

# An Introduction to CAE and to CAE Safety and Regulatory Affairs

*For SRVSOP*

By Stéphane Clément  
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Lima, 7 Dec 2010



# Introductory Comments on SRVSOP

- ❑ Gracias for inviting me
- ❑ Great people, great initiative, great meeting, great time here!
- ❑ Apologies for my poor Spanish speaking....so I will use English
- ❑ My / CAE's impressions
  - ▶ SRVSOP = a great initiative
  - ▶ Perhaps a unique initiative right now
  - ▶ Huge task
  - ▶ Well intended and highly capable people
  - ▶ Positive results already
  - ▶ Future: I am very optimistic for SRVSOP contribution to the region
- ❑ CAE sharing same value as SRVSOP: safety
- ❑ CAE sharing same strategic intent: international harmonization
- ❑ I will report back to CAE and engage CAE as much as possible in supporting this important initiative for the region
  - ▶ People: on expert panels (Licensing & Operations) mostly for the training aspects, and in such Board meetings as observer (examples: LAR 60, 121, 135, 142, 147)
  - ▶ Financial: hopefully

G L O B A L L E A D E R



Introduction  
to CAE



one step ahead

# CAE: A global leader

Civil

Military



A world leader in providing simulation and modelling technologies and integrated training solutions for commercial and business aviation and defence globally

# CAE Overview

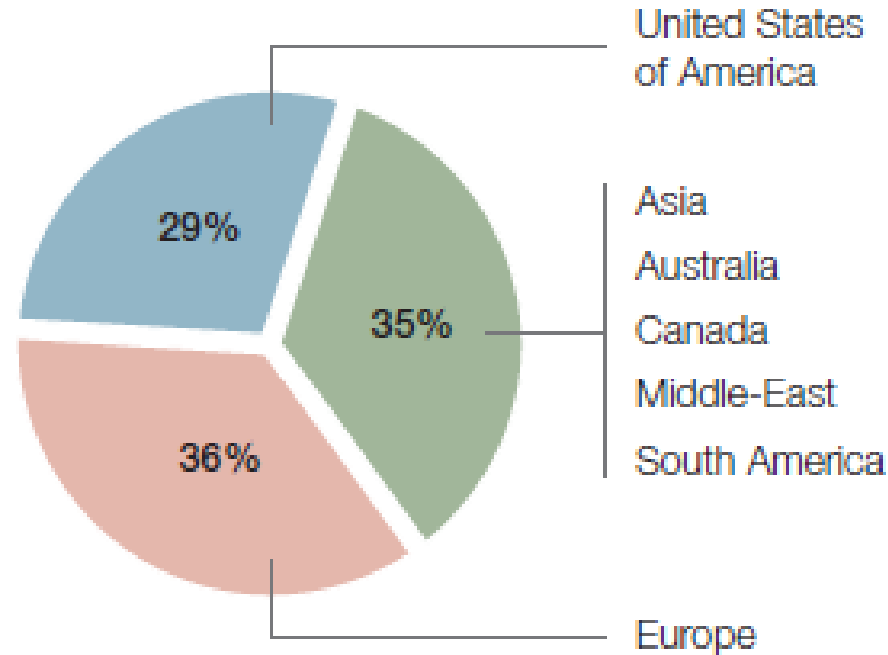
- ❑ Founded in Canada in 1947
- ❑ More than 7,500 employees worldwide
- ❑ Annual revenues of more than \$1.5B
- ❑ Over 75,000 civil and military pilots and maintenance technicians trained annually
- ❑ Largest global installed base comprised of over 1,000 civil and military full-flight simulators and training devices
- ❑ Solutions in all segments of aviation: commercial, business, general, military
- ❑ A global leader in virtual flight for military helicopters, transports and jet trainers
- ❑ Supplier to over 50 national defence forces
- ❑ One of the top Canadian companies in R&D: \$100 M per year

# Global reach

- ❑ 23 countries
- ❑ 100 sites
- ❑ 29 training centres



# Diversified revenue base



**Customers in more than 100 countries**  
**Revenue well-balanced geographically**

# Four segments balanced between markets, products and services

Simulation  
Products  
**Civil**



Training and  
Services  
**Civil**

Simulation  
Products  
**Military**



Training and  
Services  
**Military**

# Well positioned

- ❑ Successful diversification strategy
  - ▶ #1 Commercial training
  - ▶ #1 Full-flight simulator sales
  - ▶ #2 Business Aviation training
  - ▶ #1 Military virtual air training
- ❑ Broadest array of product and service solutions
- ❑ Broadest geographic footprint



# Simulation-based training

- ❑ Advantages of simulation-based training vs. live training
  - ▶ Safer
  - ▶ More economical: representing up to a tenth of the cost of real-world training
  - ▶ More environmentally friendly
  - ▶ Comprehensive and highly immersive (operational experience)
  - ▶ Accessible and portable (interoperable and deployable)
  - ▶ Enables realistic mission planning and rehearsal capability



# One-stop-shop



**CAE's Civil and Military businesses are uniquely positioned to address multiple segments of the industry value chain**



# Civil



# Civil Simulation Products

- ❑ Number one in the world in the sale of civil simulator equipment
  - ▶ More than 1,000 simulators and training devices sold commercially since inception
  - ▶ Customers include more than 130 airlines, aircraft manufacturers and training centres
  - ▶ CAE has simulated almost every modern airliner for both major and regional carriers, and the majority of business jets
  - ▶ Experience in prototype simulators for Airbus, Boeing, Embraer, Bombardier, Dornier, Dassault



# Complete suite for all segments of aviation



CAE Simfinity  
e-Learning



CAE Simfinity  
Integrated Procedures  
Trainers



CAE Simfinity  
Flight Training  
Devices



CAE 3000 Series  
Flight Training Devices



CAE 3000 Series  
Full-Flight Simulators



CAE 5000 Series  
Full-Flight Simulators



CAE 7000 Series  
Full-Flight Simulators

C A E ' S   C O M P R E H E N S I V E   S U I T E   O F   S O L U T I O N S  
T A I L O R E D   T O   Y O U R   T R A I N I N G   R E Q U I R E M E N T S

# Civil Training and Services

- ❑ A global leader in aviation training services
- ❑ 24 aviation training centres worldwide for pilots and technicians
  - ▶ Equipped with more than 140 full-flight simulators
  - ▶ Addressing every segment of aviation
  - ▶ Serving more than 3,500 airlines, aircraft operators and OEMs
- ❑ CAE Global Academy: world's largest network of ab initio flight schools
  - ▶ 11 locations on five continents and a fleet of more than 240 aircraft
  - ▶ Capacity of training more than 1,800 pilot cadets annually



# Civil Training and Services

## ❑ OEM relationships

- ▶ **Airbus:** Airbus training provider of choice
- ▶ **Embraer:** Joint venture for LJ and VLJ training
- ▶ **Dassault:** Exclusive entitlement training provider for Falcon 7X
- ▶ **Bombardier:** Authorized training provider for Global Express, Global 5000, Challenger 300 and Learjet 40 XR/45 XR
- ▶ **Honeywell:** Technical training alliance

## ❑ Joint ventures/alliances with major airlines

- ▶ Iberia, China Southern, LanChile, Emirates, AirAsia, Air Canada



# Aviation Training & Services: The broadest reach in global training

- ❑ 20 countries with over 140 FFSs
- ❑ All segments of aviation
- ❑ Training solutions innovator for OEMs
- ❑ Alliances with major airlines in key markets



# Leveraging our simulation, modelling and training capabilities into new core markets

- ❑ Fields that have similar challenges
- ❑ Where safety is imperative and there is little margin for error
- ❑ Where task complexity is high
- ❑ Where the cost of training on real equipment is high
- ❑ Up to C\$274 million invested in R&D over seven years



**Healthcare:**  
solutions to improve  
safety and efficiency



**Mining and heavy  
equipment:** mine  
planning and  
training



**Energy:** optimizing  
management,  
production,  
distribution networks



# CAE Safety and Regulatory Affairs

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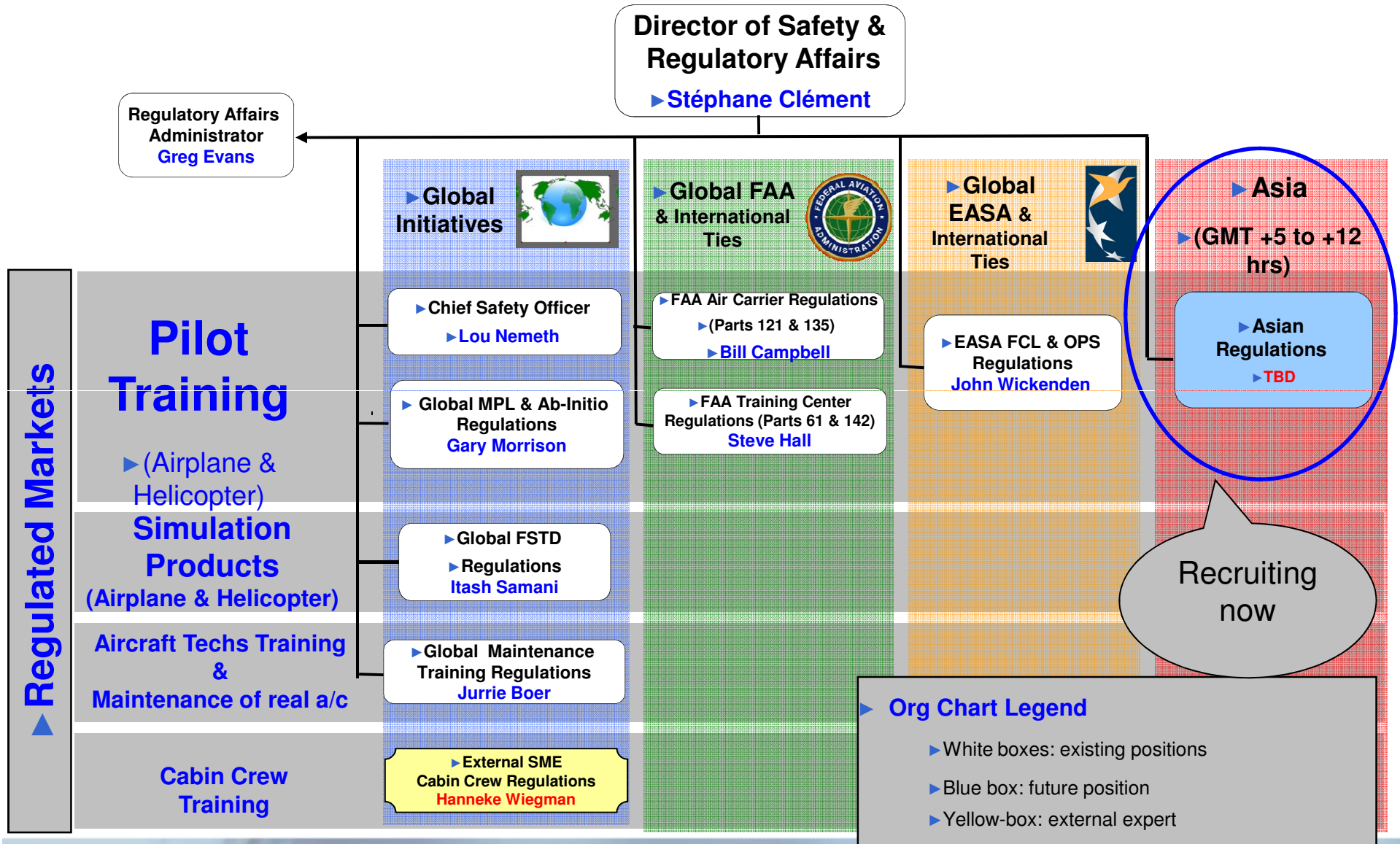


# Mandate of the Group

- ❑ ***CAE Safety and Regulatory Affairs*** provides safety and regulatory leadership worldwide...
  - ▶ ...in CAE,
  - ▶ ...with various stakeholders in the Aviation Industry, and
  - ▶ ...in co-operation with Aviation Authorities
- ❑ For all the regulated domains of aviation relevant to CAE
- ❑ CAE's main point of contact with Aviation Authorities globally, for strategic matters
- ❑ Group created in summer 2009

# Organizational Structure

(Director reports to the Civil Group President, Mr. Jeff Roberts)



# CAE is much involved with ICAO



- ❑ ICAO 9625 doc.: Qualification criteria of airplane and helicopter Flight Simulations Training Devices

## ❑ ICAO PANS TRG

- ▶ Multi-Crew Pilot License (Initial WG)
- ▶ IATA Training and Qualification Initiative (ITQI)

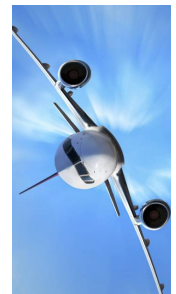
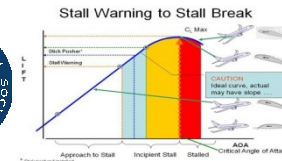


## ❑ CAE's MPL Beta program



## ❑ ICAO NGAP

## ❑ International Committee of Aviation Training near the Edge of the Envelope (ICATEE)



## ❑ ICAO Training contract with CAE, for technical officers

- ▶ Keeping up with civil aviation technology and operational evolutions
- ▶ eLearning
- ▶ Informal Training in CAE simulators



one step ahead

# Other Examples of On-going Activities

- Work with ICAO, FAA, EASA, Indian DGCA, Japanese JCAB, Malaysian DCAM, Transport Canada
  - ▶ Multi-crew Pilot License Regulations
  - ▶ Traditional Pilot Training
  - ▶ Qualification of Simulators (Airplanes & Helicopters)
  - ▶ Maintenance Training Regulations
- Starting now, SRVSOP for latin american countries
- Work with Industry Bodies such as IATA, Flight Safety Foundation, Royal Aeronautical Society, EAMTC
  - ▶ International Working Groups
  - ▶ Various initiatives, task forces, etc.
- Establish optimum regulatory structure for CAE's new training centers, flying schools, etc.

Gracias, Hasta Luego

