

# 100 Years of the Italian Air Force

## *An Introspective Look over a Centenary of Tangible Relevance*

The JAPCC's Interview with Lieutenant General Luca Goretti, Chief of the Italian Air Force



*'We already have the institutional duty to defend our skies; in the coming years, threats will come from much higher, but we as the Air Force will always be responsible by law to protect and defend our territory from any threat regardless of where it originates.'*



© Italian Air Force

*Next year the Italian Air Force is celebrating 100 years of existence. Is it getting older or younger?*

Actually, both. The Air Force is now dealing, more than ever, with a complex *dichotomy*. On one side, every year our personnel are growing older. On the other side, our Air Force is increasingly embracing technology, and thus, has to invest in and rely on the younger generation that is capable of dealing with top-notch weapon systems.

In 2023, we will be among the few Air Forces celebrating a *centennial legacy*. Our responsibility for the future is to design a force model that is sustainable in the longer term and pivotal for the Alliance's defence capability. As a matter of fact and thanks to the strategic foresight of my predecessors, our Air Force is one of the strongest contributors to Air Policing, from the High North to Europe's Eastern and Southern flanks. At the same time, although a relatively small Air Component, we demonstrated how a

massive airlift from Afghanistan could be handled, while operating concurrently in other theatres with our fighter force. Finally, we never stopped training highly skilled pilots at home for a multitude of different countries and services. We will successfully manage this dichotomy if, in the future, we make this *agile* and *second nature*.

Our Centenary logo represents this burst of innovation and transformation towards a new posture necessary to deal with cutting-edge technologies, as is the case with the F-35. This novel approach is aimed at shaping our organization around the *combat elements* (i.e. all the assets suitable for contested environments), and as such, they must be kept in high readiness and consistently capable of delivering the *full spectrum* of Air & Space Power, from kinetic effects to air mobility. Not an easy task, especially if we look back at more than two decades of financial cuts to a Military Instrument that deals globally with the widest and most complex domain and is also the primary enabler and synchronization tool for the land and maritime components. This is confirmed by real-life combat-proven Air Power successes in recent air campaigns, mainly due to precision strike and the high speed of intervention.

One of the dozens of events that will celebrate our centenary is the *Air & Space Power Conference*. It will be held in Rome in *May 2023* and will be a perfect opportunity to discuss, at the strategic and operational levels, how the vertical and technological expansion of the Air domain into the Space domain will affect our Force Structure by '*Reshaping Space & Time*'.<sup>1</sup>

*Advanced flight training and staff development seem essential to an agile and technologically advanced Air Force like the one you just described. What are the main objectives you are pursuing in these fields?*

One of my priorities has always been personnel training. When, as Force Commanders, we imagine the Air Component of the future – 2035 and beyond – we often talk, for example, about Multi-Domain Operations (MDO) and the ability to fuse data and

synchronize the effects of the Joint Force... Well, we rarely talk deeply enough about how we generate such capabilities. There is enough debate today on what does MDO exactly mean, but no real checklist of the *skills* needed to manage them effectively. As the Italian Air Force, we are defining a journey whose destination is a Component where airmen are natively integrated with the academic and industrial worlds. We take the '*evolution trinity*' – government, academic world, and aerospace industry – very seriously. Thus, we begin this transformation journey from the Air Force Academy and the Training Institutions at all levels. Keeping this approach in mind, we are updating the syllabi and trying to give our cadets the correct tools and the necessary networks to realize something great with their colleagues from the Universities and the Aerospace companies: Officers (and NCOs) together with engineers, technicians and professors. An 'arena' where Air & Space Power innovative concepts and related technology developments spark from the same shared idea.

Likewise, we stress the importance of *decentralizing decision-making* and empowering younger echelons to suggest the best course of action. Tomorrow, operational theatres might be so complex (think of cyber and information warfare!) that only highly skilled subject matter experts might have the right tool to handle and identify a piece of information as real or fake. The *enormous amount of data* generated by the five domains (four of which are physical, one virtual and, someday, cognitive) require different levels of analysis and processing power to identify relevant data, process it, and extract potential information related to a new threat otherwise impossible to spot. In other words, automation or Artificial Intelligence must work relentlessly to identify the outlier, the glitch, so that the human operator can analyse and process only a pre-selected amount of information and focus on decision-making. In doing so, extensive study of the algorithms behind the *automation* and around concepts like 'graceful degradation' and 'automation bias' is required.

Future Forces in the field will require specific multi-domain training to cope with many inputs from multiple environments, some of which may be inexplicable







from a single-service perspective. Hence, we are identifying and building the proper training pattern (i.e. exposure to all sensors and effectors, as well as Command and Control (C2) nodes across the Alliance's Services) to create an *all-domain ontology* that spans from the integrated planning of the operations to the synchronization of effects throughout the whole tasking cycle. These Forces have to exercise in specific training environments (focusing on C2 disruption), where they should demonstrate an unbiased and natural propensity to integrated operations.

Along this same line of thinking, we are consequently proceeding at full speed in expanding and completing the aforementioned training environment, called the *Operational Training Infrastructure* (OTI). As an Air Force, we deliver effects into, throughout, and from the vertical dimension. To remain relevant in future warfighting scenarios, we must constantly exercise our skills and adapt our *doctrine* (namely, our set of beliefs) to the changing world. The OTI is both a training environment where we develop and fine-tune our flying skills and a training posture where we begin with advanced fighter trainers (like the M-346) and continue with 5<sup>th</sup> Gen assets (like the F-35, and tomorrow, the FCAS Tempest). A huge *training arena* where operational and environmental conditions match perfectly with our next-generation training requirements.

*All western Air Forces experienced significant financial cuts and, consequently, we infer a reduction in aircraft numbers. Nowadays, due to the Ukrainian crisis, the notorious 2% of GDP is not a chimera anymore: what would you ask for in case of an increased budget?*

Two things. A few more *aircraft* and *space assets* to be able to deal with multiple concurrent theatres in the ever-broader spectrum of the competition-continuum and definitely, more Combat Service Support and *enablers*, including ground equipment, spare parts, integrated logistics support, and so forth.

The core strengths of an Air Force are indeed *speed*, *flexibility*, and *global reach*. Such abilities rely on pre-planned logistic chains and effective, operationally oriented sustainment contracts. The crisis in Ukraine reminded us, in Europe, that a 'sitting on the fence' philosophy is detrimental to a functional force structure and its ability to sustain prolonged operations in multiple Areas of Responsibility (AOR), especially for countries like Italy that have a greater footprint in defending the Alliance at home and abroad. The legacy force-on-force type of warfare has not disappeared yet, as some had erroneously envisioned. Again, new investments must focus on completing our innovation process to withstand peer competitors and make longer engagements sustainable to maintain the operational flexibility so peculiar to the Air Force.



*You mentioned the core strengths of an Air Component. How does the F-35B<sup>2</sup> flow into this context?*

The F-35B is a *niche of excellence* in terms of operational flexibility. It can access a much larger number of air-strips than the conventional variant at the cost of some capabilities (mainly related to range and landing weight). For this reason, it enables the Air Force in a specific sector of the Air Power pillars, namely the *Air Expeditionary component*. In a few words, it means that the F-35B can deploy fast, at increased ranges with tanker support, and pretty much everywhere, if we

consider damaged runways, central African territories, and even highways around Eastern Europe. With such an enhanced *deployable component*, we can build a high-readiness force package comprised of both fighter and tactical assets (for instance: MC-27J for tactical C2, KC-130J for tanking in the air and on the ground, HH-101A combat helicopters with Force Protection





and Special Forces teams, etc.) capable of autonomously executing rapid, *in & out* type of missions all around the Mediterranean region, following our Ministry of Defence defined AORs and even in non-permissive environments. This would also include the possibility of supporting a major Air Force package, composed of the full spectrum of Air Power assets, deployed on a Forward Operating Base near an Anti-Access/Area Denial (A2/AD) boundary otherwise not accessible by other forces, like ships or conventional support aircraft, which can become easy 'targets' in such an environment. It matches seamlessly with the *Agile Combat Employment* (ACE) concept, which entails the requirement to 'shift operations from centralized physical infrastructures to a network of smaller, dispersed locations that are defensible, sustainable and relocatable'.<sup>3</sup> This is an entirely different concept from that of Air Mobility – which we still provide – involving strategic ranges, greater take-off weights, no kinetic effects, permissive environments, and so forth.

*We spoke about training, financial perspectives, and the F35B's unique capabilities. Let's move into the future: can you tell us what to expect in the next decades?*

Wishing to complete a survey of Italian Air Force weapon systems by around 2040, we cannot avoid

starting from the two main baskets into which these capabilities are functionally divided.

On one side, we have the so-called '*combat elements*', further divided into fighters, Remotely Piloted Aircraft (RPAs), and multi-crew aircraft (fixed- and rotary-wing). I am proud to say that, with a singular vision, we have designed a fully low-observable fighter force comprised of F-35As, F-35Bs, and the new 6<sup>th</sup> Gen FCAS Tempest, which will gradually replace the Typhoon fleet around 2040. Having in mind the Ukrainian crisis and the threat posed by the surface-based missile systems, that we are now all familiar with, our Force design is the tangible result of the strategic foresight of my predecessors. Coupled with the substantial force offering that Italy constantly makes available to the Alliance, our Air Force will constitute an ever-stronger Military Instrument of Power available to the Italian Government. RPAs will consist of the MQ-9A Predator B (new Block 5 with kinetic capability), the European MALE, and Leonardo Falco X-Plorer drones. The multi-crew assets spanning all NATO Main Capability Areas are the (K)C-130J(-30), the (M)C-27J (different variants), and the G-550 (both C2 and Intelligence, Surveillance and Reconnaissance (ISR) variants). Helos will be the HH-101A and possibly a version of the Future Vertical Lift, still to be defined, but aimed at bolstering our agility and flexibility in future scenarios.



On the other side, the *non-combat*, but equally vital *elements* fulfil a variety of missions both for the Air Force itself and for different services and agencies. We also have State transport assets, different helicopter versions dedicated to Search & Rescue missions, passenger transport, medical evacuation and firefighting (A-139), and fixed-wing passenger aircraft like the Piaggio P-180. Finally, we have other excellent systems, like the aforementioned M-346 and M-345, the brand-new Light Utility Helicopter A-169, and a series of gliders. Overall, a cutting-edge set of weapons systems that make us proud of our *centennial legacy* in military aviation.

Obviously, those are the flying assets. However, other elements must be recognized since they are equally important in terms of contribution to Air & Space Power effects: air-defence systems from short to medium and long-range and even upper layer (protection against ballistic missiles and hypersonic weapons is a must!), Force Protection and Special Forces (supporting Air Force specific requirements), suborbital vectors and stratospheric ISR platforms, datalinks, cyber avionics, complex weapons, disruptive technologies, and so on.

*To conclude, what are your thoughts regarding the forthcoming celebration of 100 years of the Italian Air Force?*

In closing, I would take this opportunity to remind our readers that the Air Force has a natural vocation toward Space. We already have the institutional duty to defend our skies; in the coming years, threats will come from much higher, but we as the Air Force will always be responsible by law to protect and defend our territory from any threat regardless of where it originates. For this reason, we have in place a clear strategy that envisions cooperation in human space flight, suborbital flights, and quick satellite replacement. Future airmen will grow up and develop in a technologically advanced environment and be at the forefront of this new world. As leaders and instructors, we need to dare and adapt alongside this new generation. We need to change how we work to deliver capabilities on time or lose. We need to modify our skills quickly enough to sustain these new technologies.

I feel responsible for giving the people I represent all my trust, because I am positive they have the hallmark to succeed.

*Sir, thank you for your time and your comments.* ●

1. The 2023 Italian Air Force Conference theme is 'Reshaping Space & Time'.
2. Italian Air Force is the only European Air Force owning both variants of the jet, conventional and Short-Take-Off and Vertical Landing (STOVL).
3. See Air Force Doctrine Note 1-21, 'Agile Combat Employment', USAF, 1 December 2021.

#### Lieutenant General Luca Goretti

graduated from the Italian Air Force Academy in 1984. After the pre-operative course on the G-91T, he was assigned to pilot the Tornado aircraft. In 1986, he was posted to the 36<sup>th</sup> Wing at Gioia del Colle AFB, where he took part in flight operations in Albania and Bosnia, within the framework of NATO operations in the former Yugoslavia. In 1998 he was assigned to the Flight Safety Inspectorate. During the NATO Allied Force Operation in Kosovo, he was posted to the NATO HQ Media Operations Centre in Brussels as Italian Military Representative. From 2003 to 2005 he commanded the 32<sup>nd</sup> Wing at Amendola AFB. In February 2008 he was transferred to the Italian Defence Staff HQ to assume the appointment of Deputy Chief of the Planning, Programming and Defence Balance General Office. In February 2010 he became Deputy Chief of the Cabinet of the Minister of Defence. In 2015, he was promoted to the rank of Major General, becoming the Defence and Defence Cooperation Attaché at the Italian Embassy in Washington DC. In 2018 he was promoted to the rank of Lieutenant General and in February 2019 he assumed the appointment of Italian Air Force Deputy Chief of Staff. Since 31 October 2021 he is the Italian Air Force Chief of Staff.

During his career, he has acquired more than 2,900 flying hours, more than 2,000 being on the Tornado.

