IATA Training and Qualification Initiative (ITQI) – Progress Report

Tom Fodor

Assistant Director, Engineering & Maintenance

ICAO NGAP Symposium 1-4 March 2010, Montreal

Contents

- Background
- ITQI for Maintenance
- Competency Framework
- Roles of Stakeholders
- Training Programme Development
- Benefits
- Next Steps

Background

- Growth of global fleet size, new generation aircraft
  - Shortage of qualified licensed personnel
- Quality and standards
  - Potential risk for a drop in training and quality standards
- Demand and supply
  - Balance the demand and the supply of licensed personnel on a regional as well as on a global level
- Safety
  - No compromise to safety, safety is paramount and remains priority number one

IATA Board of Governors Objective

- Review of airline industry training needs for licensed personnel (pilots, mechanics / engineers)
- Develop recommendations for meeting these needs with no compromise to safety and quality

- Economic slowdown in 2008-09
  - Objective remains valid due to need for global, efficient training standard addressing future requirements without compromising safety

Review of National Standards

	Country A	Country B	Country C	Country D	Country E
Basic Training / Min. Req.	Yes	Yes Different	Yes Different	Yes Different	Yes Similar to EU
Aircraft Type Specific	Yes	No	Yes	Yes Different	Yes
System / Airframe Specific	Yes	No	Yes	Yes Different	Partially

Market Survey (Nov 08 – Jan 09)

- Not projected a significant reduction in deliveries as a result of the economic crisis
- Recruitment and potential shortages show considerable differences by Regions
- Reasons that individuals chose to become pilots, or chose to become mechanics/engineers
- All geographic regions are not fully satisfied with the framework of the regulations that exist for training
- Harmonized regulations would be beneficial

http://www.iata.org/whatwedo/aircraft_operations/itqi.htm

ITQI for Maintenance

- Centered on competency based training and assessment
- No current ICAO guidance material on how competency based training can be applied to maintenance
- Requires the definition of competencies
- Approach has been validated through meetings with OEMs, airlines maintenance and training organizations
- IATA has worked closely with ICAO to develop this material
- ANC was briefed in January 2010 on the progress

Competency Based Training (CBT)

- Guidance on the implementation of a competency-based approach to training and assessment of maintenance personnel
- Depends on:
  - Type and scope of work
  - Type and structure of the maintenance organization
  - Environment
- The frameworks list the competencies for three domains:
  - Aircraft systems maintenance
  - Aircraft structures maintenance
  - Aircraft components maintenance

Aircraft Maintenance Competency Units - Competency Elements & Performance Criteria

- The competency frameworks were developed with the following assumptions:
  - Targeted to personnel working within the scope of aircraft and engine maintenance manuals, structural repair manuals, component maintenance manuals and standard practices manuals;
  - Applicable in aircraft line and base maintenance and workshop maintenance; and
  - Applies to large aeroplanes (>5700 kg) powered by turbine engines and their components

Aircraft Maintenance Competency Units -
Competency Elements & Performance Criteria

2. Perform Maintenance Practices	
2.0 Recognize and manage potential threats and errors	
2.1 Identify the need for maintenance practice	
2.1.1 Identify whether any step in a maintenance task procedure requires either: • Generic Standard Practices Manual (SPM)application • Type-rated standard maintenance practice application – as per MM chapters 20, 60 or 70 • Maintenance practice application – as per Page Block 200 in each ATA chapter of the MM • Special maintenance practice application – as per Special Maintenance Procedure Manual (SMPM) (e.g. Non-destructive testing (NDT), welding etc)	MM

Competency Unit

Competency Element

Performance Criteria

Reference

Competency Based Training (CBT)

- License without type-rating endorsement
  - Fundamental training on competencies associated with Standard Practices Manuals
  - Provides aircraft maintenance license without type-rating endorsement
- License with type-rating endorsement
  - Addresses features that are unique to the aircraft or component to be worked on
  - AMOs are responsible for the contents of type-rated training programmes
  - Authority should approve the training programme
  - AMTOs, AMOs responsible for examinations and assessments

Licensing Authorities

- Evaluate and approve competency based training programmes
- Exercise oversight over designated personnel of AMOs and approved training programmes
- Specify requirements for competency based assessments
- Ensure qualifications of their inspectors
- Modular licensing system should be established

Approved Maintenance Organizations

- Obtain and maintain approval for authorization system from the licensing authority
- Responsible for the conduct of competency based training programmes leading to type-rating authorization
- Training to match the scope of work it performs and the specialization required by its personnel
- Candidates for licenses without type-rating may work in AMO under supervision of licensed/authorized personnel

Maintenance Training Organizations

- Comply with requirements of licensing authority
- Obtain and maintain approval directly from the licensing authority
- Develop and deliver competency based training programmes to fulfil the needs of AMOs
- Carry out competency based exams and assessment through personnel designated either by licensing authority or AMOs

Training Programme Development

- Use of ICAO Instructional Systems Design (ISD)
- Integrate instruction in underpinning knowledge and practical training segments
- Include continuous evaluation of the effectiveness of the training programme and performance of individual students
- Corrective action should be taken based on the evaluation results

Benefits of CBT

- Increased safety due to competency standards harmonizing task performance
- Efficiency benefits through modular approach tailored to specific sets of competencies required
- Takes into account already acquired competencies
- Training needs can address competency gaps
- Introduction of new technology facilitated by the modular approach
- Accommodates new, more effective and efficient training methodologies (simulation, e-learning)

Next Steps

- ICAO Doc 9868 – PANS-Training Maintenance
  - ICAO Preliminary review during ANC Session of 12 April to 18 June 2010
  - ICAO final review during ANC Session of 18 October to 17 December 2010
  - ICAO applicability of 1st Amendment PANS-TRG in December 2010

- IATA Guidance Material - 2010
  - Design and development of competency based training programme for maintenance personnel
  - Selection criteria for maintenance personnel

Thank you

itqi@iata.org

to represent, lead and serve the airline industry