

SAFETY MEMO – Flight Tests

1. Purpose of the document

To the attention of all operators conducting drone flight tests at the swiss aeropole, this memo consolidates the key information from the applicable emergency plan as well as the lessons learned from test operations. It aims to strengthen, in a general manner applicable to any operator, the safety framework for flight tests.

This document does not replace the regulatory procedures (OFAC, SORA, SFO Tool) or the aerodrome's official emergency plan; it summarises their key points and sets out additional measures intended to strengthen the robustness of the arrangements.

The operator remains at all times solely responsible for the preparation, conduct and safety of its operations, as well as for compliance with the applicable regulatory requirements.

For the project acceptance process and the use of the SFO Tool, refer to the PROCESS MEMO.

2. Emergency procedure

The air base emergency services are responsible for managing any emergency at the airport, including for civil operations.

2.1. Situations concerned

- Collision with an object or a person.
- Fly-away / loss of communication with the drone.
- Crash
- Any abnormal behaviour of the drone near the aerodrome or departure from the authorised flight zone.

2.2. Contacts to activate immediately

Contact in order of priority	Contact details
Control Tower Supervisor / Emergency	044 823 61 13
Civil airport authority on-call (swiss aeropole)	026 662 66 70
Civil Incident report - website	www.payerne-airport.ch

2.3. Examples of radio/telephone communication

- « Request emergency services due to emergency with drone operations [*location/aéropôle*] »
- « Lost control with drone / drone fly-away [*direction/location*] »

2.4. Priority safety instruction

- In the event of abnormal drone behaviour near the aerodrome or departure from the authorised flight zone, immediately cut the motors (**kill switch**) and do not attempt to regain control of the drone. This instruction must be known and applied by all pilots and the validation team.
- In the event of an emergency scramble of the fighter aircraft, drone operations are stopped immediately: the drone must be on the ground within 5 minutes of the ATC unit's call.

2.5. After an emergency event

- File a civil incident report and cooperate fully with the airport authority.
- Depending on the nature and location of the event, the military police may be present and, in collaboration with the civil airport authority, follow up on the case.
- swiss aeropole or the head of military operations may decide, as the civil and military airport authority, to suspend with immediate effect the flights of the operator concerned until further notice.
- Any resumption of operations must be subject to explicit authorisation after a full analysis of the event and the implementation of mitigation measures.

3. Additional measures to strengthen the safety framework

The following measures aim to consolidate the robustness of the safety arrangements, beyond the measures already in force, and apply generally to all operators:

3.1. Technical change management

- Any hardware or software modification affecting navigation, perception or piloting (sensor, firmware, configuration) should undergo a ground test followed by a validation flight in a contained area before being reintegrated into the normal operational schedule.
- This validation must be formally documented and approved by the operator's technical manager before standard testing resumes.

3.2. Detection and management of sensor inconsistencies

- The navigation system should be able to detect on its own an inconsistency between its sensors — for example when two sources of position information do not agree — and then adopt a predefined and safe behaviour: holding position, automatic return to a safe point or landing, rather than ignoring this data without warning.
- Each operator must know how their drone reacts in such a situation.

3.3. Investigation and transparency

- For any significant incident, arrange a joint review involving the operator, swiss aeropole and, if necessary, and if necessary an independent external expert, before final validation of the corrective measures.

3.4. Configuration traceability

- Where possible, keep a configuration log (onboard hardware and software versions) for each test campaign, to facilitate any analysis in the event of an incident.

3.5. Matrix of responsibilities in the event of an incident

Actor	Responsibility in the event of an incident
Drone operator	Immediate flight safety (kill switch), alerting emergency contacts, drafting the incident report.
Air base emergency services	Operational management of any emergency within the airport perimeter and immediate vicinity (civil and military) Firefighting and rescue services
swiss aeropole (civil airport authority)	Decision to immediately suspend the flights of the operator concerned Coordination with stakeholders, follow-up of the civil incident report. Explicit authorisation to resume operations, after a full analysis of the event and validation of the mitigation measures.
Air Base Commander (or deputy)	Decision to immediately suspend the flights of the operator concerned. Explicit authorisation to resume operations, after a full analysis of the event and validation of the mitigation measures.
Military Police (MP)	Investigation at military level if the incident occurs on military premises; possible presence and case follow-up, in collaboration with the civil airport authority and SESE
SESE	Information and follow-up in accordance with the applicable internal procedures.

3.6. Systematic lessons learned

- In case of events listed in chapter 2.1, a written civil report is mandatory after any incident or near-incident (near-miss included), with a submission deadline of 48h, in order to capitalise on the lessons learned even in the absence of damage.

3.7. Periodic safety review

- Keep swiss aeropole informed of any technical incidents during flight campaigns
- Organise a recurring safety meeting between swiss aeropole and active operators, in order to share lessons learned and update the safety framework if necessary.

4. Safety checklist

This checklist sets out, in operational form, the key points of this memo. It is to be reviewed for each test campaign.

4.1. Before each flight

- ATC authorisation obtained by telephone before take-off (the announcement in the SFO Tool does not constitute a take-off authorisation).
- Flight zone and altitude in accordance with the Request/Activity validated in the SFO Tool.
- Emergency contacts (see 2.2) accessible on site.
- Identity card on you (random check possible by the military police).
- Team (pilots and validation) briefed on the **kill switch** instruction in the event of a fly-away

4.2. During the flight

- Continuous monitoring of the drone's behaviour and its containment within the authorised zone.
- Monitoring of the battery level throughout the mission.
- Stay alert for any call from the ATC unit

4.3. In the event of an incident — immediate actions

- 1 Activate the kill switch as soon as abnormal behaviour or a departure from the zone is observed; do not attempt to regain control.
- 2 Immediately alert the emergency contacts (see 2.2), starting with the Control Tower Supervisor.
- 3 Communicate as needed: nature of the event, position, last known altitude, estimated direction/trajectory.
- 4 Cooperate with the base emergency services, military police, civil authority or federal investigation bureau.

4.4. After the incident

- Draft and submit the civil incident report to the airport authority (48h deadline)
- Comply with any flight suspension decided by swiss aeropole or the head of military operations.
- Only resume flights after explicit authorisation from the air base commander (or deputy) and implementation of the mitigation measures.