March 17 – VABA/VSGC Workforce Study Preliminary Findings

Virginia's aerospace workforce challenge is not a lack of opportunity—it is a misalignment between education, experience, and industry-ready skills in a rapidly evolving, technology-driven sector.

1. Strong Demand Growth — But Modest Hiring Volumes

- **68% of organizations expect demand to increase** over the next 1–3 years.
- However, most projected hiring is **small-scale (2–10 positions typical)** rather than large expansions.

👉 **Interpretation:**
Growth is real but **incremental and distributed**, not driven by large-scale hiring surges.

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2. Workforce Shortages Are Concentrated in High-Skill Roles

Most difficult positions to fill:

- Software engineers (≈21%)
- Aerospace engineers (≈20%)
- Engineering technicians (≈17%)
- UAS technicians (≈17%)

Key shortage areas overall:

- Engineering talent (58%)
- Maintenance technicians (39%)
- Cybersecurity (21%)

👉 **Interpretation:**
Virginia's aerospace gap is **not entry-level volume—it is technical depth and specialization**.

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3. Entry-Level Pipeline Is Weak and Misaligned

- Only **~25% say entry-level workers are fully prepared**; most say "somewhat prepared."
- Many firms report:

- **Lack of practical experience**
- **Need for skills even at "entry level"**
- **Few true entry-level roles exist**

👉 **Interpretation:**
There is a **structural mismatch**:

- Employers want "ready-to-work" hires
- Education is producing **theoretical, not applied talent**

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4. Compensation Competition Is a Major Barrier

Top hiring challenges include:

- Competition with private sector salaries
- Public sector pay limitations
- High wages in industry (especially maintenance & engineering)

👉 **Interpretation:**
Virginia is not just competing for talent—it is **losing talent to higher-paying sectors and regions**.

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5. Critical Skills: Software + Systems + Hands-On

Most critical technical skills:

- Software/programming, AI, modeling
- Systems engineering
- Hands-on maintenance/technical skills
- Aerospace-specific knowledge (UAS, RF, flight dynamics)

Most critical soft skills:

- Communication (top skill)
- Teamwork
- Work ethic
- Problem-solving and adaptability

👉 **Interpretation:**
The modern aerospace worker is:

"Digital + multidisciplinary + practical"

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6. Credentials Still Matter—but Are Diverse

Most common requirements:

- Bachelor's degree (63%)
- Associate's degree (39%)
- FAA Part 107 (23%)
- A&P certification (notable demand)

👉 **Interpretation:**
The workforce is **hybridizing**:

- Academic degrees + **industry certifications**
- Especially important in UAS and maintenance tracks

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7. Training Exists—but Is Inconsistent

- Only **49% of organizations offer internal training programs**
- Common formats:
  - On-the-job training
  - Certifications
  - Internships
  - Mentorship programs

👉 **Interpretation:**
Industry is willing—but **not yet systematically structured** in workforce development.

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8. Industry Wants Deeper Engagement with Education

Top recommended improvements:

- More **hands-on learning**

- Stronger **industry partnerships**
- Better **curriculum alignment**
- Expanded **internships/apprenticeships**
- Earlier **K–12 exposure**

And notably:

- **63% willing to offer internships**
- ~40–50% willing to engage with schools directly

👉 **Interpretation:**
Industry is signaling:

"We are ready to engage—education must meet us halfway."

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9. Structural Issues Identified

Several deeper systemic challenges emerge:

A. "Experience paradox"

- Entry-level jobs require experience
- But experience requires entry-level jobs

B. Geographic challenges

- Rural/relocation barriers (e.g., Blacksburg, Eastern Shore)

C. Awareness gap

- Students don't understand aerospace career paths early enough

D. Cultural/workforce readiness concerns

- Motivation, expectations, and work ethic noted by some employers

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✈️ **Bottom-Line Takeaways (Policy-Relevant)**

1. This is NOT a quantity problem—it is a quality + alignment problem

Virginia has:

- Jobs
- Employers

- Willing partners

But lacks:

- **Work-ready talent pipelines**

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2. The biggest opportunity is "applied workforce development"

- Internships
- Apprenticeships
- Hands-on training
- Industry-embedded education

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3. Aerospace workforce = convergence of:

- **Software / AI**
- **Engineering**
- **Advanced manufacturing**
- **Aviation operations**

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4. Early exposure (K–12) is critical

The pipeline problem starts **well before college**.

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5. Compensation and competitiveness matter

Policy levers may be needed around:

- Incentives
- Public sector hiring flexibility
- Talent attraction

🧭 **Strategic Framing (for GAAC / VABA Use)**

If you were to summarize this in one line for leadership:

Virginia's aerospace workforce challenge is not a lack of opportunity—it is a misalignment between education, experience, and industry-ready skills in a rapidly evolving, technology-driven sector.