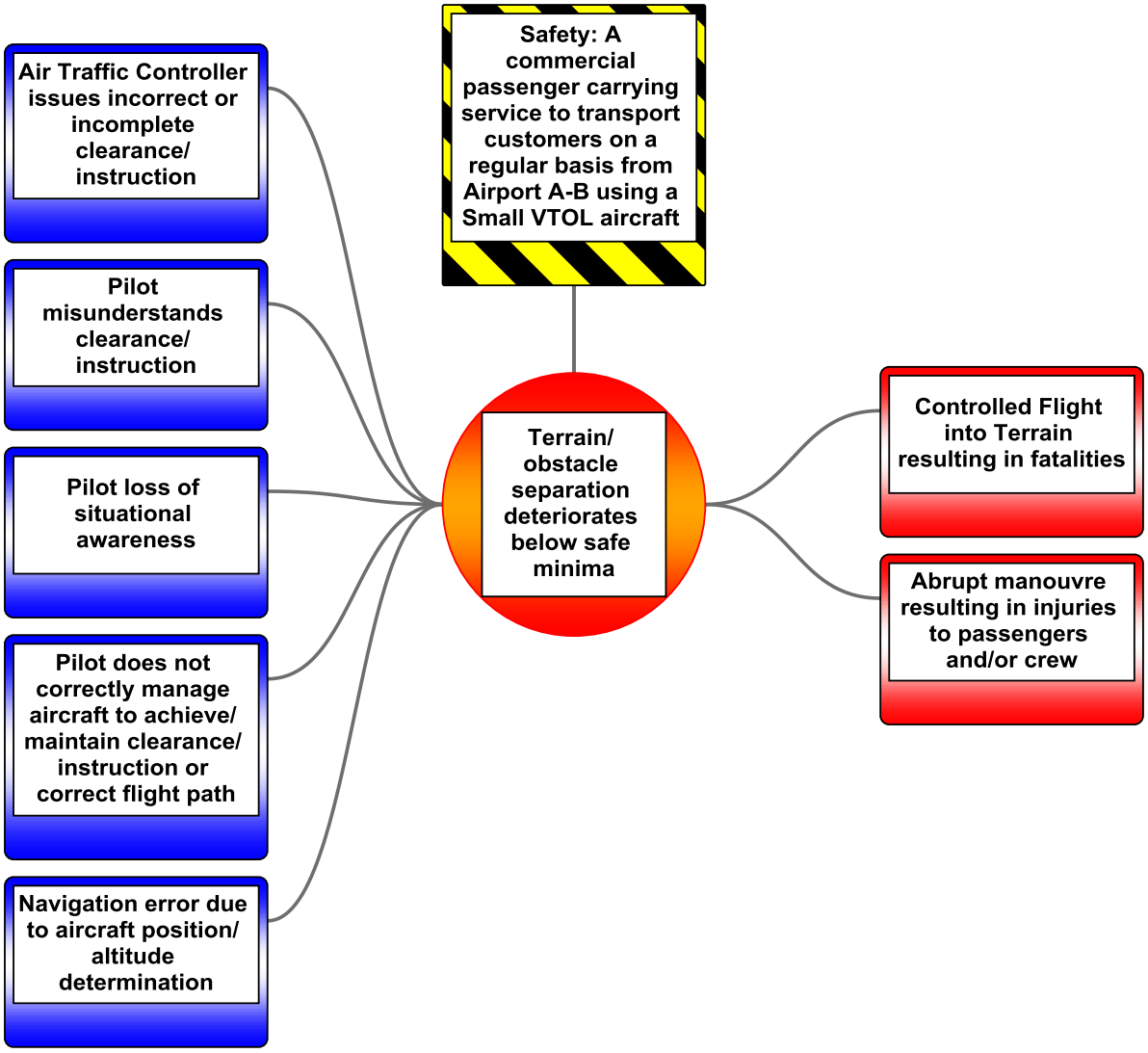
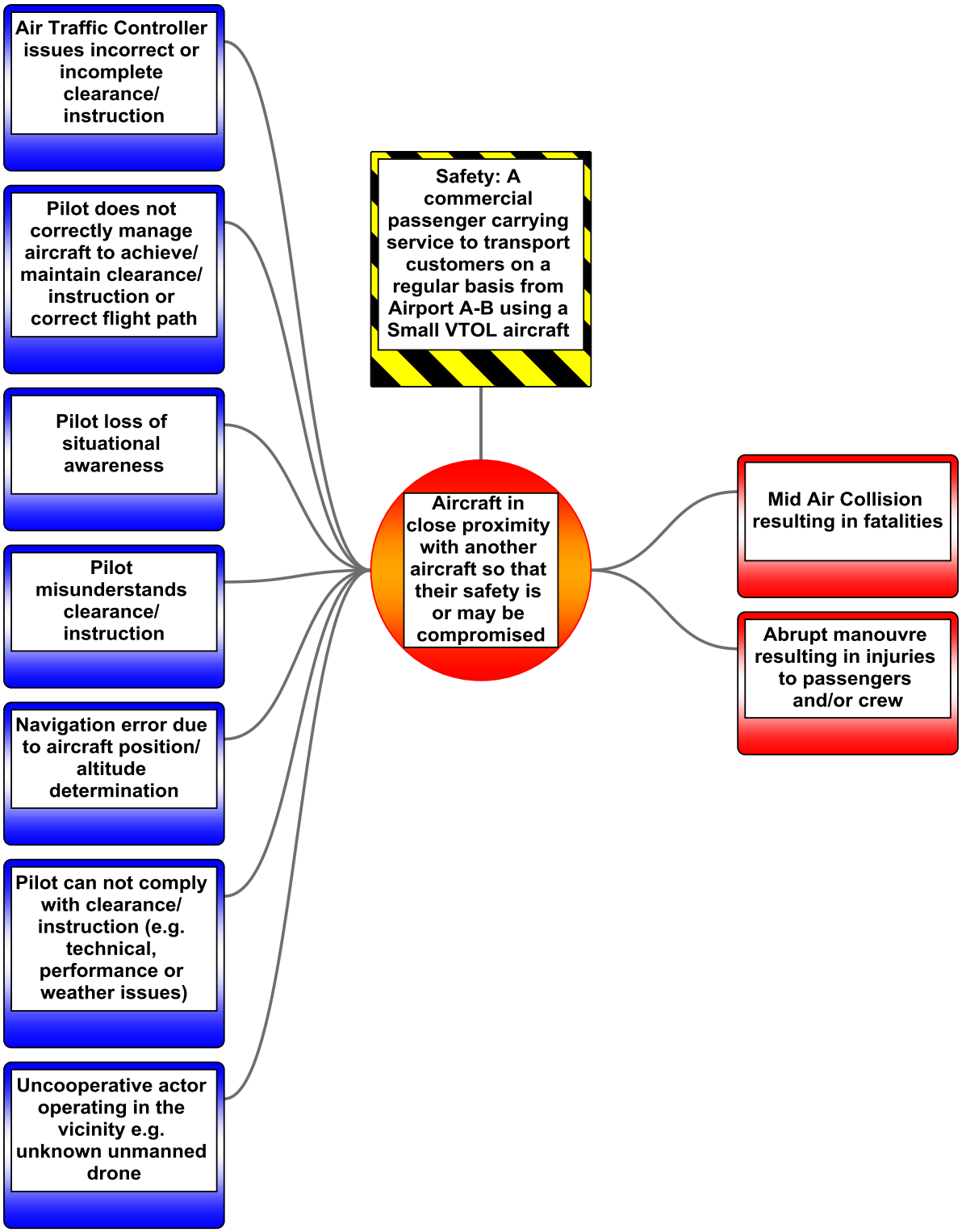
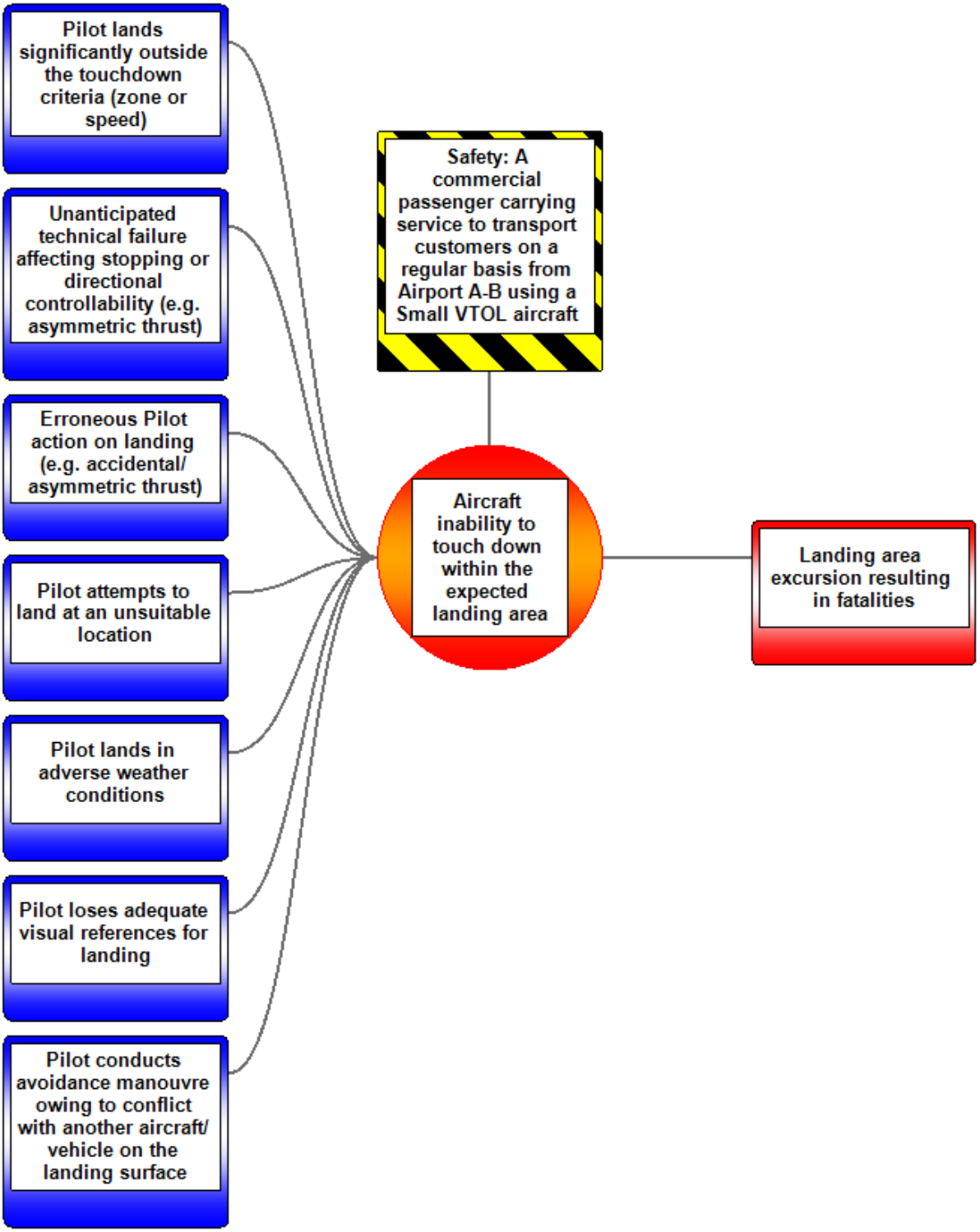
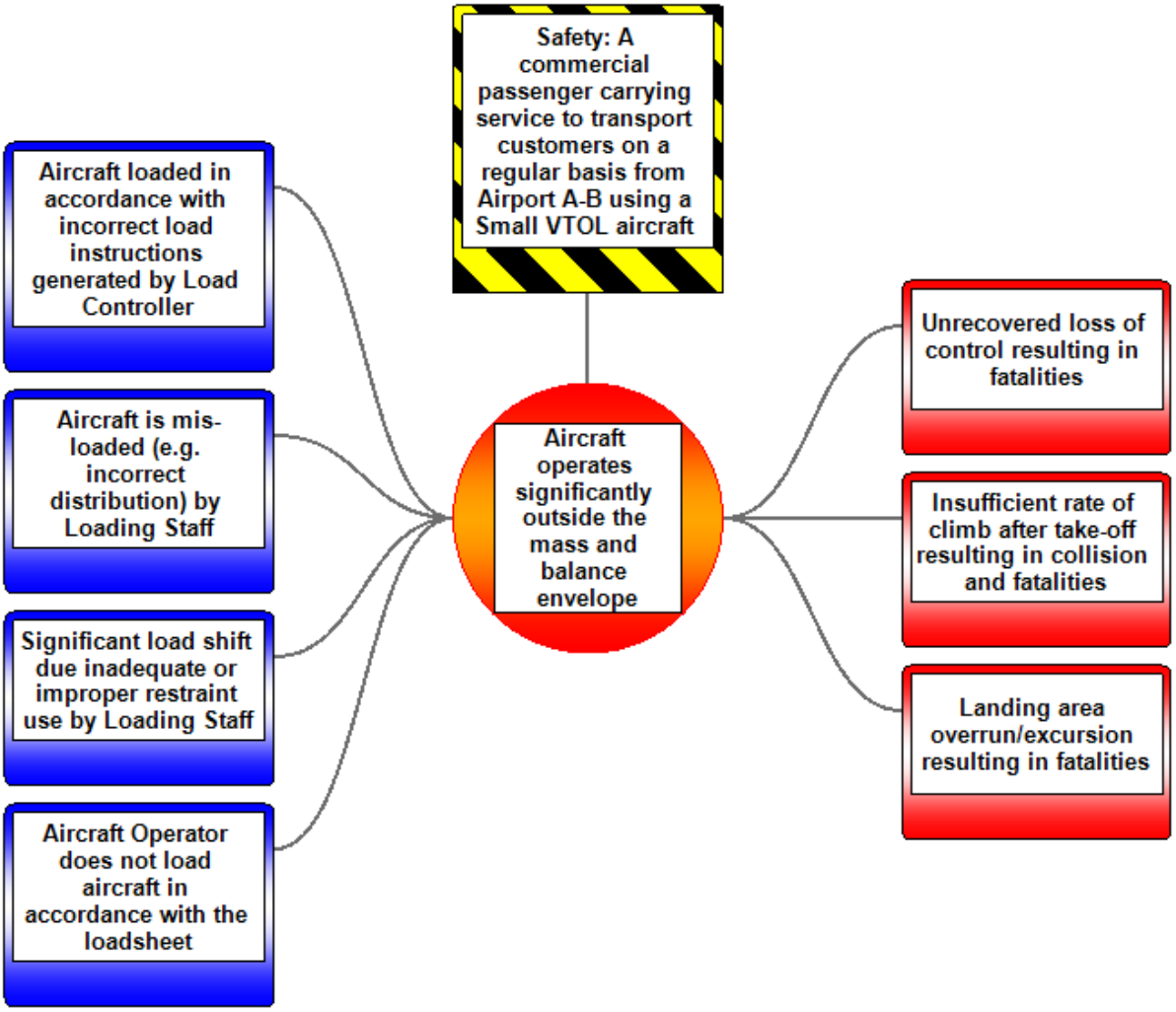
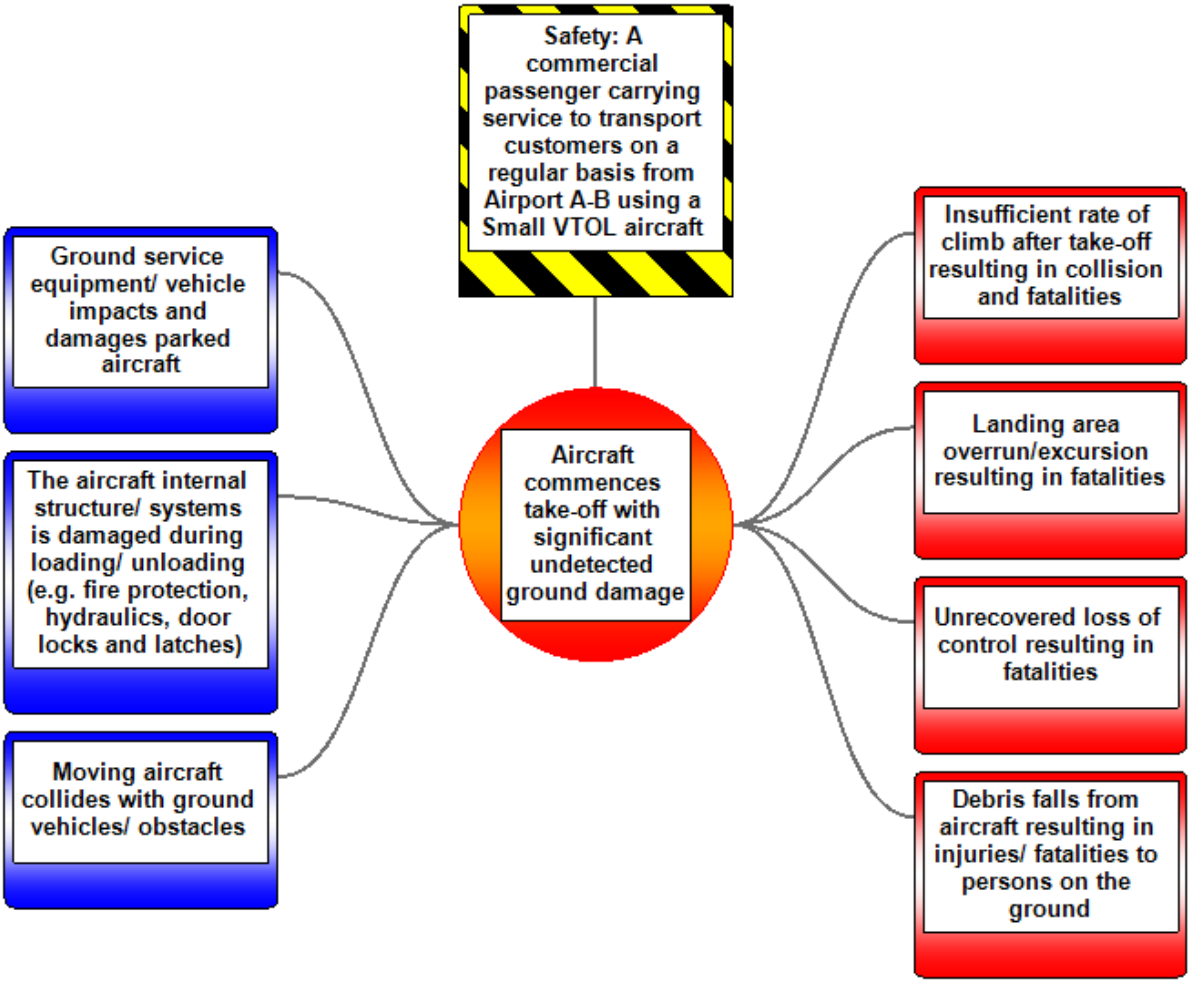
Loss of separation, control and aircraft operations

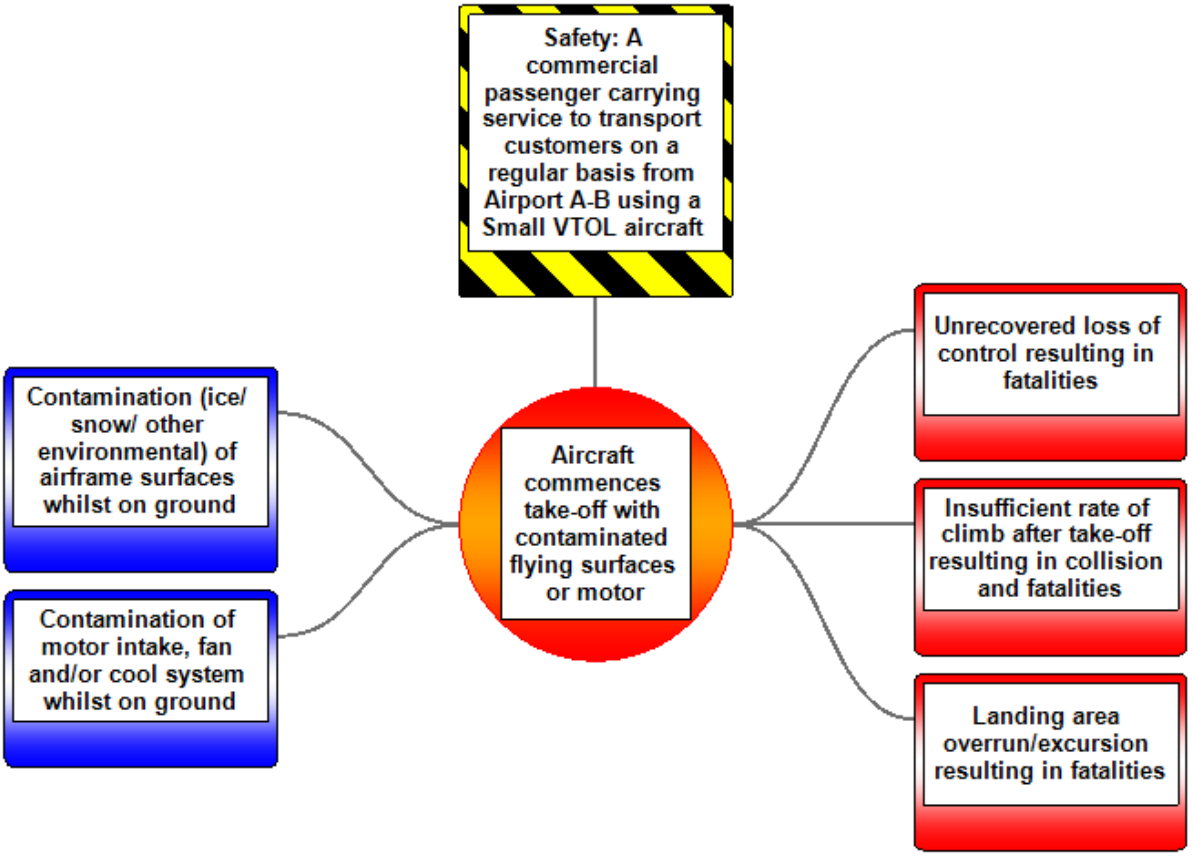


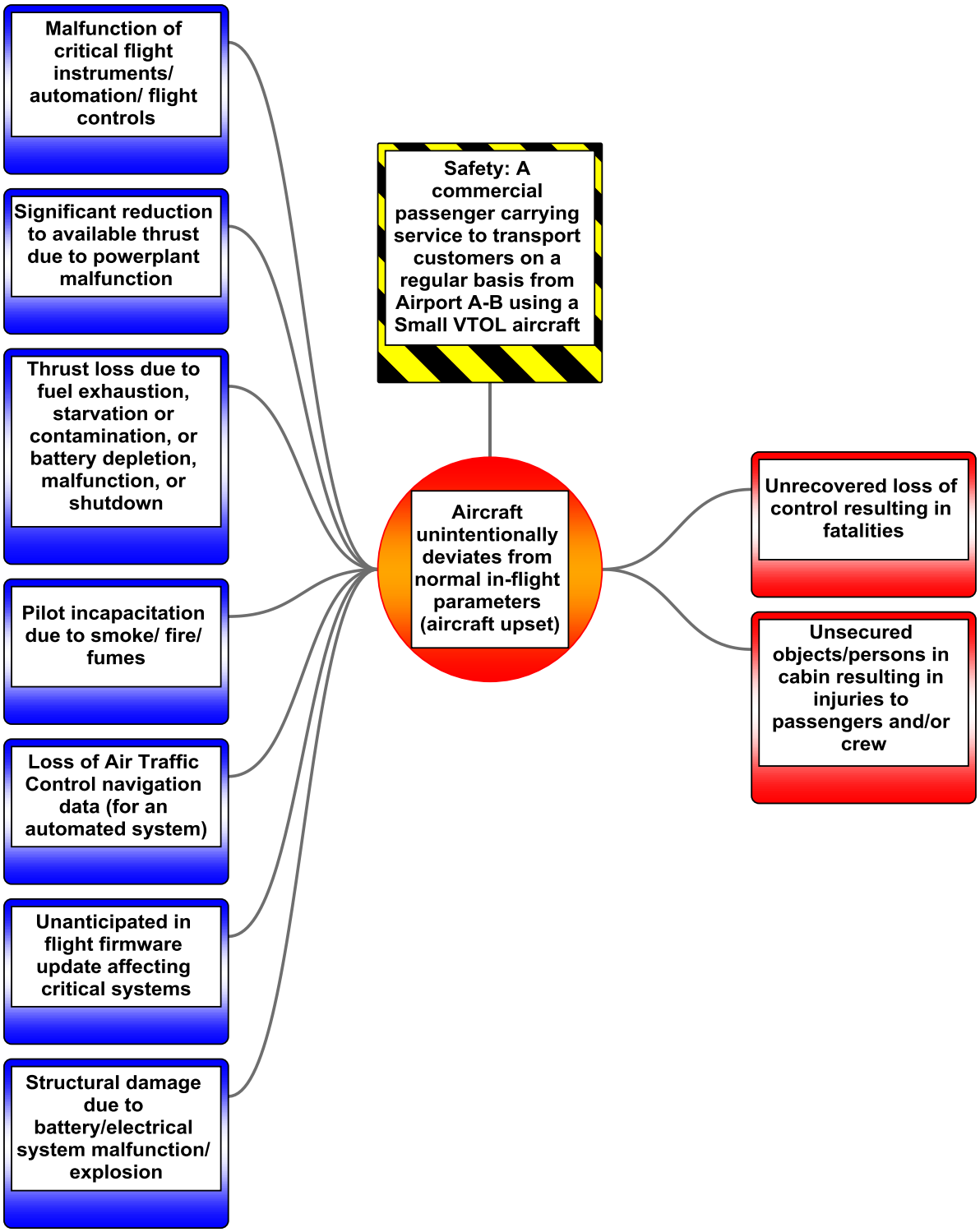

Air Traffic Controller issues incorrect or incomplete clearance/ instruction
Pilot does not correctly manage aircraft to achieve/ maintain clearance/ instruction or correct flight path
Pilot loss of situational awareness
Pilot misunderstands clearance/ instruction
Navigation error due to aircraft position/ altitude determination
Pilot can not comply with clearance/ instruction (e.g. technical, performance or weather issues)
Uncooperative actor operating in the vicinity e.g. unknown unmanned drone
Safety: A commercial passenger carrying service to transport customers on a regular basis from Airport A-B using a Small VTOL aircraft
Aircraft in close proximity with another aircraft so that their safety is or may be compromised
Mid Air Collision resulting in fatalities
Abrupt manouvre resulting in injuries to passengers and/or crew

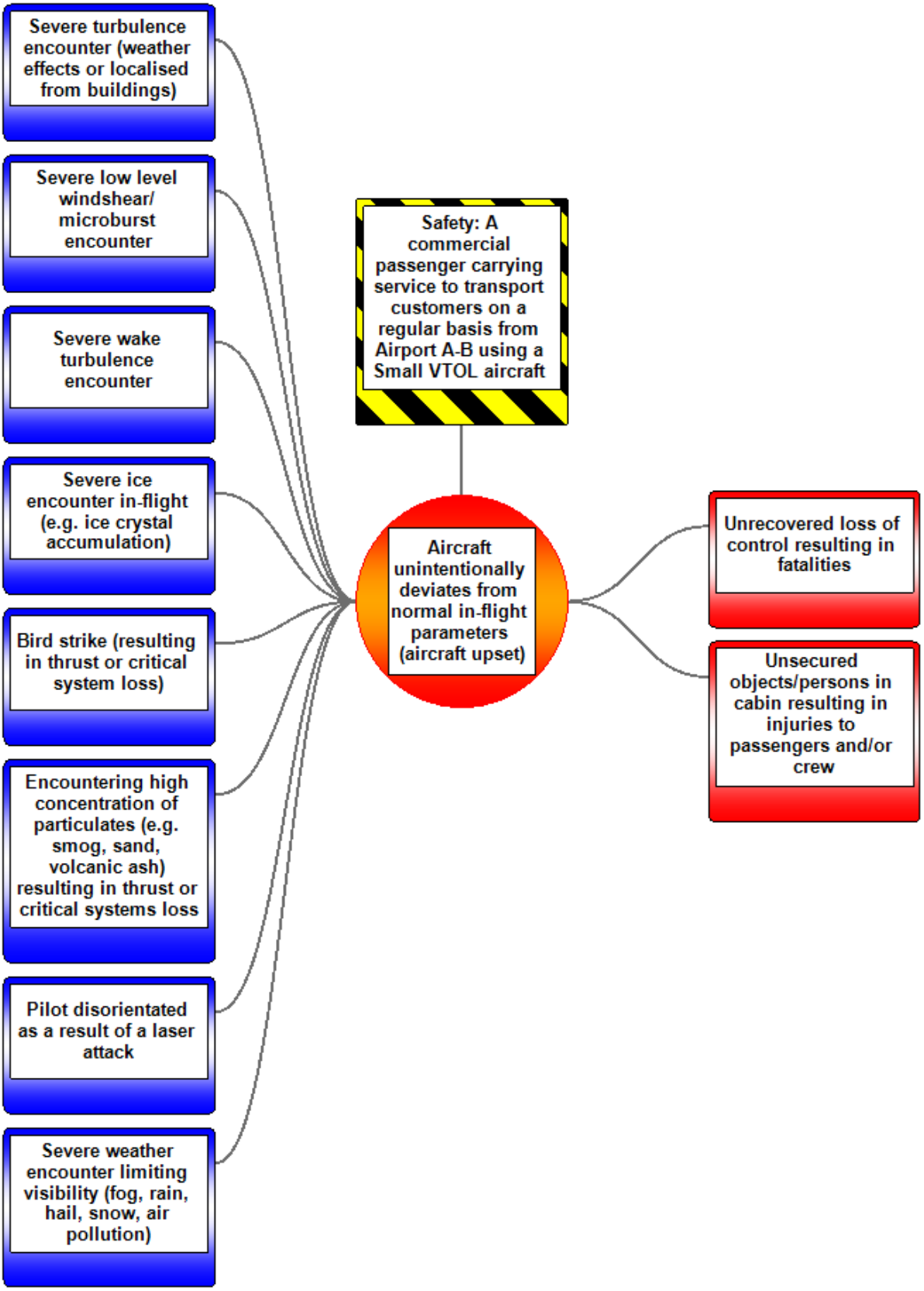

Pilot lands significantly outside the touchdown criteria (zone or speed)
Unanticipated technical failure affecting stopping or directional controllability (e.g. asymmetric thrust)
Erroneous Pilot action on landing (e.g. accidental/ asymmetric thrust)
Pilot attempts to land at an unsuitable location
Pilot lands in adverse weather conditions
Pilot loses adequate visual references for landing
Pilot conducts avoidance manouvre owing to conflict with another aircraft/ vehicle on the landing surface
Safety: A commercial passenger carrying service to transport customers on a regular basis from Airport A-B using a Small VTOL aircraft
Aircraft inability to touch down within the expected landing area
Landing area excursion resulting in fatalities


Safety: A commercial passenger carrying service to transport customers on a regular basis from Airport A-B using a Small VTOL aircraft
Aircraft loaded in accordance with incorrect load instructions generated by Load Controller
Aircraft is mis-loaded (e.g. incorrect distribution) by Loading Staff
Significant load shift due inadequate or improper restraint use by Loading Staff
Aircraft Operator does not load aircraft in accordance with the loadsheet
Aircraft operates significantly outside the mass and balance envelope
Unrecovered loss of control resulting in fatalities
Insufficient rate of climb after take-off resulting in collision and fatalities
Landing area overrun/excursion resulting in fatalities


Safety: A commercial passenger carrying service to transport customers on a regular basis from Airport A-B using a Small VTOL aircraft
Ground service equipment/ vehicle impacts and damages parked aircraft
The aircraft internal structure/ systems is damaged during loading/ unloading (e.g. fire protection, hydraulics, door locks and latches)
Moving aircraft collides with ground vehicles/ obstacles
Aircraft commences take-off with significant undetected ground damage
Insufficient rate of climb after take-off resulting in collision and fatalities
Landing area overrun/excursion resulting in fatalities
Unrecovered loss of control resulting in fatalities
Debris falls from aircraft resulting in injuries/ fatalities to persons on the ground


Safety: A commercial passenger carrying service to transport customers on a regular basis from Airport A-B using a Small VTOL aircraft
Contamination (ice/ snow/ other environmental) of airframe surfaces whilst on ground
Contamination of motor intake, fan and/or cool system whilst on ground
Aircraft commences take-off with contaminated flying surfaces or motor
Unrecovered loss of control resulting in fatalities
Insufficient rate of climb after take-off resulting in collision and fatalities
Landing area overrun/excursion resulting in fatalities


Malfunction of critical flight instruments/ automation/ flight controls
Significant reduction to available thrust due to powerplant malfunction
Thrust loss due to fuel exhaustion, starvation or contamination, or battery depletion, malfunction, or shutdown
Pilot incapacitation due to smoke/ fire/ fumes
Loss of Air Traffic Control navigation data (for an automated system)
Unanticipated in flight firmware update affecting critical systems
Structural damage due to battery/electrical system malfunction/ explosion
Safety: A commercial passenger carrying service to transport customers on a regular basis from Airport A-B using a Small VTOL aircraft
Aircraft unintentionally deviates from normal in-flight parameters (aircraft upset)
Unrecovered loss of control resulting in fatalities
Unsecured objects/persons in cabin resulting in injuries to passengers and/or crew


Severe turbulence encounter (weather effects or localised from buildings)
Severe low level windshear/ microburst encounter
Severe wake turbulence encounter
Severe ice encounter in-flight (e.g. ice crystal accumulation)
Bird strike (resulting in thrust or critical system loss)
Encountering high concentration of particulates (e.g. smog, sand, volcanic ash) resulting in thrust or critical systems loss
Pilot disorientated as a result of a laser attack
Severe weather encounter limiting visibility (fog, rain, hail, snow, air pollution)
Safety: A commercial passenger carrying service to transport customers on a regular basis from Airport A-B using a Small VTOL aircraft
Aircraft unintentionally deviates from normal in-flight parameters (aircraft upset)
Unrecovered loss of control resulting in fatalities
Unsecured objects/persons in cabin resulting in injuries to passengers and/or crew