AOPA LUXEMBOURG

GENERAL AVIATION POSITION PAPER 2022-2042

A vision of the future

Hereby you will find the General Aviation Position Paper 2022 - 2042 of the Aircraft Owners and Pilots Association of Luxembourg (AOPA). We stand up as a sector for the interests of General Aviation (GA) in Luxembourg airspace and at Luxembourg airports. GA, general aviation or light aviation, consists of a very diverse palette of aircraft, activities and organizations. This includes flying schools, training flights, helicopters, ultralights etc.

The scope of this paper is therefore also set up to 2042. It should be noted that predicting the future is very difficult, and also becomes increasingly difficult the further into the future something is. An update may be necessary for the meantime. Nevertheless, a number of frameworks are not expected to change substantially during this period, and they also form the basis for this paper.

Civil wholesale traffic is still growing and reaching established limits. Stretching these limits is met with social resistance and has anticipated restrictive consequences for GA. On the other hand, there are also opportunities for GA in an integrated airspace review. As a stakeholder, the sector wants to make a constructive contribution to this by realizing these opportunities while safeguarding its own interests.

AOPA LUXEMBOURG

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1) AOPA SUPPORTS GENERAL AVIATION IN LUXEMBOURG

A) INTRODUCTION TO AOPA

The Aircraft Owners and Pilots Association Luxembourg (AOPA) is part of the largest association of pilots and plane owners globally, with over 430,000 members in 82 autonomous, nongovernmental, national General Aviation organisations over 79 countries and all continents.

AOPA Luxembourg is a non-profit organisation whose mission is to Advance, Promote, and Preserve the Freedom to Fly. There is a vital community of 1000+ individuals acting as plane owners, pilots, instructors, service providers, and other roles in Luxembourg, making General Aviation an essential player.

AOPA Luxembourg is defending and helping its members and fighting to preserve all participant's free fly in General Aviation. The association aims to serve the interests of its members, promoting the economy, safety, utility, innovation, and popularity of General Aviation. We are open to all pilots and owners of any General Aviation aircraft, with fixed-wing singles and twin-piston and turbine, airships, helicopters, ultralights, gliders, etc.

AOPA Luxembourg deploys activities around four axes:

- the training and theoretical and practical perfection of airplane pilots
- the practice and development of air sport and tourism,
- the defence of the material and moral interests of airplane pilots,
- the development of links of friendship between local and foreign pilots.

These are typical values throughout the national country organisations of AOPA.

B) AOPA ACTIVELY REPRESENTS ITS MEMBERS

AOPA Luxembourg is always listening to its members and is defending its members' rights. The association is always taking position whenever infrastructure or equipment changes or new requirements are about to occur, or new rules, regulations, and procedures are introduced. AOPA Luxembourg is looking after the interests of its members.

AOPA Luxembourg comments, observes. AOPA is always present, nationally and internationally.

AOPA Luxembourg has access to ICAO, EASA, EUROCONTROL, EUROPEAN COMMISSION and other organisations operating worldwide through IAOPA (International Council of AOPA country organisations)

AOPA Luxembourg opposes decisions that violate international agreements or standards or constitute discrimination against General Aviation.

AOPA Luxembourg is a member of all national commissions and working groups dealing with aeronautical issues. We interact directly with DAC, ANA, Lux-Airport, FAL, and the Luxembourg Government. Relations with the Luxembourg administration should be further strengthened because of new regulations and tax increases. AOPA is looking for an open discussion to correctly interpret new laws and regulations.

Through its representation in international organisations dealing with institutional and regulatory issues affecting civil aviation, we offer sound, professional advice and positions in the interest of General Aviation and fairness in the skies.

C) LUXEMBOURG FLIGHT SCHOOLS: A CAREER PATH MADE IN LUXEMBOURG

Luxembourg is proud to be home to multiple Flying Clubs with schools based at Luxembourg Airport and Ultralight-, helicopters schools, Gliding clubs and flight maintenance organisations. They provide many future pilots and play a significant role in pilot training. One school alone has produced more than 100 certified pilots with an increasing admission of new students over the past years. Based on the overall volunteer approach, part of the staff of those schools are coming from the Plane Owner community.

Professional pilots usually start like private pilots, but they can advance their training and are often offered the possibility of growing to a professional career level and becoming commercial and air transport pilots in Luxembourg or elsewhere. Our aviation schools benefit national commercial aviation operators like Luxair, Luxaviation, Cargolux to recruit pilots trained here. Most people engaged in the flight schools are volunteers. AOPA supports this community, so crucial for the existence of aviation schools and to maintain the possibility to train future pilots for commercial or General Aviation.

Most citizens of Luxembourg use the airline companies serving Luxembourg Airport to fly to their holiday or business destination. Airline pilots started their careers in a flight school. Being an airline or helicopter pilot requires solid and expensive training. This all begins in flight schools and flying clubs. These flying schools and flight clubs are driven by volunteers passionate about aviation. For example, LFTA trained some 40 to 50 ATPL[1] pilots in modular courses. There's a clear and direct link between the training programs of our flight schools and bringing our population and businesspeople to their holiday or business destinations.

General Aviation works for the National Education System with its DIMAS programme run by LFTA. DIMAS creates awareness and provides courses to pupils, stimulating them for later involvement in aviation and aerospace. More than 350 students from different lycées have already passed the DIMAS course.

2) STATUS UPDATE NON-COMMERCIAL GENERAL AVIATION LUXEMBOURG

A) AIRPORTS IN LUXEMBOURG

Luxembourg has two airports for motor-powered planes: Luxembourg Airport and Noertrange. The latter is very small and not suitable for general operations. All motor flying operations are concentrated on Luxembourg airport.

The third airfield of Useldange is a small grass strip, exclusively used by gliders and not suitable for motor-powered planes.

Ultralight flying associations were earlier driven out of Luxembourg and operate nowadays from France and Belgium.

There is only one runway available at Findel. With traffic growing at two digits figure a year (pre-Covid-19 data) at Luxembourg-Airport, It is only a matter of a couple of years before saturation will be reached. The result is that the non-commercial General Aviation gets more and more squeezed between commercial operations at Luxembourg Airport.

B) SETUP OF PARKING 5 AND 6 AT LUXEMBOURG AIRPORT

Parking 5 and 6 are the areas where the activities of the non-commercial General Aviation are located at Luxembourg Airport.

[1] Air Transport Pilot Licence

I) PARKING 5

On our Parking 5, we see that the squeezing of the non-commercial General Aviation is already a reality. More than 50% of this Parking lot for small planes has been lost. The non-commercial General Aviation community is confronted with ever-shrinking Parking space. Luxembourg Airport has been traditionally a welcoming place for foreign pilots and plane owners to make a stop, but this appeal has been lost. Only a handful of parking spaces remain for non-commercial General Aviation.

A second issue about Parking Space concerns fuel. Traditionally, our planes are flying with AVGAS. The flying clubs have started investing in planes capable of flying with the environment friendly UL91[2], not yet available at Luxembourg Airport's Parking 5.

II) PARKING 6

Plane owners are worried about the announced reorganisation of Parking 6, where some private pilot hangar space is likely to be lost as Lux Airport intends to perform some structural works

III) CHARGING ELECTRICAL PLANES

New technologies around electrical flying are approaching

With electrical planes projects being available for the non-commercial General Aviation, Luxembourg Airport discusses with Aviasport to install a supercharger at Parking 5 and classic chargers at Parking 6.

C) THE NOISE ISSUE AROUND LUXEMBOURG AIRPORT

The non-commercial General Aviation is confronted with a minority of local activists. They do not accept that choosing to live close to an international airport means necessarily living near a source of a certain noise level.

Our community is confronted with a vocal minority of plane haters who systematically file complaints against our pilots and plane owners. They would preferably see our community of some 1000 Private Pilots and General Aviation disappear in Luxembourg. Our flight procedures are well determined and regulated. Our community is confronted with activists who try to force our pilots into unrealistic and dangerous traffic patterns at Luxembourg Airport. This creates hazardous situations.

Our flight schools responded by reducing the number of training flights around Luxembourg Airport as responsible people. The typical "Touch & Go" exercises have displaced many training activities to German and French airfields. That means that a flight teacher and his student set a course from Luxembourg Airport to airfields in Germany and France to practise these necessary "Touch & Go" exercises over there. This generates lots of extra costs for the students and is not satisfying. It only results in making our flight schools less attractive.

D) THE COST OF FLYING: MANY LITTLE ONES MAKE A BIG ONE

EASA, DAC, ANA and Lux-Airport have individually substantially increased the fees borne by the General Aviation pilots.

The cost of flying also keeps going up as it takes more and more time from the moment an engine is started until a small plane takes off from Luxembourg Airport. Due to these prices increases, between 2010 and 2020, the hourly cost for a typical Piper Warrior led from about 120€ to about 220€ an hour, way more than the inflation.

[2] UL 91 is a colourless, unleaded aviation gasoline

The costs of an ATO[3] operation also exploded mainly because of a rigid interpretation of the legislation. Before they were 5000€/year and now: 6000€/year plus 120€/ per hour, equal to 14.000€/year, it will hurt the future number of students and even the existence of those schools.

A big part of General Aviation uses basic light aircraft that cannot be considered luxury items and can be compared to motorbikes or sports cars. Many pilots fly in aviation clubs in a sharing economy model of aeroplanes to bear the cost.

Various fees related to licenses, English language proficiency certification and navigation/landings are not adequate and reasonable for non-commercial General Aviation operations.

The sum of these rising maintenance costs increased fuel prices, continuously introduced regulations, and new and increasing airport fees weigh upon the activities of the non-commercial branch of General Aviation

E) TERMINAL NAVIGATION CHARGES

According to Commission Implementing Regulation (EU) 2019/317 of 11 February 2019, the application of the following standard terminal navigation service units (TNSUs) formula is used to calculate terminal charges.

$$Terminal\ Charge(flight) = Unit\ Rate(airport) \times \left(\frac{MTOW\ (t)}{50\ (t)}\right)^{0.7}$$

AOPA considers that ANA interprets differently and rounds up the MTOW to the following whole number (an aircraft with 1,1T MTOW is regarded as a 2T aircraft). The evolution is about 6-7% from 2021 to 2022. This is not significant for the GA.

F) HANGAR RENTALS AT LUXEMBOURG AIRPORT

For many years, an issue dragging on relates to the hangar rental agreements at Luxembourg Airport.

The Plane Owner community has been confronted with Lux-Airport taking a stricter stance. In the previous years, Lux Airport created massive uncertainty within the plane owner community. The investment cycles are long, and Lux-Airport was looking for short term rental agreements with significantly increased rental fees.

I) FLYING SCHOOLS

On the one hand, there are the Flying clubs and flight schools, based there since the beginning of Luxembourg Airport. We like to stress that historic element. They got in jeopardy because of the new hangar rental agreements with a short-term duration imposed upon them at fees that would be a showstopper for their operations. After lengthy discussions, this existential problem for the flight schools and clubs seems to be resolved now. The new hangar rental agreement between Lux-Airport and Aviasport and Aéro-Sport are in place for a 15-year duration, of which the start was, however, retroactive.

II) PLANE OWNERS

On the other hand, the private aeroplane's owners were also confronted with a more rigid stance of Luxembourg Airport. Lux Airport imposed short term rental and retroactive rental agreements upon them, with rental fees

[3] Approved Training Organisation

more than doubled. The private Plane Owners were forced into signing new rental contracts but with a way shorter duration than the flying clubs/schools. Their rental agreements are to end in 2023, creating mass uncertainty in this community, besides the unreasonably increased (more than doubled) rental fees. The Luxembourg Plane Owner community have been tackled hard, the more there is no alternative place to go for the plane owners.

III) MAINTENANCE ORGANISATION

By means of office and workshop fees increase, the local maintenance organisation for the non-commercial Aviation saw their rental fees rise. These increased rental fees are passed on to their clients and thus to the pilot community, hereby putting further pressure on the flying cost per hour.

IV) INSTABILITY IN THE AVIATION COMMUNITY

The dual approach of Lux Airport creates discrimination between private owners and flying clubs as they are charged at different prices per square meter and the duration of the rental agreements. Volunteers from the Plane Owner community drive the flying clubs and flying schools; this aspect of General Aviation is systematically forgotten.

The approach related to the hangar rentals at Luxembourg airport created major instability in the Pilots and Plane Owners community.

G) REFORM OF ACCESS PASS PROCESSING

Access to Luxembourg Airport for the non-commercial General Aviation community becomes increasingly complicated and comes with a price tag that keeps going up.

As pilots and plane owners, we fully endorse strict security procedures at Luxembourg Airport.

The procedure to get an access badge entails a security check by the authorities and an external compulsory class course setup by Lux Airport, whereas the latter could be outsourced to the club level to shorten delays. This could be similar to the procedure in place at Cargolux.

H) OUTDATED FLEET

The current fleet of the non-commercial General Aviation is still flying with planes designed with classic materials of more than half a century ago. Also, the engines of our planes date from the last century with engines designed long ago, using AVGAS, in an era that fuel-saving was not a top priority.

The aviation industry is undergoing a profound change, with new composite materials being deployed. Also, there are now many eco-friendlier engines developed and available that can fly more economically with lead-free UL91 instead of AVGAS.

I) THE ARRIVAL OF ELECTRICAL PLANES IN GENERAL AVIATION

Having electric planes would mean that they're powered differently, so there's no need to use the fuels that currently produce greenhouse gases. Aviasport at Luxembourg Airport has a project around this topic. They plan to deploy two eFlyer Electric Aircraft are expected for training purposes (https://www.aerospace-technology.com/projects/sun-flyer-2-electric-aircraft/)

The noise reduction is expected to be 2/3 compared to combustible fuel-driven planes, lowering the tensions with the noise complaining neighbours of the airport.

The purchase cost of both machines together is roughly 1 Mio USD.

Whereas the political authorities endorse the idea of electrical flying, Aviasport looks for a financial partnering model. State-driven funding would be beneficial as there is no necessity that Aviasport has ownership.

Aviasport developed relations with LIST management to combine their plans with their project of electrical planes.

The need for chargers for the project is being discussed with Lux-Airport by Aviasport.

3) INNOVATION IN AVIATION

A) OPPORTUNITIES IN AEROSPACE

Luxembourg has it all to champion a leading role in aerospace research and development and establishes industries in the country.

Some of these new initiatives are drones and autonomous drone operations related, with a satellite communication link as well developments around electric-powered aeroplanes and autonomous air taxis.

Belgium and Germany show successful synergies between universities, start-up companies and General Aviation Actors. Here are two examples of such aeronautical innovation hubs, which pilots drive:

- Droneport in St Truiden – Belgium (https://droneport.eu/). Airfield synergies are created by joining infrastructure for air traffic, drone operations with training facilities and incubators for start-ups in the drone/aviation industry.
- Innovation Factory at the Aachen-Merzbrück Research-Airport (https://rwth-if.com/aktuelles/silent-air-taxi-forscher-und-forscherinnen-der-rwth-aachen-university-und-fh-aachen-zeigen-den-weg-zum-leisen-fliegen/). Created by the University of Aachen and the state of North-Rhine-Westphalia, this hub incorporates infrastructure for air traffic, drone and airplane testing and incubators for aviation start-ups like air taxis and electric propulsion.

An Aeropark industrial zone attached to a General Aviation airfield is a suitable model for Luxembourg to develop.

B) MOBILITY INNOVATION

Mobility and its pillars of transport are at the very centre of our socio-economic fabric. Innovation in technology and methodologies (e.g., redefining efficiencies in travel) is essential to develop mobility further.

Brand new technology is to transform the mobility system is creating solid opportunities for the Luxembourg economy, e.g. unmanned aircraft; artificial intelligence; biometrics; robotics; blockchain; alternative fuels and electric aircraft.

However, Luxembourg has been unable to attract so far many of these new actors as the infrastructure is not there. One can not conduct experiments with a flying taxi or an UAV at Luxembourg Airport. The military test fields in the north of the country are not suited.

C) AEROSPACE R&D

Luxembourg is ambitious in the aerospace r&d and encourages start-up industries. The SnT e.g. hosts an innovative UAV lab. They are however limited in deploying models together with the industry, as Luxembourg is missing an infrastructure such as it exists at Droneprort in Belgium.

Creating a focal point with a suitable and adequate new infrastructure and airfield for aviation, aerospace research and development, testing, and production would join the national ambition for the arising business areas in the aerospace sector. Opportunities are abounded and can only be outlined as follows:

- CO2 reduction and fuel/energy efficiency in aeroplanes

- Silent propulsion engines
- Alternative propulsion engines
- Air traffic management with unattended vehicles
- Autonomous aeroplanes
- Cyber-Defense and security applications
- Associated training and services

As shown in so many cases abroad, these new technologies are driven by the University, the Research community and highly skilled people of the aviation industry. Such an action drives innovation. General Aviation is therefore ideally positioned to support innovation and its potential impact on new mobility. Our Pilot and Plane Owner community likes to join and contribute to this innovation movement.

The key cornerstone missing is the infrastructure of a combination of a focal point and an airstrip.

4) WHAT DO WE WANT TO ACHIEVE ?

A) GENERAL AVIATION AIRFIELD IS LUXEMBOURG IS MISSING

Pre-Corona increase for commercial traffic of more than 10% per year at Luxembourg Airport shows that rather sooner than later, General Aviation becomes marginalised with slots, waiting and holding times and further pressure on space available, especially since there is only one single runway available.

The present all-in-one model at Lux-Airport is at risk for the non-commercial General Aviation. The current situation around Luxembourg Airport for General Aviation shows that time has come to move on. To achieve innovation around aviation with the introduction of new development models, not only the space but the whole environment is not available or existing at Luxembourg-Airport.

The key cornerstone of a General Aviation airfield in Luxembourg is the missing infrastructure link. A combination of a focal point and an airstrip.For all the reasons mentioned in this document, AOPA Luxembourg advocates the creation of an aviation innovation hub with an airstrip for non-commercial General Aviation in Luxembourg.

To govern is to foresee. There's a clear and present need to start the planning or new General Aviation airfield in Luxembourg with a relationship model as between Nice airport (airliners) and the Cannes airport (General Aviation).

B) AN AVIATION INNOVATION HUB, COMBINED WITH A GENERAL AVIATION AIRFIELD ON LUXEMBOURG SOIL MUST BE PUT ON THE POLITICAL AGENDA.

An aviation innovation hub in Luxembourg will boost the Aerotech sector. AOPA Luxembourg will start calling upon the Government, the University, investors, stakeholders and interested parties to come together and bring an innovation project around innovation in aviation to life, hereby responding to an opportunity in aerospace around mobility innovation and aerospace R&D. An Aeropark industrial zone is attached to a General Aviation airport is a suitable model for Luxembourg to develop and should be brought to the political agenda.

Active political support is needed for the creation of such an aviation innovation hub in Luxembourg.

AOPA is considering which steps should be most appropriate to find a solution that would answer the needs of General Aviation and ensure the freedom of flight for this and the next generation. The issue is very delicate and challenging, but we are decided to develop solutions by approaching the various stakeholders. The position paper and our aims will be presented and advocated via various channels to all the related stakeholders

C) ALLOWING ULTRALIGHTS AT LUXEMBOURG AIRPORT.

The current aging fleet of airplanes based on obsolete technologies due to overregulation will be increasingly replaced by less regulated and therefore fast developing ultralights reaching or exceeding the specifications of light airplanes and be certified as such. Within a decade, the ultralights evolved so much in quality, efficiency, speed – and using lead-free UL91 or MOGAS driven engines –that there is no reason anymore from banning ultralight planes today having their home base at Findel or simply landing at Lux-Airport at first.

D) KEEPING THE COSTS UNDER CONTROL

I) RECALCULATING OF THE TNC ACCORDING TO EUROPEAN LEGISLATION

AOPA intends to start negotiations with ANA concerning applying the European formula for terminal charges. The interpretation of the Maximum Take-Off Weight (MTOW) formula by ANA remains unclear and unjustified from the ANA's side. European Commission decisions are prevailing local legislation and should be taken into consideration.

II) LUX-AIRPORT AND THE MINISTRY

AOPA will address the interests of the non-commercial General Aviation community related to the hereabove related topics to Lux Airport at various levels.

- Exchange on operational plans for Parking 5 and 6
- Advocating to end discrimination in the rental agreement approach for Private Plane Owners
- Address costs for ATO
- Simplifying access pass procedure Luxembourg Airport

E) ALTERNATIVE FUEL INSTALLATION AT LUXEMBOURG AIRPORT

AVGAS 100LL for piston engines will eventually be replaced because of certain components at Lux-Airport. Provision of alternative fuels like MOGAS, UL 91 or future UL 100 and electric chargers at Luxembourg Airport will be endorsed in the exchanges with Lux Airport.