

Flying a Drone professionally Get to know how to become a good drone pilot Answer to questions received during the EASA livestream December 10, 2020

The EASA Drones team was very happy to have received many very good and practical questions during the Live stream session for the **Professional Drone Users on December 10, 2020.** You can find our answers further below. Some have been grouped together since to a certain degree are part of the same scope. We grouped the questions under the following clusters:

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Flying drones for fun

Answers to the many questions from viewers on the open drone category held on December 09, 2020 can be checked <u>here</u>. Some pertain to the professional category as well.



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New Drones regulation

As you all know the new European Drone regulation for commercial and leisure users is coming into force at the end of December 2020. It will make it easier to fly a drone under the same conditions across Europe. Flying a drone is great fun, a rewarding hobby and has incredible business potential. The drone's industry will create many benefits for our communities and will grow significantly over the coming years. To keep everyone safe and to make sure we share the airspace safely with everything else that flies, it is vital that the whole drone's community understands the new drone rules.

Do you have more questions?

If something is not clear to you or want to know more, send your question to: <u>SafetyPromotion@easa.europa.eu</u> or <u>drones@easa.europa.eu</u>

Want to have more drone news at EASA?

Visit us on:

https://www.easa.europa.eu/drones

Remember to subscribe to keep updated on what is changing about how you fly your drone and how to be a

good pilot. Follow the 3 steps below:

- 1. Create an account with social logins or use the normal registration form.
- 2. Follow the category "Drones"
- 3. Decide how to stay informed (Personalised homepage, email or push notification)

Livestream questions and answers

General questions

Q. Are you involved with the Military regulations?

- Is there any connection with NATO approvals for military/defense use?. Does the new EASA regulations comply with NATO requirements?
- A. The Military have their own regulations. They sometimes have a different scope. However, some personnel employed in the EASA drone team have a military experience. In the past they participated in the development of military regulation. The civil EU regulation makes use of the experience coming from the military. This facilitates the dual use of drones.

Q. NAA of Hungary, the website is not working

A. Thank you for letting us know. This is the link:

https://www.kozlekedesihatosag.kormany.hu/hu/web/legugyi-felugyeleti-hatosagi-foosztaly





In the sub links you can only find guidance for requesting permit for temporary designated air space, restricted air space and form for notification of the operation with UAS (in English as well)

Nevertheless, HU CAA still does not have a dedicated site, where all the UAS information can be found, since they are waiting for the official publication of its national legislation. AS soon as this takes place, the website will be updated.

Q. Will the registration broker facilitate the exchange of Operational Authorization between NAA?

A. Yes

Q. Are competent authorities in Europe connected?

A. Yes, through EASA.

- Q. Is there an option to postpone new drone regulations introduction for a minimum of 6 months, due to the Covid-19 crisis?
- In these hard times, when Covid-19 grounds most aircraft traffic and getting jobs with drones becomes very difficult, why is EASA pushing these new regulations?
- Postpone new regulations and give drone pilots a 1 year transition time! After 01 January 2021. We will not be able to fly because there is no time for certifications!
 - A. We are aware of the pressure that COVID-19 brought on NAAs and the industry. The EU Commission already postponed the applicability of the drone regulation. It was originally planned to take effect on July 31, 2020 and it was postponed by six months to December 31, 2020.

EASA and the EU Commission are supporting all National Aviation Authorities (NAAs) to implement the regulation on time. Drones are emerging as useful support during the COVID crisis.

You can follow the timeline of applicability of the regulations under this link: <u>https://www.easa.europa.eu/drones-regulatory-framework-timeline</u>

- Q. It seems that the costs for authorization requests vary wildly from CAA to CAA. Don't you think that this will disturb the European market?
 - A. Each <u>EASA State</u> will define fees based on their assessment of the cost.

Training / Training Centres / Pilot Licenses

- Q. Are there going to be any changes in the foundation of new academies?
- What are the minimum prerequisites, according to the new legislation, to start an instruction Centre as a business?
- Any change regarding UAS instruction centers / flying academies?
- Can training organisations be "authorised" "designated" or "qualified" entities and approved by their NAA to issue EASA certification for the completed training?
- Do the pilot need to be certified when operating in open or low risk specific category?
- Is the remote pilot License comparable to a normal pilot license or how much less complex will it be?
- Actually in France it is required to have a practical formation with a teacher and an evaluation to be professional... Is this going to disappear?
- Requirement puzzle in specific: how to obtain these requirements officially? Now, it seems you will have to follow x number of courses in private schools.





- There seems to be no such thing as a specific license. Seems more like a puzzle of requirements ~ specific SORA? How to know what will be required?
- What criteria are used to define assessments in the training centers for the specific?
- Which license will be needed to operate special and certified category drones?. My local aviation authority has no information about that.
- How about education for drone pilots that want to become active in the Specific category? Why isn't the curriculum clear at this point?
- Can you discuss the training syllabus and certification of both pilots and operators in the Specific category?
- Where can I find a training syllabus for Remote Pilot according to Article 8?
- To operate an FPV drone for commercial purposes, what certification does your observer need to obtain?
 - A. The Regulation provides very flexible requirements. The UAS operator will propose to the NAA the training needed to make the operation safe. EASA is developing the syllabus for some modules (e.g communication, night operations etc..). With the increase in the level of risk, the use of schools will be more important. For operations classified in high SAIL the operator needs to use third parties, as training schools, recognised by the competent authority.
- Q. Can Member States force the use of Manned Pilot Licenses (PPL/CPL) for operations in the Specific Category?
- I had several exams for large drones. Why do I have to take them again? It's like taking several driving tests. This is a good example of EU bureaucracy!!
 - A. Manned Pilot Licenses may be required if it is necessary to ensure the safety of the operation, however it is not considered essential. In principle the Operator is allowed to propose the training that best fit its operation, reusing all training already conducted (to be accepted by the NAA).
- Q. If you are just a trained UAV pilot, not an operator with A2 or GvC licence, can you just work anywhere in Europe?
 - A. All certificates issued by a NAA under the EU regulation will be valid in all other EASA States.
- Q. What about the needed training/certificates? Formation /Academy?. I have spent around 2000€ for my professional certification
- My Polish license does include an FPV entitlement up to 200 m distance and 50 m height. More so if I have an observer. Will I keep that after 1 Jan 2021?
- I have a Polish VLOS/BVLOS license I acquired this year. What happens on 1 January? Will it become an EU license? Or will it be recognized in all of EU?
 - A. <u>EASA States</u> have time until January 31, 2022 to convert, according to the EU regulation, all certificates issued based on the national regulation.
- Q. Are European licenses granted for life or do they need to be renewed? Is a medical exam a requirement? Does it need to be repeated every so often?
 - A. Training for the open category has a 3 years validity. For the specific category, it will depend on the type of training and the validity will be based on a proposal from the UAS operator (to be accepted by the NAA).





- Q. If the regulations start on 31 December 2020, how can I get my "big drone driver's license" before that, and be ready?
 - A. Certificates issued under the EU regulation can be issued only after the applicability date of the regulation, so starting from December 31, 2020.
- Q. Language of certification training common throughout all MSs? Common poll of exam questions?
 - A. Unfortunately a common language is still not available in the EU, so each EASA State will provide the training in their own language. However we are suggesting to also have an English version.
- Q. What will the European license look like? Is it a physical one, or a digital number?
 - A. A possible certificate issued for the specific category may look like the one for the open category, please see:

https://www.easa.europa.eu/the-agency/faqs/drones-uas#category-training-requirements-in-theopen-category-

- Q. In the self-practical training there is practical training without e.g. GPS required. Well, most of the new drones e.g. Mavic Air 2 you can't switch that off...
 - A. GPS is always required.
- Q. DRONES TEC Hello. In the specific category, STS scenario, what is the process to ensure that the pilots get the minimum regulation knowledge and flight experience?
 - A. The training requirements for the STS are defined in Attachment A to Appendix 1 to Regulation (EU) 2019/947.
- Q. Is A2 pilot license of open category a precondition to get a pilot license for the Specific category, or one can obtain specific category license without A2?
 - A. No it is not a precondition.
- Q. EU 2020/639 Appendix 3 (1): how is it expected to prove a "clear separation" between training activities and other activities?
 - A. The instructor should not report directly to the same person in charge of the operation.

Technical Requirements / Certification / Retrofit

- Q. I would like to know what are the dimensions for the Class 5 and Class 6 drones categories. Thank you
 - A. 25 Kg and a maximum dimension of less than 3m.
- Q. How can we establish if a drone has to be classified as Class 5 or Class 6 category?. I think it depends on the manufacturer's details but also on the purpose/tools used.
 - A. The manufacturer will affix a class label on the drone, after demonstrating compliance with all the requirements defined in Regulation (EU) 2019/945.
- Q. Is it true that for the specific category, there is no chance that a drone quadcopter can be certified, but it should be an hexacopter?
 - A. No. the operator may propose any configuration, demonstrating that the drone used provides the minimum safety level.
- Q. Can existing drones be certified?





A. In principle yes. However, normally a drone is designed to meet some certification requirements. Therefore it is difficult to show compliance if the drone was not designed with to follow the appropriate requirements.

Q. Do you have a standard for parachute similar to ASTM f3322?

- A. EASA is working to develop an ETSO for systems such as the flight termination system. In this case a parachute developed according to ASTM f3322 may be a good candidate.
- Q. What requirements will be necessary to be able to carry out maintenance and repair of drones professionally?
 - A. OSO#3 of SORA provides the safety objectives for maintenance. EASA will propose next year a dedicated regulation detailing the maintenance requirements.
- Q. How will the authorities be able to control that the maintenance and repair of drones is carried out in an authorized and legal way?
 - A. Depending on the level of risk an approved maintenance organization may be required
- Q. If I have custom built drone and NAA asks for certification to get permission to fly, what should I do to get drone certified?
- How does a manufacturer can already apply for certifications for drones currently used by operators, so that they can continue operating as of 1/1/21? (edited)
- will certification be needed for each and every drone or drone model?
 - A. Depending on the risk of the operation an EASA type certificate (TC) or a restricted TC according to Part 21 may be required. However, a risk assessment should be carried out to identify the SAIL of the operations that will define the technical requirements needed to ensure the safety of the operation.
- Q. We operate private built UAS, when shall we ask for the conformity assessment for open or specific category?. If we operate them, or just if we sell/ lease them?
- What is the definition for privately-build, can it be mixed with commercially operated?. Which license is needed then?
 - A. Privately built means that the drone is developed for the own use of the manufacturer, it is not purchased. In this case the conformity assessment of the drone may not be required (depends on the result of the risk assessment, it is never required for operations in the open category). In case you want to sell the drone then:
 - i. if it is operated in the open category or standard scenario, it needs to follow the process to be put on the market according to Regulation (EU) 2019/945 and you need to affix a class label.
 - ii. If it is operated in the specific category, again the requirements are defined by the risk assessment. Compliance may be declared or a type certificate or restricted type certificate issued by EASA may be requested
- Q. How do we overcome the autonomy limitation of UAS?. Should batteries be changed on the way back?. In the event of wind, the aircraft may spend more energy.
 - A. The operator needs to ensure that the operation is safety conducted and the range of the operation should be limited such that the drone has enough power capacity to complete the operation, considering also the possible wind conditions. The operator is required to identify the contingency





procedures to safely land in case the meteorological conditions does not allow the drone to reach the final destination.

- Q. To reduce impact of ground risk, terminal velocity is an important factor. How besides parachutes reduce impact (formula:kg+m²) hexacopters are not sufficient?
 - A. The operator may propose to the NAA different ways to ensure safety. The NAA will evaluate if they are sufficient.
- Q. If we are in the Cat SPECIFIC High Risk, the UAS has to be certified but how: based on the OSOs from Cat SPECIFIC High Risk?
- A Cat SPECIFIC High Risk UAS is certified but do we have to operate it in the Cat CERTIFIED and apply EASA parts (-21, -145, -M)?
- When will the technical requirements/certifications (of the drones) be available for medium and high risks operations?
- Does a company developing their own UAV systems (e.g. MR specific) need to get a Certificate of Airworthiness (CoA) in order to be allowed to fly?
- If amendments to current regulations for the certified category are expected for 2022, how can UAM manufacturers be sure that they are not overworking on safety? (edited)
- When EASA plan to publish some CS for UA with MTOM of more than 150 kg and with BVLOS capability?
 - A. Certified category means that in addition to the type certificate for the drone, issued by EASA, also the certificate for the operator and the license of the pilot is required. However in the high risk of the specific category it is required to use a drone certified by EASA (while the operator may not be required to have an operator certificate and the remote pilot may not be required to have a license). The certification requirements are based on the SAIL of the operation. EASA just published the SC light UAS (https://www.easa.europa.eu/document-library/product-certification-consultations/special-condition-light-uas) that will be the certification basis (the requirements for the design of a drone) for drones to be used in specific category are already available. EASA will publish shortly some additional guidance on how to apply already today a proportionate approach for the certification process.

The SC light UAS applicable to operations in SAIL V and VI will be published in 2021.

Q. Do you have to certify a commercial drone with the local competent authority or with EASA?. What is the difference?

- A. The EU regulation gives only to EASA the competence to certify an aircraft (and a drone). According to the SAIL of the operation, the operator may be allowed to declare (e.g. for SAIL I and II) that the drone used complies with the design related OSOs or a certification by EASA is required.
- Q. What is the weight limit in specific category? Can you explain on that?
 - A. There is no weight limit in the specific category, it all depends on the risk assessment: a very light drone flying over a stadium may be more risky than a heavy drone flying at low level in the high sea.
- Q. What is the VLOS distance? how this will be certified?
- What distance will be considered VLOS? In excellent weather conditions. Is there any visibility assessment to evaluate it?





- A. It depends on the size of the drone. A very small drones may be clearly visible only a few meters away from the remote pilot while a large drone may still be visible at hundreds of meter for. It is the pilot's responsibility to make sure that he / she can always see the drone.
- Q. Can existing drones (built by a manufacturer, not self-built) without class label be retrofit or upgraded (by the manufacturer) to obtain a class label?
- Will existing drones like Mavic mini need to have Class 1? Or only new drones?
- Can existing drones (built by a manufacturer, not self-built) without class label be retrofit or upgraded (by the manufacturer) to obtain a class label?
 - A. The market regulation in general does not allow retrofit of product already put in the market. However the EU Commission recently finalised a procedure to allow the retrofit for drone. The procedure may only be activated by the drone manufacturer.

See also: Open Category

https://www.easa.europa.eu/the-agency/faqs/drones-uas#category-drones-without-classidentification-label-'open'-category-.

Specific Category:

https://www.easa.europa.eu/the-agency/faqs/drones-uas#category-drones-without-classidentification-label-in-the-'specific'-category/

You will always be able to operate your Legacy drones also after January 01, 2023 in A1 if the weight is below 250 g or in A3 if below 25kg.

Q. is EASA certification the same than CE mark for UA?

- Can You please confirm our point of view? In case, once decided scope and stuff used on our drones, how is it possible to get their certain class?. By asking EASA?
 - A. No the EASA certification and the Class label according to the CE mark, are two different processes. The Class label process is applicable only for drones operated in the open category and in standard scenario. The EASA type certification is mandatory for all risky operations (SAIL V and IV) and may be imposed by the NAA for the operations in SAIL III and IV.
- Q. STS-01 requires a Class 5 drone. The proposed regulations for Class 5 says "(5c) include means to reduce the effect of the UA impact dynamics." What is that?. A parachute?

A. Yes a parachute may be a way to comply with this requirement.

BREXIT

- Q. The UK license / permissions. Will they be valid or not?
- What about English flying in Europe or Europeans flying in UK?
- What would a UK based commercial operator expect to need to fly within the EU?
 - A. (as of mid December 2020) We are not ready yet to define the impact of Brexit, sorry! We will update the BREXIT FAQs on this as soon as we have more information. Meanwhile visit: <u>https://www.easa.europa.eu/the-agency/faqs/brexit</u>

DRONES CLASS and CATEGORY

Q. Can you have the explanation of the "specific" category elaborated on your website? All it really says is "if it doesn't fall under the open category"





A. All operations exceeding the open category may be classified in the specific and are subject to a risk assessment conducted by the UAS operator. Based on this, the operator proposes to the NAA the operational technical and training requirements to ensure the safety of the operation.

Additional info may be found on the EASA website:

- <u>https://www.easa.europa.eu/domains/civil-drones-rpas/specific-category-civil-drones</u>
- <u>https://www.easa.europa.eu/the-agency/faqs/drones-uas#category-understanding-the-</u> <u>'specific'-category</u>
- Q. I still don't understand what I have to do in the "Specific category"
 - A. The power of this regulation is the flexibility to allow the operator to "design" the best way to conduct its operation. However, flexibility come with complexity. For this reason, EASA is developing several predefined risk assessments (PDRA) for the benefit of UAS operators to cover some of the most common operations conducted in EU. PDRAs identify possible mitigations and way to comply with the safety objectives (OSOs), without the need to carry out the SORA. EASA is planning in the next year to publish many PDRAs to cover the vast majority of operations. If still confused, contact us at: drones@easa.europa.eu
- Q. Where can I find a list of drones, telling in which category they will be placed?
 - A. Drones with a class label from 0 to 4 will fall in the open category, those with a class label 5 and 6 in the standard scenario, all other may be operated in the specific category. As transition time, until January 01, 2023, drones without class label and below 25kg may be operated in the open category. This is the most practical way to tell where each drone fits.
- Q. In which drone category the use of drone for goods application (spray application) would fall?
- In which drone category the use of drone for chemical application (spray application) would fall?
- Do the Regulations consider the case of spraying agricultural drone that currently support the connection of multiple drone to 1 controller and 1 pilot?
- In which drone category the use of drone for chemicals application would fall?
 - A. Spray for agriculture can be done in the specific category. Other applications need to be assessed via the SORA.

Drones without C Mark/ Bought before December 12, 2020

- Q. Can we still fly our non-C marked drones in the specific category close buildings and close to people? I don't really find any clear statements about that
- How about legacy drones without a Class 5/Class 6 label? Can we still use them in the Specific category? If yes, how? CAA NL doesn't give any information on this topic!
 - A. If the drone weights less than 2 Kg and the operation is conducted in VLOS keeping a distance of less than 50m from people, until January 01, 2023 these drones can be operated in the open category. If the weight is below 25kg, a PDRA-S01 for urban operations, recently published by EASA, may be used. The PDRA S-01 and PDRA-S02 cover the same operations covered by standard scenarios STS 01 and o2, without the need to use a Class 5 or Class 6 drone.
- Q. What about Class 1?. Will it be necessary to have it available 01/2021 as no drone has this yet?
 - A. No. A drone with class label 1 is not needed as of 01 January 2021. All drones up to 500 g may be used in open category A1 until January 01, 2023. Additional information may be found at:





https://www.easa.europa.eu/the-agency/faqs/drones-uas#category-drones-without-classidentification-label-in-the-'specific'-category (Scroll down to access the segment).

- Q. What happens to existing drones which do not have CE? Can I use them in the future?
- If a drone is purchased shortly (less than 1 year) before 31/12/2020, is there a procedure to continue operating it after the transition period of 2 years ?
 - A. You will always be able to use legacy drones in the open category (in A1 if they have a weight below 250g or in A3 if below 25kg). Drone without class label can also be operated in the specific category.
- Q. 2-year period: which drones could be used in under 500g / 2kg category, if used commercially? They need to be C class or not, old or new pilot license?
 - A. If the limitations of the open category fits your business need, than you can follow the requirements of the open category.
- Q. Does the current regulatory framework allow the operation of commercial drones over high populated areas? If yes, under which category and under which conditions

A. Yes in the specific category.

Q. How about homemade drones without CE marking? Can you still fly them in the specific categories?

A. Yes

- Q. What about FPV drones, which are basically often home built or mode modified models? How can they fly legally if they don't have a CE mark?
 - A. FPV is allowed in the open category, so you may follow it. Otherwise you need to conduct a risk assessment.

Operation Type / Flying Over People / Population Density

- Q. Will passenger drones be allowed in the near future in cities or at least rural areas?
 - A. EASA is working on this and will publish a proposal to adapt the regulations in the next years.
- Q. if you are a person or a company doing commercial/professional work for clients and third party using a camera you need to operate in the specific category.
 - A. Not necessarily, if you can follow the limitations of the open category and comply with the privacy regulation you do not need to operate in the specific category.

The use of a camera in your operation does not determine the category you fall under.

The category depends on the type of drone you use and the area you intend to operate. Your question provides too little information to say which category you fall under. But it is possible to carry out commercial activities under the open category with a drone with a camera, provided your operation matches the requirements laid out in the annex of Regulation (EU) 2019/947.

Please refer to your FAQ and the EASA Webpage for more details.

- Q. What exact operations could actually be done commercially in open category? Why this is not possible? (edited)
- So with the open category can somebody do commercial work?

A. There is no preclusion to conduct commercial operation in the open category.

Q. Flying a drone over a construction site to follow up the earthmoving, could that be in an open category?





- A. Yes you can operate in the open category: if there are people you can use drones with class label 1 or 2, avoiding flying directly over people. If there are no people and it is not close to a residential commercial or industrial area, you can use a drone with class label 3.
- Q. In Sweden lots of municipal offices use DJI phantom RTK for survey purposes in towns and over streets. How do suggest we will continue our work in future?
- Should the new regulation also apply to UAS operations of emergency services?
 - A. These operations qualify as state operations and are not required to comply with the EU regulation however the state may opt in. In case the emergency service is not conducted by the state, than the EU regulation applies.
- Q. Will the RPC for the Open A2 have a different standard to the RPC in the Specific Category? And if so what differences?

A. Most probably yes, it depends on the risk assessment.

- Q. I want to use a drone for commercial photography. A standard DJI drone below 900g. What are the procedures?. What's the difference compared to personal registration
- In which drone category the use of drone for capture/picturing fields would fall?
 - A. You need to register yourself as UAS operator. Considering the drone does not have a class label yet, you can operate in the A2 open category after conducting the required training. If you want to fly directly over people the operation is classified in the specific category.
- Q. How can we use old drones for real estate photography in residential areas?. For example, the common DJI Mavic 2 Pro. How is the transitional regulation applied?
- Q. In Portugal, night operation always is in a specific category and required license, even if in VLOS and below 120m. Are other State Members the same?
 - A. From December 31, 2020 the EU regulation will apply and night operations will be allowed also in the open category, unless the state will define a zone where night ops are not possible in the open category for security reasons.
- Q. What if I fly a 249 g drone fore surveying in daytime above high traffic?

A. This falls in the specific category.

- Q. In the future (actual discussions on AMC 1 Art 11 Reg UE 2019/947), the Cat SPECIFIC should allow flights over Assy of people. So Cat CERTIFIED or SPECIFIC? (edited)
 - A. It depends on the risk assessment, larger drone (more than 1 m) most probably will fall in the certified category.
- Q. We fly with drones on wind turbines. How will the future regulation be here?
- If I do wind turbine inspections. Far from people. On land or at sea. Could it be done in the A3?
- Are close infrastructure inspection operations still in the open category? For example, flying under a bridge? (edited)

A. Since the wind turbines are mostly located in non-populated areas, in case they are also far from airports, the inspection can be done in the open category A3. Same for inspections of bridges.

Q. The scope for modifications is the same for open category?. Specific operations require lots of customization with little impact on flight but they modify the UAS





- A. Requirements for drones used in the specific category can be customized, based on the risk assessment.
- Q. Is there any possibility within the specific category to operate a drone above 4 kg, BVLOS in a populated environment?
 - A. Sure, the risk assessment will define how to make the operation safe.
- Q. Does this 'mid risk' zone include flying over people/homes/buildings/nature areas? thinking about mapping municipalities?
- We are a municipality that wants to do UAV mapping of urban areas. Which specific category should we use?

A. It depends on several factors, including the size of the drone, the airspace and the population density.

Q. So, you will take scenarios from operators and transform them to standard scenarios? Will you pay the operators for that? (edited)

A. EASA will provide all support to operator to facilitate their activities and to share the best practices.

- Q. Why is it not allowed to go BVLOS with small and light drones?. In Germany the current rule is that you don't need a spotter if you fly drones < 250g below 30 m.
 - A. Light drones could still be a source of risk for several other airspace users such as small aircraft, hot air balloons and parachute.
- Q. Which flights can I perform from 01 January 2021 in the open class with my RPA-L and my registered drone in the Netherlands without Ops manual?

A. It depends on what kind of drone you are using.

- Q. If surveying in urban area, I have a matrice 600Pro 13kg and I want to do a project in a town: building area before during and after the project.
 - A. The operation is classified in the specific category. You may check if one of the predefined risk assessments fits your needs.
- Q. What is the definition of Business; is earning money on YouTube considered as a 'business'?.

A. We mean operations resulting in an exchange of money.

Q. Is there any tool for urban areas to measure in real time if there is a gather of people under the flight area?

A. EASA is working on this.

- Q. To fly over a large crowd of people, what is the best way mitigate for this?.
 - A. This operation fits in the specific category or in the certified, depending on the size of the drone. There may be several ways to mitigate the risk, from having a drone certified by EASA according to high level of robustness, or a reliable parachute to reduce the level of robustness of the design of the drone, etc...
- Q. Filming a cycling race without spectators, is it seen as a crowd? Can I do it in open category or do I need to fly in specific?
 - A. The cyclist cannot be considered as "involved persons" so the operation is classified in the specific category or in the certified, depending on the size of the drone.





Q. When will a EU-wide (quantitative) definition of population densities mentioned in Regulation (EU) 2019/947 be published?

A. Probably by beginning of 2022. However EASA will publish some guidance at the beginning of 2021.

- Q. Why did EASA put the distance to uninvolved People in place?. IMHO this actually really grounds a lot of operations for us while not increasing safety.
 - A. The distance from people in subcategory A2 is linked to the ability to control the drone. So the availability of a low speed mode function on the drone allows to reduce the distance to people.
- Q. I want to fly a drone with about 150 kg MTOW. What are the regulations for that higher weight class? When are they coming?
 - A. Depending on where you want to fly, it may fall in the specific category or in the certified category.
- Q. How will an operation of light/small drones work in combination with BVLOS & long range in spec. cat.? Will there be reduced rules depending on the drone mass?
 - A. Weight and operational limitations affect the risk of the operation. So all depends on the risk assessment.
- Q. Creating an operations manual is extremely complicated-difficult according to the new regulations. Can you make an online tool to make our lives easier?

A. Thanks for this. EASA will consider all possibilities to reduce the burden for operators.

Q. Flying a 15kg drone and mapping a road or railroad outside a city, can i do it in the open category or do i need to do it in the specific category?

A. They need to be conducted in the specific category.

- Q. If I want to fly a 15kg drone over a populated area with uninvolved people but no assemblies of people, would that be possible in the specific category, and how?
 - A. Yes in the specific category. There may be several ways to conduct it. The operator should propose to the NAA an approach and conduct the risk assessment.
- Q. If I plan a flight outside the rules of recreational category (higher altitude, outside of urban area) do I have to always contact authorities and do a training?
 - A. If you fly above 120m you are in the specific category and you always need an authorisation from the NAA and most probably a training for your pilot.
- Q. Can a Class 2 drone be operated over uninvolved people when they consent to the flight? Example: Drone mapping of a busy construction site using a DJI Phantom 4

A. If people:

- a. provide an explicit consent,
- b. are aware of the emergency procedures and
- c. are not busy in another activity such that they cannot monitor the position of the drone and are able to move away in case of accident,

then they may be considered as "involved persons" and they can be overflown. If one of the above is not verified that the person are "uninvolved" and cannot be overflown.

Q. Can I choose before every flight which regulation I will use: specific, open, or (only during transition period) the old national regulation for professionals?





- A. You can decide to limit your operation to follow the open category or decide to expand your operation (e.g fly higher than 120m, or in BVLOs etc..) and follow the specific category.
- Q. If I want to fly within limits provided for professional pilots, does it mean every flight I make must be gainful?. Or can I fly for fun but like a pro?
 - A. There are no different limits for professional or leisure pilots. All operations need to be safe. So once you define the operation you want to conduct, than you need to comply with all requirements independently of the nature of the operation.
- Q. Is it allowed to fly with drones over public beach, where people are taking a sunbath without agreement of these people?

A. No

Q. Could you plz provide some SW/app recommendation for flight records – log book, pre-flight checklists, commercial pilot / drone manuals? (Android device please)

A. EASA at this moment does not have yet any recommendation to provide.

- Q. what is the border between a sparsely populated & a populated environment?
 - A. EASA will publish by beginning of 2021 some guidance on this. However populated areas are defined as in relation to a city, town or settlement, any area which is substantially used for residential, commercial or recreational purposes.
- Q. is there an international template to make a Con Ops

A. Please refer to AMC1 UAS.SPEC.030(3)(e) Application for an operational authorization.

Registration

Q. What happen when I'm being employed by third company that has a registered drone and I only am a pilot without no drone registered under my name?

A. You are not required to be registered as a UAS operator if you are just an employee of an operator.

Q. Is somewhere an overview of which countries have introduced registration since 31.12.2020 and can therefore fly legally drones with new registration?

A. The regulation mandates all EASA States to set up the registration system by 31 Dec 2021.

- Q. Where exactly should we register as pilots?
 - A. Remote pilots are not required to be registered. However, when completing a training the NAA will provide remote pilots with a certificate including a remote pilot identification number.
- Q. When flying in the specific category, should every drone I use be registered? If yes, is a technical investigation/certification necessary, or just declaration?
 - A. The registration of a drone is mandated only when the operator is required by the NAA to use a drone with a type certificate issued by EASA and a certificate of airworthiness.

The Regulation- Applicability and Other

- Q. In the years 2021-22 it will be necessary to refer to the rules of the National Authority or EASA (standard scenarios, PDRA, ..), or both...?
- Starting January 2021, do we have to stick only to the EU drone requirements do we have the possibility to continue to follow the MS requirements?





- A. The EU regulation will be applicable from December 31, 2020 and all operations in the open and specific category needs to comply with it. The only exception is for operations under declaration (standard scenarios): until 02 December 2021 operators may continue to declare operations according to national regulations.
- Q. What happens with the state of origin regulations?
- Some national rules are different in each country. Do we follow those of our country or those of the site we are flying ? (ex : minimum age)
 - A. National regulation is superseded by the EU regulation.
- Q. How will it be possible for law enforcement services to verify whether UAS operators/pilots are in order with all regulations and certifications?
 - A. Enforcement authorities will have access to the UAS operator registration database where the authorization information is stored.
- Q. Are the new regulations valid for all the type of UAV/drone/VTOL, etc?

A. Yes

Q. How can we fly legally in 20 days from now? Nothing is clear yet in my country. There are no processes yet to approach the local authorities.

A. Just follow the process described by EASA.

- Q. What about the countries who won't be ready by the 1st of January 2021?
 - A. EASA will support all <u>EASA States</u> to be ready by that time, however some states may ask to apply a small delay.
- Q. How do the Authorities get ready for the growing number of requests for authorisation & how will they respond in timely & flexible way to the needs of Operators?
 - A. Like all new processes it will be an initial learning phase. We expect that quickly states will gain enough experience to answer in due time. State may also use qualified entities able to issue authorisations.
- Q. How long can you operate drones without these European airworthiness certificates in the Specific category?
 - A. If to ensure the safety of the operation a certificate for airworthiness is not needed, then there is no time limit.
- **Q.** Is it a problem for the company where the drone is registered, if an external pilot hired for the project made an accident? How is responsibility shared then?

A. The operator needs to define clear procedure defining also the responsibility and training of the pilot.

Q. Is it possible to follow the necessary requirements for specific operations abroad just as is allowed for open A1/A2/A3?

A. All authorisations given by one state will be recognised by the other EASA States.

- Q. Is EASA will incorporate the CS-UAS in the UAS regulation? If yes, when do you plan the publication?
- Is the current Jarus recommendations CS-UAS can be applied for an UA with a MTOM of 1200 kg?
 - A. Yes, EASA plans to issue a CS UAS in the next future. However, EASA will limit the use of CS UAS to define the certification basis only for the systems peculiar to drones. The certification basis for the remaining systems will be based on the applicable manned certification basis (e.g CS 23, 25, 27 etc...).





- Q. As an operator do you need an report system since we are flying aircrafts according to Regulation Nr 376/2014?
- A. UAS operators are required to report according to Regulation 376/2014 all incidents if they use a drone with a certificate of airworthiness. Otherwise the report is mandatory only when the accident causes a fatal injury or involved a manned aircraft.
- Q. Will I have to submit every drone I want registered for inspection to a national aviation authority? Or is a video chat inspection enough?
- A. EASA published guidance on remote inspections, however case by case the NAA will define if this will be enough.

Geographical Zones /U-Space / Flight Height/ Remote ID and Privacy

- Q. Is it possible to fly in a restricted zone (around airfield) if approved by and I am in contact with the local ATC? (edited)
- A. Most probably yes, however the operation needs to be authorised by the NAA that will assess all the proposed mitigation means.
- Q. Assuming we violate no privacy laws, are there any provisions preventing us from flying over private land in the new EU regulation?
- A. No there are no explicit provisions in the drone regulation. However you should avoid flying at low level over other person's property to meet the privacy regulation.
- Q. How will air safety be guaranteed between ad hoc manned flights (SAR/HEMS/police) and BVLOS drone operations? The mentioned flights are also often below 120 meter
- A. In the future the U-space will contribute to the safe separation of manned and unmanned flights. For now stricter requirements applies to drone operations (e.g. use observers, fly in restricted airspace etc...).
- Q. When is expectable for an integration of UAS in the air space with manned aircraft?? (edited)
- A. A reliable detect and avoid is needed, however in the spaces where the U-space will be available, the integration of manned and unmanned flight will be possible even without a certifies detect and avoid system.
- Q. Will Remote ID be mandatory for all categories?
- A. From December 02, 2021, for the specific category a remote id (either direct or network based) is required, when they fly below 120m. For the open category the requirement will depend on where they are operated.
- Q. Will there be a standard for U-Space Services harmonizing for very low level operations (e.g. below 100 ft)?
- A. Yes. EASA is working on it.
- Q. Are there any definition of a "open and documented transmission protocol " for remote identification?
- What about the remote ID? It is still on development most of the technology. Any recommendation?
- e-ID... Are there any drones able to use that technology right now? •
- A. A standard for the remote identification will be finalized by ASD Stan by mid of 2021.
- Q. Can we fly in open CTR during the transition period without criteria as remote ID and geofencing?





- A. An operation in CTR would classify in the specific category and remote ID and geofencing may be used to mitigate the risk. The UAS operator may always propose an alternative solution.
- Q. Belgium is like 1 big CRT / HTA. (How) Can I fly within these zones? (edited)
- A. Each NAA should publish geographical zones identifying how to ensure safety in these areas.
- Q. Is this possible to flight in OPEN in the controlled area without remote id and geofencing?
- A. Yes unless the state published a geographical zone forbidding it.
- Q. What does the regulation say about what frequency to use when you control the drone, so it doesn't fall down?
- A. The regulation does not prescribe the frequency to be used since there are several possible solutions.
- Q. Is there a European database with all restricted areas for drones?
- A. Not yet, for now each state has the responsibility to define the geographical zones.
- Q. I have a test scenario in a certain area which we want to repeat on demand, but it is in higher altitude then allow recreational limit. How to fly it legally
- A. Apply for an authorisation in the specific category.

LUC

- Q. Will a SMS implementation guide be available from EASA to support LUC application?
- A. EASA is working on it.
- Q. When will it be possible to apply for LUC?
- When can you apply for a LUC? And what are the requirements to obtain a LUC?
- A. Operators may apply for a LUC since December 31, 2020, the requirements are defined in Part C of the UAS regulation.

Risk Assessment / SORA / STS AND PDRAs

- Q. I am unable to find the "risk assessments" forms you talked about before on your website
- Can we find templates for the SORA?
- A. You can find the risk assessment methodology (SORA) in AMC1 Article 11 Rules for conducting an operational risk assessment
- Q. How can we be reassured about "equality" of various NAA in evaluating the proposed SORA docs?
- A. EASA will conduct standardisation inspections in the NAA.
- Q. Can we use other kind of risk assessment than SORA? For e.g. RA used in manned operations can be used. (edited)
- If a risk assessment is needed, can we make our own one, most realistic, to avoid false safety provided by other methodologies like SORA? (edited)
- A. Yes, as long as the risk assessment cover all areas of risk.
- Q. If an operation fits into a standard scenario or PDRA, except for e.g. max characteristic dimension, will it be a requirement to perform the entire SORA?

A. No





- Q. The predefined risk assessment should be submitted to EASA or the local competent authority?
- A. To the national competent authority.
- Q. In the CONOPS, OSOs are required. Nevertheless, those OSOs come later in the SORA process. What do we have to do first: CONOPS or OSOs?
- A. As first step the operator needs to describe how the operation I conducted (CONOPS). Then the operator identifies the SAIL of the operation and the compliance with the OSOs.
- Q. Will there be a STS or PDRA which suits mapping situations? (especially mapping cities, some people will always cross the areas you operate in)
- A. STS and PDRA are not linked to defined operations. If you are able to fit your operation with the limitations defined in them you can use them, what ever operation you intend to conduct.
- Q. We are a drone light show business. Is there anything planned in term of regulation or SORA to be more specific to fleet of drones or flight in formation?
- A. Unfortunately SORA does not consider drone swarms. EASA is collaborating with JARUS to expand SORA.
- Q. Where can we find documentation about PDRA 05?
 - Around what period will the texts on the new PDRAs be released
 - Can we download all possible scenarios?
- A. All published PDRA are available: <u>https://www.easa.europa.eu/document-library/agency-decisions/ed-decision-2020022r</u>
 In January EASA will update the easy access rule to include the latest PDRAs. 2 Additional PDRAs will be published by March 2021.
- Q. Will there be a standard scenario for cinewhooping very close to people (< 1-2 meter)?
- Will be published a PDRA for shows with multiple UAS at night?
- A. EASA will develop STS and PDRAs giving priority to those mostly used by EU operators. The plan is to develop in the coming years several predefined risk assessments to cover the majority of operations in EU.
- Q. What is the average cost of a SORA?
- A. The time needed to conduct a risk assessment using SORA is very variable with the complexity of the operation.
- Q. When there will be a list with accepted 3rd party validation companies for to comply with SORA methodology? Like Operation procedures validation companies
- A. Each Member State will define the competent 3rd parties for verification of requirements related to operations and training, while EASA will define those for design, if needed.
- Q. Can Civil Aviation Authorities establish their own "national Standard Scenarios" or this is restricted to EASA as per the Regulation 2019/947?
- A. After December 31, 2020, only EASA can develop new standard scenarios.
- Q. In Italy there are two Italian standard scenario IT-STS1 and IT-STS2 Why? What kind the different between EASA standard scenarios and Italian standard scenarios?





- A. Before December 31, 2020, EASA States were able to issue standard scenarios based on national regulation. Operators may declare operations based on national standard scenarios until December 02, 2021. After this date, declarations may be issued only using EU STS.
- Q. I want to fly BVLOS with 80 kg UAS, not crowded area, SORA ok in Bavaria-GE but pilot from Austria in GE where to apply with SORA for approval in GE or Austria.
- A. UAS operators need to apply in the State where they have their main place of business.
- Q. Is a Standard Scenario for BVLOS in Urban area something realistic for 2021 or is it a long-term dream? (edited)
- Can we expect standard scenarios for drone deliveries (rural and/or urban) in BVLOS?
- When will be more standard scenarios and which types?
- What is the difference between a STS and a PDRA? Why doesn't EASA provide templates for PDRA's to member states? So that we are not dependent on the 2 STS's.
- Will there be more Standard Scenarios, than the current two?
- A. Standard scenarios are only envisaged for low risk operations (SAIL I and II). We do not think it is possible to have a BVLOS ops in urban environment in SAIL I and II. For other operations, after we gain some confidence, EASA will develop other STS. Operations with higher SAIL will be covered by PDRAs.
- Q. is it correct that STS-1 & 2 are only possible with Class 5 and Class 6 certified drones? So not with existing ones?
- A. Correct, however EASA published 2 PDRAs mirroring the STS where drones with class label are not required.
- Q. How about the technical standards for Class 5 and Class 6 class drones? When can we expect the first drones bearing these marks?
- A. We may expect to have them by the end of 2021.
- Q. To obtain a operation authorization I can make a SORA including risks and mitigation measures. Can I integrate this in the operations manual or should it be separate?
- A. Yes the operations manual should include all mitigation measures.
- Q. Is the local government imposing a certain time restriction for handling a SORA analysis?
- A. There is no need to impose a time restriction.

Authorisations

- **Q.** How many applications for authorisation did EASA receive by now and how long took the review process?
- A. These applications are sent to the national authority not to EASA.
- Q. EASA planned some Noise emission grading. Does it must be taken into account for authorisation or certification process
- A. Yes, you need to comply also with the environmental requirements.
- Q. Autonomous operations BVLOS will be included in Specific Category? Will there be any STS or will it require a LUC?





- A. Autonomous operations are allowed in the specific category. We do not expect that they can be allowed based only on a declaration (using standard scenario). An operator with a LUC may have the privilege to self authorize their operations.
- Q. Is there any recap of the steps to follow to ensure to provide all the needed information to get an authorisation?
- A. Please check the SORA, it is already organised in 10 steps.
- Q. When an authorisation process has to be applied, how long an applicant has to wait to get the Authorisation granted?
- A. Difficult to say, there are so many variables to consider.
- Q. What is the difference of holding an operational authorisation and a LUC for an operator with several types of UAS and performing different kind of operations?
- A. UAS operators having a LUC may have the privilege to authorize their own operations without asking for the authorisaiton by the NAA.
- Q. As a new registered owner and licensed UAV pilot in CZ what else do I (technically) need for my first commercial flight?
- A. You may operate in the open category and so there would be no additional requirements. Otherwise you should apply for an authorisation in the specific category.
- Q. Do I have to have permission for every flight/mission I undertake or only if it is over an urban/inhabited area? Assuming I will not fly in CTR etc.
- A. You need to carry out a risk assessment for each operation. The need for single flight authorisation depends on the area where you are flying. You need to consult the geographical zone published by your national aviation authority.
- Q. How are the nominal drone operations affected by the emergency or military operations?
- A. Emergency operations will always have precedence.

Emergency

- Q. What does the regulation say what the drone should do if the drone lose contact with the pilot?
- A. It depends on the area where the operation takes place. The operator may be required to establish an emergency response plan.

Cross Border Operation

- Q. if a French operator wants to operate in another European country, what is the way to get authorisation?
- Will it be possible to fly commercially if registered in one EU state in any other state as-is, or can other states have extra/specific local regulations?
- A. The authorisation given by a <u>EASA State</u> will be recognised by the other states. The operator is only required to provide to the NAA of operation the assessment of the application of the mitigation measures and the compliance with the local conditions published by the NAA of operation.
- Q. We operate drones in countries outside of the EU. Will my new EU drone license be applicable to any nations outside of the EU? Similar to EU driving licenses?





A. This will be based on mutual recognition with non-EASA States. At this moment, since there are no common rules, recognition is not defined yet.

