Human Resource Development for The Canadian Aviation and Aerospace Industry

ICAO Symposium
Montreal, Quebec
March 2010

Robert Donald
Executive Director
• What is a Sector Council?

• Canadian Aviation & Aerospace Council
  – Training/Skills Development
    • Curricula, Accreditation, Certification, Occupational Standards etc.
    – Demographics/critical skills shortage

• Funding
CAMC Accreditation

• Ensures Training Organizations have an integrated and standardized approach to training, which is documented and demonstrated during the audit process.

• Every aspect of the training program is examined:
  > Program Content
  > Resources
  > Facilities
  > Administration
  > Quality System
  > Tools & Equipment
  > Record Keeping
  > Advisory Committee
  > Faculty Professional Development
  > Management and Organizational Structure

Industry values and recognizes accredited training organizations.
CAMC’s Accredited Training Institutes
Post-Secondary – 43 Programs – 23 Institutions
CAMC’s Secondary School Programs
24 High Schools – 8 Provinces, 2 Territories
ACLC – 458 Squadrons / 25,000 Cadets
CAMC Certification of Individuals

• Provides National recognition of overall competencies and capabilities
• Establishes minimum professional occupational standard
• Provides credibility, credential and proof of qualifications
• Enables portability of qualifications
• Facilitates the employer’s recruitment process
• Increases employer and public confidence
• Promotes professionalism within the industry
Using technical committees of experts and practitioners from all sectors of the industry, CAMC has developed 26 national occupational standards:

- Aircraft Gas Turbine Engine Repair and Overhaul Technician
- Aviation Painter
- Aircraft Interior Technician
- Aviation Special Processes Technician
- Aircraft Maintenance Technician
- Aviation Welding Technician
- Aircraft Propeller Systems Technician
- Avionics Maintenance Technician
- Aircraft Reciprocating Engine Technician
- Aircraft Simulator Technician
- Aerospace Materials Specialist
- Aircraft Structures Technician
- Electrical/Electronics/Instrument Component Technician
- Aviation Machinist
- Aviation Maintenance Inspector
- Aviation Mechanical Component Technician
- Aviation Non Destructive Inspection Technician
- Aircraft Refueller
- Aviation Ground Services Attendant
- Aircraft Mechanical Assembler
- Aviation Maintenance Manager
- Composite Fabricator
- Aircraft Structures Assembler
- Electrical/Electronic Assembler
- Quality Assurance Manager
- Quality Systems Auditor

Standards in RED are recognized by Transport Canada Ref: Airworthiness Notice C009 for personnel working in an Approved Maintenance Organization (AMO).

Transport Canada recognizes CAMC logbooks and curricula for the Standards in GREEN.
2007 > 2017 Canadian Labour Characteristics
(# of employed individual over 25 years old)

40% of employees will be over 55, by 2017.
Our industry is experiencing an unprecedented skilled-worker shortage. Over 12,000 people per year, will need to be hired in the next 12 years, to supply the required level in 2020.
International Data: IATA – ITQI  
(Report 2009 – Spring Edition)

### Pilot and Training demand

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2026</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total new pilots – (additional aircraft and retirement) needing ab-initio training</td>
<td>207,600</td>
<td>352,900</td>
</tr>
<tr>
<td>Total new pilots needing transition training on replacement aircraft</td>
<td>59,930</td>
<td>122,700</td>
</tr>
</tbody>
</table>

### Maintenance demand

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2026</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total mechanics needed for additional aircraft</td>
<td>247,100</td>
<td>420,000</td>
</tr>
<tr>
<td>Total mechanics including retirement</td>
<td>405,500</td>
<td>739,000</td>
</tr>
</tbody>
</table>
CAMC’s Mission Statement

To develop, promote and administer a comprehensive and effective human resources strategy for the Canadian aviation and aerospace industry.
Active Projects and Update

- Sector Study of Commercial Pilots
- Aviation and Aerospace Technician Short Course(s) Study
- Safety Management Systems
- Sector Study of Airport Occupations
- Analysis of College Trends and Statistics ("Supply Side" Data)
- Career Focus IV (Wage subsidy program for recent graduates)
- Skilled Workforce for the Future (Youth)

Recently Approved Projects

- Commercial Pilot-Occupational Standards
- AMT Curriculum Update
- Transition and Student Workforce Issues

Pending Projects

- Composite Fabricator Curriculum Development
- Mature Workforce Retention Strategy
CAMC’s Current Proposals

• New Occupational Standards
  – Remote Operations Aviation Worker
  – Transportation of Dangerous Goods Trainer

• Human Resources Action Plan for Employers and Training Organizations

• 3D Learning Tools for colleges

• Short Courses
  – Maintenance Manager
  – Document Navigation/Air Regulations Introduction and Refresher
  – Aviation English
  – Audit Management
  – Aviation Avionics

• Skilled Workforce for the Future
CAMC Quality Assurance Standards

CAMC has developed two new occupational standards which will help companies implement Quality Assurance throughout their organization.

– Quality Systems Auditor
– Quality Assurance Manager

SMS compliance is a sub set of overall quality assurance
CAMC in partnership with National and Regional Associations have developed customized SMS materials for different segments of the industry:

- QSA OS Implementation Workshops
- SMS Orientation for Students enrolled on the Aviation Maintenance Orientation Program
- Best practices survey of flight schools to establish a online library
- “Safety Starts at Day One”- SMS awareness program for entry level employees
- CAMC Online improvements to host various training programs
An enhanced certification process has been developed to help industry implement the new “Quality Systems Auditor” occupational standard.

A series of test workshops are being held across Canada with industry partners.
Corporate Engagement

• Input on the adequacy of current College curriculum/training
  – Identify current deficiencies
  – Identify gaps
  – Identify need for new curriculum

• Labour market data
  – In order to provide you with supply – demand data and identify projected shortages and surplus

• Identify future trends in a timely manner

• Optimal value for funding dollars
Thank You