

Workforce Overhaul

Much needs to be done industry-wide to ensure that future aerospace employees will have the ‘right stuff’

ELAINE SEAT/UNIVERSITY OF TENNESSEE

Larry B. Lehmann entered the U.S. Air Force in 1966, served in Vietnam, and is still involved in a 40-years-and-counting aviation career. He has done it all—repairing, flying, selling and recruiting. “Aviation is my love, second only to my faith and family,” he says.

Lehmann—who is director of aviation marketing and sales for the Aviation Div. of the Technology for Energy Corp. in Knoxville, Tenn.—is a prime example of the mature workforce the aerospace industry has elevated through the ranks. The industry has long been able to count on the passion of employees like Lehmann for accomplishments in the field.

However, for too long, the industry has counted on this passion to sustain the workforce without taking steps to help incoming employees maintain existing skills and current workers develop new ones. It was taken for granted that there would be a ready pool of people coming into aerospace.

Today, workforce capability and unquantifiable synergies are more central than ever to total organizational success. Yet employers are distancing themselves from investment in human capital and other commitments to the workforce. This attitude treats employees as commodities who can be bought, sold, traded or dismissed.

This tension, evident in all business, is particularly acute in the aerospace industry. There has been a shift from the flashy, high-tech imperative to go higher, faster and farther at any cost; the new demands center on being more cost-effective. This shift impacts who considers aerospace as a career and who is going to do the touch labor, whether it is touching the computer, the hardware or the customer. It also affects the mindset of the public.

A key question is: What are the implications for the industry if its way of doing business changes without accurately gauging its investment in human capital?

The aerospace workforce will be shaped by the industry’s ability to navigate instability, accurately understand who will be available to work, create global partnerships and manage public perception.

There has always

OUTLOOK

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been instability—and a way of life for people—in the aerospace industry.

Lehmann has kept his career in his own hands. He was willing to move around the U.S. and he continually updated his skills from an airframe and powerplant license to an MBA. Lehmann still has his passion for aerospace

despite the fluctuations he’s experienced. However, surveys have shown that four out of five people in the industry would not recommend it to their children—and it’s due to this instability factor.

Job security is not a given anymore in any industry. However, the global visibility of aerospace leaves it particularly vulnerable to losing people with critical skills and makes it harder to attract the best and the brightest when competing with other industries for talent.

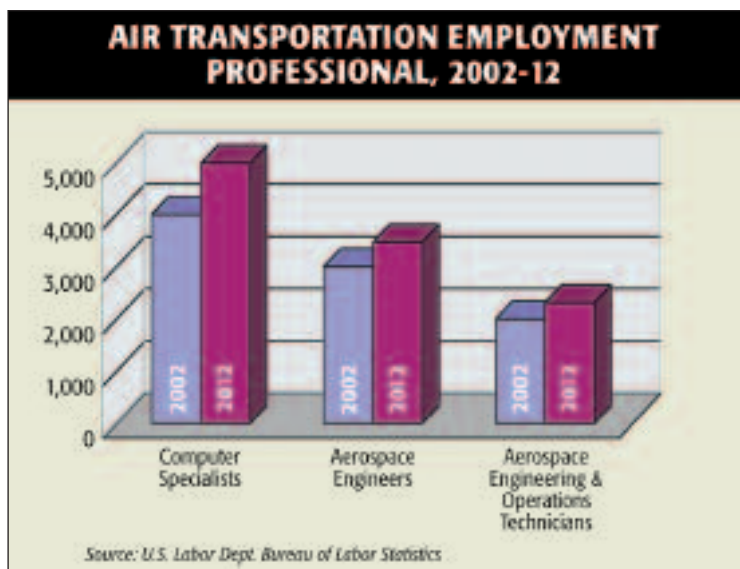
Aerospace’s current workforce includes both people entering the industry and those who have sufficient skills to move into the jobs left by retiring baby boomers. A lack of maturity and in-depth domain experience will be the toughest hurdles these employees will face.

Studies find that aerospace ranks last among almost all of the high-tech industries in providing desirable employment. Entrants into the job market believe they can find greater promise of growth and creativity in other sectors of the economy. The best and the brightest are simply not choosing aerospace careers as in the past.

Today’s entry workforce is from Generation Y. These employees expect to move up fast and be in control of what they do and how they do it. Gen-Ys grew up in the digital world;

they won’t wait. They expect time for both work and play, and often take expressions of individualism as the norm. When asked about what they want to do after graduation, many engineering students say, “I don’t know, but I don’t want to be sitting in a cubicle looking at a computer all day.”

Aerospace, when presented with its thrill of flight, space, technology and zero-failure, has the potential to hook this generation. However, if presented as a stodgy industry where change is



difficult, everyone looks the same, everyone works long hours and weekends, and there are lots of rules, the Gen-Ys will go elsewhere.

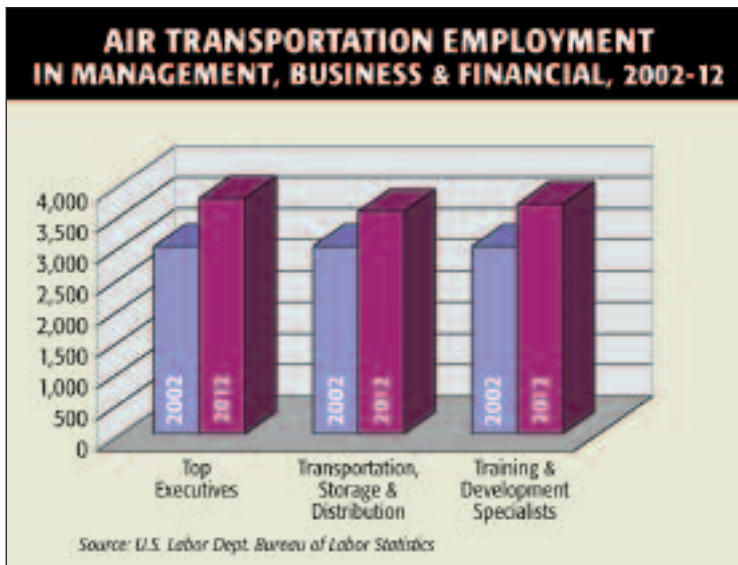
The good news is that there appears to be an adequate number of entry engineering graduates and technical workers for this year. But in less than 10 years, the entry workforce will tell another story.

The credentialed workforce for 2015 is now in middle school. Research suggests that directing students toward success in math and science happens by fourth grade. It's a 13-year process for fourth graders to get the education they need to be an entry-level engineer, mathematician or scientist. Having an adequate supply of technical professionals does not manifest this year, or next year. A significant long-term strategy for attracting and educating the workforce in 10 years is imperative.

The most immediate challenge is replacing retiring professionals with wide ranges of experience. These people learned in the field, on the test range and on the shop floor. They progressed to positions of greater responsibility with time and experience.

The industry has to do a better job of succession planning. Employees have generally not seen a variety of work because of the lack of opportunities that have accompanied expansion and new programs. This gap means people will fill many professional positions with less experience in life and in the aerospace domain than their predecessors.

With globalization, the workforce issue is the loss of jobs short-term as well as the longer term effect on skills and competencies. We might think it's just the maintenance, repair and overhaul work that U.S. and European companies are sending overseas, but in the long run, isn't it the investment in people like Lehmann that we will be missing? Again, people like Lehmann moved up through the ranks, learned and experimented with innovation on the ground floor. Are we



handing over the tools and work where that creativity and imagination will be used in other parts of the world? Are we losing the long-term resource that makes our business viable, in exchange for a short-term financial gain?

The reality is that aerospace is a global industry with a growing array of international partnerships, joint ventures and interdependencies. International sourcing has increased in subsectors of the industry including aircraft parts, engines and related equipment.

At the same time, countries must maintain their ability to meet their defense needs across all aerospace life cycles.

The challenge for our industry is to accurately analyze expenditures and benefits beyond just the balance sheet of labor rates, shipping and facility costs. If getting the job done is only considered as a group of commodity skills that can be purchased at the lowest rate, then the workforce with traits of loyalty, focus and creativity—all part of a viable business—will migrate to other industries.

An expansion of this dilemma is that news about aerospace hasn't been good. The industry is associated with terrorism, bankruptcy, layoffs, pay cuts and pension problems. In addition, public perception is growing that aircraft are major contributors to noise and air pollution.

The industry must choose a public persona. Is it one that people want to be associated with knowing they will be treated fairly? Or, is it an industry that is unethical and uses resources at the expense of the public? The people who have cast their lots in this industry have done so because of their passion for flying. It's up to the industry to re-invent itself to attract the next generation.

Some aerospace companies *are* investing in their employees. The approaches are as different as each company, but the bottom line is that valuing employees is paying off.

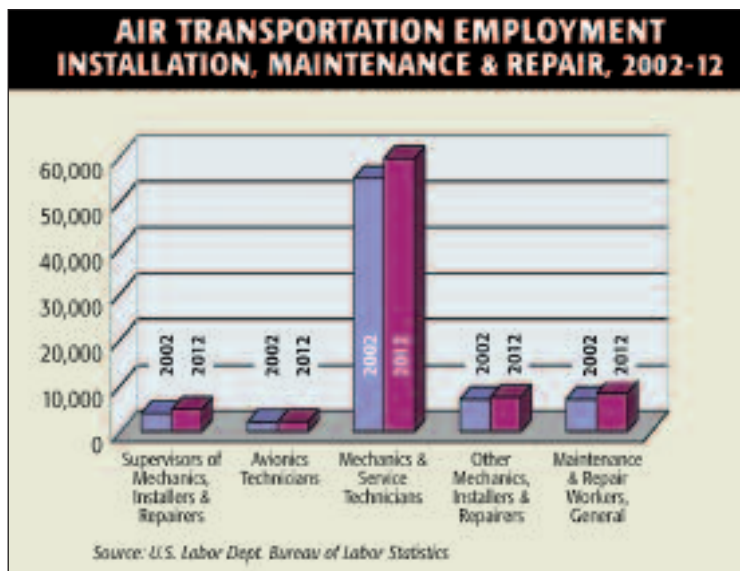
Lockheed Martin was ranked fifth in *Training* magazine's Annual Training Top 100 Awards. Among the company's milestones in 2006 was first flight of the modernized C-5 with its GE CF6-80C2 turbofans.



LOCKHEED MARTIN

Aerospace was well-represented in *Training* magazine's top 100 awards this year. *Training* began ranking the best of the best in 2001, looking at the largest and smallest companies, and their training budgets—how much training they provide their employees, training as a percentage of their payroll and their overall commitment to ongoing training. Among the best: Booz Allen Hamilton—a consulting firm that does work for the aerospace industry, was ranked No. 1; Lockheed Martin Corp. was ranked fifth; Northwest Airlines, 17th; Delta Air Lines, 80th; and FedEx, 83rd.

Booz Allen Hamilton prepays tuition expenses up to \$5,000 for each employee annually; the result, turnover for tuition recipients is 6% lower than for non-recipients. Lockheed Martin created error-preventing training to avoid delays and errors in the manufacturing process, with a reduction of errors by 67%. Northwest Airlines trained reservation sales agents to collect small fees when booking seats, resulting in \$27 million in additional revenue.



Workforce issues will never go away. There's no one solution. As the industry evolves, workers change. As we become a global partnership, and our products are in the public eye, new approaches will be needed. What we learn from the aerospace leaders who are tackling the issues of how best to retain, attract and take care of its most precious resource—people—is that how employees are treated matters.

The industry must decide if it is commodity-based—a collection of

parts that can be put together at the cheapest rate—or a viable business that nurtures people, offering them promising careers.

Aerospace is at a crossroads with regard to its workforce. The chosen direction will impact the quality of its workforce. Changes won't be seen in the next year or two, but the decisions made now will shape the industry a few years hence. ☛

Elaine Seat, Ph.D., is director of the Aerospace M.B.A. Program at the University of Tennessee in Knoxville.