2nd International Symposium: Hypersonic Flight:
from 100,000 to 400,000 Ft

Keynote Address of V. Riggio, President,

Italian Civil Aviation Authority, ENAC – Italy

Hypersonic Flight: Preparing for the Future of Air Transport

It was a pleasure to hear the presentation of Dr. George Nield, which highlighted the huge number of initiatives that the American Industry is developing as for space flights and commercial space transportation.

My address will focus on the present status and the future challenges of air transport and their relationship with the hypersonic flight as a means of transport in a foreseeable period of time.

Worldwide commercial air transport reached the number of 37.6 Million flights in 2015, carrying over 3.5 billion passengers; on average, half of the Earth inhabitants used the airplane for their journeys. 2015 was another year of records for aviation safety, with a global rate of 0.32 fatal accident per million of flight. Europe and North America maintained their leadership in safety performances well below the world rate of fatal accidents.

Nowadays, beside safety performance, other factors impact the perceived efficiency of air transport: airport congestions, especially in the major hubs, ATC capacity, security measures and the possibility to avoid illegal actions like terrorist attacks, environmental protection, airline competiveness and competition to offering lower fares and increasing comfort to passengers, customer protection and satisfaction even in case of flight delays and cancellations. Even safety of flight could become a matter of concern if the aviation system is not able to maintain the number of air accident at the lowest rate, whose social acceptance is sensitive, in particular where a large number of fatalities is involved in a single accident.

IATA published a study in October 2014 where the number of commercial flights is estimated to reach 60 Million in 2034 with 7.3 Billion of passengers carried: these figures imply that in twenty year time, or well before, the air transport sector should find adequate solutions and mitigations to the present critical issues.

In this scenario, what will be the impact of hypersonic flight? Besides the present status of researches and experimental initiatives, the speed of travel will play an important role for competiveness of air transport, as compared to other travel means, but of course aircraft speed is not the only parameter to take into consideration.

Again: safety, security, accessibility, efficiency, costs, protection of environment should be the driving factors for the success of hypersonic flights in the aeronautic domain and for commercial space transportation. There should be a global approach to a faster travel, starting from the regulatory regime; internationally, I believe in the leading role of ICAO, in cooperation with UNOOSA, to establish the baseline of legal, safety, security, economic and environmental standards applicable to the commercial space transport.

So far, the approach of ICAO has been a very prudent one: even if a Space Learning Group has been created with the attendance of the most interested Member States and Associations, and educational activities have been performed, like the Space Symposia of 2015 in Montreal and of last March 2016 in Abu Dhabi, no decision has been taken yet to start with regulatory initiatives, pending the blessing by the General Assembly.

At the next ICAO Assembly in October minimal amendments to the GASP (Global Aviation Safety Plan) and GANP (Global Air Navigation Plan) will be presented to start entering the Commercial Space impact into the two planning documents. With the aim to prepare a more structured approach to space rulemaking to be discussed at the 2019 Assembly. I guess that a faster approach should be envisaged, considering the expected timeframe for drafting, consultation and approval of relevant regulatory documents.

What about Europe on commercial space transportation regulation? No initiative yet from EASA that stated this is not a priority, but many initiative by individual European States, like Italy, United Kingdom, Sweden, Switzerland, Spain. The main common goal of these countries is to prepare the ground for hosting experimental space activities, developed by local industry or US enterprises, and as a mid-to-long term objective to establishing the conditions for operational activities.

Italy is among those that started this process; the Memorandum of Cooperation FAA-ENAC initially signed in March 2014 and renewed yesterday including ASI as a third partner, is one of the initiatives of cooperation among the various stakeholders that include also the Italian Air Force, whose competence and experience in space flights is excellent and worldwide well-known, the aerospace industry, the academic institutions, the research and educational organisations.

As a first result of these cooperative efforts, a Regulatory Policy for the Prospected Space Transportation Certification and Operations in Italy, as presented yesterday by my colleague Giovanni Di Antonio, has been drafted by ENAC and will be published soon for all interested parties consideration and comments.