



# NCLB AIM Workshop

Cairo, 11-13 September 2017

## SWIM

### IATA's Perspective



## IATA at 30,000 ft

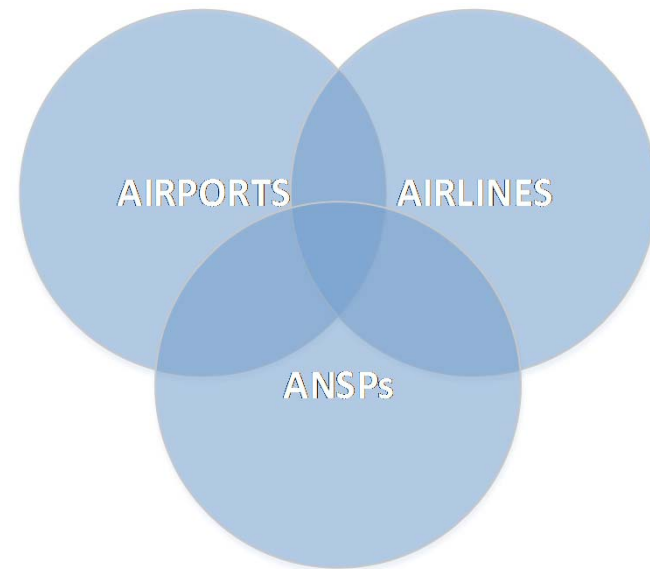


*Mission to **represent,**  
**lead and serve**  
the airline industry*

- Founded in Havana, Cuba on 1945
- 274 airline members
- Representing 84% of total air traffic
- 63 offices in 60 countries worldwide,
- 1420 employees
- Three major association roles:
  - Representation
  - Standard setting
  - Industry leadership
- Provider of aviation solution

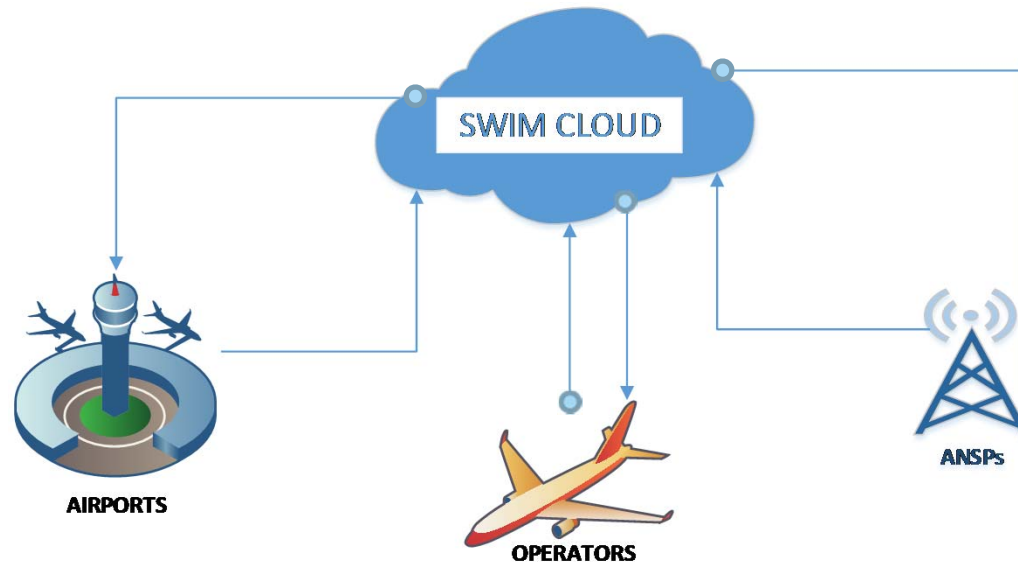
# Today's ATM environment

- complementary missions
- proprietary networks
- incompatible protocols
- incompatible data formats





# Future ATM Environment





# Information

- Relevant
- Complete
- Accurate
- Current





# SWIM Objectives

- Enable Global ATM through best practices from different information communities
  - Provide users access to relevant and mutually understood information in an interoperable manner
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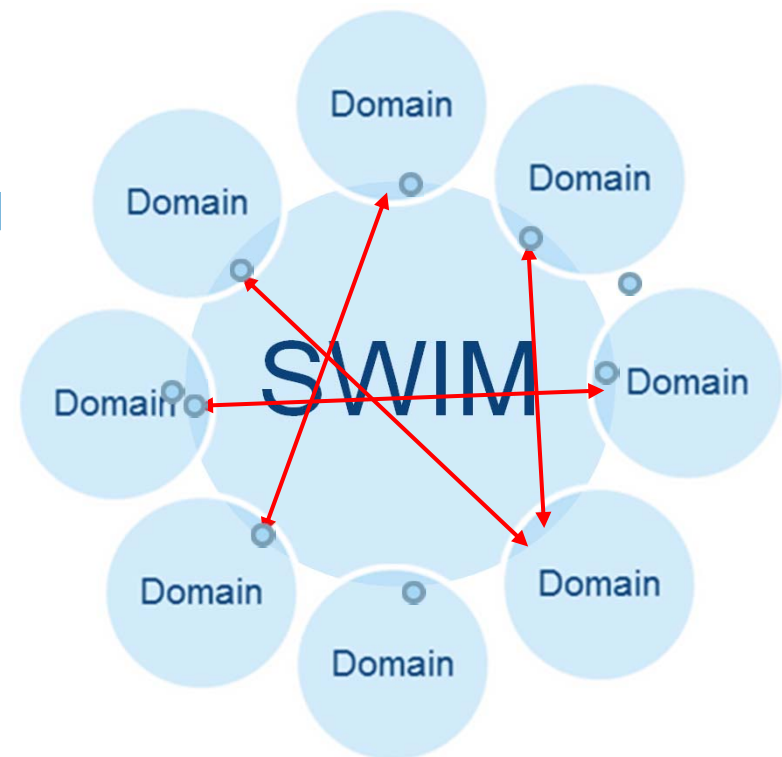


# Interoperability of SWIM

- Allows diverse systems from different organizations to exchange information in a meaningful manner
  - Information is right quality, provided at the right time and delivered to the right place
  - Promotes net-centric ATM operations
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# SWIM Principles

- separation of information provision and information consumption
- loose system coupling
- use of open standards
- use of interoperable services







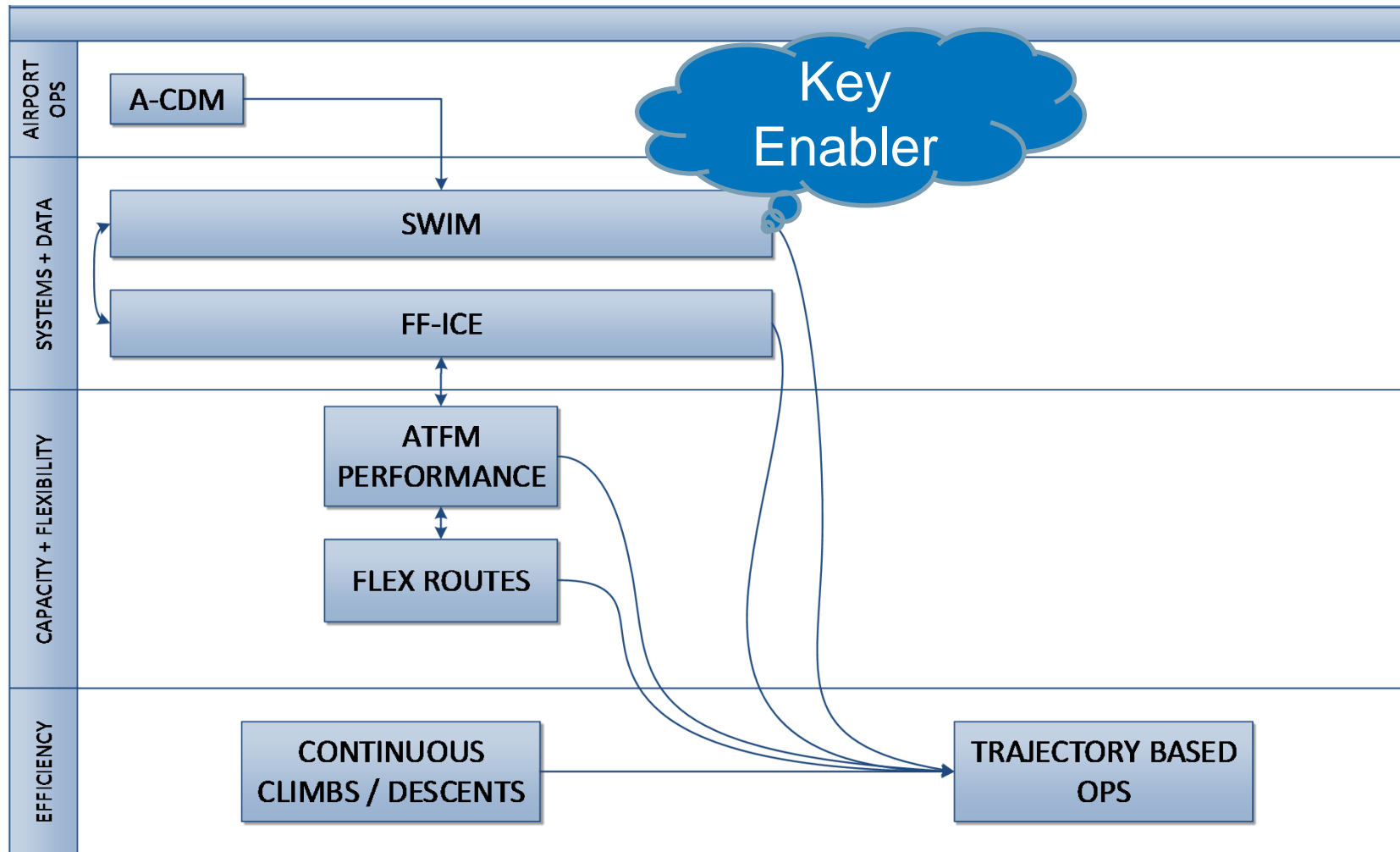
## Short term

- IP network benefits
    - Eliminate point-point proprietary
  - Allow broader information sharing
    - Improved collaboration and decision making
  - Improved situational awareness enabling greater efficiencies
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# SWIM Benefits

- ATM data will be fused for an Airspace User's general situational awareness
  - Relevant Airspace User operational information will be made available to the ATM system
  - Supports Demand / Capacity Management and strategic / pre-tactical conflict management
  - Shared awareness of aircraft performance, flight conditions and ATM resources supports dynamically optimized 4D trajectory management
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## SWIM Exchange Models

### FIXM

Flight  
information

Improved  
collaboration

### AIXM

Digital AIM

Tailoring to  
user's systems

### WXXM

Aeronautical  
weather

Richer model



# ATM Benefits - Airspace User

- greater equity in airspace access
  - greater access to timely and meaningful information for decision support
  - more autonomy in decision making, including strategic and pre-tactical conflict management
  - better deliver business and individual outcomes
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# ATM Benefits – ANSP / Airports

- Ability to operate within an information-rich environment:
    - real-time data
    - system trend and predictive data
  - Fused with a range of automated decision-support or decision-making tools, will enable optimization of services to airspace users
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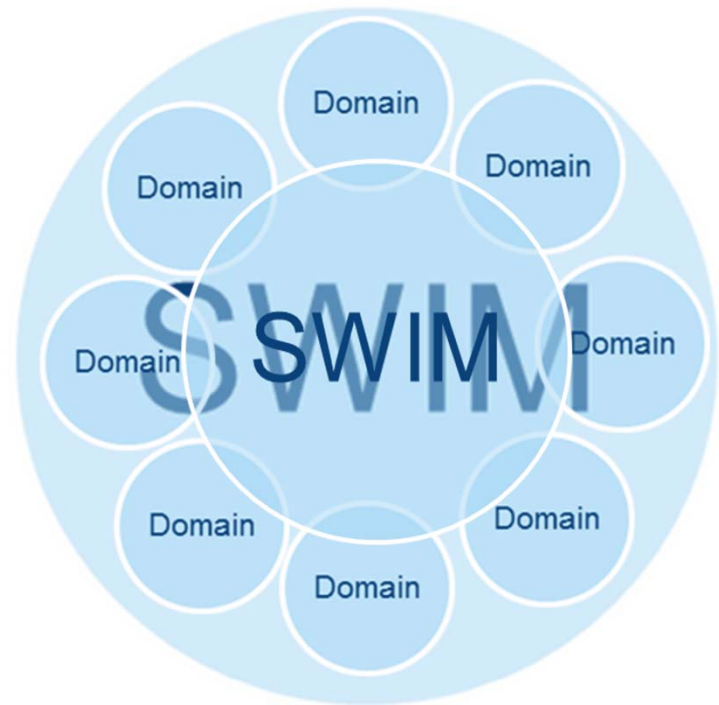
## CONCERNS

**SWIM is good... but...**

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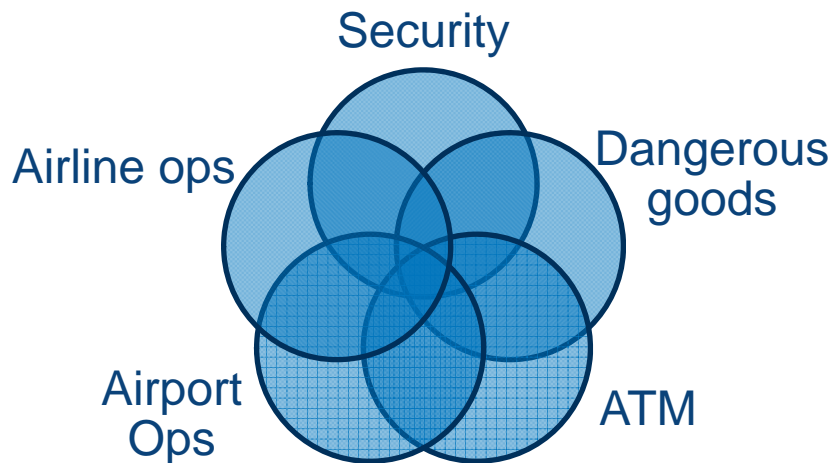
# SWIM supports ATM

- Don't try to be everything to everyone
- Avoid mixed governance (different communities with disparate objectives / roles)
  - E.g. security, dangerous goods, airport ops





# Complementary but separate information domains



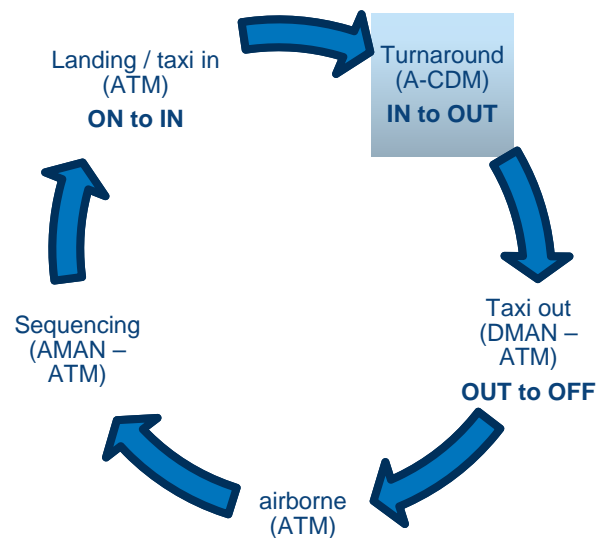
- Need to define boundaries
- Information needs to flow between stakeholders
- SWIM should not try to be the source of all knowledge for all people
- Need to define interfaces to enable interoperability / value multiplication



FOR EXAMPLE...

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# Interconnected information



- ATM should only deal with OUT to IN, and
- Use information from A-CDM for turnaround where needed



## During transition

- There will be a mix of SWIM-enabled Open Standards and Legacy solutions.
  - ANSPs or 3<sup>rd</sup> party solution providers will need to provide gateways between the information domains
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## Conclusion

- IATA believes in the value of the operational improvements enabled by SWIM
  - Boundaries to be controlled and constrained so as to be an enabler for information management and sharing
  - We call upon the community to get involved in the design and implementation of SWIM through collaborative dialogue
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