The global aviation industry faces growing workforce challenges. Strong competition for workers, the changing nature of high-skill jobs, and a retiring generation all profoundly affect many countries’ modern economies. The problem is especially acute in the United States and the United Kingdom, the largest and third largest aviation markets in the world, respectively. Both countries need to attract new workers to fly and maintain aircraft, manage airports, control air traffic, build and run terminals, and conduct every other job related to advancing a safe, secure, and high-tech aviation industry. Unfortunately, pragmatic policy solutions that comprehensively address workforce challenges across all aviation subsectors are limited. This report reviews workforce challenges across the critical sectors of the aviation industry in the US and the UK: professional pilots, air traffic controllers, aircraft maintenance and repair, airport workers, flight attendants, and aerospace manufacturing. It finds common themes that are important to understanding how to prepare the industry and its workforce for the future:

The aviation industry will face a number of workforce pipeline challenges as demand for air travel grows in the coming years. Though the outlook on worker availability varies depending on the specific occupation, the number of jobs in aviation is expected to grow.

The degree to which technology will replace jobs is unknown, but technology will change the nature of jobs across the entire aviation workforce. The industry must ensure that new and existing personnel are trained to utilize new technologies.

Workforce demographics are shifting, as a wave of current employees prepares to retire and the generations that replace them are more diverse. To fill future jobs, the industry will need to appeal to a broader demographic.

Following a number of challenges that resulted in cost cuts between roughly 2001 and 2009, the aviation industry has since begun to increase wages to attract workers. The industry has used incentives, signing bonuses, and higher salaries to attract and retain workers.

The aviation industry is competing with itself, other professions, and other countries to retain workers. “Workforce bleed” to other industries, offshoring to other countries, and recruiting established personnel from other sectors (e.g. airlines hiring military pilots) are all manifestations of this competition.

To read the report, visit: www.enotrans.org/etl-documents/aviation-workforce

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What are the unique workforce challenges affecting different aviation sectors?

Professional Airline Pilots

- It is unclear whether there is a true pilot shortage in the US or UK. However, increased demand for air travel is paralleled by growth in projected pilot jobs globally, a trend that will be challenged by impending retirements and high barriers for those interested in the profession to enter the field.
- The cost of training may inhibit many from pursuing careers in piloting. Airlines have been increasing wages and signing bonuses to make the profession more competitive.
- The decreased flow of pilots from sources like regional carriers and the military are causing additional strain on the available workforce from which professional airlines may draw.

- Workforce challenges are most acute in the US, but also exist in the UK.
- Differences in governance – the US ATC system is entirely public, while the UK ATC system operates as a public-private partnership – may influence the ability of each respective country to maintain, recruit, and train necessary personnel.
- Stricter eligibility requirements in the US than in the UK may further inhibit the US from attaining the numbers it needs to sufficiently staff its ATC workforce needs.
- In both countries, new and incumbent personnel will need to be trained to keep up with new technologies.

Air Traffic Controllers

- The global aircraft MRO industry is expected to grow from $77.4 billion in spending in 2018 to $114.7 in 2028, in part due to the delayed retirement of older aircraft.
- Many repair stations have unfilled maintenance technician positions and are experiencing difficulty finding qualified workers for these positions.
- The Aerospace Industries Association is concerned about “workforce bleed,” where many of those who receive aircraft maintenance certification choose to pursue careers in higher-paying fields or quickly moving into upper management positions.
- Reduced enrollment in aircraft maintenance programs mirrors larger industry trends in which younger students are foregoing technical education opportunities.
- Heavy maintenance tasks are increasingly shifting to locations abroad, potentially reducing available jobs for domestic aircraft maintenance workers.

Airline Maintenance, Repair, and Overhaul Workforce

- Additional airport workers will be needed to meet the growing demand for air travel. Automation may affect airport workers’ jobs, freeing employees to serve in more public-facing roles.
- Wages appear to be increasing across a range of airport occupations. A healthy economy coupled with low unemployment is creating an environment for collective bargaining and other union-driven efforts to increase wages and create better working conditions in both countries.
- In the US, security screeners are primarily employed by the federal government. While there is limited information comparing wages among these workers with their private sector counterparts, the Screening Partnership Program is an opportunity to compare the relative costs and efficiency of public and private sector screeners.

Flight Attendants

- There does not seem to be a shortage within the flight attendant occupation. Rather, record rates of applicants are applying for highly competitive jobs.
- Flight attendants have engaged in strikes over wages and working conditions, to varying degrees of success.
- The majority of flight attendants are women, and the profession has a long history of struggling with sexual harassment of its female workforce.

Aerospace Manufacturing Workforce

- The expected growth in air travel will result in increased demand for new aircraft, though major geopolitical events like Brexit in the UK and threats of a global trade war from the US may affect major aerospace manufacturers.
- Aerospace manufacturing is comprised of a variety of subfields with different educational and certification requirements. Nonetheless, potential recruits will need to be trained in science, technology, engineering, and mathematics, as well as in more general workplace skills, in order to attract and maintain a qualified workforce.