CAREC
Central Asia Regional Economic Cooperation Program

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# CAREC Aviation Cargo Study – Findings and Recommendations

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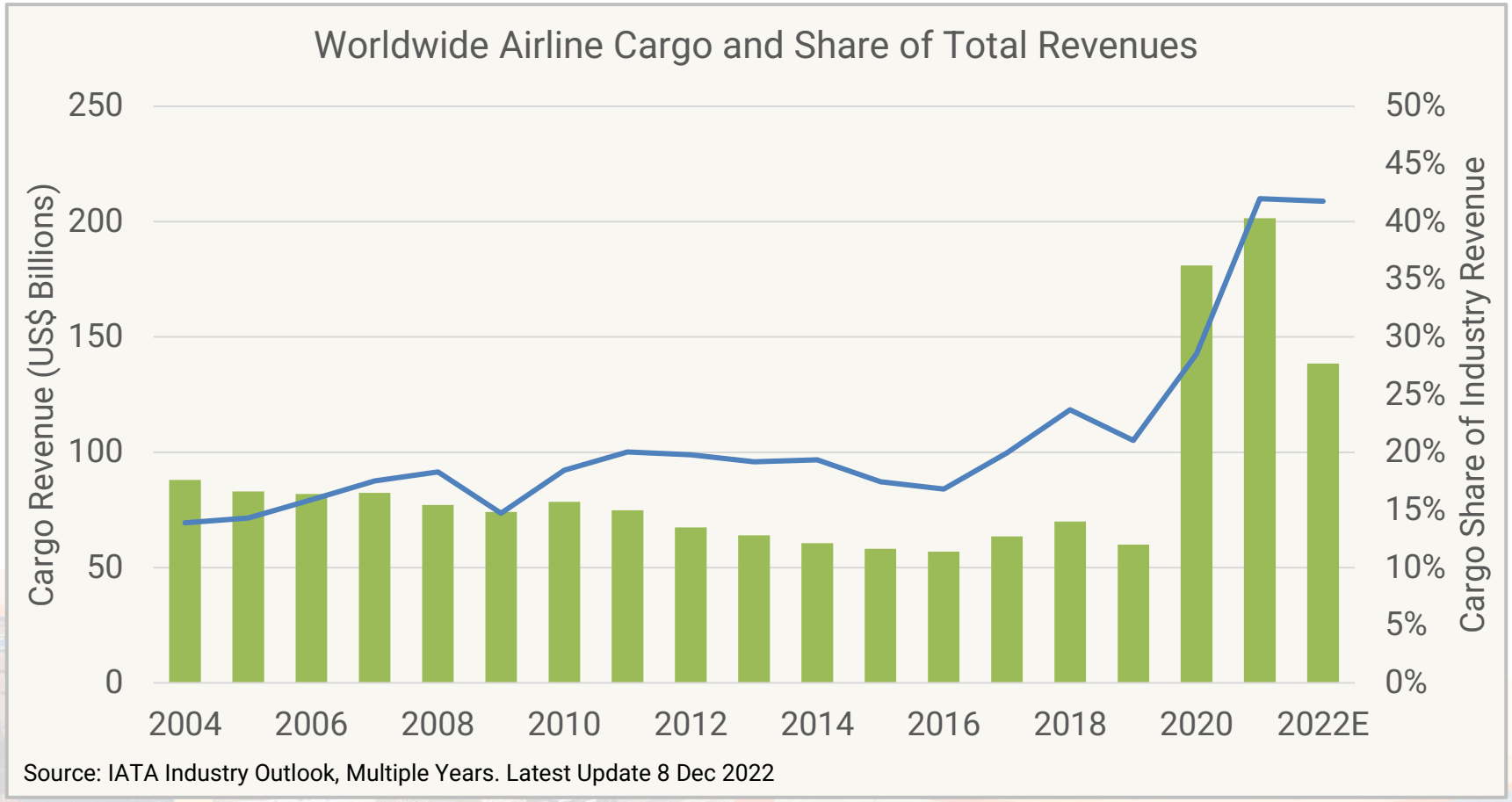
# OUTLINE

- Global Air Freight Market
- CAREC Air Freight Market
  - Air Cargo Traffic and Demand
  - Air Cargo Capacity and Connectivity
  - Freighter Technical Landings
- Opportunities and Constraints
  - Growth potential
  - Infrastructure
  - Governance
  - Further work

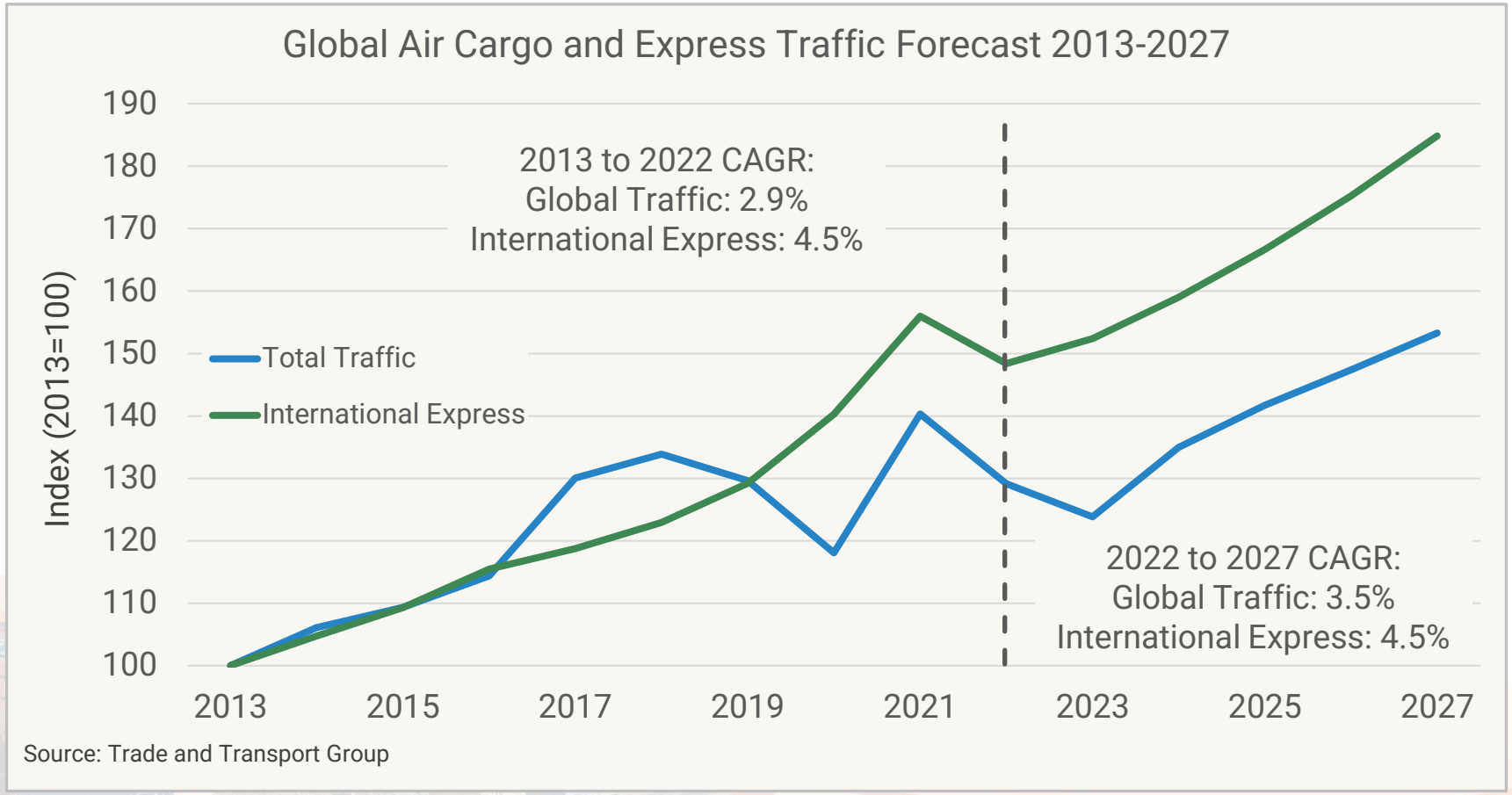
Importance of Cargo Revenues, Growth History and Outlook

# GLOBAL AIR FREIGHT MARKET

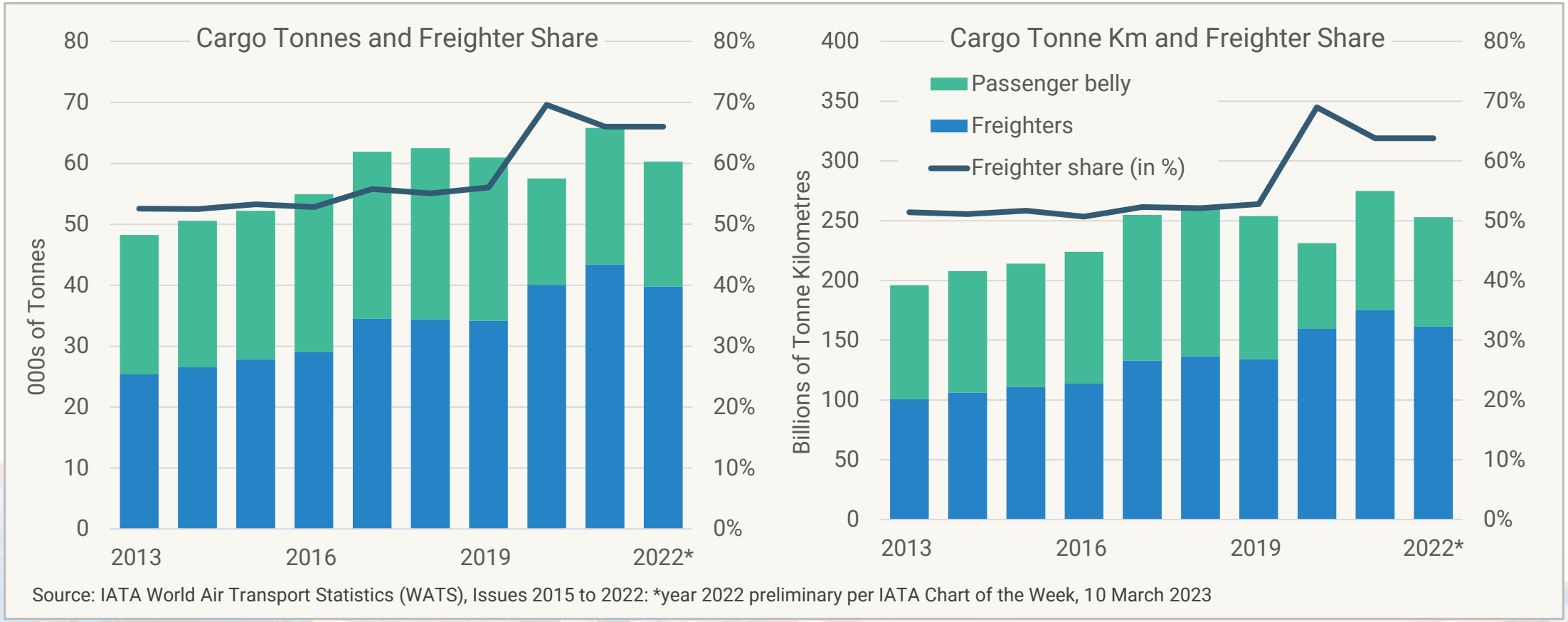
# Cargo revenues and the importance of air cargo to the airline industry surged in 2020 and 2021.



Global air cargo traffic contracted 8% in 2022, while international express traffic declined 4.9%. 2023 is also expected to be weak for the global air cargo business.

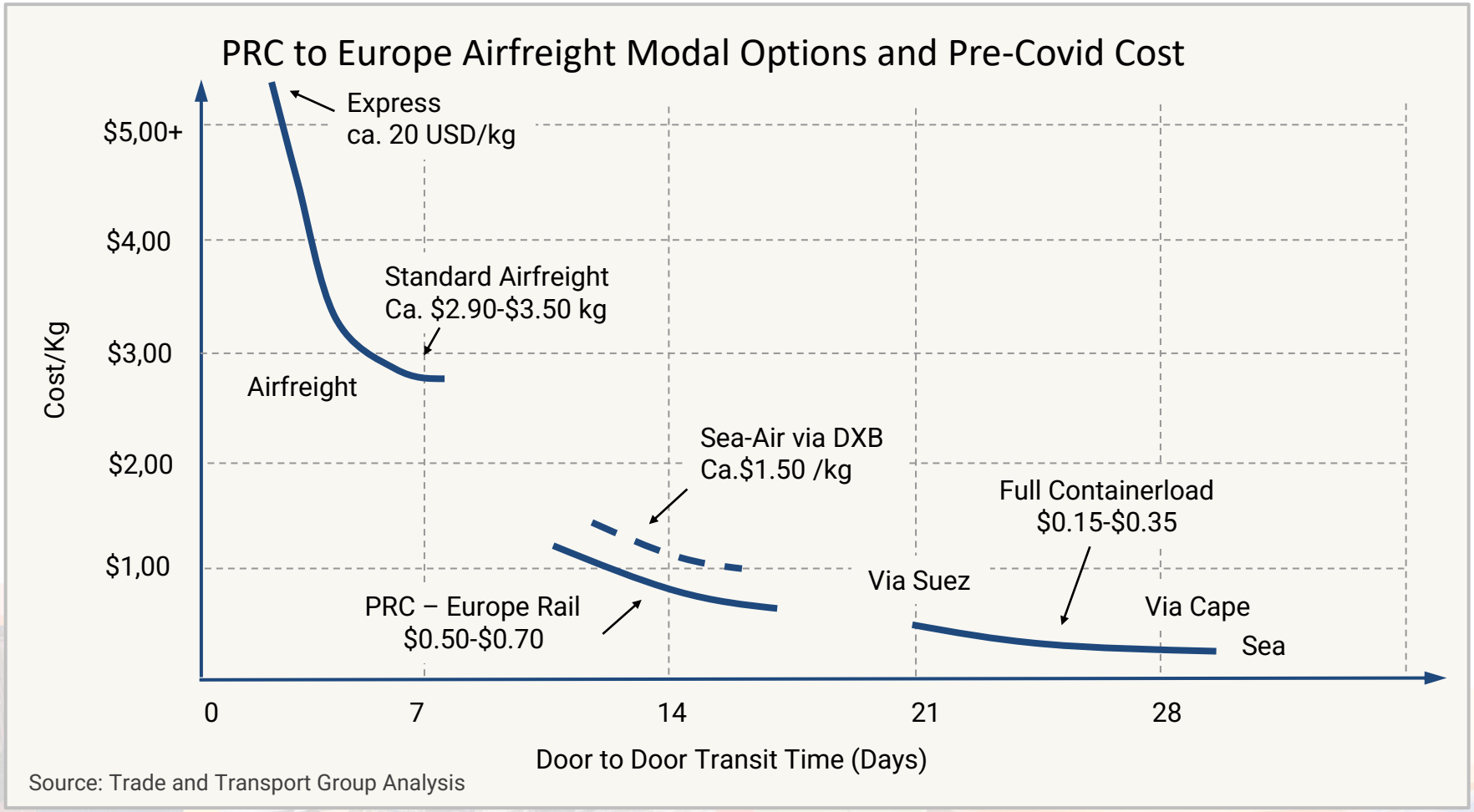


# Around half of global air cargo traffic is carried on freighters, but due to a massive loss of passenger belly capacity in 2020 – 2021 the freighter share increased to 70%.




Source: IATA World Air Transport Statistics (WATS), Issues 2015 to 2022: *year 2022 preliminary per IATA Chart of the Week, 10 March 2023

# Airfreight is the most expensive mode, but globally carries about 35% of the value of world trade.

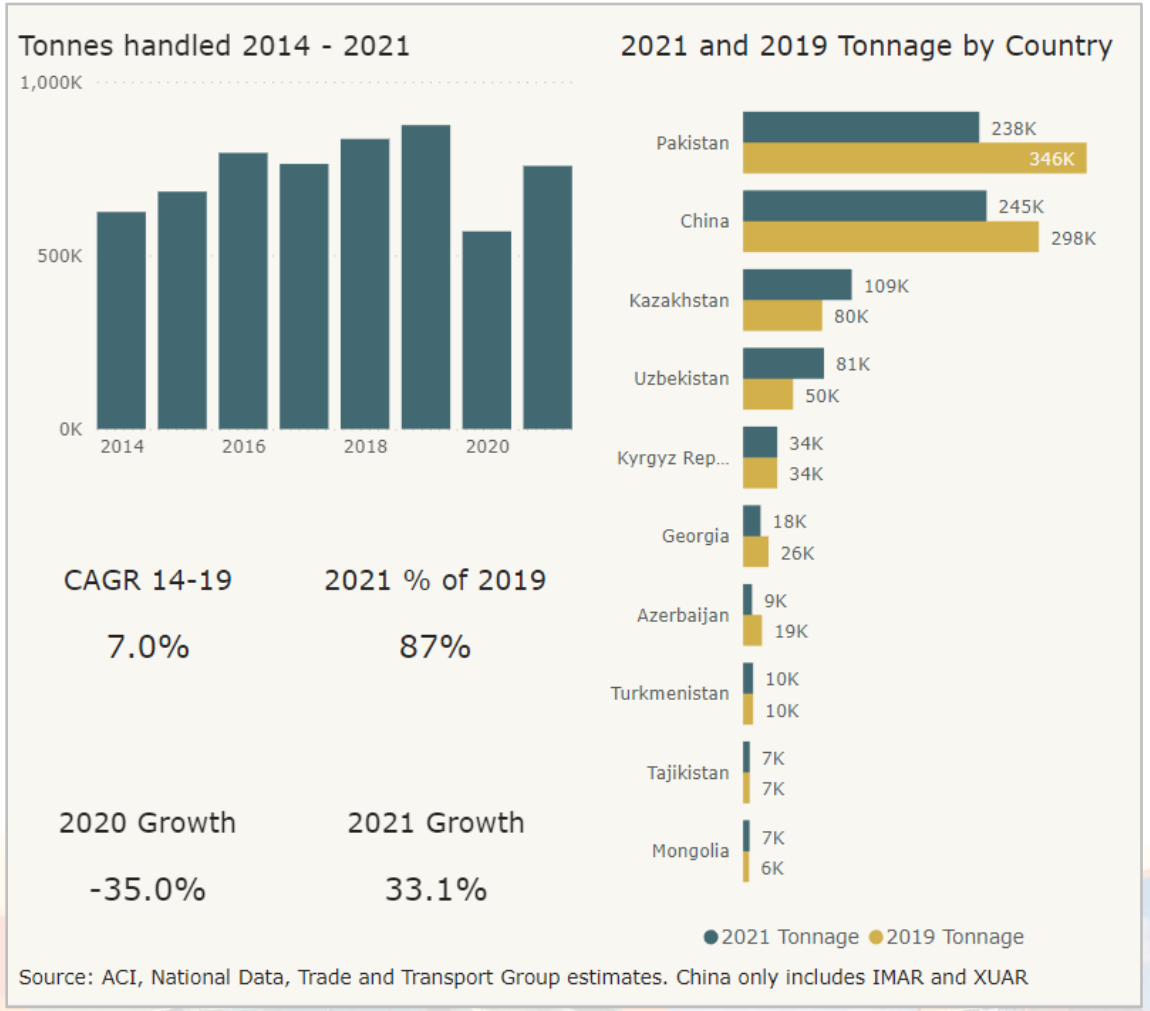


Traffic, Demand and Capacity

# CAREC AIR FREIGHT MARKET

# Total CAREC air cargo traffic handled was approximately 760,000 tonnes in 2021, compared to about 870,000 tonnes in 2019.

- Pakistan, PRC (XUAR and IMAR only), Kazakhstan, Uzbekistan and the Kyrgyz Republic account for over 90% of traffic handled in the region.
  - Pakistan along accounted for about 30% of CAREC traffic in 2021 and 40% in 2019.
  - XUAR and IMAR accounted for a further 30% in 2021 and 34% in 2019
  - Kazakhstan accounted 14% in 2021
  - Uzbekistan  accounted for 11% in 2021.
- 2021 traffic levels were at just under 90% of 2019 levels, with mixed performance across countries and airports.
  - PRC, Pakistan, Georgia and Azerbaijan, cargo volumes in 2021 were still significantly below 2019 levels
  - Volumes in Kazakhstan, Uzbekistan and Mongolia were higher than in 2019.
  - Kyrgyz Republic, Turkmenistan and Tajikistan were at similar levels to 2019



# With the exception of Pakistan and Mongolia, all other CAREC country level markets are import rather than export focused – both in terms of tonnage and value.

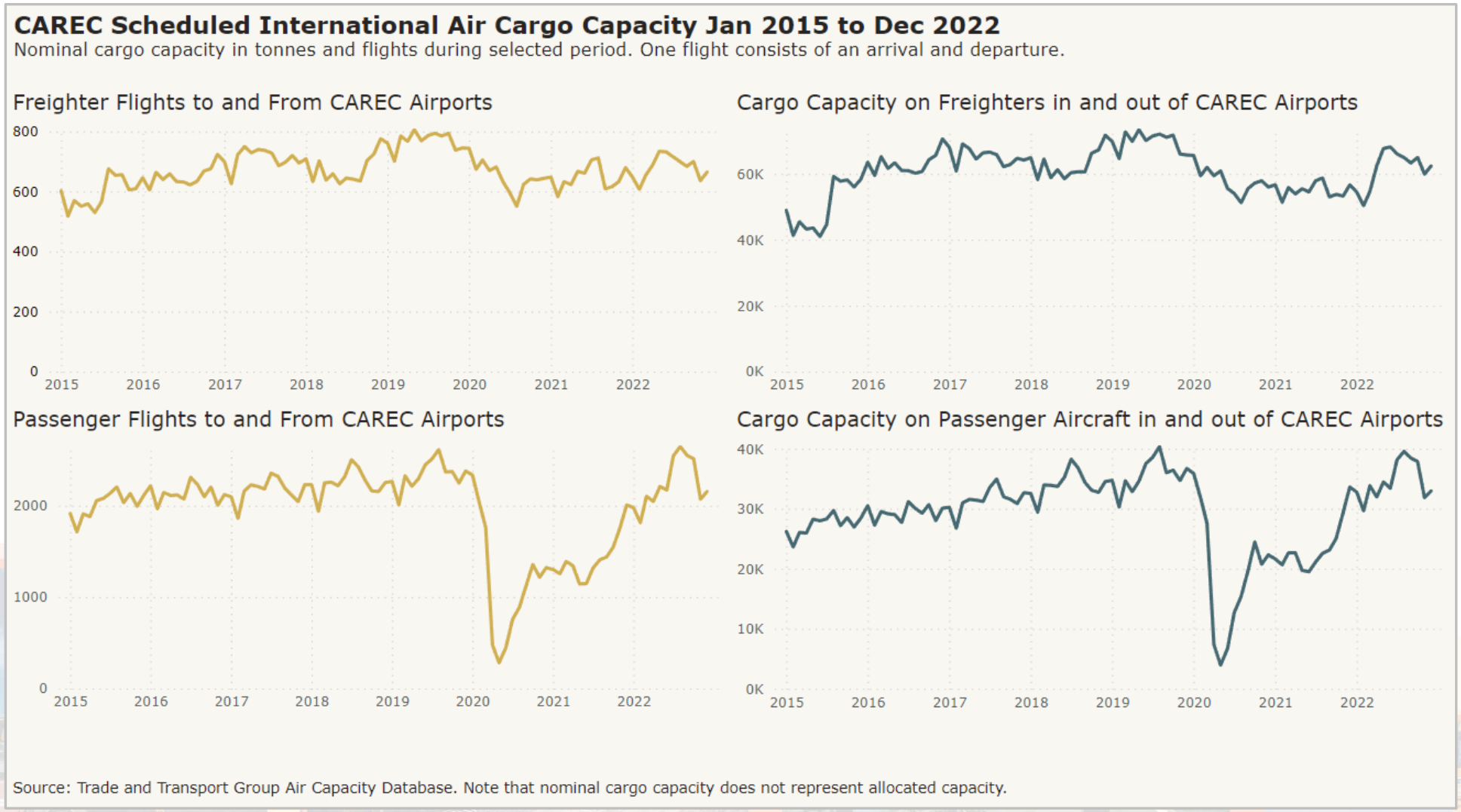
| Market | Description | Trading Partners | Commodities |
|---|---|---|---|
| Five (5) Central Asian Republics, Azerbaijan and Georgia | Highly imbalanced with import volumes of airfreight related goods around 3-5 times as high as exports. | Europe, PRC, Korea, Japan, Turkey and the United States | Imports are a mix of industrial equipment, household goods, electronics, beauty products, apparel. |
| Pakistan | Air exports around 200,000 tonnes per annum, imports around 150,000 tonnes per annum. | Imports: PRC, Japan, Southeast Asia, Europe, US. Exports: Europe, US, PRC and other points in the Middle East and South Asia. | Exports are geared around apparel and footwear, household goods and food. Imports a mix of industrial equipment, electronics, consumer goods, textiles raw materials and food. |
| Mongolia | Small air cargo market with about 6000 tonnes per year total, about two thirds of which are imports and a third exports. | PRC, Korea, Japan, Europe, UK, but also Turkey and India. | Imports a mix of products including industrial equipment, pharmaceuticals, computer and electronics and other consumer goods. Exports focused around textile raw materials, apparel and footwear, and some food exports. |
| PRC (XUAR/IMAR) | The XUAR/IMAR air cargo markets are primarily focused on domestic PRC. | XUAR international trade is dominated by trade with neighbouring Kazakhstan and Kyrgyz Republic. | Not modelled as very little international air cargo flows from IMAR and XUAR that fall within the scope of this study. Also, Chinese province level trade data does not allow analysis at a mode level. |

# Cargo capacity in and out of the region is significantly higher than region specific air cargo demand.

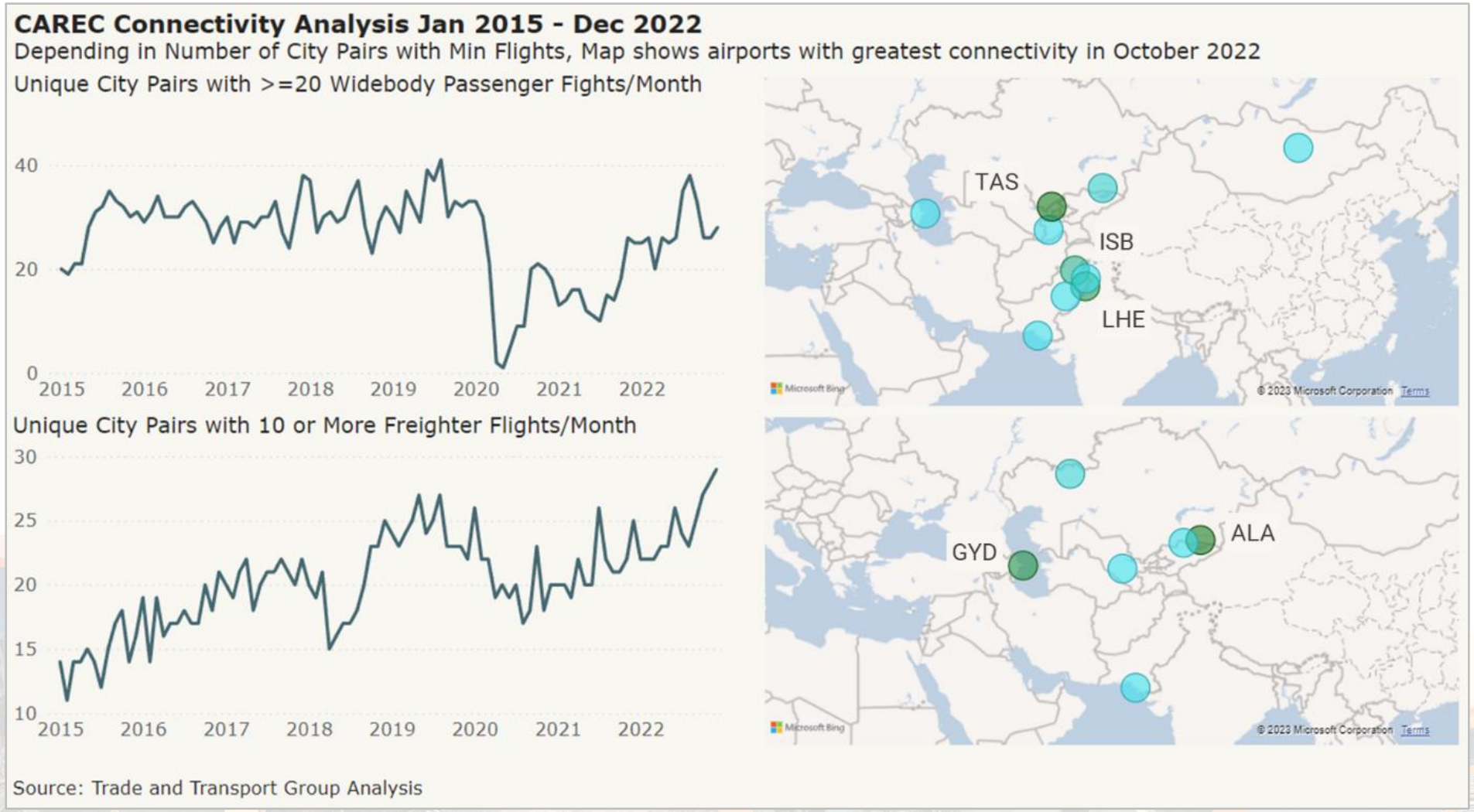
- Nominal all cargo and passenger belly cargo capacity through the region is about 1.4 million tonnes per year, two thirds of which is on freighters
  - 2020 saw a large COVID related drop in passenger capacity. Pre-COVID levels were reached in mid 2022.
  - Freighter capacity through the region did not experience a significant drop in 2020 and 2021 as freighter operations between Europe and Asia continued.
- Scheduled international capacity into the region on freighters is approximately 60-70,000 tonnes per month, nominal cargo capacity on widebody passenger flights is around 40,000 tonnes.
- Around half of international passenger flights within the region take place on narrowbody aircraft with only limited bulk cargo capacity.
- Although this adds another 20,000 tonnes per month of capacity, with the exception of routes out of Pakistan carriers generally make little use of this type of capacity.

- Approximately 25 airports within the region have or had scheduled air cargo services within the last three years.
  - Around half of the region's freighter capacity has operated through Baku (GYD), which is the operating base and hub for the region's main cargo carrier Silkway West.
  - Bishkek (FRU), Almaty (ALA), Navoi (NVI), Ashgabat (ASB) have also seen substantial freighter operations.
  - Most of the operations through the above mentioned airports represent through services or hub operations and are less geared towards local traffic.
- The key carriers with substantial all cargo operations through the region include Silkway West/ Silk Way Airlines, Turkish Airlines, Cargolux , Qatar Airways, Hong Kong Air Cargo, Lufthansa, Korean and SF Airlines and YTO Airlines.
  - Most of these operations are part of international long haul operations between Europe and Asia, but airlines such as Turkish Airlines have developed a strong presence in the Western part of the region
  - In the case of PRC based carriers such as SF Airlines, YTO Airlines and China Postal Airlines the focus is on domestic Chinese flights to Xinjiang and Inner Mongolia.

# By the end of 2022, capacity had recovered by was still below 2019 levels.



# Freighter connectivity is higher than in 2019, but passenger belly capacity connectivity has not yet reached pre-pandemic levels.

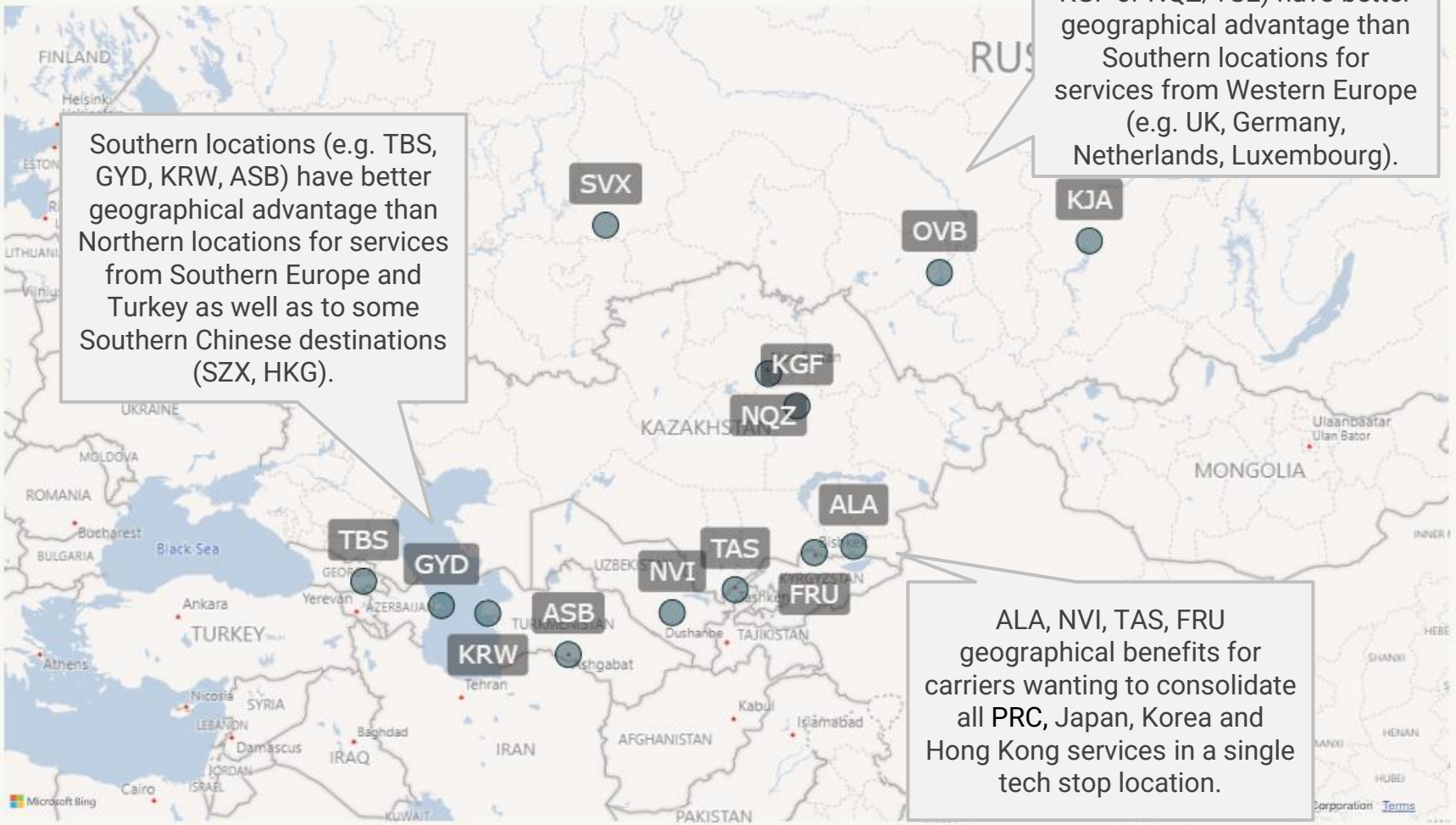


# A number of all cargo operators with services between North East Asia and Europe utilise airports within the CAREC region for technical landings and fuel stops.

- Cargo airlines utilise the opportunity for technical landings for a number of reasons, including:
  - Increase in available payload on flights to and from Northeast Asia, particularly Eastern and Southern PRC (including Hong Kong), Japan and Korea.
  - Fuel price differentials to home base and destination markets
- Since 2020 carriers have also been using locations in Central Asia and Siberia to avoid the need for flight crew quarantine in PRC, specifically by performing crew changes in locations such as Almaty or Novosibirsk to allow a single crew to perform a return leg to PRC and then a second crew to perform the onward flight to/ from Europe.
- Particularly Novosibirsk (OVB) saw a massive consequential increase in cargo only movements from around 4300 in 2019 to 10,000 in 2020 and 12,500 in 2021.
- Much of the technical stop activity via the region has ceased due to the ongoing Russia-Ukraine war and the inability for Western and many Asian carriers to utilise Russian airspace.
- Within the CAREC region, particularly Almaty (ALA), Baku (GYD), Tbilisi (TBS), Tashkent (TAS), Navoi (NVI) attract regular and substantial cargo movements.
  - Almaty (ALA) has the largest mix of carriers utilising the airport while other operations are often limited to a number of dominant carriers such as Navoi (Korean Air),
  - Other destinations with varying levels of usage over the past 5-10 years include Bishkek (FRU), Türkmenbashi (KRW), Karaganda (KGF), Astana/Nur Sultan (TSE/NQZ), Ashgabat (ASB) and within Russia also Krasnoyarsk (KJA) and to a certain extent also Yekaterinburg (SVX).
- Locations that offer a mix of geographical advantage, airport facilities, crew accommodation facilities and attractiveness as a destination, commercial cargo opportunities and fuel price advantage are more likely to attract long term technical landing related business.
- Locations in PRC (XUAR/IMAR), Pakistan and Mongolia are not geographically suitable as technical stop locations between Asia and Europe.

## CAREC and Siberian Tech Stop Locations

Label shows airport code




Source: Trade and Transport Group analysis of airport data and carrier operations

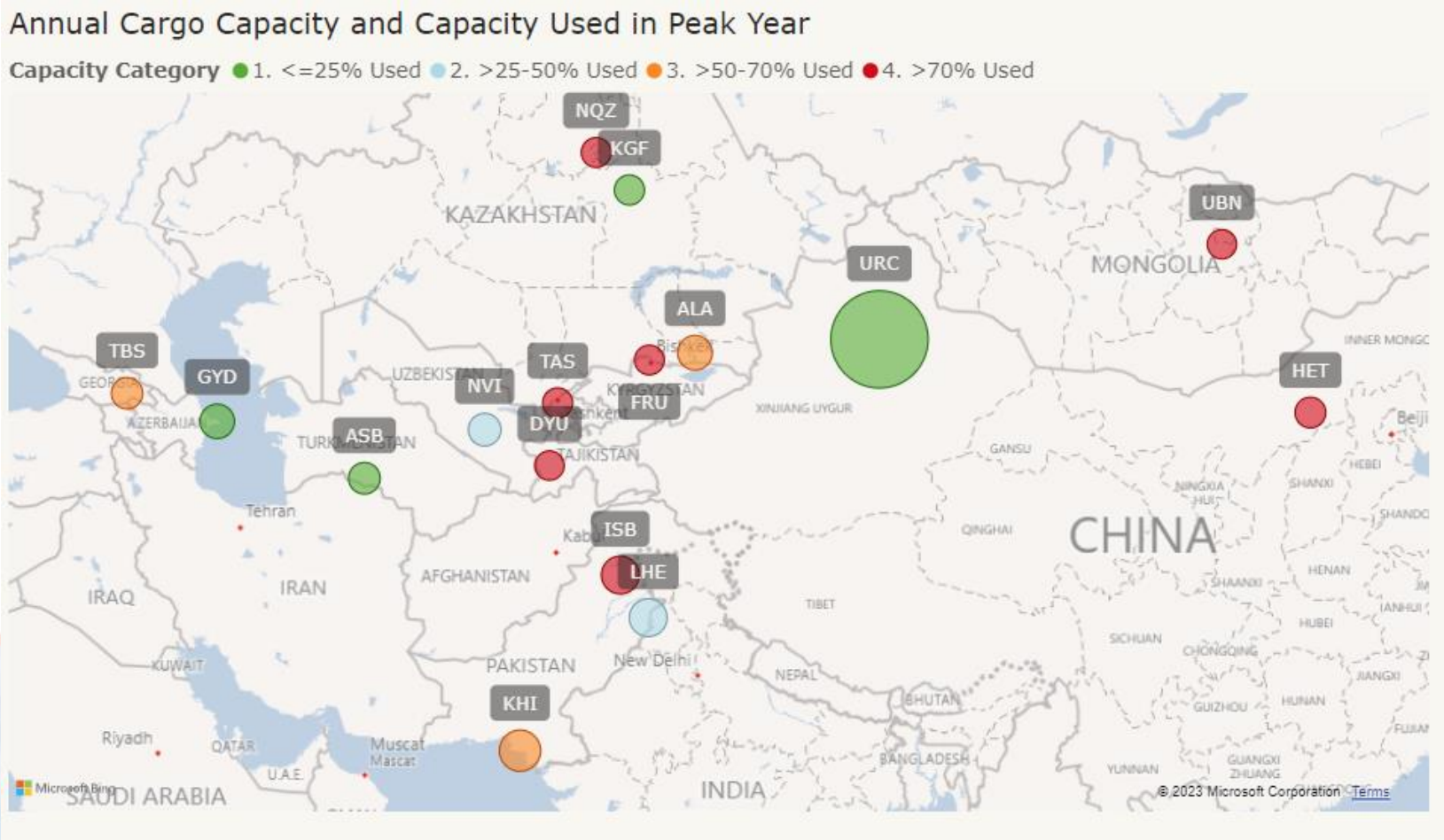
Key Findings and Further Work

# GROWTH OPPORTUNITIES AND CONSTRAINTS

# In general, we find that the CAREC air cargo market is not achieving its full potential.

- The main difficulty for landlocked developing countries is to generate enough traffic to attract recurrent air freight services that are both frequent and competitively priced
- Permitting free competition, or “open skies,” for air cargo services can be significant but not sufficient if most cargo is transported as small shipments in passenger aircraft.
- Also important is expanding the role of consolidators, especially the large integrators such as the international freight forwarders specializing in air cargo as well as local forwarders with international connections.
- Air cargo facilities across the region vary significantly in terms of capacity utilisation, equipment and systems.
- Other infrastructure constraints can arise out of insufficient ramp space, runway length to support large widebody aircraft, and airport access issues.
- Many of these issues are country specific rather than common across the region.
  - The forthcoming report provides country specific detail and findings.

# Our analysis of cargo terminal capacity and stakeholder consultation has identified infrastructure constraint in multiple CAREC airport locations.




Demand vs Warehouse Capacity

Constrained Today:
Islamabad (ISB)
Tashkent (TAS)
Dushanbe (DYU)
Ulan Bator (UBN)
Bishkek (FRU)

Potential Future Constraints
Tbilisi (TBS)
Almaty (ALA)
Karachi (KHI)

Not Constrained
Urumqi (URC)
Baku (GYD)
Lahore (LHE)

# Future opportunities for CAREC air cargo services and facilities .

- There exists several differing arrangements to airport management throughout CAREC which flows onto arrangements for air cargo.
- Some airports have chosen a PPP pathway for both infrastructure and operating rights whereas others are retained as Govt. owned and operated entities.
- Post Covid traffic recovery at airports in CAREC may signal the need for expanded infrastructure developments which requires evaluation both at Govt. and where evident the private sector partners. This may also allow new JV or PPP arrangements to flourish under the correctly defined terms of approach and contractual transaction structures.
- FURTHER evaluation of PPP / JV opportunities to define by location those air cargo centers that would benefit from private sector investments.
- Aging infrastructure and slow take-up of digital transformation for processing of air cargo shipments at some locations could limit the current and future potential of attracting and retaining traffic.
- FURTHER evaluation of current operational process and mapping the efficiency of the supply chain at CAREC air cargo centers would elaborate the opportunities for technical assistance to modernize systems at the interface of both statutory and private sector air cargo handling. The objective would be to create a more competitive air cargo center with more efficient flow of traffic receival, delivery and transit.

# Future opportunities for CAREC air cargo services and facilities .

- There was evidence that cold supply chain operations at some air cargo centers was performing well whereas at others the handling, storage and delivery was below international best practice.
- The potential for expanding the traffic for temperature-controlled goods including agricultural exports had been a repeated theme throughout CAREC air cargo centers and stakeholders.
- FURTHER evaluation by location of air cargo centers capacity and efficiency for handling cold chain products would elaborate the opportunities for technical assistance to modernize systems at the interface of both statutory and private sector air cargo handling for cold chain products. The objective would be to create a more competitive air cargo center with more efficient flow of traffic receival, delivery and transit.
- The potential for enhancing and expanding air cargo inspection equipment would increase efficient and reduce the processing time for air cargo. It would also add revenue by more efficiently defining declaration of duty levels of goods.
- FURTHER evaluation by location of air cargo centers to map capacity and efficiency of the documentation and inspection of air cargo. Modern X-ray scanners specific for cargo allow shippers to build their palettes off-airport and to load them on the aircraft within a few hours.

# Future opportunities for CAREC air cargo services and facilities .

- Airlines across the region have been positioning themselves for growth by committing to new or additional freighter capacity.
- However, there are differences across the region:
  - There have been significant developments in Georgia, Azerbaijan, Uzbekistan, and Mongolia.
  - However, in many other markets cargo capacity and connectivity is primarily provided by carriers from outside the region.
- FURTHER work could look at which measures could stimulate the establishment and addition of CAREC based air cargo capacity.
- While markets are recovering post pandemic, changes to the geopolitical situation require further work on forecasting demanding to and from as well as via the region.
- While the study team did not identify major Governance issues, there was evidence that there is a need for integrated long-term freight and logistics plans that take a multimodal approach to:
  - Forecasting freight and logistics demand
  - Planning and location of infrastructure
  - Terminal network access
  - Noise, community and emissions impacts