SWIM

Tool for operational improvement

Air Space User Perspective

Topics

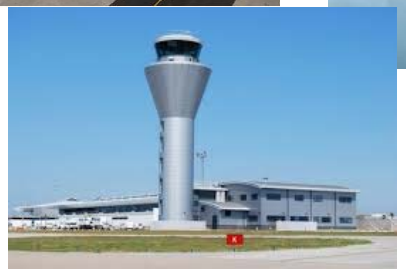
- Current Environment
- Opportunity of Benefit
- Impact to User environment
- Challenge for Step forward
- Needs for Success

Topics

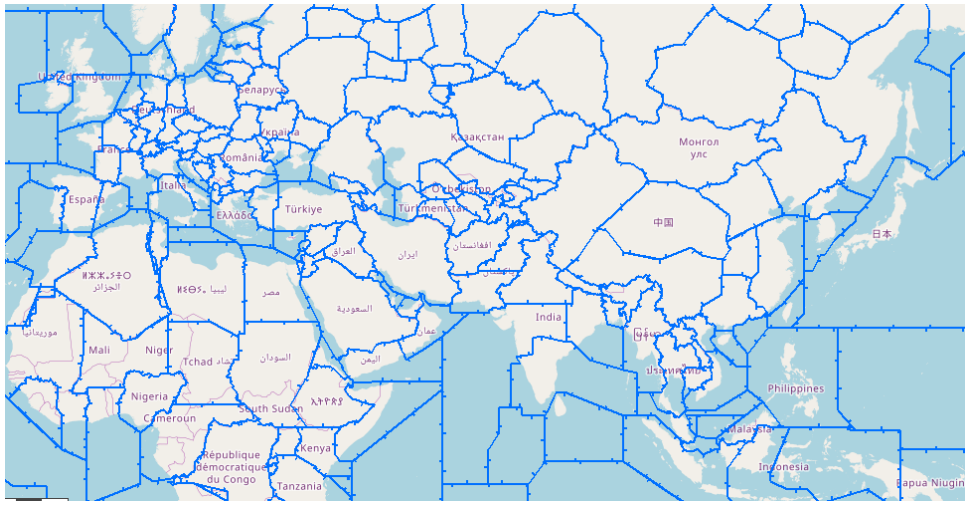
- Current Environment
- Opportunity of Benefit
- Impact to User environment
- Challenge for Step forward
- Needs for Success

Today’s Information exchange

↗ Stakeholders

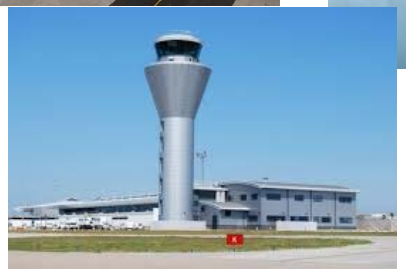


↗ States and regions



Today's Information exchange

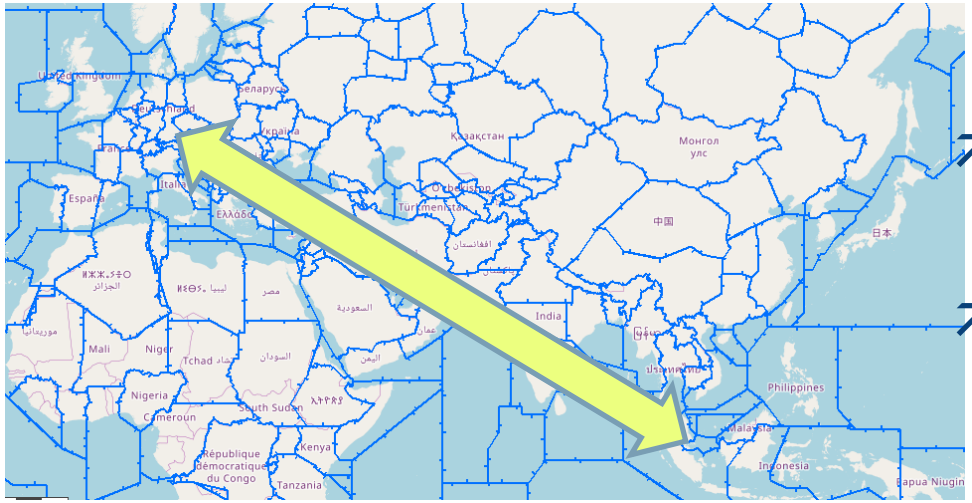
- Stakeholders



- Limited information from ATM
- Limited information from Operator
- Limited exchange with Airport

Today's Information exchange

- States and regions



- Information gap between FIRs
- Information gap between regions
- Enough information for cross FIRs and Regional flights?

Today's environment

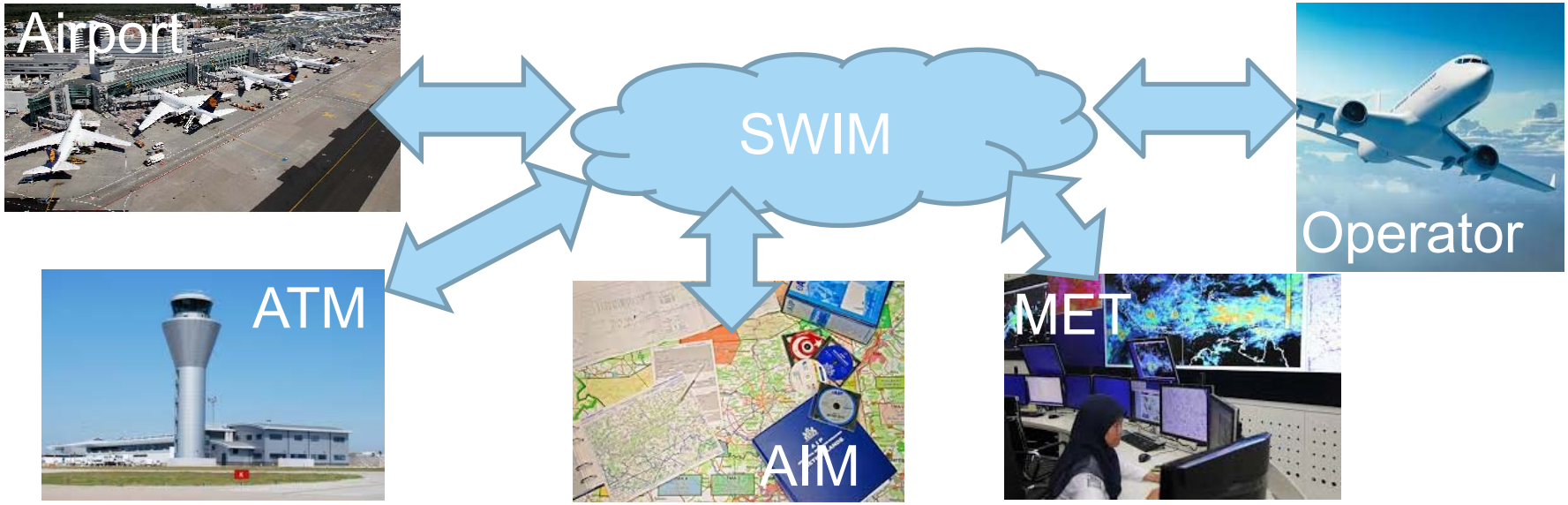
- Limited area of information
- Limited data due to data format
- Limited timeliness
- Limited interexchange between all stakeholders.

Lose opportunities of the utilization of Capacity and Capability due to limited Information

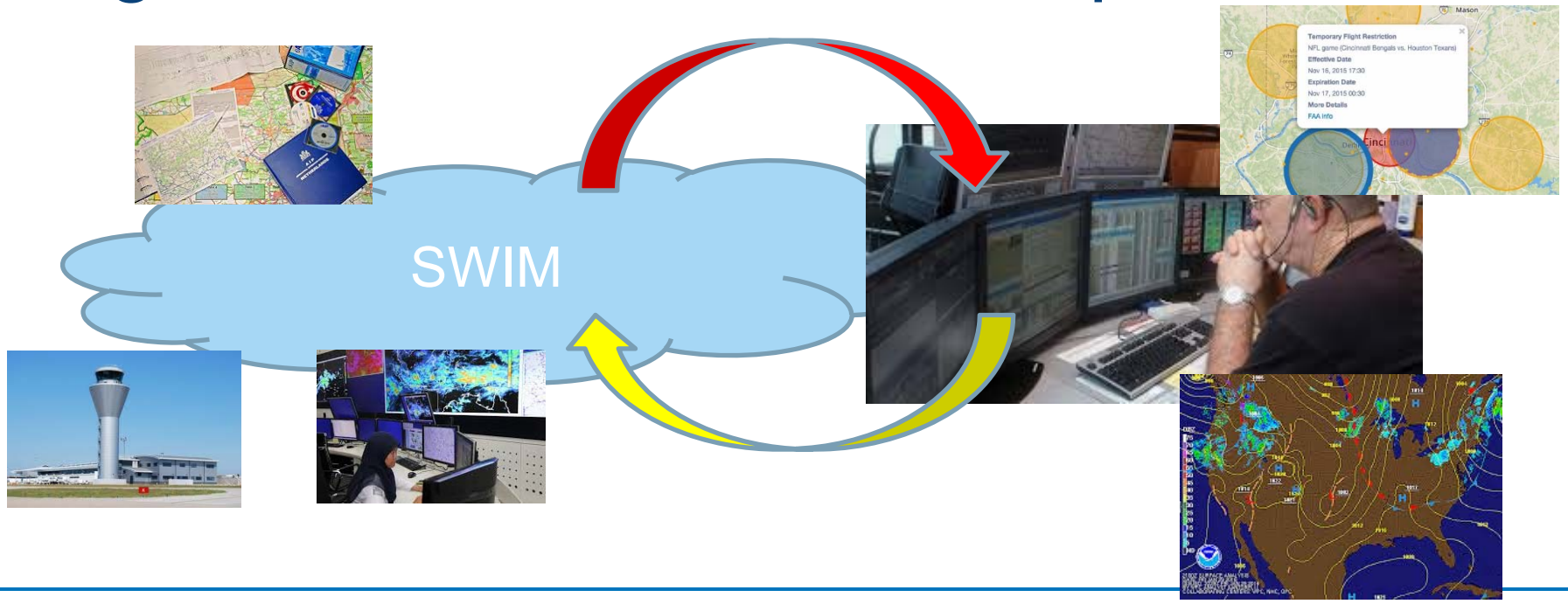
Topics

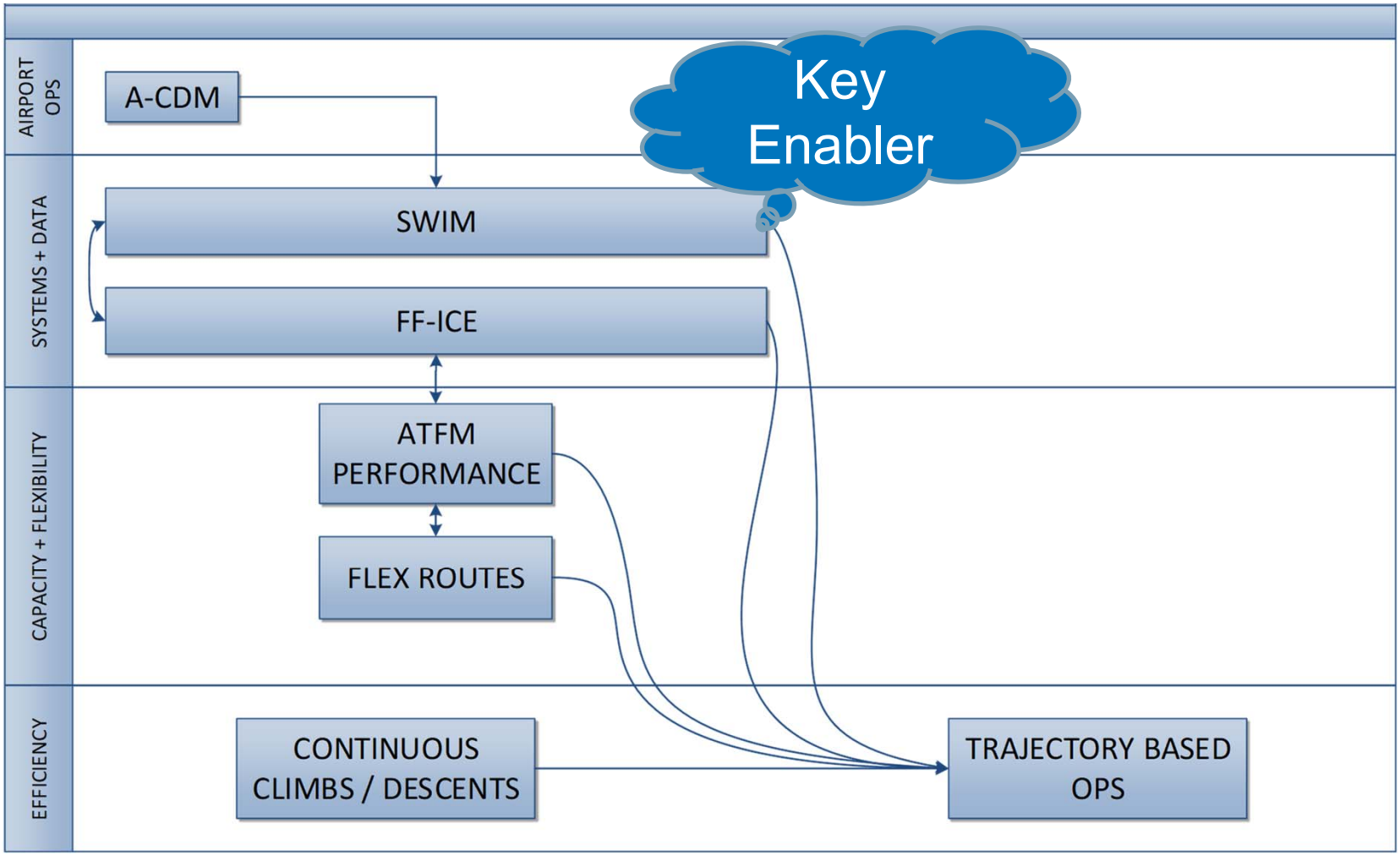
- Current Environment
- Opportunity of Benefit
- Impact to User environment
- Challenge for Step forward
- Needs for Success

SWIM.. provide users access to relevant and mutually understood information in an interoperable manner



Integration of information for operation




AIRPORT OPS
SYSTEMS + DATA
CAPACITY + FLEXIBILITY
EFFICIENCY
A-CDM
Key Enabler
SWIM
FF-ICE
ATFM PERFORMANCE
FLEX ROUTES
CONTINUOUS CLIMBS / DESCENTS
TRAJECTORY BASED OPS

SWIM – Benefit opportunity

- ATM data will be used 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 flight conditions and ATM resources supports dynamically optimized 4D trajectory management

Topics

- Current Environment
- Opportunity of Benefit
- Impact to User environment
- Challenge for Step forward
- Needs for Success

Impact to Systems

Operation system (e.g. FPL)

- SWIM connectivity
- New data exchange models
- Data process for optimum use
- Automated data process
- Possible complexity of operator system

Aircraft connectivity

- Broadband connection to Cockpit
- Future Data comm standard
- Updated information exchange

Impact to Flight Operation

Dispatch

- Manage plan policy and irregular management
- In flight monitor and support

Pilot

- In flight monitor and connected operation.
- Dispatch support in flight for best trajectory update

Topics

- Current Environment
- Opportunity of Benefit
- Impact to User environment
- Challenge for Step forward
- Needs for Success

Challenge-Operator

Ground system

- ↗ Update required-$
- ↗ Complex connections-$

Pilot and Staff

- ↗ Need to fit new style-Mind
- ↗ Interrelation across work Area-Mind

Air-Ground Connection

- ↗ Aircraft upgrade or network connection -$

Mixed environment

- ↗ Mixed capable and non-capable ANSP in traffic flow - Inefficiency and Workload

Challenge-ATM and others

- Need system upgrade
- Connection between different Stakeholders and parties.
- Trajectory operation- needs of enhanced airspace access
- Information governance

Topics

- Current Environment
- Opportunity of Benefit
- Impact to User environment
- Challenge for Step forward
- Needs for Success

Tool for sharing information

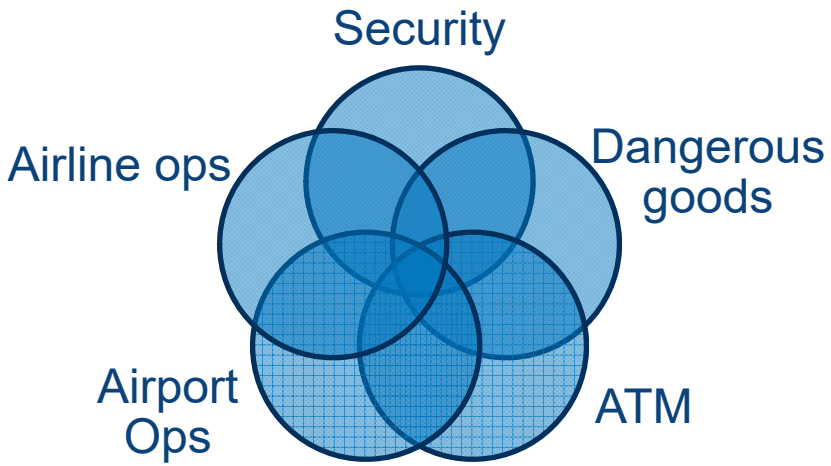
- SWIM and Data exchange models are great “Tool” to share the information between stakeholders.

Key Basic Points for success

What we achieve with these “Tools”?

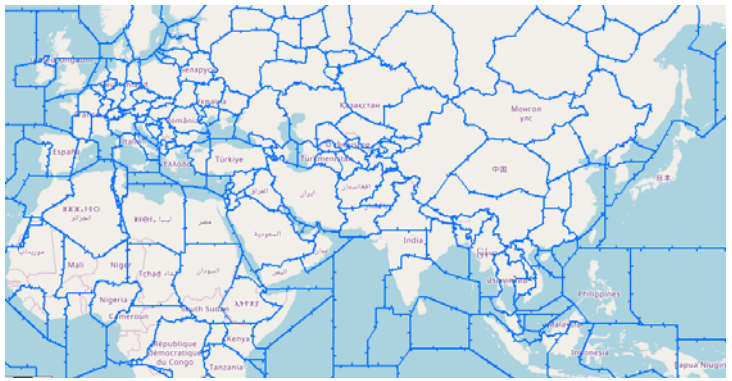
Assurance of Quality of information (Timeliness and Accuracy)

Complementary but separate information domains



- Need to define boundaries
- Avoid mixed governance (different communities with disparate objectives / roles)
- SWIM should not try to be the source of all knowledge for all people
- Need to define interfaces to enable interoperability / value multiplication

Implementation



- Clear Objectives for User investment
- Regional / Cross regional approach
- Develop environment supporting the objects
- Don’t SWIMify everything
- Think SWIM from the start

Further development in ICAO Panels

- FF-ICE phase2 for ANSP connectivity.
- TBO concept implementation
- Development of Services

Conclusion

- IATA believes in the value of the operational improvements enabled by SWIM
- Maximize the benefit of use of these tools with setting up improvement target and set appropriate environment.
- 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 though collaborative dialogue

thank you
danke
謝謝
ngiyabonga
teşekkür ederim
спасибо
dank je
gracias
tapadh leat
bedankt
mauruuru
hvala
dziękuję
mochchakkeram
go raibh maith agat
obrigado
sukriya
kop khun krap
arigato
dakujem
grazie
terima kasih
감사합니다
merci
мерси