GAMA-IAOPA
European General Aviation Survey 2021

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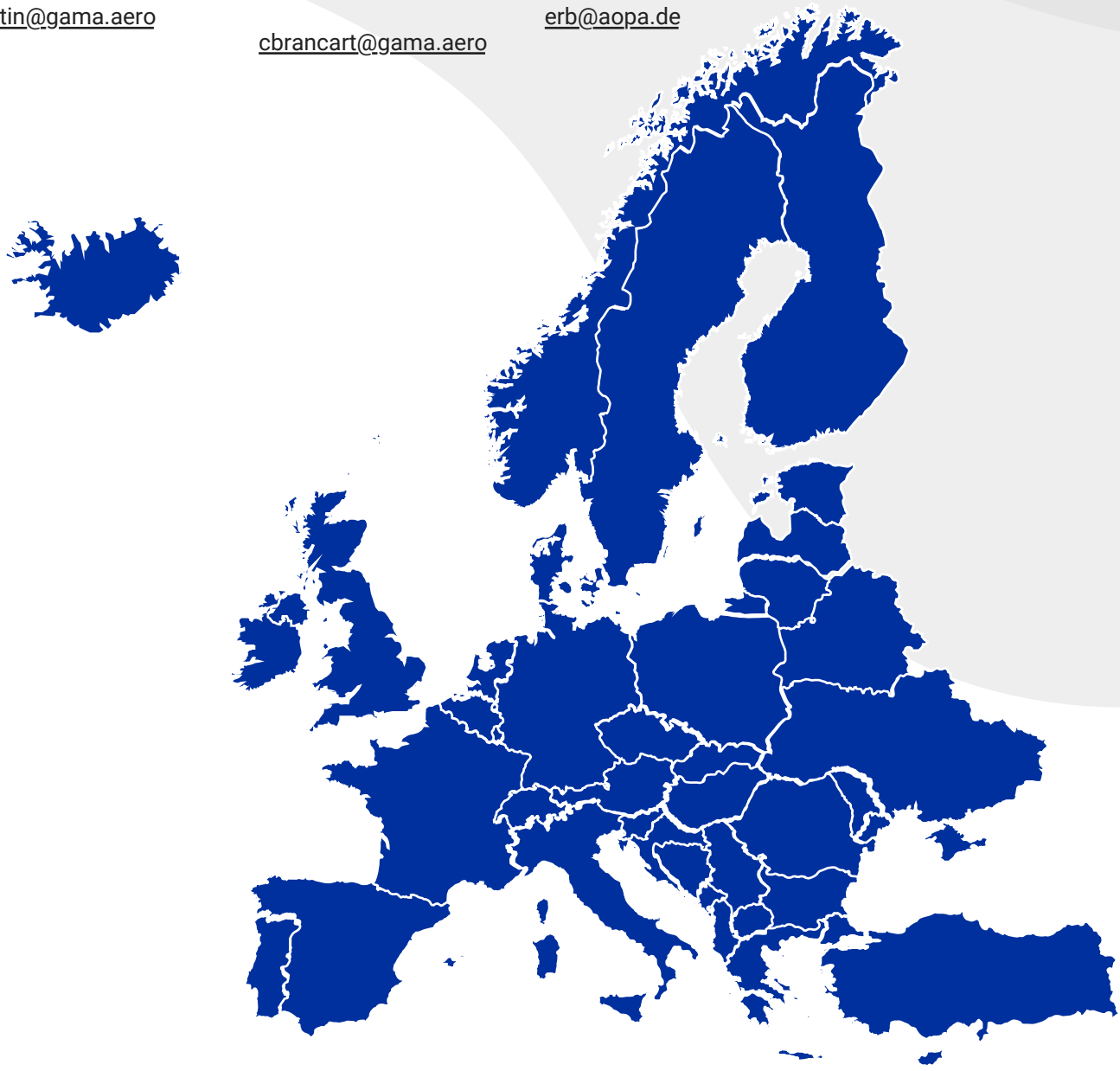


Survey 2021 for data from year 2020

SUMMARY

1. Survey participants

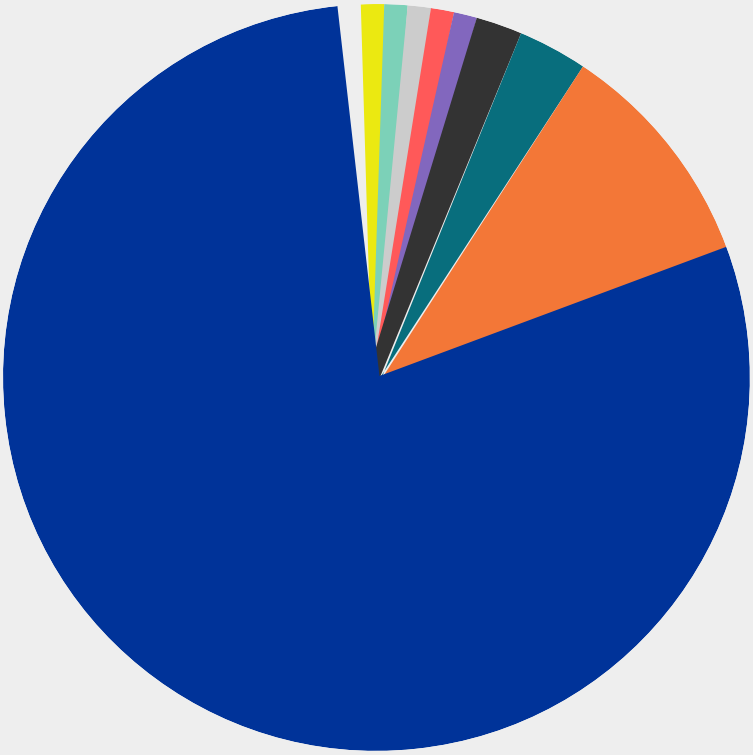
1,082 Individual Respondents

2,052 Aircraft

Registered in 28 countries

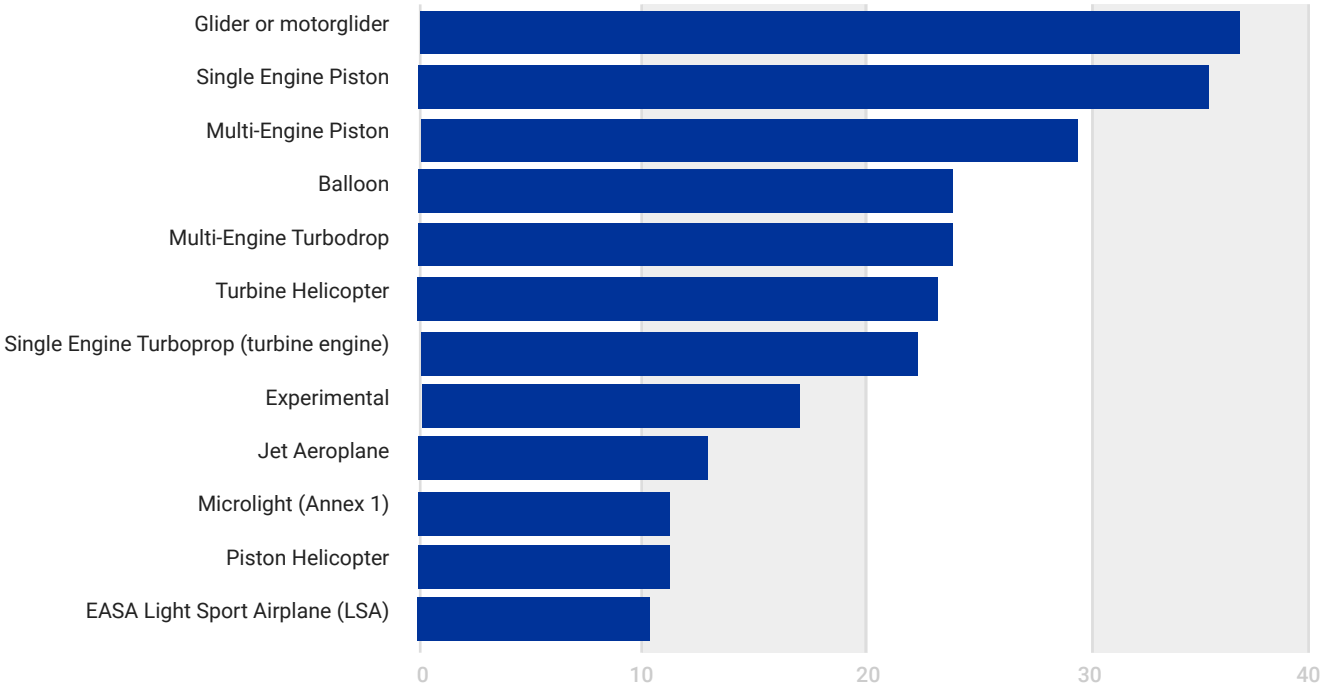
Aircraft in the survey by Category

Total: 2052 aircraft



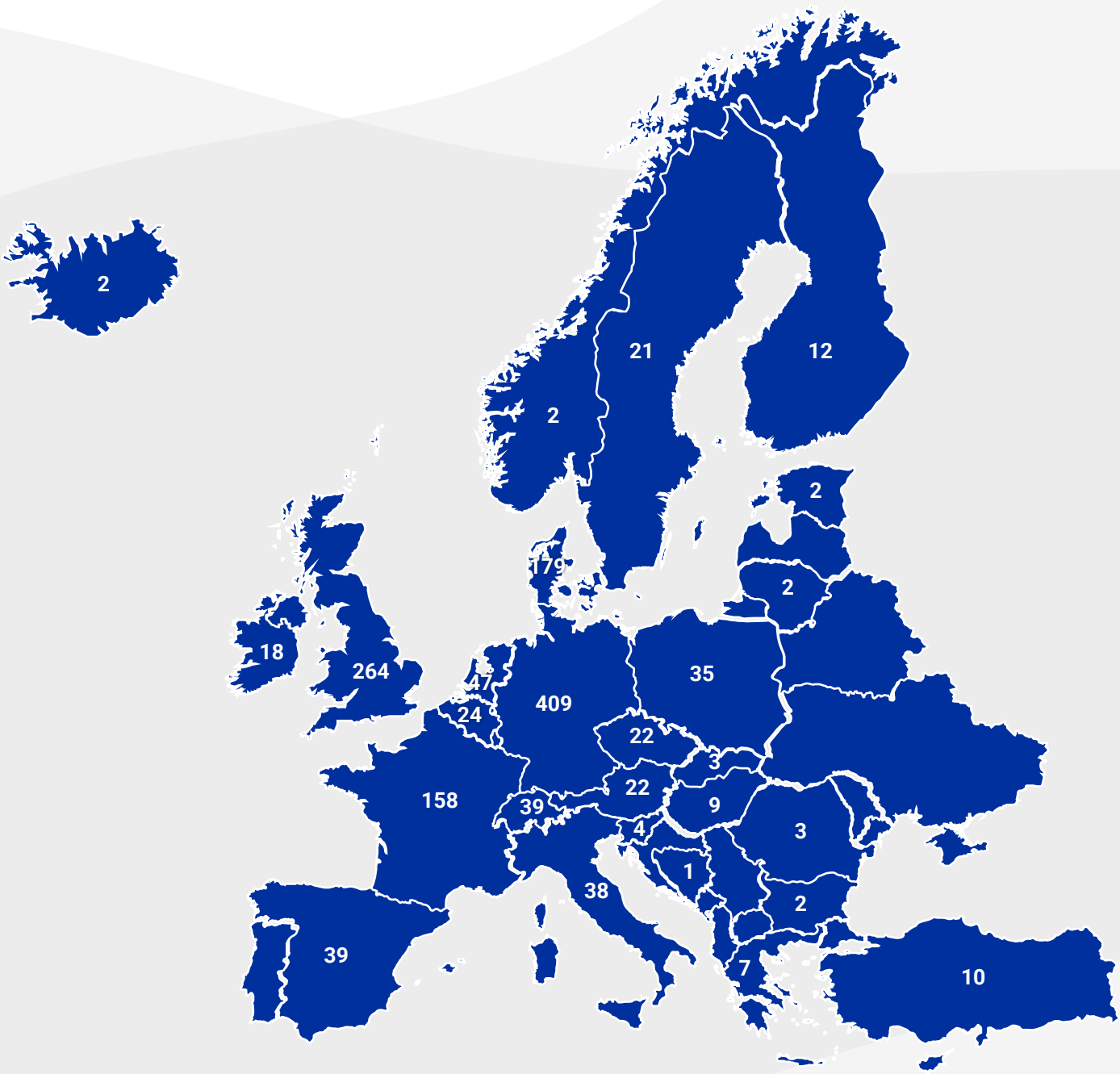
Jet Aeroplane	1%
Turbine Helicopter	1%
Glider or motorglider	1%
Single Engine Turboprop (turbine engine)	1%
EASA Light Sport Airplane (LSA)	1%
Experimental	2%
Multi-Engine Piston	3%
Microlight	10%
Single Engine Piston	79%

Average Age of Aircraft (years since manufacture)

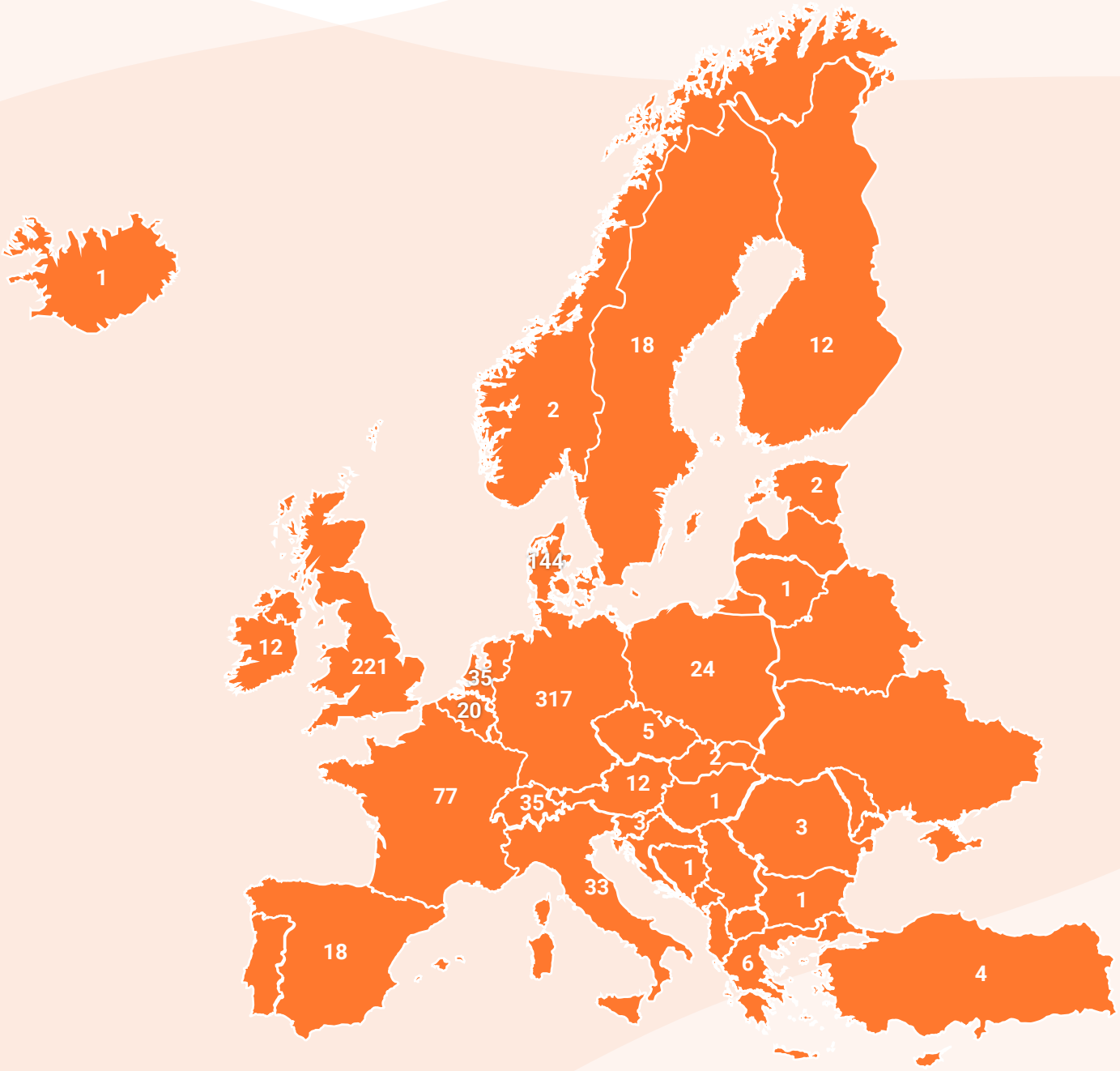


The majority of the aircraft are more than 20 years old

Survey Responses by Aircraft Primary Base Location Country



Survey Responses by Aircraft Registration Country

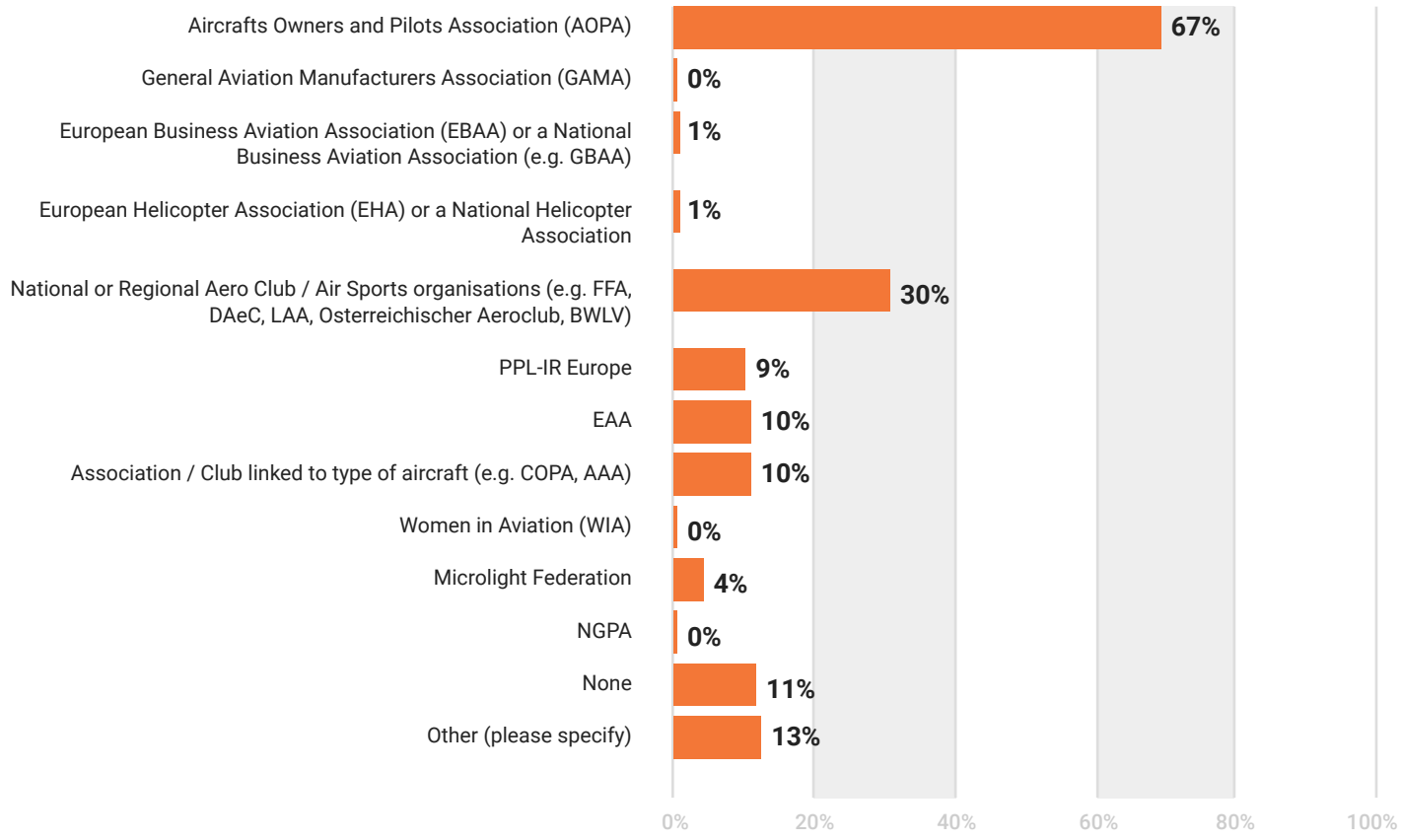


Number of aircraft with a registration from another country than the a/c base location)

	Total SEP/MEP/SET	Foreign Registered (ALL)	
Base location	**Number of A/C**	**Number of A/C**	**Percentage**
Austria	18	4	22%
Belgium	19	7	37%
Denmark	198	16	8%
France	135	32	24%
Germany	691	262	38%
Ireland	15	3	20%
Italy	17	1	6%
Luxembourg	13	1	8%
Netherlands	42	8	19%
Spain	38	8	21%
Switzerland	33	8	24%
United Kingdom	231	29	13%

TOTAL: 1.450 aircraft
excluded all countries with less than 10 SEP/MEP/SET aircraft

Participants member of an association

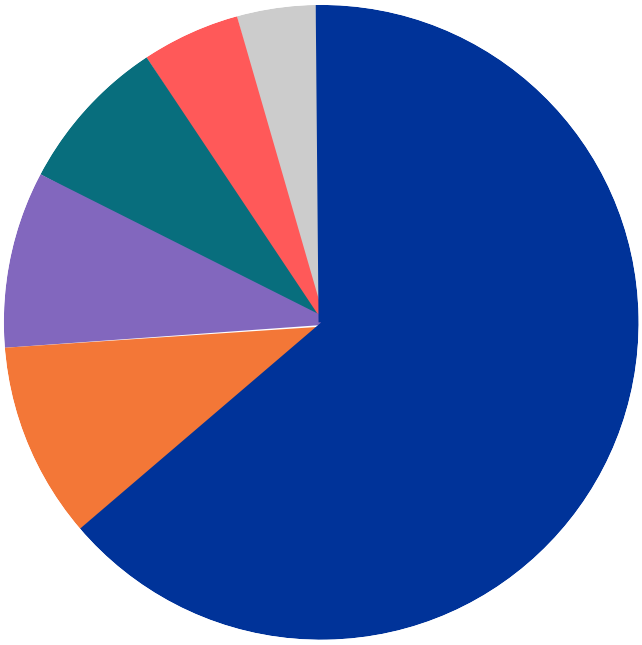


British Gliding Association - **BGA**
Hanggliding and Paragliding in Germany - **DHV**
Ultralight Flight Association in Germany - **DULV**
Experimental Aircraft Association - **EAA**
Experimental Aviation of Switzerland - **EAS**
European Light, Experimental and Vintage Aircraft Association - **EFLEVA**
Swedish Volunteer Air Corps - **FFK**
Historic Aircraft Association - **HAA**
Irish Light Aviation Society - **ILAS**
Royal Netherlands Aeronautical Association - **KNVvL**
Light Aircraft Association - **LAA**
Royal Aeronautical Society
Vintage Aircraft Club - **VAC**
Vintage Aircraft Association

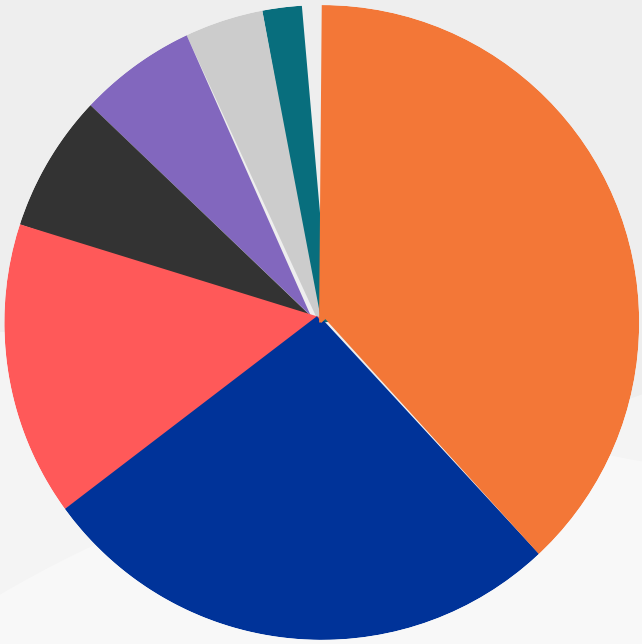
2. Flight information

Aircraft represented in the survey operational activity

- Non-commercial operations with other than complex motor-powered aircraft (NCO) 64%
- National regulations (for Annex 1 aircraft) 10%
- Non-commercial operations with complex motor-powered aircraft (NCC) 9%
- Specialised operations (e.g. aerial work), both commercial and non-commercial (SPO) 8%
- Commercial Air Transport (CAT) operations 5%
- Other 4%



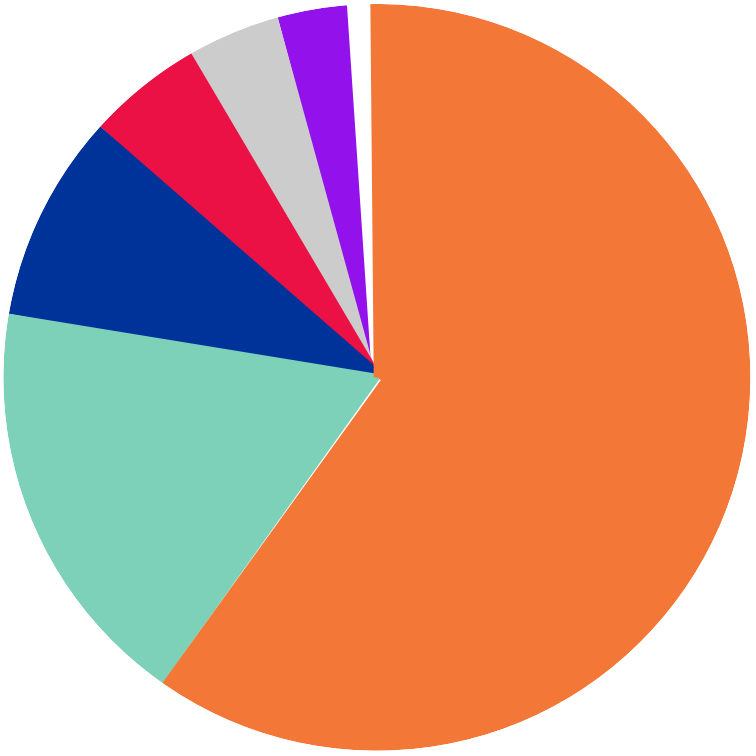
Proportion of flight hours per type of activity (SEP/MEP/SET ONLY) - 2020



- Private travel and leisure A to B flights 38%
- Flight training 27%
- Sightseeing and leisure A to A flights 15%
- Aerial work 7%
- Business transportation 6%
- Aerial sport (glider towing, parachuting, aerobatics) 4%
- Other 2%
- Air medical service 0%
- Charter / other no-scheduled operation 0%

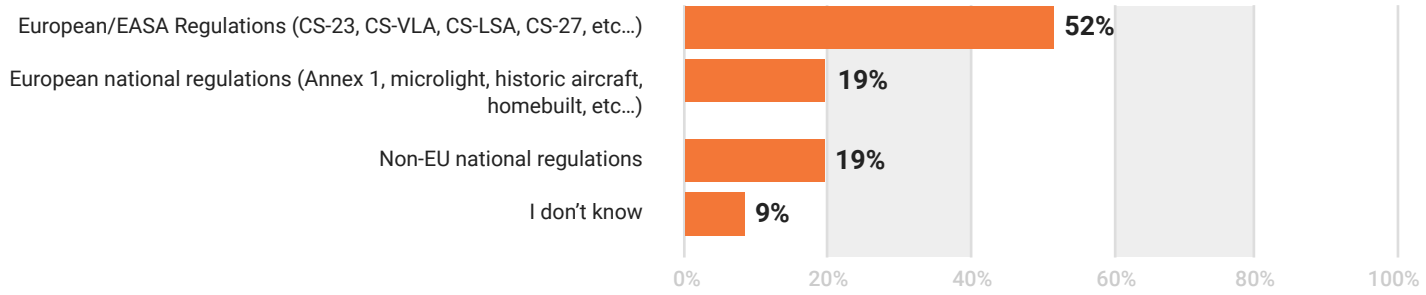
Aircraft represented in the survey usage

Total: 1.688 aircraft

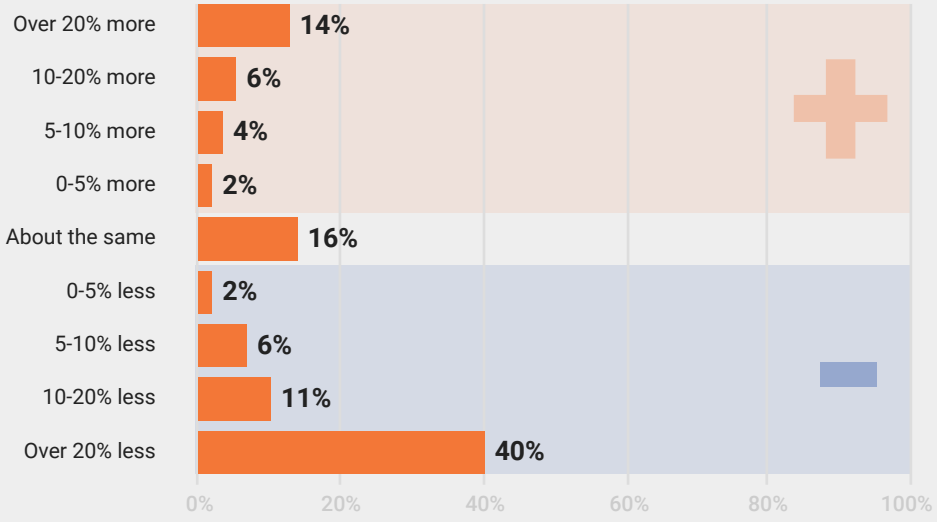


Private individual	60%
Group of private individuals	18%
Not-for-profit Flying Club	9%
Companies not involved in Commercial Operations	5%
Commercial Flight School	4%
Commercial Operator	3%
Other	1%

Aircraft represented in the survey regime



In 2020, did your aircraft fly more or less than in 2019?



59% flew less in 2020

In 2020, did your aircraft fly more or less than in 2019? BY COUNTRY

SEP/MEP/SET ONLY

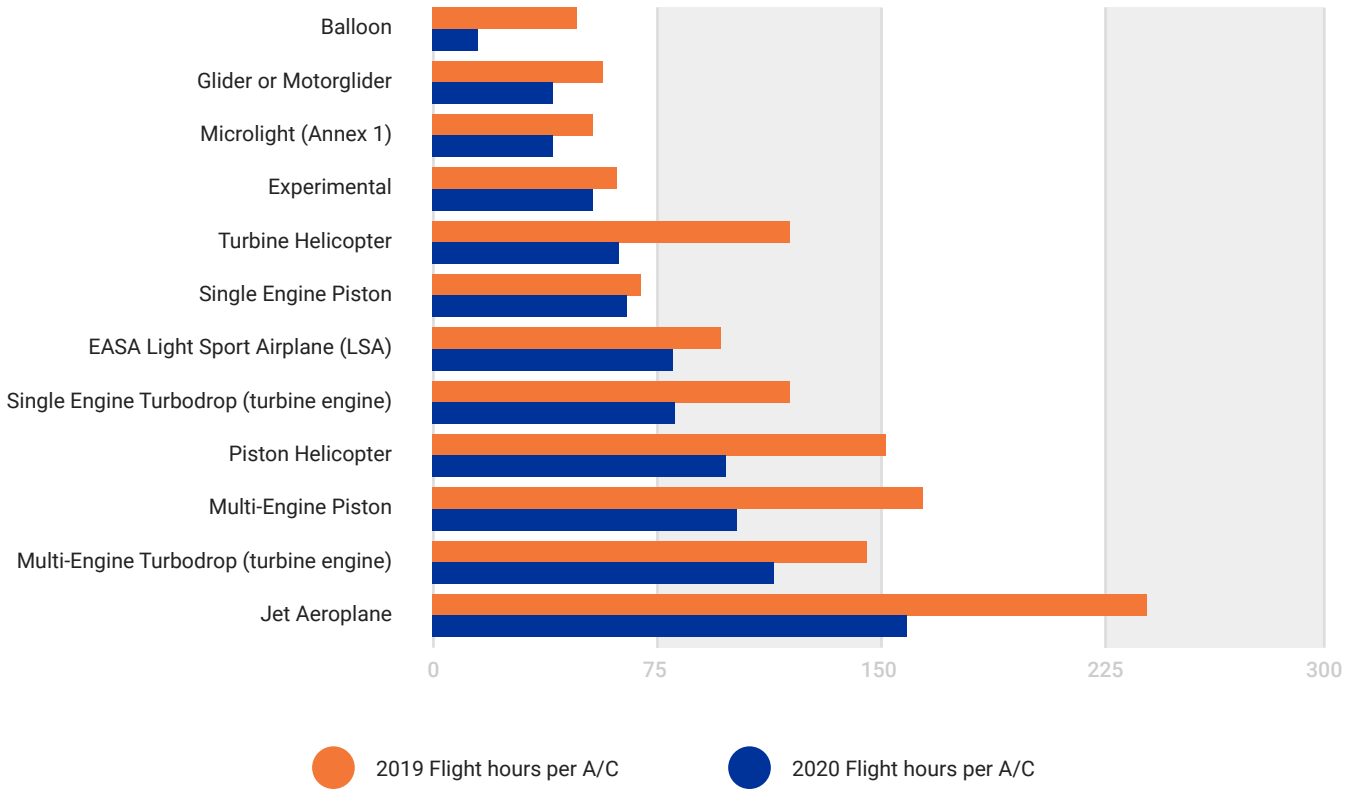
Per aircraft hours /flights

Base Location Country	Sum of No.AC	2020 flight hours	2019 flight hours	delta: 2020 vs. 2019	2020 flights	2019 flights	delta: 2020 vs. 2019
Austria	18	155	190	-18%	259	346	-25%
Belgium	19	94	122	-23%	78	98	-21%
Denmark	198	64	53	21%	73	71	3%
Finland	8	31	37	-18%	37	48	-24%
France	135	151	173	-13%	138	145	-4%
Germany	691	36	49	-26%	41	47	-13%
Hungary	9	467	400	17%	444	356	25%
Ireland	15	84	79	6%	150	145	3%
Italy	17	71	92	-23%	68	83	-18%
Luxembourg	13	47	67	-31%	50	59	-15%
Netherlands	42	116	132	-12%	107	119	-11%
Poland	25	70	86	-18%	93	104	-10%
Spain	38	78	113	-31%	62	92	-33%
Sweden	18	44	100	-56%	115	134	-14%
Switzerland	33	74	81	-8%	76	81	-6%
United Kingdom	231	49	84	-41%	50	80	-37%
Grand total	1510						

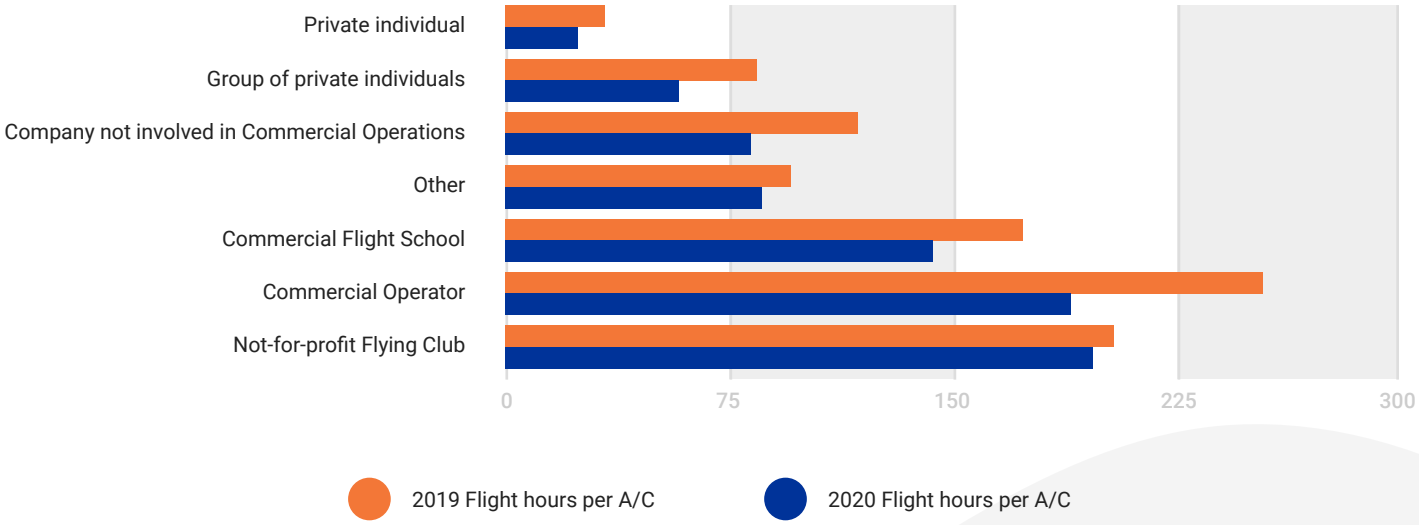
***table/map excludes all countries with less than 5 SEP aircraft

EASA MS Only	
Flight hours	-14%
No. of flights	-9%
(based on 1,442 aircraft)	

Flight Hours per Aircraft by Aircraft Category (2020 vs 2019)

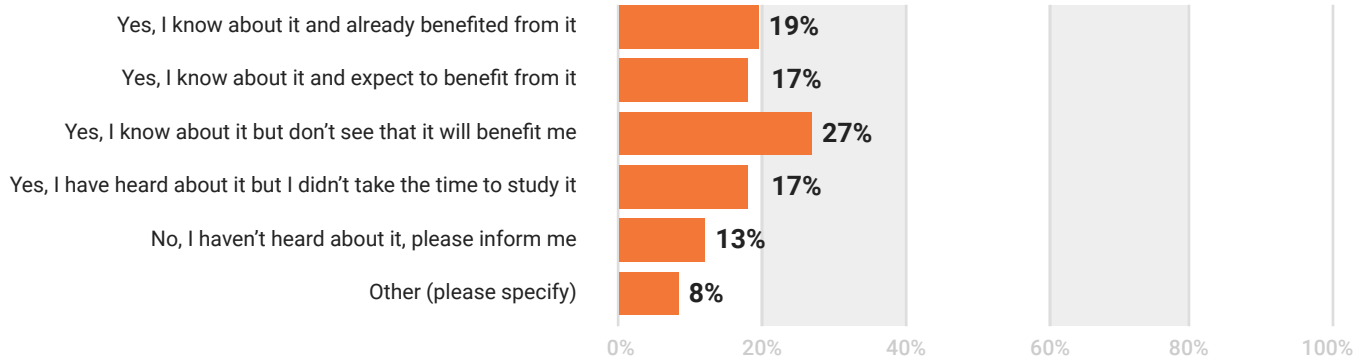


Flight Hours per Type of Operator (2020 vs 2019)



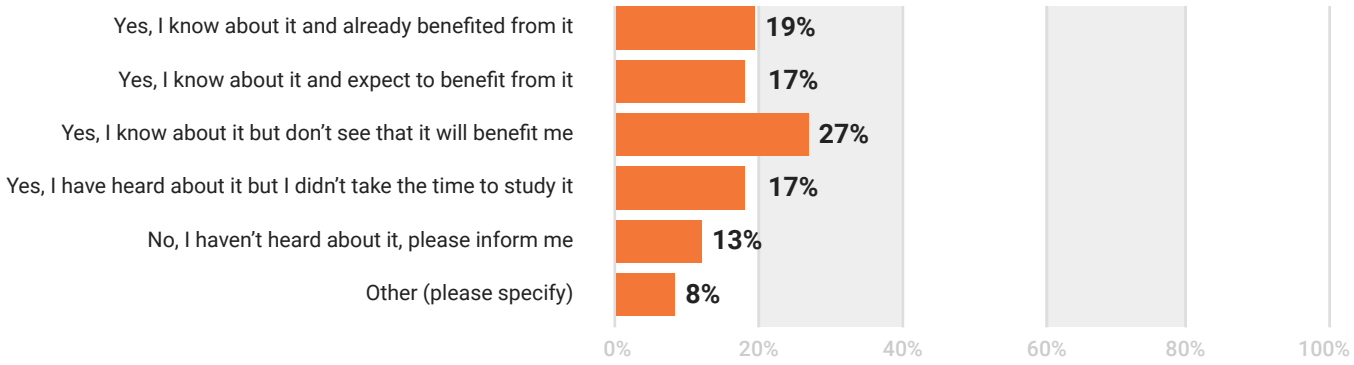
3. Maintenance

Have you heard about Part-M-Light, the new maintenance regime that can help to simplify aircraft maintenance and bring down costs?



80% of respondents had heard of Part-ML
Including 44% of respondents who heard about it but don't plan on using it or don't know enough about it to decide

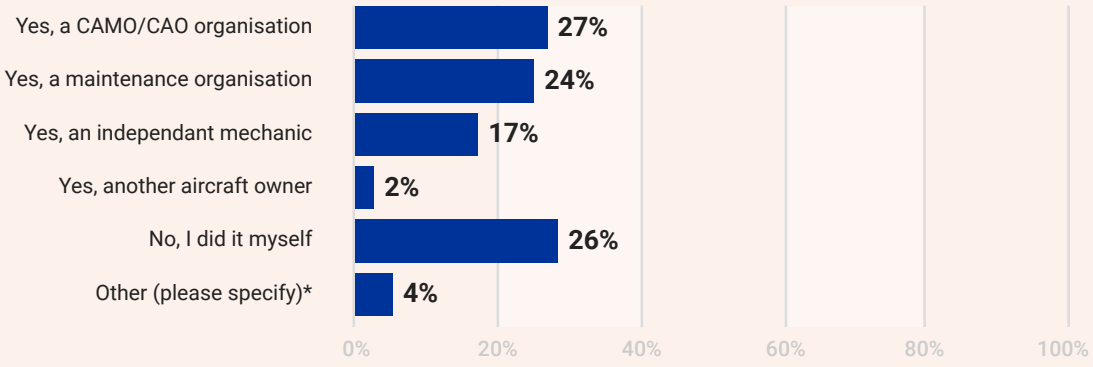
How did you benefit from the new Part-ML regulation?



27% of the respondents wish they had more information about Part-ML

36% of the respondents are using Part-ML or expect to be using it in the future

Did somebody assist you?

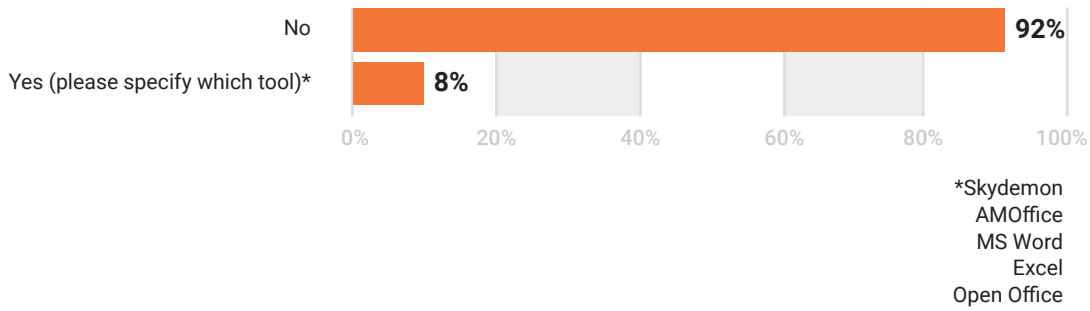


*EAS Experimental Aviation Switzerland
DULV
DAEC/NRW

71% of the respondents using the Part-ML needed assistance

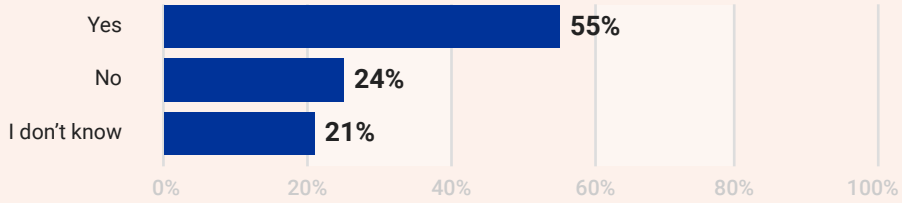
26% of the respondents didn't need assistance

Did you make use of a software tool?

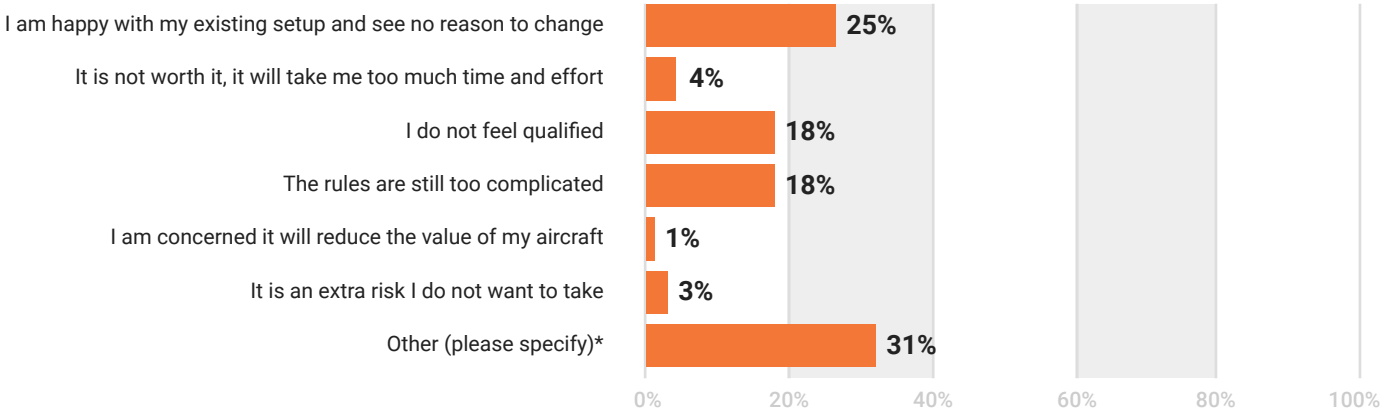


*Skydemon
AMOffice
MS Word
Excel
Open Office

Did you base it on the MIP (Minimum Inspection Programme)?

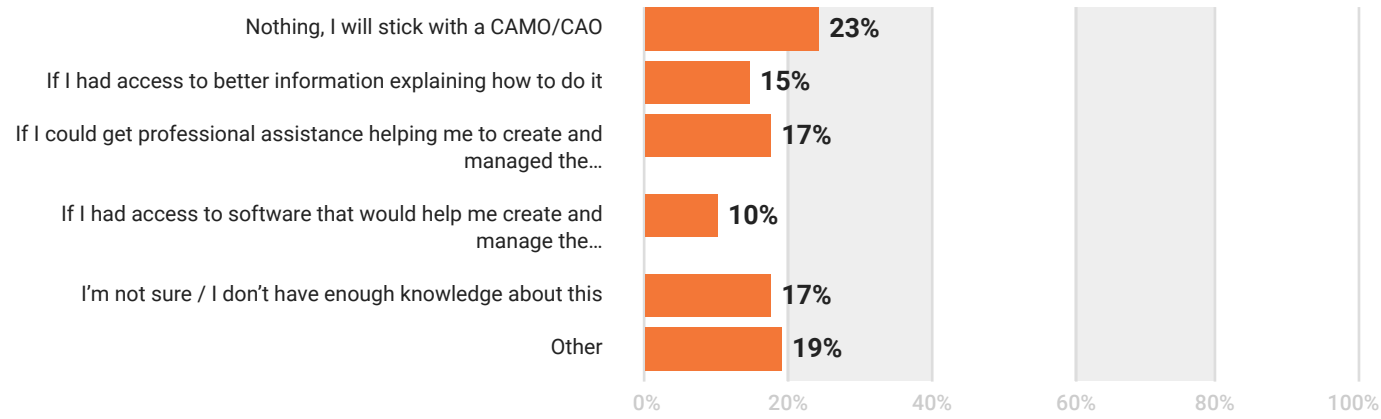


What are the main reasons you so did not use the new possibilities in Part-M Light? (select all that apply)



*Annex 1 : Homebuilt, vintage (CNRAC), ULM
FAA aircraft
Mechanics/shop not interested
Nature of organisation DTO requires CAMO
Non-Commercial SPO
I don't deal with maintenance

What could make you decide to opt for a self-declared maintenance program?



Comments specific to maintenance from participants of survey:

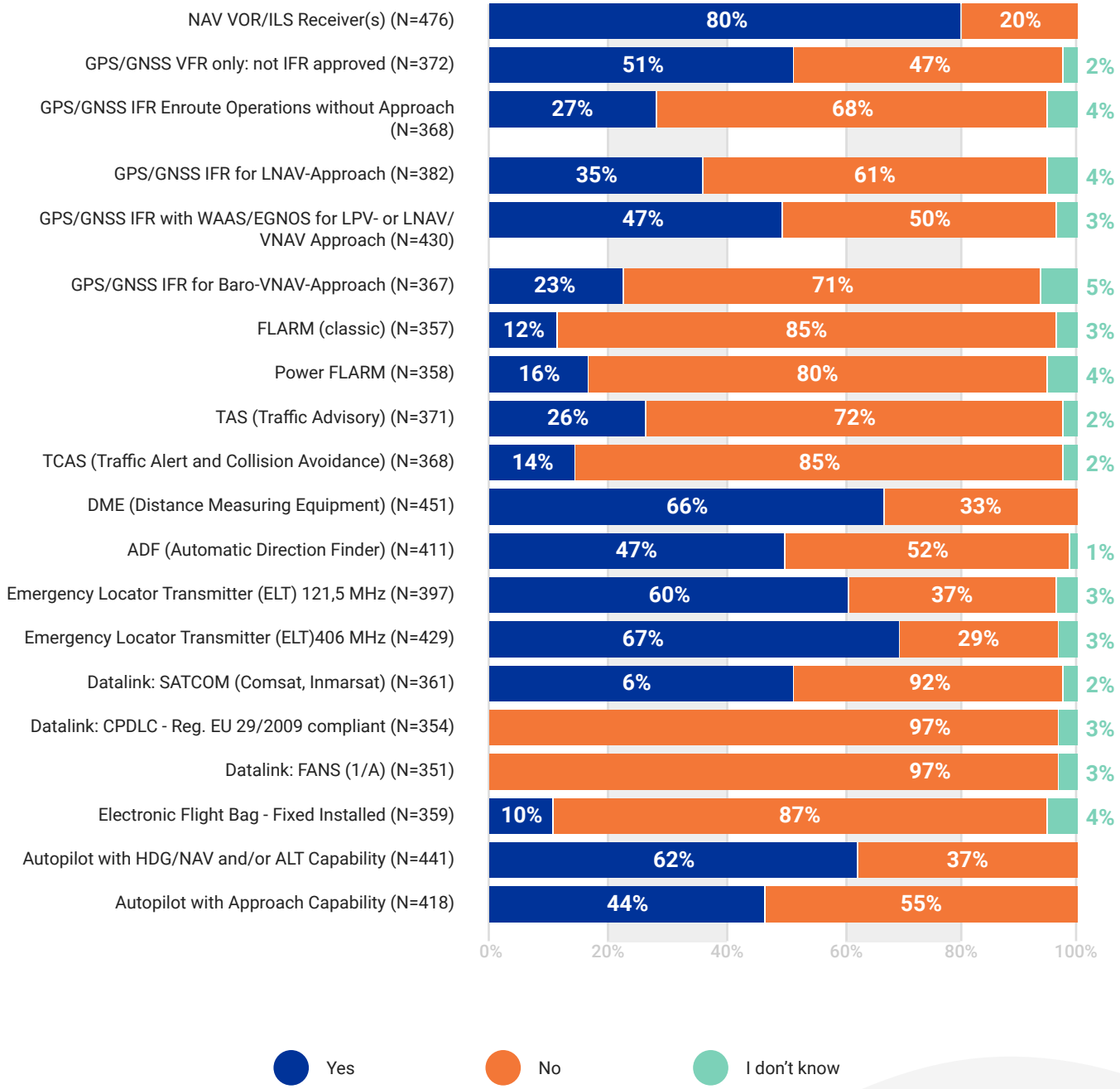
"After 40 years flying, GA could benefit from a VERY critical investigation into how pilots and owners are extorted by maintenance and ATO's. These have a vested interest in making the pilot/owner believe that he/she is a kind of toddler doing state-hostile activities and has nothing to say at all - except paying handsomely without questions. This behavior is much accommodated by authorities (the 'incrowed circuit'). AOPA should pay attention to this and defend the interest of owners!"

"Make the list of pilot/owner maintenance more extensive."

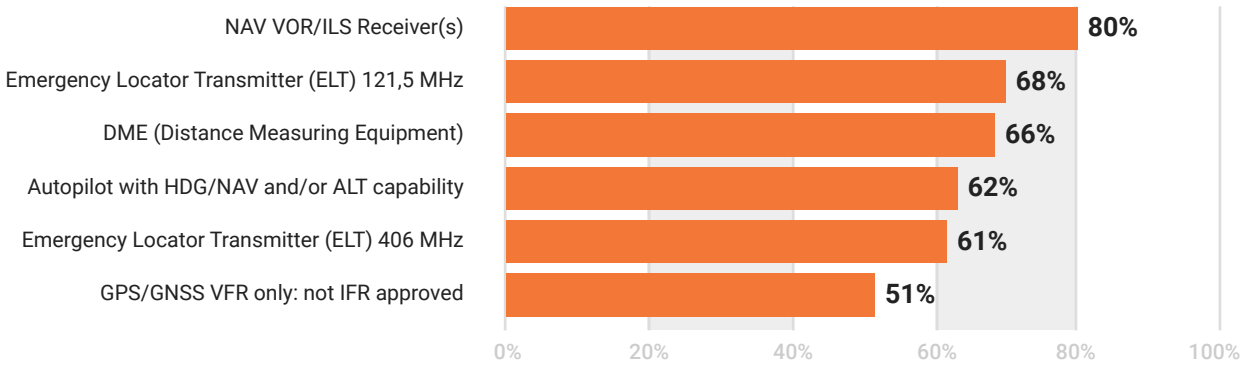
"Cost of private ownership due to regulations on maintenance program. CAMO Part M-light has no reduced costs for helicopters. MTOW 2500LB. Cost for ability to operate commercially is not feasible.."

4. Instruments

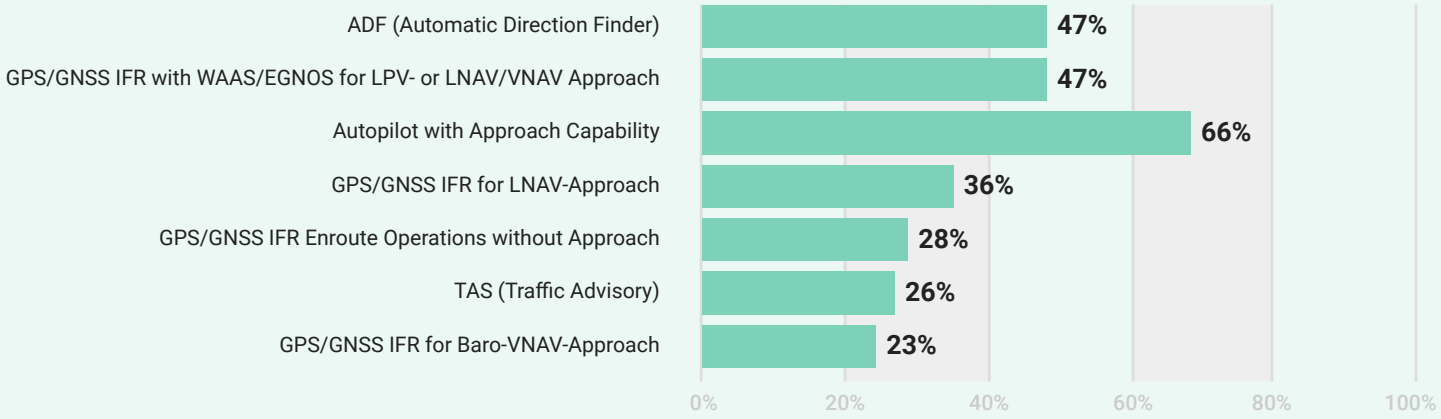
Type of instruments in the aircraft SEP-MEP-SET ONLY



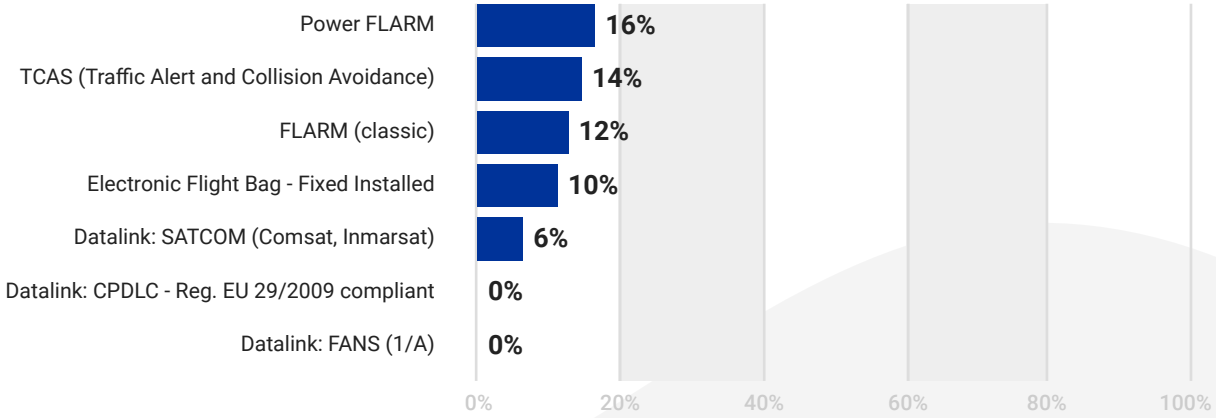
Types of instruments that more than 50% of aircraft have



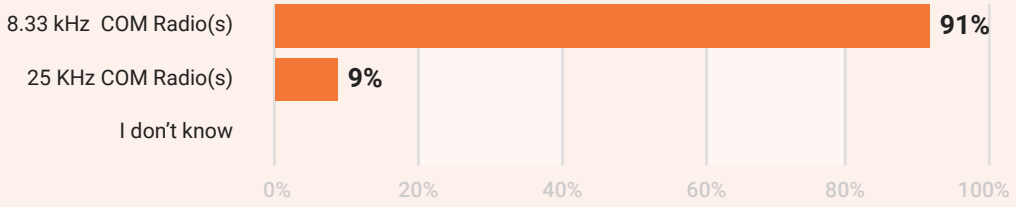
Types of instruments that less than 50% of aircraft have



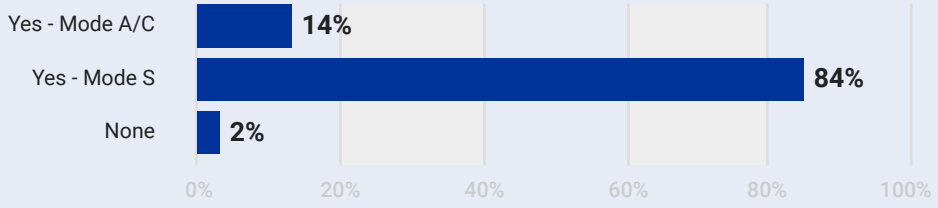
Types of instruments that less than 20% of aircraft have



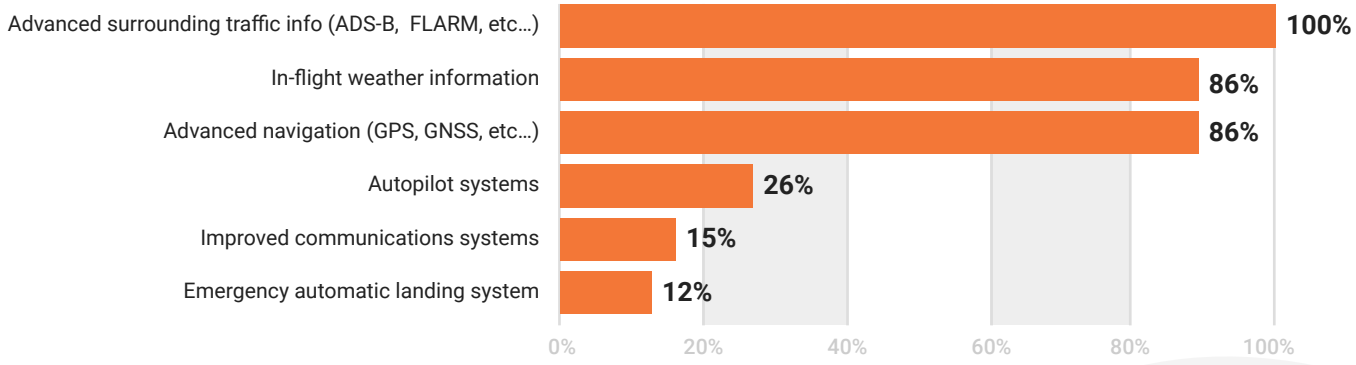
Type of radio in the aircraft (SEP/SET/MEP ONLY)



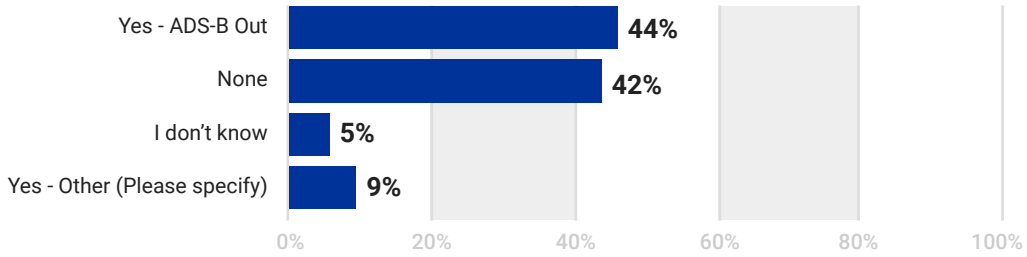
Type of transponder in the aircraft (SEP/SET/MEP ONLY)



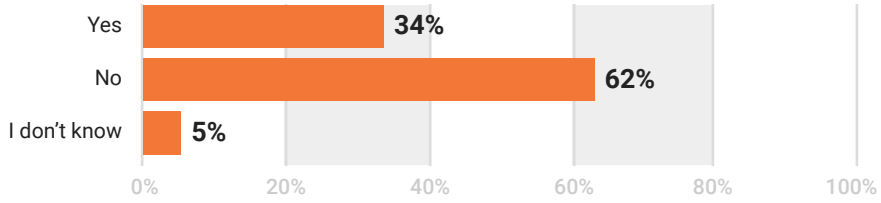
What technological improvement in GA avionics would you consider to be the most important? Please select your top 3, in order of importance.



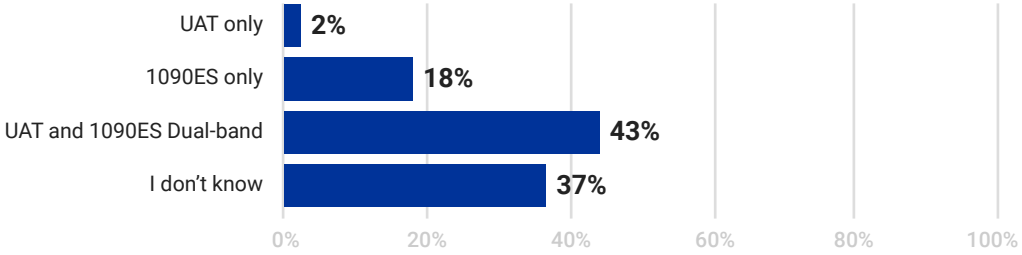
Does this aircraft have an installed ADS-B Out or other electronic conspicuity device? (SEP/SET/MEP ONLY)



Does this aircraft have an installed ADS-B In receiver ? (SEP/SET/MEP ONLY)

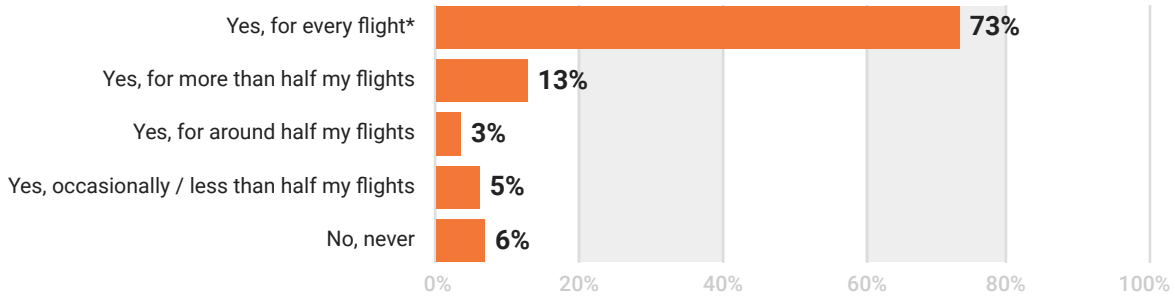


Which ADS-B In receiver is installed in the aircraft? (SEP/SET/MEP ONLY)



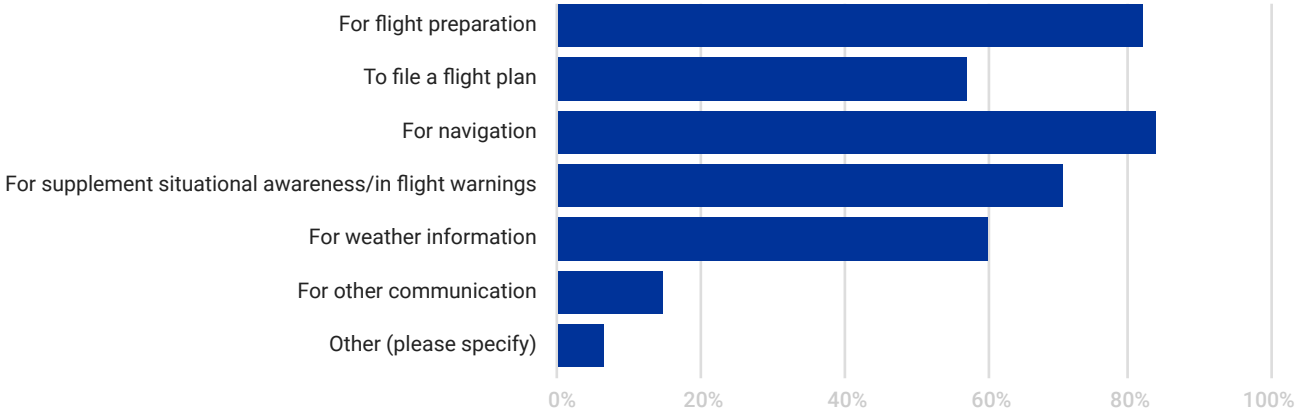
61% of participants would me more likely to buy an ADS-B receiver if weather, traffic and NOTAM information were to be available in flight

Do you regularly use any mobile phone/tablet applications in the cockpit?



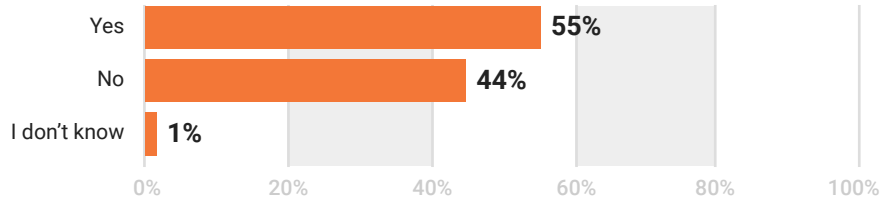
*Detailed view here below

If you regularly use any mobile phone/tablet applications in the cockpit, find here below the reasons why:



5. IFR

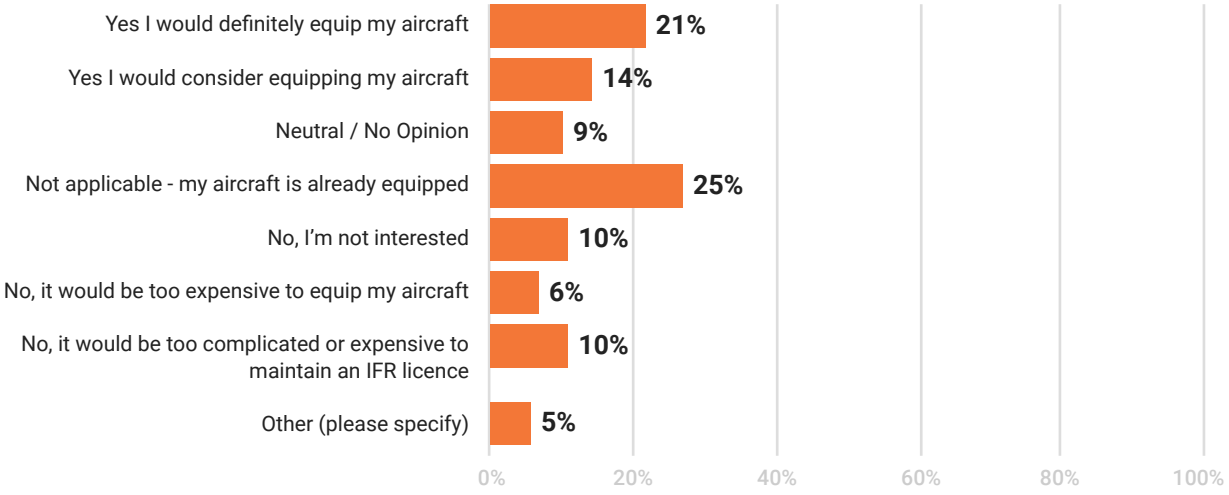
Is your aircraft certified for IFR ?



278 aircraft responding are certified IFR

223 aircraft responding are not certified IFR

If more local airfields had IFR approach procedures based on GPS/GNSS, would you be more likely to equip your aircraft?



25%

25% of the aircraft are already IFR certified

35%

35% would equip their aircraft or consider it if more airfields were equipped IFR

31%

31% of the aircraft would not be equipped even if more airfields were equipped IFR

9%

9% gave no opinion on the subject

Comments from participants of the survey related to IFR

TRAINING

IFR Training using video instruction such as KING SCHOOLS training course rather than just books with little or no guidance and students memorizing Q&A rather than really understanding the subjects. No need to re-invent the wheel, just follow the FAA system.

AIRPORT

More GPS/GNSS-Approaches for non-instrument runways

Better airport infrastructure for IFR, better traffic management in Europe, more reasonable prices in some countries like e.g. Italy, better access to IR training for private pilots

ACCESSIBILITY

IFR for PPL should be achievable for anybody (cost!).

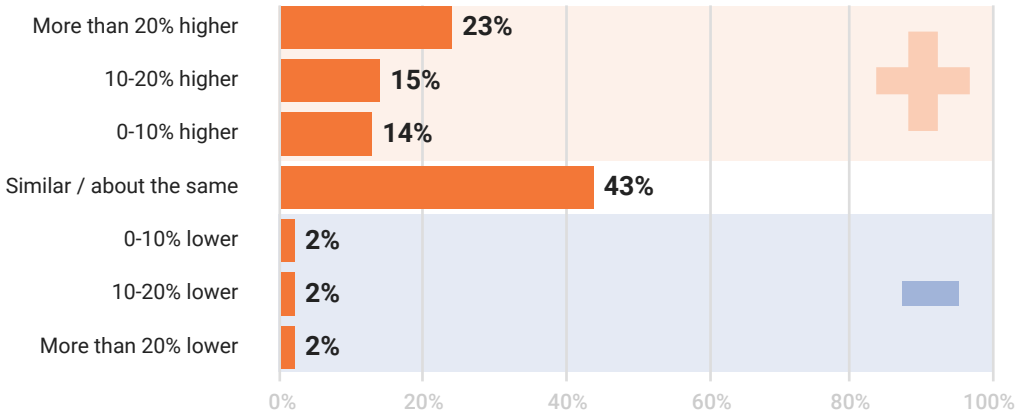
Easier access to non-commercial IFR training / certification

Make it as cheap and accessible to obtain an IR as it is in the US. Weather is the most frequent cause of GA accidents in Europe.

Remove the stupid protectionist barriers to private pilots obtaining instrument ratings in UK/Europe. An ICAO Instrument rating should be globally portable. If you can't pass the required annual proficiency check required by the country(ies) granting the IT then by all means refer for additional training but to allow a pilot to travel from California to Marseilles full IFR in an N-Reg aircraft but to restrict that same person to have to fly VFR in an EURO Reg aircraft is just plain daft.

6. Cost of flight

How do the hourly costs of your aircraft in 2020 compare to the previous year?



52% of the participants witnessed an increase of the cost by hour of flight

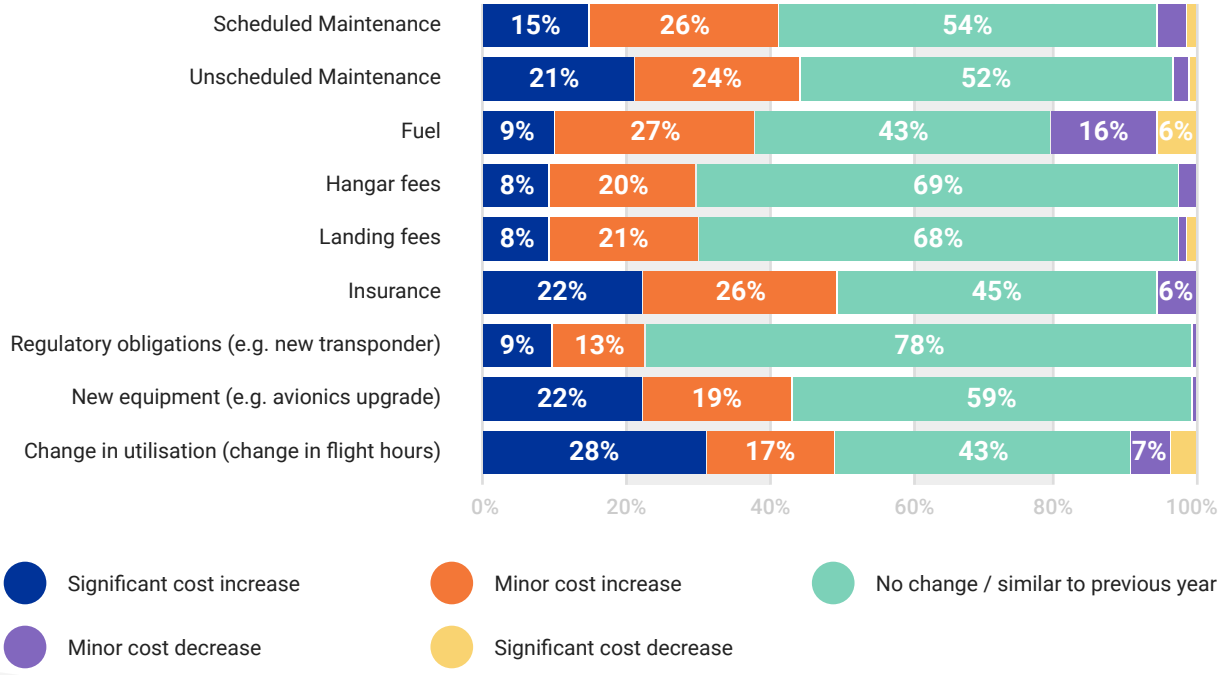
If the main reason for any changes in your costs per flight hour was not mentioned above specify here:

"The main problem is that flying has become so expensive that many have stopped flying to keep up their abilities, they only fly when they have a destination to fly to or have passengers who share the cost. These pilots with less than 15 hours per year flown becomes a higher risk for every year that they fly so little. An experienced pilot will get away with a few years of very little flying but when you see pilots with 25 hours in the last 5 years you worry".

"Reduce cost of upgrades to avionics to allow older equipment to be replaced"

"Make (CB) IFR rating and certified GPS / weather / traffic equipment easier affordable".

What were the primary causes of any changes in your flight hour cost in 2020 compared to 2019?



41% of the respondents had a cost decrease due to Scheduled Maintenance
45% of the respondents had a cost decrease due to Unscheduled Maintenance

Top 4 primary reasons for an increase in costs per flight hour

Insurance

Change of utilisation (change in flight hours)

Unscheduled maintenance

Scheduled maintenance & new equipment

If the main reason for any changes in your costs per flight hour was not mentioned above specify here:

"Decrease in 2020 costs over 2019 was MAJOR unscheduled engine costs in 2019"

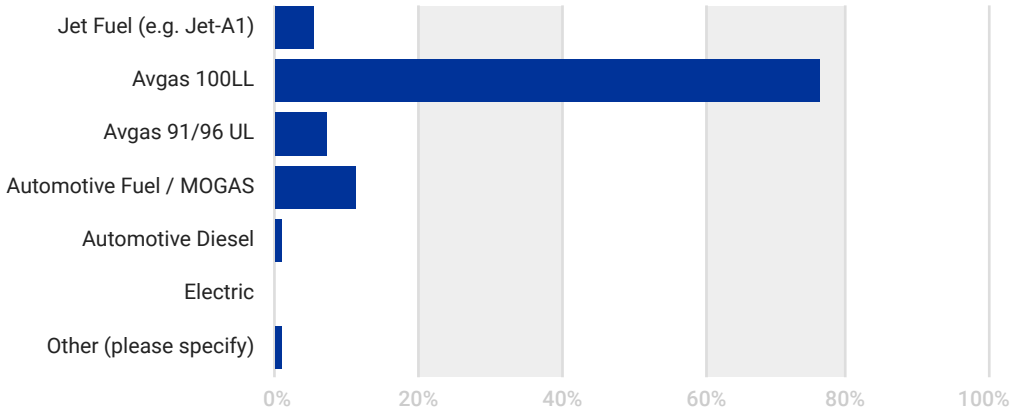
"Camo cost highly increased"

"Major repairs necessary"

"Unforeseen repairs of spinner bulkheads"

7. Fuel

What type of fuel does your aircraft primarily use?



65% of the aircraft using 100LL Avgas aren't capable of using unleaded 100LL Avgas
13% don't know if unleaded 100LL Avgas is an option

Comments regarding fuel in the survey:

COST

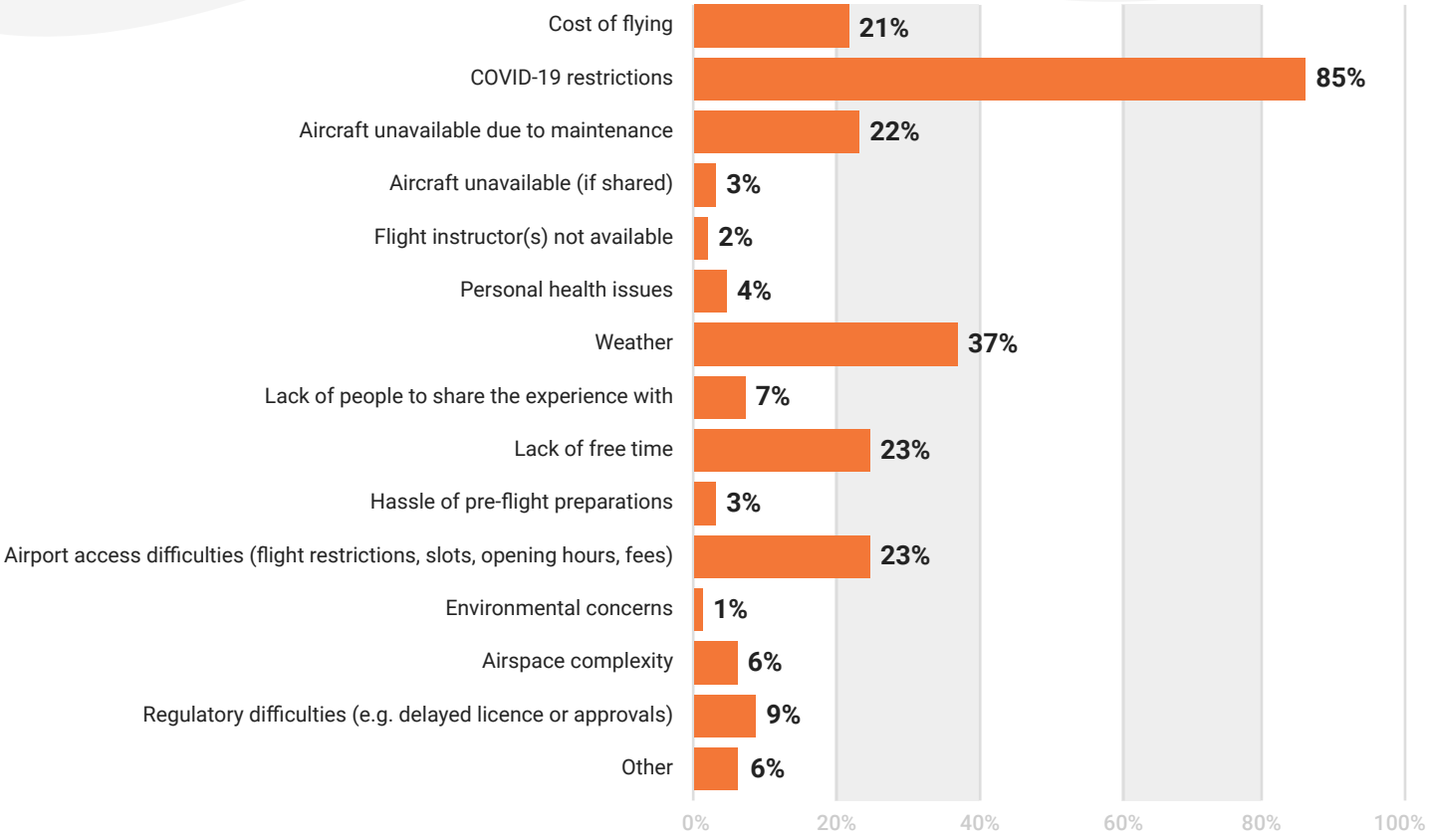
"Either remove the taxes on 100LL or certified piston JET A / Diesel engines for GA"

Work for reduced tax on aviation fuel. Both 100LL and Mogas.

As far as ecology goes, it is a total disaster that refuelers at many airports charge a fee if refueling with less than 1000l, we use very little jet and are punished for it

8. Constraints on Flight Activity

What has been preventing you or your aircraft from flying more in the last year?



85%

COVID-19 restrictions

37%

Weather

23%

Lack of free time & Airport access difficulties

22%

Aircraft unavailable due to maintenance

21%

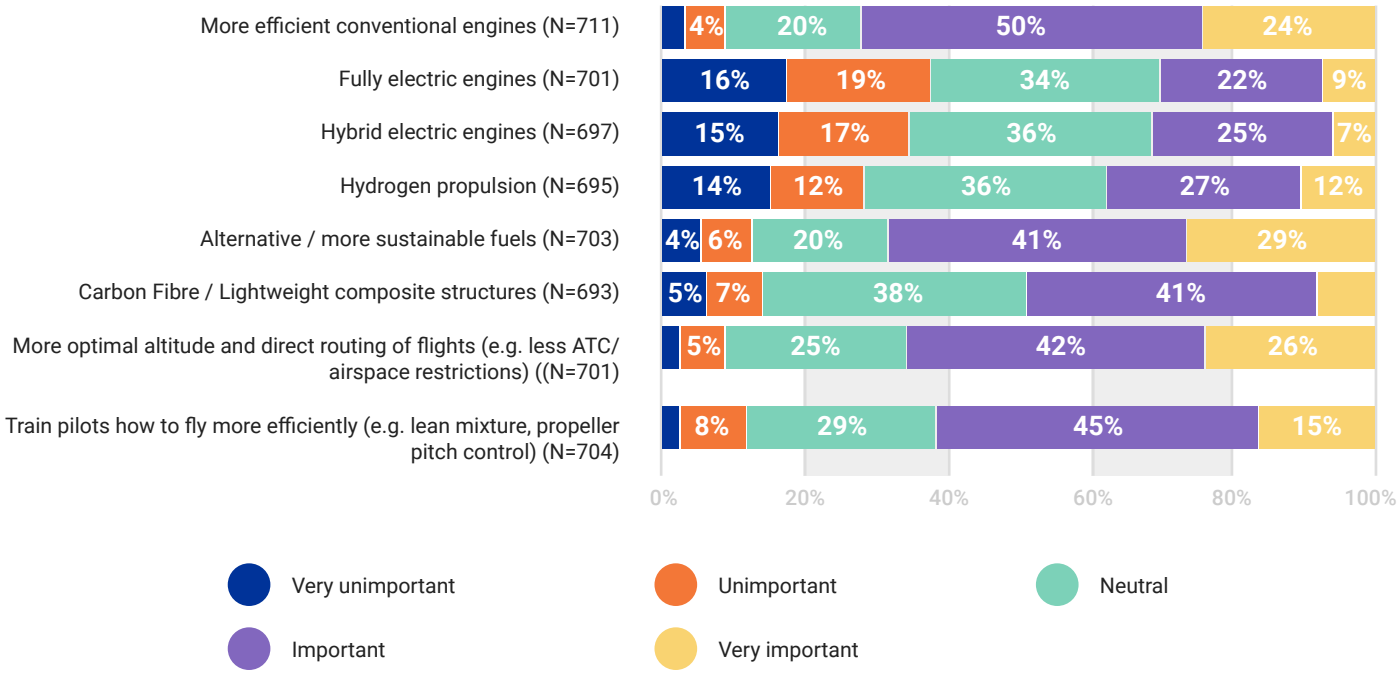
Cost of flying

What else has been preventing you or your aircraft from flying more in the last year?

Inflation	“Increased costs due to usual 2 to 3 percent said to be inflation plus insurance increase due to loss making price war between underwriters many of whom now no longer cover GA and especially privately owned aircraft”
Insurance	“Previous insurance company went insolvent and the competition in Sweden is now non-existent meaning a 100% increase for me“
	“insurance increased“
New plane	“Import of the plane from the USA and assembly in France: no flight in 2020“
	“new aircraft“
	“2020 was my 1st year of ownership“
COVID	“Government COVID restrictions“
Health	“Lack of use due to illness“
Utilisation	“Similar fixed costs, lower utilization“
	“Decrease of flight hours = increase of fixed cost“
	“Standing charges apportioned over less hours. “
	“overhead spread on 50% more hours“
New technologies	“new exhaust fitted“
	“NEW 8.33 Radio equip. “
	“registration renewal, 8.33 radio requirement“
	"Avionics with 8.33kHz radio and Mode-S/ADSB-out transponder after the purchase of the aircraft in March 2020."
	“Electrification of the aircraft“
	“G1000 auf WAAS umgerüstet, neuer Transponder mit ADS-B in/out“
Maintenance	“Decrease in 2020 costs over 2019 was MAJOR unscheduled engine costs in 2019“
	“Camo cost highly increased“
	“major repair“
	“Unforeseen repairs of spinner bulkheads“
Cost of parts	“Spareparts more expensive“
Parking fees	“Parking fees example: lfmq +250%“
Relocation	“Relocation from USA to UK“

9. Environment

General Aviation's Environmental Impact: How important do you consider each the following to be as solutions to mitigate the environmental impact of GA?



74%

More efficient conventional engines

70%

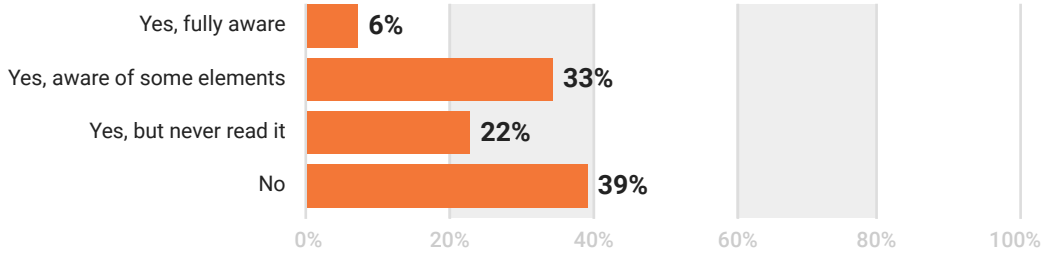
Alternative / more sustainable fuels

58%

More optimal altitude and direct routing of flights (e.g. less ATC/airspace restrictions)

10. EASA - CAAs

Are you aware of the EASA General Aviation Roadmap?

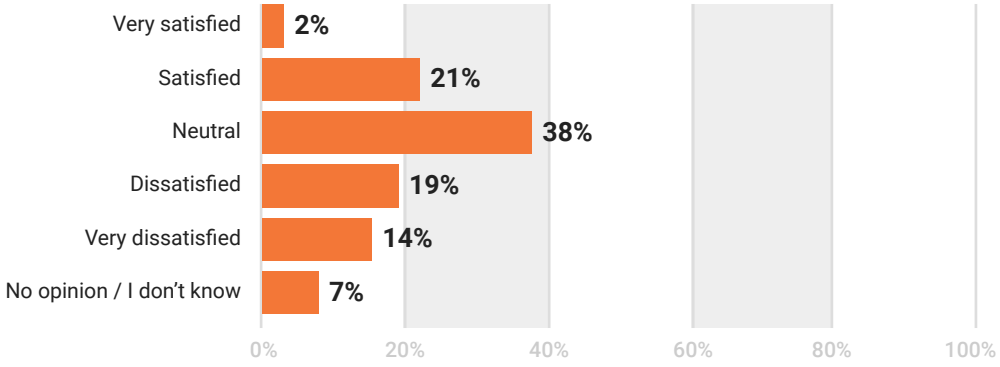


61% know about the GA Roadmap
61% never read it including 39% who didn't know about it

EASA GA Roadmap 2.0

The GA Roadmap 2.0 – the second phase of the GA roadmap – contains important strategic priorities that will help to ensure a safe and sustainable future for GA in Europe.
https://www.easa.europa.eu/newsroom-and-events/news/ga-roadmap-20-update-2020-making-ga-safer-and-cheaper

How satisfied are you with the support of the European Aviation Safety Agency (EASA) to General Aviation in Europe?



Written comments about European regulation:

"You must put more focus on more simple rulemaking and distrubution of rule changes. Also make a single/one entry point system to all EASA law and national differences. Full focus on allowing IFR cloud brake procedures to uncontrolled aerodromes and private airfields, this can be done by making more TMZ/RMZ areas and making transponder mandatory in all class E airspace or above 3.000ft".

"European Overregulation will end up KILLING GA"

"Way over-regulated with too many conflicting and disproportionate rules".

Written comments about EASA:

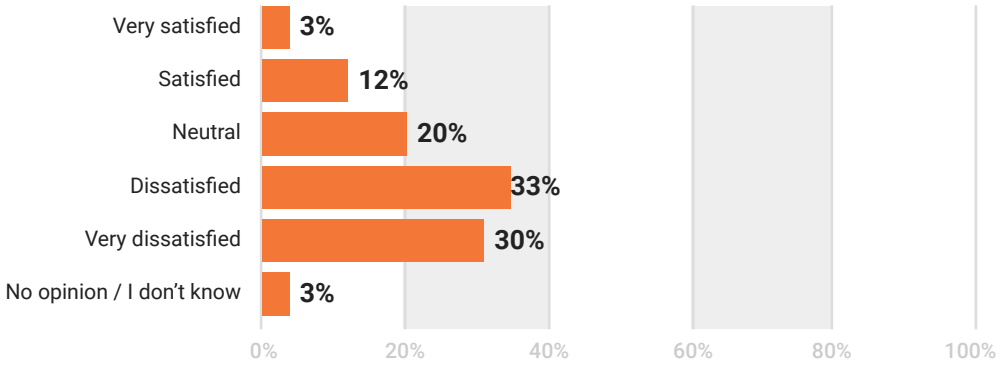
"EASA seems very willing to make all wishes come true in regulations, but this makes the regulations complicated. You should be careful with what you are wishing for, because you may get it!"

"The EASA should support GA aviation, makes it easier and cheaper. Training in Europe is way too expensive."

"It is time for EASA and the NAA's to take the lead from the FAA - they have more aircraft operating in the GA sector and hence much better experience. The EASA / NAA approach is overly bureaucratic, burdensome and expensive, and General Aviation in Europe is adversely affected (vs the US) as a result. This goes across all elements - whether it is licensing, maintenance, airworthiness etc - the European requirements are overly punitive on people in the GA sector, and over time the sector will die "

11. General comments

How satisfied are you with the support of your National Aviation Authority (NAA) to General Aviation in your country?



63% of the participants are not satisfied with the support from NAAs
15% are satisfied

General comments

GA in EASA countries should work like in the US. Airfields are for free and there are plenty. GA should not be considered as a hobby spirt or leisure but as a means of transportation.

Too disjointed and not intuitive - so unnecessarily challenging for many new and low hours pilots.

The age demographic is getting older and older. We need initiatives to bring younger people into the sport/hobby/industry.

Communication

I am an airplane instructor and also a glider instructor and examiner. I am also the president of my flying club. So I have a lot of information. Nevertheless the "standard" members and students of my club have difficulty accessing all this information. We try to transmit new information regularly when we receive it. However, this is a very tedious process!

I have difficulties to easily find the rules for European flights with a National Permit to Fly.

Politics

The pressure of the local associations to which the policies attach far too much importance in view of the minimal nuisances of general aviation (the Airbus, Boeing, yes, it makes noise. A Cessna that passes...let's be serious)

Harmonization

"Harmonisation of rules between European countries. Example of recognition of CNRAC by all European countries"

"All countries including the UK need to accept other countries licences and aircraft certifications as a matter of course and without further qualification."

"Still too fragmented and too many locally administrated "interpretations" No one place GUARANTEED to have the correct info"

"There is still a lot of work to be done to ensure that the texts are understood and applied in each country without differences in interpretation. Each country adds too many particularities. SERA is a glaring example"

"Reduce regulation to safe GA"

"harmonize and simplify european VFR airspace, especially simplify Italian airspace and french MOAs"

"More alignment between national airspace restrictions to make it easier to travel Europe. General aviation should have been an easier way to spread goodwill and encourage openness between pilots of the various states but it is apparent that EASA is more interested in regulating rather than encouraging GA. as a border flyer in Ireland I find it confusing and off putting to cross the border and tend not to do it"

"a single sky, a European aviation regulation that is FOR FLIGHT, not for restrictions and bureaucracy, guaranteeing for all interested parties a favorable"

Basic Instrument Rating

I've been looking forward to the Basic Instrument Rating since we've been talking about it. It's been a long time..

IR training should become possible in DTO. After all, instrument ratings provide for better pilots and less accidents.

Regulation

European Overregulation will end up KILLING GA

You must put more focus on more simple rulemaking and distrubution of rule changes. Also make a single/one entry point system to all EASA law and national differences. Full focus on allowing IFR cloud brake procedures to uncontrolled aerodromes and private airfields, this can be done by making more TMZ/RMZ areas and making transponder mandatory in all class E airspace or above 3.000ft.

Coming out of lockdown will flag some of the very daft non safety based rules we have, 3 month night landing requirement to keep legal when the old 5 landing a year worked well and better. Allowing PPL's to share P2 commercial saftey pilot roles as they were allowed in the 1980's to experience IFR, big airports, bad weather h

The promulgation of regulatory change is very important. Making regulation lighter, better, simpler is very important to ensure pilots fly as much as possible in order to improve safety.

I strongly disagree with your calling travel by personal aircraft "leisure flights from A to B" which is reflected in the EASA Air Safety Report as the Operational Category of "Pleasure." Nobody would ever call your driving hundreds of miles by car for whatever personal reason "leasure driving". But this wording puts Private General Aviation into the category of a (useless) hobby just for pleasure and opens the doors for all those who are just waiting to further reduce private flying.

Way over-regulated with too many conflicting and disproportionate rules.

IFR

Yes fight against abusive handling rates, require PCL equipment accessible 7/7 at IFR sites, develop GNSS approaches, make TAF mandatory at IFR sites.

The more PPLs who have IFR compliant the better.

Not allowing another PPL's to be exempt from the ordinary passenger rules when some despite no instructor rating can add great value and enhance learning from each other.

Pilot licencing

Now to pass a multi-engine, ifr, turbine qualifications... which force to pass through a school is a hindrance and a prohibitive cost, then the renewal of qualifications is an ordeal... for what gain safety.

Please simplify licensing.

Current licence situation dreadful. Some licences not covering EASA aircraft, has to be sorted out

Training

Better training (recurrent training - greater focus on causes of fatal accidents), more frequent flying, better access to airfields. More regulation is NOT the answer. Better regulation will help.

Flight plan

Requirement for filing ATC Flight Plans

Weather

Current situation: no monitoring weather assistance (other than transmitting metar). How is it possible in 2021 that a controller sends you in a thunderstorm without any interest in the thing: this is not his problem. When EASA is questioned, all you have to do is have proper equipment on board. Another remark from EASA: what you say surprises us because there is a weather radar image in each control room. No comment! Have a good day

Electronic conspicuity

ADS-B is NOT the solution. privacy and security is dismal. more digitalinformation uplinks (weather, airspace status etc...) needed but via something like starlink satellites, XM geostationary or so and not via an ADS-B ground network that will have problems e. g. in mountain valleys

Need adsb traffic and weather, LPV approaches needed everywhere without requirement for atc

Avionics feature rather too highly here, in my view.

Improve CS-STAN with more options like installation of autopilots, navigation equipment and other improvements like installation of seats with headrests to benefit flight safety.

We urgently need Electronic Conspicuity. There are numerous drones in the air which we can not see or detect.

ADS-B out is still a problem for small aircraft and the fragmentation with PFLARM is not helping. Cost prohibitive in many countries.

Better access to IFR is needed, including airport infrastructure in some countries (e.g. Switzerland),

Use of GPS/GNSS and other technologies to simplify and reduce the volume of Controlled Airspace below 10,000ft would improve general aviation safety by removing bottlenecks around major airports.

Airport

Increased mandatory handling fees simply increase cost of flying significantly .- so often you avoid some airports with lots of nice ifr options, and try to land on a smaller vfr field to save several hundreds eur. That is a safety issue to GA.

GA access to airports due to Airside security causes expensive and hazzle. ESSB in Stockholm is a prime example.

Airport accessibility, especially wild price policy, mandatory handling, insane procedures are main GA development obstacle in EU

Airspace

Disproportionate place of military air spaces in the French sky. Real mismanagement in the creations of ZRT and other reserved spaces. Difficulty of easy access to aeronautical information. Obsolete French paper documentation (IGN maps, Radionavigation, ...)

Some areas become almost impossible to fly through due to airspace restrictions. Belgium, much of Netherlands much of France/German border area, etc.

lower airways for winter flying. Not everyone is deiced that likes to fly for business.

Airspace is far too complex and easy to infringe. Airfields with limited movements are given class D airspace, and then fail to provide a reasonable service to General Aviation. Danger areas are far too extensive. It is daunting to undertake a long distance trip VFR from say the UK to Germany due to airspace issues - why not have VFR corridors up to 10,000ft? GA should receive more encouragement to explore beyond a area of comfort which is flown regularly.

Experimental

Hello, I fly in the permit to fly category (experimental) it would be great if access to all European countries could be harmonised.

ULM

Not enough encouragement from the by pilots or clubs to develop the ULM trip in France and abroad!

When will European harmonisation for MLUs take place?

Drones

The effects on GA regarding temporary reticted airspace for drone trials. Possible future permanent drone sites and corridors that could restrict operations from small GA airfields .

Drones. Huge scare for us!!! Should be banned and only for licensed and work use. To dangerous for GA!!

EASA

Overall, I find that EASA has still not incorporated that could not be applied to the GA and that light aviation, the regulatory framework for air transport, is also important. This is due to the cumbersome nature of the cost, efficiency, dynamism and innovation of general aviation.

EASA seems very willing to make all wishes come true in regulations, but this makes the regulations complicated. You should be careful with what you are wishing for, because you may get it!

The easa should support GA aviation, makes it easier and cheaper. Training in Europe is way too expensive.

EASA should review and cancel any TC holder that does not provide active support for its responsible types.

It is time for EASA and the NAA's to take the lead from the FAA - they have more aircraft operating in the GA sector and hence much better experience. The EASA / NAA approach is overly bureaucratic, burdensome and expensive, and General Aviation in Europe is adversely affected (vs the US) as a result. This goes across all elements - whether it is licensing, maintenance, airworthiness etc - the European requirements are overly punitive on people in the GA sector, and over time the sector will die