

The Impact and Opportunities for Cleveland Hopkins International Airport on the Proposed District and Surrounding Regions

Current conditions brought on by COVID-19 pandemic are giving rise to immediate, medium, and long-term change and opportunities for Cleveland Hopkins International Airport (hereafter CLE) to generate revenue beyond the long standing funding model, to serve as a conduit and gateway to attract high-value targeted industries, goods, and jobs, benefitting the surrounding region. This condition has taken place while the Airport prepares its next twenty year plan.

Simultaneously, as the Aerozone Alliance works to build The District or 'Aerotropolis'¹ in collaboration with adjacent nearby communities and other key stakeholders, this thought paper examines the purpose and function of CLE as a central and complementary tenant of future initiatives.

Introduction

Whereas the proposed Aerozone District could once take advantage of initiatives revolving around passenger flow through CLE, this report advocates for the Aerozone Alliance and other stakeholders to rethink of the value and function of CLE for healthy integration into the future of the initiative.

The data, findings and discussion outlined below support immediate cargo centric reorientation of airport operations to offset dramatically low passenger rates and take advantage of higher demand in certain goods. For example we can readily observe:

- An ongoing air cargo capacity crunch presents an opportunity to immediately refocus on high-value goods-based commerce, such as pharmaceuticals, prized mechanical components, perishables, and other 'just-in-time' goods.
- The timing is accentuated by the unique and meteoric rise of e-commerce enabled by COVID-19, creating a ready medium to longer term solution to benefit from a profitable and growing industry.
- A longer-term vision is encouraged with a focus on incentivizing the drone industry, providing high-skilled technology-based jobs to the region and diversifying and complimenting the aerial component of the proposed District.
- Facilities to be repurposed on airport property in particular, with the closure of the IX Center, to aid partnership discussions with interested or incoming ecommerce or pharmaceutical companies.

Current Economic and Employment Conditions in the Greater Cleveland Area

Much like the rest of the country, the Greater Cleveland Area (GCA)² is reeling from

¹ The proposed 'Aerotropolis' concept, or 'District' is viewed here in the simplest definition as "a metropolitan subregion whose infrastructure, land-use, and economy are centered on an airport" ([Kasarda, D 2018](#)).

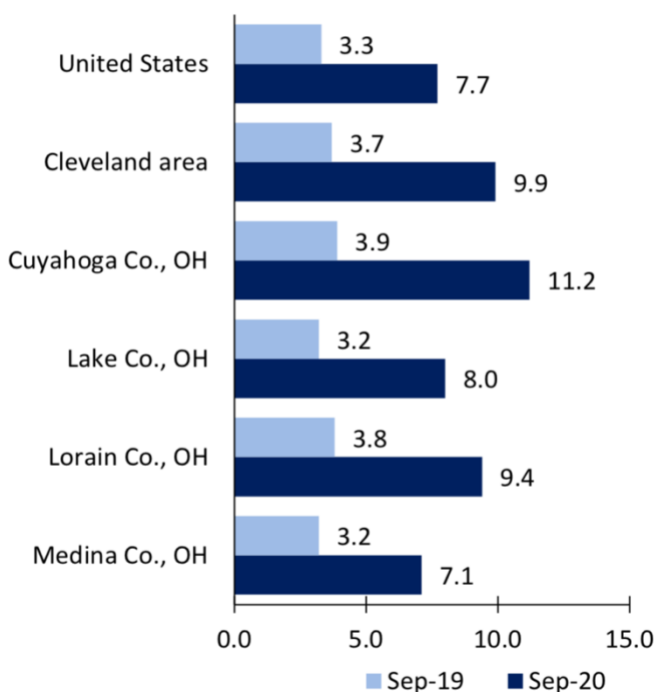
² For the scope and purpose of this report, and due to the nature of the effect and potential benefits of the District affecting more than the City of Cleveland alone, all data and statistics are in the context of the GCA wherever possible with available data. This area is defined as the Cleveland-Elyria Metropolitan Statistical Area by the Office Management and Budget (OMB), consisting of Cuyahoga, Geauga, Lake, Lorain, and Medina Counties, with a population size of 2,048,449. Furthermore, this is also applied in any comparative analysis, noting regional differences that are of

the effects of the COVID-19 pandemic on the local economy, particularly with loss of employment. The latest employment rates depicted in the charts below highlight an effect worse than the US average, for the Cleveland Area, greater Cuyahoga, Medina, and Lorain counties that immediately stand to gain the benefits of a well-executed District surrounding CLE. Of particular concern are:

- [September 2020 unemployment average for Cuyahoga County \(11.2%\), that is 3.5% higher than the US average \(7.7%\).](#)
- By a further statistic, the Cleveland Area lost 26.7% in leisure and hospitality, alongside 12.6% of all employed professional & business service employees, due to the unique nature of the COVID-19 pandemic and lockdown measures in March and April whose impacts continue to be felt to present day.

It is therefore not just important, but critical, to push forward a high-value, job-centric agenda for the region to return to better than before levels of employment with industries projected to expand in the coming years.

Unemployment rates



Source: U.S. BLS, Local Area Unemployment Statistics.

Cleveland area employment (number in thousands)	Sep. 2020	Change from Sep. 2019 to Sep. 2020	
		Number	Percent
Total nonfarm	981.2	-98.9	-9.2
Mining, logging, and construction	41.4	0.1	0.2
Manufacturing	116.8	-5.8	-4.7
Trade, transportation, and utilities	173.5	-11.0	-6.0
Information	12.4	-0.8	-6.1
Financial activities	63.2	-4.3	-6.4
Professional and business services	142.0	-20.5	-12.6
Education and health services	188.9	-17.7	-8.6
Leisure and hospitality	77.8	-28.3	-26.7
Other services	38.4	-1.2	-3.0
Government	126.8	-9.4	-6.9

Source: U.S. BLS, Current Employment Statistics.

CLE Airport, Cargo Capacity Crunch, and the Immediate Opportunity

For the proposed District to fully benefit the region, CLE must function at full strength and at least position itself to operate in a complimentary manner for targeted commercial endeavours. The pandemic has unequivocally provided the biggest challenge in aviation history for the industry, for airport authorities and airlines in

course contributing factors to varied economic and business conditions in different regions. The OMB defines a [Metropolitan Statistical Area](#) as one or more adjacent counties, or county equivalents, that have at least one urban core area of at least 50,000 population, plus adjacent territory that has a high degree of social and economic integration with the core as measured by the commuting tie.

particular. At the low point in April, [global passenger air travel was roughly 95% below 2019 levels](#) according to the International Air Transport Association (IATA). While there are indications that traffic is slowly improving, the overall levels for 2020 are expected to fall by 54.7% compared to 2019. Unfortunately, passenger numbers are expected to roughly halve to 2.25 billion, approximately equal to 2006 levels. Airlines are therefore expected to lose \$84.3 billion in 2020 for a net profit margin of 20.1%.

The impact of this has been heavily felt by CLE. Total air passengers going through the airport dropped [59.05% September 2020 year to date \(YTD\) \(3,105,633\), compared with the same rate leading up to September 2019 \(7,584,298\)](#).

Despite widespread passenger downfall, cargo was the one bright spot in airport operations globally, presenting challenges and opportunities for CLE. Compared to 2019, overall global freight tonnes carried are only expected to drop by 10.3 million tonnes to 51 million tonnes. Remarkably, CLE only experienced a 0.52% decrease in total cargo throughput ([131,628,407 lbs until September 2020 YTD to 132,321,859 lbs Sept 2020 YTD](#)).

A severe shortage in cargo capacity has developed in globally due to the unavailability of belly cargo³ on passenger aircrafts is expected to push rates up by some 30% for the year, implying cargo revenues might reach a near-record [\\$110.8 billion in 2020 \(up from \\$102.4 billion in 2019\)](#). As a portion of industry revenues, cargo is expected to contribute approximately 26% - up from 12% in 2019.

To respond to the growing need for cargo transport and to generate other sources of revenue, [American, United and other carriers have started operating cargo-only flights for the first time in years](#). American is planning to open 1000 cargo-only flights to 32 destinations, and for its [second quarter report](#), United posted a 36.3 percent increase in cargo revenue – helping the company offset losses incurred from the drop in passenger traffic.

Here lies the opportunity for CLE to take advantage of immediate high demand for cargo aircrafts caused by immediate demand for personal protective equipment, medical supplies and pharmaceuticals. Air cargo is particularly important in transporting time-sensitive, secure, and unpredictable demand-driven goods – exaggerated by the current COVID-19 conditions, looking to continue to affect the regional and national economy for some time. Furthermore, while air cargo makes a small fraction of freight shipped in the region, it has by far the [greatest dollar value per ton of goods](#) shipped, considering typical goods include electronics, precision instruments, other smaller manufactured products, and pharmaceuticals.

CLE Currently Geared Toward Passengers Instead of Cargo

The airport is ranked in respectable [45th place for passenger enplanements](#) among commercial airports in the US. Unfortunately, it is ranked 64th in landed weight of cargo. Comparative to airports of similar metropolitan sized areas in Ohio and neighbouring states, Indianapolis International Airport ranks 8th, Rickenbacker

³ Under normal circumstances, 50% of all airfreight is transported in cargo planes operated by companies like UPS, FedEx and DHL. The other half is typically carried in the bowels of planes below where passengers sit.

International in Columbus is 27th, and Pittsburgh International Airport comes in at 49th, all above CLE. Given the well-developed healthcare industry alone in GCA in particular, there are large incentives for CLE to work with airlines and door-to-door service companies like UPS, FedEx, and DHL to strengthen cargo-centric operations at CLE, and take advantage of immediate demand for profitability and wider beneficial impact to the region. While companies like United, FedEx, Southwest, and Delta Air Lines Cargo already operate at the airport in this capacity, there are other tools to encourage air cargo to CLE in the form of [financial incentives, promises of low airport costs, and no airside or landside congestion, and working with large local shippers to commit their use of the airport's new freighter services.](#)

Rise of E-Commerce and Drone Opportunities

Despite a barrage of negative effects of COVID-19 on the economy and business life, e-commerce has experienced astronomical acceleration, coinciding with the transition into the 'low touch economy'⁴.

In the first six months of the 2020, consumers spent [\\$347.26 billion online with U.S. retailers, up 30.1% from \\$266.84 billion](#) for the same period in 2019. Comparatively, ecommerce sales during the first half of 2019 grew just 12.7% year over year. [Furthermore, e-commerce has wider reach, with penetration hitting 20.8% in Q2, up from 14.7% in Q2 2019 and 16.2% in Q1 2020.](#)

There are signs that this isn't a temporary phenomenon according to a study by [Adobe Digital Insights](#), with COVID-19 estimated to have accelerated e-commerce by 4-6 years. Buy online, pick up in-store (BOBIS) in particular grew 195% in the month of May, citing this may be the *new abnormal*, with figures indicating that these trends are becoming permanent fixtures in consumer behaviour.

Despite a number of air cargo operators functioning out of CLE, a new opportunity may be to enter discussions with Amazon Air, working more closely with the largest e-commerce giant in North America⁵. This would follow a path similar to other non-traditional cargo airports like Lehigh Valley (ABE), Baltimore-Washington (BWI) and Charlotte (CLT) that have benefitted by handling thousands of annual operations by Amazon Air. Closer to home, a major hub being built at Cincinnati/Northern Kentucky International Airport (CVG) is projected to create in excess of 2000 jobs, generating \$1.5 billion in project investment.

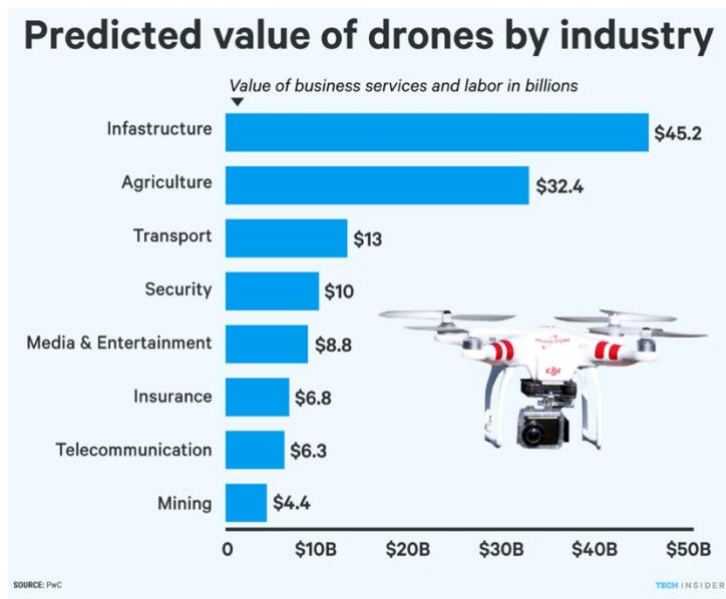
Investing in the Future with Drone Technology

Air cargo is not purely confined to airplanes however, giving rise to an intriguing long-term opportunity for the Aerozone Alliance and its stakeholders edge ahead of the curve and diversify the aerial component of the District away from the airport alone. Unmanned Aerial Vehicle (i.e. drone) technology has natural applications to the air cargo industry, being primed to transport products and packages with e-commerce shipments and other shipments. Companies like Amazon, Alphabet

⁴ [The Low Touch Economy](#) refers to a phenomenon that is independent of face-to-face contact between customers and salespeople

⁵ Despite the pandemic, Amazon *doubled* its net profit year over year to \$5.2 billion, compared to \$2.6 billion at the end of Q2 2019 ([Amazon second quarter results](#))

(Google’s parent company)⁶, China’s JD.com and numerous start-ups are engaged in developing and testing drones in this form. There are numerous other applications for drones, that industry may bring to benefit the District and wider area.



Enterprise drones are being adopted by a diverse set of industries (see illustration), with the sales of drones expected to surpass \$12 billion in 2021, up 7.6% from \$8.5 billion in 2016. Strong consideration must be given to attract and incentivize drone businesses that are mostly small-medium sized and growing, that is rich in high-value jobs for the proposed District – from manufacturers of hardware, to mapping and data processing, flight operations, training and education, and other businesses.

Source: Tech Insider

Lastly, CLE Airport Authority has a unique opportunity with the permanent closure of the International Exposition Center (IX) on its property. The location of the facility allows for a space to be repurposed into one of the immediate or medium-term term considerations outlined above. Due to the ongoing pandemic, the facility may be used for a medical supply or pharmaceutical distribution center, particularly with the news of Pfizer and Moderna’s COVID-19 vaccine rollout requiring time and climate sensitive conditions. On the other hand, ecommerce giants such as Amazon may be engaged for a more medium-long term strategy, especially if Amazon Air begins using CLE for shipments in and out of the region.

Conclusions

In conclusion, for the District to make maximal impact in the surrounding region, CLE, as an undeniably central tenant of the initiative must operate to compliment and strengthen all of its endeavors .

Due to the unique conditions brought on by the COVID-19 pandemic on the economy, the findings of this report support an immediate cargo-centric repurposing of airport operations, focused on the movement of high-value goods such as pharmaceuticals and medical supplies in the short-term in particular. Cargo will add important revenue streams to passenger services for airlines beset by dramatic losses in 2020 and ultimately benefit the region’s economy in more ways than one.

⁶ In Spring 2019, Alphabet’s Wings Aviation division received the first U.S. authorization by the FAA to operate a fleet of drones for consumer-goods deliveries, starting in a rural Virginia. The first of many approvals by the FAA of drones used for deliveries, thereby paving the way for future innovation and growth.

Furthermore, the region can stand to significantly benefit from the meteoric rise in e-commerce by strategic partnerships with Amazon Air, ensuring a medium to longer term arrangement in a job-heavy sector and growing industry. The closure of IX Center on airport property offers a unique opportunity to repurpose a physical facility for interested or incoming ecommerce or pharmaceutical companies.

Lastly, the drone industry may offer a longer-term focus on nurturing an industry starting now, that may bring high-skilled technology-based jobs to the region, while diversifying and complimenting the aerial component of the proposed District.

If properly developed to take advantage of these short, medium, and long term opportunities, the airport can function to serve the region as an economic development tool, syncing in with other forms of freight transportation such as the nearby Ohio Turnpike and railway lines, among others.

About the Author



This thought piece was prepared for the Aerozone Alliance by Alexander Sekhniashvili. Alex is a consultant with a background in infrastructure development and digitalization and a passion for harnessing the benefits of public-private partnerships to empower communities around the world. Previously, as the Director of Projects at CG/LA Infrastructure, Alex worked with project owners and developers to identify and overcome bottlenecks in planning, executing, promoting, and optimizing projects in various sectors. He holds an MSc degree from the University of Oxford, and a BA from the University of Westminster.