

YOU REPORT IT, WE HELP SORT IT

Posted on 10.07.2022 by Steve Forward



Category: [Air Transport](#)

EditionATFB 143

Editorial

Reporting can sometimes be an issue, which is why CHIRP aims to bring concerns into the open through its independent, confidential process.

This year is the 40th anniversary of the CHIRP aviation programme and so perhaps a good opportunity to reflect on what it's all about and how it's been going. Although commercial air transport accident rates are extremely low, they have remained relatively constant over the past few decades and a major challenge for the air transport industry has been to develop and promote effective processes to identify key causal factors that in some circumstances might lead to an accident, before the accident occurs. Reports fall into two broad categories; those indicative of an undesirable trend, and those detailing discrete safety-related events, occurrences or issues. As part of this, since its inception, CHIRP's role has been to improve the quality of feedback from the professional groups involved in air transport operations not just through the reporting of incidents

but also the reporting of things that nearly happened (but were averted or didn't develop into a reportable incident) in order to provide additional important information related to contributory causal factors.

Importantly, although mandatory reporting systems make an essential contribution to the feedback process, for many reasons they are less successful in gaining information on human factors related aspects due to individuals' concerns about the personal implications of submitting reports that may be critical of their companies or superiors. Confidential human factors reporting systems were introduced to address this. It is important to understand that the confidentiality part applies to the identity of the reporter not the information; whenever possible the latter is disseminated as widely as possible, but in a disidentified manner so that the reporter cannot be recognized, and only with the reporter's consent.

A confidential reporting system permits individuals who are working within the aviation system to report safety-related matters that they might not report through other 'open' systems. Reporting directly to an organisation such as CHIRP that is totally independent of the operational management and regulatory agencies allows reporters to describe the issue in their own words and ensures that reports are received without being filtered in any way. More importantly, the confidential process permits the non-attributable reporting of deficiencies and discrepancies that may result from, or cause, human errors without exposing the reporter or other individuals within the system to critical judgement or the attachment of blame. On the other side of the coin, for companies and organisations, confidential reports provide a source of non-attributable safety information to safety management and regulatory agencies that otherwise would probably not be available. This type of information often provides organisations with early warning precursor alerts of potential problems, or substantiates other sources of information.

Within this, our mission at CHIRP – the 'what' – is to help improve aviation and maritime safety and build a Just Culture by managing an independent and influential programme for the confidential reporting of human factors-related safety issues. Our desired strategic outcomes – the 'why' – are:

- better leadership, awareness and attitude towards safety issues;
- improve safety culture by changing behaviours, so that practices, processes and procedures are as safe as they can be; and
- that safety outcomes identified in CHIRP reports are adopted by regulators, managers and individuals.

With regard to Just Culture, nobody comes to work intending to fail: mistakes & errors are part of the human condition. However, sometimes people should have known better (unprofessional), could have known better (training), or may have intentionally broken the rules with good or bad intentions. These aspects all need to be taken into account when reviewing people's actions in any incident or event. CHIRP's four key principles of operation are:

- **VOLUNTARY** – Voluntarily submission of reports concerning events related to safety for the purpose of system alerting, understanding and learning.
- **CONFIDENTIAL** – Protection of identity through disidentification of persons, companies, and any other identifying information.
- **INDEPENDENT** – Trusted, unbiased dissemination of safety information and advice.
- **JUST CULTURE** – Non-judgemental safety net for reporting occurrences that might not otherwise be reported.

With the widespread introduction of additional safety processes such as company 'open' reporting schemes, Flight Operations Data Monitoring programmes and Line Operations Safety Audits, it might be questioned whether there is a continuing need for an independent confidential reporting system when other avenues are apparently more readily available. However, the evidence from mature confidential systems is that reporters prefer to raise some safety-related issues on a confidential basis; this is demonstrated by the fact that despite the increased availability of alternative reporting methods, the number of confidential reports submitted per annum has remained essentially the same or increased over the past ten years (the 2 years of COVID-19 hiatus in aviation activities excepted). The key is that an integrated approach is essential to ensure that human performance and environmental information are appropriately and fairly coupled with technical/operational data because although data/event logging provides insights into human actions and 'what happened' it does not inform as to 'why' an event occurred, any pertaining external influences and distractions, or an individual's capabilities and remaining capacity at the time.

A few words of caution though, the reports that CHIRP receives represent a fairly small statistical sample and so we should be careful about reading too much into them. Also, CHIRP obviously receives reports that are generally critical of things that have gone wrong and so there is a bias towards negativity that might not reflect the majority experience.

The top-15 key issues reported to CHIRP by Flight Crew over the last 12 months have seen Company Policies and Culture; Duties and Rosters; Commercial/ Management Pressures; and Management Relations well to the fore. Concerns have focused on FTL/FDP limits being regularly approached; rosters containing successive long-haul duties with minimum rest at destinations or after return to the UK; reduced resources (crew availability); pressures to operate to time schedules despite the additional constraints of COVID procedures; late rosters; and many reports of crews who feel fatigued but do not feel they can report as such due to fear of consequences. Increased efficiency is a laudable notion that has obvious managerial attraction in keeping down costs as some airlines struggle to survive and remain viable in the immediate post-COVID economic circumstances but there's a trade-off: as James Reason identified in his 'Safety Space' concept, at some point, reducing costs too far can have a negative impact on safety and this needs to be at the forefront of any change management risk assessment – as the old saw goes, 'if you think safety is

expensive, try having an accident...'

All of which has echoes from the past and indicates a continued need for confidential reporting so that regulators and senior management remain attuned to concerns and feedback from those at the coal-face. CHIRP will continue to engage with the CAA and organisations where it can to ensure that your concerns are aired in a confidential, independent and impartial manner. The first option should always be to use the formal ASR/MOR/VOR reporting systems where you feel able to because this will hopefully gain the quickest and most complete response to any concerns. But CHIRP stands ready to assist as best we can those who do not feel able to do so or wish to report concerns about things that 'nearly happened' and might not meet the threshold for formal reporting elsewhere.

Steve Forward, Director Aviation

Engineering Editorial

Forty years ago, an aircraft factory's (now called a Production Facility) aircraft fuel was stored underground in one corner of the airfield, oils in another corner and oxygen elsewhere. Once the aircraft was erected, fuel was uplifted, oils and other fluids added, and oxygen systems filled. Once in service, the cabin was stocked with flammable spirits from duty free shops and, as soon as the seat belt sign extinguished, at least fifty percent of the passengers lit up cigarettes. Who thought flying is safe? Air safety is the result of the people involved, whether they be a member of a regulatory authority, a Captain, Engineer, Cabin Crew, Air Traffic Control Officer, Ground Handler, even the toilet-servicing truck driver.

The first fifty years of aviation took us from the Wright Brothers to Super Sonic Flight followed by Concorde twenty years later but has aviation improved in the last forty years since the introduction of the CHIRP Aviation Programme? Sadly, supersonic passenger flight is unlikely to really return in the short-term for environmental reasons although efforts are underway to bring such aircraft back into the commercial fleet. Engineering input has continually decreased as Major Maintenance has become less labour intensive and this has led to changes in Line Maintenance too, where some traditional engineering functions have been delegated to non-technical staff, such as checking doors, hatches, cowlings and panels, headset on pushback and even gear pin removal. Flight Crew Turnrounds mean that an engineer often only sees the aircraft in the dark at the end/start of the day or during night shift. If a member of flight crew does leave the flight deck on a turnround (remarkably, there is evidence that some do not but thankfully that operator no longer exists) from a Human Factors (HF) point of view, the pilot has just landed a serviceable aircraft, so what could possibly be wrong on the outside? A turnround inspection by an engineer is not influenced by any such feeling of comfort. From a training and licensing perspective, there is no longer a requirement for Technical Orals, where one has to prove they know their aircraft (one cannot go to the maintenance manual for experience on type), and Part 147 Type Training seems to be becoming

shorter and shorter. Standards being driven down by cost perhaps?

Positive engineering things from the last forty years? Perhaps less engineering input will hopefully reduce maintenance error. Quality Assurance auditing, Safety Management Systems, open, objective and transparent Internal Reporting and of course CHIRP, are all designed to improve safety. Modern Health and Safety regulations and practices keep us safe whilst working in our dangerous environment and to not injure ourselves or others. The introduction of Fault Isolation Manuals improves trouble shooting. We have more electronic Maintenance Manuals and they are more sophisticated (sometimes even in colour which has a real HF benefit, unless your employer only gives you a black-and-white printer). Little black books of cheats are no longer allowed. We now record the approved maintenance data used, which may possibly have derived from liability concerns but does encourage us to read the data, especially as one has gone to the trouble to look the reference up anyway (although, recording a Standard Practices Chapter reference when a genuine one is not available opens a myriad of negative issues). Shift handover is now a formal process, as is Check Flight brief and de-brief. We have improved our approach to Acceptance of Components thereby reducing the dangers of SUPs (Suspected Unauthorised Parts) and Bogus Parts. Our understanding of the safety implications of components in electrical systems and ignition sources in fuel tanks has improved with EWIS and FTS training. Human Factors training has increased our ability to predict, avoid and understand errors.

How can we improve further? We need a step change in HF training – not Computer Based Training – less on how the eye works and more engaging interactive sessions, on errors and incidents, ideally from within our organisations but at least on the aircraft our customers operate (internal and/or external customers). We can continue to report our errors and those of others, report safety concerns internally, nationally, even internationally. We must keep reporting discrepancies in aircraft design and approved data to the OEMs and encourage our organisations to press for meaningful change. We must encourage our organisations to listen, perhaps add a suggestion scheme to the Internal Reporting vehicle, then we can share with them the day-to-day challenges so we can start to learn from everyday work, not just from errors, incidents and accidents. We, as always, have to maintain concentration. It may seem normal to drive to work and not remember the journey on arrival but during inspections we must take at least two steps/stages back the minute we find ourselves thinking of another issue or being distracted. It may fall to the engineer to stop passengers walking under wings or baggage loaders walking through a propeller arc because you may now be the only staff member on the ramp in these times of staff shortages. Arguably Base Maintenance inspections could be subject to more interruption and not just because they generally take longer. Base maintenance inspection could uncover a can of worms leading to an MOR and possibly an AD, so there are heroes of the good spot amongst us all, including our cleaners and detailers.

Signing the Certificate of Release to Service (CRS) is the point where you demonstrate taking

responsibility for your actions and sometimes the actions of others. That responsibility starts with certification but can continue for months or even years after the maintenance has taken place unless superseded by the maintenance having been performed again. In the current climate, keep in mind stressors may be building hour on hour and day on day. Perhaps the greatest (Human Factors) improvement in modern society is that if you are having personal difficulties, there is help available and you do not have to pretend you are strong anymore.

Phil Young, Engineering Programme Manager

Comments on Previous FEEDBACKS

Comment No1 – Approach Ban

Regarding CHIRP Air Transport FEEDBACK Edition 142, Report 2 – Approach Ban. I take an interest in this issue because before retirement 17+ years ago now (hard to believe), I was responsible for Aerodrome Operating Minima in [Airline] and, through membership of several JAA committees, the development of common European rules. I understand these have mostly survived the transition from JAA to EASA, though since this occurred after my watch, I am prepared to be corrected.

Your reply correctly sets out the basic rules on commencement and continuation of (an instrument) approach with regard to RVR or Visibility, but to be fair to your correspondent, this wasn't the question they asked. I hope that the situation hasn't changed markedly since I retired, but when I was involved, what they describe ('RW visible from 20 miles') could have been termed a Visual Approach for which visual minima applied. There was always a lot of confusion and misunderstanding, particularly may I say among the regulators, how visual approach minima worked and how they could possibly 'be below' the corresponding Instrument approach visibility minima. In [Airline], visual approach minimum RVR was typically 600m. This was a compromise within the company, as there were many managers who wanted no limit at all. Later, after a fierce argument with the Flight Ops Inspectorate who insisted the minimum should be several miles, this limit was raised to ...800m... The point is that on a visual approach the descent below Minimum Safe Altitude can be done by visual means; it doesn't matter that ATC has 'cleared the X approach' or that the flight follows the tracks and profile of an Instrument approach, the path and terrain clearance are still visual, with the runway in view at all times below MSA. The visual approach RVR was then chosen for the reasons you state, to guard against late loss of visual reference in shallow fog, but if the Instrument approach had a high DH, the visual approach RVR could be below the relevant instrument approach RVR. And the relationship between Instrument approach DH and RVR was originally set with approach success rate in mind, so RVR increases as DH increases. Finally, there was (is?) a rule that stops people switching to 'visual' minima if they become visual below MSA, but above 1000ft...

So the crew members who your correspondent says were carrying out a LOC/DME approach in

400m, well below the 1100m limit, were indeed wrong, but not necessarily quite as wrong as implied. Incidentally some people find it easier to accept the argument if it is put to them that the visual approach minima are in effect, say, 2000ft DH/RVR 800m...so are they really lower than 400ft/1000m?

CHIRP Response:

There is scope for confusion over VFR and IFR RVR minima but we took the original reporter's comments to be that people were not applying IFR minima whilst conducting an IFR approach. Above 1000ft, pilots might elect to conduct a visual approach if they can see the airfield but should declare that fact to the controlling agency so that everyone understands what criteria are being applied. What should not be done is to conduct an instrument approach visually below 1000ft with RVR less than IFR limits because if visual references are suddenly lost as the aircraft approaches the ground then not only can an unsafe situation develop but any subsequent last minute go-around will generate significant workload both in the cockpit and for ATC.

Comment No2 – Recycling Parts

A very interesting and informative article on the recycling of aircraft parts (FEEDBACK Edition 142 – April 2022), but I feel you missed the very final point of airworthiness control of bogus parts and that's the CAMO. There are a few of reasons for me saying that but, before I mention those, let me just say that the company I work for specialises in being the CAMO on aircraft in between owners or operators and currently that means parking/storing aircraft at a scrapyard airfield and hoping they go on to be sold to an operator and not sold to the scrappers, so you can see my interest in your article.

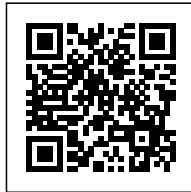
So, the reason I wrote to you. It's difficult to convince CAMO staff that they are part of the very final part of the airworthiness chain on aircraft parts when they are not mentioned in articles like yours. The biggest problem with this is we (CAMO office staff) never see the actual part and possibly never see the aircraft. We really are the final catch point before aircraft fly away to new owners (assuming they don't cross the invisible line to the scrapyard), and this is especially hard to manage with Part 145 staff working on scrap aircraft before lunch and airworthiness-controlled aircraft after lunch...I have been very impressed by the CAMO staff finding bogus parts with only the paperwork to go on, without seeing the actual part, but don't tell the Part 145 staff that...It's a small point but may be content for your next editorial introduction.

CHIRP Response:

Reports and comments from Continuing Airworthiness Management Organisations (CAMO) rarely arrive at CHIRP and this comment is warmly received. It's unfortunate that the Continuing Airworthiness Management aspect of component control was missed out by us so we humbly

accept the admonition by the reporter! It's comforting to know that CAMO staff weed out issues both in routine scrutiny of Technical Records and when the aircraft is undergoing an Airworthiness Review Certificate (ARC).

In a Part 145 organisation, the Goods In Inspectors (GII), the Licenced Engineer and his Mechanic all carry out their respective duties to establish the status of a component prior to installation. In cases where completed task paperwork is drip-fed to the Part 145 Technical Records staff and then further drip-fed to the CAMO, there is the opportunity for the Authorised Release Certificates to be examined by the CAMO staff. In cases where the Work Pack is sent to the CAMO as "dirty finger" records after the aircraft has returned to service, then the protection still exists but costly corrective action may be required if something is found to be amiss by the CAMO staff. Electronic maintenance records speed up the drip-feed process but they have their own drawbacks. Whichever channel is used, this aspect should be assessed for safety risks, or covered by the organisation's Safety Management System if applicable.



There are no comments yet.