



VIRTUAL ROUNDTABLE DISCUSSION – APRIL 3, 2020

COVID-19 Impacts and the Economic Response

Introduction

VHB hosted a Virtual Roundtable Discussion on April 3rd regarding the impacts of COVID-19. Industry leaders represented included developers, architects, engineers, and consultants from transportation, energy, real estate, higher education, manufacturing, and technology sectors.

The session provided opportunity to share multiple perspectives to develop a clearer vision of our potential future. The below provides a summary of challenges, concerns, ideas, and creative thinking that came about during our conversation.

Summary

Uncertainty was top of everyone's mind, as the U.S. workforce is mostly comprised of employees who have never experienced a pandemic. **To that end, participants discussed being focused on people first:** how to keep employees safe at home or at their workplace; how to keep them incentivized to work; and how to continue to support clients. We all need to retain our best employees to hit the ground running when the economy starts back up.

To maintain the connectedness with teams and partners, communications from leaders have ramped up in frequency to both internal and external audiences. **Participants said over-communication is key.** We have all been thrust into remote environments whether ready or not. For the most part, remote work is going well across participant sectors, however some organizations are still working on trying to get appropriate technology put in place.

Several participants cited the **creation of strategic planning response groups and tightening finances**, asking senior staff to reduce salaries in lieu of and/or to lessen staff reduction.

Uncertainty outside the office is where efforts seem to be focused now. **Participants and their organizations are doing their best to keep projects moving and to be “shovel ready”, while closely monitoring current and future stimulus packages and federal funding.** Staying close to clients, customers, and partners has never been more important. Still, the overwhelming sentiment was looking at obstacles as opportunities.

For instance, transit has seen a huge drop in ridership, but there could be opportunity to advance State of Good Repair (SOGR) projects, while systems are running on reduced schedules. Additionally, the Real Estate market is a real challenge considering tenant closures, but this could lead to opportunities with new tenants.

The consensus among roundtable participants is we will most likely see lasting technological changes in how we live, work and play. The pandemic is accelerating use and adoption of technology, further promoting a digital world.

Discussion One: Most Likely Scenario

Participants were asked to consider the impacts of COVID-19 by answering four key questions:

- » How will the impacts be felt in your sector?
- » Are you currently feeling impacts?
- » Does it vary by region / location?
- » Do you expect impacts to worsen? When?

Insights, grouped by sector, include the following:

Manufacturing and Industrial

China experienced initial extended shutdowns, then felt the ripple effects in other locations, but they are back in operation. Overseas manufacturers are offering incentives to employees. Safety is important and some organizations are conducting temperature checks in all factories and have renewed efforts to sanitize plants.

Oil and gas companies are seeing global energy impacts. International offices are experiencing a reduction in backlog, most likely a precursor to what will follow in the U.S.

An immediate focus is understanding the CARES Act and Stabilization Fund, and the industries that are not included—travel, advertising, and restaurants, for example. What will a fourth stimulus bill look like? Will we have funding for infrastructure improvements?

Participants do not expect future stimulus bills to happen as quickly as the first.

Institutions and Higher Education

Government agency and municipal clients are adjusting slowly to remote work, which is causing project bottlenecks. Healthcare projects will slow as hospitals and patients delay elective surgeries.

Most colleges and universities have been evacuated for close to a month, which generally happened in stages—first students, then employees. Remote learning and working are ongoing. We saw universities with healthcare systems phase their evacuation approach. For example:

1. Get the population out
2. Get the hospital systems up
3. Convert double-bed to single-bed spaces
4. Build out for emergency back-up

Even research labs at these institutions have been closed, with few exceptions.

Public Sector - Transit and Transportation

From a mass transit perspective, we are seeing a sharp decline in ridership, with participant systems declining near 90%. We are also seeing an overall drop in toll revenue due to a lack of cars on the roads. Transportation clients are looking long-term as their service area has been hit hard by COVID-19 with recovery no earlier than June, best-case scenario.

Will commuter trips into cities and monthly pass usage decrease, long term? The industry will need to rethink our approach to passenger needs.

Bright spots do remain—programs with federal funding continue to advance. Owners are focusing on procurement / proposal writing and getting projects shovel-ready for stimulus.

Private Sector - Retail and Real Estate

With many real estate sectors—like retail—being deemed non-essential, the real estate market has been hit especially hard. Although they are equipped to work remote, there is not much work to advance. Pre-COVID-19 focus was new deals, but that has now shifted to operations. Tenant rental payments are questionable, with some paying, some deferred, and some not paying at all. Who can hold on? Participants from this sector anticipate a long recovery that will play out roughly six to 12 months behind other markets.

Also, important to note, construction and property management are also both down. Operationally, it is a complex time, as many evaluate whether they can continue to safely build. Communications for multi-family and senior housing is challenging. However, digital marketing continues, with virtual tours taking the place of in-person site visits.

The hospitality industry is devastated, experiencing eight to 10% occupancy and staff layoffs. There is a delicate balance between cash flow and rent collection. Participants agree permitting for major projects to get them entitled will continue, while design and construction may pause.

One ray of light in the market is industrial development. The supply chain is important here. Opportunities exist and leases are being signed, but deal points may be renegotiated. Life science clients want lab space.

2 Discussion Two: What does 2021 look like?

Roundtable participants were asked to consider this particular point in time next year:

- » In 2021, has the economy rebounded to pre-COVID-19 levels?
 - » Which sectors will be most robust and which will lag?
 - » Will regions and sectors be able to capitalize on opportunities?
 - » How will they conduct their business?
- Here's what we are thinking about:

Manufacturing and Industrial

Money and politics may be a big focus. Leaders will be considering how to pay for infrastructure and how to get a bill passed. Clients are questioning Exchange Stabilization Fund (ESF) because of restrictions. In 2021, we should expect a big infrastructure package with a lot of back and forth regarding green provisions. Funding could happen as early as summer 2021.

Manufacturing is already a global business with significant travel involved, but we expect virtual meetings are here to stay. Office spaces may be smaller, and safety and sanitation of the workplace and industrial plants will be top of mind.

Public Sector – Transit and Transportation

Different travel opportunities will open as a result of the effects of the pandemic; demand and capacity scenarios for travel are being heavily considered. After the last recession, ridership recovery took five years. A lull in ridership means opportunities to improve elsewhere.

In 2021, we may see organizations invest in and fast-track SOGR projects that they were not able to do previously due to lack of resources and time. An infrastructure bill will determine project priorities.

Significantly, we will invest in what the future of work looks like because the future is here. Will more choose to telecommute when they have a choice? What about travel mode? Expect a big shift from paper to electronic documentation.

Private sector, Retail and Real Estate

This sector is hard hit, but even pre-COVID, we were already seeing retailers' shrinking footprints. This will likely continue. We expect fitness centers to return, but many restaurants and retail to shutter. However, available space means new markets can enter.

Will there be a shift to the suburbs? Will there be less of a need for office space? Shared space? More space per employee or less? Flexible hours with occupancy per shift?

Participants are interested in how Central Business Districts will react to office and retail changes. We are expecting clients to focus on optimizing space and flexibility. Virtual meetings will impact training, onboarding and travel for employees across most industries.



People enjoy being social, but perhaps will take a step back next year and ask: Do I go to the game or watch it on tv? Do I go into the office or work remote?

Telemedicine and virtual learning will become even more prominent. In retail, the click & collect trend had already begun so those that lagged have had their eyes opened.

Institutions and Higher Education

In the future, perhaps the impacts in education will depend on student age. In the K-12 market, we may see a return to traditional classroom learning. With higher ed, online learning was already in use before COVID-19. Summer sessions for students will be robust online learning environments.

Much depends on how students perceived the virtual experience: Would they choose to learn remotely or are they only participating out of necessity? What did they miss about campus life? We will find out to what extent college and university closures impacted their communities.

Next Steps: Future Discussions

We want to stay connected! VHB will be hosting several virtual roundtable discussions, connecting varying perspectives across geographies. Future question and discussion around this roundtable topic include:

- » What are we learning from Asia and Europe on the recovery?
- » Which localities are likely to be more resilient (recover more quickly)?
- » When do we expect to see more normalized work environments returning?
- » What are we hearing in terms of an infrastructure package?
- » Are there any trends that are starting to emerge?

Have another roundtable idea specific to your market?

Connect with our thought leaders:

- » [Steve McElligott](#) - Transportation Market
- » [Steve Thomas](#) - Real Estate Market
- » [David McIntyre](#) - Institutions Market
- » [Kris Dramby](#) - Energy Market
- » [Nancy Barker](#) - Federal Market
- » [Steve Anderson](#) - Technology
- » [Glen Kirkpatrick](#) - Manufacturing & Industrial



VIRTUAL ROUNDTABLE DISCUSSION – APRIL 16, 2020

COVID-19 and Impacts to the Aviation Industry

Introduction

VHB hosted a Virtual Roundtable Discussion on April 16, 2020, regarding the wide-spread and significant impacts of COVID-19 on the aviation industry. Participants included industry executives from a variety of aviation touchpoints, including airlines, airports large and small, the Federal Aviation Administration (FAA), airport industry interest group leaders, and consultants.

The session provided an opportunity to share multiple perspectives to develop a clearer vision of our potential future. The comments below provide a summary of challenges, concerns, ideas, and creative thinking that were shared during the conversation.

Summary

By April 9th, U.S. airlines had idled 2,200 aircraft and passenger volume was down more than 95 percent from a year ago. Recent reports indicate that global passenger revenues are expected to fall by \$314 billion this year, a 55 percent decline from last year.

These are uncertain times; there will not be a light switch we simply turn back on. The industry knows it is in for a long recovery. To get through this, participants mentioned the need to think like economists: look at unemployment, consumer spending, and new metrics. Old models will no longer apply because we have never experienced anything like this COVID-19 pandemic. Still, looking to the past provides us with hope for the future. The industry has experienced shocks before (the 1979 oil crisis, the Gulf War, 9/11 and the 2008 Global Financial Crisis) and has always recovered. **The crisis has forced the FAA to be more agile and think differently**—which is challenging when dealing with Airport Improvement Program (AIP) grants for FY2020 and the [CARES Act](#) simultaneously. FAA lines of business are collaborating

across the board on initiatives, such as amending aircraft parking plans (to accommodate grounded aircraft) and expediting the review processes for work acceptance and approval. FAA is responding to questions about the [CARES Act](#) and is keenly aware of what the industry is facing.

Participants discussed being focused on people first. How to keep employees safe at the workplace is important for an industry with people on the frontlines. Several participants cited the swift activation of crisis response teams to mitigate loss.

The consensus among roundtable participants is that we will most likely see lasting structural and technological changes in how we travel to and through airports, and how we fly. The pandemic will accelerate the use of technology, especially health screening, further promoting a digital world. The federal [CARES Act](#) is a stop gap measure for the industry—a step in the right direction.

Below are highlights of the roundtable conversation.

Discussion One: What are you experiencing right now?

- » What impacts have you felt in your organization?
- » What strategies are you employing in response to those impacts?
- » What challenges do you wish you had anticipated before this crisis unfolded?
- » Are your projects moving forward or on hold?

Airlines

Airlines are fighting for survival. **Those who pivoted fastest when the first decline in bookings happened in late February may weather the storm better than those that hesitated.** March 9th was a significant day in regard to the velocity of cancellations. Some airlines responded with lightning speed, implementing crisis response teams trained for catastrophic events, who worked significantly long hours to address a challenge never previously seen.

Despite the immediate economic and logistical complications, airlines have been focused on how employees and customers are being affected. The dust is settling, and operations are going well for those that are flying, albeit at strikingly diminished levels. **Collaborative phone calls between airports and airlines are helping both groups continue to deal with the crisis.** Airports have a better understanding of their financial position and what decisions and operational changes they may still need to make. While the [CARES Act](#) and capital deferrals is providing critical funding, it will not be enough to compensate for the unprecedented revenue shortfall.

Airports

The pandemic resulted in a complete turnaround for many airports that were rapidly moving ahead with plans to address growth and expansion. **When cancellations began to escalate, airports set immediate response goals: customer and employees' safety and health come first, maintaining jobs is close behind it. Every project and program was scrutinized.** At some airports, the drop in total operations was an opportunity to move forward and expedite projects while passenger/customer activity levels are low. We also saw airports put major capital investments on hold, while others identified projects that should move forward with design and permitting, such that they are shovel-ready for when circumstances improve.

COVID-19 has had a huge impact on large capital projects that were needed in airports across the country. According to an Airports Consultants Council (ACC) member survey, 90 percent of airports are experiencing delayed/cancelled projects and 72 percent have seen reduction in RFPs. Construction projects that were underway are still happening, with interruptions resulting from employees hesitant to come back to work and pauses to implement new safety requirements on construction sites.

Airports are concerned about the temporal extent of this pandemic, unlike the events of 9/11, which had a finite timeline. The nature of COVID-19 is uncertain and may drag on for months or years. In terms of international travel, a major factor will be how each country responds to COVID-19 and the procedural and safety measures put in place will impact international travel for years to come, ultimately until a vaccine is found. On the domestic side, this pandemic could result in structural changes to the hub-and-spoke system of air service provision and could lead to permanent changes in the National Aviation System Plan.

Non-hub airports are experiencing significant losses. **As an example, on a typical travel day, one small airport cited around 1,000 cars in a standard parking lot. Today, that lot is down to 27 cars.** These airports are the heart of their hometowns, and most operations' employees are all still at work. Airports have responded by making staff health and safety a priority. **One silver lining: deferred maintenance projects such as parking lot painting can now be prioritized** and projects like this do help to keep on-site staff spirits up when they are working and see activities continuing at the airport.

Airport Concessions

Only a handful of retail stores and concessions are operational at airports with greatly abbreviated operating hours. **A bright spot mentioned was a new trade association recently formed in the industry, allowing concessionaires to better collaborate and have a voice during this crisis.** Concessionaires have experienced varied responses from airport partners, with some reacting quickly to recommendations to reshape operations and policies, such as waiving or deferring rent. They are watching as to how Personal Protection Equipment (PPE) guidelines and standards for consumer protection at airport concessions will change as a result of COVID-19.

Fixed Base Operators

Similar to scheduled aircraft operations, charter and private aircraft operations are down for fixed base operators (FBOs). **FBOs are being proactive by setting up rent deferment programs, and expect the coming months to be more demanding.** Communicating with employees and customers is vital—they should feel safe coming to work. Cleaning expenses are up and FBOs are working with tenants to provide lots of signage and vocally communicate with passengers about conducting flows in terminals to maintain social distancing.

Aviation Industry Consultants

Consultants are focused on helping airports rethink budgets and prioritize projects and initiatives. **Most airports know the amount of federal aid they will receive from the components of the [CARES Act](#), but the variation is great** amongst them due to varied enplanements and debt service. Forecasting the future after this pandemic is difficult as there is no past precedent. The biggest challenge right now is the unknown post-lock-down, pre-vaccine period.

This is a long, drawn out crisis without a precedent, and the entire industry will have to be nimble to respond.

2 Discussion Two: What are you planning for?

Roundtable participants were asked to consider this particular point in time next year:

- » What do you think our aviation recovery will look like and when do you think that might that happen?
- » Will it vary by region/location?
- » What will be the lasting impacts on the aviation industry?

Here are some predictions of what could happen to the industry:

What does a post-COVID airport look like?

Expect passenger behavior to change dramatically. Look for a reduction in physical touchpoints during the boarding process and social distancing on planes and in terminals.

The use of technology will skyrocket. There may be an increase in the use of biometrics to test passenger health. Security officers will need equipment to better screen bags without having to touch objects inside. It's a big opportunity to have a more automated journey.

A big design challenge will be redesigning terminals and ticketing for social distancing. If social distancing becomes the norm, it will affect operations, such as longer times between boarding for plane sanitization. Cleanliness of planes will remain top-of-mind for travelers.

Airlines will have to work hard to encourage customers' return to flying. They must pay attention to consumer confidence. Passenger confidence is key. Expect demand for a higher level of service.

Terminal projects will be a bigger focus now with attention paid to how travelers approach airports. Could there be an increase back to airport parking instead of transit or TNC rides due to virus transmission anxiety?

Educating the consumer about changes will be important. Will they need to get to airports even earlier? Will we have to health screen passengers now and what entity would be responsible for that? Current TSA checkpoint guidelines could be obsolete. Airlines, airports and other industry partners will need to team-up in a consistent, coordinated approach.

Structural Changes in the Aviation Industry

Companies realize that employees can be productive at home, so **business travel could languish.** The hub and spoke system will be more relevant than in the past. Gateways may be the first to recover—carriers tend to consolidate into gateways post-crisis. The industry has previously seen air service cut off to small communities. Could there be code-sharing among airlines to cover demand to smaller markets?

Funding

New federal aid dollars come with conditions at AIP funded airports, which could discourage airports from accepting funding or using FAA funds to finance projects. One outcome of the crisis could be the ability to introduce additional flexibilities within programs. **The infrastructure stimulus package will be critical in funding future airport projects.** Passenger Facility Charge (PFC) dollars are shrinking. Could this crisis lead to a different approach to funding projects?

Financing of airports could move to more short-term financial models. It will be difficult to get airlines to commit to long-term agreements. Private capital may come into the market even more due to risks public authorities are no longer willing to take.

Next Steps: Future Discussions

We want to stay connected! VHB will be hosting several virtual roundtable discussions, connecting varying perspectives across geographies. Future question and discussion around this roundtable topic include:

- » What are we learning from Asia and Europe on the recovery?
- » Which airports and segments of the flying public are likely to be more resilient?
- » When do we expect to see more normalized air travel trends returning?
- » How will the design and operation of airports have to change?

Connect with our Aviation Thought Leaders:

- » [Fin Bonset](#) – Director of Aviation Services
- » [Lauire Cullen](#) – Regional Aviation Director
- » [Carol Lurie](#) – Regional Aviation Director
- » [Ben Siwinski](#) – Managing Director, Gulf Coast



VIRTUAL ROUNDTABLE DISCUSSION – APRIL 24, 2020

COVID-19 Impacts and the Economic Response, Session 2

Conference Board Scenario Recap and Participant Update

In the two weeks since our Virtual Roundtable executives last gathered on April 3rd, **an unprecedented amount of fiscal relief was pumped into the economy. But social distancing measures continue to vary across state lines, and the federal stimulus package only reached parts of the U.S.** Across the globe in China, work has changed. At home, in Europe, and in less-developed parts of the world still suffering, much remains the same. In the U.S., a May Quick Reboot Scenario and Summer V-Shape Scenario proposed by [The Conference Board](#) are unlikely. **Based on the economic impact so far, it seems a Fall U-Shape Scenario with a slower recovery is the most realistic, as it gives businesses time to recover.** That is, assuming social distancing works and we flatten the curve. The Conference Board added a somber Fall Resurgence W-Shaped Scenario to account for a tough season of controlling the virus spread, which would not bode well for the U.S. In VHB's second Virtual Roundtable, participants reported various ways their industries are being tested, and how they plan to anticipate and embrace change.

U.S. and International Recovery to Date

[The McKinsey Group](#) is predicting a rolling recovery by region. States in the Southeast are not feeling the pain as strong as the Northeast. States reliant on consumer spending and discretionary spending will struggle. Some analysts predict U.S. unemployment to be at 15 percent by May and could drop dramatically in the following months. Businesses are realizing the federal government did not pass a stimulus bill so much as a lifeline bill. How long will the industry be able to hang on?

Many expect the next stimulus bill to be more politically laborious, with division amongst political parties continually emerging. The current [CARES Act](#) placed significant money and relief to local government and their response to the pandemic. Many are fighting for the next round of stimulus dollars to provide more direct funding to cities and

states, with many governors requesting significant stimulus funding as well as flexibility in spending for general budgetary demands and needs versus just COVID-19 response, helping to get the economy back on track. Expensive items will likely make their way in because the infrastructure piece was not realized in the first bill. Broadband access may have bipartisan support and many expect additional funds for roads and bridges. The next package may also include tax incentives for manufacturing to be brought back home. Vote by mail funding will be a fight. Politically divisive issues could crowd out infrastructure needs.

The virus will alter the way we work and participants agreed that social distancing measures will continue for some time, until a vaccine is found. There is a potential for gateway cities—mid-size, urban cities across the U.S. that serve as economic anchors and hubs to surrounding cities and regions—to see a renewal as people move away from crowded, major city centers.

Consider the dilemma many may face working in an urban city in a significantly large, multi-story office building. With continued social distancing measures in place, will the elevator now pose a time management and commuting dilemma? We will now need to consider time and safety measures for what used to be a simple elevator ride to an office.

If employees continue the work-from-home trend en masse, how will corporate culture thrive? **With a vaccine likely a year out, consider the health and safety liability issues the pandemic will continue to place on businesses as employees return to work.** When should they return to work? And how does this impact corporate culture and employee engagement? Will the government lay out clear guidelines on reasonable accommodations? What technological changes are worthy investments to retain resiliency? Finally, we cannot underestimate the collective trauma an incident like COVID-19 poses on people and their families. **The human toll will likely have unforeseen repercussions.** Smart companies will need to continue to keep their finger on the pulse of the workforce. What's next for maintaining company culture and employee engagement with a significant remote workforce?

Roundtable participants further shared intriguing thoughts and perspective, which are detailed below by sector.

MANUFACTURING

Parts of Asia are now recovering. As of mid-April, **despite being hit hard in China, operations that shut down for weeks are up and running now**, with strict government guidance on controls and cleaning. Companies that tackle workplace safety head on with transparency can instill employee satisfaction. Nonessential workers in China can return, but employers are cautious and taking it slow. The move to virtual office will be the norm for at least the year in parts of Asia, if not permanently, for many people. Business travel is nonessential, and overseas organizations are ready to travel differently, hire differently, and work from home. Look to keeping supply chains close to manufacturers as an important focus.

AEC INDUSTRY

Business software companies saw demand for product come in waves of forced usage due to moving from office to virtual work-from-home or work standstill, based on where the virus was hitting hard globally. It is likely working in the cloud will be the norm for the AEC world (and most industries in general) from this point on, especially for the slow adopters. We expect demand for design work to rethink office, urban, hospitality, and retail for social distancing. It will be a new line of business.

ENERGY, RENEWABLES, OIL & GAS

From a regulatory standpoint, things are moving forward, but expect change with boots-on-the-ground business. Federal Energy Regulatory Commission (FERC) was well-prepared to work remotely and is ready to process applications. Natural gas industry is proceeding at pace. Oil drilling dropped off and when it starts back up, rigs may be less efficient due to social distancing. States are still trying to put standards in place for renewables, and the industry is on track to meet them, but will have similar social distancing jobsite concerns.

Oil will lean more toward exports. Participants expect a slowdown on the receiving end due to COVID-19 concerns from abroad, and the ripple effect on the supply chain. Pricing is influenced by drilling drop-off and the storage problem. This should dissipate and oil will return, to some degree. Banks are preparing for significant disruptions. The U.S. does not have a national oil company like some countries (such as China and Russia) so our response will be felt differently across state lines. Companies and lobbyists are vying to get interests included in legislation going through Congress, which could cause delays.

TRANSPORTATION

Many questions remain unanswered. Will there be a fundamental realignment of travel? Movement away from density? Will public transit be hit hard due to social distancing?

Tracking movement around the system has somewhat fallen by the wayside, but the big data is there to be studied. Transit has declined more than general travel. Transportation industry's current focus has moved from urban centers to medical facilities and retail centers, where not as many resources exist because they were not previously so important.

Transportation is operations-focused now. Labor shortages are real; frontline workers were hard hit. Projects with rolling deadlines are still on track. The maintenance backlog can move forward. Subway and bus transit are down 80 to 90 percent in Northeast urban areas. What will shared mobility look like in three months? Six months? The rebound could be years. The industry will look outside itself to help determine how to respond. It is possible that cars will pick-up faster than transit. Participants noted agencies will likely be looking towards capital investment plans focusing on the first year, primarily maintenance and not new projects, due to impact on other revenue sources.

Safety is a big concern now on sites. New construction guidelines present a learning curve.

REAL ESTATE DEVELOPMENT

While the real estate sector has been hit hard, particularly hospitality and retail, no one is going through “fire sale” concepts yet. Smaller, independently owned operations are receiving critical stimulus monies, helping to keep them afloat for the time being. **Of note is concern that employees will not return because their unemployment benefits are better under the paycheck protection program.** Many retail establishments may have future workforce challenges, competing to bring employees back.

Developers are seeing a pause as tenants wait to see what a COVID-19 discount might look like. The right product type will have access to equity, but the new retail mix remains to be seen. Zoning pre-pandemic was already a hurdle and may not be a barrier in the future. Regional malls could become fulfillment centers. Employers may disperse to local offices due to social distance concerns in high rise office towers. There is a need to have a very specific plan and protocols for what work looks like to elicit employee confidence

HIGHER EDUCATION

Universities have reason to be cautious due to large populations of students. Many are trending toward a delayed or online fall semester, but have not made formal announcements yet. Economically, the vast majority of universities are suffering due to research and travel being put on hold, and delayed graduate student decisions. However, universities with major health systems are different than others, as the academic side tends to take a hit to support the healthcare side. **Capital projects and discussions about renovation are not part of the conversation yet.**

Next Steps: Future Discussions

We want to stay connected! VHB will be hosting more virtual roundtable discussions, connecting varying perspectives across geographies. Future questions and discussion around this roundtable topic include:

- » What U.S. operations are opening first? What can we learn from their protocols?
- » Are subsequent federal stimulus bills adequately responding to industry need?
- » Where are pockets of the new normal starting to emerge and what does it look like for your industry?

Have another roundtable idea specific to your market?

Connect with our thought leaders:

- » [Steve McElligott](#) - Transportation Market
- » [Steve Thomas](#) - Real Estate Market
- » [David McIntyre](#) - Institutions Market
- » [Kris Dramby](#) - Energy Market
- » [Nancy Barker](#) - Federal Market
- » [Steve Anderson](#) - Technology
- » [Glen Kirkpatrick](#) - Manufacturing & Industrial



VIRTUAL ROUNDTABLE DISCUSSION – MAY 28, 2020

Next Practice: Campus Operations for Fall 2020

Introduction

VHB's Virtual Roundtable on May 28, 2020, brought together facility and design leaders from public and private universities and colleges across the country to explore the impacts of COVID-19 on higher education. Participants represented a wide variety of higher education touchpoints, including sustainability, capital planning, campus planning, facilities and safety, design and construction, and transportation departments. A summary of challenges, concerns, ideas, and creative thinking that were shared during the conversation are detailed below.

Summary

The discussion revealed the vast impact of COVID-19 on higher education institutions, as well as the array of similar responses across campuses, including mobilizing task forces, implementing enhanced safety procedures, exploring multiple campus-return scenarios, and rethinking master plans for a post-pandemic world. While participants did not go into the 2019-2020 academic year with a pandemic on their radar, **the majority noted students and their educators as being well-prepared for remote education, with administrators rising to the occasion** to aid students in need. University employees had a more difficult adjustment, depending on the school and workforce population. Universities are starting to announce fall 2020 plans for students, and it will look different than most expected, and no two schools will be alike. Lucrative athletic programs expect a surreal sports experience for players and fans alike, especially with travel restrictions and social distancing still in place. The roundtable discussion was robust and leaves us with hope for a safe return-to-campus for all and renewed interest in sustainable, future-proof places to live, learn, work, and play.

Topic 1: Immediate Response to COVID-19

Closing campus was an urgent decision which schools did not take lightly. **Spring Break coincided with the initial spread of COVID-19 in the U.S. Some universities took advantage of the planning time by adding another week to the break.** In most situations, campuses were depopulated of students immediately, with staff and faculty generally following right after. Multiple layers of required buy-in from administration created a barrier and slow decision-making process for schools to move forward more expeditiously.

STUDENTS

Universities known for strong online education programs pivoted to remote learning at once. But not all students could return to stable homes and some at home still lacked internet access. **The crisis exposed economic inequality on campus.** Administrators also had to adjust for international students with travel restrictions and Pell Grant students with financial need and no residence besides campus housing.

Participants cited that up to 1,000 students remained on campus at one institution. **Staff made accommodations to feed and care for them without putting anyone at risk.** This included providing free meals to students and staff on campus from a campus vendor with plenty of food in the freezer. Another school started a charitable fund to help students in need.

Schools had to pack student belongings in dormitories and put them in storage so buildings could be deep cleaned. Some institutions are just now starting the packing process due to an earlier expectation of student return that did not materialize. Universities on a quarter system had different concerns. Instead of Spring Break, students were taking final exams. **Facilities staff stayed close to student affairs in planning.**

EMPLOYEES

Institutions may have previously invested in online learning for students, but were not uniformly prepared for the technological challenges of remote work for all employees. From an operations perspective, the adjustment was rocky, especially for skilled trades. **The pandemic reveals where colleges and universities are behind on technology.** One institution turned to LinkedIn Learning for online employee training when normal job duties disappeared overnight. Facilities and housekeeping staff returned to campus early with renewed safety precautions. Paid administrative leave kept furloughs at bay, but just how long remains to be seen. Some facilities and safety teams remained on campus to work on capital projects with approaching deadlines.

Construction crews onsite for capital projects at a remote university were accustomed to commuting during the week. The school provided a health facility for them onsite and made arrangements for food to be delivered so the crew did not have to venture into the community.

Universities put an emphasis on preserving research activities and allowing some researchers to stay on campus. Of note is one institution that had several COVID-19 research projects put on high priority to help the national response.

Topic 2: Will Students Show Up? Current Efforts, Scenario Planning, and Alternatives

Colleges and universities are now laser-focused on planning returns to populate campuses in the fall. Many scenarios allow for phased introductions of employees first, ahead of students. Even those populations have been restricted to researchers first, then top-level administrators, then staff and faculty.

Communication will be key to a safe return. Signage will be critical: what the message is and where it is posted. People are looking to university leaders for reassurance and guidance. Communications teams are planning social media campaigns focused on caring for each other and staying safe and healthy.

Most schools agree that students, faculty and staff will return in the fall in some type of hybrid situation. The number of scenarios to plan for are endless, and a common concern among participants is the idea of planning for a “moving target.” Without a vaccine in place and plans for reopening relegated to states instead of federal authorities, return to campus will look different at each school.

Return-to-campus possibilities for Fall 2020 include:

1. Restrict student population to 50% on campus, 50% remote.
2. Delay start time for semester and extend the academic year.
3. Early start date with no fall break and early semester end.
4. Bring 50% students back the first half of semester followed by 50% students the second half.
5. Pivot to online for classes with 100+ students; smaller classes remain on campus using new space.

STUDENTS

Residential planning is difficult due to the unknowns. How will enrollment figures be affected if administrators plan for all-single rooms? International students will need to be quarantined for two weeks with food delivered to their rooms. **Classroom capacity is a big topic.** Rooms must serve smaller populations due to social distancing. Private colleges in small towns must consider the community and how they would handle a surge in COVID-19 brought on by returning students.

Athletic departments are planning for different scenarios: no tailgating, reduced ticket sales, and loss of revenue from lucrative media contracts. Student athletes are returning to campus, but travel restrictions will impact where they can compete.

EMPLOYEES

Institutions are planning a very controlled return for employees and are following their state directives. **Some employees may continue to work from home permanently, meaning more space will open on campus.** Many employees are now on task forces at the local and state level to help with planning. When the semester begins, schools must anticipate visitors and student control points on campus to test and evaluate health—no small task. High level policies about social distancing will be finalized soon.

Some institutions are rushing to make decisions due to issues with [supply and demand](#). For example, obtaining polycarbonate (plastic) material for shielding workers is already difficult. A few capital projects, including crucial student housing, are behind due to supply issues.

Universities are learning best practices in safety protocols from contractors on site for capital projects. These can be shared with administrators to enhance health and safety for fall. One positive outcome of the pandemic is a reduction of energy and water consumption on empty campuses.

Departments that depend on receipts for funding, like parking, are rethinking revenue sources. Unknown occupancy makes transportation planning difficult. How many students and employees will want to continue to commute on public transportation? How many will want to buy a parking pass? Is the campus equipped to handle an influx of parking?

Topic 3: Looking to the Future—What Does Fall 2020 Look Like?

Universities and colleges will have to look at balancing a return to campus with a close eye on the bottom line. Students and parents will not want to pay full tuition for a fully online education. **Universities will struggle if they cannot base budgets on full tuition models.** Over-communicating with constituents and finding new ways to foster community are very important.

COVID-19 challenges came at the tail end of many other challenges to university and college officials: crisis planning and security adjustments due to active shooter incidents and major climate disruptions like hurricanes. Schools need to be robust enough to respond to all of these things. **A big challenge is the need to keep shifting focus.**

The pandemic has prompted lively discussions at institutions which are no strangers to discourse. Can face coverings be required? To what extent can contact tracing or card access at doors be enforced? Will adverse student behavior undermine health and safety precautions?

Innovation on campus continues, as one school has already developed a mobile health screening app to test employees before they return to campus via self-reporting and answering a number of travel and health-related questions.



Opportunity abounds despite the challenges. Participants agreed that we will see more creative ways of setting up classrooms for close to full capacity. Space plans are changing every week. **Schools will need to think long-term and design buildings that can be sanitized easily.** The pandemic has presented opportunities to rethink design and campus planning projects. Facilities can take a second look at a Student Health Center in schematic design and make accommodations for pandemic issues. The architecture of a building may look great, but the materials inside make it difficult to clean. Future projects will see more attention to selection of finishes and not just layouts. Campus master plans will be looked at again with a different set of eyes. **Reduced energy and water consumptions will prompt schools to make permanent changes to classrooms and buildings typically open 24/7.** Expect adaptability, sustainability and public health to be at the forefront of planning.

Next Steps: Future Discussions

We want to stay connected! VHB will be hosting several virtual roundtable discussions, connecting varying perspectives across geographies. Future questions and discussions around this roundtable topic include:

- » How did staff and faculty adjust to return-to-campus? What accommodations were put in place?
- » What types of classroom and facility space planning scenarios are working best?
- » What does resiliency planning look like now on your campus? How will design and operation of higher education facilities have to change?
- » To what extent did social distancing and safety concerns affect student enrollment?

Connect With Our Institutional Thought Leader

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VIRTUAL ROUNDTABLE DISCUSSION – JUNE 4, 2020

COVID Era Property Acquisitions and Dispositions: Opportunities, Challenges, and Distressed Properties

Introduction

VHB's Virtual Roundtable on June 4, 2020, brought together leaders from across the country to discuss the impacts of COVID-19 on the real estate industry and to explore property acquisitions and dispositions. Participants represented a wide variety of industry touchpoints, including developers, investors, property managers, land use attorneys and brokers who are involved in real estate transactions.

Discussion centered on the state of the market and the impacts to various sectors, including multifamily, office, mixed-use, retail and industrial along the East Coast. The comments below provide a summary of challenges, concerns, opportunities, and creative thinking that were shared during the conversation.

Summary

Roundtable participants are cautiously optimistic that the industry and economy will rebound but are uncertain of the timing or strength. Currently, the Federal Government and Federal Reserve Board are keeping things in check. **Most do not anticipate a financial crisis on par with the Great Recession, but that sentiment could change quickly with a resurgence of the virus in the fall and the lack of a vaccine or effective therapy.** There is talk in the industry about companies de-densifying their offices in the urban core and establishing satellite offices; 'hub-and-spoke' strategies to retain employees and alleviate fears. COVID-19 will have near term and potentially long-term effects on where and how people live, work, and play. Underwriting is complicated now due to uncertainty, not knowing when the dust will settle, and what new paradigms will be in place in the workplace and in our neighborhoods.

The roundtable discussion was robust and leaves us with hope for positive changes that transform the industry. Below are market specific observations and takeaways from the discussion.

Multifamily

Multifamily developers are not seeing a high level of distress at the property level in suburban markets and were surprised at the strength of rental payments and the amount of leasing that continued into April and May 2020. **The distress appears in workforce housing and has impacted collections among lower income brackets, mirroring the unequal impacts of COVID-19 across U.S. socioeconomic lines.** Where cash flow and collections are holding steady, be prepared for this to change when unemployment benefits and federal CARES Act monies dry up. Cycle resistant properties such as affordable, workforce and mixed-income spaces, although adversely affected by the pandemic, are still active. Big cities are feeling the hit, as well. The fiscal environment is unsteady, and budget cuts at the state and city level will put pressure on affordable housing starts in major metropolitan areas like New York City, which need capital subsidies. **Look to public-private partnerships as a solution in the near term.**

Office

Look for innovations in the office market. Perhaps the biggest challenge this sector faces is the move to a **work from home** environment. While corporate America has experimented with telecommuting and flexible schedules for years, the pandemic and subsequent “stay-at-home” orders have impacted how companies are thinking about the workplace of the future. While Industry sentiment indicates that most U.S. workers strongly prefer an office environment to a full-time remote experience, when employees do return expect significant changes (**think flexible space plans and work schedules**). It is a good time to be building from the ground-up as this gives companies the opportunity to think about workflow and the development of unique spaces that allow for interaction and innovation. Large office property assets are being repurposed for new players who seek flexible, collaborative, future-proof spaces that can attract the right demographic. **Identifying high-quality real estate that is an extension of a user’s brand can be a tool to attract talent.** Tenants are affirming that the workplace is a key part of their culture.

Expect developers to remain bullish on suburban office as they are eager to accommodate a millennial workforce that is moving out of the urban core. Flexible work may reinforce this shift. Companies are focused now on how to de-densify and circulate safely in a “post COVID” world. Large firms are considering ‘hub-and-spoke’ strategies in recognition that existing office space in urban locations may not be able to safely accommodate their existing workforce and they may need satellite offices to ease employees concerns about commuting into the city.

Retail and Mixed-Use Environments

Retail and hospitality sectors have been severely impacted by the pandemic. Across the nation, developers are working with restaurants and retailers on a case-by-case basis, with most making plans to open new outdoor dining areas and implement social distancing modifications inside. **New curbside pick-up and delivery models created ideas for how mixed-use shopping centers could evolve in the near term.**

COVID-19 has accelerated the closures of big box anchors, which were on the decline. Mall owners are busy reimagining these spaces and starting a long-term disciplined process

to evaluate redevelopment opportunities. Owners are working with communities on entitlements which will open doors to reposition anchors with a mix of residential, medical office, and fulfillment centers. Communities are open to conversations, because the tax base is important to their revenue and the transformation of these centers is vital to the community.

Expect sustainability and an emphasis on the public realm and placemaking to change the way consumers experience mixed-use developments post-COVID. Public transit and urban live, work, play models were turned on their head in only a few weeks. [Transportation will need to adapt.](#) Look for more robust bike and walking paths in mixed-use developments to aid in transportation and attract young residents.

Hotels are operating at about 15-percent capacity. Opportunities exist to convert distressed hotels into affordable housing or shelters, although size will be a challenge. It will be difficult to convert large 1,000 room hotels into affordable housing, given community concerns. Developers are working closely with planning agencies to think about the future of these assets.

Industrial, Distribution, and Biopharma

The industrial sector remains strong and **many investors are rebalancing their portfolios and reallocating capital to logistics and life science sectors.** National security issues and [supply chain disruptions](#) will lead to an onshoring of biopharma manufacturing in the United States and growth in life sciences firms who are racing to find cures for diseases. Downtown Boston and Cambridge Life Science markets will continue to thrive. During the onset of COVID-19, manufacturers and businesses needed a place to store goods. Retail centers were not set up to house goods, but the shortage in storage space sparked discussions with retailers who are thinking about new delivery models. Many large retail anchors have gone dark and there is a market for big boxes which can be repositioned as distribution centers across the country. Will consumers want to go back into stores to pick out their goods or will curbside pick-up prevail? Capital investments will continue to be made in this sector to meet the acceleration in e-commerce.

Capital Markets and Bank Financing

Private equity players with liquidity in the market are looking for quality assets. During the past few months, lending institutions have found it difficult to underwrite the future due to uncertainty, but deals are moving forward for high-quality clients characterized by risk-averse leases and quality credit tenants such as build-to-suits for established brands. Banks are funding new preleased office and industrial facilities, but they have temporarily paused on lending for multifamily due to uncertainty about how to underwrite future rents. During previous periods of economic troubles, like the Great Recession of 2007-2009, financial institutions were hit hard, and as a result measures were put in place to avoid severe economic impacts. Banks are holding steady now with no rush to sell assets.

What will debt look like at the back end of the pandemic? Until there is a vaccine, there may not be clarity. **It appears the federal reserve stress tests and capital requirements after the Great Recession have done their job.** Banking systems will weather this storm, but it will still be stormy. Reserves and losses could both escalate in 2021.



Key Industry Takeaways

Prior to the pandemic, some developers were diversifying their portfolios and evaluating the mix of multifamily, office, retail, and residential properties to achieve a greater balance across sectors and asset classes. **Investments were made in growth sectors, including e-commerce/industrial, multifamily, and biopharma/life sciences. Others are investing in key geographies and demographics, such as metro and suburban areas experiencing exponential growth. There is still pent-up demand for residential development, fueled by millennial demographics and historically low interest rates.** Researching and knowing your markets with boots on the ground is a key strategy. Pre-COVID migration to the Southeast and Sunbelt will likely continue and open more opportunities in secondary markets.

Staying positive and coming up with creative ideas for clients with conviction will help steer the industry forward. Developers should consider distressed properties as value propositions, instead. Private equity players will play an important role. Developers want to work with clients who have targeted geographic ‘hub-and-spoke’ strategies. Deals that are keeping developers busy have a longer horizon with no shovel in the ground or construction financing for at least a year. **Continue to pursue entitlements and permitting for properties during the pandemic, as this will better position properties when market demand strengthens.**

Early in the crisis, some complex transactions and deals were paused because due diligence was difficult and markets uncertain. Virtual meetings have met the challenge, and **the industry is seeing better virtual participation rates than in-person participation rates in public meetings** for large development projects. Expect this tool to be utilized long past the pandemic.

Next Steps: Future Discussions

We want to stay connected! VHB will be hosting another virtual roundtable discussion with participants in the fall. Future questions and discussions around this roundtable topic include:

- » In 90 days will there be new stimulus money to propel the economy and help property owners sustain rent rolls?
- » When the stimulus funds run out, how will businesses thrive without the much-needed liquidity?
- » Will offices become more decentralized and adopt hub-and-spoke models (both city and suburbs) to maintain a diverse workforce? How will new “socially-distanced” office standards affect occupancy and how will work be executed in the office?
- » Will multifamily units be redesigned with office space within units or in central spaces that tenants can rent?
- » Will retail malls reposition big boxes with last mile distribution hubs? Multifamily? Entertainment? Medical office or healthcare?



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VIRTUAL ROUNDTABLE DISCUSSION – JUNE 10, 2020

COVID-19: A Safe Return to Aviation

Introduction

VHB hosted a second Virtual Roundtable Discussion on June 10, 2020, part of a series regarding the aviation industry's efforts to provide a safe return to an increase in air travel after COVID-19. Participants included industry executives from a variety of aviation leaders, including airport operators, industry trade associations, the Federal Aviation Administration (FAA), Transportation Security Administration (TSA), architects, ridesharing, concessionaires, emergency management, and airport sanitation experts. The discussion followed a passenger's air travel experience from leaving home with baggage and transportation concerns to disembarking at their destination and the potential infrastructure development solutions that are currently being implemented or assessed. The session provided an opportunity to share multiple perspectives from different aspects of the travel journey to develop a clearer vision of our future. The comments below provide a summary of challenges, concerns, ideas, and creative thinking that were shared during the conversation.

Summary

The aviation industry is preparing for a gradual increase in passenger travel. COVID-19 exposed a need for consolidated industry standards at every step of the journey, including curbside pick-up, terminal cleaning, and passenger health screenings. There will be creativity in cooperation. **The term “The Now Normal” was introduced, which reflects the adaptations industry partners must undertake in the uncertain world of a pandemic.** With stay-at-home orders lifted, airports and airlines are expecting discretionary leisure travel for checking on elderly relatives or scheduling late summer vacations. Businesses are starting to schedule meetings for fall, but associations are not booking for annual gatherings.

Since VHB's last Aviation Roundtable in April, the GDP has contracted from 1.7-percent to 4.8-percent. TSA throughput is a big focus based on the airport security checkpoint being the most critical component for airport processing in terms of throughput and processing times. Week-over-week growth has fluctuated. **The industry saw 2.5 million passengers for June 1, versus 17 million at the same point in 2019.** How long will it take for the U.S. to get back to these numbers? The industry is looking closely at both the passenger experience and the airport experience. Peak hour is down significantly less than traffic volumes but is still critical when it comes to planning and design as peaks are still evident. There is still a demand for gates, which has implications for planning processes. Airlines will pull traffic into major regional hubs for the near term. Travelers will have more connecting flights for the foreseeable future.

The industry is examining technologies that will eliminate touchpoints and crowding, such as leveraging a system like Disney's FastPass+ model of appointment times via phone apps, and further sanitation measures such as ultra-violet (UV) baggage tunnels or disinfectant spray devices within those tunnels/systems. **An international crisis like COVID-19 comes with an important public health component which will likely play a larger role at the forefront of planning and communications.** Although the future of aviation travel remains uncertain, restoring trust with apprehensive travelers is paramount. Participants from different market sectors in aviation shared the following perspectives:

Airport Access

The industry must grapple with understanding that the air travel journey for passengers starts at home. **Before COVID-19, roughly 25-percent of air travel passengers used transportation network companies (TNC) to get from home to airport; expect those numbers to shift now.** Will travelers choose to drive solo instead of using public transportation, calling a taxi, or rideshare? The entire airport access sector is making certain both passengers and drivers feel safe, through actions such as providing PPE and helping drivers with costs for masks and cleaning supplies. The industry needs to think about the curb experience. People huddle at curbs for shuttles, taxis, and rideshares despite adequate airport wayfinding. How do airports provide social distancing at these points? The industry must pay new attention to where vehicles meter and where people wait for rides. Industry collaboration to address a safe passenger journey will be important.

Baggage

The baggage industry is studying how bags are handled at each step of the journey. What are passenger, bag handler, and subsequent TSA confidence levels in baggage safety measures along the way? A passenger's bag is touched by seven to 10 people each trip. The trend was already moving toward self-service with bag drops and bag retrieval. **Treatment of baggage via ultraviolet (UV) tunnels is a top consideration.** UV tunnels can be introduced in various places, including at the load belt and resolution area. The industry is also concerned about planning involved in these systems, and whether there will be a shift in checked versus carry-on baggage. Airlines could reconsider baggage fees and try to reduce congestion which would require significant lobbying.

Security and Screening

Most travelers are doing so now out of necessity not desire. TSA can be a problematic point in the system of passenger air travel. **Agencies are cognizant of the opportunity to accelerate transformation and get it right.** Big ideas include reducing touchpoints (travel document checkers could be e-gates and self-identification with someone as a monitor), removing extraneous tasks like employees asking passengers to take items from pockets, and adding remote screening rooms to remove x-ray screeners from lanes. Airports have implemented some of these ideas already, but we will see standardization as the approach needs to be systematic. It is doubtful passengers will trust the enclosed phonebooth version of the Advanced Imaging Technology (AIT). Now flat panel versions can be accelerated. Airports like LaGuardia are experimenting with scheduling times of passenger arrival. **Low traffic means the industry can experiment.** Psychology is a category of concern. Perception of safety is the expected catalyst to bring passengers back to flying. The system can transform from one that shows concern about safety to a system that fundamentally creates a safe environment. UV tunnels and anti-bacterial nano coatings could have an impact. It is important that aviation industry governing bodies (not private industry) seek standardization and independent verification for safety measures and guidance, and then communicate these to the public, as trusted sources for industry information and collaboration.

Terminal Design and Operations

Terminal designers and operators are in a quandary: will the changes made now still be necessary post-vaccine? Airport use trends may be changing. **Regional hubs will see more passengers because of the perceived added levels of safety at these facilities due to smaller crowds.** Regional airports have an opportunity to be proactive and visibly improve confidence of a flying public. Communicating safety is important via wayfinding and signage. Architects are focused on social distancing solutions. Designers are helping clients identify high-traffic locations and technologies for disinfection stations, such as at escalators. Modifying hold rooms is challenging due to the amount of square feet needed per person to maintain adequate social distance. Look for pre-and post-security hold rooms and health screenings at separate entrances. **The industry will need to move past social distancing at peak times as a model because it may not be financially sustainable.** Remember, the current climate is a pre-vaccine world—but things will continue to evolve.

There is a big design overlap between food, beverage, retail, and aviation. **Airport design imperatives will inevitably be pushed down to concessionaire and hospitality.** This is an opportunity to help concessionaires adapt. Planners and architects are exploring new seating options in open spaces like food courts, but also considering their transformation into something similar to an Amazon storefront experience with places to take food items out. Seating and eating are big concerns. If travelers cannot social distance at an airport bar where will they go? Airports will move away from seat clusters. Events like COVID-19 push airport operators to adapt and transform their facilities. Biometrics, self-tagging baggage, and touchless self-boarding are here to stay.

Airport Concessions

Concessions need to be creative and change because the impacts they have seen, which are tremendous, are staying. **Social distancing is devastating to business. The best many restaurants can do is operate at 50% of normal capacity.** Is this still a viable business model? Technology will be key to survival. Food and beverage could move toward adaptable spaces and seating. New technologies on the street are slow to catch-up to the airport, like apps for preordering at coffee houses. Advanced ordering will be more important, but it should come with passenger education and integration into the airport apps, which passengers are accustomed to already.

Airports Operators

Airports are strengthening partnerships with all stakeholders at their facilities to make certain the traveler feels safe. Enhancing passenger perception of safety is important. **Communication with passengers is therefore a big focus point through targeted marketing campaigns to assuage safety concerns and educate the public on the “Now Normal”.** When safety features are added, such as UV lighting or hospital-grade misting machines, these changes need to be communicated to the public. Airports are also concerned about their own employees’ safety, especially those who assist in processing passengers and baggage. Furthermore, airports are planning for recovery and assessing how their revenues will be impacted by changes in airlines and passenger demand. **Space planning and seating changes could be costly and have a negative effect on the bottom line.** Travel is increasing, with a 50/50 split between business and leisure. At its worst, one large airport reported only 1,500 travelers but is now at 10,000 travelers on June 9. Markets with a large elderly population are seeing passengers fly to check on relatives. Expect families to put off a vacation until right before school starts.

Prior hurricane and pandemic crisis planning, as well as close relationships with emergency management teams, helped in the response. Airports with a robust customer service program can be more agile responding to change at every touchpoint of the passenger journey. Taking the initiative to design signage for social distancing and sharing with airline partners and concessionaires keeps everyone on message. It is important to note that while every airport is different, an industry-wide health and safety protocol will benefit all parties.

Janitorial and Cleaning Services

The pandemic brought about appreciation of essential workers for businesses, many times roles that are underappreciated, such as cleaning and sanitation personnel. The “Now Normal” means safety directives are implemented and updated week by week for health and safety, including cleaning and sanitation measures. This is an opportunity to transform cleaning and sanitation from satisfying passenger perceptions to something that is scientifically measured and managed (think clean room yield managers that measure particles in the air). According to recent reports, surface transmission has not proven to be the most common way of acquiring the virus. **The industry needs to make a distinction and assess resources for cleaning touchpoints versus social distancing implementation.**

Consider reprogramming elevators to stop on every floor to eliminate the need to touch buttons. The industry needs to set standards and clear guidelines about cleanliness in airports and test the quality of the products being used.

Aviation Industry Groups

The International Civil Aviation Organization (ICAO) Council's Aviation Recovery Task Force created recommendations that airports and airlines should consider post-pandemic. Industry think-tanks are separating the conversation of restarting versus recovery. Restarting will be harder than shutting down when the pandemic first appeared. The industry reaction is different from the 9/11 response as this is a problem without a clear endgame or timeframe. The emphasis is on implementing for the "Now Normal" and removing any unnecessary processes. **An important conversation is who will own the post-pandemic health screening and response role, including who owns the biometric journey?** If a passenger screens with a high temperature, who will be responsible for disposition of that passenger? It may not be the case that TSA will be responsible. The U.S. government is having high-level discussions about it. Another priority is alignment of standards for airlines and airports involved in international travel.

Federal Aviation Administration

Federal entities are determining eligibility and have dispersed CARES Act monies to the aviation industry to offset impacts to airport operating expenditures (OPEX) costs due to COVID-19. Reimbursements are already being processed for eligible costs and these will end in October. Federal entities very much appreciate airports using the monies to respond to COVID-19 crisis, but the industry must do so within regular boundaries, which include expenditures generally used for airport revenue. Eligibility is broad but there are grey areas. **The nature of the reimbursement requests could determine how funds are distributed in the future.** For instance, some development projects that provide for everyone entering the airport to get a screening may/may not be eligible. **Future requirements could change to involve technology that solves efficiency issues instead of items that only benefit revenues.** The FAA facilitated distribution of approximately 87 million masks to airports in a collaboration with the Federal Emergency Management Association (FEMA).

Health, Safety, and Emergency Management

The pandemic makes it clear that emergency planning and public health entities need to be called to the aviation industry table more often. They are critical functions of air travel. Emergency management planners are accustomed to pandemic planning and knew that a COVID-19 type virus was a high possibility, with plans in place and conversations about industry standardization at annual conferences. Some airports have been in close contact with CDC coordinators for planning purposes. How airports restart and recover are critical functions. **Emergency management can lead those conversations, help integrate the aviation and public health communities, and move them forward.** Look for more opportunities to educate passengers and let them know that what public health steps are in place at airports and by airlines.

Next Steps: Future Discussions

We want to stay connected! VHB will be hosting more virtual roundtable discussions, connecting varying perspectives across geographies. Future question and discussion around this roundtable topic could include:

- » How were CARES Act funds used in your sector and how effective were they?
- » What new technologies have you implemented? What is still needed?
- » What health and safety protocols have the most impact on passenger satisfaction?
- » What does a realistic industry recovery look like in 2021? Further out? Long term plans?

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VIRTUAL ROUNDTABLE DISCUSSION – JULY 16, 2020

COVID-19 and Impacts to the Energy Industry

Introduction

VHB hosted a Virtual Roundtable Discussion with energy industry executives on July 16, 2020, as part of our virtual roundtable series with clients in various industries. Energy roundtable participants included lawyers, CEOs, financial, and environmental leaders from a variety of energy touchpoints, including electric, natural gas, and renewables. The session provided an opportunity to share multiple perspectives about how COVID-19 has impacted business and the workforce, and what changes are anticipated for a historically resilient industry to recover and adapt to a post-pandemic economy. The comments below provide a summary of challenges, concerns, ideas, and creative thinking that were shared during the conversation.

Summary

Though COVID-19 caused major adjustments to the world energy market in February and March, the pandemic unveiled how flexible and resilient roundtable participants' employees and lines of business were during a crisis. Some expressed surprise and admiration at how quickly they were able to pivot to work-from-home, despite the initial virtual meeting learning curves, and are now laser focused on employee well-being for the remainder of the crisis. A strong future for renewables remains top of mind as COVID-19 has not significantly slowed down work in this sector. The industry is concerned about making projects affordable due to the negative economic impact of the pandemic on disadvantaged populations. **Overall, participants remain optimistic about the amount of opportunity but concerned about the industry's ability to be agile enough to operate in a rapidly changing environment.** Remote work and the transition to renewables and low-carbon scenarios is happening even faster than expected. **The blue/green economy will help the U.S. out of the economic slump, and the energy industry is poised to lead.** Participants from different market sectors shared the following perspectives.

Discussion 1: Top Impacts of COVID-19 on the Energy Industry

ELECTRIC & NATURAL GAS

Initially, some companies were concerned about maintaining capital projects. Some utility work fell-off at the beginning of the pandemic because agencies were not holding meetings. Compliance issues initially increased due to distracted workers, and a rush to keep busy during downtime caused new problems. Fortunately, many utility and contract workers were defined as essential workers and could cross state lines. Managing back-to-back storms remotely for the first time in April was a learning opportunity for one company which is now better prepared for future adverse climate conditions that must be managed virtually for the unforeseeable future.

Some leaders are concerned about reaching lofty sustainability goals set before COVID-19 due to economic and political changes. **Many utilities and energy developers are in the process of reevaluating their energy generation portfolios with the goal of developing safe, reliable forms of energy in the most cost-effective manner (i.e., renewables versus natural gas).** Pipeline work is also challenging to coordinate virtually, but employees are working hard and possibly working more now that they are at home. A large number of LNG projects need pipelines so expect to see that work continue, even with the move to renewables.

Keeping the lights on and power flowing for customers is important, and companies worked closely with utilities and government entities to provide essential services at the outset. They are mindful that customers rely on them more than ever and continue to plan for scenarios that could arise and further impact their ability to respond to customer needs (hurricanes, winter storms, etc.). Some reported permitting frustrations in the environmental sector. For instance, a project that required stakeholder input was delayed due to a judge not wanting a virtual public hearing. The loss of human interaction has been fairly significant, in particular for land acquisition work which tends to be personal and face-to-face.

Energy providers with low or no COVID-19 cases feel fortunate they were able to quickly transition their workforce to work-from-home environments. The northeast was well-prepared for remote work due to a major winter storm about 10 years ago that caught many off-guard, resulting in inadequate local response, but ultimately led to a call for remote work training, which is paying dividends now. **However, they look forward to returning to in-person contact such as commission meetings where body language and observation of stakeholders is so important.** Additionally, isolation has been a significant concern for employees who live alone or use the office as primary way to socialize. Some companies organized offline meetups following strict social-distancing protocols. They want to make certain employees remain engaged and return to work ready to meet challenges. **Resiliency means abandoning the notion of returning to normal. Companies that throw off that yoke and lean-in to the permanent shift of doing business in a new way will prosper.**

From a financial perspective, liquidity in the markets is better now than it was in March. The load impacts the industry, such as industrial impact in South Carolina via factories shutting down. Decline in load also affects cash cycles. Bad debt has not been an issue, but the industry is still in the pandemic early stages; we could expect impacts over a longer period of time. Liquidity is the other side of cash preservation. **Many in the industry shored up liquidity and see the pandemic as a test of the short-term.**

RENEWABLE ENERGY

Companies active in the solar photovoltaic and energy storage space remain robust.

There were some initial slowdowns as employees navigated social distancing and shelter-in-place requirements. Construction continued because supply chain impacts in this sector were not significant. **Fortunately, with solar construction, workers can social distance more easily, allowing construction to continue unabated.** Some regulatory issues caused turnaround times to slow as people moved to a cloud platform and electronic submittals.

Much of renewable development is good planning and creative problem solving.

The sector pivoted quickly to address critical issues around siting and permitting. One company cited an internal communications campaign about wind farm blade construction, which was challenged when support technicians could not travel from Europe. However, given our current work environment, they were able to virtually train in real-time and successfully exchange information in-the-cloud with workers on blade maintenance.

Offshore providers that regularly import wind projects via tankers shipping from all over the world initially had a host of concerns. Employees working on vessels and ships needed to return to port, and in many cases, quarantine. Borders were closed to cruise ships and other vessels. Offshore employees were staying on a vessel for 16 weeks instead of a typical six. Determining how to best bring them home had a big impact on management, but again reflected resiliency and creative problem solving as some rented planes and hotels to quarantine. **The company had to learn a lot about force majeure in a short amount of time.** They are instituting planning scenarios to forestall future pandemic impacts.

The renewable sector is still focused on cash preservation mode; however, there are concerns about second wave impacts. The impact of COVID-19 on employee mental health and productivity cannot be ignored.

Discussion 2: Decline of Global Energy Demand & Moving Forward

Most participants do not anticipate a negative long-term impact on the industry nor a permanent change in demand. Gas, renewables, and diversification should remain strong. Gas infrastructure is harder to build with permitting issues and federal court decisions, but it makes existing networks even more valuable. Providers that serve a heavy residential population and are well-diversified feel good about the future. Solar and battery sites are on schedule.

The U.S. will continue to transition to a low-carbon economy. Decreased energy demand means emissions will go down. Companies who want to future-proof will have to incorporate a renewable strategy. Natural gas will remain strong. **The industry is starting to talk about hydrogen more, especially in the last year.** The excitement is reminiscent of when storage was first on the radar. Producing hydrogen requires electricity, and there is a huge opportunity for the energy market in the U.S. to produce hydrogen as storage or a carrier for electricity.

Northeast energy providers remain concerned about a slowdown, especially in regions heavily dependent on hospitality and tourism. Emergency preparedness is imperative with a major storm season of hurricanes in our midst. The workforce is still remote and the pandemic numbers are rising in parts of the U.S. Expect the electric market to bounce back if the summer holds without a resurgence. **Some are gearing up for a significant increase in distributed generation in renewables.**

One issue now is a soft investment tax credit market which affects financing for solar projects. The massive effort to decarbonize our economy will accelerate; however, the industry may see the concept of contracting for firm capacity in the future (i.e., customers paying for the ability to procure power 24/7).

Social justice and environmental issues are important. Participants are conscious of making projects affordable due to COVID's negative impact on the economy. They do not want to raise the cost of energy to those who can least afford it. Expect more small-scale solar and utility projects in response.

Next Steps: Future Discussions

We want to stay connected! VHB will be hosting more virtual roundtable discussions, connecting varying perspectives across geographies. Future questions and discussion around this roundtable topic could include:

- » How did global energy demand fluctuations impact your business in Q3 and Q4?
- » Have pandemic setbacks and local/federal policy response changed your approach to employee engagement and retention?
- » How have clean energy goals set before COVID-19 been impacted?

Connect With Our Our Energy Thought Leaders



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VIRTUAL ROUNDTABLE DISCUSSION – JULY 14, 2020

Freight Logistics: How to Strengthen Cities and Supply Chains in a Post-COVID-19 World

Introduction

VHB's Virtual Roundtable on July 14, 2020, brought together freight transportation industry leaders along the East Coast to explore the impacts of COVID-19 on freight logistics and supply chains. Participants represented a wide variety of public and private industry perspectives, including port authorities, state and local departments of transportation (DOTs), metropolitan planning organizations (MPOs), trucking associations, and freight railroad operators. A summary of challenges, concerns, ideas, and creative thinking that were shared during the conversation are detailed below.

Summary

The discussion revealed the vast impacts of COVID-19 on freight transportation and highlighted the vulnerability of international and domestic supply chains. Industries were affected in different ways when the pandemic first appeared. Air travel plummeted and created a drop in cargo capacity. Maritime freight was hampered by blank sailings and incidents of longshoremen contracting COVID-19. Freight rail became a critical mover of food supplies. Trucking was already experiencing a shortage of drivers, which was immediately accelerated.

The world of freight planning is front and center now due to the pandemic. Globalization means the world is smaller and more complex. Our freight community plays an increasingly important role as the public and private sector learns how goods are moved from producers to distributors. Most people never thought about where paper towels or other daily goods came from before COVID-19, but now they do.

Roundtable participants expressed thanks for the opportunity to share concerns and best practices for responding to the pandemic with their peers, and a desire to not go back to the “muscle memory” of doing business pre-COVID. The roundtable discussion was robust and leaves us with hope for continued innovation in global supply chain and freight transportation in the future.

Topic 1: Immediate Response to COVID-19 and Current Efforts

PORT AUTHORITIES

The first major change observed by port authorities was the significant increase in e-commerce and online shopping. Early on, there were concerns about regional warehouse capacity to handle an influx of goods given high demand by consumers. Soon after, however, maritime demand shrank, resulting in blank sailings, which helped to rebalance warehouse capacity. **The designation that goods coming into the port were essential, coupled with proactive communication to partners that the ports were open, proved critical for the continued flow of materials.**

Ports also observed the aviation industry's pivot to accommodate freight. With [global air travel demand reduced](#), fewer passenger flights were offered, resulting in less capacity for air cargo which is often held in the “belly” of passenger planes.

The immediate pandemic response also strengthened partnerships between the ports and local offices of emergency management. Ports worked collaboratively to help streamline the permitted movement and storage of emergency COVID-19 goods (i.e., tents, medication, and PPEs) to large metropolitan areas in need.

TRUCKING INDUSTRY

COVID-19 accelerated the driver shortage for the trucking industry across the U.S. Fear of contracting the illness, especially for high-risk or older drivers, prompted early retirement for some. At early onset, confusion on regulations also complicated many things. In areas of high-infection rates, like New York City, a 14-day self-quarantine was required, which disincentivized truckers from driving into the city. Additionally, state rest areas and parking areas were closed. Thankfully, truck drivers were deemed essential and did not need to self-quarantine. Instead, they could deliver critical supplies to stores and residents.

The trucking industry had to adjust quickly. Working with local partners, the industry identified back-up plans with a local economic development corporation to make certain supplies were still able to get where they needed to go, especially in large metropolitan areas. Clarification on self-quarantining requirements was obtained early on from regulators. Working with DOTs, rest stops were reopened in many states. Parking relief was also provided by local authorities and essential deliveries were made by adjusting hours and locations.

STATE AND LOCAL DEPARTMENTS OF TRANSPORTATION

For DOTs, the immediate focus during COVID-19 was serving their communities by getting people and supplies where they needed to go in a safe manner. Rest areas and service areas were a priority to provide cleanliness and accessibility. Pre-COVID-19 scenario planning that addressed bottlenecks and supply chain disruptions helped in the initial response, although these prior efforts did not account for a pandemic. COVID-19 has now shifted how work gets done. **For example, “last mile” truck activity is shifting from serving distribution centers in industrial areas to more residential areas. In dense urban environments, this poses a challenge given the competition for space at the curb.**

Because of COVID-19, precious roadway space is being used for outdoor dining. Even before COVID-19, DOTs were working with the private sector to find creative solutions for goods delivery. New York City launched a cargo-bike pilot program last year with Amazon DHL, and UPS to reduce truck vehicle miles travelled (VMT), reduce congestion, and improve air quality. Now, this program is even more useful given trucks have less access to storefronts and residential buildings.

Another successful New York City initiative is the neighborhood loading zone program, which provides dedicated space for e-commerce curbside deliveries. Due to COVID-19, businesses like Instacart, a grocery delivery service, has seen [increase in demand by 300 percent](#). The new approach to curbside management has allowed for these new business models to flourish. It was also noted that even Baldor, a food distribution business, is now offering delivery services direct to consumers given the change to online purchases during COVID-19.

The pandemic provided an opportunity for DOTs to better understand industry trade needs, to address business-to-business and business-to-government collaboration, and workforce development.

RAILROADS

For freight rail operators, changes were made both in how the railroad deployed its own personnel, as well as how it moved its fleet of locomotives and railcars. Within the railroad itself, social distancing was key, as train crews typically include two people per locomotive. A variety of safety measures were also implemented: extra procedures for cleaning trains and crew rooms, crew changes on locomotives were limited, as were hotel stays by those crews. In addition, interchanges became mostly touchless and required no human interaction, with switching operations in yards and terminals managed via remote control.

Freight rail was devastated by COVID-19. 200 locomotives and 400,000 railcars were put in storage due to the drop in demand. At record-breaking levels of storage, the cost to store rail cars (at a typical lifespan of 40 years per) has come into play. As of July 2020, freight rail demand has slowly returned, resulting in the return of employees, locomotives, and railcars.

On the positive side, railroad operations did become more fluid. **As passenger demand on commuter railroads decreased on shared passenger and freight tracks, it cleared the way for freight trains to more easily make deliveries to large cities.** At some larger ports, overall rail volumes were sustained during the initial impacts from COVID-19 given the high demand for containerized, intermodal cargo. However, there were losses in merchandise traffic moving in gondola, hopper, and boxcars. On the bright side, the crisis helped to facilitate collaboration within the rail industry and with government agencies to help navigate the response.

METROPOLITAN PLANNING ORGANIZATIONS

Given MPOs are not operations-focused agencies, during COVID-19, the focus was on processing emergency funding for transit operators. **The MPO became a framework for facilitating communication and coordination, as needed, and was actively engaged in a multi-state consortium.**

Early in the health emergency, truck rest areas closed which impacted supply chains in dense, metropolitan areas. The MPO conducted a driver survey to understand rest stop usage, which later helped facilitate the reopening of rest areas in key states. An emphasis on the regional perspective was needed during COVID-19, rather than a focus solely on urban epicenters.

Topic 2: Future Scenarios

Uncertainty remains around the pandemic, especially with cases rebounding nationwide this summer. As such, impacts to the supply chain continue to evolve and the freight industry will shift to accommodate. Roundtable participants shared their views on the future and best practices to navigate potential changes and strengthen the global supply chain.

ENHANCE FLEXIBILITY AND ADAPTABILITY

- » Volumes, origins, and destinations will change when product options vary.
- » Inbound freight volumes may pick-up from Asia this summer, although that hinges on consumer demand.
- » Expect an **uptick in proposed multi-story, rail-served warehousing** in the New York City region.
- » Rail operators are considering closer moves (less than 500 miles) to accommodate the e-commerce demand and compete with the trucking industry.
- » With the **acceleration of e-commerce**, it may be harder for some modes to compete with delivery needs, like rail, with just-in-time delivery. For regions that rely heavily on a single mode, this could be problematic. How can the freight industry balance the modes to not get overrun with truck miles? Significant change could be coming to help offset the imbalance.
- » Rail industry seeks to update its business model given the rise in e-commerce, and potentially deliver smaller packages using existing regional/suburban drop-off locations.
- » Look for **streamlined processes for reopening manufacturing facilities** following changes to and/or new product lines, notably for emergency goods.
- » Capital programs are at risk. Investment at the federal and state level will keep capital projects moving forward and increase jobs and infrastructure. Future stimulus funding to bolster freight and transportation needs will require good data and analytics. If more goods are produced domestically it will also impact the global supply chain.

LEVERAGE TECHNOLOGY

- » E-commerce will continue to accelerate quickly and distributed manufacturing trends such as 3-D printing will also quicken.
- » 50 percent of logistics providers have **shortened technology roadmaps** to respond quicker. This is an area for even greater improvement.
- » State departments of motor vehicle online registration and permitting for commercial drivers would provide greater efficiency, especially during supply chain disruptions like pandemics.



PROMOTE VISIBILITY, COMMUNICATION, AND EDUCATION

- » Expect further education for the public and industry partners on how the supply chain works.
- » The industry could **elevate visibility on supply chain and tracing** to understand how fragmented the chain is and the number of players involved.
- » Communication and collaboration on the local, regional, and national scale will help to identify weaknesses in the system, allow for informed decision-making, and enable supply chain planners to plan for the long-term. **Undoubtedly, money, time, and infrastructure are needed to make these systems more resilient.**

DIVERSITY IN FREIGHT PLANNING AND SUPPLY CHAIN MANAGEMENT

Diversity in the freight world is important and something the industry should address. NYC has a food resiliency group focused on diversity and scenario planning that raises big questions like who has access to food? Who has access to capital? Who are the owners/farmers? Where do food deserts exist? Compound these questions with populations that are disproportionality impacted by emissions from truck or commercial activity and access to transportation, the importance of diversity in the freight world is significant. It is problematic that supply chain decision makers do not represent the communities that are impacted. **Many perspectives are needed.** Some industries, like trucking, are introducing a younger, more diverse population (even in charter schools) to the trucking industry to educate them about opportunities.

Next Steps: Future Discussions

We want to stay connected! VHB will be hosting several virtual roundtable discussions, connecting varying perspectives across geographies. Future questions and discussions around this roundtable topic include:

- » Are we approaching a new era of globalization?
- » How will this affect trade across borders?
- » How do we increase resiliency to mitigate future disruptions?
- » Can we leverage technology to push for greater transparency?

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Learn more about COVID-19 impacts on the global supply chain [here](#).