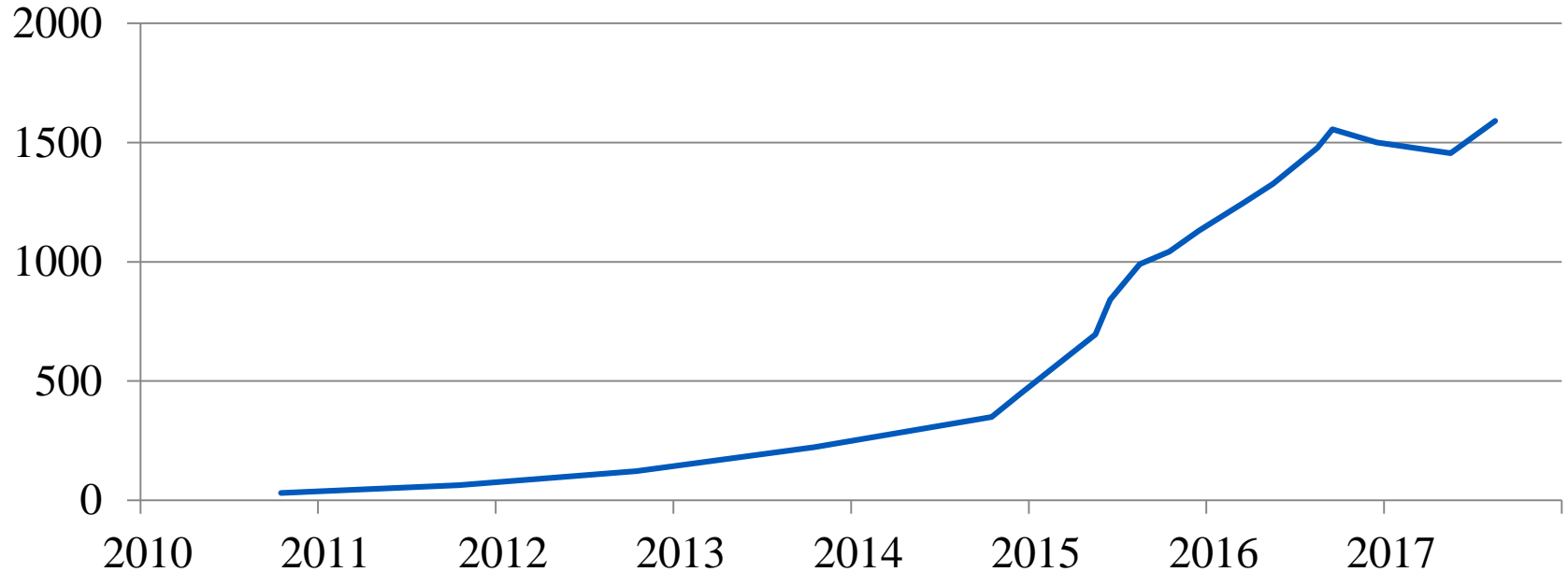


UAS utveckling i Sverige

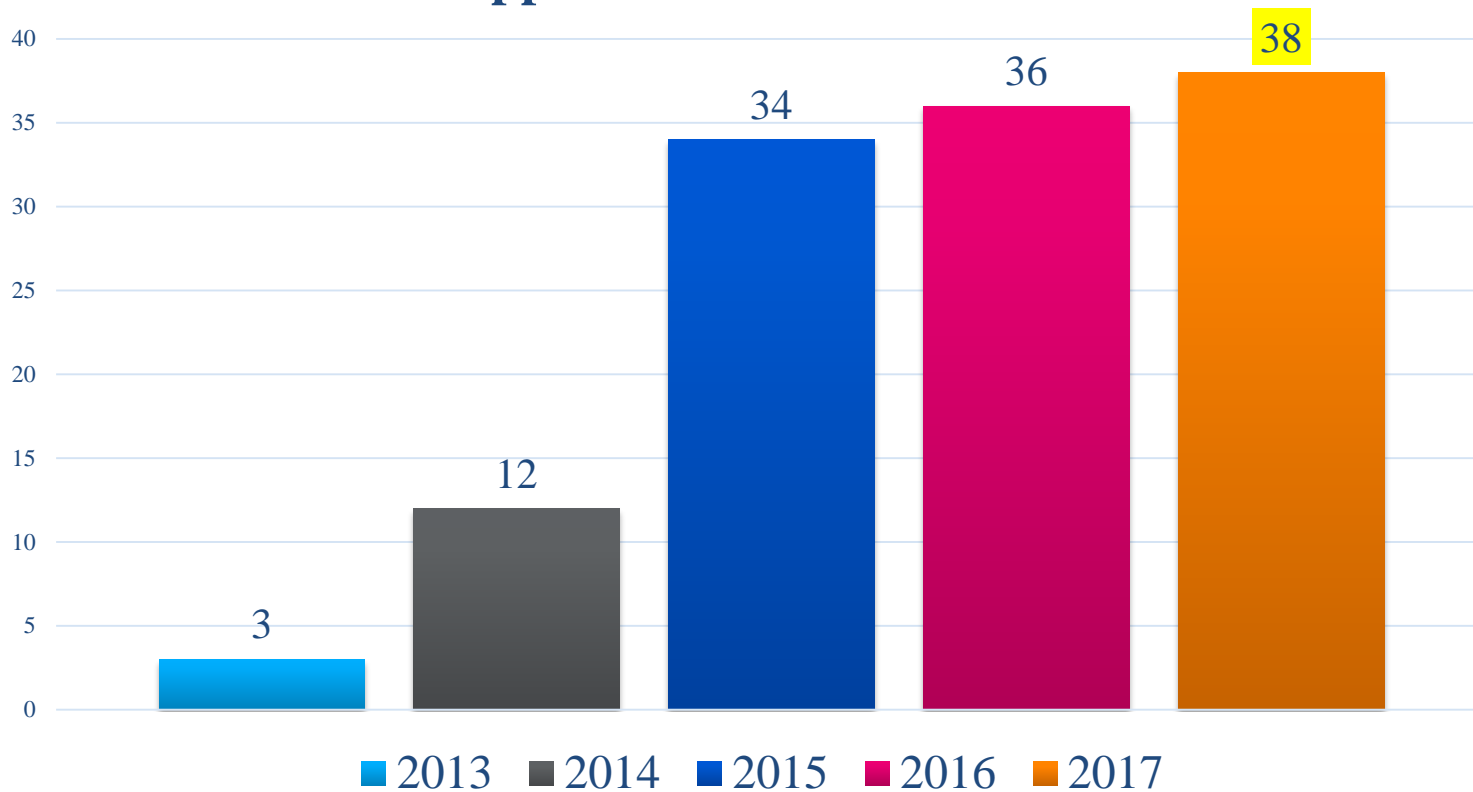
Rémi Vesvre

Ledningsstrateg

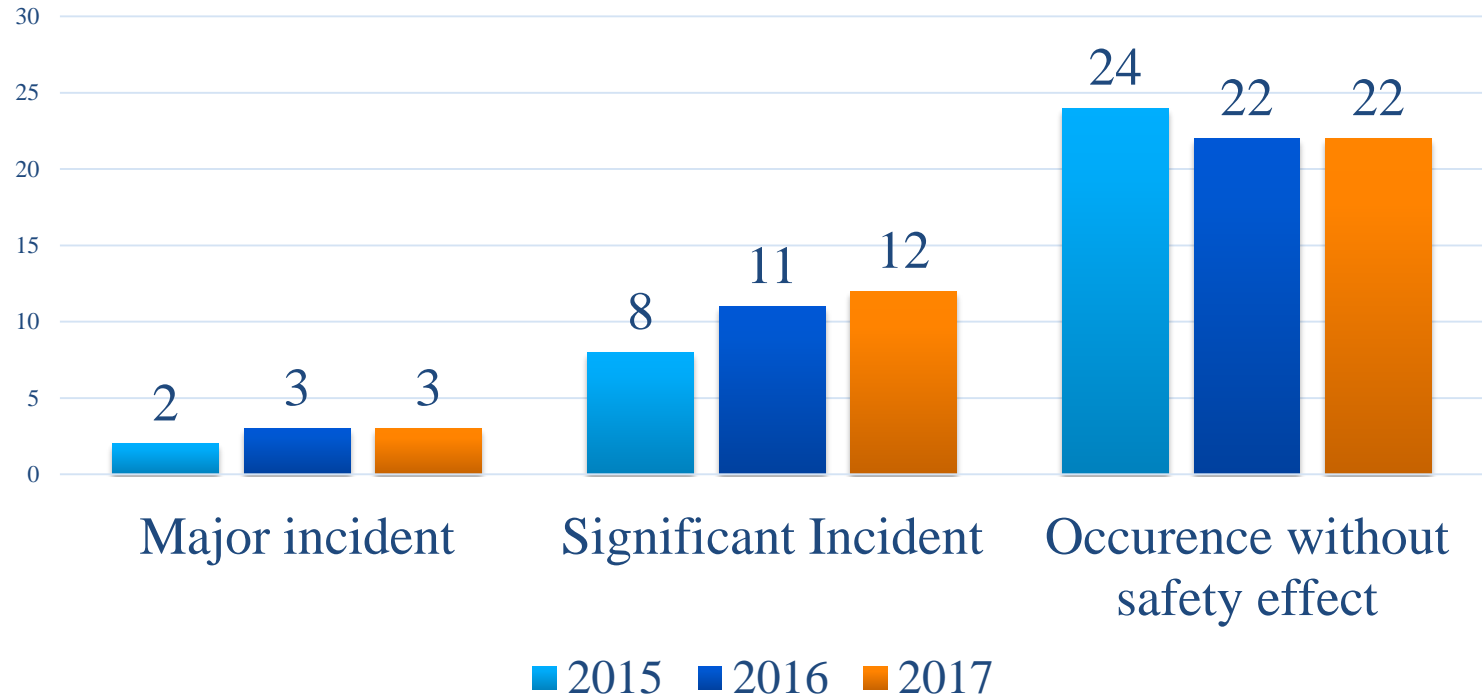
Antal UAS Tillstånd (kommersiell)



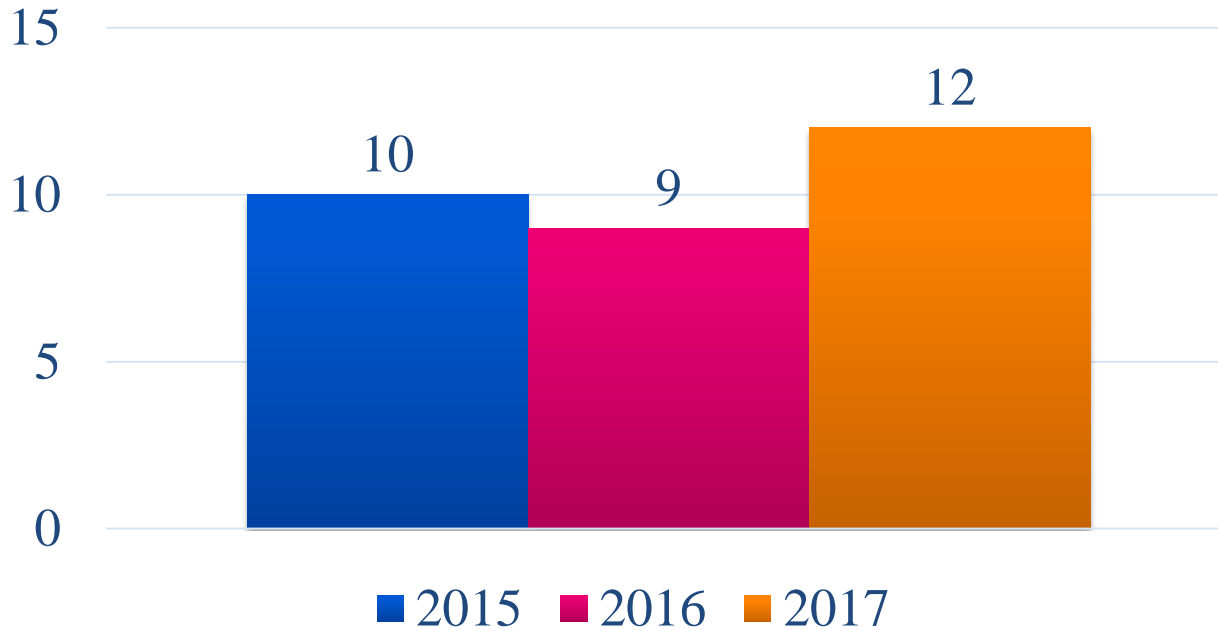
Antal rapporterade händelser med UAS



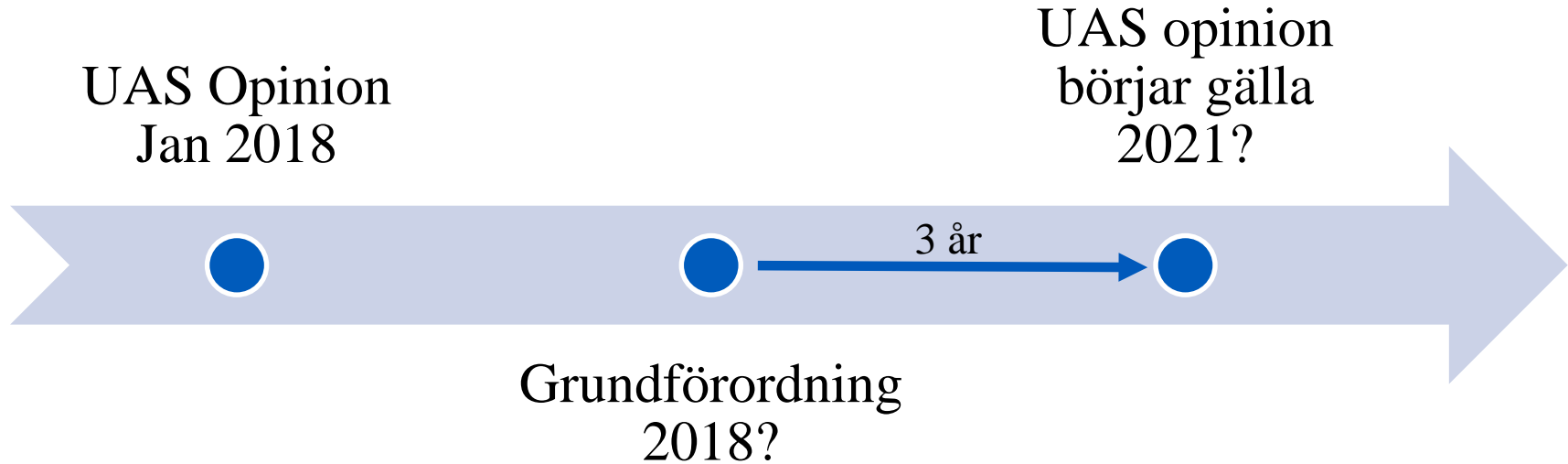
Klassificering av rapporterade händelser med UAS



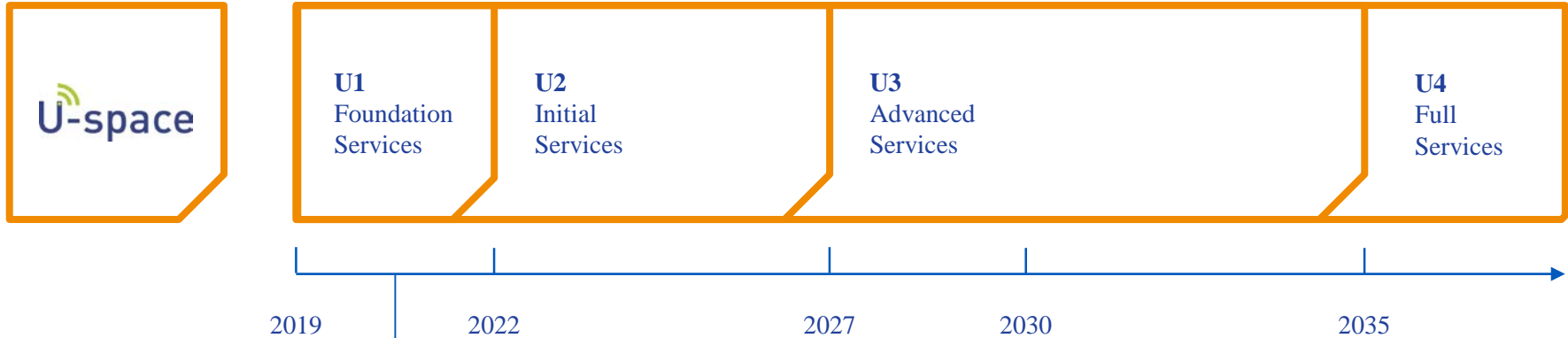
Total stängningar CTR



EU regelprocess



Deployment of U-space



e-registration
e-identification
Pre-tactical geo-fencing

Svenska regler 1/1/2018

- Alla omfattas av luftrumsregler (privat och kommersiella)
- 50/10m i CTR minst 5km från banan
- Samråd zon 1km runt om hkp flygplatser
- Obligatorisk märkning av alla drönare
- Alltid inom synhåll
- Alltid under 120m
- BVLOS och FPV möjlig (tillståndspliktig)

Svenska regler 1/1/2018

Kategori	Tillstånd från TS	Vikt	Operativa begränsningar
1	Nej	0-7kg	<ul style="list-style-type: none">• Inom synhåll• Max flyghöjd 120 m
2	Ja	7-25kg	<ul style="list-style-type: none">• Inom synhåll• Max flyghöjd 120 m
3	Ja	25kg-150kg	<ul style="list-style-type: none">• Inom synhåll• Max flyghöjd 120 m
4	Ja	-	<ul style="list-style-type: none">• Certifierade för flygning utom synhåll, samma regler som bemannad luftfart.
5a-c	Ja	-	<ul style="list-style-type: none">• Tillägg till kategori 1-3

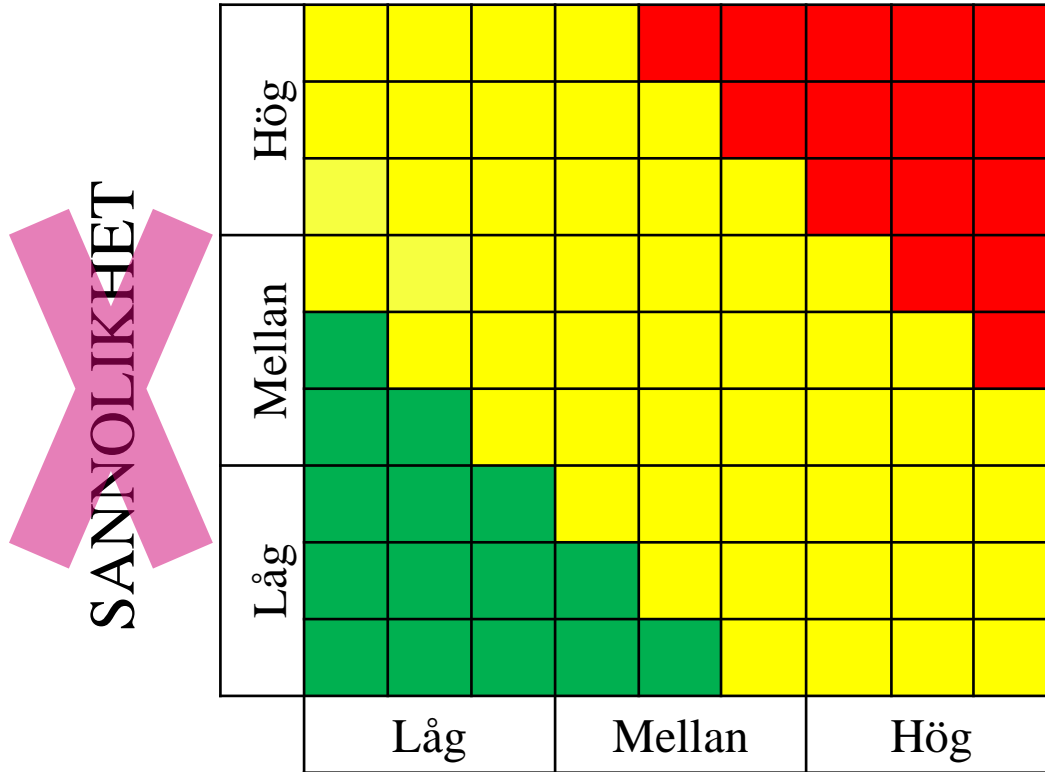


Department
for Transport

Small Remotely Piloted Aircraft Systems (drones) Mid-Air Collision Study

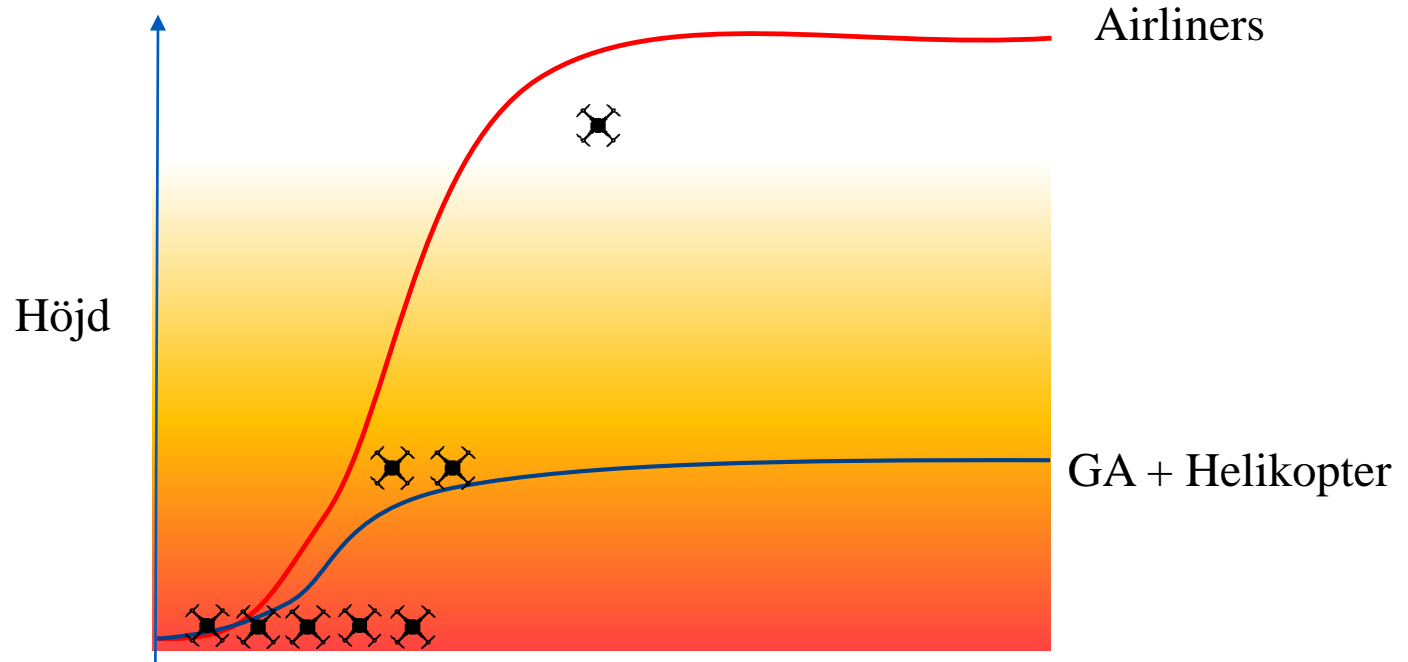
- This study aimed to find the lowest speed at collision where critical damage could occur to aircraft components.
- It should be noted that to understand the risk fully, work should also be done to estimate the **likelihood** of a collision.

Risk = sannolikhets + konsekvens



KONSEKVENNS

Small Remotely Piloted Aircraft
Systems (drones)
Mid-Air Collision Study



Slutsats

Small Remotely Piloted Aircraft
Systems (drones)
Mid-Air Collision Study

Non-birdstrike certified helicopter and general aviation airplanes windscreens have very limited resilience to the impact of a drone, well below normal cruise speeds.

- Although the birdstrike certified windscreens tested had greater resistance than non-birdstrike certified, they could still be critically damaged at normal cruise speeds.
- Helicopter tail rotors are also very vulnerable to the impact of a drone, with modelling showing blade failures from impacts with the smaller drone components tested.

- Airliner windscreens are much more resistant, however, the study showed that there is a risk of critical windscreen damage under certain impact conditions:
 - – It was found that critical damage did not occur at high, but realistic impact speeds, with the 1.2 kg class drone components.
 - – However, critical damage did occur to the airliner windscreens at high, but realistic, impact speeds, with the 4 kg class drone components used in this study.



Frågor?