

# Air Cargo During the COVID-19 Pandemic: The Airport Perspective from O'Hare

CMAP FREIGHT COMMITTEE PRESENTATION

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# CHICAGO DEPARTMENT OF AVIATION

The City of Chicago owns and operates both O'Hare and Midway, administered by the Chicago Department of Aviation (CDA) with long-term airline agreements in place

O'Hare and Midway, normally with an annual operating budget of over \$1.5 billion, are fully self-sustained enterprises

Nearly 50,000 employees work at both airports on a regular day, adding up to \$50 billion per year to Chicago's economy

In 2019, Over 100 million passengers and over 1.1 million flights annually between O'Hare and Midway with three hubs (UA, AA, WN), 50 international airlines, and 25 more cargo airlines

**NO STATE OR LOCAL TAXPAYER DOLLARS ARE USED!  
(GARBS, RENTS & FEES, PFCS & FAA AIP GRANTS)**



# CHICAGO HAS LONG BEEN A CENTER OF COMMERCE BEFORE COVID-19

U.S. RAIL FREIGHT TRAFFIC INTENSITY



U.S. MANUFACTURING PLANTS AND DISTRIBUTION CENTERS



## A GLOBAL ECONOMIC (AND CULTURAL) CITY

- Strong DNA for business and transportation thanks to central geography and massive infrastructure
- Waterways first → then handling over 50% of nation's rail freight → our airport system built around this legacy
- Today over one-third of U.S. market is within a one-day truck drive of O'Hare → I-55, I-57, I-80, I-88, I-90, and I-94

# PREMIER NATIONAL AND INTERNATIONAL CARGO HUB AT O'HARE

- In 2019, about 1.8 million tonnes of cargo handled annually (record levels over past couple of years)
- O'Hare ranks #6\* in the Americas and top 20 in the world by tonnage (ACI)
- O'Hare is the #1 cargo airport in the Americas by value, processing over \$200B/yr in imports/exports
- That value ranks among our largest sea and land ports, even though O'Hare handles <2% of their volume
- Today, O'Hare has about 2 million SF of airside cargo facilities and another 2 million SF of landside cargo facilities just on-airport, fueling about 5,000 jobs and able to handle over 40 jumbo freighters at one time



# O'HARE IS A GLOBAL TRADE NEXUS, READY TO HANDLE THE PANDEMIC

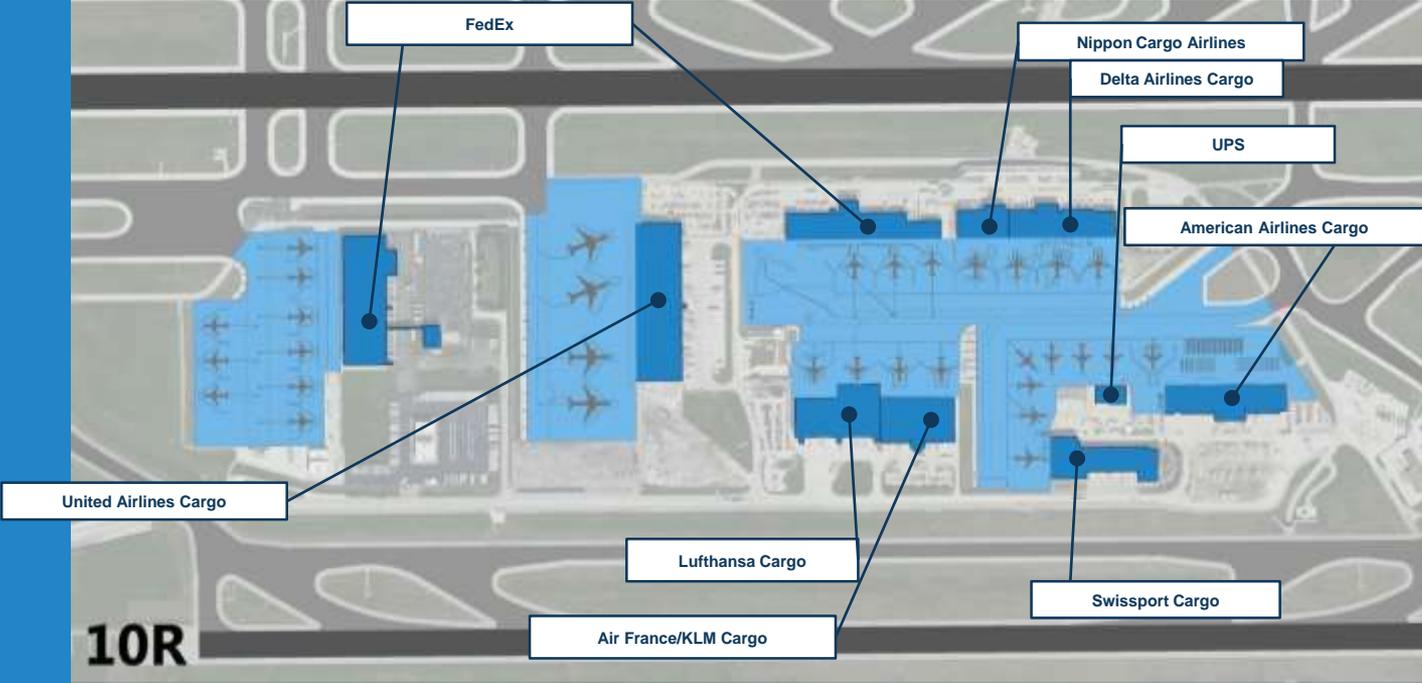
- Although only a tiny fraction of the world's supply chain, air cargo represents by far the most valuable, pressing, and leading goods that drive a modern metropolitan or regional economy (incl. in emergency times)
- Normally, 25% of O'Hare cargo value is exports (top export = medical supplies and medicines)
- Normally, 75% of O'Hare cargo value is imports (top import = electronic goods and supplies)
- O'Hare is the flagship cargo gateway to U.S. for several overseas carriers
- Biggest trading partner this past decade is China (over 25% of volume and value at O'Hare)
- Large hinterland surrounding O'Hare directly related to air trade (part of large "edge city" economy):
  - Distribution centers
  - Manufacturers
  - Freight Forwarders
  - Trucking companies
  - Importers/exporters

# FOUR AIRSIDE CARGO CAMPUSES AT O'HARE

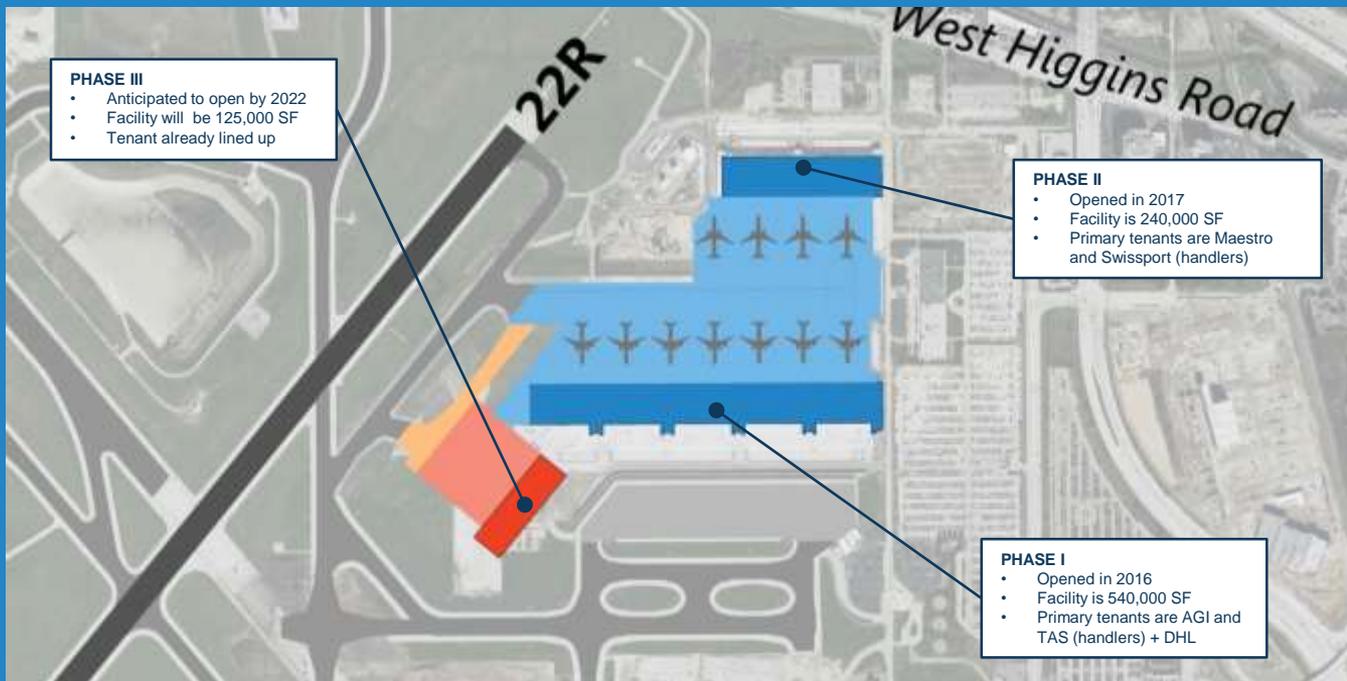
| North Airfield Cargo   | South Airfield Cargo   |
|--|--|
| New Northeast ramp opened in 2016  | Three distinct ramps each for FedEx, United, and general cargo use               |
| 11 jumbo freighter parking positions for all B747-8F aircraft (with 2 more on the way)       | 30+ jumbo freighter parking positions, most of which can handle B747-8F aircraft |
| Next phase underway will bring total facility space to over 900,000 SF among three buildings | Over 1,100,000 SF of facility space among 10 buildings                           |



# THREE BUSY AIRSIDE CARGO CAMPUSES ON THE SOUTH



# STATE-OF-THE-ART AIRSIDE CARGO CAMPUS ON THE NORTHEAST



**PHASE III**

- Anticipated to open by 2022
- Facility will be 125,000 SF
- Tenant already lined up

**PHASE II**

- Opened in 2017
- Facility is 240,000 SF
- Primary tenants are Maestro and Swissport (handlers)

**PHASE I**

- Opened in 2016
- Facility is 540,000 SF
- Primary tenants are AGI and TAS (handlers) + DHL

- Developer Aeroterm has a 35-year ground lease for this \$200+ million development that added substantial new airside capacity
- A 65-acre campus, one of four airside cargo ramps at O'Hare
- Total facility space will be over 900,000 SF with positions for 13 of the largest B747-8 freighters (when Phase III opens)

**LEGEND**

- Existing Cargo Facility
- Existing Cargo Apron Pavement
- Future Cargo Facility
- Future Cargo Apron Pavement
- Existing Non-Cargo Apron Pavement
- Existing Taxiway Pavement
- Future Taxiway Pavement
- Existing Runway Pavement

# O'HARE NORTHEAST CARGO CAMPUS (AERIAL OF PHASE I)



# NORMALLY, O'HARE HAS N/S FLIGHTS TO OVER 180 DOMESTIC AND 70 INT'L CITIES – MOST CONNECTED AIRPORT IN THE AMERICAS (OAG)



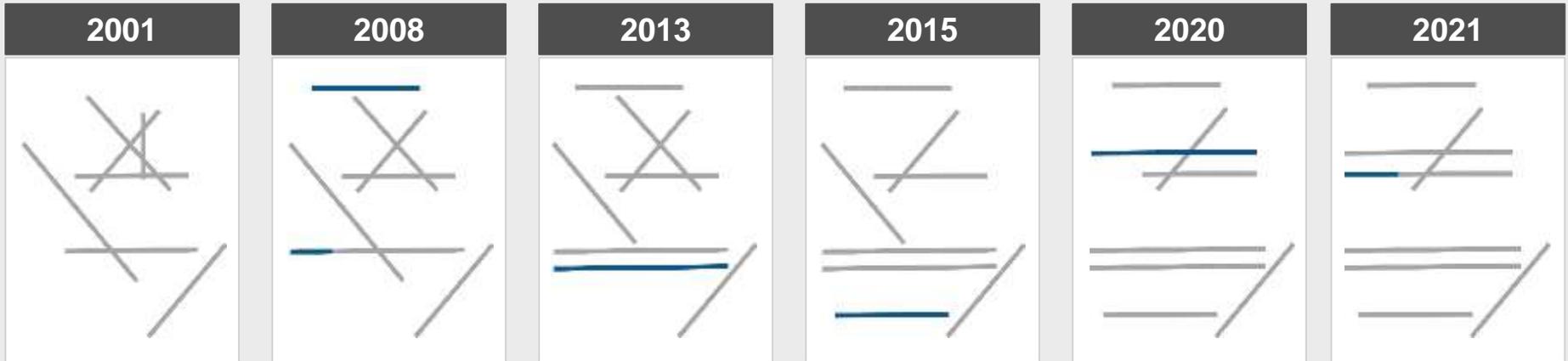
Sources: Innovata, Diio Mi Schedule Dynamic Table Report, January 2019 (destination data); OpenFlights.org, January 2019 (routes); Esri 2010 Data, 2010 (regions).

# Stay Competitive and Grow Capacity Beyond the Pandemic

✈️ O\*HARE 21



# AIRFIELD RECONFIGURATION (O'HARE MODERNIZATION PROGRAM)



Reconfigure  
intersecting runways  
East – West runways



Reduce system impact  
delays substantially



Four brand new  
runways built in  
just over a decade



Final new runway  
opened last year

# O'HARE 21 TERMINAL AREA PLAN – PHASE I (PROGRESS CONTINUES!)



# O'HARE 21 TERMINAL AREA PLAN WILL BE CONSTRUCTED IN STAGES



# CITY SELECTS STUDIO ORD AND SOM FOR NEW TERMINAL DESIGN



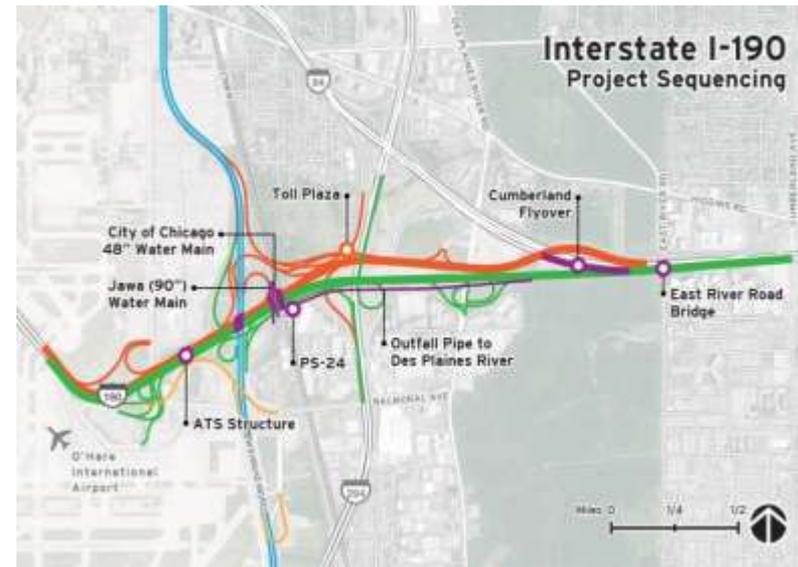
Global Terminal (Terminal 2) will be designed by Studio ORD

Sustainable design and operation are always important at O'Hare and Midway (CDA's Sustainable Airport Manual)



Satellite concourses will be designed by Skidmore, Owings & Merrill (SOM)

# COORDINATION WITH IDOT AND TOLLWAY TO IMPROVE O'HARE ACCESS



# ...AND THEN WE SAW GLOBAL PANDEMIC EFFECTS BY MARCH 2020

- Passenger traffic plummeted as much as 95% → today still about 50%-60% down from normal
- Overall air cargo volumes fell (belly cargo loss), but freighter and integrator traffic exploded
- Air cargo was the reliable go-to to keep the critical supply chain and emergency shipments moving
- Land and sea ports are not only slower but more prone to emergency border concerns or closures
- As the pandemic set in over many months, e-commerce (requiring air cargo) surged
- To curb bleeding and meet demand, 150 passenger airlines converted hundreds of planes to freighters
- The strong air cargo demand also means crowded cargo operations on the airfield, incl. more trucks
- While many cargo airlines struggle to keep up with pandemic demand, passenger airlines suffer on
- CARES Act helped airlines and airports, but could not stop concessions, adjustments, and cutbacks
- IATA and other forecasts look to 2023 to see significant economic and air traffic recovery (vaccines!)



# COVID-19 SOLIDIFIED E-COMMERCE'S PERMANENCE IN OUR ECONOMY

- E-commerce was 10%-15% of all retail transactions in the developed world prior to the pandemic
- Annual e-commerce growth was forecast at a healthy 5%-10% in the developed world 2019-2024
- The pandemic compressed that already-robust growth in a matter of months (i.e. up 50% over 2019)
- This translates into cargo airlines, especially integrators, trying to keep up with parcel demand
- Amazon Air started O'Hare service in early 2020, and its service quickly tripled in a few weeks
- Even as GDP contracted throughout the developed world, e-commerce continues to skyrocket
- Airports need to be prepared how to handle this opportunity, including new e-commerce cargo facilities
- There are unique design challenges for e-commerce like more truck queuing, larger square floor, etc.



# AIR CARGO IS INTEGRAL TO THE GREAT VACCINE DISTRIBUTION 2021

- Airports will have a significant if not substantial role on the delivery of millions of vaccine doses
- Besides monitoring and reimbursements, “Operation Warp Speed” was only an idealistic outline
- That is, the details of vaccine distribution fell on carriers and contractors (no direct federal role)
- The new U.S. administration may redefine its role on the supply chain logistics of vaccine distribution
- Most vaccine brands have some foreign production, requiring air cargo (and lots of dry ice to transport)
- IATA estimates that one B777F can carry just over one million vaccine doses at a time
- But compare that to millions or billions of doses required to be delivered, plus the supporting equipment
- To date, only federal guidance for supporting vaccine distribution at airports comes from FAA
- Right now, vaccine movement falls on existing capacity of our airport cargo tenants, esp. cool storage
- Security is a major concern (secret locations, decoys, contingencies, GPS tracking, police escorts, etc.)



## SO WHAT IS THE BOTTOM-LINE OUTLOOK IN THIS CHALLENGING TIME?

- Who would have ever thought cargo planes would steal the spotlight over passenger planes?
- Along with the economy, U.S. airports will recover and thrive (they always do over 60 years of jet travel)
- Nevertheless, caution and temperance toward operations and capital planning are undoubtedly prudent
- Worldwide airport revenues were down \$100+ billion (65%) last year, and Chicago is part of that picture
- Right now, though, airports can especially support their busy cargo airlines and tenants to help get by
- Cargo hubs like O'Hare will need more cargo development (while balancing other recovering concerns)
- This time is all about improving and saving lives—our prayers for the thousands of lives lost to COVID-19
- Please do your part to be safe and responsible, as individual actions add up to a faster recovery for all



JAMIE L. RHEE, COMMISSIONER

[www.flychicago.com](http://www.flychicago.com)