

Attract, Train & Retain

Developing the Next Generation of Aviation
Technicians

ARSA Symposium
March 15, 2012

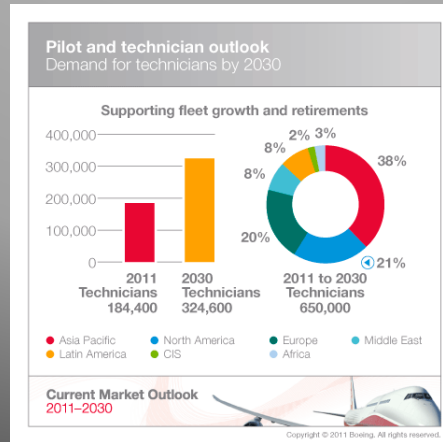
Panelists

- ▶ **Ryan Goertzen**, Vice President of Education, Spartan College of Aeronautics and Technology
- ▶ **Kermit Kaleba**, Senior Policy Analyst, National Skills Coalition
- ▶ **Raymond Thompson**, Associate Dean, College of Aviation – Western Michigan University and President, Aviation Technician Education Council
- ▶ **Michael Young**, Senior Manager, Air Operation Division (Aircraft Maintenance), FedEx Express & Member, Board of Directors, Organization of Black Aerospace Professionals

Needs Forecast 2011 - 2030

- ▶ North America – 134,800 maintenance personnel
- ▶ This equates to 6,740 persons per year

- ▶ Source:
http://www.boeing.com/commercial/cmo/pilot_technician_outlook.html

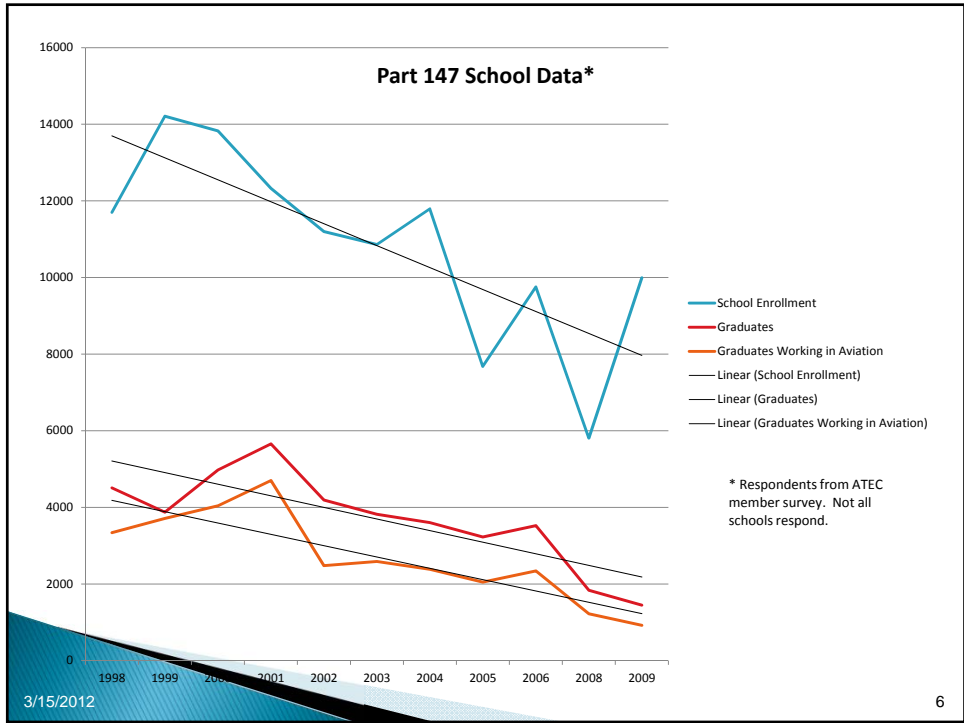
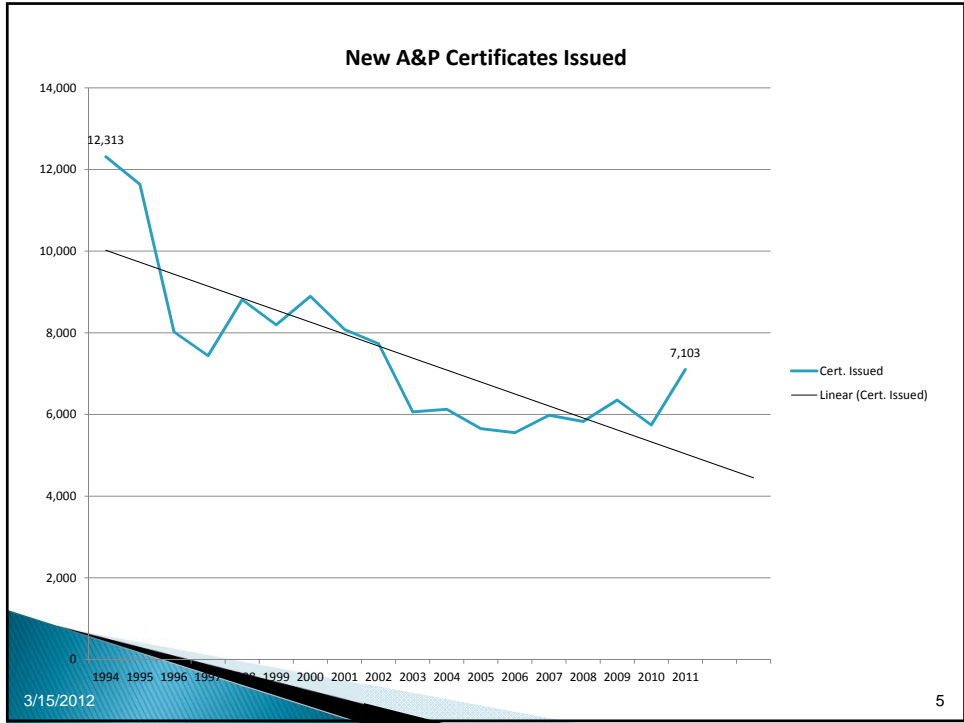


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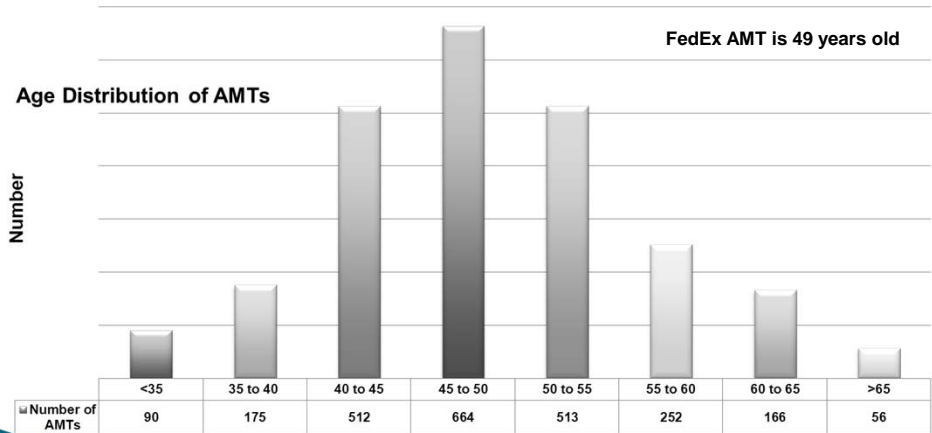
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Where do you see the industry going with respect to growth?

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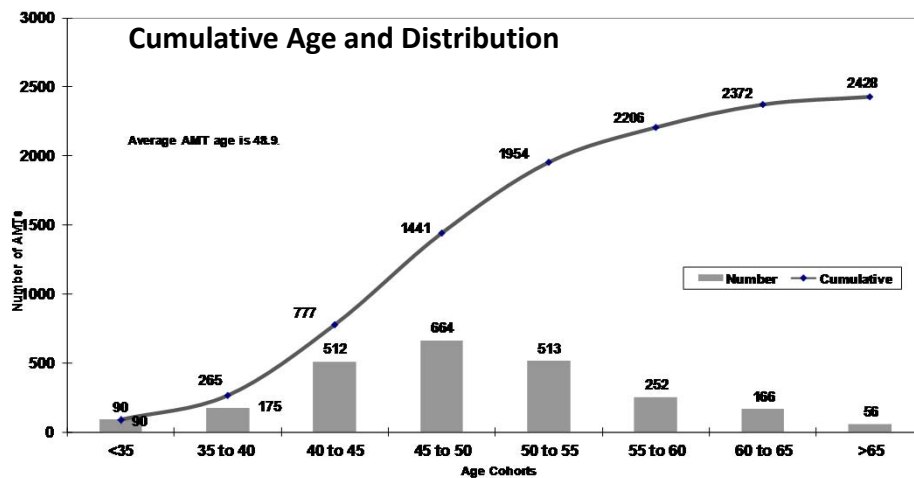
What we know...



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7

What we know...



3/15/2012

8

Attracting Students Into Aviation Maintenance Training

- ▶ Overall, the trend line for new students is downwards.
- ▶ We are seeing program growth at a number of schools but those numbers are still low.

Current Issues Affecting Student Choice

- ▶ The majority of A&P training programs are for-profit schools.
- ▶ The Department of Education issued 900 pages of Program Integrity Rules that went into effect on July 1, 2011.
- ▶ Many of the changes targeted For-Profit education.
 - Clock Hour / Credit Hour payment of Financial Aid
 - Gainful Employment
 - Default Standards
- ▶ Potentially, all A&P programs are affected

Current Issues Affecting Student Choice

- ▶ Spartan has experienced 105% growth over the last 5 years.
- ▶ Due to the regulatory environment of 2011 Spartan saw a 12% drop in student enrollments. Other schools in our sector fared much worse.

Recruiting By Schools

- ▶ Traditional recruiting – grades 9 – 12
- ▶ Expansion of effort into grades 6 – 8 and lower
- ▶ Programs
 - School visits
 - Classroom visits
 - Career days
 - STEM program participation

Barriers To Overcome

- ▶ We tend to lose underrepresented groups by grade 8
- ▶ Parents and students don't know who we are and what these careers are like
- ▶ Almost zero positive media coverage or role models
- ▶ Cyclical industry
- ▶ We are no longer seen as a leading edge career

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13

Generating Interest from Organizations

- ▶ The Organization of Black Aerospace Professionals partners with organizations, including schools, to excite young people
 - ACE camps
 - Project Aerospace Day
 - Aerospace Professionals in Schools
 - Scholarships

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14

What innovative programs
have you seen or worked
with to attract students?

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Training Students

- ▶ Part 147 controls the minimum school curriculum
 - Created in 1970
 - Revised once in 1992
- ▶ Schools can teach above the minimum levels and many do
- ▶ Cost and competition become limiting factors

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16

Cost Issues

- ▶ Difficult to obtain state-of-the-art equipment
- ▶ We are a high tech industry that relies on a lot of low tech training – some appropriately so
 - It is what we can afford and meets the requirements
 - The auto industry provides new engines and vehicles to training programs
 - *How do we accomplish this in our industry at a reasonable cost?*

Part 147 ARAC

- ▶ All the boats need to float higher.....
- ▶ 2007 – 2008 the Part 147 ARAC working group developed a series of recommendations, including greatly improved curriculum requirements
 - More electronics
 - Human factors
 - Safety Management
 - Advanced structures

Part 147 ARAC

- ▶ The ARAC also recommended
 - Moving the details of the curriculum into an operational specification to allow updates without rule change
 - Create a biennial industry-school review board that would keep the curriculum current
- ▶ We are still waiting for the NPRM but some progress is occurring

Elevating Our Game

- ▶ The only way schools can truly improve training is for the training tools to be similar to what is being used in the field
- ▶ Upgrading the 147 curriculum is a first step but schools as a whole will struggle to have the latest equipment in place

How do we address the equipment gap problem?

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Retaining Graduates in Aviation

- ▶ Our competition?
 - Energy – oil, wind
 - Railroads
 - Automotive
 - Medical

- ▶ Better starting pay, hours, and less liability
- ▶ Often can start work immediately at higher level organizations

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22

Retaining Graduates in Aviation

- ▶ Graduates seek know entry points in our career field
- ▶ We do not have a widespread program(s) that are clearly definable to a recruit and his or her parents
 - Example: Cooperative education programs in Engineering

Are you able to find
qualified entry-level
technicians?

Bridging The Gap

- ▶ Many pilot training programs have bridge programs that allow graduates to move directly into the right seat at the regional level
- ▶ We need to develop a broad scheme for maintenance students
 - Spartan's apprenticeship program

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25

Evolution of the AAR Bridge Program

- ▶ Participation on Spartan's Program Advisory Committee.
- ▶ Drove changes to existing 147 curriculum initially focused on Sheet Metal
- ▶ Changes included:
 - Thicker materials used in projects
 - Larger rivet sizes and types
 - Larger rivet guns
 - More focus on SRM



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26

AAR Commitment

- ▶ AAR agreed to hire 10% of Spartan's graduates.
- ▶ AAR provided 737NG General Familiarization training to Spartan instructors.
- ▶ Accessed training materials and training aids.
- ▶ Current GM provided commencement address to our Fall graduation class.

AAR Commitment, Cont.

- ▶ Student Debt Reduction
 - AAR was facing 32% turnover at the time the bridge program was initiated.
 - 6 months \$5,250
 - 18 months \$5,250
- ▶ Keep employee in position for 3 years.
- ▶ Raises associated with mentorship program advancement.

Continued Education Programs

- ▶ Rayner Hutchinson – Corporate VP of Quality at AAR Corp.
 - Provided Airworthiness training to all A&P and Avionics Instructors
 - Provided industry related issues that can flow back to the classroom.
 - Student behavior and the creation of a safety culture in every student.
- ▶ Noel Christen – VP of Quality Operations at AAR-OKC.
 - Speaking at the upcoming ATEC conference on SMS and Human Factors.

Bridging The Gap

- ▶ Thought Experiment
 - Identify a level of maintenance training and experience required to participate in the Bridge
 - 145's across the country take these students for a period of time, paid, and run them through a series of experiences. 6 months? More?
 - Successful completion is documented maintenance organizations waive the minimum experience requirement to enter

Bridging The Gap

- ▶ Pros
 - You can test these graduates
 - Hire the best
 - We define a specific method of career entry
 - Students are motivated to perform to be eligible
 - Parents see how the path works
 - Increased numbers of new students
 - We retain more graduates in aviation
- ▶ Cons - cost

Working Together

- ▶ Getting involved
 - Get connected with your local A&P program
 - Advisory boards
 - Open houses
 - Career Days
 - Supporting with equipment and materials
 - Defining structured paths for graduates
- ▶ Schools, 145's, and ARSA – a powerful combination

What are your thoughts
about attracting, recruiting,
and retaining the next
generation of aviation
technicians?

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