

CBTA Value and Challenges: The Voice of the Customer



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- Investing in a safer industry – Global Aerospace Safety Initiative
- Why CBTA?
- Our CBTA program and solutions
- The “voice” of the customer: CBTA value and challenges
- Next Steps

Investing in a Safer Industry – Global Aerospace Safety Initiative

- Aligning safety management systems
- Enhanced support for customer aircrews and maintainers
- Using Advanced Analytics
- Evolving to **competency-based training and assessment**
- Strengthening our global safety and regulatory engagement
- Operational Aspects of Design



Why CBTA?

- Boeing is evolving its approach on training customers' pilots and maintainers.
- Pilots and maintainers will learn the essential technical knowledge about how to operate Boeing products safely AND the skills, attitudes and values required to achieve the highest levels of safety.

FLY

- Control flight path
- Do not hurry

FOCUS

- Control emotions
- Check fellow crew member(s)
- Observe, identify and confirm

ACT

- Event management
 - PIC designate PF
 - PM Communication and coordination
 - Crew execute final plan

CBTA

9 Pilot competencies and TEM

Develop competent and resilient pilots

Student-centered

Enhanced measurement of standards

Drives relevant licensing system

Comprehensive metrics

Curriculum

Goal

Instructor – vs –
Student Centered

Assessment

Licensing

Metrics/Data

Traditional Training

Mainly three technical training elements

Training and checking against a task list

Instructor-centered

Numeric flight path deviation and tolerances

Requirements based on incidents/accidents

Limited metrics

Learning program

- *Building Resilience*
 - “De-mystify” industry guidance
 - Role of human factors
 - Evolution of CRM and TEM
- Training Needs Analysis (TNA)
 - Malfunction clustering
- Instructor training
 - Instructor skills course (ISC)
 - Facilitation & mentoring
 - Instructor orientation to pilot competencies (IOPC)
 - Competencies & behaviors



Learning environment

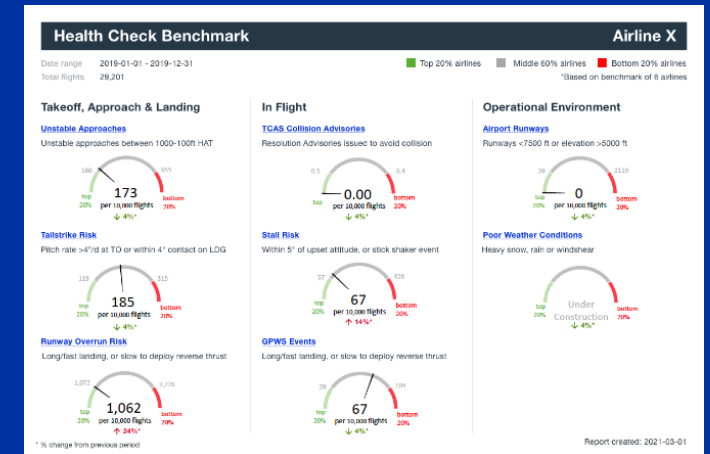
- Engaging and immersive theoretical training
- Systems & procedures
- Deep learning, retention and real-world application
- Learning modality selection



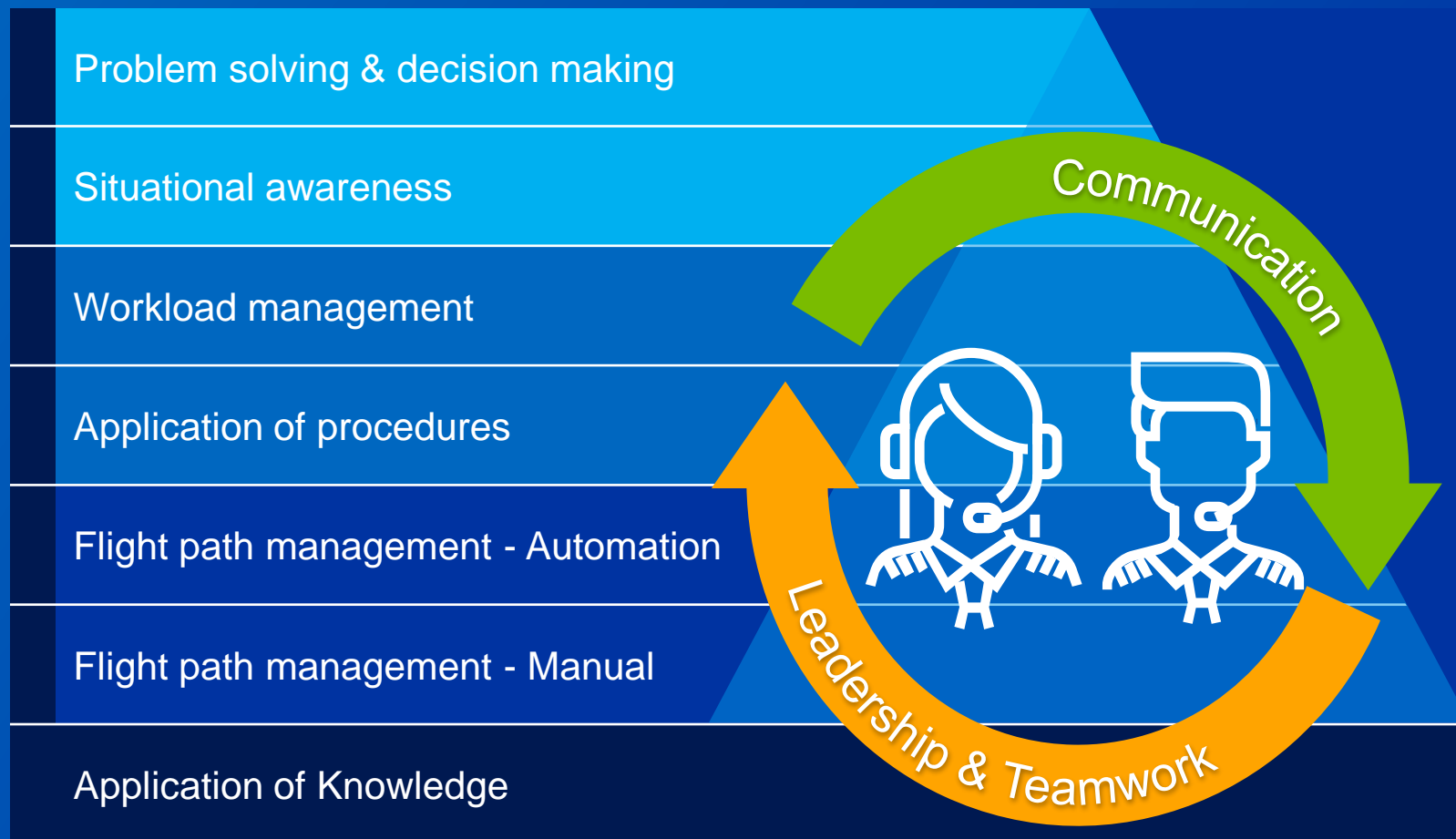
- Student-centric practical training environment
- Importance of brief and debrief
- Optimizing FSTD time

Closed-loop learning system

- Learning Science research
- Training effectiveness studies
- Collecting assessment data
- Synthesize with operational data
- Analyze and interpret the data
- Establishing benchmarks & trends
- Drive standardization
- Elevate performance



Pilot Competency Framework



The Value of the Pilot Competency Framework

- Pyramid focuses on a flow that begins with knowledge foundation
- Establishes a common language
- Provides a “guide” for observations – enabling root cause analysis
- Competencies serve as countermeasures to threats & errors

CBTA Learner Solutions:

Digital tools enhancing knowledge, application of procedures, problem solving, decision making and other competencies.



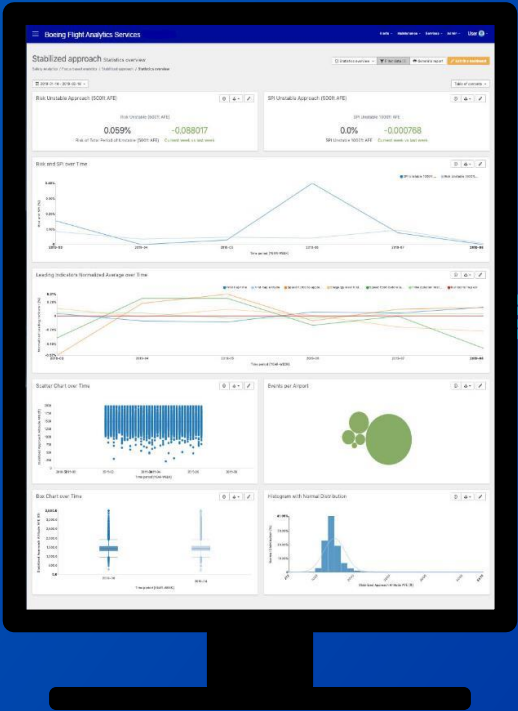
Maintenance Synthetic Trainer



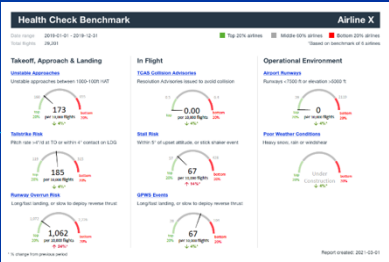
Virtual Procedures Trainer

Informing Training through Safety Data Analytics (SDA)

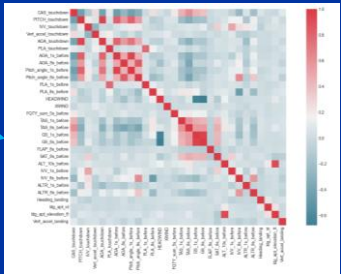
Quick
Access
Recorder
Data



Tailored Recurrent
Training Programs



Safety Performance
Benchmarks

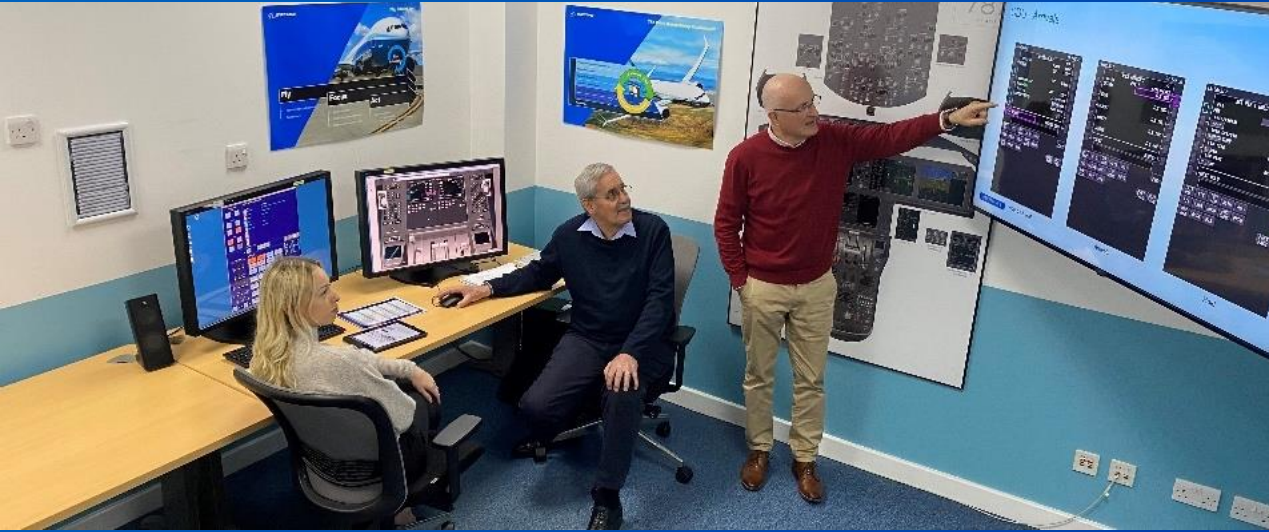


Correlation Analytics



Monitoring and Training
Effectiveness Assessment

CBTA Courses



- Instructor training
 - Initial
 - Recurrent
- Type Rating
- Differences Training

- Specialty Course Training
 - Upset Prevention and Recovery Training (UPRT)
- Recurrent Training
- Jet Bridge
- Command Upgrade

Customer Centric Journey

Small Group Tryouts (SGTO)

- Instructor training (IOPC)
- 737NG and MAX Type Rating
- 737NG/MAX Recurrent training
- 787 Type Rating
- 6 customers engaged throughout the process – 4 customers planned in 2023

Heads of Training (HoT) Engagements

- Nine HoT engagements at Istanbul, London-Gatwick, Singapore, and Miami campuses
- 49 customers (over 150 pilots) and 17 regulators
- Program and learner solutions overview
- Instructor training
- 737NG/MAX Recurrent program + UPRT Training

Collaboration with GOL Airlines

- Initial SGTO customer for 737MAX Type Rating
- Instructor training (December 2021, June 2022)
- 737NG/MAX Recurrent program evolution
- Coordination with ANAC on CBTA program
- Collaboration on Safety Data Analytics (SDA)

For Credit Training

- 737MAX Type Rating (Miami Campus)
 - 30+ pilots trained
 - Type Rating preparation guide

The “voice” of the customer: CBTA value and challenges

- Where do I start?
- How do I engage and work with my regulator?
- How do I engage and work with my pilot's union?
- Grading!
- How do I train and standardize my instructors?
- What if instructors don't “buy in” to the concept?
- How do I balance this change with other challenges?
- How do I manage all the data?
- How will I know it's having an impact on safety?



Next Steps for CBTA

- CBTA recurrent training evolution
- Instructor recurrent training
- Early Career Training
- Maintenance training
- Aircraft Manufacturers Flight Training Association (AMFTA) Coordination



