



ATFM DEVELOPMENT IN CHINA

Presented by Fu Yongqiang

ICAO 2021
ATFMSG/11



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Action By the meeting

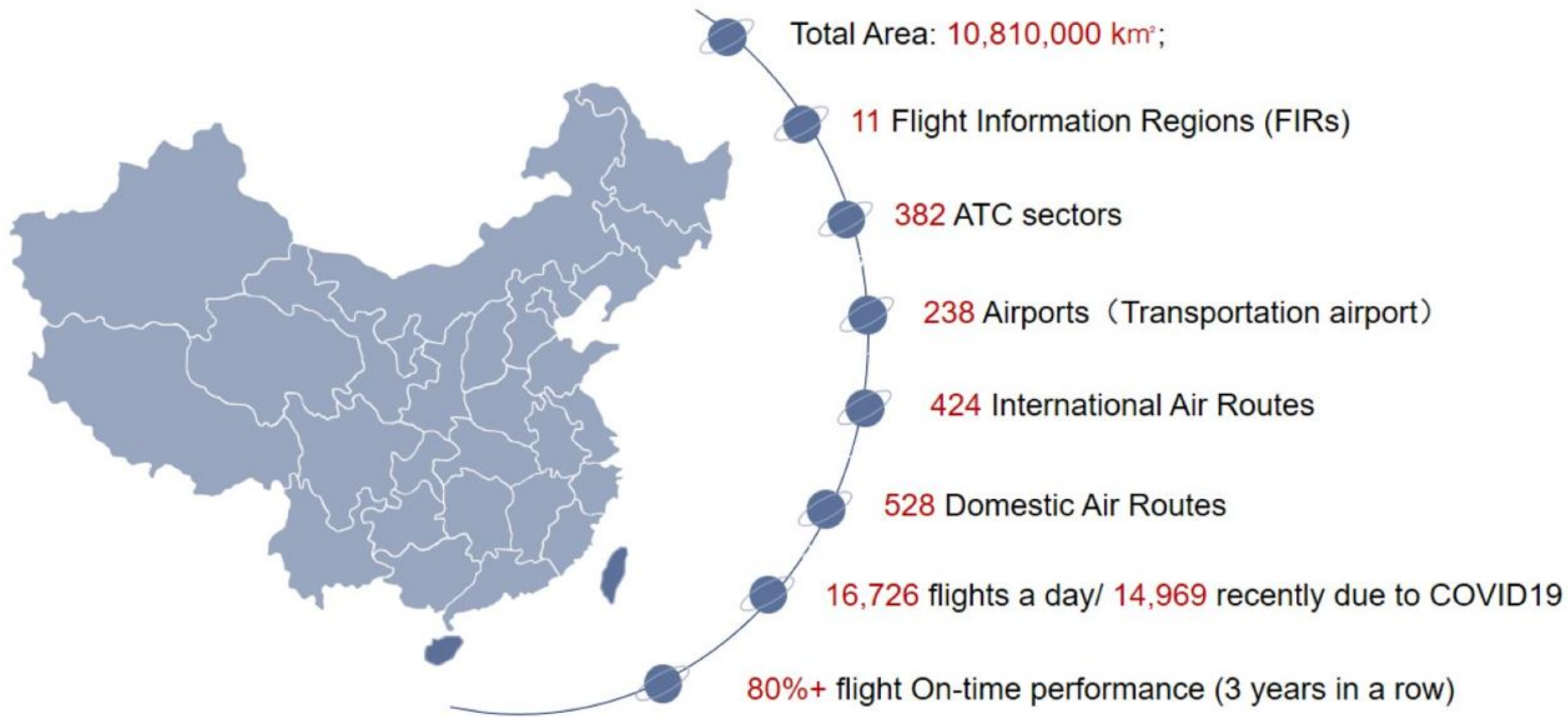




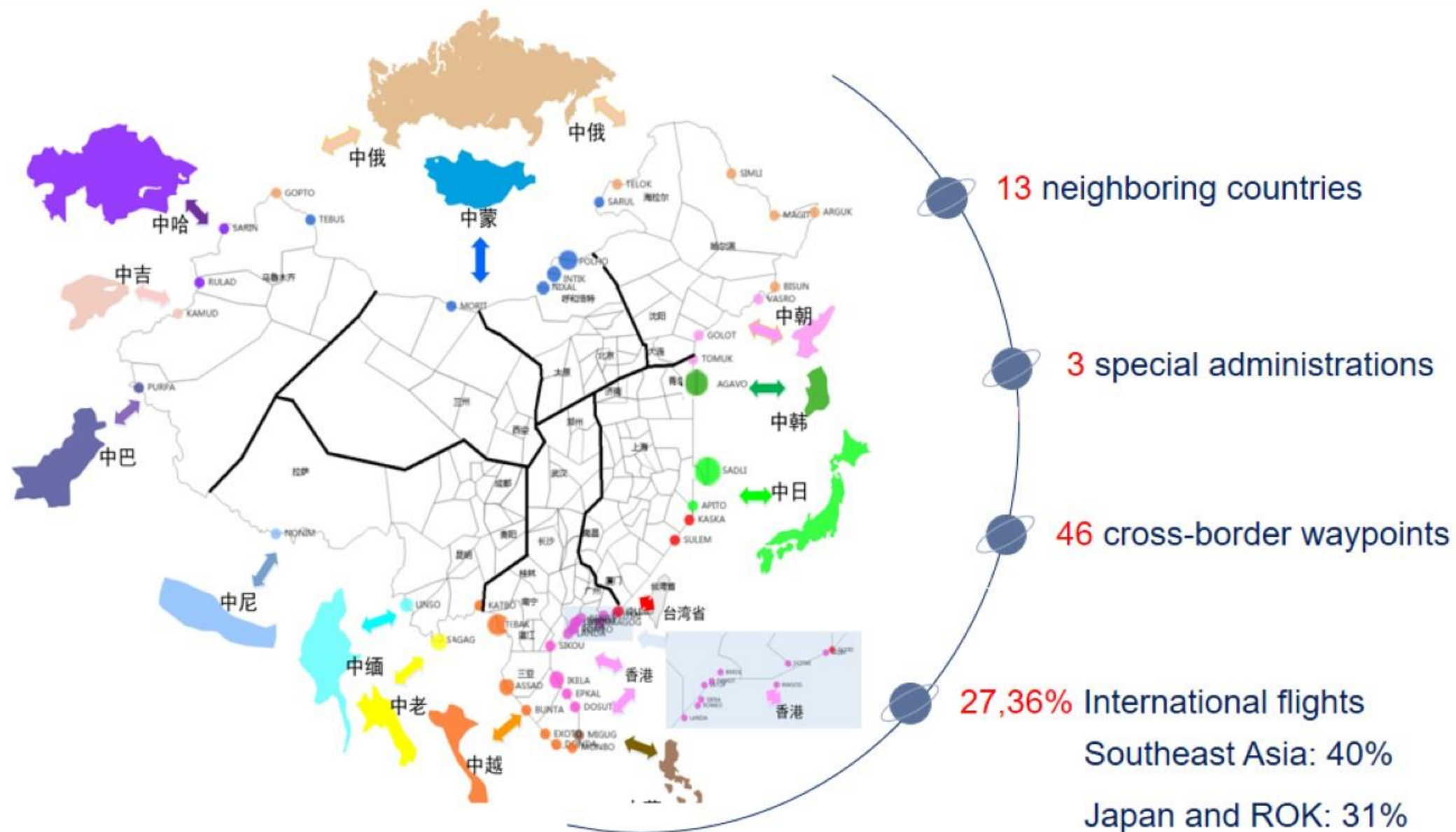
/01

Introduction

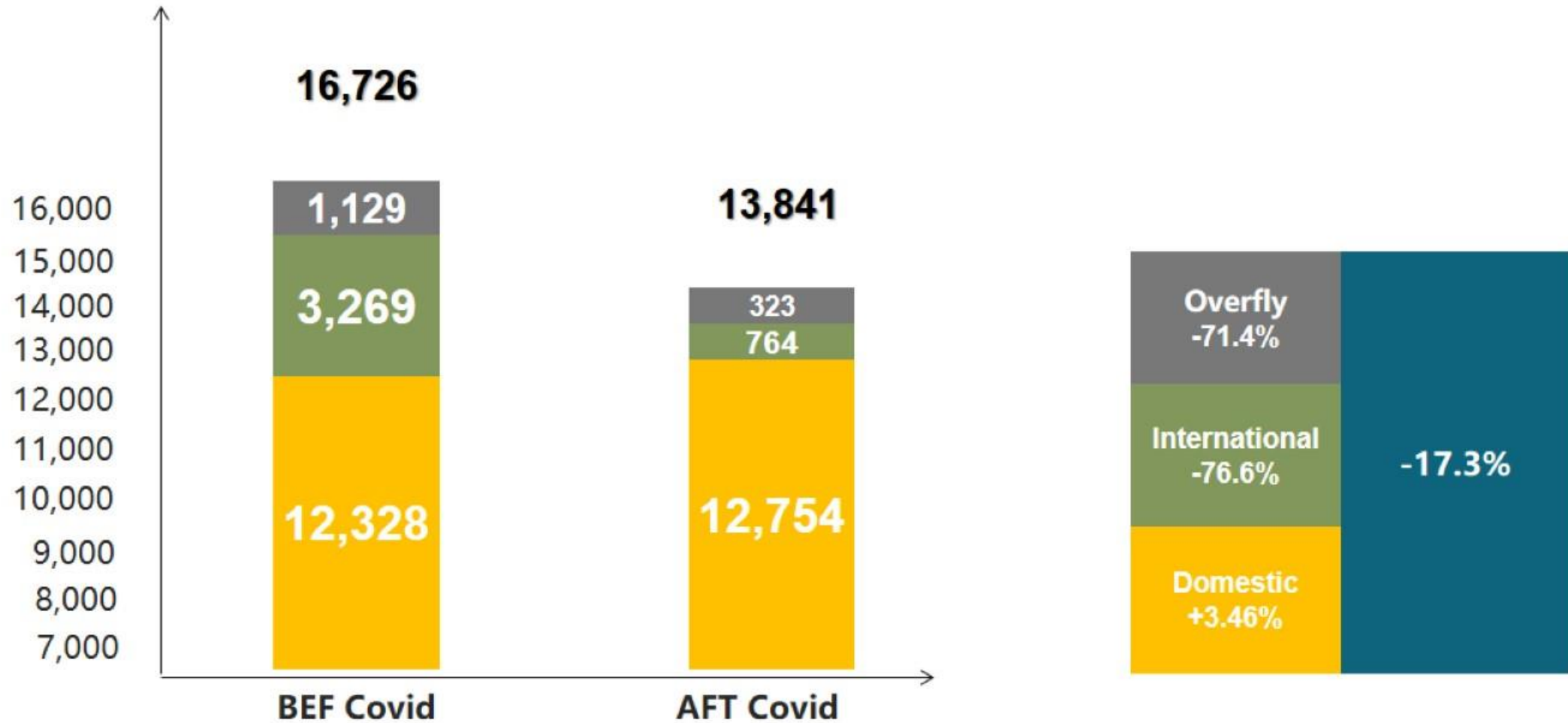
Introduction



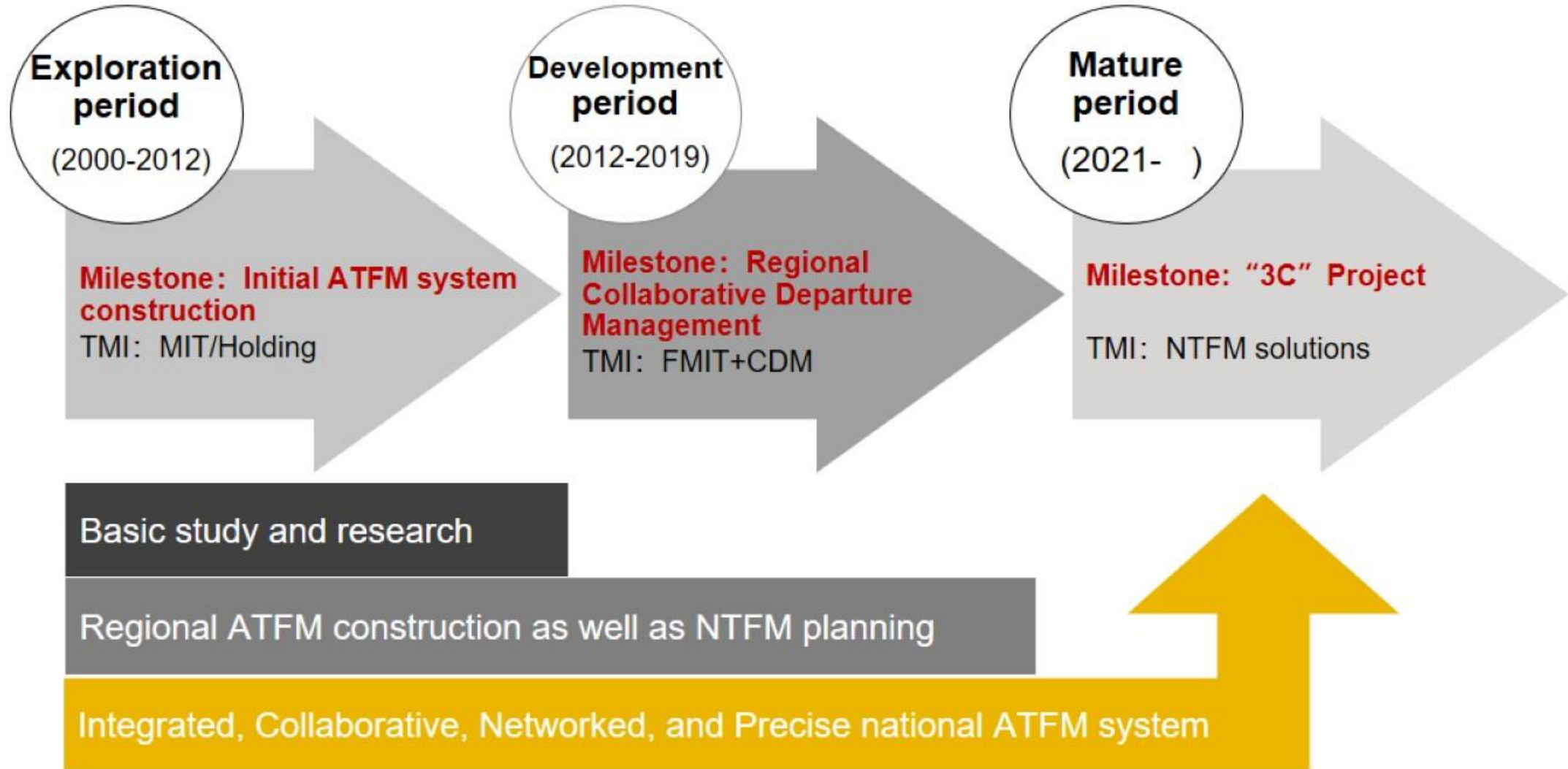
Introduction



Introduction – Demand (COVID19)



Introduction — Panorama of the development of ATFM



Introduction — Operational Structure of ATFM



Introduction — CDM Conference



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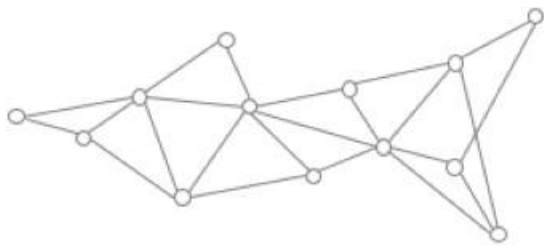
Multi-Con

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Multi-Con

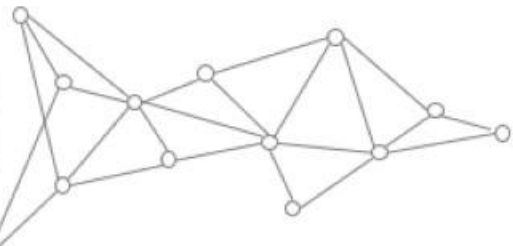
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08:00-24:00
Regular video conference
mechanism

Every 2 hours
9 times for
every day

2 times
Multi-stakeholder
CDM conference



Introduction — MDRS

25%



Yellow

25% reduction in capacity

.....

50%



Orange

50% reduction in capacity

.....

75%



Red

75% reduction in capacity

.....



102

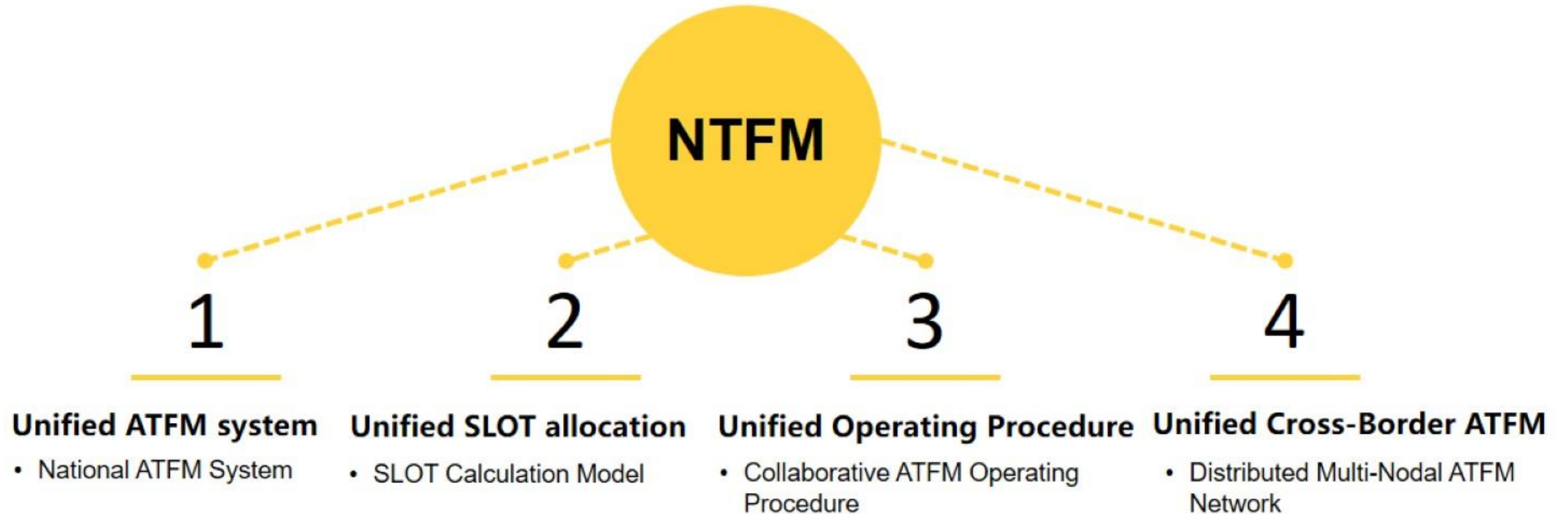
Discussion



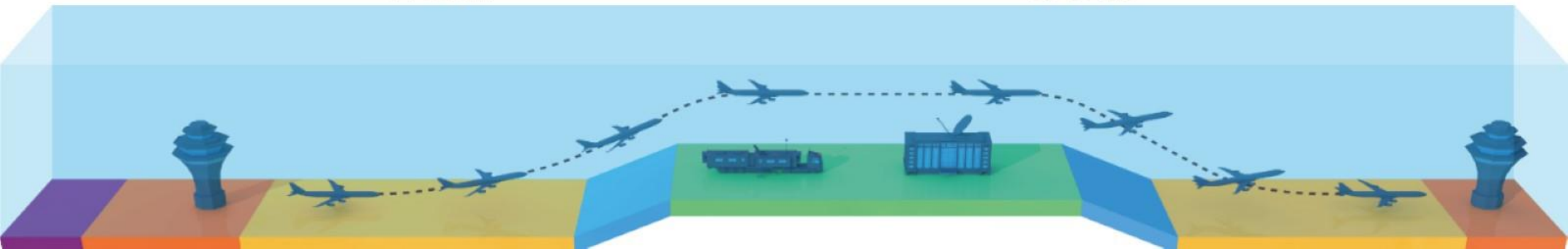
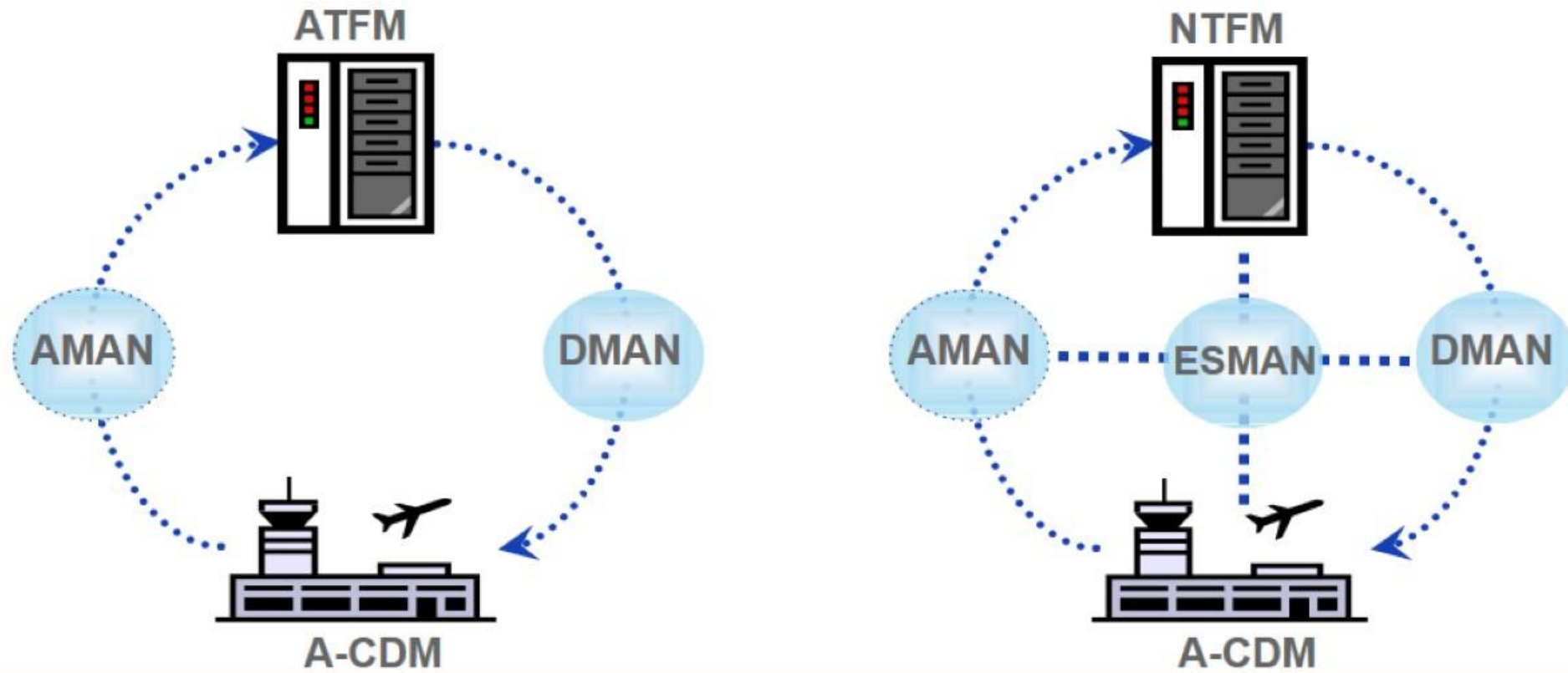
CONOPS – Centralized Multi-Participant Collaborative ATFM Network (CMC)



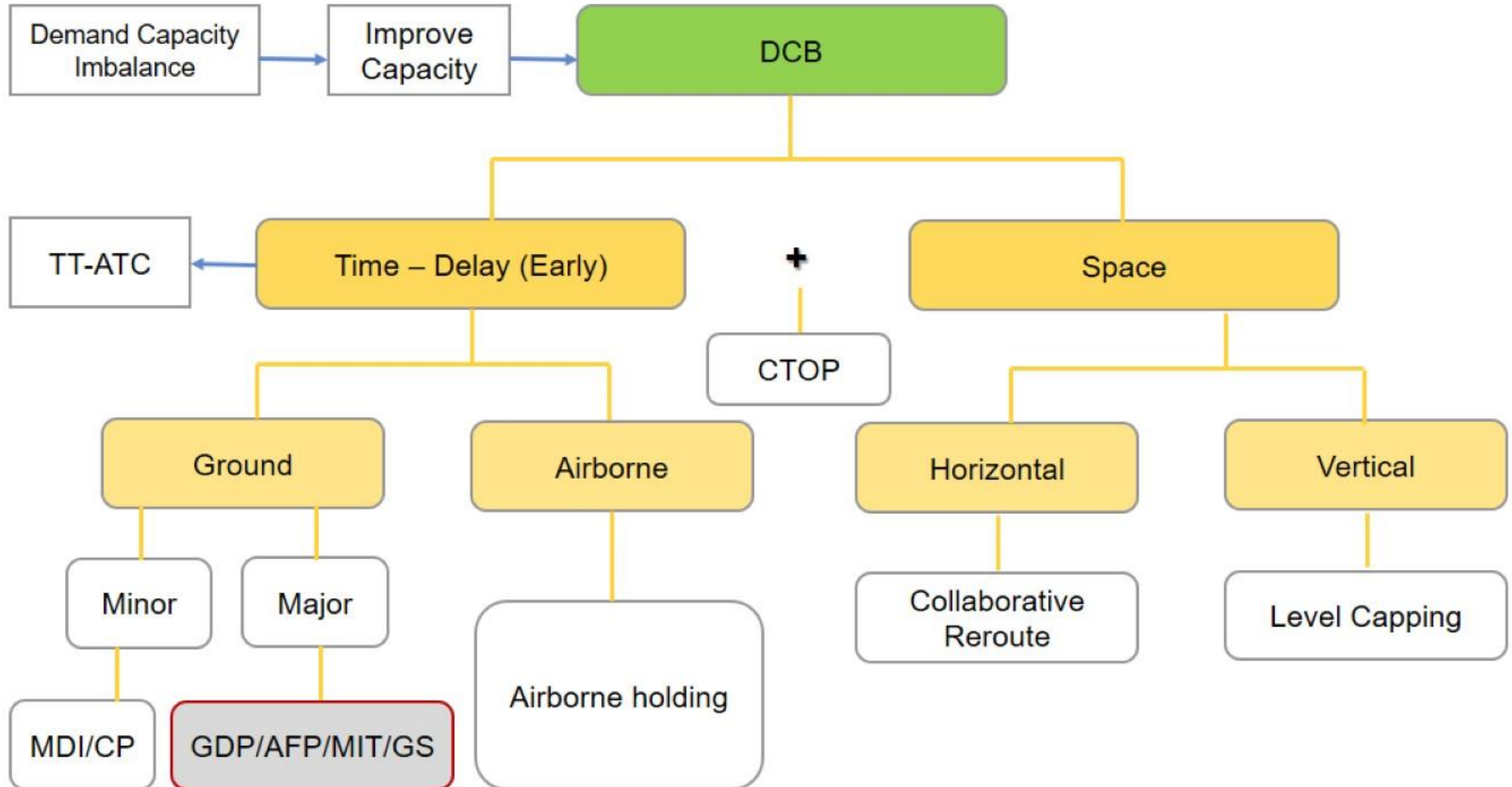
CONOPS – Operation Model



CONOPS – ATFM System

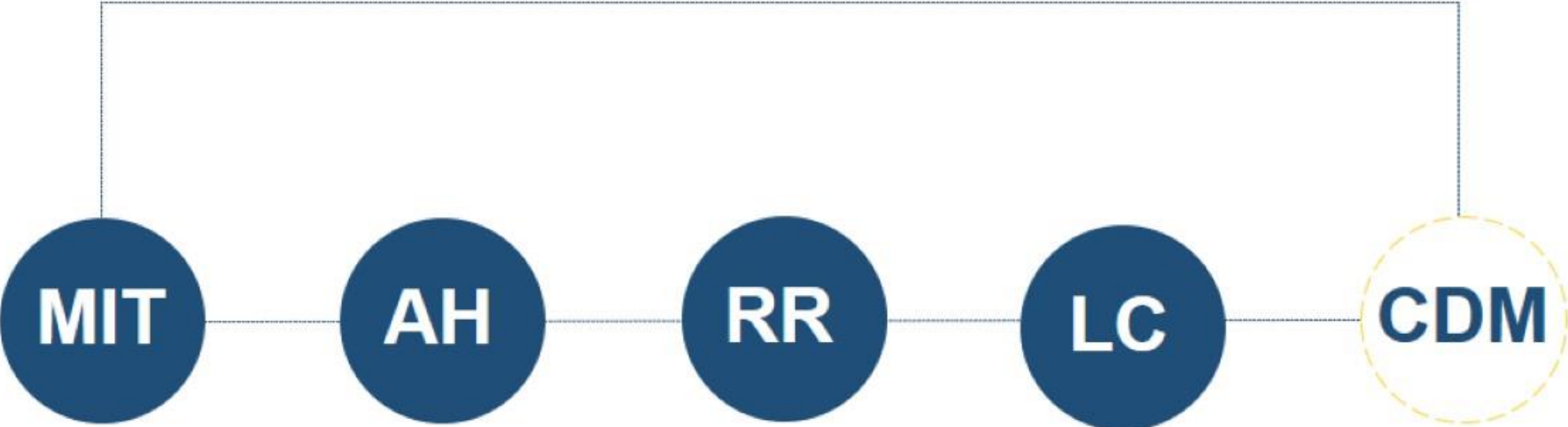


ATFM Solutions



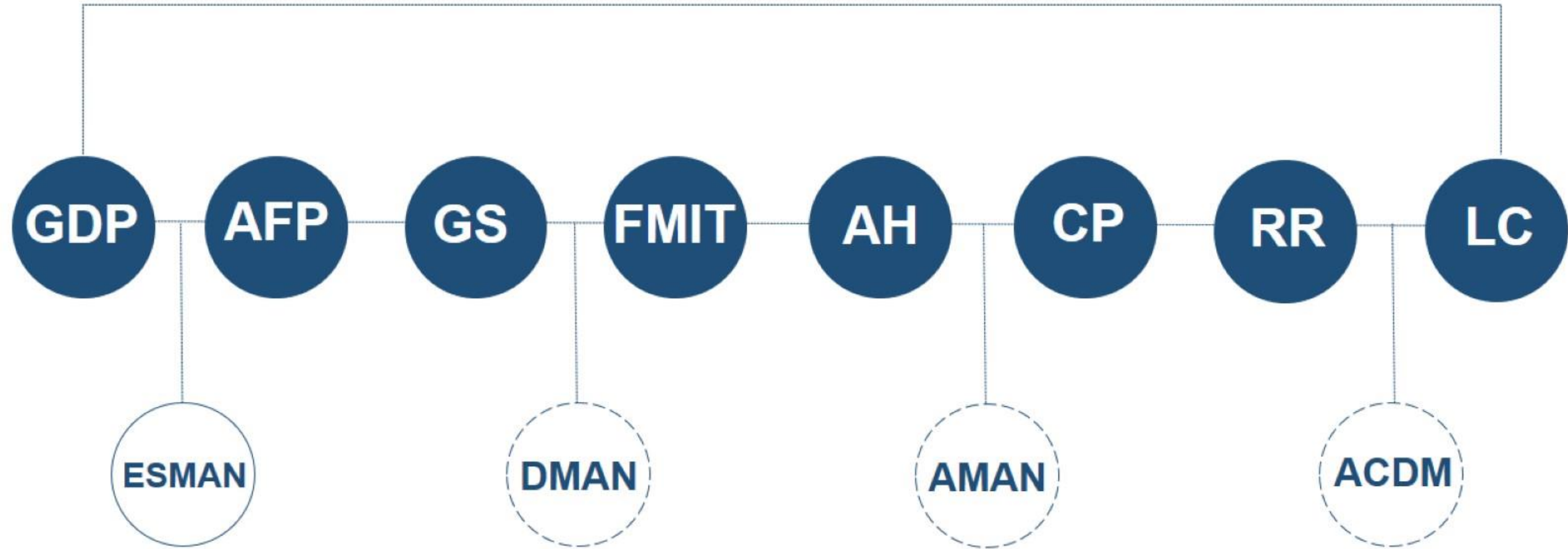
NTFM – Before NTFM

Available Measures



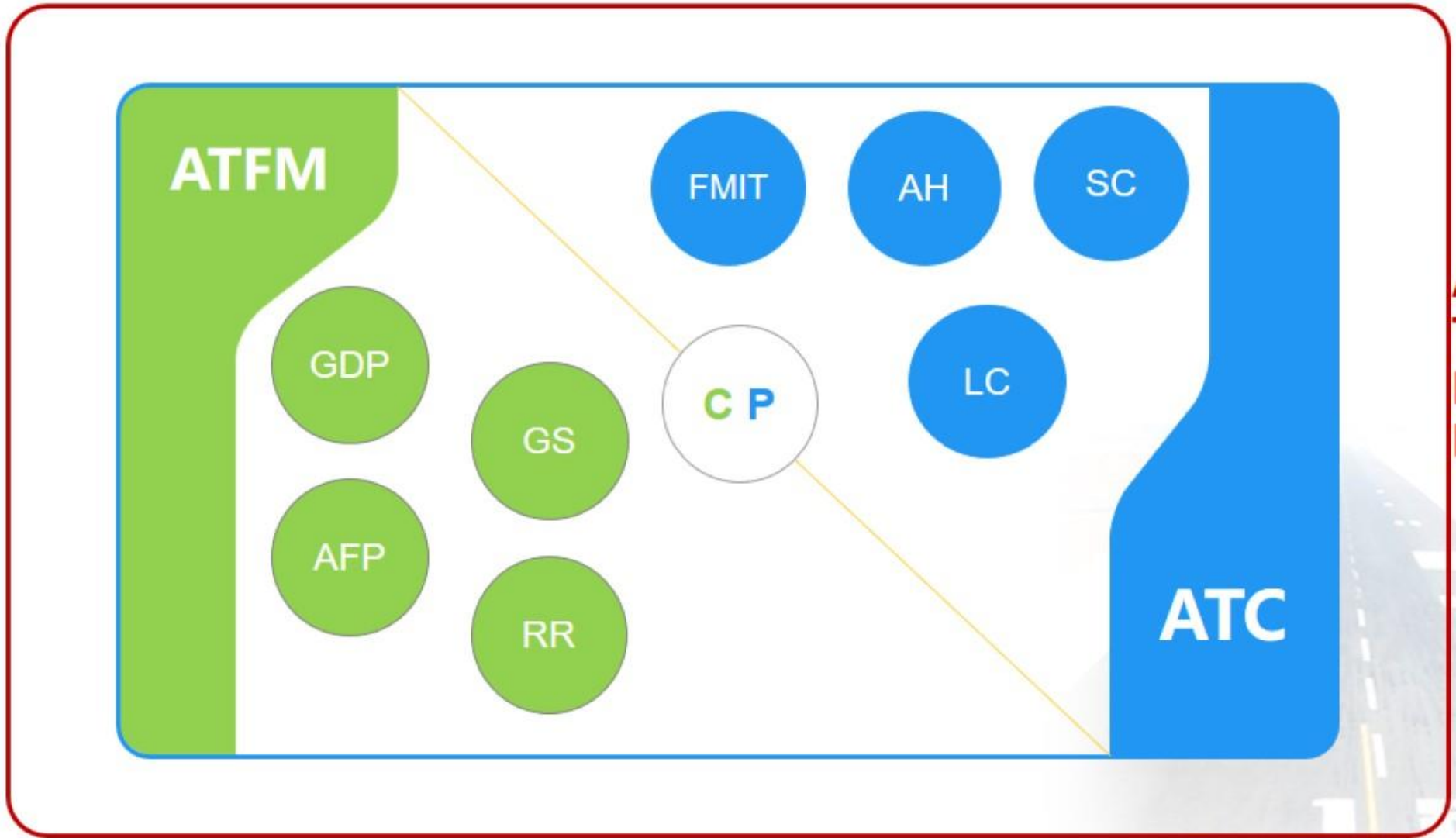
NTFM – After NTFM

NTFM



ATFM

**A
T
F
M**

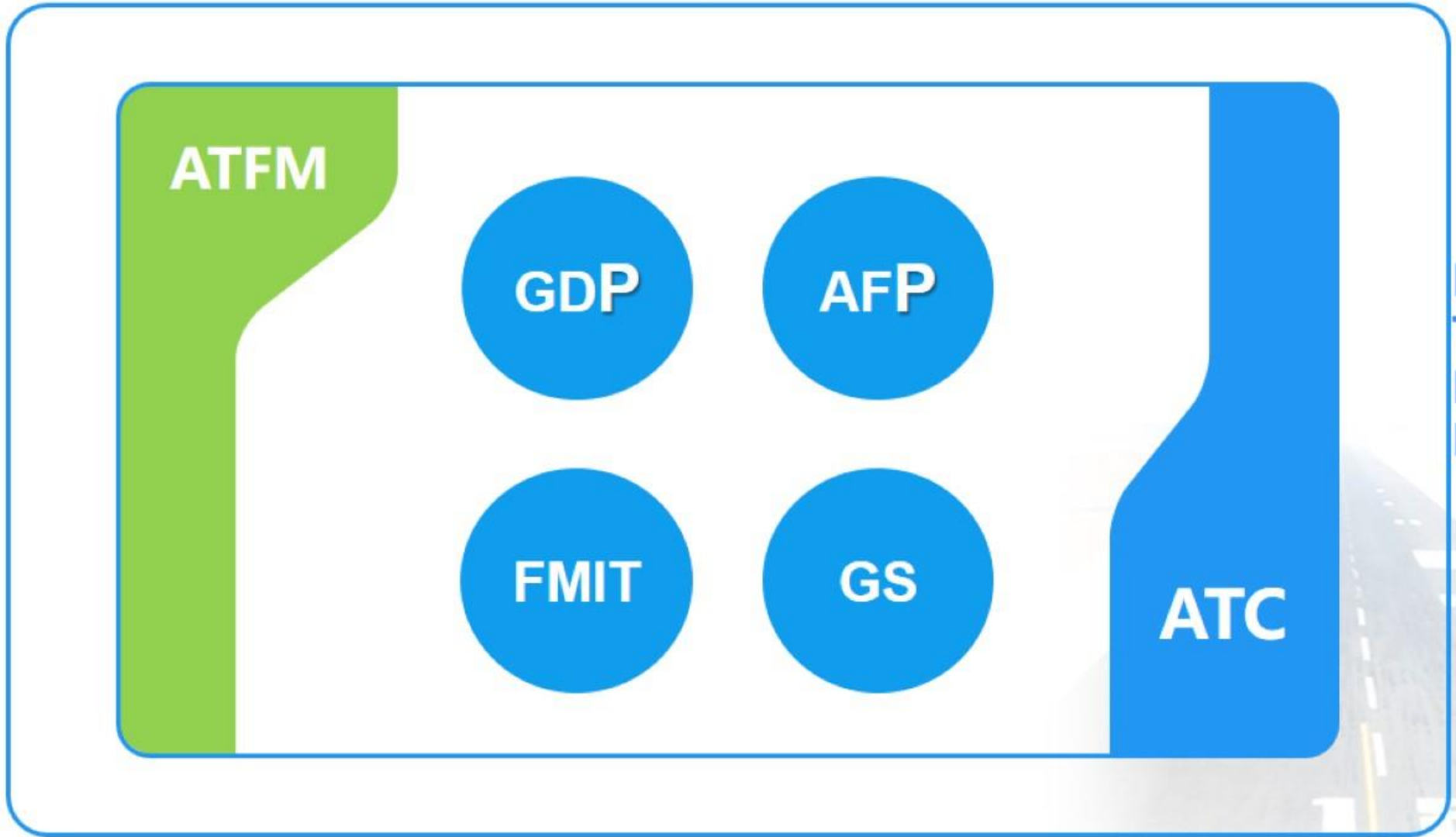


**A
T
F
M**

ATFM

NTFM

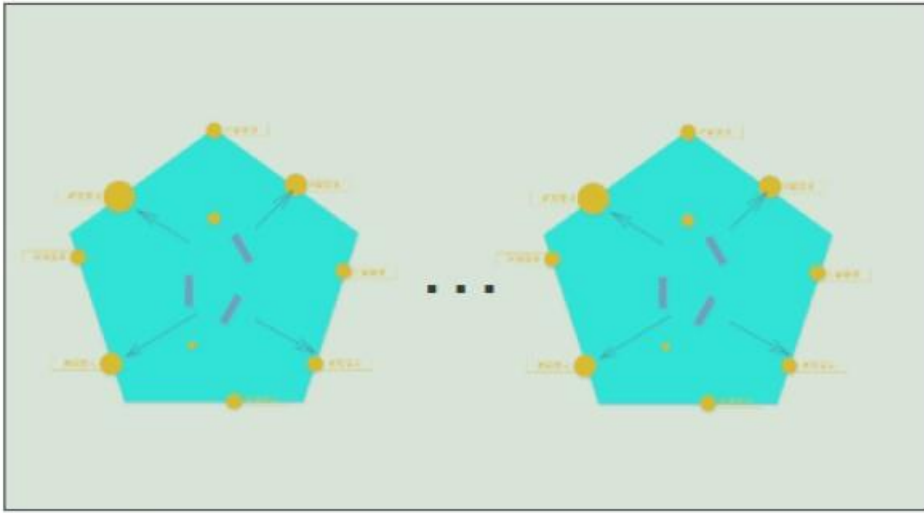
NTFM



NTFM

NTFM

Separation to Capacity

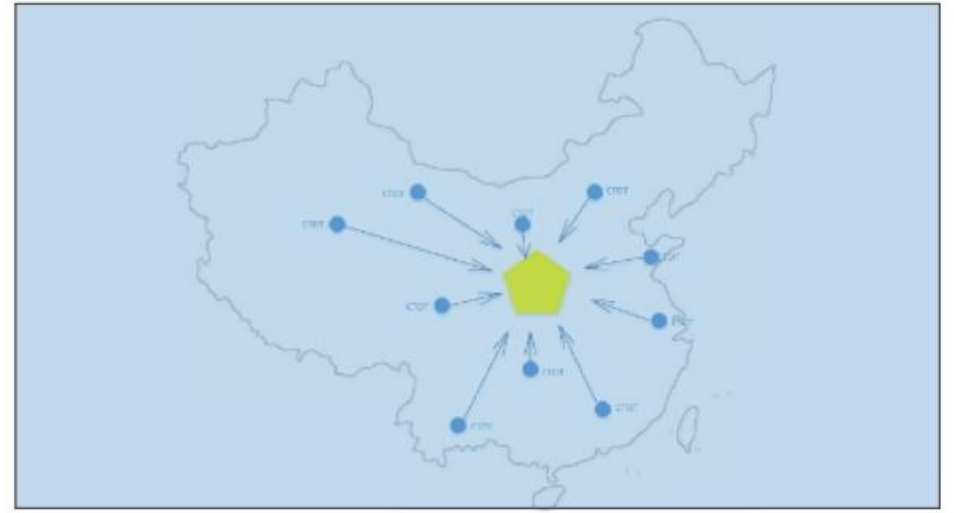


Isolated platform



MIT, CTO

Separation



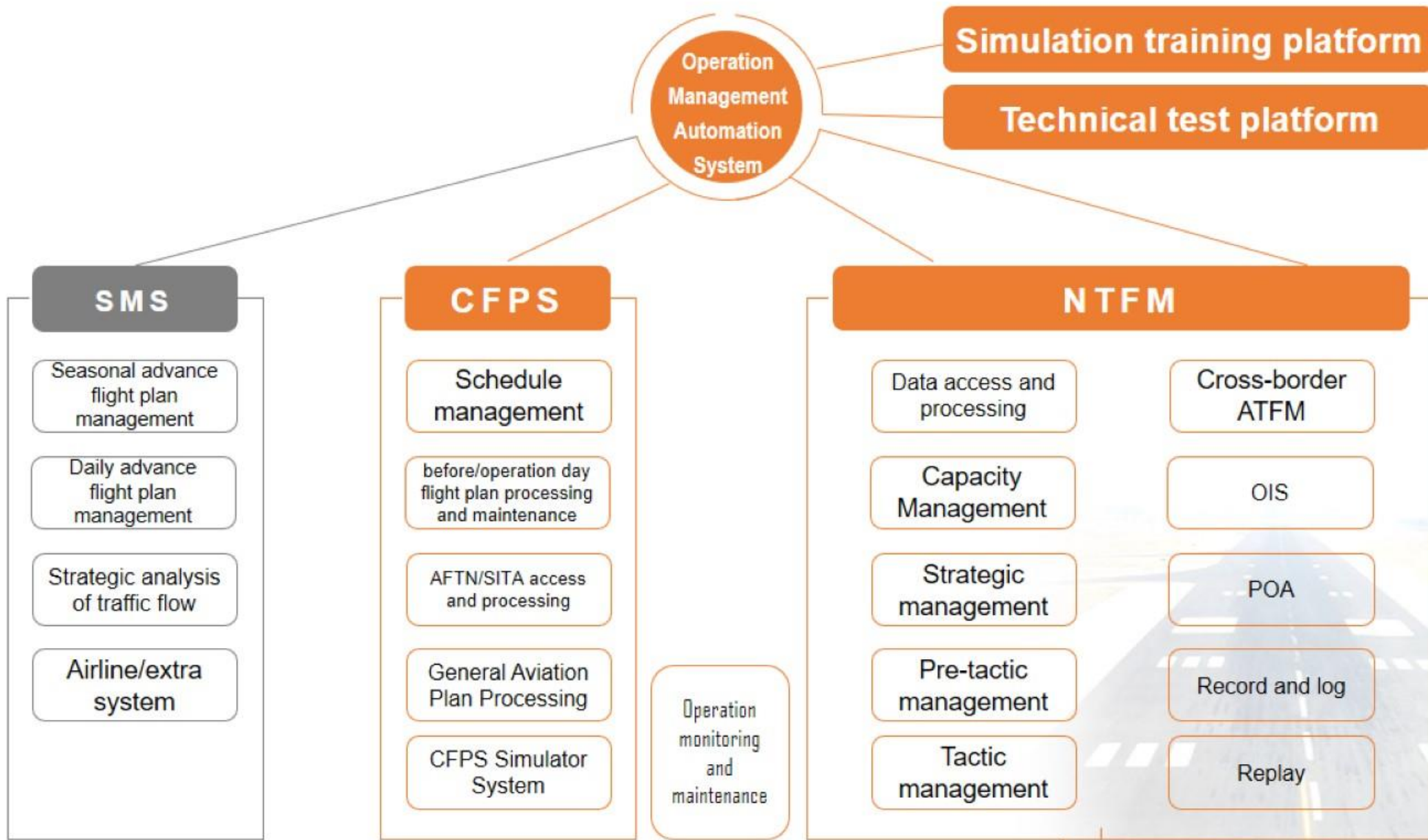
Integrated platform



GDP, AFP, GS, FMIT

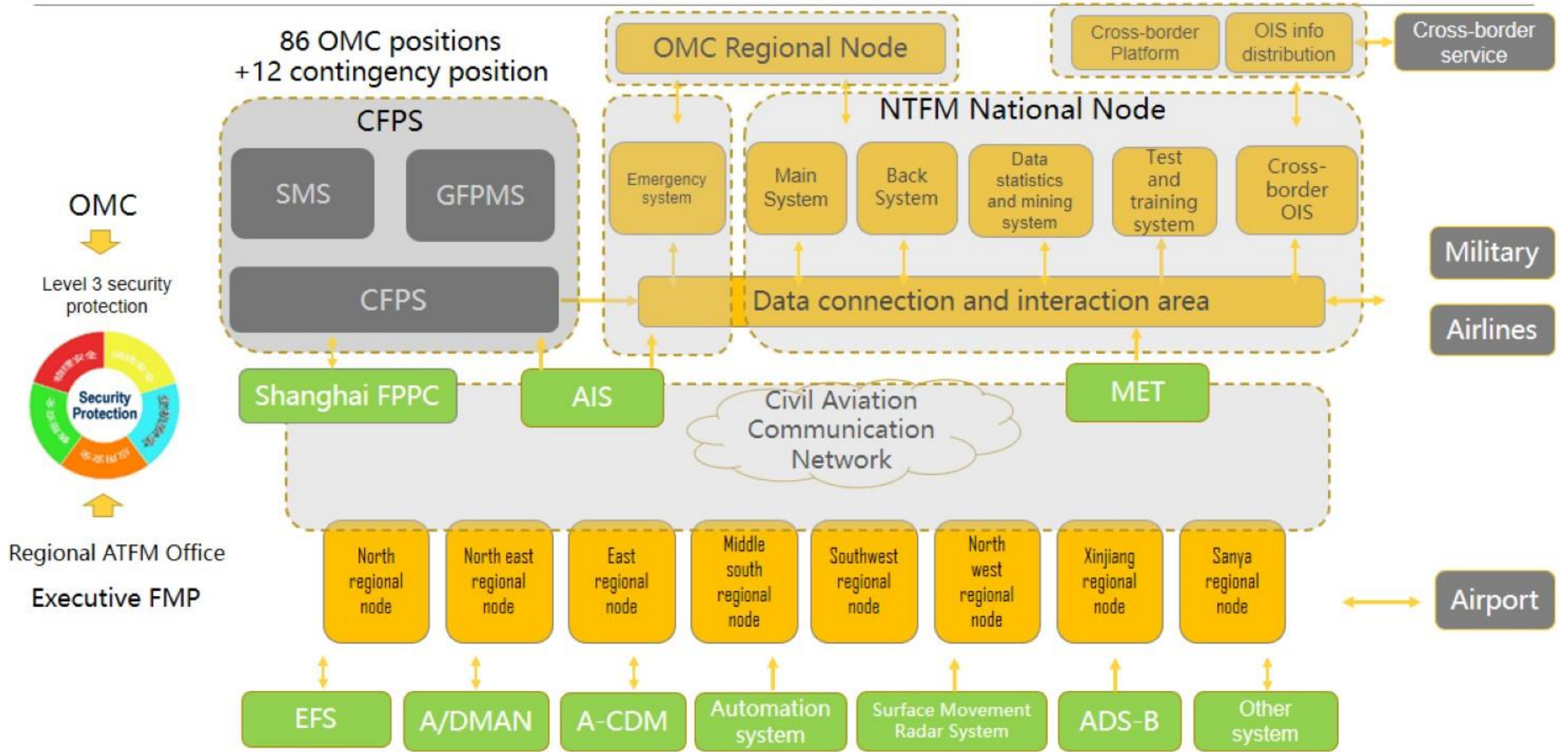
Capacity





Business Rules / Common Operating Procedure

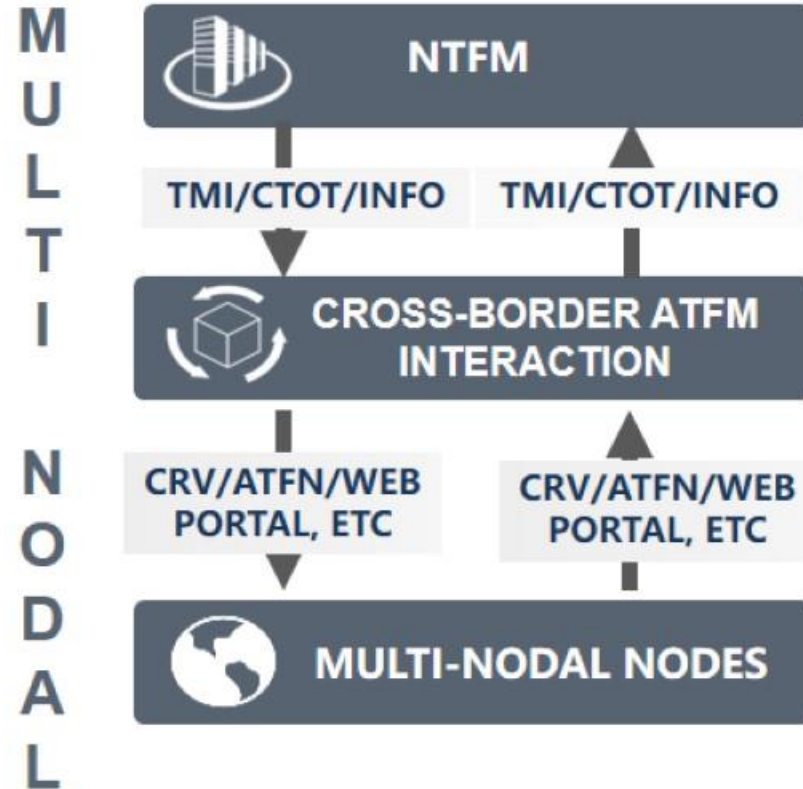
NTFM – System Structure



NTFM – Functionalities

Pre-flight plan		NTFM					
Seasonal plan		TSD	Schedule	TMI M.	Pre-tactical	AP WX	Airport interface
Regular pre-flight plan		DCB monitor	EFS mini	Message M.	Meeting platform	WX dBz	Airline interface
Pre-flight configuration		Daily monitor	Remedial FP	CDM Slot M.	Post analysis	Replay Tools	Strategy
		Operate Moni	Capacity M.	ADP/MDRS	Statistics	Log analysis	ECR/PCR
		Big data	Parameter M.	Event M.	AIS data	FEA/FCA	Authority M.
		ESMAN	OIS	Cross-border	Online Chat	Maintenance	Airspace data
		FP M.	Radar track	4D	Flight update	WX data	Strategic Ser.
		Traffic Predict	Op. process M.	DCB M.	Simulation	TMI M.	Replay Ser.
		Slot algorithm	AIS M.	Cross-border	Esman Cal.	Log M.	System Ser.
IFPS							
Schedule	Pre-FP						
Route check	Telegraph						
AIS data	statistics						
Error warning	GIS						
Data check	Seat setup						
Log info	Permissions						
Environment	General Aviation						

NTFM – Functionalities



NTFM – Interface



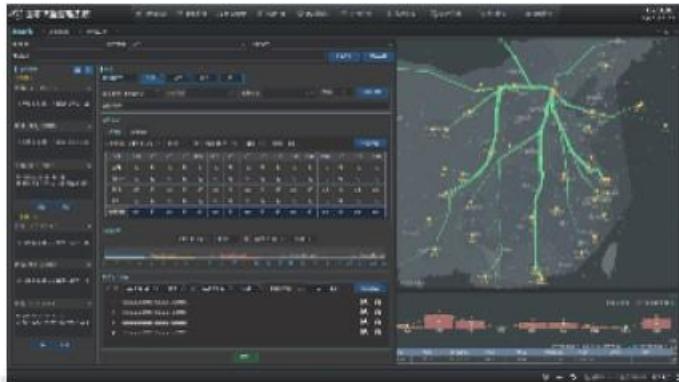
TSD



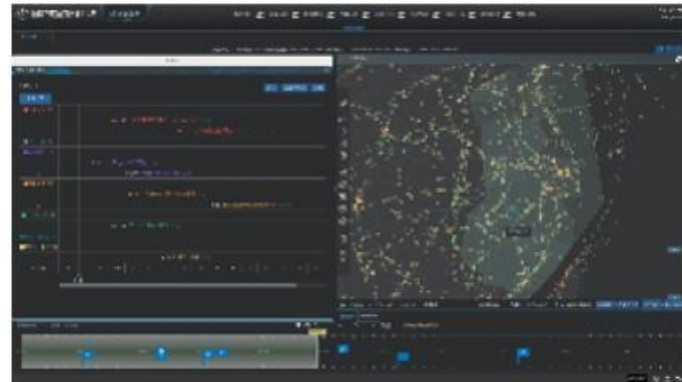
Pre-tactic simulation



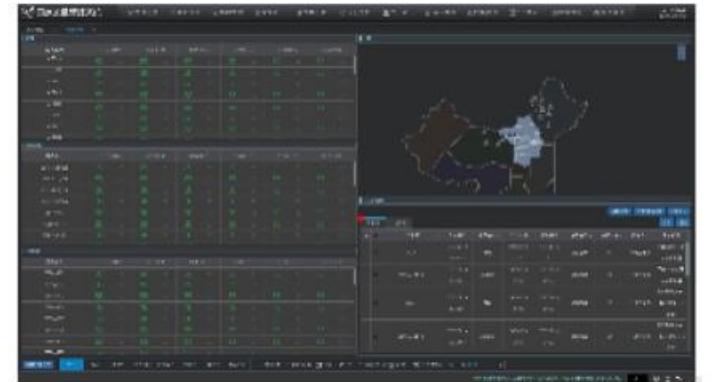
ATFM measure evaluation



GDP

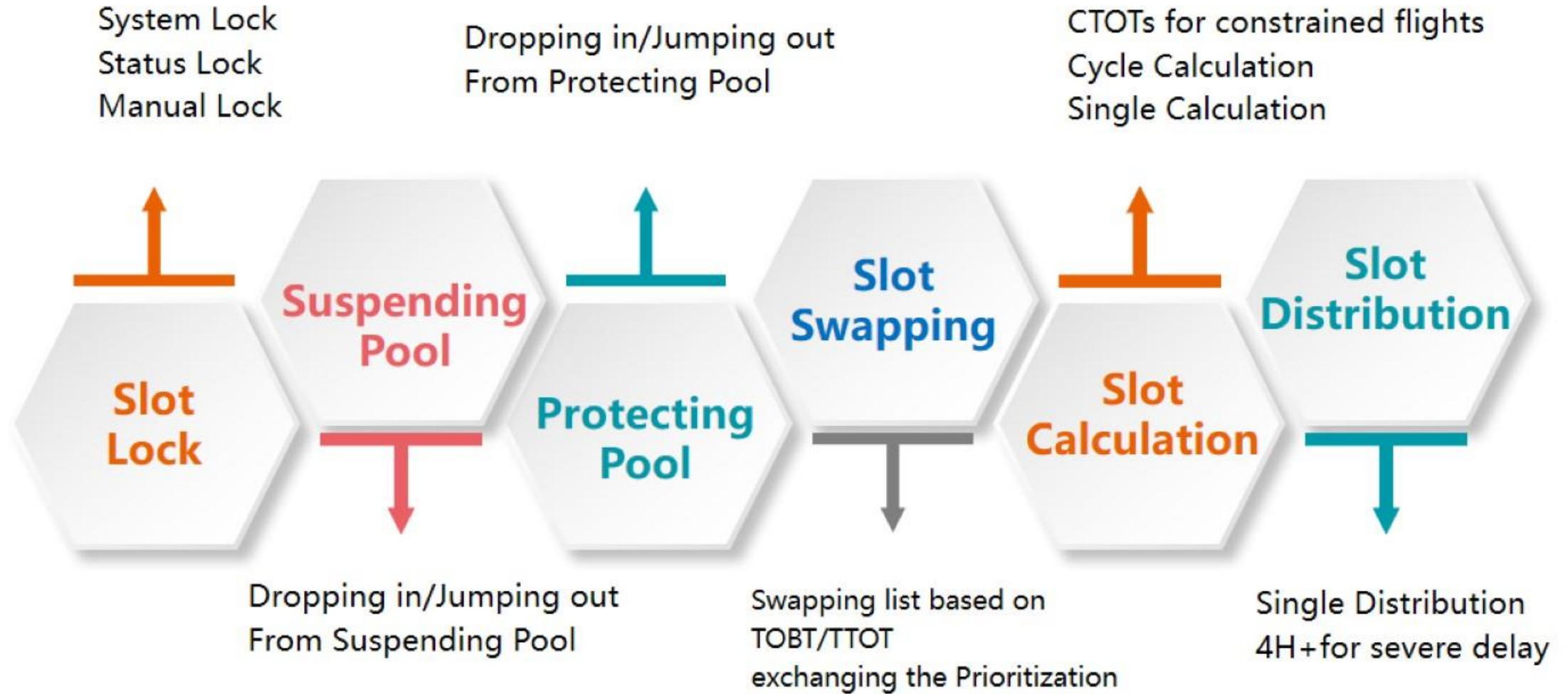


POA



Capacity management

NTFM – Business rules/COP





/03

Action By the Meeting



one Sky, one Dream

A white ceramic cup filled with tea, sitting on a matching saucer. A teabag is in the cup, and a spoon lies on the saucer. The cup and saucer have a decorative pattern of small green leaves and white dots. The scene is set on a dark wooden table with a wooden chair back visible in the background. A purple banner with white text is overlaid on the image.

Any question?



THANKS

Thanks for your attention

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