

## Framtida flygutbildning



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## Press Release – FAA Issues Final Rule on Pilot Training

November 5, 2013

### **Rule Will Significantly Advance Commercial Pilot Training**

WASHINGTON – As part of its ongoing efforts to enhance safety and put the best qualified and trained pilots in the flight decks of U.S. airplanes, the Department of Transportation’s Federal Aviation Administration (FAA) today issued a final rule that will significantly advance the way commercial air carrier pilots are trained.

In addition, FAA Administrator Michael Huerta is inviting the nation’s commercial aviation safety leaders to Washington, D.C. on November 21, to discuss additional voluntary steps that can be taken to further boost safety during airline operations, including pilot training.

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The final rule requires:

- ground and flight training that enables pilots to prevent and recover from aircraft stalls and upsets.
- These new training standards will impact future simulator standards as well;
- air carriers to use data to track remedial training for pilots with performance deficiencies, such as failing a proficiency check or unsatisfactory performance during flight training;

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The final rule requires (cont):

- training for more effective pilot monitoring;
- enhanced runway safety procedures; and
- expanded crosswind training, including training for wind gusts.

"This pivotal rule will give our nation's pilots the most advanced training available"

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Vilka jobbar med framtidens flygutbildning?

**ICAO PANS-TRG, (Doc 9868)**

**IATA Training and Qualification Initiative (ITQI)**

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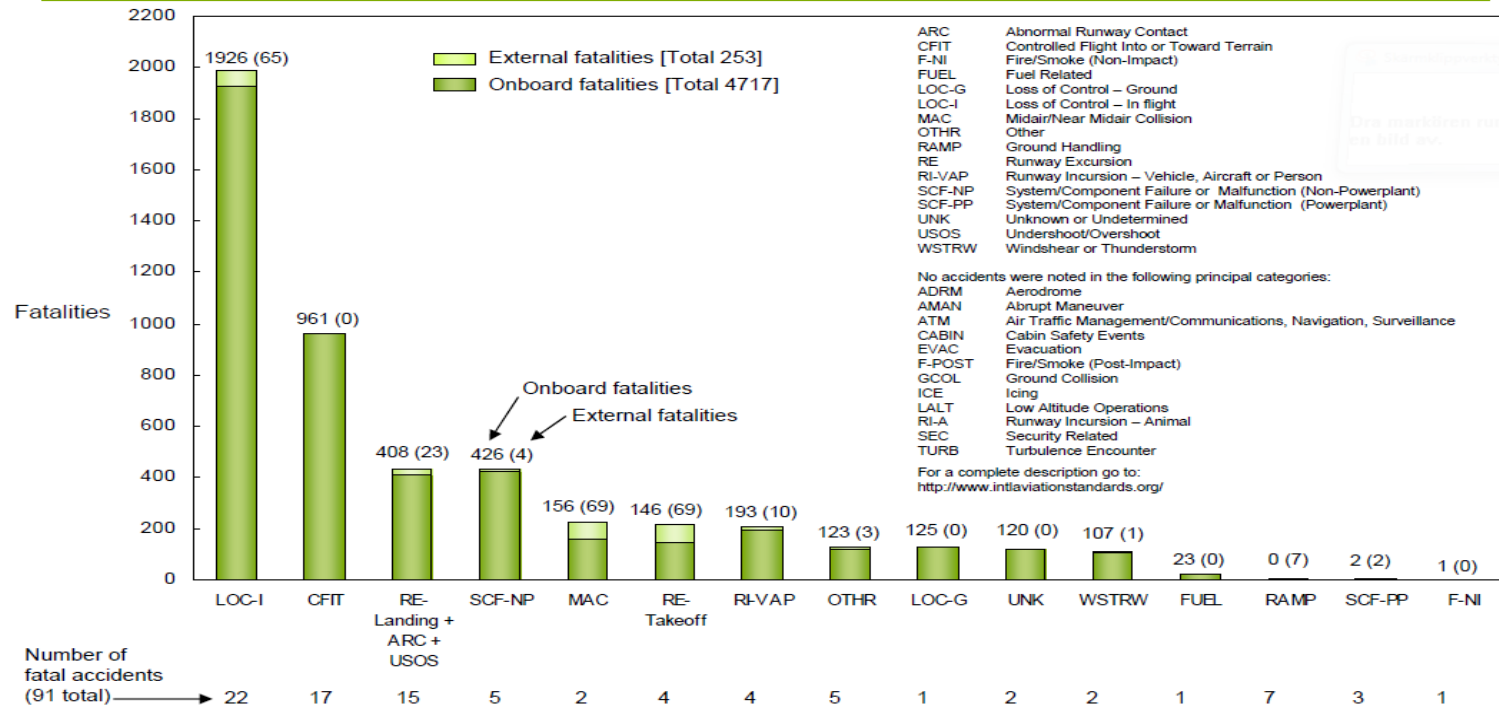
Vilka brister har dagens flygutbildning?

Några nya termer:

- Competency Based Training ? CBT
  - Evidence Based Training? EBT
  - Threat and Error Management? TEM
  - Multi-Crew Pilot License? MPL
- 
- Vilka idéer finns om framtidens flygutbildning?

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## Fatalities by CAST/ICAO Common Taxonomy Team (CICTT) Aviation Occurrence Categories Fatal Accidents – Worldwide Commercial Jet Fleet – 1999 Through 2008



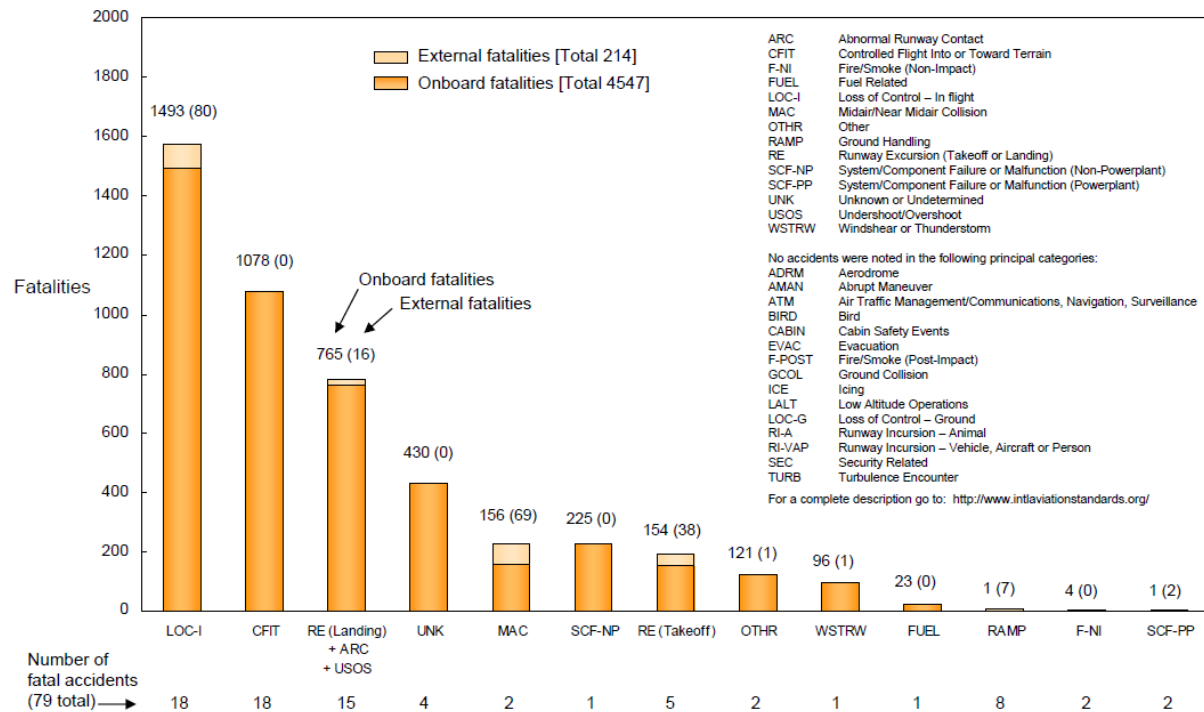
- ARC Abnormal Runway Contact
  - CFIT Controlled Flight Into or Toward Terrain
  - F-NI Fire/Smoke (Non-Impact)
  - FUEL Fuel Related
  - LOC-G Loss of Control – Ground
  - LOC-I Loss of Control – In flight
  - MAC Midair/Near Midair Collision
  - OTHR Other
  - RAMP Ground Handling
  - RE Runway Excursion
  - RI-VAP Runway Incursion – Vehicle, Aircraft or Person
  - SCF-NP System/Component Failure or Malfunction (Non-Powerplant)
  - SCF-PP System/Component Failure or Malfunction (Powerplant)
  - UNK Unknown or Undetermined
  - USOS Undershoot/Overshoot
  - WSTRW Windshear or Thunderstorm
- No accidents were noted in the following principal categories:
- ADRM Aerodrome
  - AMAN Abrupt Maneuver
  - ATM Air Traffic Management/Communications, Navigation, Surveillance
  - CABIN Cabin Safety Events
  - EVAC Evacuation
  - F-POST Fire/Smoke (Post-Impact)
  - GCOL Ground Collision
  - ICE Icing
  - LALT Low Altitude Operations
  - RI-A Runway Incursion – Animal
  - SEC Security Related
  - TURB Turbulence Encounter
- For a complete description go to:  
<http://www.intaviationstandards.org/>





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## Fatalities by CAST/ICAO Common Taxonomy Team (CICCT) Aviation Occurrence Categories Fatal Accidents – Worldwide Commercial Jet Fleet – 2002 Through 2011



Note: Principal categories as assigned by CAST.



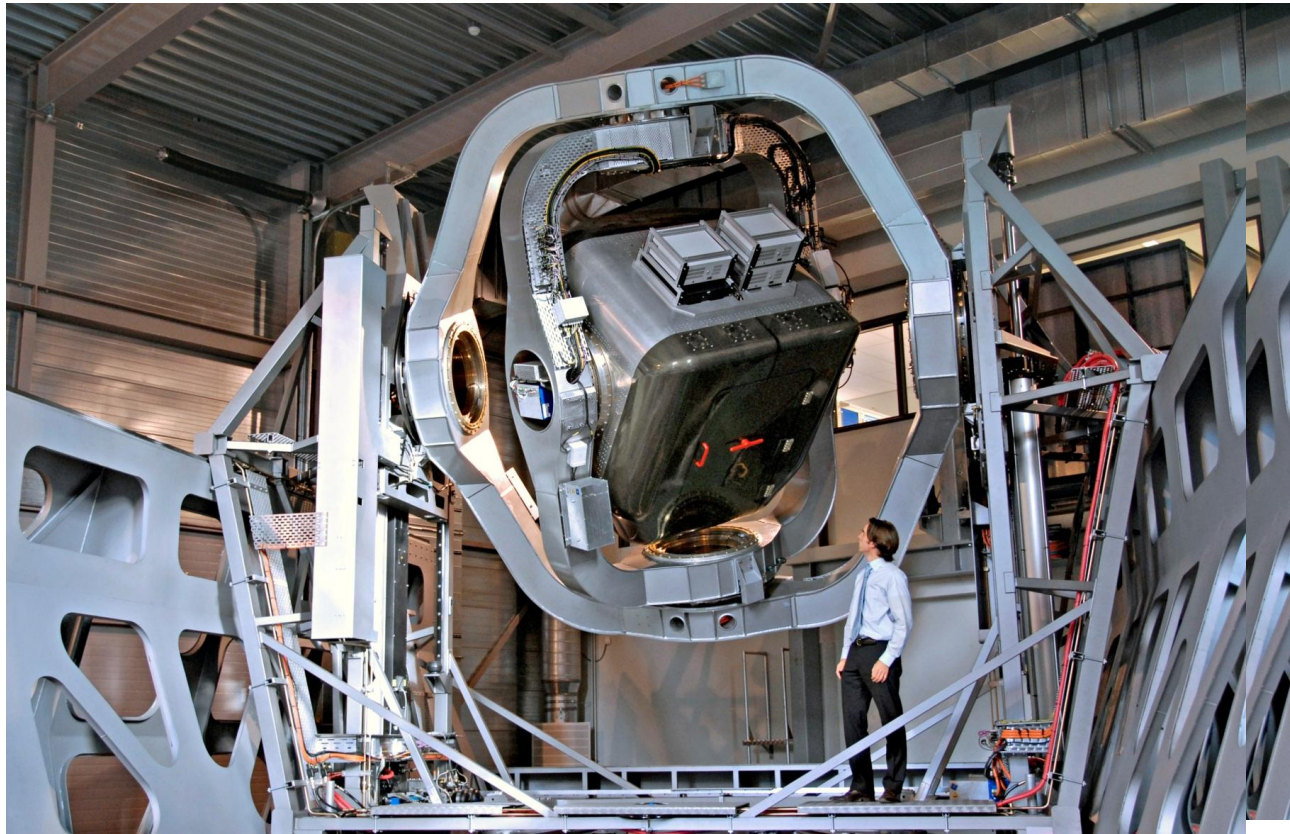
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- Fly By Wire
  - Flight Envelope Protection
- CFIT →  
(E)GPWS, TAWS  
Implementation
  - ← Reduced number of CFIT
- TCAS/ACAS
- ROPS



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## Upset Prevention and Recovery Training



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Complex world of aviation

Infinite number of abnormal/emergency situations

Impossible to train an infinite number of situations

Solution: **Prepare for the unforeseen**

## Competency Based Training (CBT)

- Focuses on the **outcome** of the training  
Not based on an amount of hours
- A competency is the combination of knowledge, skills and attitudes required to perform a task to prescribed standards under certain conditions.

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- Application of Procedures
- **Communication**
- Aircraft Flight Path Management – Manual Control
- Aircraft Flight Path Management – Automation
- **Leadership and Teamwork**
- **Problem Solving and Decision Making**
- **Work Load Management**
- **Situational Awareness**

## Threat and Error Management (TEM)

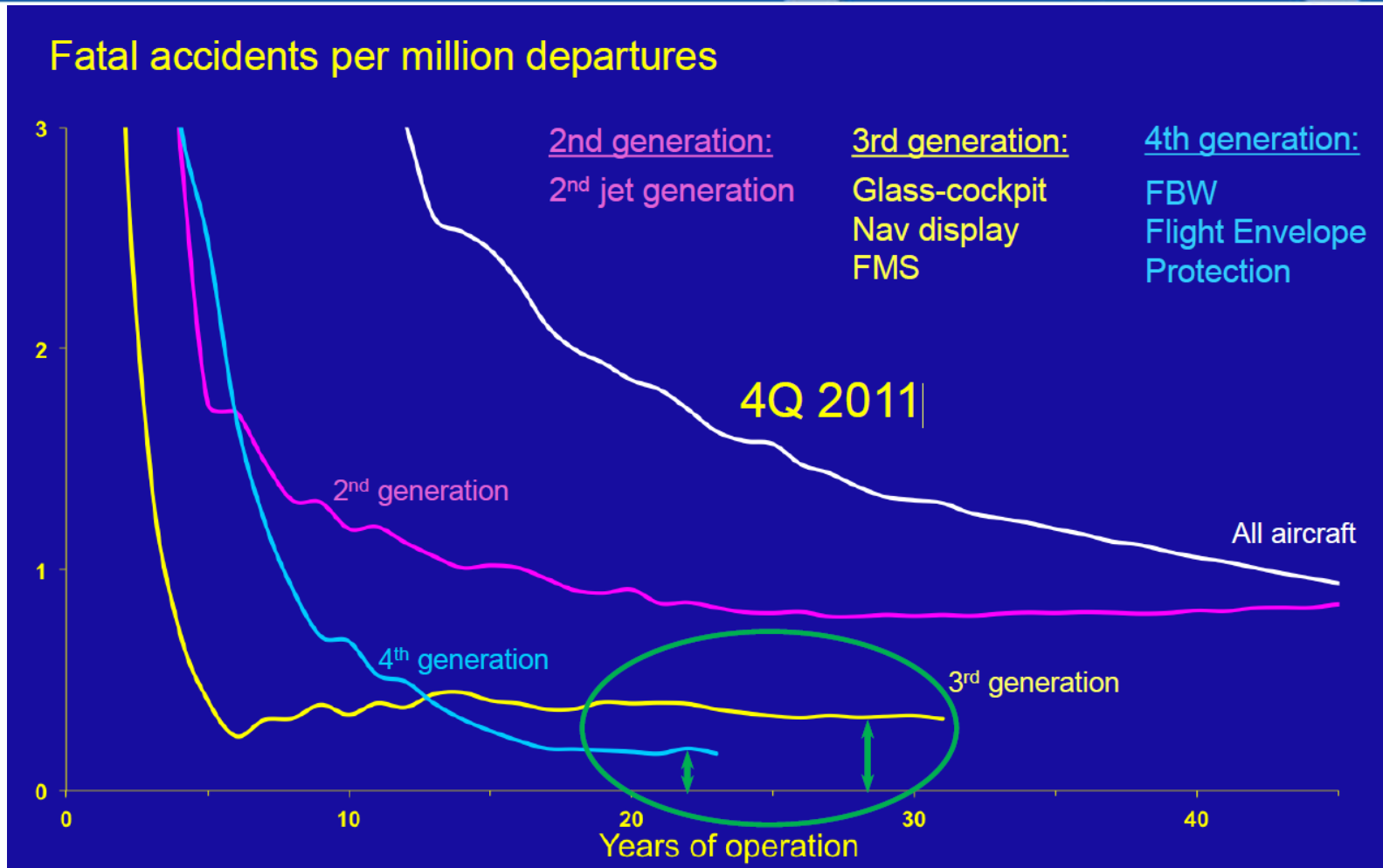
- The “super-competency”
- Recognition of:
  - Threats
  - Errors
  - Undesired Aircraft States→Countermeasures
- Core competencies are the “toolkit” for successful TEM

## Evidence Based Training (EBT)

- CBT for airline operations
  - Phase 1 – Recurrent
  - Phase 2 – Type Rating
- Identify, develop and evaluate which core competencies are required
  - Based on available evidence (data)
    - Flight Data > 3 000 000
    - LOSA reports
    - Pilot surveys > 1000
    - Training data
    - Accident/incident reports > 3000 (1962-2010)

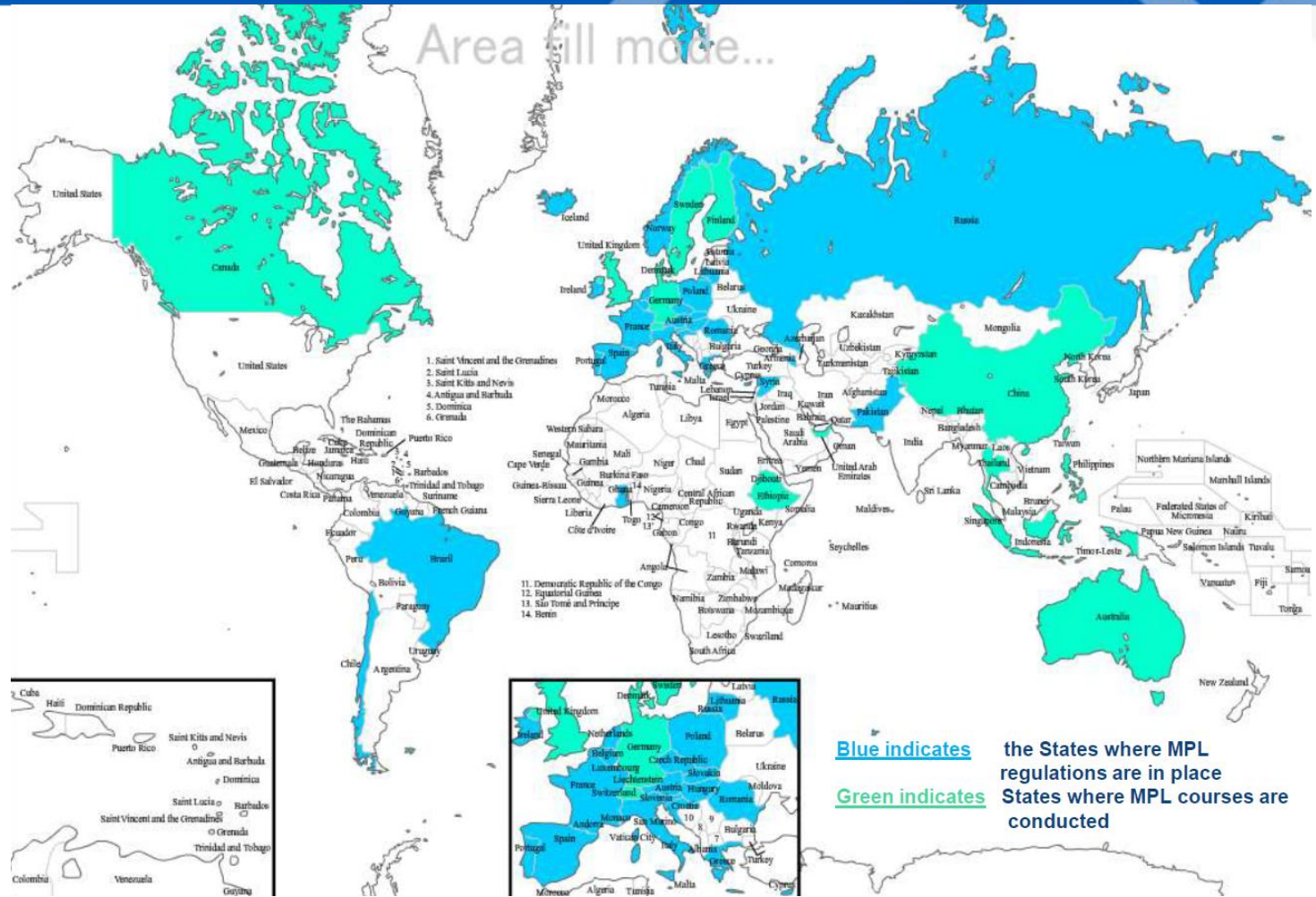


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MPL  
Today



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## MPL Implementation

- 50 States have regulation in place
  - 15 States run MPL courses
  - 20 ATO/Operator cooperatives
  - > 2000 students enrolled
  - > 700 graduates
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## The future?

- Competency Based!
  - Manual Control and UPRT to handle LOC-I  
Hopefully improved FFS characteristics
  - 2020 – Majority of airlines recruit via competency based ab-initio training
  - 2030 – All commercial flight training will be competency based
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# Skolchefsmöte november 2013

SLUT – Frågor ?

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