



Competency-Based Training Solutions

The time is now!

**ICAO NGAP
March 2010**



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Topics

- ❑ **Where are we today?**
- ❑ **One possible solution.**
- ❑ **Building a solution.**
- ❑ **Ongoing initiatives.**
- ❑ **Additional initiatives.**

A few comments about.....

Experience— *Experience is that marvelous thing that enables you to recognize a mistake when you make it again.* Franklin P Jones

Judgment— *Good judgment comes from experience, and experience comes from bad judgment.* Will Rogers

After more than 100 years of aviation we are still debating the question:

Does Total Flight Time Translate into Experience and Judgment ?

Is it quantity of maneuvers that define ability?

Some recent comparatives have shown well designed programs have produced pilots with one-third the amount of flight time of pilots obtaining the ATP license but indeed have 3 to 4 times the amount of “hands on” actual maneuvers experience.

So if it is not total hours or number of maneuvers that measure the ability of the pilot, then what is the answer and how do we define it?

Our current situation

Today we fly safe airplanes that are well designed and substantially increases crew situational awareness and reduces crew workload.

There have been important improvements and initiatives:

- Improvements to Training Tools & Products (Technology)
- Advanced Qualification Programs (AQP) Training
- Maturing Threat and Error Management (TEM) Programs
- ITQI (IATA Training Qualification Initiative)

We are part of an industry that has established an expectation of safety in the traveling public.

But some recent data shows:

“The major-accident rates for commercial jets since 2000 and the five year running average both have virtually leveled off.”

“The total fatalities for major accidents in all three industry segments was 745 in 2009, up from 688 in 2008....., but lower than 903 in 2006.”

Quoted from the AeroSafety World magazine

December 2009-January 2010 Issue

General Responses

The general response thus far has been to increase:

- The prescriptive hourly requirements
- The required maneuvers
- The testing processes necessary for qualification.

And yet, many believe that adding more prescriptive requirements does little to confirm that a trainee has obtained the knowledge and mastered the skills required for the next generation professional.

General Responses

But in our view, training methods and supporting evaluation criteria have not kept pace.

We are still challenged to advance our training and evaluation methods throughout the international aviation community.

Competency-Based Training

One possible solution is competency-based training and assessment.

Competency-based training is a means of training that places emphasis on achieving benchmarked standards of performance; more precisely, training that focuses on what a person will actually be required to do in the workplace after completing a program of training.

Most modern military training is competency-based, but the application to civil flight training is relatively new.

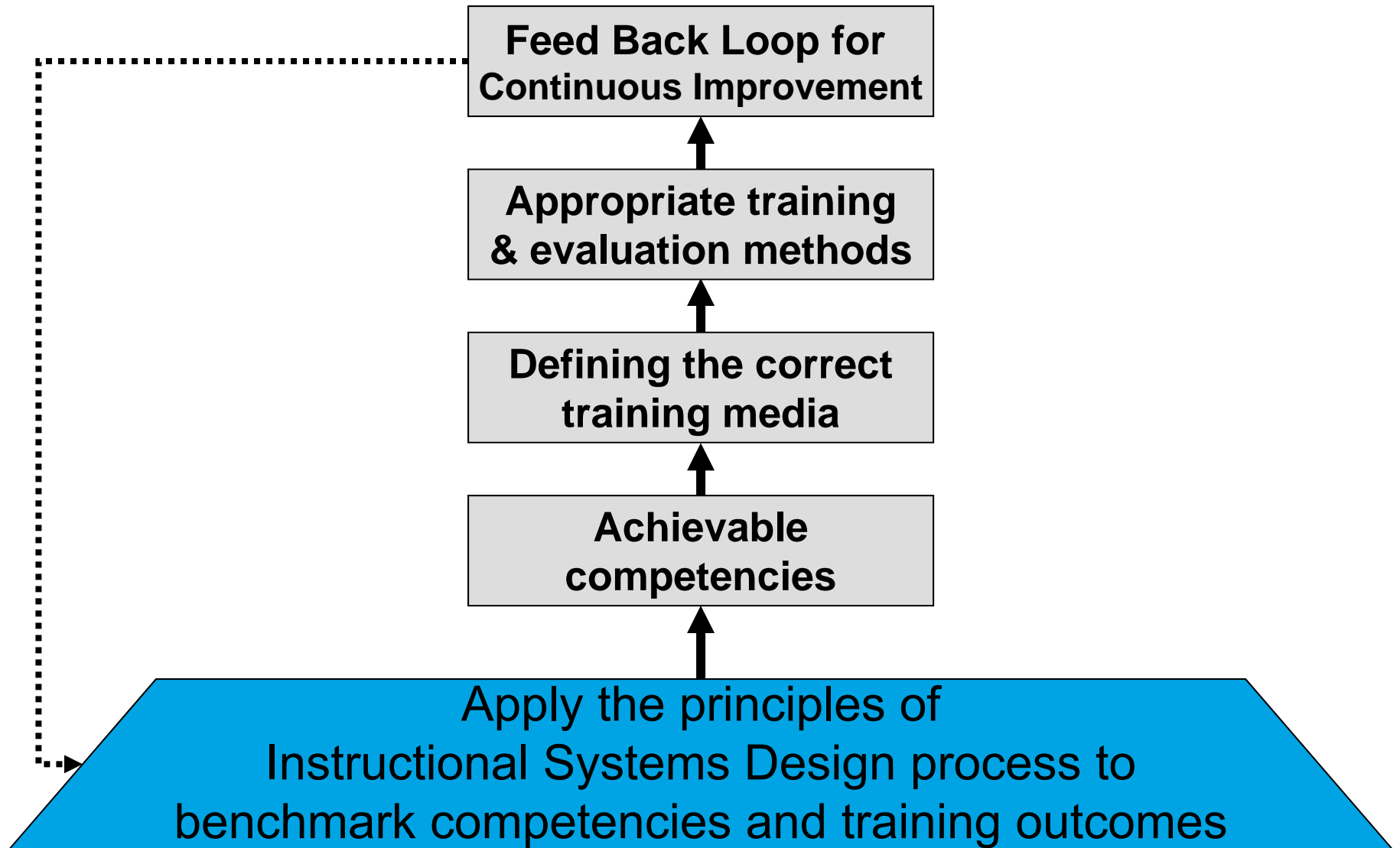
How do we start?

**Have the luxury of
designing from a blank
page!**

And

**A regulatory environment
that allows you that
flexibility.**

How do we build?



How do we execute?



New Technology
Transport Aircraft



Full Flight Simulators



FTDs/ CPTs



Desktop Trainers
& CBT



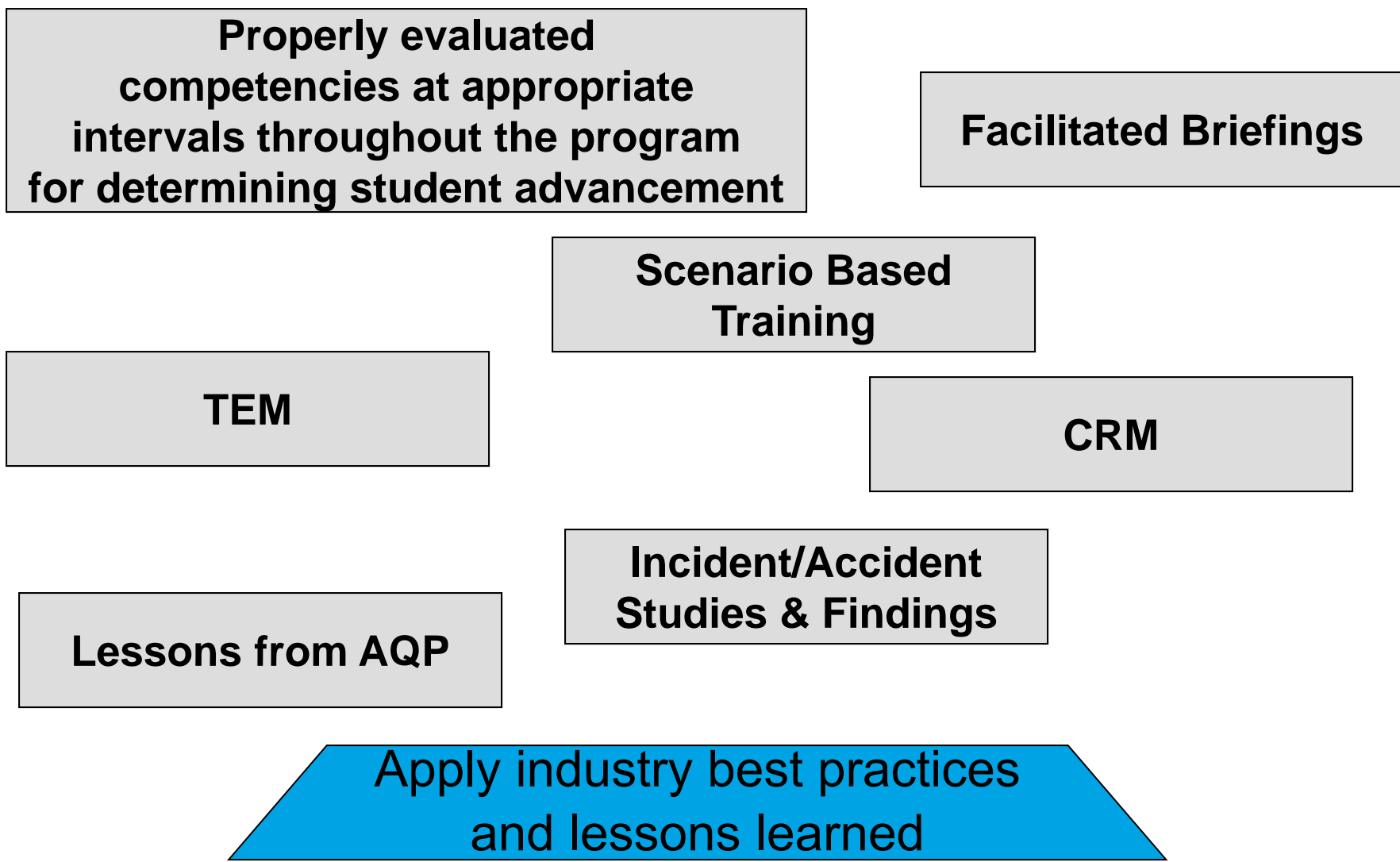
TAA Aircraft



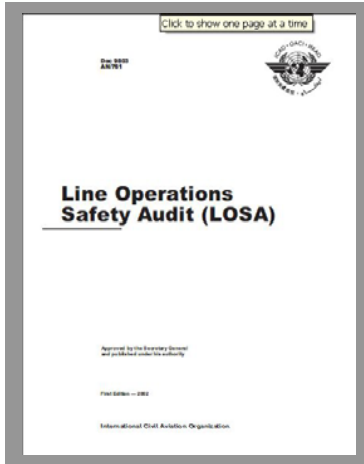
Integrated Procedures
Trainers

Use of advanced technology

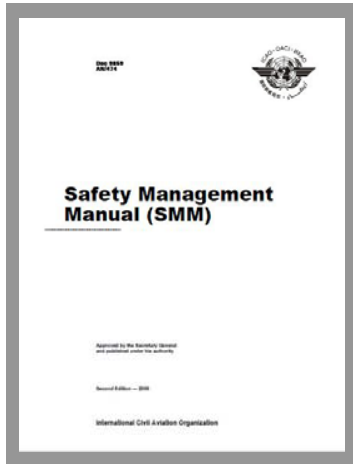
How do we execute?



How do we ensure?



Voluntary Safety Reporting Systems



Flight Data Monitoring & Analysis Tools

Effective Safety & SMS Systems



How do we ensure?

And with collation tools that combine and allow analysis of all the data streams, with follow-up mechanisms to improve the safety of the system and its participants !

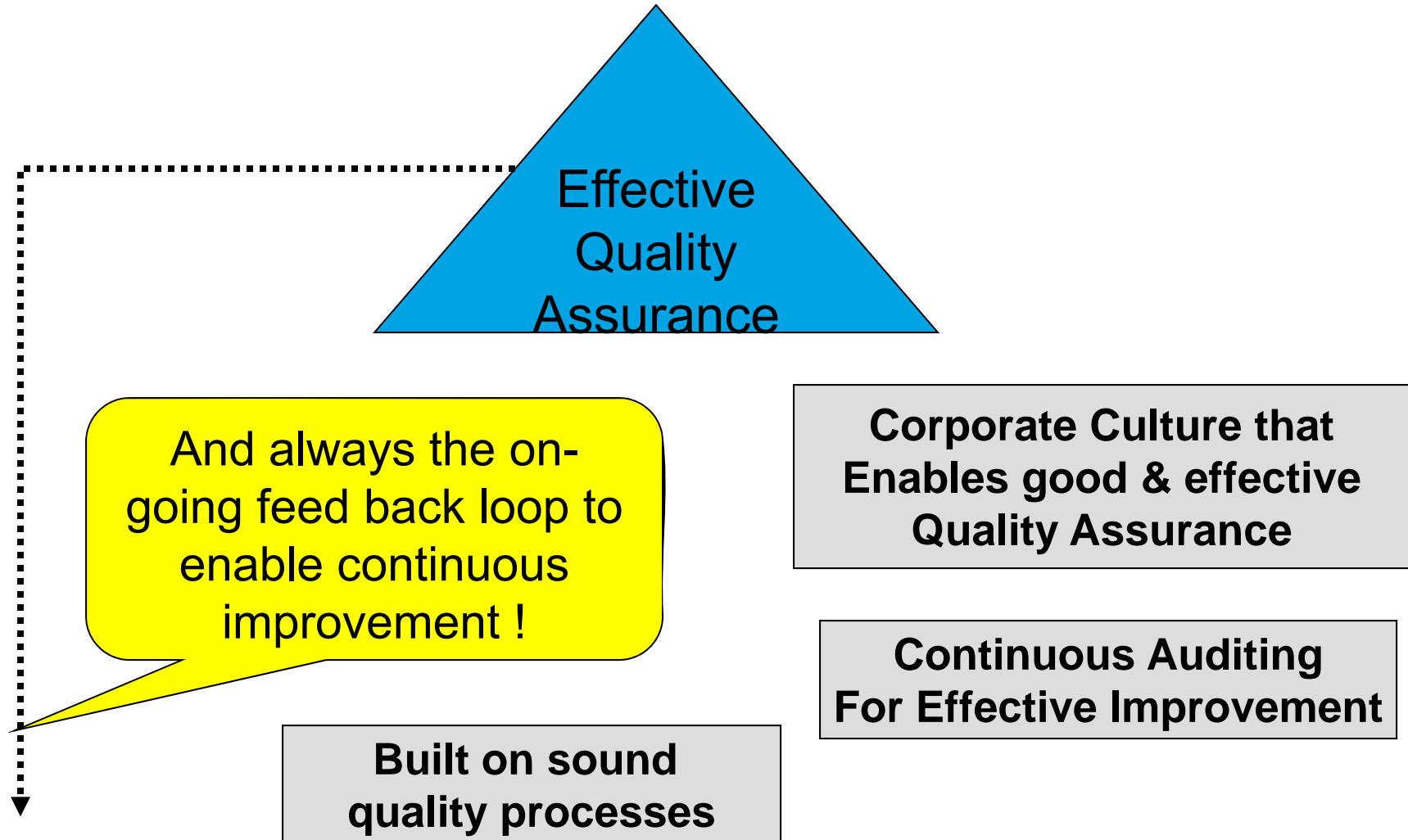


Monitoring
is Tools



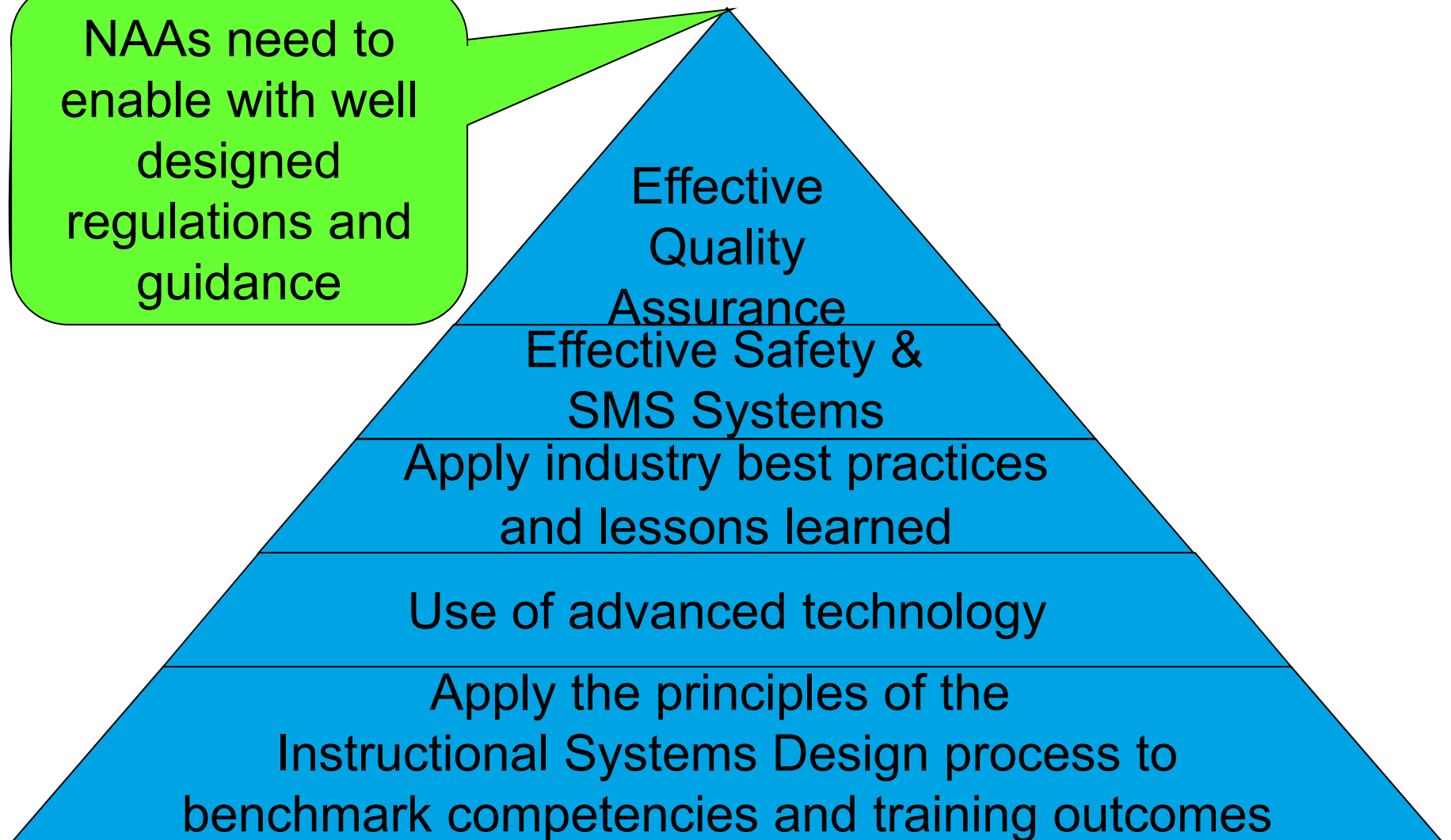
Effective Safety & SMS Systems

How do we continuously improve?



A well designed competency-based program

NAAAs need to enable with well designed regulations and guidance



The Ingredients for Success

- ❑ Candidates properly selected through Comprehensive Aircrew Selection Process.
- ❑ Integrated Aviation English Language (AEL) Training to meet ICAO standards.
- ❑ Instructors with the right instructional competencies and a true understanding of competency-based training & evaluation.
- ❑ New technology, efficient and cost effective training tools to meet the objectives of the program

The Ingredients for Success

- ❑ Integrated CRM/TEM, Leadership and Decision Making training throughout the program.
- ❑ Effective competency-based evaluation, data collection & analysis for continuous improvement.
- ❑ Effective Program Oversight via:
 - ▶ A Quality Assurance System
 - ▶ The Organization's Management Systems
 - ▶ The National Aviation Authority

A quality, safe and efficient *Ab Initio* competency-based training program designed for success!

Competency-Based Training Solutions

CAE has just launched such a program under the new Canadian CARs for ATO and MPL certification, with Air Asia as the sponsoring airline and the Department of Civil Aviation of Malaysia.

We are currently working with other NAAs and sponsoring airlines for additional MPL program implementation in many places around the world.

BENEFITS TO THE AIRLINE & AIRLINE INDUSTRY

▣ *BENEFITS TO THE SPONSORING AIRLINE*

- ▶ Airlines reduce time and overall cost of new-hire training.
- ▶ The MPL pilot delivered to the airline ready for IOE (Initial Operating Experience), trained to the airline's SOPs (Standard Operating Procedures).
- ▶ The CAE MPL program will produce a more consistent level of new-hire pilot, which will help the airline further standardize its pilot force.

▣ *BENEFITS TO THE AIRLINE INDUSTRY*

- ▶ MPL is a direct response to calls by the ICAO and other industry organizations for significant improvement in flight training for airlines.
- ▶ MPL will provide an efficient, streamlined, accelerated alternative for meeting some of the demand for qualified pilots as industry growth resumes and the forecasted pilot shortage becomes reality.

Competency-Based Training Solutions

The time for enabling Competency-Based Training Solutions is now!

And competency-based training programs should be an option from ongoing training operations;

We encourage extending competency-based training programs for rotorcraft pilots, aviation technicians and many other categories of aviation professionals.

CAE Initiatives

CAE's goal is improved training fidelity that fully utilizes advanced training methods and technologies while providing our clients with safe, efficient and timely solutions.

■ Airline/Customer Coordination

- ▶ Training expectations/special needs.
- ▶ Traditional / AQP / MPL / Other?
- ▶ Application selection and pilot placement.
- ▶ Coordination of extended data collection & analysis requirements.
- ▶ Coordination with the client's NAA.

CAE Initiatives

National Authority & Global Organization Coordination

- ▣ Working with NAAs and global organizations on topics such as:
 - ▶ Harmonization regulatory and training guidelines
 - ▶ Training technology at every level,
 - ▶ ATO Certification Requirements
 - ▶ Quality Systems and SMS requirements
 - ▶ MPL (Multi-Crew Pilot License)
 - ▶ International Working Groups (AIWG & HIWG)
 - ▶ ITQI (IATA Training Qualification Initiative)
 - ▶ ICATEE (International Committee for Aviation Training in Extended Envelopes)
 - ▶ and many other initiatives

Additional initiatives

We encourage the formation of a global Aviation Training Organization from which ICAO could seek cooperation and counsel on training of aviation professionals.

Examples:

- ▶ **IATA—the global voice for airlines**
- ▶ **IFALPA—the global voice for pilots**

Thank You

