

**STATEMENT OF**  
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**CHAIR, SMALL BUSINESS DIVISION,**  
**NATIONAL DEFENSE INDUSTRIAL ASSOCIATION (NDIA)**  
**BEFORE THE**  
**COMMITTEE ON SMALL BUSINESS SUBCOMMITTEE ON INNOVATION,**  
**ENTREPRENEURSHIP, AND WORKFORCE DEVELOPMENT**  
**ON**  
**“MOVING UPWARDS AND ONWARDS: THE WORKFORCE AND INNOVATION**  
**NEEDS OF THE AVIATION AND AEROSPACE INDUSTRY”**  
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NOT PUBLIC UNTIL RELEASED BY THE  
HOUSE COMMITTEE ON SMALL BUSINESS

## **Introduction**

Chairman Crow, Ranking Member Kim, and Members of the Committee, thank you for inviting me to appear before the Innovation, Entrepreneurship, and Workforce Subcommittee today, and thank you for your consistent efforts in supporting America's small business community.

My name is ML Mackey, and I am the CEO of Beacon Interactive Systems. Beacon delivers innovative, efficiency improving, digital capabilities to the U.S. Air Force. I am also here today in my role as the Chair of the Small Business Division of the National Defense Industrial Association (NDIA), the nation's oldest and largest defense industry association, comprised of nearly 1,800 corporate and over 63,000 individual members.

The challenge facing the Aviation & Aerospace Industry today is a workforce challenge. How do we increasingly grow the innovation workforce to address both current and future needs? Whether it is a focus on the scientists and engineers developing and delivering innovative technology or the maintenance technicians, the Airmen on the flight line, maintaining and sustaining aircraft, there is a workforce shortage across the board.

To be successful we can either increase the workforce so that we have more people available, or we can increase the capacity of the resources in place. The most successful outcome will be an artful combination of the two.

Using Beacon as an example, participating in Federal R&D Programs not only enabled us to further develop technology innovation for the maintainers on the flight line, it also enabled us to further develop our own innovation workforce. This developmental impact in terms of becoming an ever more innovative team is the multiplier effect of Federal R&D funding.

It is important to call out that the Innovation Workforce is not only comprised of the technical resources typically thought of in STEM discussions but also the wider team of innovative thinkers necessary to bring a successful product forward. It includes the Program Managers, the Analysts, and the extended teammates of our Air Force colleagues on the flight line. This is the diversity of thought and creativity that fuels successful innovation. This is the team Federal R&D funds let us explore, find, and push the envelope to develop.

Without this well-developed intentional diversity of thought, innovation happens in one-off moments not as the continuous engine critical to U.S. National Security needs and the country's economic prosperity.

At this point I would like to broaden the discussion to bring in input and recommendations from my fellow NDIA colleagues.

## **Workforce Training**

The success and growth of the Aerospace & Defense industry is reliant on a robust and talented workforce. Technicians are a critical component to the overall operational safety of the industry and are playing a vital role in supporting the pandemic recovery efforts.

Boeing's recently released Pilot and Technician Outlook 2021–2040 forecasted that 626,000 new maintenance technicians will be needed to meet operator and MRO demand to maintain the global commercial aviation fleet over the next 20 years. Maintenance technicians will play a critical role in restoring, inspecting, and preparing aircraft that have sat idle during the pandemic to meet airworthiness standards. As importantly the industry will need an influx of technicians familiar with electrical and hybrid motors and components to keep pace with the emerging Advanced Air Mobility sector.

The recommendation here is to both continue and accelerate investment in Federal Workforce Training Programs for upskilling of the existing workforce as well as outreach efforts for future workforce development.

### **Procurement Visibility**

The need for a clear demand signal from the federal government, while important across all industry participants, is especially true for Small Business. This isn't limited to just to Procurement or Research & Development, it's also needed for businesses providing aerospace services, spare parts, and support.

A critical step the Federal Government, and particularly DoD, could take to send a clearer demand signal to industry regarding its priorities for aerospace systems' sustainment would be to provide additional detail in the Operation & Maintenance Budget Request regarding the materiel availability objective for each major weapon system and the resources required, across the FYDP, to achieve that objective.

That kind of accountability and transparency on the part of the federal government would enable greater investment in innovation and workforce development.

In closing, I'll give voice to a third recommendation which is more about how to think about Federal R&D than actual steps to take. I am going to suggest we collectively adjust our thinking on R&D funding from a singular engagement to more of a continuum. That it should be viewed as more than just the specific outcome of the specific R&D funding. It should be understood as a continuous investment in developing the innovation workforce critical to the Aviation and Aerospace Industry.

### **Conclusion**

With that, I will close my remarks. Again, I'd like to thank you Chairman Crow, Ranking Member Kim, and Members of the Committee. Thank you for the opportunity to appear before you this morning and thank you for your continued efforts in helping the small business community.

I would be pleased to respond to any of your questions.