

# DFS World Webinars Vol. 2

1 June 2021

## R&D with NRIEE on Trajectory Based Operations

Hans de Jong, DFS Aviation Services



DFS Aviation Services



DFS Deutsche Flugsicherung

DRONIQ 

# Agenda

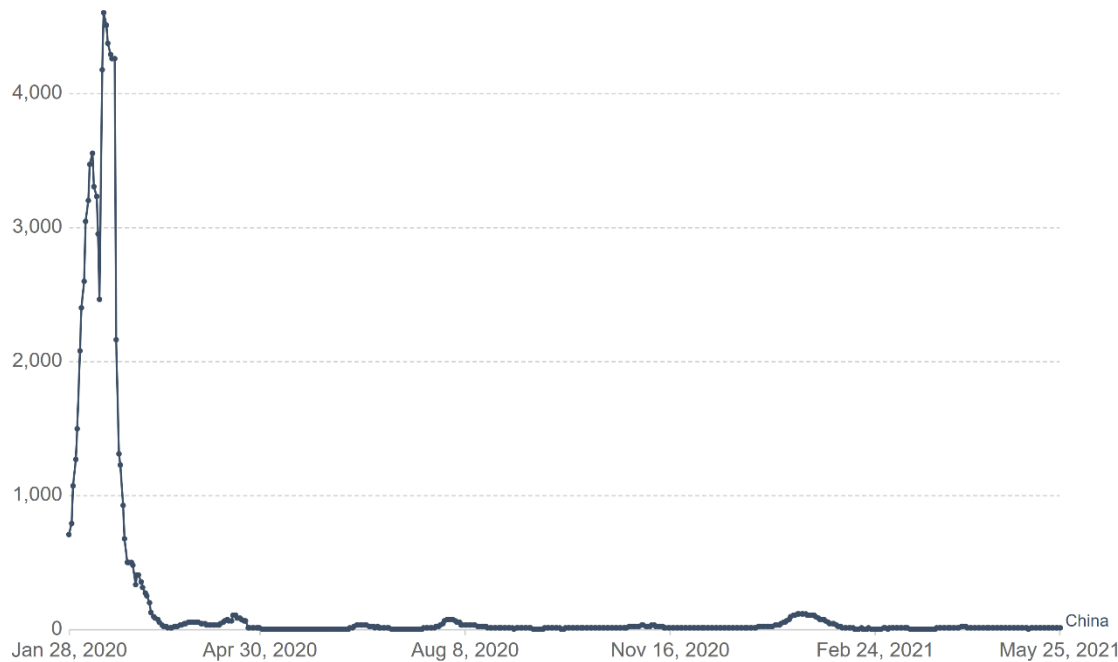
- ① The present situation in China**
  - 1.1 COVID-19
  - 1.2 Recovery of Air Traffic
  - 1.3 Global Developments in Air Traffic
  
- ② Cooperative R&D project with NRIEE regarding Trajectory Based Operations**
  - 2.1 Context and Focus of the Project
  - 2.2 Organisations in the Project

THE PRESENT SITUATION IN CHINA

# COVID-19

## Daily new confirmed COVID-19 cases

Shown is the rolling 7-day average. The number of confirmed cases is lower than the number of actual cases; the main reason for that is limited testing.



Source: Johns Hopkins University CSSE COVID-19 Data

CC BY

## Confirmed cases / deaths

All Time:  
102,905 / 4,846

Past Day:  
15 / 0

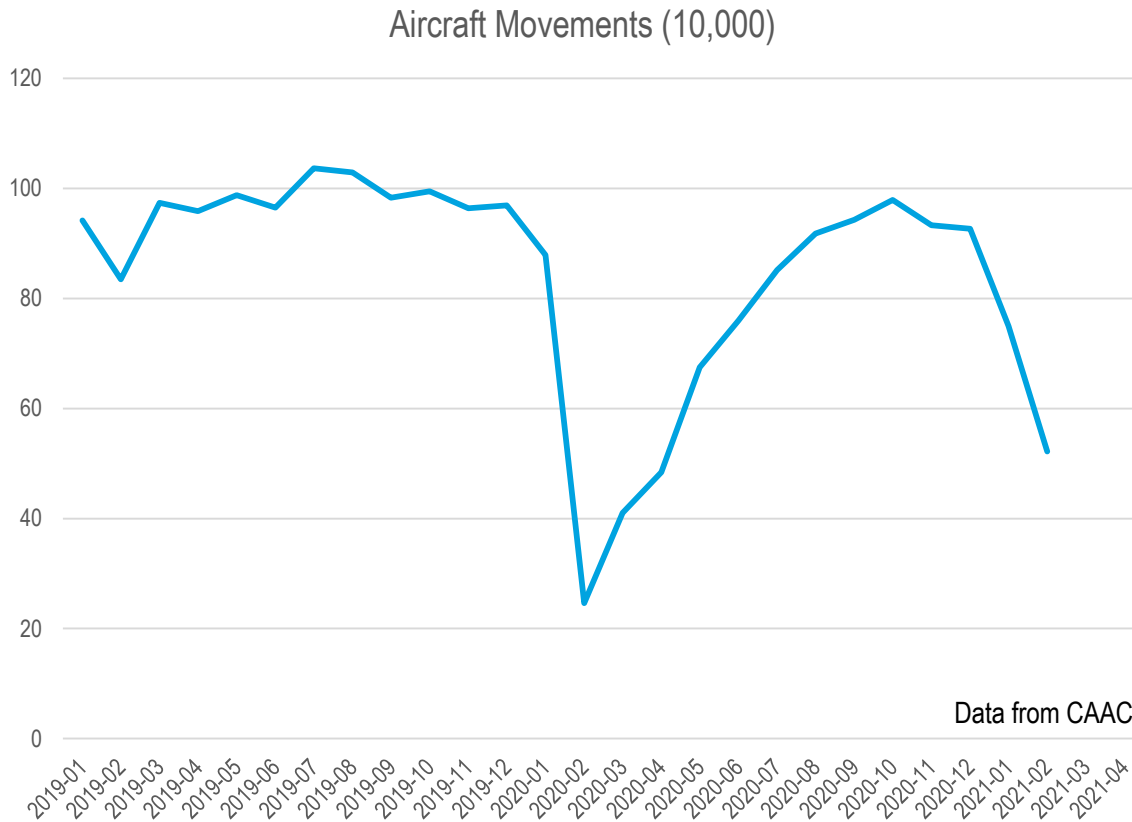
Past Week:  
121 / 0

Past Month:  
521 / 1

<https://coronavirus.jhu.edu/region/china>, 2021-06-26

THE PRESENT SITUATION IN CHINA

# Recovery of Air Traffic



## Civil IFR flights

April 2021:

Domestic	414,821
Terminating in China*:	24,485
International Overfly:	10,460

April 2019:

Domestic	363,328
Terminating in China*:	88,625
International Overfly:	32,796

\*Including Hong Kong & Macao

Courtesy ATMB



THE PRESENT SITUATION IN CHINA

# Global Developments in Air Traffic

2019 Total passengers enplaned and deplaned, passengers in transit counted once, ACI

1	Atlanta (ATL)	110 531 300
2	Beijing (PEK)	100 013 642
3	Los Angeles (LAX)	88 068 013
4	Dubai (DXB)	86 396 757
5	Tokyo (HND)	85 505 054
6	Chicago (ORD)	84 649 115
7	London (LHR)	80 888 305
8	Shanghai (PVG)	76 153 455
9	Paris (CDG)	76 150 009
10	Dallas/Fort Worth (DFW)	75 066 956

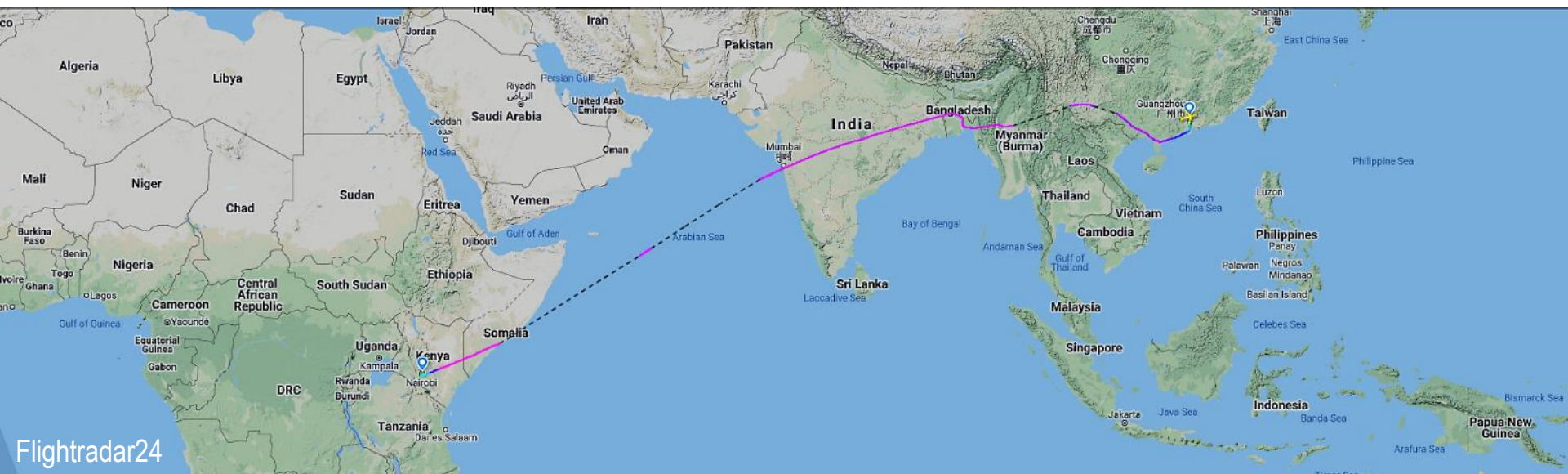
2020 Total passengers enplaned and deplaned, passengers in transit counted once, ACI

1	Guangzhou (CAN)	43 767 558
2	Atlanta (ATL)	42 918 685
3	Chengdu (CTU)	40 741 509
4	Dallas/Fort Worth (DFW)	39 364 990
5	Shenzhen (SZX)	37 916 054
6	Chongqing (CKG)	34 937 789
7	Beijing (PEK)	34 513 827
8	Denver (DEN)	33 741 129
9	Kunming (KMG)	32 990 805
10	Shanghai (SHA)	31 165 641

R/D PROJECT WITH NRIIE

# Context and Focus of the Project

- DAS and NRIIE cooperate in a program to improve long haul flights, e.g. Guangzhou-Nairobi



- The project focuses on R&D and operational expertise regarding Trajectory Based Operations for high density airspace near Guangzhou

R/D PROJECT WITH NRIIE

# Organisations in the Project



Nanjing Research Institute of Electronics Engineering

R&D organisation i.a. for ATM, with subsidiary supplying ATMS



DFS Aviation Services

Project Management, Workshop ATC Operations, Site Visit OCC



DFS German Air Navigation Services

R&D regarding TBO and FRA, Operational En-route Expertise



Ernst Schroeder Centre

Workshop Formal Concept Analysis



**Further questions?  
More information please?**

**Let us #stayconnected!**

**Dr Hans de Jong**  
**Chief Representative in Beijing**  
**DFS Aviation Services GmbH**  
[hans.de.jong@dfs-as.aero](mailto:hans.de.jong@dfs-as.aero)

 <https://www.linkedin.com/in/hans-de-jong-9370229/>



[www.dfs-as.aero](http://www.dfs-as.aero)