Forecast Risks

• This forecast is a “status quo” forecast, meaning if there are no changes in the industry or overall economy, the forecast is what we would expect

• Forecasts are reliant on underlying historical data sources, which may have inaccuracies

• Forecasts are subject to greater variances over time, and are generally more accurate in the near-term forecasting period

• Unforeseen events such as worldwide catastrophes (wars, epidemics, global recessions, etc.) will likely greatly alter this forecast
Helicopter Pilots – Summary

• Projected shortage of 7,649 helicopter pilots in the United States between 2018 and 2036

• Since 2009, there has been about an equal number of new helicopter pilots as those becoming inactive or retiring

• More helicopter pilots are projected to retire or leave than are incoming over the next 12 years

• The impact of the hiring of helicopter pilots to transition to the regional airline industry is already having a negative impact on the helicopter labor supply (over 500 transferred in 2017 alone).
Forecast Annual Deficits of Helicopter Pilots in the United States
Forecast Cumulative Shortage of Helicopter Pilots in the United States
Aviation Mechanics – Summary

• Projected shortage of 40,613 certificated aviation mechanics in the United States between 2018 and 2036
• 67% of operators are reporting it is more difficult to hire mechanics in 2017 than previous years
• Over 60% of operators report they are hiring mechanics with less experience than in previous years
• Over 50% of operators report in the next five years the inability to hire qualified mechanics will interfere with their ability to grow and expand
Aviation Mechanics – International

• International operators report similar trends:
  • 70% find it harder to hire mechanics
  • 75% have hired mechanics recently with less experience than previous years
  • Over 57% believe the inability to hire mechanics in the coming years will interfere with their growth and expansion plans

• China is poised for aggressive aviation expansion (Rand, 2017)
  • Currently has less than 1,000 helicopters
  • If growth occurs as planned, the use of ex pat maintenance technicians will be very likely, resulting in further labor supply issues in the United States and elsewhere

• No official data source available which tracks international maintenance technicians
Forecast Annual Surpluses and Deficits of Required Aviation Mechanics in the United States
Forecast Cumulative Shortage of Aviation Mechanics in the United States
Analysis of Survey Results
Supply Survey Demographics Analysis
What region of the world is your company located?

76% North America

North America  South America  Europe  Asia  Australia  Africa

Other
Which of the following categories most closely describes your organization?
For your flight activity, please indicate below the percentage for each operation listed for which your company engages.
Pilot Supply Survey Results
In the last year, have you found it harder, the same, or easier to hire pilots?

- Harder: 2.02%
- The same: 45.45%
- Easier: 52.53%
Please indicate the sources and percentages for which you hire pilots.
In the last year have you found it harder, the same or easier to hire pilots from the military?
In the last year, have you hired pilots with less experience than in previous years?

- Yes: 45.92%
- No: 54.08%
When pilots leave your company, where do they normally go?

- They retire: 64.80%
- They go to other companies: 5.60%
- They go to other professions: 4.80%
- Other: 24.80%
Regarding the future of hiring pilots (over the next five years), do you anticipate finding qualified pilots will be harder, the same, or easier?
Whether you plan to grow or not, do you anticipate that a lack of qualified pilots would or will interfere with your ability to grow over the next 5 years?
For pilots who retire from your company, please estimate the average age at which they retire.
Mechanics Supply Survey Results
In the last year, have you found it harder, the same, or easier to hire mechanics?
Please indicate the sources and percentages for which you hire mechanics.
In the last year have you found it harder, the same or easier to hire mechanics from the military?
In the last year, have you hired mechanics with less experience than in previous years?
When mechanics leave your company, where do they normally go?

- They retire: 19.47%
- They go to other companies: 72.57%
- They go to other professions: 4.42%
- Other: 3.54%
Regarding the future of hiring mechanics (over the next five years), do you anticipate finding qualified mechanics will be harder, the same, or easier?
Whether you plan to grow or not, do you anticipate that a lack of qualified mechanics would or will interfere with your ability to grow over the next 5 years?
For mechanics who retire from your company, please estimate the average age at which they retire.
Qualitative Analysis
Qualitative themes emerging from pilot hiring aspects

• Concern in regards to helicopter pilots being poached by other aviation companies
  • Within the helicopter industry
  • By Part 121 Air Carriers
SkyWest Airlines is the place for military pilots who want to Take Control of Their Careers. SkyWest is now offering $20,000 in tuition reimbursement for fixed-wing transition training at participating flight schools, plus a $7,500 bonus, providing a direct path for helicopter pilots to become commercial airline pilots.

Take **Control** of Your Career

SkyWest Proudly Employs More than 1,000 Service Members

Up to **$27,500** in bonuses for military pilots and tuition reimbursement for fixed-wing transition training.*

*At participating flight schools, paid out over 2 years.
Attrition of Military Helicopter Pilots to Regional Airlines

• Reason this is occurring
  • Regional airlines need pilots
  • Eligible for a R-ATP (military) at 750 total hours

• Program logistics
  • Airlines offer financial incentive ($20,000+) to obtain fixed-wing ratings
  • Partnered with flight academies throughout the US

• Surveyed three regional carriers
  • Approximately 500 hired in 2017 and transitioning to fixed wing R-ATP
  • 95% completion rate
Qualitative themes emerging from pilot hiring aspects

• Experience gap between commercial certification and industry need
  • “The problem with this industry in an oversaturation of jobs that require very high levels of experience and a major deficit of jobs in which pilots can build said experience.”
Qualitative Themes emerging from mechanic hiring aspect

• Harder to recruit and retain military trained mechanics
  • Airline are aggressively recruiting from this pool
  • Not as many, may be unaware of opportunities

• Lack of preparation and knowledge needed for the job
  • Large knowledge gap between seasoned helicopter mechanics (soon to be retired) and those entering into the field
  • Experienced mechanics are targeted by other larger companies offering more attractive incentives

• Large focus on pilot shortage, not as much discussion in regards to mechanic shortage
Qualitative Themes emerging from Both

• As an industry we need to work together to attract young people into the aviation industry
Understanding Generation Z – Digital Natives

• Embrace Current Technologies to Communicate Opportunities in Helicopter Industry to a younger audience
  • Favorite website is YouTube
    • Most popular Helicopter videos are over 5 years old
    • Many focus on flying, not maintaining
  • Communicate through social media
  • Virtual Reality Opportunities

• Recommendations:
  • Harness the talent of this generation to help effectively communicate with this generation!
    • Support an internship for a current student to part of the team to promote opportunities
  • Have a coordinated social media communication plan to take advantage of the various platforms available
Defined Career Pathways – Pilots and Mechanics

• This generation desires structure and job security
• Defined pathway programs are exploding in the fixed-wing side of the industry due to pilot shortages
  • Typical Structure of Pathway Program
  • Involves Regional and Major Airline partners

• Seeing a larger variety of pathway programs:
  • Recently announced CBP/UND Pathway Program
  • Air Cargo operators

• Recommendation:
  • Helicopter industry needs to explore partnerships between various operators to assist in defining the career pathway to take someone through the experience gap of 200 hours to 1000 hours
  • Partner with A&P schools to establish pathways for their students into the helicopter industry
Invest in training (retraining) of highly experienced pilots and mechanics

• Threat of the Part 121 carriers poaching pilots is happening
  • Targeting the military rotor pilot that meets R-ATP minimums
  • This is a way for some of the pilots to regain currency if lacking

• Airlines also have the ability to attract mechanics with different benefits package and work environment

• Recommendation:
  • Collaboratively discuss ways in which as an industry we can work together to keep experienced helicopter pilots and mechanics in the helo industry
Financial Support for Flight and Mechanic Training

• Education and training is expensive
  • At UND helicopter flight training is twice as expensive as fixed-wing training for same certification and ratings.

• Recommendations:
  • Availability of helicopter training specific scholarships for both pilots and mechanics
  • Continue efforts to ensure the GI Bill continues to support aviation education and training
Continue to collect and track accurate data

• Difficult to attain and track accurate data for a worldwide understanding of metrics

• This industry is very dynamic and global, and need to be aware of changes happening in every region

• Recommendation:
  • Continue to have this conversation being led by HAI bringing in variety of data points collected by industry partners (example GAMA Aircraft Shipment Report by Region)
Continue the effort towards policy reform

• Liability reform
  • Recommendation:
    • Eliminate penalties for individual mechanics when they operate in “good faith.” Other maintenance professions do not operate under such strict rules, which disincentives people from choosing aviation maintenance as a career field

• A&P Certification Reform
  • Recommendations:
    • Streamline the process for military maintainers to convert their experience into civilian certification
    • Ensure financial support is available
Questions/Comments?

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Contingency Slides
Forecast Number of Rotorcraft Pilots in the United States

- Forecast Pilots
- Upper Confidence
- Lower Confidence
Forecast Number of Aviation Mechanics in the United States

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- Forecast Mechanics
- Upper Confidence
- Lower Confidence