



LET

DRONES

FLY

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# LET DRONES FLY



Drones are threats to aviation

They fear crews in the air but also operators on the ground

61 airspace drone incursions at German airports in 2016 so far

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**BUT:**

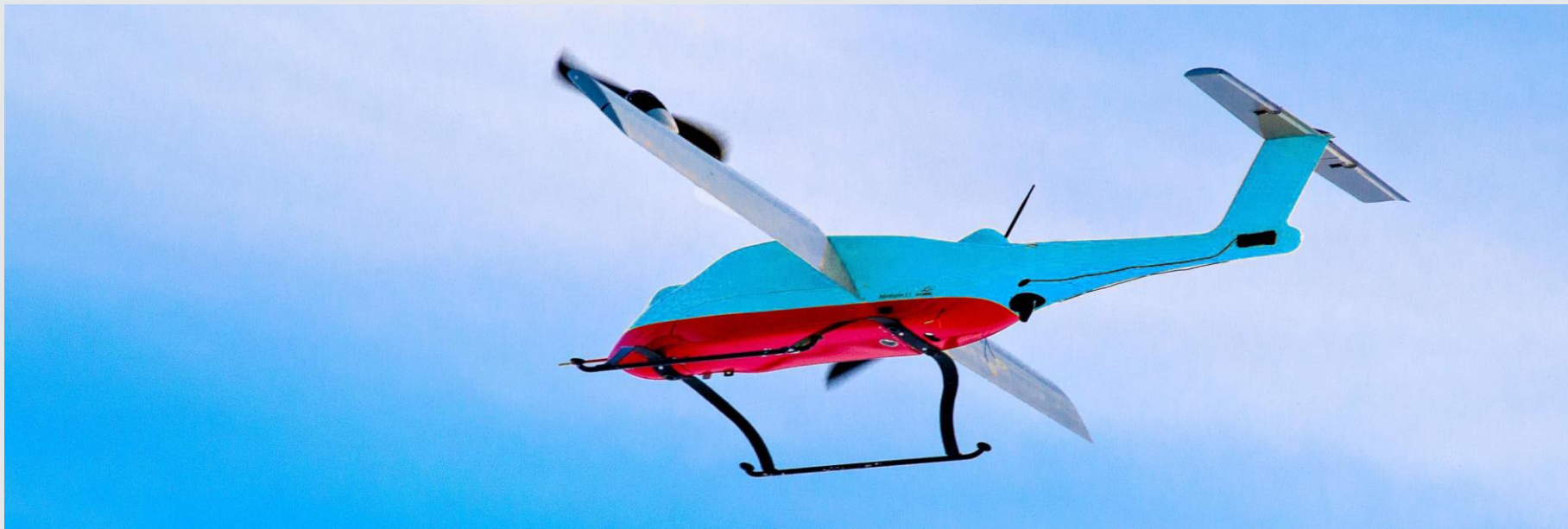
The manned rotorcraft sector loses business opportunities day by day to these „threatening“ UAS

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## TILT WING DRONE – RESEARCH PROJECT

- autonomous and beyond visual line of sight
- Long Range of up to 20 Kilometer
- Specific Category
- Transponder on board
- Flights under ATC

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## DRONES BENEFITS FROM:

- You don't need to be a real pilot
- Your aircraft does all the work for you
- Your aircraft has situational awareness
- The regulation is on your side (operation centric)
- NO standards, NO procedures, NO problems

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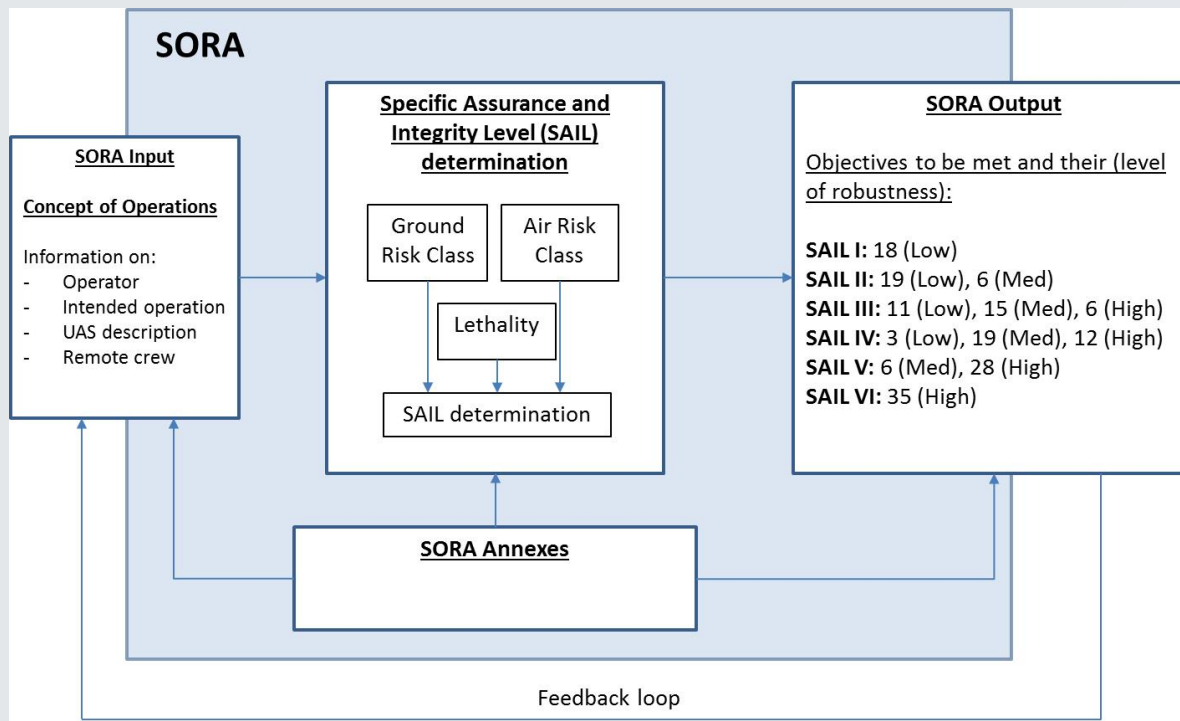
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## BUT WHAT ABOUT THE HELICOPTER?

- growing workload and risks for the pilot
- regulation focuses on the aircraft and not on the mission
- A heavy helicopter in the desert is more dangerous than a light type over a city (opposite to drones)

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## SPECIFIC OPERATION RISK ASSESSMENT

An unsafe drone with an incapable pilot in an unpopulated area could eventually still be allowed to take off, because of the calculated SAIL values (Specific Assurance and Integrity Levels).



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## CASE 1: Aerial filming

All helicopter operators lost precious flight hours to the drone business in the last five years  
A professional drone team costs 2,000 € per day  
A helicopter more than 10,000 € per day



## CASE 2: Surveillance

A helicopter would cost up to 4,000 € for an 2 hours lasting aerial inspection of a power plant  
2 drones now do the same job for less than half of that money several days long

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## CASE 3: Emergencies

More and more firebrigades use drones for aerial inspections of emergency sites.

Important benefit: a drone is permanently on the trucks and immediately available at low costs.



## CASE 4: Search and Rescue

The German DLRG uses a drone in order to localize lost persons in near shore waters. The drone can be deployed from a boat.

A rescue helicopter would do that at 75 € per minute - the drone costs 100 Euros a day.

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## RECENT DEVELOPMENT

While the rotorcraft industry started to think bigger, faster and more capable and hence more expensive...

And while things become safe and even safer...

The reality of aviation development and demand took the opposite direction:

- small and unmanned
- most flexible and automated
- lots of freedoms
- fewer AND better REGULATION

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**SO:**

Fight the evil or accept the challenge!

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## SOME ASPECTS FOR THE FUTURE

We should take the performance of the drone sector and its technology as an add on to our traditional helicopter business models

We shouldn't just demand rules for others, we should actively team up and make them – on a real level playing field basis

Our pilots are the best educated ones for the specific drone operation's segment – why don't we start a business with them?



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## THIS IS THE SOLUTION



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„Inspections completed by professionally trained UAV remote pilots are safer, faster and more cost efficient than other inspection techniques.“

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## NO THREAT

JUST A NEW DIVERSIFIED BUSINESS  
APPROACH



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## THANK YOU