

HR in Aviation

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History of Human resource Challenges in Aviation- Final sent to DOM

The idea of writing on this subject came to me after reading about the anticipated shortage of pilots and maintenance technicians in both military and civil aviation. My comments on this subject will be from my experience of observing the aviation industry for the past 55 years. During my lengthy regulatory career, I spent many years looking for solutions to the challenge of acquiring adequate human resources. My civil and military career brought me into contact with many people, much smarter than me, who were working on the same issue. These people were spread throughout the international aviation industry and from many different cultures but faced the same challenge; how to maintain an adequate number of well educated, trained and motivated people willing to make a career, however long or short, in either military or civil aviation.

I want to assure all the highly educated human resource people I worked with and those who read this that my thoughts come from my personal experience. Yes, I did take many human resource courses and seminars to assist me in hiring, and managing aviation human resources, but the real detailed work was done by the human resource staff. My big picture overview came from my work on the licensing and training of aviation maintenance technicians. Including the regulatory certification of individuals who certify aircraft and other aeronautical products after any maintenance actions. These people are known by different titles in many countries. In the British Commonwealth they are called Licensed Aircraft Maintenance Engineers in the U.S.A., by the title of Inspection Authorization.

My work in Ottawa was managing a division that set national training and licensing standards which gave me an insight into all the issues, many of which I can deal with under the section on specific Canadian challenges. Obviously, one wants to deal with this issue from an international approach because people who

are skilled in aviation matters and are properly licenced can move from nation to nation. They are following the work across the world. Many Americans and Canadians, for example, have found great careers working in the Middle East and Africa. This trans national portability is based on our nation's sound national training and licencing systems. This has been a both a boon and a liability for aviation in the sense that many domestic aviation industries have come to rely on immigration as an easy way to fill maintenance and pilot positions. However, the competition has increased for the same sort of folks as areas like eastern Asia have become prosperous with an advanced technical society and therefore an expanding aviation industry. So, in North America home grown solutions may be the way forward.

In previous DOM articles I have written about some of the reasons for technician licencing and certification around the world. In addition to providing clear traceability as far as personal responsibility for one's work and for the inspection and certification of other team's members work, it also provides a clear human resource advantage. That advantage is in holding a widely recognized government issued document attesting to one's technical training and responsibilities. It is also transportable between aviation organizations and nations.

The period before the First World War was a time of experimentation in flight. Finding technical human resources was mainly limited to finding euthanistic individuals from backgrounds in the classic engineering and technical trades. Since the aviation industry was small not a lot of people were required. The great expansion in aircraft and its associated manufacturing during the war soon lead to the creation of aviation technical schools and aeronautical engineering programs in universities. These institutions remain in effect today all over the world.

My readings of historical documents do not point out any great issues in the 1920's. This was probably due to the surplus of technicians and pilots remaining from the Great War. Of course, in the 1930s the depression hit and with jobs being few and far between finding skilled labor was not a big issue. A lot of the historical documentation revolves around training and licensing decisions in those times, not staff shortages. Some off the technical schools from the Great War time period remained in service during the so-called dirty thirties. They were there to be greatly expanded as World War Two erupted.

World War Two saw an awesome expansion of all sorts of aviation beyond anyone's imagination in the 1930's. The existing technical training schools were rapidly expanded, both for pilots and technicians. Once the war was over, literally hundreds of thousands of trained personnel were available. Resource planning in the 1950's was mainly a matter of checking resumes for the type of person needed, i.e., airframes, aeroengines, electricians, instruments, etc. The early 1960s was much the same in the U.S.A. and Canada as the army, navy, marines and the USAF/ RCAF were still very large organizations with expansive aviation departments.

When I left the RCAF to go to Wardair, most of the existing staff and new hires were from a military background. Many were from England and a few from Germany. It was not until the late nineteen seventies and into the nineteen eighties that we began to seriously talk about possible human resource shortages. The discussion was about how would the industry cope.

The industry then saw a need for a dedicated national effort to standardize and certify on a national basis all associated aircraft trades which underpin the licensed technicians. In Canada, this resulted in the Canadian Aviation Maintenance Council which later morphed into the Canadian Council for Aviation and Aerospace (CCAA). The following is taken from their website this December 2018.

“Ottawa, Canada – April 20, 2018: The Canadian Council for Aviation & Aerospace, CCAA, is pleased to announce the release of the 2018 Labour Market Information (LMI) Report. The report quantifies the workforce of the industry, as well as projected labour and skills shortages. The study projects a need to hire 55,000 new workers by 2025 to keep pace with projected industry growth and to replace workers who are retiring or leaving the workforce for other reasons. This represents one third of the existing workforce of 154,000 today. The study also looks at the current and projected number of graduates. Only a quarter of the needed workers—about 14,000—will be domestic graduates. The LMI report highlights issues which need immediate attention, if the industry is to have enough workers with the right skills, to keep pace with growth and retirements. It confirms the need for a National Labour Market Strategy to address these issues.”

Full credit to the CCAA which has done great work in dealing with issue we are writing about.

I was intimately involved in many years of discussions and meetings which led to two key decisions. One was to make the Licensed Aircraft Maintenance Engineer a requirement for all aircraft maintenance certification on Canadian registered aircraft. Before this, you could work in one of three large air carriers that used an internal technician certification system. Requiring a federal licence solved a lot of regulatory enforcement and some internal labor relations problems as well as enhancing safety.

However, the underlying issue of attracting keen people into the trades and aviation licensing career path remained. Some of the issues being discussed were low salaries compared to oil companies, for example. Some other problems were working in bush country far away from the bigger urban areas, shift work, excessive travel. Working weekends and holidays were another negative. For some a stumbling block was the onerous legal liabilities which comes from being a licenced AME or in the U.S.A. holding an Inspection Authorization was somewhat frightening.

The old-time positive attraction of just being around aviation had faded away as aviation just became another means of transportation. There was still some of this attraction among the young people who wanted to be pilots. I recall attending one meeting chaired by a female manager who had to respond to some male comments about females not wanting to get dirty. She asked, "Have you ever changed a baby's diaper?". That answer shut down that avenue of questioning by men trying to find out why women were not joining aviation trades in large numbers. We also tried to reach out to new immigrant Canadians and our aboriginal populations in the north of Canada. Again, the compensation matter arose as aviation could not compete with the resource-based companies for apprentices. Attracting immigrants with aviation backgrounds was difficult as well since they were in demand in many other nations. The supply of under-employed Europeans had long ago dried up as Europe had recovered from the war years.

By the time I left Transport Canada in 2007 the needle had not moved too far towards any one solution except that Canadian Council of Aviation and Aerospace

and Aviation (CCAA) had developed a set of national standards for many aviation and aerospace trades and was providing additional training. Today, the aviation community is still dealing with the possible resource shortfalls, much as it has been doing for the last 40 years. Now over to my friend Jim Henshaw.

U.S.A. scene.

Greetings! My name is Jim Henshaw. I am a retired US Marine Corps Aviator who was fortunate to go on to a second career as a pilot for United Airlines. I retired from the Corps in 1989, after flying the A-6 Intruder for most of my years, and from United in 2003, finishing up as a Boeing 767 Captain.

My friend Roger Beebe feels that this qualifies me to write about HR challenges in US aviation, and since he is right about most things, I will give it a shot.

South of the border, things roughly paralleled Canada through the 1920s and 1930s and into the Second World War. Commercial aviation was on the cusp of the modern era, with the DC-3 just coming into airline service when the war began in 1939. The US aviation buildup for the war was so massive that it affected the industry for more than a decade after its end in 1945.

As the military contracted into a peacetime posture, surplus aircraft, as well as pilots and technicians with military experience would supply the needs of civil and commercial aviation well into the 1950s. From this point, US aviation was on a cycle with roughly a ten-year period, peaking near the end of each calendar decade, until it was disrupted by the events of September 11, 2001.

Economic expansion would fuel technological advances such as the introduction of jet airliners in the 1950s, and widebody aircraft in the 1960s. These in turn would lead to a period of accelerated growth in the aviation industry, which would require more pilot and technician resources to support it. Conversely, economic tightening would lead to slowdowns in aircraft orders, retirement of older types, and layoffs for pilots and technicians. One US airline did not hire a “new” pilot for over 10 years, just furloughed and recalled those already on their seniority list.

During this period the military requirements of the Cold War, the Vietnam Conflict and the Gulf War, along with the drawdowns which interspersed them, fed a steady supply of military trained technicians and pilots into the industry. Things

were still booming at the end of the 1990s and it looked like the upside of this cycle would be a bit longer than usual, that is until September 11, 2001.

After “9/11”, the US airline industry imploded almost overnight. Whole fleets of older aircraft were retired in a day. Companies which hadn’t seen a layoff since the 1980s now had hundreds of technicians and pilots furloughed. A flurry of airline bankruptcies and mergers led to the disappearance of a number of iconic names such as TWA, Pan American and Northwest. Many skilled personnel with military backgrounds tried to return to active duty and many succeeded, filling vacancies created by the intervention in Afghanistan and the second war with Iraq.

As military operations wound down, the industry was slowly recovering and new hyper-efficient aircraft such as the Boeing 787 and the Airbus 350 were lowering operating costs. Enter the “Great Recession” of 2007, and once again growth and profitability slowed to a crawl, but this time as the recovery began, there was no military buildup to provide a supply of trained personnel. In addition, a regional airline mishap with a minimally experienced cockpit crew led to a regulation change requiring airline First Officers to have a minimum of 1500 flight hours, a seven-fold increase over the previous threshold.

Civilian training sources have not been able to produce the numbers needed to support the industry growth fueled by the expanding economy. Regional airlines are dramatically increasing pay levels in an effort to retain experienced personnel, and separating military with solid experience have their pick of potential employers. The military as well, is having difficulty recruiting and retaining aviation people as the pay and lifestyle in the civilian sector is very attractive.

Back to Roger.

Conclusions.

So here we are in 2019 again wondering and worrying about where we will find the human capital to continue an ever-expanding aviation system around the world not just in north America. Reading the CCAA numbers for Canada shows the extent of the work needed. Personally, I don’t see immigration being of great help unless governments realize that a key to industrial and transportation health is n

the trades, more so than in importing more managers and such. Additional support needs to be provided to aviation flight and technical schools as well.

Our North American obsession on having a university education discourages young people from the desire to work in the aviation industry. Yes, we need university educated engineers but not in the numbers that we need for pilots and technicians of all types. Perhaps the United States and Canada could learn from Germany, where college educated trades people are well respected and rewarded.

Obviously, continued attention to quality of life issues, such as shifts, holidays, continuing education and so on, are another key item. This can lead to work and life balance decisions that will make the aviation industry more attractive. The long-standing matter of fatigue in maintenance work is also being addressed not without some controversy.

Finally, it would be nice to see more general advertising from the aviation industry about the rewarding work a career in aviation can provide. I think it was American Airlines, who some years ago ran a series of adverts about the work their aviation technicians do to make a flight safe. That sort of thing together with more government support to flight and trade schools would also help. Jim and I look forward to seeing how this all works out over the next few years.

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