TODAY’S AVIATION WORKFORCE

SWEEPING CHANGES ARE TAKING PLACE THROUGHOUT THE AVIATION INDUSTRY.

The Federal Aviation Administration (FAA) is implementing the Next Generation (NextGen) Air Transportation System. This technical work supports the modernizing of the future of aviation, yet a more pressing issue the industry faces is the lack of workforce to support these changes.
According to the Aviation Week 2015 Workforce study, “This year, 67.3% of the total attrition for Aerospace & Defense was among those with 0-5 years of experience, and better than half of these early service employees worked in engineering.”

Source: Aviation Week 2015 Workforce Study: A Reality Check as Competition for Talent Increases. Carole Rickard Hedden, Carla Sands.
This acquisition workforce includes professionals critical to modernizing the National Airspace System (NAS). With a vast number of employees eligible for retirement in the coming years, the FAA has begun increasing its efforts to draw younger talent. However, significant challenges exist in fully creating this NextGen workforce. The inability to replenish the workforce is a critical concern precisely because of the ongoing modernization efforts. If the industry cannot replace its talent, those efforts will fall further and further behind, reducing efficiency and limiting economic growth. There have been many discussions and articles about how much millennials, those born in the early 1980s to the early 2000s, differ from experienced baby boomers, those born during the post-World War II years between 1946 and 1964, and the implications in the workplace. In general, millennials don’t differ that much from other age groups. They have a broad range of motivations and goals, they want to be successful and they want the type of prosperity that means that their children will be better off. However there are a couple of areas that need to be noted in order to attract these highly motivated young career professionals to the aviation industry.
THERE’S NO TIME LIKE THE PRESENT

There is near-universal agreement on the importance of having a safe, efficient air transportation system.

One of the biggest advantages that the aviation industry has is its mission. Even within the larger defense/government sphere, civil aviation stands out by being a highly visible field that many people use and benefit from. There is near-universal agreement on the importance of having a safe, efficient air transportation system. On the surface, this is a great fit for millennials eager to make an impact on the world.

WHY AVIATION?

Aviation also is a growing field, both from the continuing expansion of airline traffic as well as new segments such as Unmanned Aircraft Systems (UAS). The large number of start-ups and new concepts related to UAS shows that aviation still can appeal to the best talent, and it will need that talent to deal with the many complicated issues in safely incorporating these new aircraft into the NAS.
There are two pressing challenges. The first is doing a better job of portraying aviation as a complex environment consisting of policies, human factors, technical requirements and safety and security aspects. To achieve real change, the future workforce needs to apply a holistic understanding to the problems that need to be solved, rather than viewing aviation as another area mired in government bureaucracy.

The second challenge is that things must move faster. The aviation community has made significant inroads in the UAS problem, however the pace needs to improve or the best talent (and technology) will leave the industry.

WE MUST MAKE PROGRESS OR A WHOLE GENERATION OF WORKERS COULD BE LOST.
HOW TO ACCELERATE THE CURRENT PACE OF CHANGE

RISK VERSUS REWARD.

The existing and the new workforces must meet in the middle. We need to accelerate the current pace of change, but we also need to be willing to understand the constraints and underlying reasons behind the current system.

Long development and implementation cycles not only turn off young talent, it also hinders the adoption of new technologies, especially as the pace of technological change increases. Air traffic controllers are naturally and correctly risk-averse. The NextGen workforce must be able to see through their eyes and identify ways to safely and quickly implement new technology while not making a change for change’s sake. The aviation community and its partners must encourage and enable this, or its systems will become increasingly outdated.

Additionally, being able to design new innovative concepts increasingly relies on a deep understanding of the underlying data. The rollout of the System Wide Information Management (SWIM) data network has increased the availability of data. The existing workforce needs to help the NextGen workforce grasp the complexities and details in the data so that we can go beyond superficial applications and create real value.

So how do we implement change while maintaining the integrity and safety of the current system? The existing and the new workforces must meet in the middle. We need to accelerate the current pace of change, but we also need to be willing to understand the constraints and underlying reasons behind the current system.
The aviation and defense industry has lost some of its luster since the 20th century. Millennials are drawn to the allure of the technology and lifestyle of Silicon Valley. Those of us in the aviation and defense industry should take note of this and promote our positive impact on society through our own critical technologies and tight-knit community.
MY AVIATION JOURNEY.

One of the main reasons I joined Northrop Grumman was the mission. Here you get to work on cool things that make a difference, from space telescopes to advanced aircraft to work in the FAA Aeronautical Information Management Modernization program. The opportunity to make a difference is the biggest discriminator we have in the competition for talent.

Another reason I came to Northrop Grumman was their extensive offering of programs for young professionals.

As a member of the company’s Future Technical Leader program I had the opportunity to work on major projects, not only in aviation but across the company and in the corporate office. I interacted with fellow engineers, subcontracts, legal, business development and other entities within the company. Being able to learn from such a diverse group is a privilege; everyone on the team brings a different skillset that you can absorb. While not all millennials want this type of experience, many do want to understand all parts of a problem.

Being able to learn from such a diverse group is a privilege; everyone on the team brings a different skillset that you can absorb.
Where do we go from here?

A holistic understanding is especially important in a complex environment like the government or major corporations. There are so many experiences you need to have before you’re qualified to address large-scale problems.

In 10 years the face of our industry will be much different. We need to recognize and adapt to the changing demographic and technological landscape to ensure that aviation remains safe and robust and continues to grow.

Contact Information

Alex Nakahara
Alex.Nakahara@ngc.com
Northrop Grumman Corporation
www.northropgrumman.com/CivilAviation
703.556.1000

Do you have a grasp of the future’s ETA?