the personnel of the sector and of the airport infrastructures and to adopt the recommendations and resolutions aimed at prevent unlawful interferences, respecting the competences of the national institution responsible for public order.

**ECAC Task Force Security apparatus**

During the periodic meetings of the ECAC Task Force, where the ENAC participates with its experts, the results of the several ongoing researches carried out by the national authorities in the sector of technology for the security, are examined; these researches covers all the areas related to the airport infrastructures, the devices to detect explosive material and those to detect weapons or prohibited items. The positive results of the experimentations processes determine, on a shared decisional base, the update of the performances and the technological requirements of the devices on the market by amendments to EU legislation. To be highlighted is the increase of the inter-european and with USA and Australia cooperation in order to define more precisely the potential threats and harmonise the functionalities and the operational parameters of the devices used for security reasons.

**Facilitation**

As regards the implementation of the ICAO Annex 9, after the verification of the contents by the National Committee for the Facilitation of the air transport, the Facilitation National Programme for the civil aviation (1<sup>st</sup> edition, 4 September 2017) has been adopted and published on ENAC website. To implement the regulation, the ENAC Airport Depts. had to set up the Airport Committees for the facilitations.

At European level, in occasion of the ECAC subgroup meeting about passengers with reduced mobility, that took place in Paris the 5 September 2017, Italy presented the application “Airport 4 All”, developed in the airports of the Sardinia Region with ENAC patronage in order to make the information about flights operability accessible in particular to deaf passengers, but not only.

| BODY | 2017 INTERNATIONAL ACTIVITIES IN THE SECURITY & FACILITATION FIELD   |
|------|--|
| ICAO | <p><b>Aviation Security Panel:</b> AVSEC/28, Montreal, 29 May-2 June</p> <p><b>Aviation Security Symposium:</b> AVSEC2017 - Montreal, 12-14 September</p> <p><b>ICAO Regional Facilitation Implementation Seminar:</b> Paris, 21-24 November</p>   |
| UE   | <p><b>AVSEC – Air security Committee</b> - Bruxelles: AVSEC/92, 1-2 March; AVSEC/93, 21-22 June; AVSEC/94, 27-28 September; AVSEC/95, 9 November</p> <p><b>Inspection Working Group:</b> 10<sup>th</sup> Annual Meeting of UE National Auditors - Bruxelles, 19-20 September</p>   |
| ECAC | <p><b>AVSEC - Aviation Security Forum:</b> SF/24 - Rome, 11-12 October 2017</p> <p><b>TECHNICAL Task Force:</b> TTF/66 - Paris, 1-2 February; TTF/67 - Arezzo, 7-9 June; TTF/68 - Paris, 4-5 October</p> <p><b>Facilitation Working Group:</b> FAL/54 - Paris, 12 April; FAL/55 - Barcelona, 20 October</p> <p><b>Facilitation Sub Group - Passenger with Reduced Mobility</b> - Paris: FAL-PRM sub-grp/59, 14 February; FAL-PRM sub-grp/60, 5 September</p> |

**Economic and Air Transport Regulation**

**Airport charges**

In 2017, the ENAC contribution to the evaluation process of the Directive 2009/12/EC about airport charges has continued. In particular, in 2017 ENAC participated in the meetings of the new teamwork on Market Power Assessment set up at the end of 2016 within the Thessaloniki Forum of Airport Charges Regulators to provide recommendations for a correct and homogeneous

implementation of the above-mentioned directive between the State Members.

The Market Power Assessment teamwork elaborated, over the year, two documents of recommendations: “Recommendations on Market Power Assessment to ensure that economic regulation of airport in EU is appropriately targeted” and “Practices in conducting Market Power Assessment”; the first one provides indications about the opportunity to use the Market Power Assessment as a tool to evaluate the

status of an airport real competition and to efficaciously address the economic regulation only when the risk of dominant position of the airport managing body has been verified; the latter provides technical indications for a correct application of the Market Power Assessment tool in the airport context.

### Charges for the Air Navigation Services

The aircrafts that operate within the Italian airspace are subject to payment of one or more charges in relation to the type of services they benefit: en route charges and terminal charges.

After the publication of the regulation related to the European Single Sky, the EU disciplined the new air navigation charges framework, whose principles are included in the Reg. (EC) 550/2004 and with the Reg. (EC) 391/2013 instituted a shared charging system.

In particular en route charge and terminal charge fall within the European regulation about two specific charging zones: in the first one there is the Rome Fiumicino Airport, with more than 225,000 movements per year; in the latter there are the airports of Milan Malpensa, Milan Linate, Venice, Bergamo Orio al Serio with more than 70,000 movements per year.

The terminal charge of the third charging zone that includes the airports left, remains under the national legislation.

In the Eurocontrol context, the Extended Committee for the en route charges represents the place where the consultation with the users of the Air Navigation Services provided for by the national legislation, takes place. The Committee is the Eurocontrol entity that supervises the operation of the en route charging system. The representatives of the users' organisations participate in the Extended Committee meetings as observers. The multilateral negotiations take place during the June session, when many countries present their first valuation to calculate the cost base for the next year, and in the November session to discuss the final numbers and to calculate the unit rate for the next year. The Eurocontrol Permanent Commission later approves the single-piece charge.

The unit rates for en route charges and terminal

charges have been published with the Eurocontrol Circular 2018/01.

In September, ENAC hosted in its Rome headquarters, the 56<sup>th</sup> meeting of the Eurocontrol Study Group for en route charges. About 100 experts from the other countries of the Organisation participated. The meeting was important to share and consolidate the orientations with the European partners in view of the preparation of the next reference period of the Performance Scheme, for which the updating activities of the relate regulation are ongoing.

### Protection of competition

ENAC participated in the team works of the EU Council, in whose context the proposal of Regulation related to the protection of competition in the air transport sector that abrogate the Reg. (EC) 868/2004 has been examined.

The goal of the new proposal is to give the State Members a tool to ensure a fair completion between the European air carriers and those from third countries, redefining the norms to carry out investigations by the Commission and to adopt remedial measures in case of international obligations violation and procedures that affect the competition and may create prejudice between the European air carriers.

The range of the proposed text is wider than the current one, limited to "protection against subsidies and the unfair practices that provoke a damage to the Community's air carriers". The new text leaves the Commission the possibility to intervene on both the bilateral agreements, in particular for traffic rights, and the free investments circulation, with impact on the relations between the State Members and the third countries and on the competences separation between Commission and State Members.

It is important to notice that a bigger liberalisation of the market access and to air operations carried out by non-EU air carriers in Europe produces relevant economic benefits for both the air transport sector and the service sustainability; so it would be appropriate to identify a system to ensure fair competitiveness and air transport market liberalisation at European and global level.

### ICAO Air Service Negotiation Event (ICAN2017)

As regards to the ICAO activities, ENAC in December 2017 participated in ICAN2017, hosted by the Ministry of Transport and Aviation of Bahamas.

ICAN, at its 10<sup>th</sup> edition, recorded a wide participation of the State Members also this year, setting itself as an efficient platform to conduct negotiations about air services, consultations etc. It has been an important occasion for an international discussion.

The forum allowed the participation in debates that showed the most relevant experiences and evolution of the sector, being an excellent discussion and ideas sharing opportunity.

During ICAN 2017, Italy conducted 12 negotiations obtaining the signing of as many agreements; Italy also confronted with five other countries about the future air connection development and to solve some critical issues.

### EU External Relations

The process started by the Juncker Commission with the "EU strategy for the aviation" presented the 10 December 2015 and with the release of new mandates to the EU Commission in 2016, became real with the negotiation of global agreements with:

- Armenia
- ASEAN Countries (Brunei, Cambodia, Philippines, Indonesia, Laos/Lao PDR, Malaysia, Myanmar, Singapore, Thailand, Vietnam)
- Azerbaijan
- Qatar
- Tunisia
- Turkey

The negotiating lines agreed with the Ministry of Infrastructures and Transport support an air transport policy aimed at increasing the competitiveness by the norms harmonisation and a gradual opening to the market access respecting the fair competition principles. In this perspective, the idea that the EU global agreements are fundamental tools to reinforce the competitiveness of the entire European industry involved in the civil

aviation and that a combined work is needed to promote a gradual modernisation of the system to protect the users, has been strongly supported. In addition, the reconsideration of the concept of substantial propriety and effective control of the companies has been supported, considering these as an important challenge for a modern Europe. All these global agreements, on going and completed ones, are aimed to a gradual opening to the investments related to the legislation convergence.

The list of the 2017 meetings:

- Armenia: the agreement text has been agreed and the initialling has been completed. The agreement has been drafted following the scheme of the agreements aiming at European Common Aviation Area;
- ASEAN: considered the cultural differences within the ASEAN context and the numbers of the involved countries, the negotiations continue in positive way thanks to the collaboration between the parts;
- Azerbaijan: like with Armenia, the draft respects the template of the principles related to the agreements for a free European shared space. The negotiations are fluctuating but there is optimism;
- Qatar: despite a difficult negotiations beginning, the negotiations recorded progresses and will continue in 2018;
- Tunisia: the subscribed agreement, that follows the typical scheme of the sample agreements Euro-Mediterranean, establishes the gradual implementation of the EU legislation by Tunisia with a progressive extension of the operations;
- Turkey: the base for negotiation is a scheme of Neighbourhood Agreement and some more time is needed to reach the agreement signature.

The negotiations with Brazil seems to be close to an end, despite the European transition proposals. The agreement with Ukraine is suspended from the initialling date (28 November 2013) but it is to be hoped a conclusion.

During 2017 the meetings of the Joint Committees have continued. They are verification tools of the correct application of the global European air

agreements already subscribed with third countries. The second day of the celebrations related to the Open Skies event, occurred in Washington on the 10 and 11 July, was dedicated to the Joint committee with USA.

The EU Commission obtained the mandate to negotiate a side agreement on wet lease and it started to discuss the text in October with the American counterpart.

| BODY        | 2017 INTERNATIONAL ACTIVITY ABOUT THE ECONOMIC AND AIR TRANSPORT REGULATION FIELD   |
|-------------|---|
| ICAO        | <p><b>Air Transport Regulation Panel:</b> ATRP/14, Montreal, 5-7 July</p> <p><b>Aviation Data and Analysis Panel:</b> ADAP/2 - Montreal, 28-30 March</p> <p><b>Forecasting and Economic Analysis Support Group:</b> MDG-FESG/4 -Cambridge Massachusetts, 19-23 June; MDG-FESG/4 - Genève, 13-17 November</p> <p><b>ICAO Air Service Negotiation Event (ICAN):</b> Sri Lanka, 4-8 December</p> <p><b>ICAO Air Transport Symposium: IATS/3</b> - Qatar, 16-17 October</p> <p><b>International Register for Civil Aircraft:</b> London, 19-21 April</p>  |
| ECAC        | <p><b>Ad-hoc ECAC/EU economic group:</b> ADHOC-ECON/18 - Bruxelles, 16 February; ADHOC-ECON/19 - Paris, 5 May; ADHOC-ECON/20 - Rome, 26 June</p> <p><b>ECAC Medium-Term Objectives</b> - Paris EMT0/51, 20 June; EMT0/52, 7 November</p> <p><b>Economic working group:</b> ECO/5 - Paris, 13-14 September</p> <p><b>Network of Chief Economists:</b> NCE/2 - Paris 7 September</p>  |
| UE          | <p><b>Airport Charges Forum &amp; Working Group on WACC - Weighted Average Cost of Capital:</b> Bruxelles, 27 March; London, 7-8 September; Bruxelles 16-17 November</p> <p><b>Avia Working Party (EU Council Aviation Group)</b> - Bruxelles: monthly periodical meetings</p> <p><b>Consultative Forum on EU External Aviation Policy &amp; Aviation Experts Meetings</b> - Bruxelles: 15 February; 8 March; 17 May; 20 October</p> <p><b>Global Agreements (Vertical) and Joint Committee:</b> Aeronautic negotiation for global agreement UE/Armenia - Yerevan, 27-28 April; UE/ASEAN - Jakarta 17-20 January (2<sup>nd</sup> session), Helsinki, 3-5 May (3<sup>rd</sup> session), Singapore 12-14 September (4<sup>th</sup> session); UE/Azerbaijan - Baku 24-25 January (1<sup>st</sup> session), Bruxelles 4-5 July (2<sup>nd</sup> session), Baku 24-25 October (3<sup>rd</sup> session); UE/QATAR - Doha 28 February - 1 March (2<sup>nd</sup> session), Bruxelles 2-3 October (3<sup>rd</sup> session); UE/Tunisia - Tunis 15-16 March (1<sup>st</sup> session), Bruxelles 22-23 May (2<sup>nd</sup> session); UE/Turkey - Bruxelles 13-14 February (2<sup>nd</sup> session), Ankara 10-11 July (3<sup>rd</sup> session). Joint Committees: UE/Israel - Bruxelles, 24 January; UE/PAESI ECAA - Skopje, 27 March; UE/U.S.A. - Washington, 10-11 July; UE/Moldova - Chisinau, 11 November</p> |
| EUROCONTROL | <p><b>Enlarged Committee on Route Charges:</b> CER/108 - Bruxelles, 28-29 June ; CER Study Group - Rome, 21-22 September; CER/109 - Bruxelles, 22-23 November</p> <p><b>Member States' Volunteers Groups UPP (CN-SG V2)</b> - Bruxelles: 2 February; 2 March; 17 May; 30 June; 4 October</p> <p><b>Pension Fund</b> - Bruxelles: PFSB/37, 27 March; PFSB/38, 30 May; PFSB/39, 23 October</p> <p><b>Standing Committee on Finance(SCF)</b> - Bruxelles: SCF/27, 31 January; SCF/28, 11 May; SCF/29, 12-13 October</p>  |

## Environment

### ICAO and ECAC

Italy, through ENAC, keeps actively participating in the working groups committed to the implementation of CORSIA - Carbon Offsetting and Reduction Scheme for International Aviation. In particular, this activity is part of ICAO in the CAEP - Committee on Aviation Environmental Protection and its subgroups dedicated to the most relevant topics for the environmental aspects of the aviation: containment of noise and gas,

supersonic, particulate dust emissions, global market based measures to reduce CO<sub>2</sub> emissions, alternative fuels, routes and air navigation services optimisation.

The most significant topic is currently represented by the adoption of CORSIA and by its implementation. In this sense, a European coordination between ECAC and EU Commission to guarantee a homogenous line and a coherent answer to ICAO, considering the European

priorities already expressed, has been activated. Italy is represented also in the coordination groups EuroCAEP e MBM - Market Based Measures (measures to reduce CO<sub>2</sub> emission), and it is aligned with the European partners and the EU Commission on the shared positions connected to the main CORSIA's critical issues and its compatibility with the European goals to reduce CO<sub>2</sub> emissions and to contain the climate change. The EuroCAEP and MBM groups merged into the new ECAC EAEG - European Aviation and Environment Working Group.

ICAO organised in Mexico City, in October 2017, the second CAAF/2 Conference on the Alternative Fuels (AF), aimed at updating the situation related to the potentialities of the alternative fuels in the civil aviation and providing guidelines for the future. ENAC participated in it, representing Italy.

The Conference ended with the confirmation of the usefulness and importance of the future use of AF/ Sustainable Aviation Fuel (SAF) in order to achieve the Carbon Neutral Growth goals, inviting the countries to promote the developments of the SAF compatible with the current distribution system and the financing programmes to make them competitive on the market compared to fossil fuels. The countries have been encouraged to maintain an active collaboration between them and with the stakeholders, in order to promote the SAF development in aviation with equal conditions compared to other way of transport. The ICAO

vision is about reaching a substantial and much wider SAF use in aviation by 2050.

**EU**

The last 13 December 2017, the Reg. (EU) 2017/2392 from the EU Parliament and Council has been adopted, amending the Directive 2003/87/EC, with which the EU established a system to exchange the greenhouse gas share emission: EU ETS - European Union Emission Trading System.

The new regulation is aimed at reviewing the current legislation about the managing system of the air transport CO<sub>2</sub> emission, maintaining the current limits of the field of application to the flights within the European economic space and introducing some dispositions in the view of the implementation, from 2021 of the global mechanism CORSIA.

The Reg. (EU) 2017/2392 extend to the 31 December 2023 the current derogation to the obligations under the ETS for the flights from/to third countries, unless reviewed, in order to allow the experience acquisition needed to implement the CORSIA system and its integration with ETS.

The alignment between the European and global mechanism represents the most ambitious goal from now until 2023 and Italy supports, in ICAO and EU/ECAC context, the environmental goal defined in the European strategic Plan in the wider context of international commitment as established by the Paris Agreement.

| BODY | 2017 INTERNATIONAL ACTIVITY ABOUT ENVIRONMENT FIELD  |
|------|--|
| ICAO | <p><b>Airports and Operations Working Group (CAEP WG2):</b> Sydney, 21-24 March; Stockholm, 27-30 June; Montreal, 27 November- 1 December</p> <p><b>Alternative Fuel Task Force</b> - Montreal: AFTF/03, 6-10 February; AFTF/04, 4-10 June; AFTF/05 - Brasilia, 21-28 October</p> <p><b>Committee on Aviation Environmental Protection Steering Group:</b> CAEP11-SG/2 - Montreal, 11-15 September</p> <p><b>Conference on Aviation Alternative Fuels:</b> CAAF/2 - Mexico City, 11-13 October</p> <p><b>Global Market Based Measure Technical Task force</b> - Montreal: GMTF/10, 6-10 February; GMTF/, 5-9 June; Brasilia, 21-28 October</p> <p><b>Noise Working Group (CAEP WG1):</b> Savannah, Georgia (USA), 20-23 March; WG1/3 - Bodo, 12-16 June; Montreal, 6-10 November</p> |

| BODY    | 2017 INTERNATIONAL ACTIVITY ABOUT ENVIRONMENT FIELD   |
|---------|---|
| ICAO    | <p><b>Seminar on Green Airports:</b> SGA - Montreal, 29-30 November</p> <p><b>Seminars on CORSIA - Carbon Offsetting and Reduction Scheme for International Aviation:</b> Bonn, 3-6 April; Montreal, 10-11 May</p>  |
| ECAC/UE | <p><b>Abatement Nuisances Caused Air Transport - Aircraft Noise Modelling:</b> ANCAT-AIRMOD/26, Zurich 15-16 March; ANCAT-AIRMOD/27 - Rome, 27-28 September</p> <p><b>EAEG - European Aviation and Environment Working Group:</b> EAEG/1 - Bruxelles (EASA Office), 6-7 December</p> <p><b>Environmental Forum:</b> ENVFORUM/1 - Paris, 18-19 December</p> <p><b>EuroCAEP - ECAC/UE Coordinating Group</b> - Paris (teleconference), 31 March; Bruxelles: 2-4 July (EuroCAEP and EuroGMTF); (teleconference), 16 August; 27-29 August; Paris (teleconference), 5 September; Montreal, 10 September</p> <p><b>MBM-CG - Market Based Measures Coordinating Group</b> - Paris: MBM-CG/25 (teleconference), 2 February; MBM-CG/27 (teleconference), 1 June; MBM-CG/28, 21 June; MBM-CG/26 - Bruxelles (teleconference), 22 February</p> |

### Implementation of CORSIA - Carbon Offsetting and Reduction Scheme for International Aviation



CORSIA is an international scheme to compensate and reduce the CO<sub>2</sub> emissions due to civil aviation provided for by the ICAO resolution A39-3 adopted from the 39<sup>th</sup> ICAO General Assembly in October 2016. This scheme, that will represent the Annex 16,

Volume 4 of ICAO, is included in the set of measures taken by ICAO, together with technological and operational improvements and the use of new kind of fuels, to achieve the goal of Carbon Neutral Growth, which is the zero growth of the CO<sub>2</sub> emissions from 2020, in coherence with the COP21 Paris agreement on climate.

The CORSIA implementation will be done in three stages:

1. Pilot phase, from 2021 to 2023 (voluntary participation);
2. First phase, from 2024 to 2026 (voluntary participation);
3. Second phase, from 2027 to 2035 (mandatory participation for all the countries involved unless exemptions).

In December 2017, 73 ICAO members, including Italy and all the ECAC countries, representing the 87,7% of the international civil aviation activities, decided to participate in CORSIA voluntarily.

The CORSIA exemptions concern different criteria:

- *Contribute to the international aviation activities: exemptions for the countries that in 2018 record both the following conditions:*
  1. An individual RTK - Revenue Tonne Kilometres - passengers and goods transported per kilometre less than 0,5% of the total RTK;
  2. A total RTK - obtained adding up the RTK share of each single participating country, from the highest to the lowest - bigger than 90%.
- *Socio-economic indicators - exemptions for:*
  1. LDCs - Least Developed Countries
  2. SIDS - Small Island Developing States;
  3. LLDCs - Landlocked Developed Countries.
- *Technical criteria - exemptions for:*
  1. Air carriers whose yearly emission for international flight is less than 10.000 tons of CO<sub>2</sub>;
  2. Aircrafts with Maximum Take-Off Mass (MTOM) less than 5.700 kg;
  3. Aircrafts that operate in humanitarian missions, rescue mission and fire-fighting missions.

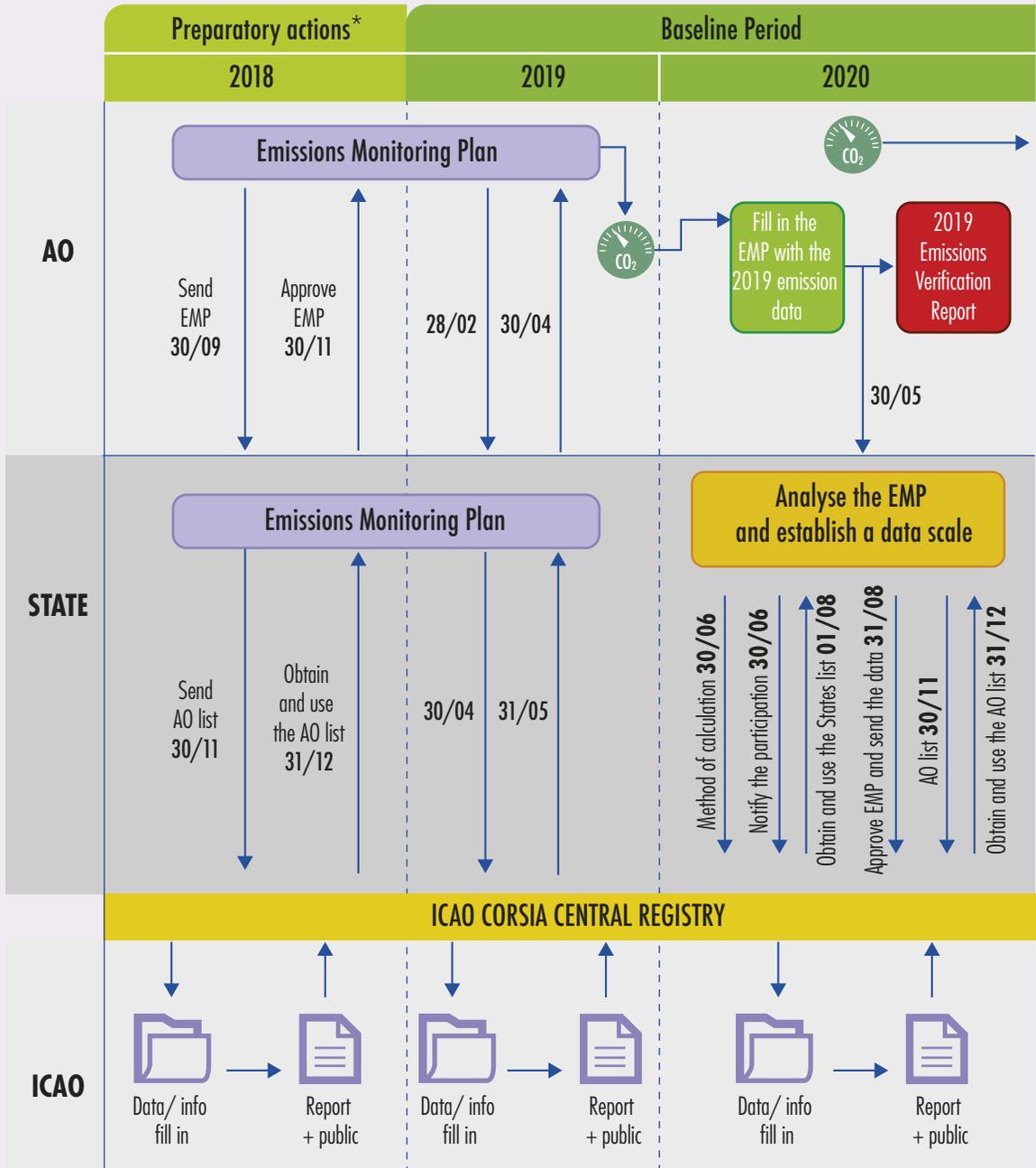
CORSIA is applied to all the international flights whole routes are between States that joined the scheme. The

system's scope is that all the air carriers operating these routes compensate the CO<sub>2</sub> emissions (offsetting requirement) buying on the market a quantity of emission unit (1 unit = 1 ton of CO<sub>2</sub>), resulting from projects for the environment protection also in other economy's areas. Only the emission units that meet the ICAO requirements will be used in CORSIA. From 1 January 2019, all the air carriers of the Countries participating the pilot phase will have to start monitoring the emission data of their international flight and communicate them to the relative home state. Then, the state will have to send the data to ICAO CORSIA established a monitoring, reporting and verification system (MRV - Monitoring, Reporting, Verification), whose goal is to collect the data of the yearly CO<sub>2</sub> emissions of the international civil aviation included in the scheme and compare them to the baseline, the average emissions of the entire sector in the period 2019-2020. Compared to what the exceeding emissions to be compensate by the air carriers from 1 January 2021 will be calculated. The system components are:

- Monitoring of the fuel used by each flight included in the scheme and the calculation of the related CO<sub>2</sub> emissions (5 different methods of calculation in order to let the air carriers not to make important modifications to their systems);
- Information reporting of the emissions transmitted by the air carriers to the States and to ICAO;
- The data verification.

It has been established to create a Central Registry managed by ICAO and national registries. The state members' implementation and development of the national registries will permit the Emission Units control and to verify that the operators respect the requirements for CO<sub>2</sub> reduction established by CORSIA. Every time an air carrier to compensate will use a unit, it will have to be deleted from the Registries and never be used again. ICAO through the CAEP and the related teamwork CAEP GMTF (Global Market-Based Measures Task Force) and CAEP AFTF (Alternative Fuel Task Force), in which ENAC representatives participate has done the CORSIA implementation study. As indicated in the following road map, the developing time of the process have been extremely tight. The CAEP in September and the ICAO council in November approved the draft of the CORSIA package and the ICAO secretariat sent at the end of the year the State Letter to the States asking for comments, to achieve the final approval expected in June 2018. In 2017, the ICAO Secretariat finalised the entire documents needed to implement and manage CORSIA, beside manuals and guide in a single document, the CORSIA Package (part of the Annex 16 Vol. IV + Implementing Elements + Supporting Documents). The Steering Group Meeting CAEP in September 2017 validated the CORSIA Package technical analysis currently under approval by the Council. The formal adoption will take place within June 2018. From 2022, every three years (compliance cycle) the CORSIA project implementation will be revised by the Council, considering the impact in terms of international traffic growth.

CORSIA Road Map



\* Strongly recommended.

