

ECCAIRS Aviation

1.3.0.12

Data Definition Standard

English

Attribute Values

Liveware (human) (Liveware (human))	100000000
<i>Factors related to the human being.</i>	
Experience, knowledge and recency (Experience & knowledge)	105000000
<i>Factors related to experience, qualifications, knowledge and recency. N.B. details should be recorded elsewhere; the keywords should only be used if inexperience, inadequate qualifications, poor knowledge or for example, lack of recency are considered to have been contributory factors (irrespective of whether the regulations were met or not).</i>	
Inadequate or inaccurate knowledge (Adequacy of knowledge)	105030000
<i>Factors related to inadequate or inaccurate knowledge.</i>	
Aeronautical knowledge (Aeronautical knowledge)	105030400
<i>Factors related to aeronautical knowledge (applicable to flight crew, controllers and maintenance engineers).</i>	
Aircraft systems knowledge (Aircraft system knowledge)	105030500
<i>Factors related to the knowledge of aircraft systems (aircrew and maintenance engineers).</i>	
Lack of up-to-date knowledge (Current knowledge)	105030200
<i>Factors related to up-to-date knowledge.</i>	
General knowledge (General knowledge)	105030100
<i>Factors related to general knowledge.</i>	
Knowledge of flight rules (Knowledge of flight rules)	105030700
<i>Factors related to the knowledge of flight rules (flight crew and controllers.)</i>	
Knowledge of procedures (Knowledge of procedures)	105030600
<i>Factors related to the knowledge of procedures, e.g. existence, content or where to look them up.</i>	
Knowledge of aerodrome procedures (Aerodrome procedures)	105030604
<i>Factors related to the knowledge of aerodrome procedures.</i>	
Knowledge of air traffic management procedures (ATM procedures)	105030603
<i>Factors related to the knowledge of air traffic management procedures.</i>	
Knowledge of company procedures and policies (Company policies)	105030601
<i>Factors related to the knowledge of company procedures and policies.</i>	
Knowledge of flight procedures (Flight procedures)	105030602
<i>Factors related to the knowledge of flight procedures.</i>	
Knowledge of engineering maintenance procedures (Maintenance procedures)	105030605
<i>Factors related to the knowledge of engineering maintenance procedures.</i>	
Meteorological knowledge (Meteorological knowledge)	105030900
<i>Factors related to the meteorological knowledge, or knowledge of current or predicted meteorological conditions. N.B. This covers the individual's lack of knowledge given that the information is available.</i>	
Knowledge of regulatory requirements (Regulatory requirements)	105030300
<i>Factors related to the knowledge of regulatory requirements.</i>	
Self briefing factors (Self briefing factors)	105030800
<i>Factors related to the self briefing.</i>	
Other knowledge factors (Other knowledge factors)	105031000
<i>Factors related to knowledge of other matters not listed above.</i>	
Personal experience and qualifications (Experience & qualification)	105010000
<i>Factors related to experience or qualifications (relating to flight crew, controllers or engineers)</i>	
Personal experience (Personal experience)	105010200
<i>Factors related to experience, e.g. inadequate, inappropriate or out-of-date.</i>	
Experience in position (Experience in position)	105010202
<i>Factors related to experience in position, e.g. a highly experienced controller may have transferred to a new unit only recently, and may be inexperienced on a particular sector.</i>	
Experience of aerodrome (Experience of aerodrome)	105010204
<i>Factors related to experience of the aerodrome, e.g. first landing at a particular airport.</i>	
Experience on aircraft type (Experience of aircraft type)	105010203
<i>Factors related to experience on the subject aircraft type or variant.</i>	

Experience of route (Experience of route)	105010205
<i>Factors related to experience on a particular route/sector, e.g. unfamiliarity with controlled airspace boundaries on that route.</i>	
Instrument flying experience (Instrument flying)	105010206
<i>Factors related to instrument flying experience, e.g. lack of experience in using certain types of aircraft instruments.</i>	
Total hours/years experience (Total hours/years)	105010201
<i>Factors related to general experience level.</i>	
Other experience factors (Other experience factors)	105010207
<i>Factors related to lack of other types of experience, e.g. of poor weather, of terrain or of maps/charts.</i>	
Qualifications/licences/ratings (Qualifications)	105010100
<i>Factors related to qualifications, licences or ratings, e.g. inadequate or out-of-date.</i>	
Use of tools and equipment (Use of tools and equipment)	105010300
<i>Factors related to experience of maintenance engineer in use of tools and equipment.</i>	
Recency factors (Recency factors)	105020000
<i>Factors related to recency, e.g. lack of recent relevant experience due to sickness, leave, management or training responsibilities. N.B. an individual can meet the requirements of the licence or validation, i.e. be current, but not have operated recently in the subject aircraft or in the air traffic services position.</i>	
Recent experience in operational activity (Experience-operational)	105020600
<i>Factors related to lack of recency in operational activity, particularly during a busy period, e.g. due to management responsibilities. This includes individuals not "keeping their hand in".</i>	
Recency in position (Recency in position)	105020100
<i>Factors related to recency in position, e.g. lack of recency in position.</i>	
Recency on aircraft type (Recency on aircraft type)	105020200
<i>Factors related to lack of recent experience on the subject aircraft type or variant.</i>	
Recent experience with IFR (Recent experience-IFR)	105020500
<i>Factors related to lack of recency in instrument flying rules.</i>	
Recent experience with route (Recent experience-route)	105020400
<i>Factors related to lack of recency associated with a route or sector.</i>	
Recent experience with aerodrome (With aerodrome)	105020300
<i>Factors related to lack of recency associated with the aerodrome, e.g. have not landed at the airport for 2 years.</i>	
Other recency factor (Other recency factor)	105020700
<i>Factors related to other recency factors.</i>	
Human physiology (Human physiology)	102000000
<i>Factors related to physiological conditions of persons. Physiology is the science of the normal functions and phenomena of living things. Physiology comprises the two divisions of animal and vegetable physiology; that part of the former which refers specially to the vital functions in man is called human physiology.</i>	
Illness/incapacitation (Illness/incapacitation)	102010000
<i>Factors related to physiological problems, including illness, incapacitation, general well-being, health, fitness, fatigue, stress and visual illusions.</i>	
Mortality (Mortality)	102010100
<i>Factors related to a person who has died.</i>	
Illness (Illness)	102010200
<i>Factors related to illnesses in general.</i>	
Illness gastro-enteritis/food poisoning (Illness-food poisoning)	102010201
<i>Factors related to gastro-enteritis/food poisoning.</i>	
Vertigo/dizziness (Vertigo/dizziness)	102010202
<i>Factors related to illness resulting in vertigo/dizziness. Vertigo is a spinning sensation usually caused by a peripheral vestibular abnormality in the middle ear.</i>	
Pre-existing injury (Pre-existing injury)	102010300
<i>Factors related to a pre-existing injury which may have contributed to the occurrence. N.B. do not include injuries arising from an occurrence unless they contributed to a further problem.</i>	
Heart attack (Heart attack)	102010400

<i>Factors related to a heart attack.</i>	
Hypoxia/anoxia (Hypoxia/anoxia)	102010500
<i>Factors related to hypoxia/anoxia. That is reduced oxygen to the eyes and brain, resulting in symptoms such as: euphoria, confusion, impaired judgement, aggressiveness, blurring, tunnel vision, dizziness, increased respiration and loss of consciousness.</i>	
Hyperventilation (Hyperventilation)	102010600
<i>Factors related to hyperventilation. That is an increased or excessive exposure of the lungs to oxygen, resulting in a more rapid loss of carbon dioxide from the blood; the action of bringing this about in oneself, by deep or rapid breathing, or in another individual.</i>	
Carbon monoxide poisoning (Carbon monoxide poisoning)	102010700
<i>Factors related to carbon monoxide poisoning.</i>	
Reaction to toxic fumes (Reaction to toxic fumes)	102010800
<i>Factors related to effects of toxic fumes.</i>	
Loss of consciousness/fainting (Loss of consciousness)	102010900
<i>Factors related to loss of consciousness/fainting.</i>	
Motion sickness (Motion sickness)	102011000
<i>Factors related to motion sickness.</i>	
Visual disturbance (Visual disturbance)	102011100
<i>Factors related to visual disturbance, including visual interference associated with migraine.</i>	
Human impairment-decompression/diving (Impairment-diving)	102011200
<i>Factors related to decompression/diving, which may have contributed to the occurrence.</i>	
Impairment-decompression (Impairment-decompression)	102011201
<i>Factors related to decompression impairment.</i>	
Impairment-trapped gas effects (Impairment-trapped gas)	102011202
<i>Factors related to impairment due to trapped gas effects.</i>	
Impairment-underwater diving (Impairment-underwater diving)	102011203
<i>Factors related to underwater diving.</i>	
Medical history (Medical history)	102011300
<i>Factors related to medical history, e.g. history of heart problems.</i>	
Human impairment-health/fitness/lifestyle (Impairment-fitness lack)	102020000
<i>Factors related to general health/fitness/lifestyle, as opposed to specific illness or incapacitation.</i>	
Impairment-stress symptoms (Impairment-stress)	102020100
<i>Factors related to stress symptoms.</i>	
Impairment-degree of fitness (Impairment-fitness)	102020200
<i>Factors related to fitness.</i>	
Impairment-degree of obesity (Impairment-obesity)	102020300
<i>Factors related to obesity, e.g. leading to illness or resulting in anthropometric problems.</i>	
Impairment-diet/meals/meal breaks (Impairment-food intake)	102020400
<i>Factors related to general diet, or short term problems associated with food/meals e.g. inadequate meal breaks.</i>	
Impairment-blood/sugar level (Impairment-blood/sugar)	102020500
<i>Factors related to blood/sugar level.</i>	
Impairment-chronic alcohol abuse (Impairment-use of alcohol)	102020600
<i>Factors related to a long term alcohol problem.</i>	
Impairment-alcohol/blood level (Impairment-alcohol level)	102020700
<i>Factors related to excessive alcohol in the blood as evidenced from tests.</i>	
Impairment-alcohol consumption (Impairment-alcohol intake)	102020800
<i>Factors related to known or suspected impairment of performance as a result of alcohol intake.</i>	
Impairment-alcohol hangover (Impairment-alcohol effect)	102020900
<i>Factors related to known or suspected impairment of performance as a result of a hangover.</i>	
Impairment-self medication (Impairment-self treatment)	102021000

<i>Factors related to the use of readily available medication, e.g. melatonin, not on the barred list, which may have affected performance.</i>	
Impairment-prescription medication (Impairment-prescription)	102021100
<i>Factors related to prescription medication affecting performance.</i>	
Impairment-barred drugs (Impairment-barred drugs)	102021200
<i>Factors related to evidence/suspicion of the use of barred medication/substances.</i>	
Impairment-stimulants (Impairment-stimulants)	102021300
<i>Factors related to evidence/suspicion of the use of stimulants.</i>	
Impairment-illicit drugs (Impairment-illicit drugs)	102021400
<i>Factors related to evidence/suspicion of the use of illicit drugs.</i>	
Impairment-blood donation (Impairment-blood donation)	102021500
<i>Factors related to a blood donation, which may have affected performance.</i>	
Impairment-disease (Impairment-disease)	102021600
<i>Factors related to any disease which may have affected performance.</i>	
Impairment-pain (Impairment-pain)	102021700
<i>Factors related to any pain which may have affected performance.</i>	
Impairment-tobacco smoking (Impairment-smoking)	102021800
<i>Factors related to smoking and health problems associated with smoking, e.g. susceptibility to hypoxia, stress experienced by not being able/allowed to smoke or absence at a critical time due to a smoke break.</i>	
Impairment-predisposing condition (Impairment-predisposition)	102021900
<i>Factors related to any pre-disposing condition which may have affected performance.</i>	
Impairment-psychological condition (Impairment-psychological)	102022000
<i>Factors related to known or suspected medical psychological condition/neurotic disorder e.g. depression, fear of heights or other phobia.</i>	
Impairment-other health/fitness issues (Impairment-other fitness)	102022100
<i>Factors related to health/fitness problems, which may have affected performance, other than those listed above.</i>	
Impairment-other lifestyle (Impairment-other living)	102022200
<i>Factors related to other lifestyle issues which may have affected performance.</i>	
Human fatigue/alertness (Human fatigue/alertness)	102030000
<i>Factors related to fatigue/alertness generally. Fatigue can be defined as: "diminished productivity, efficiency, or ability to carry on work, because of a previous expenditure of energy in doing work" (usually after a prolonged spell of work). N.B. fatigue differs from boredom.</i>	
Fatigue-falling asleep (Fatigue-falling asleep)	102030100
<i>Factors related to a person falling asleep.</i>	
Fatigue-acute (Fatigue-acute)	102030200
<i>Factors related to acute fatigue, i.e. extreme fatigue associated with this one instance.</i>	
Fatigue-chronic (Fatigue-chronic)	102030300
<i>Factors related to chronic fatigue, i.e.. frequently experienced fatigue over a long period of time (weeks/months).</i>	
Fatigue-circadian dysrhythmia (jet lag) (Circadian dysrhythmia)	102030400
<i>Factors related to fatigue/alertness caused by jet lag.</i>	
Fatigue-rest/duty time (Fatigue-rest/duty time)	102030500
<i>Factors related to fatigue/alertness caused by inadequate rest periods, or inadequate rest/duty time schedules.</i>	
Fatigue-sleep deficit (Fatigue-sleep deficit)	102030600
<i>Factors related to a sleep deficit affecting performance. N.B. This differs from fatigue in that sleep deficit affects preparedness for work irrespective of any subsequent task demands, whereas fatigue is a combination of task demands and preparedness/fitness for work.</i>	
Fatigue-sleep disorder (Fatigue-sleep disorder)	102030700
<i>Factors related to fatigue/alertness caused by a sleep disorder, e.g. inability to sleep soundly.</i>	
Fatigue-sleep disruption (Fatigue-sleep disruption)	102030800
<i>Factors related to fatigue/alertness caused by sleep disruption, e.g. caused by a noisy hotel or telephone calls.</i>	
Fatigue-other (Fatigue-other)	102030900

Human vestibular or visual illusions (Human illusions)	102040000
<i>Factors related to human vestibular or visual illusions.</i>	
Human vestibular illusions generally (Vestibular illusions)	102040100
<i>Factors related to human vestibular illusions generally. Vestibular illusions, i.e. of or pertaining to the vestibule of the ear or its function as an organ of equilibrium.</i>	
Coriolis vestibular illusions (Coriolis illusion)	102040101
<i>Factors related to Coriolis vestibular illusions. The Coriolis illusion is the most dangerous of all vestibular illusions because it causes overwhelming disorientation. It gives the pilot a sensation of motion on another axis. The illusion is caused by any abrupt head movement, in a different geometrical plane, during a constant rate turn.</i>	
Elevator vestibular illusions (Elevator illusion)	102040102
<i>Factors related to elevator vestibular illusions. The elevator illusion is caused by a rapid upward acceleration of the aircraft. Inertia causes the pilot's eyes to track downwards as his body tries, through inputs supplied by the inner ear, to maintain visual fixation on the environment or instrument panel. The displacement of the eyes gives the pilot a sense that the nose of the aircraft is rising even though the aircraft remains in level attitude.</i>	
"Giant-hand" vestibular illusion ("Giant-hand" illusion)	102040103
<i>Factors related to giant-hand vestibular illusions. A pilot suffering from the "giant hand" illusion perceives that the aircraft is not responding properly to his control inputs, as every attempt to bring the aircraft to the desired attitude, appears to be resisted by a tendency to fly back to another, more stable attitude e.g. a pilot experiencing disorientation about the roll axis may feel a force-like a giant hand-trying to push one wing down and hold it there.</i>	
Somatogavic/acceleration vestibular illusion (Somatogavic illusion)	102040104
<i>Factors related to mistaking acceleration for pitch. Somatogavic illusions are caused by changes in linear accelerations and decelerations or gravity that stimulate the otolith organs. The three types of somatogavic illusions that can be encountered in flight are oculoagavic, elevator and oculoagavic</i>	
Somatogyral vestibular illusion (Somatogyral illusion)	102040105
<i>Factors related to somatogyral illusions. Somatogyral illusions are caused when angular accelerations and decelerations stimulate the semicircular canals. Those that may be encountered in flight are Coriolis illusions, graveyard spin and the leans.</i>	
The leans vestibular illusion (The "leans" illusion)	102040106
<i>Factors related to feeling of "leaning", when the aircraft is level after a gentle turn. This illusion occurs when the pilot fails to perceive angular motion e.g. in a slow roll the pilot may fail to perceive that the aircraft is no longer upright even though the attitude indicator shows that the aircraft is in a bank. When the pilot rolls out of the bank he may perceive, erroneously, that the aircraft is banking in the opposite direction.</i>	
Human visual illusions (Human visual illusions)	102040200
<i>Factors related to visual illusions generally.</i>	
Black hole visual illusions (Black hole)	102040201
<i>Factors related to black hole illusion e.g. descending below the approach path when there are no visual points of reference before the runway threshold on a night approach.</i>	
Flicker vertigo visual illusions (Flicker vertigo)	102040202
<i>Factors related to flicker vertigo. Flicker vertigo is not an illusion; however viewing a flickering light can be both distracting and annoying. Helicopter rotor blades, or aircraft propeller blades, interrupting direct sunlight at a rate of 4 to 20 cycles per second, may create flicker vertigo. Flashing anti-collision strobe lights, especially while the aircraft is in the clouds, can also produce this effect.</i>	
Landing visual illusions (Landing visual illusions)	102040203
<i>Factors related to landing illusions, e.g. believing the aircraft to be higher than normal because the runway is narrower than usual.</i>	
Geometric perspective visual illusions (Perspective illusion)	102040204
<i>Factors related to geometric perspective illusions, e.g. interpreting a sloping cloud bank as a level horizon.</i>	
Auto kinesis visual illusions (Auto kinesis illusion)	102040205
<i>Factors related to auto kinesis. Auto kinesis occurs primarily at night when ambient visual cues are minimal and a small, dim light is seen against a dark background. After about 6 to 12 seconds of fixating visually on the light, a pilot perceives movement at up to 20 degrees in any particular direction or in several directions in succession, although there is no actual displacement of the object. This illusion may allow an aviator to mistake the object fixated as another aircraft.</i>	
Visual illusions-other (Visual illusions-other)	102040206
<i>Factors related to human visual illusions other than those listed above.</i>	
Illusions other than those listed above (Illusions-other)	102040300

<i>Factors related to human illusions other than those listed above.</i>	
Physiological limitations-other (Physiological limit-other)	102050000
<i>Factors related to a physiological limitation other than those listed above.</i>	
Personal workload management (Personal work management)	104000000
<i>Factors related to management of own or another's workload (if within one's own control).</i>	
Personal timing of actions (Personal timing of actions)	104020000
<i>Factors related to timing of actions or events, e.g. leaving everything to the last minute.</i>	
Adapting to unforeseen task additions (Unforeseen task additions)	104020100
<i>Factors related to short term workload management - adapting to short notice changes.</i>	
Task allocation (Task allocation)	104040000
<i>Factors related to task allocation, e.g. inappropriate allocation of tasks.</i>	
Personal prioritization/task scheduling (Task scheduling)	104010000
<i>Factors related to prioritization/task scheduling.</i>	
High workload task shedding (Workload task shedding)	104030000
<i>Factors related to shedding tasks due to high workload.</i>	
Other workload management (Other workload management)	104050000
<i>Factors related to other workload management.</i>	
Personal physical or sensory limitations (Physical/sensory limits)	101000000
<i>Factors related to a person's physical or sensory limitations, not including physiological, psychological or visual illusions.</i>	
Human sensory limitations (Human sensory limitations)	101020000
<i>Factors related to limitations in any of the human senses e.g. sight and touch.</i>	
G tolerance (G tolerance)	101020400
<i>Factors related to tolerance of high G (mainly associated with military aircraft).</i>	
Hearing (Hearing)	101020200
<i>Factors related to hearing.</i>	
Mandelbaum effect on humans (Mandelbaum effect)	101020600
<i>Factors related to the Mandelbaum effect, i.e. the tendency of the eye to approach "resting" accommodation under conditions of poor visibility. Since resting accommodation is approximately one metre objects outside the windscreen will be out of focus. Accommodation is the physiological process by which the eye brings objects at different distances into focus.</i>	
Proprioception (Proprioception)	101020500
<i>Factors related to proprioception. Proprioceptive illusion rarely occur alone. They are closely associated with the vestibular system and to a lesser degree, with the visual system. The proprioceptive information input to the brain may lead to a false perception of true vertical. During manoeuvres proprioceptive information is fed into the central nervous system. Without visual reference the pilot only senses being pressed firmly into the seat. Because this sensation is normally associated with a climb the pilot may interpret it as such.</i>	
Sensory threshold (Sensory threshold)	101020700
<i>Factors related to a person's sensory threshold.</i>	
Vestibular function (Vestibular function)	101020300
<i>Factors related to limitations pertaining to the vestibule of the ear or its function as an organ of equilibrium.</i>	
Vision (Vision)	101020100
<i>Factors related to vision.</i>	
Colour vision (Colour vision)	101020102
<i>Factors related to a person's colour vision.</i>	
Empty field myopia (Empty field myopia)	101020103
<i>Factors related to empty field myopia i.e. the tendency of the eye to focus at a fixed distance when not stimulated.</i>	
Uncorrected vision failure to wear glasses or contact lenses (Uncorrected vision)	101020101
<i>Factors related to uncorrected vision, or failure to wear glasses/lenses when required to do so.</i>	
Personal physical characteristics (Physical characteristics)	101010000
<i>Factors related to a person's physical characteristics, e.g. anthropometrics, strength, weight and age.</i>	

Personal age and physical limitations (Age/physical limitations)	101010100
<i>Factors related to a person's physical limitations associated with age, e.g. slowed reaction times (not including psychological aspects associated with age).</i>	
Personal anthropometrics (Personal anthropometrics)	101010200
<i>Factors related to a person's anthropometrics, e.g. reach, visual field. That is involving a person outside the percentile range for which the equipment or working environment was designed.</i>	
Personal mass (Personal mass)	101010204
<i>Factors related to a person's mass.</i>	
Personal reach (Personal reach)	101010202
<i>Factors related to a person's reach.</i>	
Personal size (Personal size)	101010201
<i>Factors related to a person's size.</i>	
Personal strength (Personal strength)	101010203
<i>Factors related to a person's strength.</i>	
Other human physical limitations or characteristics (Other physical limits)	101030000
<i>Factors related to physical limitations or characteristics not listed above.</i>	
Psychological limitations (Psychological limitations)	103000000
<i>Factors related to anything which involves thinking or acting (not including physiological issues) such as learning, memory, personality or attitudes.</i>	
Action or lack of action (Action or lack of action)	103010000
<i>Factors related to an action, series of actions, or lack of action which was, or may have been, a contributory factor.</i>	
Psychological action-slip (correct intention; faulty action) (Action-slip)	103010100
<i>Factors related to a slip (correct intention; faulty action).</i>	
Psychological action-lapse/omission/memory failure (Action-lapse/omission)	103010200
<i>Factors related to a failure to carry out a particular action, e.g. missing one step in a sequence from a checklist or forgetting to do something.</i>	
Psychological action-mistake (faulty plan/intention) (Action-mistake)	103010300
<i>Factors related to a mistake; intending to do something without appreciating that it is incorrect, e.g. entering FL150 when the clearance was for FL140.N.B. the difference between a mistake, a slip and a lapse is not always clear-cut.</i>	
Psychological action-procedure violation (Procedure violation)	103010400
<i>Factors related to deliberate failure to follow the rules/procedures (whether well intentioned or not).</i>	
Psychological action or error-other (Psychological error-other)	103010700
<i>Factors related to psychological action or error other than those listed above.</i>	
Psychological action or error-timing (Timing)	103010500
<i>Factors related to action inappropriately timed, e.g. too late, too early, delayed or coinciding with other tasks.</i>	
Psychological action or error-third party (Third party)	103010600
<i>Factors related to action by a third party, e.g. a passenger or observer.</i>	
Human judgement factors (Human judgement factors)	103060000
<i>Factors related to human judgement.</i>	
Human judgement factors-spatial (Spatial)	103060100
<i>Factors related to spatial judgement, either temporary or in general, e.g. one aircraft being taxied into another.</i>	
Human judgement factors-separation (Separation)	103060200
<i>Factors related to separation judgement, either temporary or in general, e.g. controller judgement, by reference to the radar display, of separation between aircraft.</i>	
Human judgement factors-timing/speed (Timing/speed)	103060300
<i>Factors related to timing/speed judgement, e.g. controller failing to realise by reference to the radar display how fast an aircraft is climbing.</i>	
Other human judgement factors (Other human judgement)	103060400
<i>Factors related to types of judgement other than those listed above.</i>	
Psychological action-information processing/decision making (Information processing)	103030000
<i>Factors related to information processing, e.g. deficiencies or poor/inappropriate decision making.</i>	

Psychological action-decision making (Action-decision making)	103030100
<i>Factors related to decision making. N.B. There are many decisions which turn out to be incorrect or inappropriate with the benefit of hindsight; these should not be included unless they could have been anticipated as poor at the time the decision was made.</i>	
Psychological-assumption incorrect (Assumption incorrect)	103030600
<i>Factors related to an incorrect assumption. This differs from a false hypothesis in that there was evidence available which, if checked, could have indicated that the assumption was incorrect, whereas with a false hypothesis the evidence was not necessarily available to check the hypothesis at the time.</i>	
Psychological-comprehension (Comprehension)	103030300
<i>Factors related to comprehension difficulties, e.g. in communication, might be associated with language or accent or understanding of procedures.</i>	
Psychological-confirmation bias (Confirmation bias)	103030800
<i>Factors related to attending to the evidence which confirms a theory/hypothesis and ignoring the evidence which does not confirm it. Seeing what you want to see; hearing what you want to hear.</i>	
Psychological-false hypothesis (False hypothesis)	103030700
<i>Factors related to false hypothesis, e.g. hypothesis that No. 1 engine has failed is false if the failed engine is No.2.</i>	
Psychological-information processing other (Information processing-other)	103031100
<i>Factors related to information processing other than those listed above.</i>	
Psychological mental capacity (Mental capacity)	103030200
<i>Factors related to mental capacity, e.g. task demands have reached or exceeded the mental capacity of the individual, either in terms of sheer quantity of workload, or in terms of complexity. Some individuals cope better than others.</i>	
Psychological-mind set/expectancy (Mind set/expectancy)	103030900
<i>Factors related to having the mind set on a particular course of action, or explanation, or understanding of events, possibly ignoring other information to the contrary. Expectancy is similar in that an individual expects something to happen, e.g. a controller may expect certain aircraft types to climb very quickly, and fails to notice, or ignores, evidence to the contrary.</i>	
Psychological-mis-recognition (Mis-recognition)	103030400
<i>Factors related to perceptual misinterpretation of visual or auditory data, e.g. mishearing an air traffic control clearance or misreading instruments.</i>	
Psychological-misunderstanding (Misunderstanding)	103030500
<i>Factors related to a misunderstanding by the recipient, usually associated with communication, e.g. misunderstanding of a warning, an instruction, a procedure or a chart.</i>	
Psychological-habituation (Psychological-habituation)	103031000
<i>Factors related to being so used to, or familiar with, something, that actions may become automatic, e.g. running through the checklist, and failing to notice that something is set incorrectly because of familiarity with it being set correctly.</i>	
Human knowledge acquisition factors (Knowledge acquisition)	103070000
<i>Factors related to the acquisition of knowledge/learning.</i>	
Mental/emotional state factors (Mental state factors)	103100000
<i>Factors related to mental/emotional state generally.</i>	
Arousal level/alertness problems (Alertness problems)	103100100
<i>Factors related to alertness; whether the task demands are too high or too low to result in the optimum performance of an individual.</i>	
Personal apprehension problems (Apprehension problems)	103100300
<i>Factors related to the feeling of apprehension.</i>	
Personal anxiety problems (Personal anxiety problems)	103100400
<i>Factors related to the feeling of anxiety.</i>	
Personal stress factors (Personal stress factors)	103100200
<i>Factors related to an individual feeling stressed, or appearing to be stressed.</i>	
Post-incident stress factors (Post-incident stress)	103100201
<i>Factors related to stress incurred as a result of having experienced a incident or stressful situation (usually that day, but could be some time prior to that).</i>	
Personal boredom (emotional state) problems (Personal boredom problems)	103100600
<i>Factors related to boredom.</i>	
Personal panic factors (Personal panic factors)	103100500

<i>Factors related to panic.</i>	
Personal situation denial factors (Personal situation denial)	103100700
<i>Factors related to failure to admit to oneself that an emergency or stressful situation exists.</i>	
Other personal mental/emotional state factors (Other emotional factors)	103100800
<i>Factors related to other mental/emotional state.</i>	
Suicide: circumstances indicate that death was sought intentionally. (Suicide)	103100801
<i>Suicide: to be used when circumstances indicate that the occurrence was related to a suicide and when no other better fitting factor is at hand.</i>	
Psychological-attention, perception and monitoring (Perception & monitoring)	103040000
<i>Factors related to attention, perception and/or monitoring, including failure to notice information, visual or aural, e.g. lack of attention.</i>	
Psychological-attention habituation (Attention habituation)	103040800
<i>Factors related to being so used to, or familiar with, something, that the person does not necessarily "see" it, e.g. if there are many false conflict alerts on an air traffic control radar display, the controller's attention to such warnings may be reduced as a result of habituation.</i>	
Psychological-attention - other (Attention-other)	103040900
<i>Factors related to other types of inattention than those listed above.</i>	
Psychological-boredom/monotony (Boredom/monotony)	103040400
<i>Factors related to boredom/monotony.</i>	
Psychological-fascination/fixation/channelized attention (Channelized attention)	103040700
<i>Factors related to a person concentrating on one thing at the expense of others, e.g. pilots concentrating head-down and failing to look out or controllers concentrating on the radar and ignoring the strips.</i>	
Psychological-attention (Psychological-attention)	103040200
<i>Factors related to attention. This is often difficult to determine. Just because an individual did not see something, it does not mean that he/she was not paying enough attention. Care should be taken when using this keyword.</i>	
Psychological-distraction (Psychological-distraction)	103040600
<i>Factors related to being distracted from a task. N.B. The nature of the task often involves distractions (e.g.. ATC calls when the flight crew members are busy with another task).</i>	
Psychological-monitoring (attention) (Psychological-monitoring)	103040300
<i>Factors related to monitoring, to an acceptable extent, whether careful or occasional, e.g. instruments, displays or the sky. Just because an individual did not notice something, it does not mean that he/she was not monitoring it regularly. N.B. Care should be taken when using this keyword. as inadequate monitoring is often difficult to determine.</i>	
Psychological-monitoring automation (Monitoring automation)	103040301
<i>Factors related to monitoring the automation (via displays, knowledge of what the aircraft should be doing, warnings or checks).</i>	
Psychological-monitoring displays/instruments (Monitoring displays)	103040302
<i>Factors related to monitoring aircraft displays/instruments and ATC displays (mainly radar).</i>	
Psychological-monitoring frequencies (Monitoring frequencies)	103040304
<i>Factors related to monitoring/listening to the frequency which the individual is required to monitor, (aircrew and controllers).</i>	
Psychological-monitoring outside world (Monitoring outside world)	103040303
<i>Factors related to monitoring the outside world, "heads-up" in the cockpit for pilots; visual monitoring of aircraft in the vicinity of an aerodrome for tower controllers.</i>	
Psychological-monitoring a person (Monitoring a person)	103040305
<i>Factors related to monitoring a person, e.g. in a training situation, or cross-checking in crew resource management.</i>	
Psychological-perception (Psychological-perception)	103040100
<i>Factors related to the problem associated with recognising or identifying something. One may see something, e.g. a radar return, but fail to perceive what it represents.</i>	
Psychological-vigilance (Psychological-vigilance)	103040500
<i>Factors related to vigilance. Vigilance is similar to attention, but associated more with attending carefully than attention in general.</i>	
Personality and attitude factors (Personality/attitude)	103090000
<i>Factors related to personality or attitudes.</i>	
<i>N.B. care must be taken when assigning these keywords, given that such judgements are generally subjective.</i>	

Complacency factors (Complacency factors)	103090400
<i>Factors related to complacency, e.g. home aerodrome complacency.</i>	
Lack of or excessive confidence problems (Confidence problems)	103090300
<i>Factors related to lack of, or excessive, confidence generally.</i>	
Confidence in aircraft factors (Confidence in aircraft)	103090301
<i>Factors related to lack of, or excessive, confidence in the aircraft.</i>	
Confidence in ATC factors (Confidence in ATC factors)	103090307
<i>Factors related to lack of, or excessive, confidence in air traffic control.</i>	
Confidence in automation factors (Confidence in automation)	103090306
<i>Factors related to lack of, or excessive, confidence in automation.</i>	
Confidence in equipment factors (Confidence in equipment)	103090302
<i>Factors related to lack of, or excessive, confidence in equipment.</i>	
Confidence in information factors (Confidence in information)	103090305
<i>Factors related to lack of, or excessive, confidence in information, e.g. in the accuracy of meteorological information.</i>	
Confidence in others factors (Confidence in others)	103090304
<i>Factors related to lack of, or excessive, confidence in others, particularly work colleagues.</i>	
Self confidence problems (Self confidence problems)	103090303
<i>Factors related to lack of, or excessive, confidence in self.</i>	
"Get-home-itis"/"press-on-itis" factors ("Get-home-itis" factors)	103090500
<i>Factors related to being keen to continue a task, e.g. despite evidence to suggest that this may not be advisable, or without carrying out proper checks.</i>	
Motivation problems (Motivation problems)	103090600
<i>Factors related to motivation.</i>	
Personality factors (Personality factors)	103090100
<i>Factors related to certain types of personality.</i>	
Aggressive personality factors (Aggressive personality)	103090101
<i>Factors related to an aggressive personality.</i>	
Assertive personality factors (Assertive personality)	103090102
<i>Factors related to an assertive personality.</i>	
Non-assertive personality factors (Non-assertive personality)	103090103
<i>Factors related to non-assertive personality.</i>	
Risk-taking personality factors (Risk-taking factors)	103090200
<i>Factors related to risk-taking personality.</i>	
Other attitude factors (Other attitude factors)	103090700
<i>Factors related to attitudes - other than those listed above.</i>	
Psychological-skill/technique/ability (Psychological-ability)	103050000
<i>Factors related to skill/technique/ability, e.g. poor aircraft handling skills.</i>	
Human interaction with automation (Interaction-automation)	103050600
<i>Factors related to interaction with automation, e.g. "Why did it do that?" syndrome.</i>	
Non-standard technique factors (Non-standard technique)	103050800
<i>Factors related to the use of a non-standard technique.</i>	
Psychological-airmanship (Psychological-airmanship)	103050200
<i>Factors related to airmanship, i.e. the proper conduct of the flight.</i>	
Psychological-handling of aircraft (Handling of aircraft)	103050201
<i>Factors related to flight handling, in terms of the direct manipulation of aircraft flight path and configuration (either via normal flight controls or via automatic systems).</i>	
Psychological-CRM/airmanship (Psychological-airmanship)	103050202
<i>Factors related to crew resource management skills/airmanship.</i>	

Psychological-competence/ability (Psychological-competence)	103050300
<i>Factors related to the competence or ability of the person.</i>	
Psychological-past record (Psychological-past record)	103050400
<i>Factors related to the individual's history, e.g. an indication that there are some areas where the person's skill/technique/competence may be questionable.</i>	
Psychological-skill (Psychological-skill)	103050500
<i>Factors related to the individual's level of skill.</i>	
Skill maintenance factors practice lack (Lack of practice)	103050503
<i>Factors related to skill maintenance due to lack of practice, e.g. management commitments or being required to fly minimum hours.</i>	
Skill maintenance factor-automation (Maintenance-automation)	103050501
<i>Factors related to a reduction in skill level due to lack of practice as a result of automation.</i>	
Skill maintenance factor with age (Skill maintenance-age)	103050502
<i>Factors related to a reduction in skill level with increasing age, e.g. a slowing of reaction times.</i>	
Skill maintenance-negative transfer (Negative transfer)	103050504
<i>Factors related to negative transfer, e.g. interference of old skills after having transferred to a new environment/aircraft type or transfer from traditional cockpit to glass cockpit aircraft.</i>	
Psychological-technique (Psychological-technique)	103050100
<i>Factors related to shortcomings in the means of achieving one's purpose, e.g. poor or inappropriate technique, flying or air traffic controlling.</i>	
Human reaction time-skill/ability level (Reaction time-ability)	103050700
<i>Factors related to reaction time, related to level of skill or ability.</i>	
Other technique/skill/ability factors (Other factors)	103050900
<i>Factors related to a technique, skill or ability other than those listed above.</i>	
Psychological action-planning (Psychological planning)	103020000
<i>Factors related to planning of operational tasks - flight, route, air traffic control or maintenance.</i>	
Psychological action-preparedness (Action-preparedness)	103020200
<i>Factors related to preparation or planning issues (e.g. diversion aerodromes, knowledge of weather or anticipation of workload).</i>	
Psychological action-ATC planning (ATC planning)	103020300
<i>Factors related to Air Traffic Control planning directly related to the task of separating aircraft, e.g. poor plan or inflexible plan.</i>	
Psychological action-flight planning (Flight planning)	103020100
<i>Factors related to flight planning generally.</i>	
Psychological action-in-flight planning (In-flight planning)	103020102
<i>Factors related to in-flight planning, e.g. change of plans in response to weather or planning for even distribution of workload.</i>	
Psychological action-pre-flight planning (Pre-flight planning)	103020101
<i>Factors related to pre-flight planning, e.g. fuel load, route or diversion aerodromes.</i>	
Psychological action-maintenance task planning (Maintenance planning)	103020400
<i>Factors related to planning for maintenance, including planning for adequate manning, tooling and spares. Short term planning issues, associated with an individual.</i>	
Psychological action-spares provisioning (Spares provisioning)	103020401
<i>Factors related to planning for spares provisioning - one particular aspect of the maintenance engineering task. For long term issues, not associated with an individual.</i>	
Human knowledge acquisition factors situational awareness (Situational awareness)	103080000
<i>Factors related to situational awareness. Situational awareness refers to a person's consciousness of the aeroplane's status in relation to operational and environmental conditions.</i>	
Geographic disorientation factors, i.e. being lost (Geographic disorientation)	103080200
<i>Factors related to geographic situational awareness - not knowing where you are in terms of location.</i>	
"Losing the picture" factors ("Losing the picture")	103080500
<i>Factors related to losing the cognitive "picture" of the overall situation, e.g. inexperienced controllers in high workload conditions.</i>	

Situational awareness and automation factors (Situational awareness)	103080600
<i>Factors related to situational awareness and automation, e.g. knowing the mode to which the autopilot is selected.</i>	
Spatial disorientation factors (Spatial disorientation)	103080100
<i>Factors related to spatial disorientation, e.g. not knowing when the aircraft is straight and level.</i>	
Temporal disorientation/time horizon factors (Temporal disorientation)	103080300
<i>Factors related to awareness of time, e.g. in an emergency situation, time can appear to run very slowly and this may distort one's perception of elapsed time.</i>	
Visual disorientation factors (Visual disorientation)	103080400
<i>Factors related to visual disorientation, e.g. mistaking a road for the runway.</i>	
Other orientation factors (Other orientation factors)	103080700
<i>Factors related to other orientation or situation awareness, e.g. lack of awareness of a colleague's inability to cope.</i>	
Liveware (human) - environment interface (Liveware-environment)	200000000
<i>Factors related to the interface between a human and the interface with his/her work environment.</i>	
Physical environment (Physical environment)	201000000
<i>Factors related to the interface between the human and the physical environment.</i>	
Aerodrome/landing/take-off site (Landing/take-off site)	201010000
<i>Factors related to aerodrome or take-off or landing site if not an aerodrome, e.g. helideck.</i>	
Taxiway/runway characteristics, conditions or lighting/markings (Taxiway/runway)	201010100
<i>Factors related to a taxiway/runway characteristic or condition, e.g. potentially misleading runway/taxiway lighting, or unclear markings of runway exits.</i>	
Approach aids (Approach aids)	201010200
<i>Factors related to approach aids, e.g. approach aid suddenly switched off without pilot being advised.</i>	
Landing/take-off site infrastructure (Infrastructure)	201010300
<i>Factors related to an aerodrome or landing/take-off site infrastructure, e.g. helideck design on offshore oil platforms.</i>	
Obstructions to vision on the landing site (Obstructions to vision)	201010400
<i>Factors related to obstructions to vision, e.g. not being able to see the end of a sloping runway or an Air Traffic Control Officer not being able to see all of a runway from the Tower.</i>	
Landing take-off site facilities (Landing take-off)	201010500
<i>Factors related to an aerodrome or landing/take-off site facilities, e.g. no fire service or poor de-icing.</i>	
Air traffic services (Air traffic services)	201020000
<i>Factors related to air traffic services provided, e.g. lack of air traffic control.</i>	
Air Traffic Services incorrect/ inappropriate/ inadequate (Inappropriate)	201020100
<i>Factors related to Air Traffic Services, e.g. being provided with an Advisory or Information Service instead of a Control service or poor air traffic control.</i>	
Lack of Air Traffic Control (Air Traffic Control lack)	201020200
<i>Factors related to a lack of provision of a Air Traffic Control, (none provided normally or service temporarily suspended for some reason).</i>	
Provision of Air Traffic Services information (ATS information provision)	201030000
<i>Factors related to the availability or provision of Air Traffic Services information, e.g. information not available, incorrect or late.</i>	
Air Traffic Services weather information (Weather information)	201030100
<i>Factors related to Air Traffic Services meteorological information, e.g. poor, out-of-date or unavailable.</i>	
Air Traffic Services information on aerodrome conditions (Aerodrome conditions)	201030200
<i>Factors related to Air Traffic Services aerodrome condition information, e.g. poor, out-of-date or unavailable.</i>	
Other Air Traffic Services information (Other information)	201030300
<i>Factors related to other Air Traffic Services information, e.g. poor, out-of-date or unavailable.</i>	
Weather/visibility conditions (Weather/visibility)	201040000
<i>Factors related to human performance affected by weather or visual conditions, e.g. disorientation in fog or workload increased by poor weather conditions.</i>	
Physical workspace environment (Workspace environment)	201050000

Factors related to immediate physical working environment. N.B. The workspace environment may be as normal and meet published requirements, but may not be conducive to optimal performance.

Anthropometric space (Anthropometric space)	201050100
<i>Factors related to space, anthropometric issues, e.g. cramped cockpit or lack of space in the hangar for maintenance purposes.</i>	
Access (for maintenance) (Access (for maintenance))	201050200
<i>Factors related to access, e.g. difficult access to parts of the aircraft for maintenance.</i>	
Visibility from workspace/workplace (Visibility from workplace)	201050300
<i>Factors related to visibility from the immediate workplace, e.g. Tower window struts obscuring vision or small cockpit windows.</i>	
Air quality in workplace (Air quality in workplace)	201050400
<i>Factors related to air quality, e.g. poor air circulation in the cockpit/workplace leading to drowsiness.</i>	
Ambient air pressure (Ambient air pressure)	201050500
<i>Factors related to ambient air pressure (in an aircraft).</i>	
Cold working environment (Cold working environment)	201050600
<i>Factors related to cold working environment, e.g. aircraft maintenance taking place in a cold outdoor environment, possibly affecting manual dexterity of engineers.</i>	
Hot working environment (Hot working environment)	201050700
<i>Factors related to hot working environment.</i>	
Ill-lit working environment (Ill-lit environment)	201050800
<i>Factors related to illumination, e.g. poor lighting in cockpit making it difficult to read charts at night.</i>	
Vision impairment due to glare (Vision impairment-glare)	201050900
<i>Factors related to glare, e.g. glare on cockpit or Air Traffic Service displays, glare in Tower caused by setting sun.</i>	
Working environment discomfort due to humidity (Environment humidity)	201051000
<i>Factors related to extremes of humidity resulting in an uncomfortable working environment.</i>	
Noise in the workplace (Noise in the workplace)	201051100
<i>Factors related to noise, e.g. aircraft noise making it difficult to hear the R/T in the cockpit.</i>	
Ozone contamination of workplace (Ozone contamination)	201051200
<i>Factors related to the presence of ozone in the air of the workplace.</i>	
Smoke/fumes contamination of workplace (Smoke/fumes contamination)	201051300
<i>Factors related to fumes, smoke and the like in the work environment, e.g. smoke in the cockpit affecting vision or fumes in empty fuel tanks affecting maintenance engineers.</i>	
Radiation in the work environment (Radiation environment)	201051400
<i>Factors related to presence of radiation in the work environment.</i>	
Excessive vibration in the work environment (Excessive vibration)	201051500
<i>Factors related to excessive vibration.</i>	
Other internal workspace environment issues (Other workspace issues)	201051600
<i>Other factors related to the workspace environment.</i>	
Other human-environment interface (Other interface)	201060000
<i>Factors related to other human-environment interface conditions.</i>	
Psychosocial factors (Psychosocial factors)	202000000
<i>Factors related to psychosocial issues associated with, or affecting, work, e.g. cultural differences.</i>	
Job satisfaction (Job satisfaction)	202010000
<i>Factors related to job satisfaction, affecting performance.</i>	
Morale/motivation (Morale/motivation)	202020000
<i>Factors related to morale or motivation, affecting performance.</i>	
Cultural issues (Cultural issues)	202030000
<i>Factors related to cultural issues, e.g. crew mix, authority gradient, cultural issues and crew resource management.</i>	
Domestic issues (Domestic issues)	202040000
<i>Factors related to domestic issues affecting performance.</i>	

Domestic event/crisis (Domestic event/crisis)	202040100
<i>Factors related to domestic event or crisis which may have affected performance, e.g. death of a close relative or divorce proceedings.</i>	
Family pressure (Family pressure)	202040200
<i>Factors related to family pressure, e.g. pressure to get home from duty for a special event.</i>	
Financial problems/issues (Financial problems/issues)	202040300
<i>Factors related to short term or long term financial issues, e.g. moonlighting to earn more money resulting in overwork, or continuing operationally when approaching retirement for financial reasons despite doubts concerning declining skill level.</i>	
Interpersonal conflicts (Interpersonal conflicts)	202040400
<i>Factors related to interpersonal conflicts, e.g. not "getting on" with a work colleague.</i>	
Significant lifestyle change (Lifestyle change)	202040500
<i>Factors related to significant lifestyle change, e.g. moving house, country or company.</i>	
Mental pressure (domestic) (Mental pressure-domestic)	202040600
<i>Factors related to mental pressure related to non-work issues.</i>	
Non-sterile cockpit/workplace (Non-sterile cockpit/workplace)	202060000
<i>Factors related to non-sterile cockpit/workplace. Presence of third parties in the workplace, affecting performance, e.g. presence of other persons in the cockpit (i.e. not belonging to the flight crew), or the presence of third parties in an ATM workplace.</i>	
Other psychosocial issues (Other psychosocial issues)	202050000
<i>Factors related to other psychosocial issues not listed above.</i>	
Company, management, manning or regulatory issues (Company/regulatory issues)	203000000
<i>Factors related to company, management, manning, or regulatory issues which tend to be outside the individual's control and which may affect performance or safety.</i>	
Pressure to achieve (Pressure to achieve)	203010000
<i>Factors related to perceived or actual pressures, e.g. perceived pressure among controllers to keep up the movement rate, pressure on pilots to avoid go-arounds or diversions.</i>	
Company/commercial pressures (Commercial pressures)	203010100
<i>Factors related to company/commercial pressures, e.g. perceived pressure among controllers to keep up the movement rate or pressure on pilots to avoid go-arounds or diversions.</i>	
Specific company problems (Specific company problems)	203010200
<i>Factors related to specific company problems, e.g. different terms and conditions between staff in recently amalgamated companies, leading to difficulties in working together.</i>	
Management/supervision problems (Supervision problems)	203010300
<i>Factors related to management/supervision, problems with management/supervisors, or problems experienced by managers/supervisors in connection with their role, e.g. conflicts between management requirements and operational supervisory responsibilities.</i>	
Managerial operating pressures (Managerial pressures)	203010400
<i>Factors related to managerial operating pressures, e.g. trying to justify safety related costs within a commercial environment.</i>	
Labour relations factors (Labour relations factors)	203020000
<i>Factors related to labour relations, e.g. working to rule or strikes.</i>	
Employee-management relations (Employee-management)	203020100
<i>Factors related to employee-management relations.</i>	
Industrial action (Industrial action)	203020200
<i>Factors related to industrial action, e.g. problems arising as a result of air traffic service strikes or pilot's "work to rule".</i>	
Union or professional group (Union/professional group)	203020300
<i>Factors related to unions (apart from industrial action, covered elsewhere) or professional groups. N.B. do not include situations where unions or professional groups have highlighted problems or attempted to solve them.</i>	
Management's personnel policies (Management personnel policy)	203030000
<i>Factors related to management's personnel policies.</i>	
Operational personnel policies (Operational)	203030100

<i>Factors related to operational personnel policies, e.g. pilots discouraged from making diversions due to cost implications, flight crew may be encouraged to bend regulations, overlook minor faults or exceed maintenance dates.</i>	
Operational control personnel policies (Operational control)	203030200
<i>Factors related to operational control personnel policies.</i>	
Operational support personnel policies (Operational support)	203030300
<i>Factors related to operational support personnel policies, e.g. inadequate or lack of, operational support policies.</i>	
Recruitment personnel policies (Recruitment)	203030400
<i>Factors related to recruitment personnel policies, e.g. recruitment of inappropriate staff.</i>	
Staffing personnel policies (Staffing)	203030500
<i>Factors related to staffing - long term, general personnel policies and numbers. N.B. This is different from manning, e.g. the agreed number of staff at an ATC Unit may be 10 (staffing), there may be only 8 posts filled (staffing), 2 staff members maybe off sick (manning) and the remainder may be inappropriately rostered according to their validations (manning).</i>	
Manning/resource allocation personnel policies (Resource allocation)	203030600
<i>Factors related to manning or resource allocation personnel policies, i.e. the availability of staff and their deployment, e.g. underestimating anticipated workload and deploying inadequate personnel as a consequence.</i>	
Crew pairing personnel policies (Crew pairing)	203030700
<i>Factors related to crew pairing personnel policies, e.g. an inexperienced pilot-in-command flying with an inexperienced co-pilot.</i>	
Scheduling personnel policies (Scheduling)	203030800
<i>Factors related to scheduling personnel policies, e.g. not providing sufficient personnel to allow for absentees, when making duty time calculations, resulting in a lack of availability of staff.</i>	
Maintenance scheduling personnel policy (Maintenance scheduling)	203030900
<i>Factors related to personnel policies for scheduling of aircraft maintenance jobs, e.g. not allowing enough time for a task.</i>	
Seniority/promotion/career progression personnel policies (Career progression)	203031000
<i>Factors related to seniority/promotion/career progression personnel policies, e.g. changes such that senior controllers at certain units have to accept demotion, or transfer to busier units where they might not be able to cope as well.</i>	
Terms and conditions/pay/incentives personnel policies (Terms and conditions)	203031100
<i>Factors related to policies on terms and conditions/pay/incentives.</i>	
Personnel requirement policies (Personnel requirement)	203031200
<i>Factors related to personnel requirement policies, e.g. company medical requirements or company flight time limitations.</i>	
Personnel policies in instructions/directives/orders (Instructions)	203031300
<i>Factors related to personnel policies in instructions/directives/orders, e.g. pilots discouraged from making go-arounds due to cost implications.</i>	
Shiftwork/rosters/duty time personnel policies (Shiftwork, duty time)	203031400
<i>Factors related to shiftwork/rosters/duty time personnel policies, including flight time limitations.</i>	
Manning issues (Manning issues)	203040000
<i>Factors related to manning issues.</i>	
Temporary or unexpected staff shortages (Unexpected staff shortage)	203040100
<i>Factors related to temporary or unexpected staff shortages, e.g. due to illness.</i>	
Temporary or unexpected skills shortages (Unexpected skill shortage)	203040200
<i>Factors related to temporary or unexpected skills shortages, e.g. adequate number of staff on a shift, but inappropriate mix of skills.</i>	
Regulatory authority policies and practices (Regulatory policies)	203050000
<i>Factors related to regulatory authority policies and practices, e.g. regulations may have loopholes or a regulation to improve safety in one area may impact adversely upon safety in another area.</i>	
Operational task demands (Operational task demands)	204000000
<i>Factors related to operational task demands, i.e. demands directly associated with the operational task itself, e.g. flying, navigating, controlling or servicing part of an aircraft.</i>	
Workload task demands (Workload task demands)	204010000
<i>Factors related to workload in terms of task demands, as opposed to the ability to cope with the task demands.</i>	

Work overload/task saturation (Overload/task saturation)	204010100
<i>Factors related to task demands being too high; it would be unreasonable to expect an individual to meet such demands. N.B. If the task demands are high but reasonable, but the individual is unable to cope see, Workload Management.</i>	
High workload due to staff/skills shortage (High-staff/skills short)	204010200
<i>Factors related to high operational task workload due to staff/skills shortages.</i>	
Underload - low operational task demand (Underload-low demand)	204010300
<i>Factors related to low operational task demands.</i>	
Workload level transition (Workload level transition)	204010400
<i>Factors related to problems/errors occurring shortly after the level of operational workload has changed from high to low, or from low to high. N.B. For the latter see, "Planning - preparedness, or workload management - timing"</i>	
Additional workload due to unexpected demands (Additional-unexpected)	204010500
<i>Factors related to additional workload generated by unexpected operational task demands.</i>	
Additional workload due to extraneous tasks (Additional-extraneous)	204010600
<i>Factors related to additional workload generated by extraneous tasks that are not strictly part of the operational task, e.g. explaining one's actions to a trainee in addition to doing the task.</i>	
Additional workload due to administrative requirements (Additional administrative)	204010700
<i>Factors related to additional workload generated by administrative workload associated with the operational task demands, e.g. filling in paperwork whilst in-flight.</i>	
Additional workload due to unusual/unfamiliar situation (Additional-unusual)	204010800
<i>Factors related to additional workload generated by an unusual/unfamiliar situation, particularly one which has not been covered in training.</i>	
Additional workload due to emergency situation (Additional-emergency)	204010900
<i>Factors related to additional operational task workload generated by an emergency situation.</i>	
Additional workload due to poor air traffic flow control (Additional-flow control)	204011000
<i>Factors related to an increase in operational task workload resulting from poor air traffic flow control, e.g. a lot of traffic arriving at once, as opposed to being spread out. N.B. This is irrespective of whether, the agreed flow rates or procedures are met.</i>	
Time pressure factors (Time pressure factors)	204020000
<i>Factors related to time pressures, e.g. pressure to finish aircraft maintenance by a specific time because the aircraft is due back in service.</i>	
Time pressures while flying (While flying)	204020100
<i>Factors related to time pressures associated with flying, or experienced by flight crew.</i>	
Time pressures while controlling air traffic (Controlling air traffic)	204020200
<i>Factors related to Air Traffic Control Officers, which are associated with time pressures related to air traffic control.</i>	
Time pressures maintenance/turn around (Maintenance/turn around)	204020300
<i>Factors related to time pressures experienced by maintenance engineers and maintenance supervisors during aircraft turnarounds.</i>	
Time pressures night curfew (Night curfew)	204020400
<i>Factors related to time pressures caused by night curfews.</i>	
Time pressures - flight time limitations/out-of-hours (Flight time limitations)	204020500
<i>Factors related to time pressures incurred by the operational personnel approaching or exceeding their duty time limitations.</i>	
Mental pressure during normal operations (Mental pressure normal operations)	204030000
<i>Factors related to the pressure of the job or task irrespective of any additional operational pressures (e.g. older controllers having difficulty coping with operational job demands.)</i>	
Training, examination or check situation (Training/check situation)	204040000
<i>Factors related to on-the-job training, an examination or check situation.</i>	
Examination, check or training in progress (Training in progress)	204040100
<i>Factors related to training, examination or check in progress.</i>	
Flight crew examination, check or training in progress (Flight crew)	204040101
<i>Factors related to flight crew training, examination or check in progress.</i>	
Air Traffic Control Officer examination, check or training in progress (ATCO)	204040102
<i>Factors related to Air Traffic Control Officer training, examination or check in progress.</i>	

Engineer examination, check or training in progress (Engineer)	204040103
<i>Factors related to maintenance engineer training, examination or check in progress.</i>	
Other examination, check or training in progress (Other training going on)	204040200
<i>Factors related to a training situation other than one of those listed above.</i>	
Miscellaneous operational task demands (Operational task demands)	204050000
<i>Factors related to operational task demands not covered elsewhere.</i>	
Task demands caused by other aircraft (Caused by other aircraft)	204050100
<i>Factors related to operational task demands caused by actions of other aircraft's pilots.</i>	
Task demands caused by passengers (Caused by passengers)	204050200
<i>Factors related to operational task demands caused by passengers, e.g. disruptive passengers.</i>	
Task demands due to disruptive passengers (Disruptive passengers)	204050201
<i>Factors related to operational task demands caused by disruptive passengers.</i>	
Task demands due to technical problem/failure (Technical problem/failure)	204050300
<i>Factors related to any operational task demands due to technical failures. N.B. For the description of the technical failure use descriptive factors.</i>	
Task demands caused by ground operations (Ground operations)	204050400
<i>Factors related to operational task demands caused by ground operations, e.g. engineering on the ramp, loading, pushback or taxiing.</i>	
Task demands caused by ground services (Ground services)	204050500
<i>Factors related to operational task demands caused by non-ramp ground services, e.g. meteorological briefing or operations control.</i>	
Task demands caused by technical support (Technical support)	204050600
<i>Factors related to operational task demands caused by engineering support, advice or information.</i>	
Liveware (human) - hardware/software interface (Hard/software interface)	300000000
<i>Factors related to the interface between the human and the hardware/software.</i>	
Human and hardware interface (Human/hardware interface)	301000000
<i>Factors related to the interface between the human and the system (hardware) interface. N.B. There is no clear-cut dividing line between hardware and software, therefore, in this context, hardware had been interpreted as referring to the more traditional displays and controls, and software to 'glass' cockpit systems and their interfaces. Firmware has been added to cover the modern electronic display interfaces for systems such as data link and navigation systems.</i>	
Workplace equipment/workplace design liveware - hardware interface (Workplace equipment/design)	301010000
<i>Factors related to the liveware - hardware interface caused by cockpit equipment/cockpit design issues which have led to less than optimal performance, or which are safety hazards.</i>	
Design or ergonomics liveware - hardware interface (Design or ergonomics)	301010100
<i>Factors related to the liveware - hardware interface caused by design or ergonomic issues (defining ergonomics in its narrower sense of man-machine-interface design).</i>	
Workplace eye reference position overlooked (Eye reference overlooked)	301010101
<i>Factors related to the liveware - hardware interface encountered as a result of a failure to take into account the design eye reference position in the design of the cockpit and its equipment. As an example this is critical for heads up display design, where it must be possible for any pilot within the allowable anthropometric range to adjust his/her seat to place the eyes at the correct height.</i>	
Workplace seat design inadequate (Seat design inadequate)	301010102
<i>Factors related to the liveware - hardware interface associated with seat design, e.g. lack of seat adjustment resulting in inability to reach certain controls or poor seat design leading to back problems with helicopter pilots.</i>	
Workspace layout not optimum (Layout not optimum)	301010103
<i>Factors related to the liveware - hardware interface associated with the workspace layout, e.g. no room to clip charts open at the required place.</i>	
Workplace instruments design unsuitable (Instrument design)	301010104
<i>Factors related to the liveware - hardware interface associated with the instrument design, e.g. similar instruments giving very different information, creating a potential for confusion.</i>	
Workplace electronic displays design (Electronic display design)	301010105
<i>Factors related to the liveware - hardware interface associated with electronic displays design, e.g. navigating through complicated menus.</i>	
Workplace control design unsuitable (Control design unsuitable)	301010106

<i>Factors related to the liveware - hardware interface associated with the design of controls, e.g. a design which makes it easy to knock a control out of place if a 'gate' is not provided.</i>	
Workplace controls and displays incompatible (Control/display incompatible)	301010107
<i>Factors related to the liveware - hardware interface associated with controls and displays, e.g. lack of integration where the autopilot display can indicate one mode but the 'hard' mode switch can be selected to a different mode, the software overriding the hardware.</i>	
Workplace controls and displays badly lit (Control/display badly lit)	301010108
<i>Factors related to the liveware - hardware interface associated with illumination of cockpit equipment, e.g. glare making it difficult to see whether an indicator light is on or off.</i>	
Workplace controls and displays mislocated (Control/display location)	301010109
<i>Factors related to the liveware - hardware interface associated with the location of controls or displays, e.g. a display/indicator on one side of the cockpit being located in a position which makes it difficult for the other pilot to see in order to cross-check.</i>	
Workplace controls and displays (Controls and displays)	301010110
<i>Factors related to the liveware - hardware interface associated with the workplace controls and display movement, e.g. failure to apply good ergonomic principles to control and display movement for example using digital indicators when analogue would be more appropriate.</i>	
Workplace equipment control (Equipment control)	301010111
<i>Factors related to the liveware - hardware interface associated with the operation of the equipment, e.g. a layout which makes it easy to knock one switch accidentally when selecting another.</i>	
Workplace motor workload excessive (Motor workload excessive)	301010112
<i>Factors related to the liveware - hardware interface associated with the motor activity required, e.g. too much button pressing.</i>	
Workplace reach/vision restrictions (Reach/vision restrictions)	301010113
<i>Factors related to the liveware - hardware interface associated with difficulties in seeing or reaching controls or displays, e.g. important indicators located in areas of peripheral vision.</i>	
Workplace personal discomfort (Personal discomfort)	301010200
<i>Factors related to the liveware - hardware interface associated with personal comfort which may, in the longer term, have an impact upon fatigue, e.g. seat comfort.</i>	
Workplace alerts/warnings intrusive (Alerts/warnings intrusive)	301010300
<i>Factors related to the liveware - hardware interface associated with the design of alerts and warnings, e.g. unnecessarily intrusive audio alerts.</i>	
Workplace non-standard controls (Non-standard controls)	301010400
<i>Factors related to the liveware - hardware interface associated with standardization issues e.g. switches in the up position on some aircraft turning a service off, and in others turning a service on.</i>	
Workplace unreliable equipment (Unreliable equipment)	301010500
<i>Factors related to the liveware - hardware interface associated with reliability concerns, e.g. where a pilot elects not to use a particular piece of equipment because he has no confidence in its reliability. N.B. Actual unreliability of equipment, not related to the human - system interface, which is covered elsewhere in the explanatory factors.</i>	
Workspace electronic map display shift (Electronic map display)	301010600
<i>Factors related to the liveware - hardware interface associated with map shift, i.e. the sudden change of an electronic map display.</i>	
Non-flight deck/cockpit aircraft equipment (Non-flight deck equipment)	301020000
<i>Factors related to the liveware - hardware interface associated with aircraft equipment other than cockpit/flight deck equipment.</i>	
Ergonomics of other aircraft equipment (Ergonomics)	301020100
<i>Factors related to the liveware - hardware interface associated with design or ergonomic issues (defining ergonomics in its narrower sense of man-machine-interface design).</i>	
Cabin crew seat design (Cabin crew seat design)	301020101
<i>Factors related to the liveware - hardware interface associated with cabin crew seat design, e.g. lack of seat adjustment resulting in inability to reach certain controls, or poor seat comfort leading to back problems/injuries in accidents by cabin crew.</i>	
Comfort of other aircraft equipment (Comfort)	301020200
<i>Factors related to the liveware - hardware interface associated with personal comfort which may, in the longer term, have an impact upon fatigue, e.g. seat comfort.</i>	
Intrusive alerts/warnings of other aircraft equipment (Intrusive alerts)	301020300
<i>Factors related to the liveware - hardware interface associated with the design of alerts and warnings, e.g. unnecessarily intrusive audio alerts.</i>	
Standardization of other aircraft equipment (Standardization)	301020400

<i>Factors related to the liveware - hardware interface associated with standardization issues e.g. switches in the up position on some aircraft turning a service off, and in others turning a service on.</i>	
Reliability of other aircraft equipment (Reliability-other)	301020500
<i>Factors related to the liveware - hardware interface associated with concerns about the reliability of other aircraft equipment. N.B. Actual unreliability of equipment, not related to the human - system interface, is covered elsewhere, in the descriptive factors.</i>	
Aircraft maintenance equipment (Aircraft maintenance equipment)	301030000
<i>Factors related to the liveware - hardware interface associated with the equipment and tools used by maintenance engineers, e.g. appropriate tools not being available.</i>	
Design/ergonomics of maintenance tools/equipment (Design tools/equipment)	301030100
<i>Factors related to the liveware - hardware interface associated with design/ergonomics of maintenance tools/equipment, e.g. poor design/ergonomics of maintenance engineering tools/equipment. N.B. ergonomics is the study of man in his/her working environment.</i>	
Reliability of aircraft maintenance equipment (Reliability)	301030200
<i>Factors related to the liveware - hardware interface associated with the reliability of aircraft maintenance tools/equipment.</i>	
ATC equipment (ATC equipment)	301040000
<i>Factors related to the liveware - hardware interface associated with ATC equipment.</i>	
Ergonomics/design of ATC equipment (Ergonomics-ATC equipment)	301040100
<i>Factors related to the liveware - hardware interface associated with the ergonomics/design of ATC equipment.</i>	
Radar display standards (Radar display standards)	301040200
<i>Factors related to the liveware - hardware interface associated with the radar display, e.g. overlapping labels.</i>	
Flight progress strips display (Progress strips display)	301040300
<i>Factors related to the liveware - hardware interface associated with the flight progress strip display, e.g. display board too small to hold all the strips.</i>	
Air Traffic Control communications equipment (ATC communications equipment)	301040400
<i>Factors related to the liveware - hardware interface associated with the communications equipment or radiotelephone quality, e.g. telephones, faxes, telexes or frequencies.</i>	
Reliability of ATC equipment (Reliability-ATC equipment)	301040500
<i>Factors related to the liveware - hardware interface associated with the reliability of ATC equipment, e.g. unreliable ATC equipment.</i>	
Other air traffic control equipment (Other ATC equipment)	301040600
<i>Factors related to the liveware - hardware interface associated with other air traffic control equipment, e.g. ancillary information displays.</i>	
Suitability of design/ergonomics for training purposes (Ergonomics for training)	301050000
<i>Factors related to the liveware - hardware interface associated with the suitability of a design, or the ergonomics, for training purposes.</i>	
Suitability of design for maintenance purposes (Suitability-maintenance)	301060000
<i>Factors related to the liveware - hardware interface associated with suitability of design for maintenance purposes.</i>	
Inadequate information/data sources (Inadequate info sources)	302000000
<i>Factors related to the liveware - hardware interface associated with the lack of availability of information, inaccurate information or intermittent information. N.B. For problems associated with misinterpretation of 'good' data, see, "Information Processing/ Decision Making"; for problems associated with the man-machine interface between the human and the information, see, "Hardware - Ergonomics/Design"; for problems associated with human communication, see, "Communication".</i>	
Data sources (Data sources)	302010000
<i>Factors related to the liveware - hardware interface associated with the sources of information/data, e.g. radar or transponder.</i>	
Radar information (Radar information)	302010100
<i>Factors related to the liveware - hardware interface associated with the radar information, e.g. not available, inaccurate, misleading or intermittent.</i>	
Primary radar information (Primary radar information)	302010101
<i>Factors related to the liveware - hardware interface associated with the primary radar information, e.g. not available, inaccurate, misleading or intermittent.</i>	
Secondary radar information (Primary radar information)	302010102
<i>Factors related to the liveware - hardware interface associated with the secondary radar information, e.g. not available, inaccurate, misleading or intermittent.</i>	
Transponder information (Transponder information)	302010200

Factors related to the liveware - hardware interface associated with the transponder information, e.g. no transponder, transponder not working, transponder working incorrectly, intermittent transponder information or inaccurate transponder information.

Mode C information (Mode C information) 302010201

Factors related to the liveware - hardware interface associated with the mode C altitude information, e.g. not available, inaccurate, misleading or intermittent.

Squawk/identification (Squawk/identification) 302010202

Factors related to the liveware - hardware interface associated with mode A identification information, e.g. not available, inaccurate, misleading or intermittent.

Human data source (Human data source) 302010300

Factors related to the liveware - hardware interface associated with information from other people, e.g. ATC, other units, other aircraft or military ATC units.

Civil air traffic control data source (Civil air traffic control) 302010301

Factors related to the liveware - hardware interface associated with information from (other) ATC units.

Information from military sources (Information-military) 302010302

Factors related to the liveware - hardware interface associated with information from military sources, e.g. failure to inform civil air traffic control that a Danger Area is active.

Information from other pilots (Information-other pilots) 302010303

Factors related to the liveware - hardware interface associated with the information passed from other aircraft, e.g. in parts of the world where no ATC service is available.

Other information/data sources (Other information) 302010400

Factors related to the liveware - hardware interface associated with other information/data sources.

Communications media (Communications media) 302020000

Factors related to the liveware - hardware interface associated with communications media.

VHF/HF frequencies (VHF/HF frequencies) 302020100

Factors related to the liveware - hardware interface associated with VHF/HF frequencies

Telephone (Telephone) 302020200

Factors related to the liveware - hardware interface associated with transmitting information via the telephone.

Data link communications (Data link communications) 302020300

Factors related to the liveware - hardware interface associated with transmitting information via data link.

Controller-pilot data link communications (CPDLC). A means of communication between controller and pilot, using data link for ATC communications. ICAO Annex 10.

Other communications media (Other communications media) 302020400

Factors related to the liveware - hardware interface associated with transmitting information via other communications media.

Human software/firmware interface (Human software interface) 303000000

Factors related to the interface between the human and the system software/firmware interface. N.B. There is no clear-cut dividing line between hardware and software, therefore, in this context, software has been interpreted as referring to 'glass' cockpit systems and their interfaces and hardware to the more traditional displays and controls. Firmware has been added to cover the modern electronic display interfaces for systems such as data link and navigation systems.

Human firmware interface (Human firmware interface) 303010000

Factors relating to the interface between the human (liveware) and systems such as modern navigation system input devices, electronic checklists and warning systems and datalink interfaces [software/firmware].

Firmware reliability (Firmware reliability) 303010100

Factors relating to the liveware - firmware interface associated with reliability concerns related to firmware. Firmware covers the modern electronic display interfaces for systems such as data link and navigation systems.

Electronic display "navigation" (Electronic display) 303010200

Factors relating to the liveware - firmware interface associated with electronic display 'navigation' interfaces, e.g. personnel finding their way around the display screens using buttons, keys or a mouse.

Data link/digital communications (Data link/digital communications) 303010300

Factors relating to the liveware - firmware interface associated with the pilot's interface with the cockpit data link equipment/system.

Electronic checklist and warning display (Warning/checklist display) 303010400

Factors relating to the liveware - firmware interface associated with the use of electronic checklist and warning display (EICAS/ EFIS).

Software (Software) 303020000

Factors relating to the liveware - firmware interface associated with the design or incorrect operation of the software, e.g. software which is not 'user friendly'.

Software reliability (Software reliability) 303020100

Factors relating to the liveware - software interface associated with software reliability concerns, e.g. if a pilot elects not to use a particular piece of software or system because he has no confidence in its reliability.

User friendliness/usability (User friendliness) 303020200

Factors relating to the liveware - software interface associated with poor user friendliness/usability, e.g. a pilot elects not to use a particular piece of software or system because he/she has difficulty making the system work.

Menus/menu navigation (Menus/menu navigation) 303020300

Factors relating to the liveware - software interface associated with the difficulty in navigating through menus, e.g. in electronic checklists.(see also electronic display navigation interfaces)

Automation/automatic systems (Automation systems) 304000000

Factors related to the use of automation/automatic systems. This refers to all automatic systems including automation in ATC control rooms.

Automation design philosophies (Design philosophies) 304010000

Factors related to automation design, or automation design philosophies.

User friendliness of automation (User friendliness) 304010100

Factors related to user friendliness of automation.

System mode awareness (System mode awareness) 304010200

Factors related to system mode awareness - being aware of the state of the supporting system/software.

Automation generating additional workload (Additional workload) 304010300

Factors related to automation generating additional workload, additional re-programming to change to another approach.

Compatibility with hardware and instrumentation (Compatibility-hardware) 304010400

Factors related to compatibility with hardware and instrumentation, e.g. poor compatibility with hardware and instrumentation.

Reliability of automation (Reliability of automation) 304010500

Factors related to the reliability of automation, e.g. poor reliability.

Unwanted disconnects of automation (Unwanted disconnects) 304010600

Factors related to unwanted disconnect of automation, e.g. autopilot 'dropping out' or inadequate warning of disconnect.

Use of automation (Use of automation) 304020000

Factors related to the use of automation.

Training in the use of automation (Training-automation) 304020100

Factors related to training in the use of automation.

Reliance on automation (Reliance on automation) 304020200

Factors related to reliance on automation.

Use/overuse of automation (Use/overuse of automation) 304020300

Factors related to the extent of the use of automation, e.g. overuse of automation.

Complacency with automation (Automation complacency) 304020400

Factors related to complacency associated with automation.

Automatic defences/warnings (Automatic defence/warning) 305000000

Factors related to the interface between the human and the system, e.g. automatic defences/warnings. N.B. These keywords should only be used if there was a problem with the warnings, e.g. warnings not available/not working, warnings misleading or too many false alarms.

Cockpit warnings (Cockpit warnings) 305010000

Factors related to cockpit warnings.

Stall warnings (Stall warnings) 305010100

Factors related to stall warnings.

Windshear warnings (Windshear warnings) 305010200

Factors related to windshear warnings.

Traffic Alert and Collision Avoidance System (TCAS) 305010300

Factors related to traffic alert and collision avoidance systems warnings.

Ground proximity warning system (GPWS)	305010400
<i>Factors related to ground proximity warning system (GPWS) warnings.</i>	
Gear warning system (Gear warning system)	305010500
<i>Factors related to gear warning.</i>	
Air traffic control alarms/alerts (ATC alarms/alerts)	305020000
<i>Factors related to ATC alert systems, e.g. STCA.</i>	
Conflict alert (Conflict alert)	305020100
<i>Factors related to conflict alerts.</i>	
Minimum safe altitude warning system (MSAWS)	305020200
<i>Factors related to minimum safe altitude warning system alerts.</i>	
Other defences/warnings (Other defences/warnings)	305030000
<i>Factors related to defences/warnings other than those listed above.</i>	
Operational material (Operational material)	306000000
<i>Factors related to the interface between the human and the system which are not covered by hardware or software/firmware (either direct operational, or indirect).</i>	
Workplace manuals, checklists and charts (Workplace documents)	306010000
<i>Factors related to manuals or use of flight deck manuals, checklists or charts, e.g. poorly designed, not readily accessible or out of date.</i>	
Workplace manuals (Workplace manuals)	306010100
<i>Factors related to manuals or the use of work place manuals, e.g. poorly designed, not readily accessible or out of date.</i>	
Workplace checklists (normal) (Workplace checklists)	306010200
<i>Factors related to checklists or use of checklists, e.g. poorly designed in terms of content or presentation or difficult to use in the cockpit. N.B. For electronic checklists, see, "Software/firmware - Electronic Checklist Display".</i>	
Emergency and abnormal workplace checklists (Emergency checklists)	306010300
<i>Factors related to the design or use of emergency/abnormal checklists. N.B. For electronic checklists see, "Software/firmware -Electronic Checklist Display".</i>	
Maps or charts or use of maps/charts (Maps/charts or use of)	306010400
<i>Factors related to maps or charts or use of maps/charts. See also, "Training - Miscellaneous Training Issues - Use of Maps/charts".]</i>	
Flight progress strips (Flight progress strips)	306020000
<i>Factors related to flight progress strips.</i>	
Maintenance engineering material (Maintenance engineering material)	306030000
<i>Factors related to maintenance engineering material.</i>	
Maintenance task cards and process sheets - operational material (Maintenance process sheet)	306030100
<i>Factors related to maintenance task cards and process sheets.</i>	
Operational documents, charts or checklists (Operational documents)	306040000
<i>Factors related to the interface between the human and the operational documents, charts or checklists.</i>	
Notices and advisory material (Notices-advisory material)	306040100
<i>Factors related to notices (NOTAMs) and advisory material.</i>	
Other publications (Other publications)	306040200
<i>Factors related to other publications.</i>	
Aircraft safety instruction card (Aircraft safety card)	306040300
<i>Factors related to aircraft safety instructions cards for passenger briefing.</i>	
Written regulations (Written regulations)	306040400
<i>Factors related to associated with written regulations.</i>	
Other handbooks/manuals (Other handbooks/manuals)	306040500
<i>Factors related to handbooks or reference manuals. N.B. This refers to manuals which do not have to be available but which may need to be referred to either before of after carrying out tasks.</i>	
Other checklists (Other checklists)	306040600

<i>Factors related to the design or use of non-flight crew checklists, e.g. ATC Tower emergency checklist and cabin crew checklists.</i>	
Signage (Signage)	306040700
<i>Factors related to signage, e.g. ambiguous signs.</i>	
Other written/printed information (Other written information)	306040800
<i>Factors related to other written/printed information.</i>	
Liveware (human) - interface system support (Human v system support)	400000000
<i>Factors related to the interface between liveware [human] and system support.</i>	
Human interface-procedures (Human v procedures)	401000000
<i>Factors related to the interface between liveware [human] and system support procedures themselves. N.B. For failure to follow procedures, and the reasons for this, see other categories such as, "Psychological- Knowledge-Procedures, Psychological - Action- Violation" and "Training".</i>	
Human interface-Standard Operating Procedures (Human v SOP)	401010000
<i>Factors related to the interface between liveware [human] and Standard Operating Procedures, e.g. the procedure is inappropriate or the manner in which the procedures are written down is ambiguous.</i>	
Human interface-emergency and abnormal procedures (Human v abnormal procedure)	401020000
<i>Factors related to the interface between liveware [human] and emergency and abnormal procedures.</i>	
Human interface-air traffic control procedures (Human v ATC procedures)	401030000
<i>Factors related to the interface between liveware [human] and ATC Procedures, e.g. the procedure is inappropriate or the wording of the procedures is ambiguous.</i>	
Human interface-air traffic control operational procedures (Human v ATC operational procedures)	401030100
<i>Factors related to the interface between liveware [human] and Air traffic control operational procedures associated with the task of controlling/separating aircraft.</i>	
Human interface-Standard Instrument Departure/Standard Arrival Routes (Human v SIDS/STARS)	401030200
<i>Factors related to the interface between liveware [human] and Standard Instrument Departure and Standard Arrival Routes procedures.</i>	
Human interface-noise abatement procedures (Human v noise abatement)	401030300
<i>Factors related to the interface between liveware [human] and noise abatement procedures.</i>	
Human interface-aerodrome procedures (Human v aerodrome procedure)	401040000
<i>Factors related to the interface between liveware [human] and aerodrome related procedures.</i>	
Human interface-maintenance procedures (Human v maintenance procedures)	401050000
<i>Factors related to the interface between liveware [human] and engineering maintenance procedures.</i>	
Human interface-maintenance recording procedures (Human v maintenance recording)	401050100
<i>Factors related to the interface between liveware [human] and maintenance recording procedures (including process sheets).</i>	
Human interface-company procedures (Human v company procedure)	401060000
<i>Factors related to the interface between liveware [human] and company procedures.</i>	
Human interface-other procedures (Human v other procedures)	401070000
<i>Factors related to the interface between liveware [human] and procedures other than those listed above.</i>	
Human interface-custom and practice (Human v custom & practice)	401080000
<i>Factors related to the interface between liveware [human] and custom and practice at the workplace, i.e. not related to written procedures/instructions.</i>	
Human interface-training (Human v training)	402000000
<i>Factors related to the interface between liveware [human] and training, e.g. poor training, lack of recurrent training, situations not trained for or need for more training. Positive aspects of training are not covered here.</i>	
Human/system interface-basic/initial training (Human v basic training)	402010000
<i>Factors related to the interface between liveware [human] and initial training.</i>	
Human interface-training syllabus (Human v training syllabus)	402010100
<i>Factors related to the interface between liveware [human] and the training syllabus, e.g. inclusion of training in use of maps/charts.</i>	
Human interface-specific training (Human v specific training)	402020000
<i>Factors related to the interface between liveware [human] and training for a specific task.</i>	

Human interface-simulator training (Human v simulator training)	402030000
<i>Factors related to the interface between liveware [human] and simulator training, e.g. for initial training, recurrent training, LOFT or CRM.</i>	
Human interface-on-the-job training (Human v on-the-job training)	402040000
<i>Factors related to the interface between liveware [human] and on-the-job training.</i>	
Human interface-emergency training (Human v emergency training)	402050000
<i>Factors related to the interface between liveware [human] and the training in how to handle emergencies.</i>	
Human interface-crew/team resource management training (Human v CRM/TRM)	402060000
<i>Factors related to with the interface between liveware [human] and crew/team resource management training.</i>	
Human interface-recurrent training (Human v recurrent training)	402070000
<i>Factors related to the interface between liveware [human] and recurrent training, including LOFT and CRM.</i>	
Human interface-Line Oriented Flying Training (Human LOFT)	402070100
<i>Factors related to the interface between liveware [human] and Line Oriented Flying Training.</i>	
Human interface-route training (Human v route training)	402080000
<i>Factors related to the interface between liveware [human] and training on the specific route.</i>	
Human interface-miscellaneous training issues (Human v miscellaneous training)	402090000
<i>Factors related to the interface between liveware [human] and miscellaneous training issues other than those listed above.</i>	
Human/system interface-use of automation (Use of automation)	402090100
<i>Factors related to the interface between liveware [human] and training in the use of automation.</i>	
Human/system interface-use of maps/charts (Use of maps/charts)	402090200
<i>Factors related to the interface between liveware [human] and training in the use of maps/charts.</i>	
Human/system interface-use of manuals (Use of manuals)	402090300
<i>Factors related to the interface between liveware [human] and training in the use of manuals.</i>	
Human/sys interface-other miscellaneous training (Other training)	402090400
<i>Factors related to the interface between liveware [human] and miscellaneous training other than that listed above.</i>	
Other human - system support issues (Human/system interface-other)	403000000
<i>Factors related to the interface between liveware [human] and system support issues.</i>	
The liveware (human) - liveware (human) interface (Interface between humans)	500000000
<i>Factors related to the interface between humans.</i>	
The interface between humans in relation to communications (Human v communications)	501000000
<i>Factors related to the interface between humans in relation to communications.</i>	
The interface between humans in relation to oral/aural communications (Human v spoken communications)	501010000
<i>Factors related to the interface between humans in relation to oral/aural communications.</i>	
The interface between humans in relation to communications between crew members (Human v communications between crew)	501010100
<i>Factors related to the interface between humans in relation to communications between crew members.</i>	
The interface between humans in relation to air-air communications (Human v air-air communications)	501010200
<i>Factors related to the interface between humans in relation to air-to-air communications between pilots of different aircraft.</i>	
The interface between humans in relation to air-ground communications (Human v air-ground communications)	501010300
<i>Factors related to the interface between humans in relation to communications between air and ground stations.</i>	
The interface between humans in relation to air traffic control-pilot communications (Human v ATC-pilot communications)	501010301
<i>Factors related to the interface between humans in relation to communications between ATC and pilots.</i>	
The interface between humans in relation to company communications (Human v company communications)	501010302
<i>Factors related to the interface between humans in relation to company communications.</i>	

The interface between humans in relation to party line information (Human v party line information)	501010303
<i>Factors related to the interface between humans in relation to overheard information between two other aircraft, or between ATC and another aircraft (including loss of 'party line' information with the advent of data link).</i>	
The interface between humans in relation to ground - ground communications (Human v ground-ground communications)	501010400
<i>Factors related to the interface between humans in relation to ground - ground communications (ATC - ATC, or aircrew - ground staff, when the aircraft is on the ground).</i>	
The interface between humans in relation to language (Human interface-language)	501010500
<i>Factors related to the interface between humans in relation to the use of a particular language, e.g. English in a French speaking area.</i>	
The interface between humans in relation to accent (Human interface-accent)	501010600
<i>Factors related to the interface between humans in relation to accents in verbal communication.</i>	
The interface between humans in relation to phraseology (Human v phraseology)	501010700
<i>Factors related to the interface between humans in relation to phraseology used in the communication.</i>	
The interface between humans in relation to readback/hearback (Human v readback/hearback)	501010800
<i>Factors related to the interface between humans in relation to the readback/hearback of communications.</i>	
The interface between humans in relation to callsign confusion (Human v callsign confusion)	501010900
<i>Factors related to the interface between humans in relation to actual or potential callsign confusion. See also, "Psychological - Action - Slip (slip-of-the-tongue)", and "Psychological - Information Processing/Decision Making".</i>	
The interface between humans in relation to noise interference with communication (see also noise in the workplace) (Human v noise interference)	501011000
<i>Factors related to the interface between humans in relation to noise interference with communication.</i>	
The interface between humans in relation to aural/oral interpretation/misinterpretation (Human v interpretation)	501011100
<i>Factors related to the interface between humans in relation to interpretation/misinterpretation associated with communication.</i>	
The interface between humans in relation to written/read communications (Human v written/read communications)	501020000
<i>Factors related to the interface between humans in relation to communications - written, typed or displayed information.</i>	
The interface between humans in relation to documentation for communication of information (Human v documentation)	501020100
<i>Factors related to the interface between humans in relation to the documentation for communication of information.</i>	
The interface between humans in relation to documentation incomplete/missing (Human v incomplete documentation)	501020101
<i>Factors related to the interface between humans in relation to documentation being incomplete or missing.</i>	
The interface between humans in relation to maintenance engineering task sheets/cards - for communicating information (Human v maintenance information)	501020102
<i>Factors related to the interface between humans in relation to using maintenance engineering task sheets/cards as a means of recording and passing information.</i>	
The interface between humans in relation to use of flight progress strips to communicate information (Human v flight progress strip)	501020200
<i>Factors related to the interface between humans in relation to using flight progress strips as a means of recording and passing information.</i>	
The interface between humans in relation to communications using data link (Human v data link communications)	501020300
<i>Factors related to the interface between humans in relation to the use of data link communications.</i>	
The interface between humans in relation to teletype communications (Human v teletype communications)	501020400
<i>Factors related to the interface between humans in relation to the use of teletype communications.</i>	
The interface between humans in relation to keying error (Human v keying error)	501020500
<i>Factors related to the interface between humans in relation to keying errors.</i>	
The interface between humans in relation to handwriting (Human v handwriting)	501020600
<i>Factors related to the interface between humans in relation to handwriting, e.g. misleading/unreadable handwritten annotation on flight progress strips.</i>	
The interface between humans in relation to misreading (Human v misreading)	501020700

<i>Factors related to the interface between humans in relation to misreading.</i>	
The interface between humans in relation to acknowledgements/feedback loop - written/keyed/visual (Human v feedback loop)	501020800
<i>Factors related to the interface between humans in relation to written, keyed-in, visual acknowledgements and the feedback loop, as opposed to, "Readbacks/Hearbacks", e.g. pressing a button on an electronic checklist to indicate that an item has been checked.</i>	
The interface between humans in relation to visual signals (Human v visual signals)	501030000
<i>Factors related to the interface between humans in relation to the use of visual signals to communicate.</i>	
The interface between humans in relation to ground-hand signals (Human v ground-hand signals)	501030100
<i>Factors related to the interface between humans in relation to the use of ground-hand signals.</i>	
The interface between humans in relation to acknowledgements - visual signals (Human v visual signals)	501030200
<i>Factors related to the interface between humans in relation to the use of gestures to acknowledge something, e.g. 'thumbs-up' to indicate an affirmative.</i>	
The interface between humans in relation to interactions/team skills crew/team resource management training (Human v team skill/CRM)	502000000
<i>Factors related to the interface between humans in relation to interactions between people; the team working.</i>	
The interface between humans in relation to team skills crew/team resource management training (Human v team skills)	502010000
<i>Factors related to the interface between humans in relation to team skills, e.g. crew/team resource management training.</i>	
The interface between humans in relation to coordination crew/team resource management training (Human v coordination)	502010100
<i>Factors related to the interface between humans in relation to coordination between team members.</i>	
The interface between humans in relation to incompatibility crew/team resource management training (Human v incompatibility)	502010200
<i>Factors related to the interface between humans in relation to incompatibility between team members - crew/team resource management training.</i>	
The interface between humans in relation to confidence/trust crew/team resource management training (Human v confidence/trust)	502010300
<i>Factors related to the interface between humans in relation to confidence/trust in other team member(s).</i>	
The interface between humans in relation to cross-checking crew/team resource management training (Human v cross-checking)	502010400
<i>Factors related to the interface between humans in relation to cross-checking between team members.</i>	
The interface between humans in relation to authority gradient (Human v authority gradient)	502010500
<i>Factors related to the interface between humans in relation to the authority gradient - CRM/TRM, e.g. between pilot-in-command and co-pilot.</i>	
The interface between humans in relation to peer pressure/conformity (Human v peer pressure)	502010600
<i>Factors related to the interface between humans in relation to peer pressure/conformity.</i>	
The interface between humans in relation to assertiveness within the team (Human v team assertion)	502010700
<i>Factors related to the interface between humans in relation to assertiveness within the team.</i>	
The interface between humans in relation to briefing between team members (Human v briefing team)	502010800
<i>Factors related to the interface between humans in relation to briefings between team members - CRM/TRM.</i>	
The interface between humans in relation to self feedback (Human v self feedback)	502010900
<i>Factors related to the interface between humans in relation to self-feedback between team members.</i>	
The interface between humans in relation to joint decision process (Human v decision process)	502011000
<i>Factors related to the interface between humans in relation to the joint decision process between team members.</i>	
The interface between humans in relation to group climate (CRM/TRM) (Human v group climate)	502011100
<i>Factors related to the interface between humans in relation to team operations or 'atmosphere', without necessarily being able to determine what, specifically, was wrong.</i>	
The interface between humans in relation to team preparation/planning (Human v team planning)	502011200

<i>Factors related to the interface between humans in relation to planning of the team activities, e.g. pre-flight planning.</i>	
The interface between humans in relation to team workload management (Human v managing workload)	502011300
<i>Factors related to the interface between humans in relation to team workload management, e.g. poor management of the workload or lack of delegation.</i>	
The interface between humans in relation to formal coordination (Human v formal coordination)	502020000
<i>Factors related to the interface between humans in relation to formal coordination which is required by the procedures.</i>	
The interface between humans in relation to shift/watch/team changeover (Human v team changeover)	502030000
<i>Factors related to the interface between humans in relation to problems which are, or may be, related to changeovers of personnel, usually associated with inadequate communication between the two individuals or teams, e.g. problems occurring in maintenance engineering as a result of information not being correctly recorded and therefore not passed across on shift changeover. N.B. Problems associated with changing responsibilities between pilots would normally be addressed under CRM or SOPs. See also, "Maintenance Engineering Task Sheets/Cards; Procedures - ATC Procedures" (for handovers).</i>	
The interface between humans in relation to other interactions (Human v-other interaction)	502040000
<i>Factors related to the interface between humans in relation to other interactions between people.</i>	
The interface between humans in relation to supervision (Human interface-supervision)	503000000
<i>Factors related to the interface between humans in relation to supervision, e.g. lack of supervision, poor supervision.</i>	
The interface between humans in relation to operational supervision (Human v operational supervision)	503010000
<i>Factors related to the interface between humans in relation to operational supervision.</i>	
The interface between humans in relation to supervision during training (Human v training supervision)	503020000
<i>Factors related to the interface between humans in relation to supervision during training, e.g. failing to notice or correct a mistake made by a trainee.</i>	
The interface between humans in relation to quality control (Human v quality control)	503030000
<i>Factors related to the interface between humans in relation to supervision of quality control, e.g. a maintenance engineering supervisor fails to notice that a task has been carried out incorrectly.</i>	
The interface between humans in relation to standards (Human interface-standards)	503040000
<i>Factors related to interface between humans in relation to the supervision of standards, e.g. a supervisor allowing standards to lapse.</i>	
The interface between humans in relation to regulatory activities (Human v regulatory activities)	504000000
<i>Factors related to the interface between humans in relation to regulatory activities, i.e. the processes by which regulation is carried out, as opposed to the regulatory issues themselves.</i>	
The interface between humans in relation to regulatory procedures (Regulatory procedures)	504010000
<i>Factors related to the interface between humans in relation to regulatory procedures, as opposed to operational procedures, e.g. requirement to report incidents where safety has been jeopardized.</i>	
The interface between humans in relation to regulatory standards (Regulatory standards)	504020000
<i>Factors related to the interface between humans in relation to regulatory standards, e.g. regulatory standards are considered to be inadequate.</i>	
The interface between humans in relation to design standards (Design standards)	504020100
<i>Factors related to the interface between humans in relation to design standards, e.g. design standards considered inadequate or outdated.</i>	
The interface between humans in relation to certification standards (Certification)	504020200
<i>Factors related to the interface between humans in relation to certification standards, e.g. certification standards inadequate.</i>	
The interface between humans in relation to regulations (Human interface-regulations)	504030000
<i>Factors related to the interface between humans in relation to regulations, poor regulations, or lack of regulation.</i>	
The interface between humans in relation to inspections (Human interface-inspections)	504040000
<i>Factors related to the interface between humans in relation to inspections, e.g. inspections too infrequent.</i>	
The interface between humans in relation to monitoring organizations (Human interface-monitoring organizations)	504050000
<i>Factors related to the interface between humans in relation to monitoring the activities of organizations or individuals.</i>	
The interface between humans in relation to surveillance (Human interface-surveillance)	504060000
<i>Factors related to the interface between humans in relation to surveillance associated with regulations.</i>	

The interface between humans in relation to audits (Human interface-audits)	504070000
<i>Factors related to the interface between humans in relation to audits, e.g. audits fail to detect problems with an organization.</i>	
The interface between humans in relation to checks (Human interface-checks)	504080000
<i>Factors related to the interface between humans in relation to checks, e.g. checks not thorough enough.</i>	
Other human human interface (Other human human interface)	505000000
<i>Factors related to the interface between humans in relation to other human-human interfaces.</i>	