



Professional Aviation Board of Certification

## Need for the Features & Benefits of PABC Testing Fact Sheet: 8/01/2017

### **Problem: A global pilot shortage**

- Threatens the effectiveness, growth and safety of air transportation
- Limits local, regional and global economic growth

### **The Shortage: New Commercial Pilots with Instrument Ratings**

- Demand estimate: **31,850**/ Yr (Boeing / Summer 2017)
- Production estimate: 23,000 / Yr = shortage grows by **8,850**/Yr

### **One Cause of the Shortage: Poor quality initial (Ab Initio) pilot training**

- Inconsistent & outdated National Aviation Authority (NAA) Training Standards
- Outdated and compromised NAA Knowledge Testing

**Result:** Holding a license does NOT assure professional pilot preparedness

### **Solution: PABC's knowledge testing system reduces the shortage by**

- **Providing**
  - Stakeholder-defined *Ab Initio* training criteria
  - Criteria that meet or exceed ICAO and each State's NAA training standards
  - Current, comprehensive & secure knowledge & competency testing that
    - Proves pilot preparedness for entry into airline New Hire training
    - Identifies topics needing added emphasis by trainers
- **Recognizing** high quality Ab Initio training providers
- **Increasing** New Hire success rates
- **Reducing** training costs

**Result:** The pool of well-prepared new pilots is significantly increased

### **Development of PABC's testing system is**

- **Based on**
  - Proven by FAA-funded *Operational Research*
  - Standards accredited by the International Standards Organization (ISO)
- **Supported by**
  - Funding provided by donations from industry stakeholders
  - Subject Matter Experts (SMEs) from around the world
  - The European Aviation Safety Agency's new Ab Initio training standards
  - Industry *Best Practices*, changes in technology and safety report data

### **Timeline for this Research 2017 to 2023**

- 2-years for fundraising & test development (2017-2018)
- 5-years for Operational Test & Evaluation refinement (2019-2023)
  - Expanding the bank of test items and scenario-based questions
  - Qualifying this test as an *Alternative Means of Compliance (AMC)* for *Airline Transport Pilot (ATP)* license testing by National Aviation Authorities (NAAs)

**Initial Benefits from PABC testing can begin as early as 2019**



**Initial Operational Test & Evaluation (IOT&E) Research Goals**

- **Refine & Expand** the depth, scope, IT features and operation of PABC testing
  - **Depth** – for security and **Scope** – to cover all basic competency requirements
  - **IT** – to enhance the operational realism of computer based testing
- **Demonstrate** the benefits for Stakeholders, ICAO and Regulators gained from:
  - Current, comprehensive, relevant and secure testing
  - Feedback to tested pilots, trainers, employers, industry and NAAs
  - *Continuing Professional Development (CPD)* – to keep *Certification* current
- **Prove** the business case for having better trained Ab Initio graduates
- **Enable** ICAO and NAAs to assess the benefits they gain from
  - Receiving annual training criteria updates from PABC
  - Using PABC’s tests as a model for upgrading their training & exam standards
  - Pilot mobility when PABC’s tests are accepted as AMCs for their ATP exams

**Estimated Cost of this Research**

- 2-year Preparatory Phase: \$1.5 mil / Yr (USD)                    S/Total: \$ 3.0 mil
- 5-year Operational Phase: \$3.0 mil / Yr                            S/Total: \$15.0 mil
- Grand Total: \$18.0 mil

**Funding for Research**

- Contributions by the 7 Industry Stakeholders benefitted by this endeavor:  
Operators, Trainers, Insurers, Manufacturers, Pilots, Public & Regulators
- Types of donations: Cash & In-kind (reducing planned expenses)

**Funding for Sustained Operations**

- **Revenue** from PABC’s Initial & Renewal testing
- **Revenue** from PABC’s *Continuing Professional Development (CPD)* Program
  - Enhanced if PABC Certification becomes a “preferred” hiring credential
  - Greatly enhanced if NAAs accept PABC tests as an AMC for their exams
- **Grants** from Stakeholders, States & Philanthropic donors for further research

**PABC’s projected revenue following IOT&E vs. our \$3.0 Mil Annual Budget**

Year	2024	2025	2024	2025	2026
Revenue	\$2,250,000	\$2,916,500	\$3,599,500	\$4,499,000	\$5,415,000

**Consider these recent comments from Airline Trainers**

- In 2015, Ryanair found that 50% of their pilot applicants were **unfit to interview**
- Airlines report that 10-20% of their new hire pilots **fail** Initial Type Rating training
- A pilot who fails an airline’s Initial course, can cost the company up to \$50,000 USD

**Conclusion**

**Quality Ab Initio training & testing for aspiring professional pilots  
Shrinks the shortage – Supports operational growth – Enhances Safety**