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Original Equipment Manufacturers and Training

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Head of ATR Training
1. **Introduction**

2. Airlines « Heritage »

3. ATR Training Center response
   1. Pilot training programs
   2. Instructors
   3. Training tools

4. Diffusion of ATR training standard

5. Conclusion
WHO IS ATR

- ATR : Avion de Transport Regional created in 1982
- ATR is fewer than 1000 persons
- ATR: 871 aircrafts in the world
- ATR is approaching the thousandth order
- ATR delivered 59 aircrafts in 2008 and 58 in 2009
ATC: ATR TRAINING CENTER

- ATC is the ATR Training Center

- ATC: 3 Training Centers in the World: Toulouse, Bangkok and Kuala Lumpur

- ATC is fewer than 80 persons including:
  - 10 TRI/TRE
  - 12 SFI
  - 8 AMI
  - 3GI

All Training Programs and Training Tools are approved by the DGAC member of EASA
Who are typical ATR operators?

- **Short and mid-range airlines** (140 operators)

  - **Location**: worldwide (80 countries) with a strong presence in emerging Markets
  
  - **Fleet**:
    - Few A/Cs (5-10)
    - Less than 100 pilots

  - **Training program**: dependent on international minima and exemptions obtained from local authorities to accommodate for specific challenges (distance, budget...)


What challenges are ATR operators facing today?

1. Booming demand for pilots over the past years
   - Scarcity of experienced pilots leading to a high turnover
   - Lack of entry-level skills and pilot experience

2. Heavy costs of training
   - Unfavourable economics of classic (FFS) simulation
   - Reliance on third-party training
   - Remoteness of the training centres

3. Cost pressure
   - Fierce competition
   - Security costs
   - Environmental Constraints (Carbon tax)
   - Rising Fuel Costs

4. Technical Challenges
   - Increasing complexity in operating aircraft systems
   - Increasing congestion of air traffic
ATR Pilot Training Paradigm

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Regional airlines see the average level of their crews decreasing.

- All Airlines face a shortage of experienced pilots
- As a result, more and more pilots leave small/regional Airlines for bigger airlines after 300 to 1000 flight hours ("pilot poaching")
- The small airlines are under pressure to recruit new pilots with less experience
- Due to the shortage of pilots, those airlines have to lower their entry-level requirements (lower selection level, in particular when operating in remote areas)
- The average qualification and experience level of pilots is decreasing

Source: Interviews, Roland Berger analysis
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Necessity to reinforce value of training

**Training Programs:**

- 4 weeks short course
- 5 weeks Standard course
- 6 weeks for first Type Rating including Multi Crew Course
- Dedicated type rating requested by customers (6W + 3 weeks pre-entry course program in India)
- T/OFFs and Landings on the airplane, for each pilot regardless of the experience
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All instructors must have JAR/FCL requirements before entry

FOR GI
- Theoretical ATPL+ valid CPL/IR/ME+ valid instructor qualification
- Full ATR Type rating + 1 theoretical type rating as observer + 1 in supervision

FOR SFI
- Full ATR 4 weeks Type Rating including ATR philosophy
- Difference Courses
- Full ATR SFI course + 1 supervision
- 2 days of HF and CRM course
- 1 supervision as SFI by a HF and CRM specialist

FOR TRI
On turboprop JAR 25 aircraft 1000h mini including mini 500h as Captain
Idem SFI +
3h of instructor training flight:
- Training technics in flight especially for Touch and Go
- Training from the right and left seat
# Instructors Recurrent Training

<table>
<thead>
<tr>
<th>GROUND SCHOOL INSTRUCTORS</th>
<th>JAR-FCL1 Requirements</th>
<th>ATR Requirements = JAR FCL1 + …</th>
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</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
<td>- Theoretical check</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- 2 simulator sessions</td>
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<tr>
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<td></td>
<td>- Safety Course</td>
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- 3 hours simulator session as instructor.
- 4 hours of simulator training.
- 4 hours of simulator check.
- 3 hours simulator session as instructor.
- 4 hours of instructor supervision with CRM and HF instructor (TRI).
- 3 hours as instructor in a simulator or 1 hour on aircraft.
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A Complete suite of training tools adapted to each training phase

- FFT
- VPT
- CBT
- WALK-AROUND
- DEBRIEFING
- FLIGHT PHASE
- GROUND PHASE
The FFT-X®: A new concept of Flight Synthetic Training Device

Level D FFS

FFT-X

A/C instruments

Dynamic Seat + Vibrations + Systems Schematics

FNPT II MCC

FTD

Level 2
Do we need an FFS for any pilot task to be trained?

OR

FFT-X

OR

FFS Level D
Why an ATR FFT-X®?

~160 M$

ATR 42/72

~16 M$

FFS

FFS Level D

~ 4 M$

B787

A/C

A/C Level D
On-going studies in partnership with USDOT Research and Innovative Technology Administration Volpe National Transportation Systems Center

Type Ratings using FFT X instead of FFS under French DGAC approval

- **Ground Phase**: FFT
- **FFT X**: FFS sessions replaced by same number of FFT X sessions
- **FFS**: FFS Skill Test
- **ATR Type Rating program with Data recording**
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ATR objectives to develop a worldwide training standard are to:

• Provide more affordable training to its customers, closer to their home base: Toulouse, Bangkok, Kuala Lumpur and we hope in 2010 Toronto, Bangalore, Paris and Johannesburg

• Guarantee the best Quality / Costs ratio

• Guarantee an ATR control and standardization on programs, training tools and instructors
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ATR TRAINING PARADIGM PROMOTES:

- **A HIGH LEVEL OF TECHNICAL KNOWLEDGE** which is necessary with the increasing complexity of the cockpits

- **AN INNOVATIVE AND EFFICIENT USE OF THE AVAILABLE TECHNOLOGY IN TERMS OF TRAINING TOOLS**
  - Walk-around
  - Virtual Procedure Trainer
  - Comprehensive Briefing Station (GNSS, Training Documentation …)
  - Full Flight Trainer as complement to the FFS
  - Debriefing Station

- **A HIGH LEVEL OF PRACTISE**
  - Highly qualified and standardized instructors
  - All programs with more simulator training than regulatory minimum
  - Base Training
NEXT ATR CHALLENGES

- Develop a difference course for the new ATR 600 using the E learning for the Glass Cockpit familiarization
- Develop a full ATR 600 type rating.
- Rewrite our Training Syllabi using TEM and CBT concepts
THANK YOU FOR YOUR ATTENTION

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