



# ACC NEWS



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## YOUR WEEKLY UPDATES

Week 46 of 2020



*Healthcare*



*Beverages*



*Ports*



*Retail*



*Shipping*



*C-Stores*



*Rail*



*Road*



*Supply Chain*



*Handling*



**Pfizer's COVID-19 vaccine – see Slide 31**

### **Still So Much To Learn**

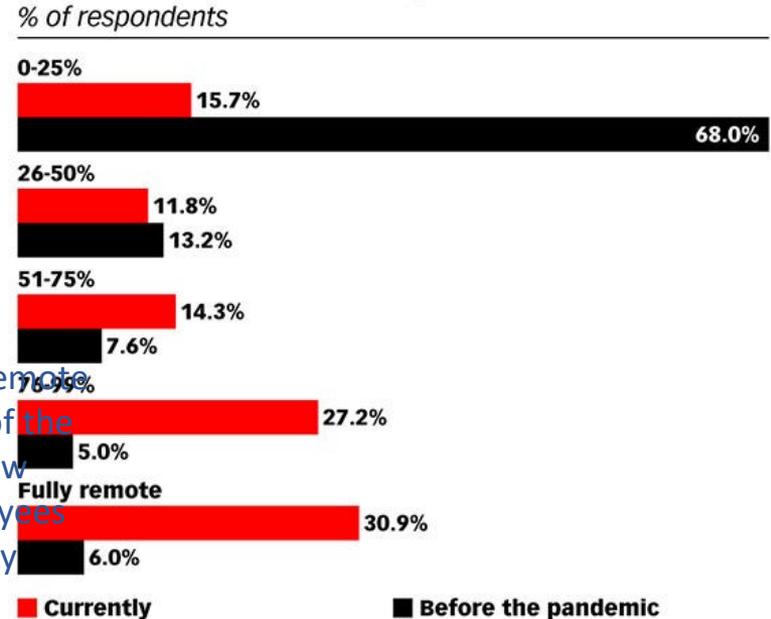
- Slide 3 – Tesco virtual supermarket in a Japanese subway station
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- Tesco Homeplus opened a virtual grocery store in a South Korean subway station, where users shop by scanning QR codes on their smartphones
- A large, wall-length digital billboard was installed in the station, designed to look like a series of supermarket shelves and displaying images and prices of a range of common products. Each sign also includes a QR code. Users scan the code of any product they would like to purchase, thereby adding it to their online shopping cart. After the web transaction is completed, the products are delivered to the user's home within the day.
- The strategy makes productive use of commuters' waiting time, while simultaneously saving shoppers time spent going to the supermarket.
- This is forward-looking as it drives sales for the retailer – without the need to build new stores. It brings the store to the consumer who, instead of merely waiting for a train, can use the time to digitally order. *designboom*



- For knowledge workers, the coronavirus pandemic brought an abrupt change to daily work life. As many companies shut down their corporate offices—some out of regard for employee safety and others due to government mandates—the norm of conducting business from an office ceased. Without an in-person option, teams were forced into a distributed work model and given little to no time to prepare.
- According to a May 2020 survey from The Adecco Group, 69% of US employees said they had to make major changes to their usual ways of working to adapt to the pandemic. A National Association of Corporate Directors (NACD) poll from the same month found that 54% of US directors cited changing the way in which work gets done as a leading trend that would impact their company’s post-coronavirus recovery.
- A June 2020 survey from Workable, a talent-acquisition tech provider, found that among human resources and talent acquisition professionals and business leaders worldwide, 30.9% said their employees were now fully remote, up from just 6.0% before the pandemic. Moreover, the percentage of respondents who said that one-quarter or less of their workforce was remote fell from 68.0% before the pandemic to 15.7% in June.
- Now, several months into the pandemic, even within organizations where executive teams may feel they’ve successfully scaled their remote workforce, many employees feel otherwise. Across various facets of the employee experience, there was more than a 30% gap between how many executives worldwide said they were supporting their employees and how many employees worldwide reported feeling supported by their companies, per IBM Institute for Business Value and Oxford Economics research from April to July 2020.

**Percent of Their Workforce Working Remotely Currently vs. Before the Coronavirus Pandemic According to HR/Talent Acquisition Professionals and Business Leaders Worldwide, June 2020**



Note: numbers may not add up to 100% due to rounding  
Source: Workable, "The New World of Work," Aug 3, 2020

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## US ECONOMY: Coronavirus Predictive Indicators for Economic Impact

prevedere

All Categories: Look at these indicators to understand how they are placing upward or downward pressure on the economy.

Last Refresh: 11-09-2020

Category	Indicator	Relationship	Next Update	Jul 2020	Aug 2020	Sep 2020	Oct 2020	Nov 2020
Business Investment	Average Weekly Hours - Retail	Procyclic	12-07-2020	0.97%	0.75%	0.32%	0.65%	
	Small Business Sentiment	Procyclic	12-04-2020	-6.13%	-3.70%	-2.13%		
	Weekly Economic Index	Procyclic	11-16-2020	-7.20%	-5.82%	-5.22%	-3.81%	
	Weekly Jobless Claims	Countercyclic	11-16-2020	534.40%	425.70%	316.38%	273.25%	
Transportation and Tourism	Google Search "Travel Cancellation"	Countercyclic	11-10-2020	40.74%	13.79%	0.00%		
	ISM Services Index	Procyclic	12-04-2020	-3.08%	4.18%	6.21%	4.64%	
	Restaurant and Bar Sales	Procyclic	11-16-2020	-26.11%	-19.30%	-16.41%		
	Sentiment: Vacation Travel Next 6 Months	Procyclic	11-11-2020	-34.56%	-38.40%	-40.80%	-42.84%	
Consumer Big Ticket Purchases	Auto Sales	Procyclic	11-30-2020	-36.81%	-29.78%	-22.06%		
	Consumer Sentiment - Discretionary Spend	Procyclic	11-11-2020	-11.42%	-10.47%	-11.68%	-11.32%	
	Global Luxury Index	Procyclic	12-09-2020	2.14%	9.87%	17.59%	19.67%	17.53%
	Home Building Permits Issued	Procyclic	11-26-2020	-0.50%	2.60%	5.38%		
Logistics and Manufacturing	Economic Policy Uncertainty	Countercyclic	11-10-2020	283.49%	111.48%	113.91%	170.93%	135.48%
	Industrial Production	Procyclic	11-16-2020	-11.10%	-8.15%	-7.02%		
	Overtime for Hourly Mfg Workers	Procyclic	12-07-2020	-20.63%	-15.87%	-11.90%	-9.60%	
	Purchasing Managers Index - Mfg	Procyclic	12-02-2020	-3.29%	7.11%	11.82%	17.56%	
Financial	Financial Stress Index	Countercyclic	11-16-2020	-71.51%	119.33%	-40.36%	80.61%	
	S&P 500	Procyclic	11-10-2020	6.19%	15.39%	13.19%	15.02%	10.74%
	US High Yield Index Option - Adjusted Spread	Countercyclic	11-10-2020	47.32%	20.76%	32.37%	23.63%	22.06%
	VIX Volatility Index	Countercyclic	11-10-2020	112.44%	25.48%	78.65%	81.56%	158.19%

### NOTES

Values represent the percentage change from the previous year.

In November, 2 out of 5 indicators are signaling economic improvement from the previous year.

In October, 5 out of 14 indicators are signaling economic improvement from the previous year.

Look to subsequent pages for monthly trend analysis.

■ Upward pressure on economy

■ Downward pressure on economy

Full report attached

Still So Much To Learn

ACC



## Exercise equipment inventories somersault over COVID-19 **American Shipper**

- The traditional logistics and inventory model behind the exercise equipment supply chain is now doing somersaults in the U.S., a country beset by the coronavirus pandemic.
- Eric Goldapske, senior director of operations at Horizon Fitness, said at FreightWaves LIVE @HOME Thursday that exercise equipment suppliers have had to shift from mostly serving public gyms to dealing with homeowners almost overnight as COVID-19-related social distancing measures were put in place.
- People have not stopped exercising during the pandemic but instead want the gym experience in their homes. This change in demand has caused Horizon Fitness and its competitors to upend their logistics and inventory management.
- “We’re in the process of opening additional warehouses to allow us to have the flexibility to have those products available to the consumer and we’re actually increasing our inventory,” Goldapske said. “The plan longer term is to carry larger amounts of stock for situations just like this.”
- **Comment** – ACC has previously reported on the rising level of imported household goods being routed directly to homes in M2H (**M**anufacturer **2** **H**ome) channels. The challenges this has created, and continues to create, is in the final mile delivery of units that are heavy and ungainly in handling characteristics. Conventional channels through UPS and FedEx, among others, have traditionally steered away from these commodity types, raising their rates to unacceptable heights in order to avoid entering domestic areas with large vehicles to effect these deliveries as opposed to their present mid-van vehicles. ACC assisted importers in setting up channels in order to capitalize on this rising trend. Unfortunately for traditional carriers and couriers, it is not only going to continue, but also rapidly rise as increasing numbers of Asian exporters to the U.S cut out “middle-men” such as Walmart, Home Depot and other national brands. They are actively seeking out separate delivery channels and pursuing increased margins via direct-to-consumer sales. The manifest, and as yet unrealized, manufacturer challenges however, is in aftersales services provided by traditional retailers in repairs and customer taste changes. They do not have any ability at present to provide such services. Similarly they do not yet have secondary market arrangements in place for disposal of redundant goods.



## “We expect to see the Covid-19 packaging trends continue into 2021”

- Packaging has seen a big boost in sales this year as a result of the pandemic. Just like everyone else in the industry, the ability to be flexible proved vital for packaging companies, Aaron Fox, President of Fox Solutions and Executive Vice-President of Fox Packaging shares: “Rapid changes in both internal and external demands frequently necessitate change in different areas of manufacturing: lower price points and production costs, higher quality and shorter throughput time are constantly integrated. These demands require a high degree of flexibility and more dynamic decision making later in the production chain.”
- Fox Packaging expects that the current challenges will not go away in the coming year. “In light of Covid-19, there have been increased orders of packaged items, as well as bulk items transitioning into retail-pack sizes. We’re seeing increased orders for small consumer pack sizes of 1, 3, and 5lbs, specifically for products such as onions, potatoes and citrus. We anticipate that this will continue through 2021 as there is a continued decrease in food service and a driven increase through retail demand,” Fox concludes.

## US Holiday Ecommerce Sales Will Surge 35.8% to \$190.47 Billion, Offsetting Brick-and-Mortar Declines

Retailers are bracing for a softer holiday season due to the pandemic. They will see, however, a major shift to ecommerce this holiday season. US consumers will spend \$190.47 billion this year on holiday ecommerce purchases, up 35.8% and representing an incremental \$50 billion in sales versus 2019. In-store holiday sales will decline by 4.7% to \$822.79 million. But online gains will entirely make up for these losses, resulting in growth of 0.9% for total holiday season sales, to \$1.013 trillion. (Note: We define holiday season sales as those occurring in November and December.). This holiday season will see a continuation of the channel-shift to ecommerce, as shoppers look to avoid crowds and minimize their number of in-person shopping trips,” said Andrew Lipsman, eMarketer principal analyst at Insider Intelligence.

**US Retail and Retail Ecommerce\* Holiday Season Sales Growth, 2013-2020**  
% change





## Uber on Track to be \$1B Grocer Progressive GROCER

- Two recent acquisitions and the addition of new food retail partners have Uber on a pathway to facilitating \$1 billion in grocery sales annually.
- The revelation of the inroads in grocery made by San Francisco-based company best known for disrupting the world of transportation, came a triple-digit growth rate for its overall product delivery business quarter ended Sept. 30. Based on increased demand for a grocery service launched in early July and the impact of the two recent acquisitions, Uber said that it's on track to facilitate \$1 billion in grocery annually.
- The company noted that its total delivery bookings, the value of merchandise delivered, increased 134% to nearly \$8.6 billion in the third quarter. That's up from delivery bookings that increased 106% to \$6.9 billion in the second quarter, and 52% to \$4.7 billion in the first quarter. Uber makes money based on fees earned -- its "take rate" -- on its gross bookings. In the third quarter, its revenues increased 125%, to \$1.45 billion.



Uber, a as it revealed during the delivery

sales

## Loblaws' new fees for CPGs: This move generates big questions

- Loblaws recently announced several new fees will be added to the cost of goods bought from large CPG brands starting Jan 3, 2021.
- The retailer says the new charges are needed to keep costs down for consumers as CPGs press to raise product prices and to have brands share in its \$6 billion plan to invest in stores and eCommerce infrastructure.
- These types of fee increases are becoming more common, and they highlight 2 key questions that both retailers and suppliers will need to answer as they develop their long-term strategies in Canada and the US too.
- These new fees are targeted at big brands and include an additional 1.2% charge to current in-store promotion or shelf placement fees; an increase from 0.85% to 0.97% for deliveries to Loblaws distribution centers; and an increase from 0.26% to 0.30% for deliveries to stores. (Farmers and small brands are currently exempt.)

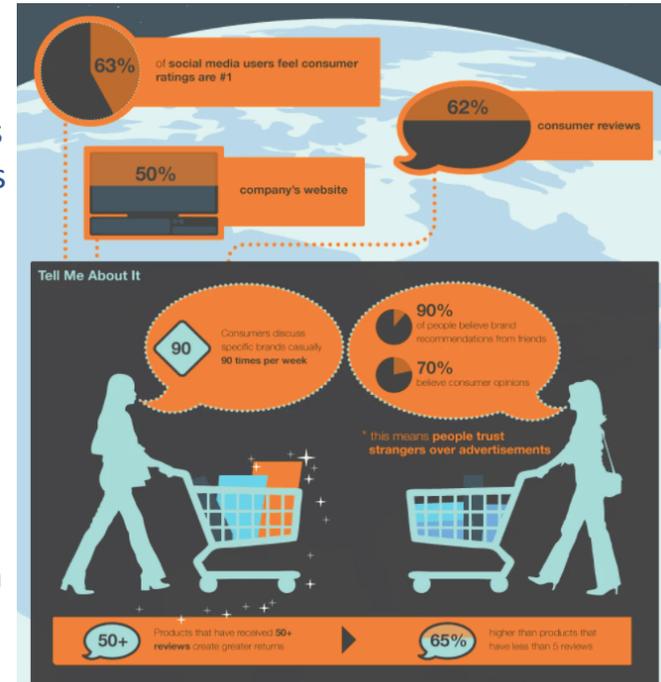


## Social media trend: The organic social media relationship funnel

COVID has impacted the lives of every audience - There are limited ways to reach users in the real world, so, in order to catch up, every channel has to be utilized. Companies will be (and already are) investing into social media platforms they stayed away from previously, be it the new sensation TikTok, somewhat stale Facebook, or any other previously unexplored platform."

The top 6 social media trends for you to reach and convert more customers next year

1. **The organic social media relationship funnel** - Who do your customers trust the most? With rising concerns over privacy and fake-news, forming a trust relationship with your customers in 2021 is going to be harder than ever.
2. **People-first social media** - Two-way communication is the ticket to boosting your organic posts to the top of your audiences' social feeds. As we know, 'the function of an algorithm is to deliver relevant content to users', alongside targeted paid ads.
3. **Diversification** - We can't talk about 2021 social media trends without acknowledging the huge shake-up of social platforms we've witnessed this year. TikTok, peaking in March 2020 with almost 76 million downloads, has pioneered a new approach to social engagement.
4. **Live social media** Using live streaming to fill the physical void had become the new normal for so many consumers, but how are marketers using this opportunity to meet their customers live online?
5. **Social content for good** - A growing focus on political, environmental, and social issues throughout the year means increased social media conversations about the issues close to your customers' hearts.
6. **Social commerce** - 87% of e-commerce shoppers believe social media helps them make a shopping decision and with half the world's population on social media, social commerce is the next logical step for online shopping.





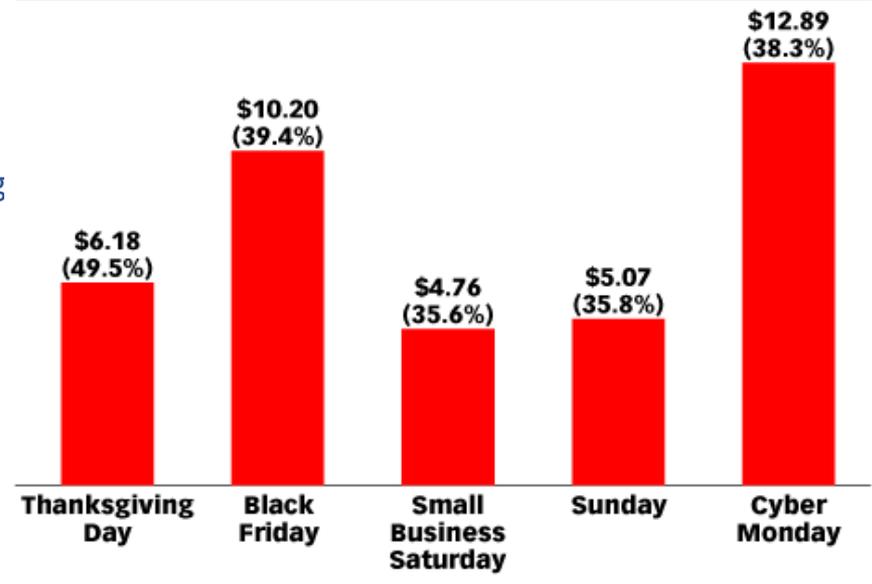
## The Netherlands needs some night frost before importing of Italian vegetables begins

The Italian vegetable season is off to a difficult start. "The Dutch weather is actually still too good. We need a few nights of frost, then we can start loading," says Wijnand de Mooij of a fresh produce wholesaler in Rotterdam with the same name. "The current supply of, particularly, baby leaf, is still too large. Fennel, radish, and kohlrabi supplies are as good as exhausted in the Netherlands. We've been importing spinach for a while now. Our Italian suppliers would like to switch. They, too, are missing the sales to their hospitality industry clients."

## The Cyber Five promotional period

- The Cyber Five promotional period—Thanksgiving Day through Cyber Monday—will continue gaining share of the total holiday ecommerce pie, rising slightly this year to capture 20.5%. eMarketer forecasts that Cyber Five ecommerce sales in the US will bring in \$39.10 billion in 2020, up 39.6% from 2019.
- Within the Cyber Five period, there will be some record-breaking days. It begins with Thanksgiving, which is forecast will see a dramatic increase in sales of 49.5%, reaching \$6.18 billion. With most big-box retailers keeping their doors closed on Thanksgiving, eMarketer anticipates shopping will move to mobile, making it the ultimate day for “couch commerce.”
- Black Friday will experience its first-ever \$10 billion spending day, rising 39.4% year over year. The Cyber Five period will be capped off with record-setting sales on Cyber Monday, which is forecast will rise 38.3% to \$12.89 billion—once again landing as the top online spending day of the year.

**US Cyber Five Retail Ecommerce Holiday Season Sales, by Shopping Day, Nov-Dec 2020**  
billions and % change vs. prior year

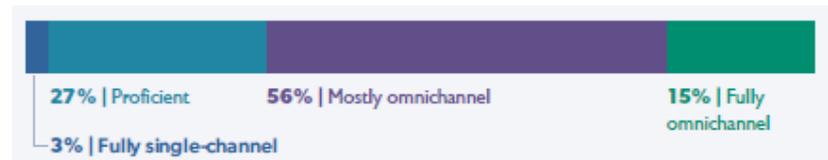




## The customer journey is taking place online for today’s consumers. **DIGIDAY**

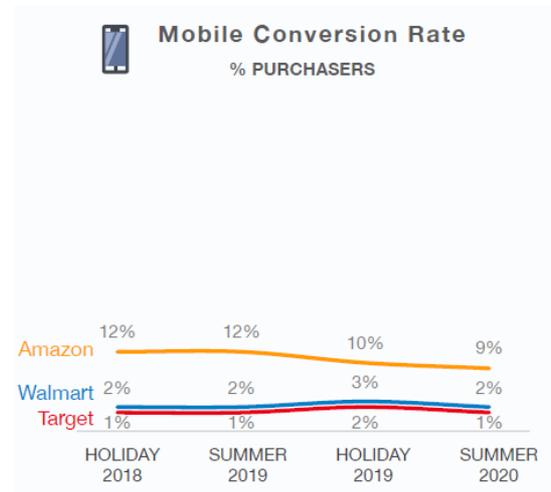
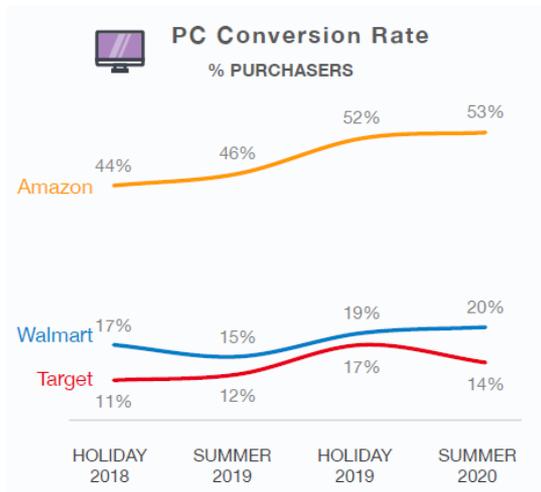
- Yet according to new findings, brands, retailers and their agency partners report deficiencies when it comes to creating an effective on-site experience. As companies attempt to move customers through every phase of the customer journey, their own websites remain tough nuts to crack.
- Indeed, most brands concede that, in terms of product discovery and overall ease of use, their site experiences are at best imperfect. Not only can this cause customers to abandon the e-commerce funnel before the conversion stage, but companies can find themselves unable to collect crucial CRM data — and insights into customer intent — that would help them target and engage customers.
- At a moment when the customer journey is becoming overwhelmingly digital — and increasingly omnichannel — solving those challenges has never been more urgent.
- “For all customers, it’s gone from, ‘I’m going out shopping,’ to ‘I’m always shopping,’ said agency Reprise Digital. “We have our devices, and we’re always connected, and we’re always searching.”
- On a more granular level, differences abound between digitally native DTC brands — generally more effective at mastering on-site product search — and CPG brands, historically more reliant on third parties and resellers and are only now feeling the imperative to improve the direct-to-consumer e-commerce experience.
- But brands of all stripes are finally beginning to prioritize every aspect of the online customer journey, including the offsite and on-site research phases.
- “There have been dramatic changes in the retail landscape in recent years, and we needed to move quickly to harness the change in consumer behavior,” said Dutch denim brand G-Star RAW, which recently revamped its site search features. “We need to ensure that customers can seamlessly interact with our brand.
- Companies — both CPG and DTC — are making greater efforts to improve their e-commerce experiences, both to boost conversions and to collect a richer pool of data.
- Q – when it comes to the overall customer journey, what best describes your omnichannel approach?

**Full report attached**



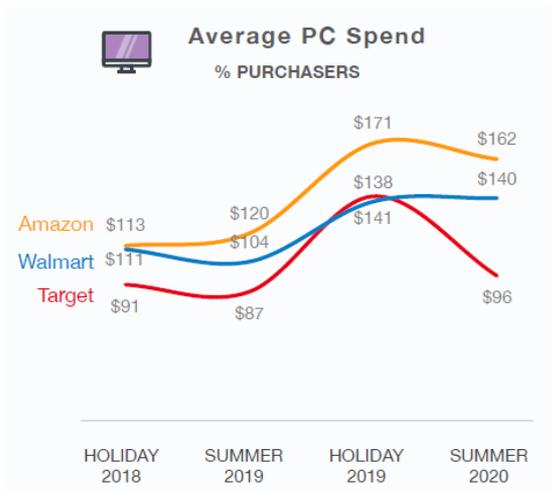


## Tracking Shopping Behaviors



### TOP SHOPPING WEBSITES (top 12)

	HOLIDAY 2018	SUMMER 2019	HOLIDAY 2019	SUMMER 2020
1	amazon.com	amazon.com	amazon.com	amazon.com
2	walmart.com	walmart.com	walmart.com	walmart.com
3	ebay.com	ebay.com	ebay.com	ebay.com
4	target.com	target.com	target.com	homedepot.com ↑
5	bestbuy.com	homedepot.com ↑	rakuten.com ↑	target.com ↓
6	groupon.com	groupon.com	bestbuy.com ↑	bestbuy.com
7	etsy.com	craigslist.org ↑	kohls.com ↑	etsy.com ↑
8	homedepot.com	rakuten.com ↑	macys.com ↑	kohls.com ↓
9	macys.com	etsy.com ↓	homedepot.com ↓	rakuten.com ↓
10	craigslist.org	kohls.com ↑	etsy.com ↓	lowes.com ↑
11	jcpenny.com	macys.com ↓	groupon.com ↓	google.com ↑
12	kohls.com	bestbuy.com ↓	jcpenny.com ↑	macys.com ↓



### TOP SHOPPING APPS (top 10)

	HOLIDAY 2018	SUMMER 2019	HOLIDAY 2019	SUMMER 2020
1	Amazon	Amazon	Amazon	Amazon
2	Walmart	Walmart	Walmart	Walmart
3	Ibotta	Ibotta	Ibotta	Wish ↑
4	Shopkick	B&H Photo, Video & Pro Audio ↑	Wish ↑	Fetch Rewards ↑
5	eBay	Apple Store ↑	Fetch Rewards ↑	Ibotta ↓
6	Wish	eBay ↓	eBay	eBay
7	Ebates	Fetch Rewards	Ebates	Apple Store ↑
8	Shopular	Shopkick ↓	Lucky Money ↑	Google Opinion Rewards ↑
9	Target	Ebates ↓	Apple Store ↓	Mobile Performance Meter ↑
10	Groupon	Wish	Google Opinion Rewards ↓	Receipt Hog ↑

Still So Much To Learn





## With these planes Mercado Libre will deliver packages in less than 24 hours **Entrepreneur**

- Mercado Libre announced an investment of one billion pesos to create its own logistics network that allows it to reach the entire Mexican territory in 24 hours.
- This ecommerce company's network will feature yellow airplanes and vans, as well as new distribution centers known as last mile and cross docking stations , to cover the entire country.
- During a virtual press conference, the Latin American e-commerce brand highlighted that this initiative seeks to create more than six thousand direct and indirect jobs nationwide.



## Even with new funding, Uber is asked whether Uber Freight fits **FREIGHTWAVES**

- Uber Freight had a strong quarter compared to last year but in the company's earnings call, the one question asked about the unit of the larger Uber Technologies was one that has dogged it for a while: Does it fit inside Uber?
- Uber Freight's revenue climbed 32% from the third quarter of last year, jumping to \$288 million from \$218 million. Freight's adjusted earnings before interest, taxes, depreciation and amortization improved to a \$73 million loss from \$81 million last year.
- Freight margins were up 12 percentage points year-over-year but weakened 2 percentage points sequentially from the second quarter.
- But during the Q&A part of the earnings call, CFO Nelson Chai and CEO Dara Khosrowshahi had to address that nagging question about fit.
- The question came up even though Uber Freight, just a bit more than one month ago, raised \$500 million from Greenbriar Equity Group, putting the valuation of the digital brokerage at \$3.3 billion.
- Overall, Uber's net loss of 62 cents per share missed Wall Street projections by 2 cents per share. Revenue of \$2.8 billion was down 20.4% from the corresponding quarter of 2019 and missed projections by \$380 million. Uber's stock was down approximately 1.9% after the close, sitting at \$41.15 at approximately 6:25 p.m.





## Amazon opens its first European regional air hub in Germany *Neowin*

- Amazon is expanding the regional capacity of its Amazon Air service to Europe. The retail giant has announced the launch of its first European regional hub at the Leipzig/Halle Airport in Schkeuditz, Germany.
- The air hub has formally kicked off operations this month, serving customer deliveries with two flights every day. The new facility covers 65,600 square feet and will house two Boeing 737-800 aircraft from GECAS, growing Amazon Air's fleet to more than 70 aircraft. The two new planes will be operated by ASL Airlines and will join Amazon Air's global fleet by the end of 2020.
- Amazon says the new hub will provide more than 200 jobs to residents in the Leipzig area. The company already employs more than 1,500 individuals in Leipzig. Dietmar Jüngling, formerly general manager of the Amazon Fulfillment Center in Leipzig, leads the sorting and loading operations at the new facility.
- Amazon notes that the regional hub will also bolster its efforts to continue offering timely delivery services in Europe amid the COVID-19 pandemic. The company first unveiled its fleet of Prime Airplanes in 2016.

## BNSF 3Q20: Pandemic Drives Down Revenues, Pre-Tax Earnings **RAILWAYAGE**

- BNSF's third-quarter operating revenues and pre-tax earnings fell 14.1% and 8.4%, respectively, due to the COVID-19 pandemic's continuing impact.
- Operating revenues were \$5.0 billion for the third quarter, a decrease of approximately \$0.8 billion compared with the same period last year. For the first nine months of 2020, operating revenues were \$14.7 billion, a decline of about \$2.4 billion (14.0%) vs. the corresponding 2019 period. These results reflect "lower volumes of 8.3% in the third quarter and 10.5% in the first nine months, as well as a 4.0% year-to-date decrease in average revenue per car/unit resulting from business mix changes and lower fuel surcharge revenue driven by lower fuel prices," according to BNSF parent company Berkshire Hathaway's recently filed third-quarter report.
- Railroad operating expenses were \$3.0 billion in the third quarter and \$9.1 billion in the first nine months of 2020, falling \$0.7 billion (18.0%) and \$2.0 billion (18.0%), respectively, compared with the same 2019 periods. The ratio of railroad operating expenses to railroad operating revenues decreased 2.9 percentage points to 59.7% in the third quarter and 3.0 percentage points to 62.1% in the first nine months of 2020 vs. the 2019 periods.

## Pressure on US grocery supply chains as consumers get a taste for online shopping



- The shifts wrought by Covid-19 have put tremendous pressure on US grocery supply chains – and much of it will remain after the pandemic. Food supply chains have been in turmoil as flows to restaurants and bars plummeted, whereas traffic to grocery outlets went through the roof.
- According to data from the US Department of Agriculture, the US market will see an overall \$250bn shift to food being consumed at home.
- Online grocery sales tripled in the early part of the pandemic, as per the FMI — The Food Industry Association’s Food Retailing Industry Speaks 2020 report, which was based on a survey of more than 37,000 food stores.
- And a customer research study led by logistics firm CH Robinson found 54% of consumers had bought fresh food online for the first time following the outbreak of the pandemic.



## Mounting evidence that container spike could last into 2021 **American Shipper**

- Bullish news on container shipping keeps pouring in, implying demand strength through Feb 2021 — if not longer.
- The latest green light comes from container-equipment lessor Triton, the largest player in its sector, reported Q3 2020 results Friday and described Q4 2020 demand for equipment as “exceptionally strong.”
- Ocean carriers generally lease more than half their boxes from companies like Triton. The carriers’ forward visibility on shipper demand drives their box-leasing demand. If leasing volume and rates jump, it’s easy to connect the dots and anticipate higher future consumer demand.
- “Market conditions are expected to remain strong at least through early next year,” reported Triton CEO Brian Sondey during a conference call. “We hear from customers [ocean carriers] that they expect a fairly significant container shortage to remain through at least Chinese New Year, which this year is in the middle of February.
- “What happens after Chinese New Year is obviously harder to predict,” acknowledged Sondey. “There is a lot of macro uncertainty out there ... although we haven’t heard customers saying they expect anything negative.”
- A small number of Chinese companies manufacture containers and are reportedly sold out until at least February.

***Still So Much To Learn***

## Virgin Hyperloop: The first human passengers have traveled safely through a hyperloop **Neowin**

- On Sunday, November 8, two passengers safely traveled on the Virgin Hyperloop north of Las Vegas, in the desert of Nevada. The test marks the first time in history that the famed hyperloop technology, which promises rapid transportation of people and cargo at speeds close to and above 600 mph, was put to the test with humans onboard.
- Weighing 2.5 tons and measuring 15-18 feet long, the Pegasus XP-2 pod that housed two passengers, represents a scaled-down version of the full-sized pod that will be carrying up to 23 passengers, reaching speeds of up to 671mph (1080km/h). While the company says it has conducted over 400 tests on the DevLoop, they'd never done it before with human passengers. CEO of Virgin Hyperloop, Jay Walder commented on the bold initiative, stating that: *"No one has done anything close to what we're talking about right now. This is a full scale, working hyperloop that is not just going to run in a vacuum environment but is going to have a person in it. No one has come close to doing it."*



## SuperFreezer seen as Covid-19 vaccine solution Canadian Sailings Transportation & Trade Logistics

- Montreal-based Hunt Refrigeration (Canada) Inc. has put in orders for SuperFreezer units that can solve the challenges of storing and transporting leading Covid-19 vaccine candidates. The company has ordered two SuperFreezers, which Hunt Refrigeration Canada President Eric Bedard expects will arrive by about mid November. "And then, as the demand is growing, then we could go as high as 40, 50,100 — whatever the demand is," Mr. Bedard said. "So we will be listening to the needs, and we will be adjusting to them."
- Made by Minnesota-based Thermo King, they can maintain temperatures as low as -70C. That's enough to safely store and transport the BNT162 Covid-19 vaccine being developed by Pfizer and BioNTech, which would otherwise have to be packed in dry ice to keep sufficiently cold. SuperFreezers can also maintain higher sub-zero temperatures, such as the -20C temperature for the mRNA-1273 Covid-19 vaccine candidate from Moderna.

**Still So Much To Learn**

**ACC**



## Delays, surcharges and returns: Holiday shipping headaches have just begun RETAIL DIVE

- The pandemic rattled most aspects of the industry — consumer demand surges, supply strains, widespread store closures — but it also accelerated some trends analysts were already projecting, notably the increased adoption of e-commerce.
- Due to most nonessential stores closing in mid-March and consumers being advised to limit encounters in crowded places, shopping online became more popular than ever.
- Preparing for a flood of online orders, retailers and carriers alike have had to increase staffing for the holiday season.
- Target and Walmart, among others, have ramped up seasonal hiring to support their e-commerce and logistical operations. UPS announced in September it would hire 100,000 seasonal workers for peak season, while FedEx said it planned to add more than 70,000 positions to prepare for the season.
- Carriers, to accommodate for the demand surges, have also made clear cutoff dates for when orders need to be placed to be received in time for the holidays.
- The U.S. Postal Service set a Dec. 15 deadline for its Retail Ground Service and a Dec. 18 deadline for its First-Class Mail Service for packages to arrive in the contiguous United States before Dec. 25. UPS similarly said orders needed to be placed by Dec. 15 for its Ground service and Dec. 21 for its 3 Day Select service for parcels to arrive by the holidays. And FedEx set Dec. 15 deadlines for its Home Delivery and Ground services, and Dec. 22 for its 2 Day service for orders to arrive by Dec. 25.

## Carriers owed money after company files for bankruptcy THELOADSTAR

- Several trucking companies are owed thousands of dollars after a Minnesota manufacturer filed for Chapter 11 bankruptcy. Eagle Manufacturing Inc., headquartered in Red Lake, Minnesota, filed its petition Friday in the U.S. Bankruptcy Court for the District of Minnesota.
- Among the manufacturer's top 20 unsecured creditors — which are last in line for payment in Chapter 11 cases — are three trucking companies: Hartz Truck Line Inc. of Thief River Falls, Minnesota, owed \$15,500; FedEx Freight East in Palatine, Illinois, owed more than \$11,600; and Becker Aggregate Trucking Inc. of Pierz, Minnesota, owed nearly \$4,000.



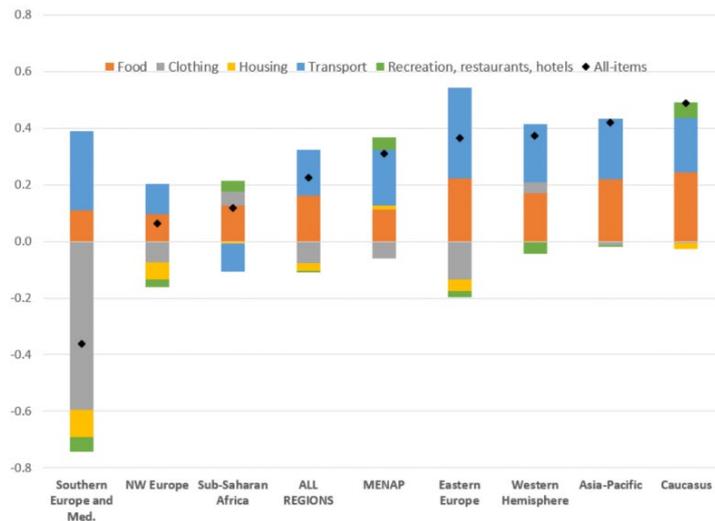
## The Impact of COVID-19 on Inflation Measurement

The chart of the week looks at the difference over the February–May timeframe between a COVID-19 price index that adjusts the CPI weights based on the impacts of COVID-19 on spending in Canada and an index with unchanged CPI weights. The diamonds in the chart show the difference between the two indexes by region. In seven of the eight regions shown, the CPI is below the COVID-19 index. Looking at the average for all regions combined, the gap is 0.23 percentage points.

### Undetected inflation

During the height of the pandemic, true inflation was higher than what was recorded by the consumer price index in nearly all regions.

(inflation estimates, percentage points, February – May, 2020)



Source: Author's calculations based on indexes and weights in the IMF CPI database.

Note: COVID-19 weights reflect spending changes in Canada. MENAP = Middle East, North Africa, and Pakistan.





## Canadian Federal Covid-19 vaccine task force has no expertise in transporting and storing vaccines Canadian Sailings Transportation & Trade Logistics

- When Covid-19 vaccines receive approval from health authorities, they will need to be moved from where they're produced to where they will be administered to recipients. Considering that most vaccines need to be refrigerated during storage and transport, it is expected that heavy demands will be made of all aspects of the cold chain. Two of the leading vaccine candidates — from Pfizer and Moderna — have to be kept well below freezing, which requires specialized equipment and handling practices. The Pfizer vaccine, for example, has to be stored below -70 Celsius, meaning it has to be packed in dry ice.
- “Are you better off having a vaccine that is delivered earlier, that requires such careful handling, that is accessible only by relatively few people, or waiting until there is a vaccine that is, in a sense, more logistics friendly?” asked Dr. David Gillen, Director of the Centre for Transportation Studies at the University of B.C. in Vancouver.
- On that score, the Covid-19 vaccine candidate from Johnson & Johnson is much more logistics friendly than the Pfizer or Moderna candidates. J&J expects to transport its Ad26.COVS vaccine, which began its phase 3 trials on September 23, to customer warehouses at 2-8 degrees C, “based on available stability data using this vaccine platform,” the company said by email to Canadian Sailings. That’s about the temperature range of a standard refrigerator. It’s also the temperature at which vaccines are traditionally stored and transported. As for how J&J’s vaccine will move around, “discussions are underway with the government concerning distribution of our vaccine candidate, which is anticipated sometime in 2021, pending Health Canada regulatory approval,” the company said.
- On September 24, Public Services and Procurement Canada, on behalf of the Public Health Agency of Canada, issued a letter of interest “seeking information on logistic capabilities to support the transport, storage and distribution of Covid-19 vaccines,” said an email from PSAC media relations officer Jeremy Link. The letter of interest isn’t an invitation to bid. Its purpose is “to obtain information on the end-to-end vaccine supply chain to support the transport and distribution of Covid-19 vaccines in Canada, notably international and domestic transport of cold chain including ultra-cold chain requirements exceeding current requirements.”
- The government announced it has agreements with pharmaceutical companies to provide at least 88 million Covid-19 vaccine doses “with options to obtain tens of millions more.”

## Pfizer plans 'just-in-time' COVID-19 vaccine distribution in Canada

- Pfizer plans to distribute its potential COVID-19 vaccine directly to locations administered in Canada in specialized, temperature-controlled container filled with dry ice under a “flexible just-in-time” logistics scheme, the company said.
- The pharmaceutical giant is developing its Canadian distribution plan with federal and provincial government agencies to deploy the vaccine in the event it is approved for use.
- “We are working with urgency in collaboration with stakeholders, including Health Canada, Public Health Agency of Canada and Provincial/Territorial public health decision-makers, to determine the logistics of the vaccine distribution in Canada, pending regulatory approval,” Pfizer Canada spokesperson Christina Antoniou told FreightWaves in an email.
- While Pfizer would not detail how it intends to get its vaccines to Canada, its direct delivery closely resembles its plans for the U.S. A key difference: Determining the delivery sites will require close collaboration with provincial and territorial health authorities, which administer Canada’s universal health care system.
- Canada has ordered 20 million doses of the potential vaccine being jointly developed by Pfizer and German firm BioNTech. The companies announced on Monday that preliminarily clinical trial data indicated the vaccine candidate was 90% effective.



## Increased 3PL needs to fill gaps in B2C distribution

- The evidence is there for all to see - e-commerce purchases are skyrocketing. It’s been trending for a while, but the global pandemic and associated ‘stay at home’ orders, plus restrictions on business operations and occupancy of brick-and-mortar establishments, has accelerated it beyond even the most hardened analyst expectations.
- As much as e-commerce is a commercial opportunity for once traditional retail B2B businesses, they also face acute growing pains as they struggle to meet warehouse and fulfillment demands. That’s where 3PL companies have an opportunity to seize the day.
- Most challenging though is having to qualify internal limitations or present an unattractive price in order to cover the transactional cost to the 3PL.

*Still So Much To Learn*



## Associations seek relief from detention, demurrage fees in backed-up LA/Long Beach ports American Shipper

- Two key trade associations representing drayage companies that operate in the ports of Long Beach and Los Angeles are asking for a temporary suspension of detention and demurrage charges from the key entry ports that are currently overwhelmed with business.
- Citing a chassis shortage that was described as effectively “none available,” the Harbor Trucking Association and the California Trucking Association released a statement Thursday that said cargo flow at the ports are “nearing a complete gridlock due to a lack of dual-transactions and the chassis shortage.” Dual transactions occur when a truck driver brings in a container and picks up a container in the same trip.
- Truckers can’t do anything on their own to solve the problem, according to the release by the CTA and HTA. But “carriers and terminals continue to charge unreasonable detention and demurrage penalties, originally designed to promote the efficient pick-up and drop-off of containers, despite inhibiting the trucker’s ability to complete import, export, and empty transactions.”
- According to the statement, this is not the first time that drayage drivers have sought relief from detention. “Earlier this year, the ability to return empties was inhibited by gate closures and clunky empty appointment systems that were in their infancy,” the statement said. Relief from detention was sought then, and two unidentified carriers “came to the table and did give a broad waiver of detention fees.”

## Konecranes celebrates Auckland automation success PORT TECHNOLOGY SMART DIGITAL LIFE

- Konecranes has hailed the success of its straddle carrier (SC) automation project at the Ports of Auckland (POAL), the first phase of which went live in June 2020 and saw container ships being serviced in September 2020.
- In a statement, the company said in September 26 container ships were successfully serviced by the blended fleet of 24 enhanced manual SCs and 27 new automated Konecranes Noell Straddle Carriers (A-STRADs).
- It said POAL’s primary aim for converting to automation in this phase is to increase the terminal’s capacity and move the annual terminal throughput from approximately 900,000 TEU annually to 1.4 M TEU.
- POAL is New Zealand’s busiest import port. The cooperation between the terminal and Konecranes ensured container handling efficiency while reliability was not compromised throughout the ramp-up, the company said.



## Port of Virginia welcomes the largest cranes in the US



- The Port of Virginia has welcomed the two largest container cranes to operate in the US to Norfolk International Terminals (NIT) as part of its \$450 million, two-a-half-year renovation of the terminal's South Berth.
- "It's a landmark moment for The Port of Virginia because it signals the completion of the overall expansion of this port that started back in 2016," said John F. Reinhart, CEO and executive director of the Virginia Port Authority.
- "With these units we'll have significant lift capacity in the harbor and the ability to handle multiple ULCVs [ultra-large container ship] at once at both NIT and Virginia International Gateway [VIG]."
- "This benefits the port customers and says, very clearly, to the ocean carriers and the industry that we are prepared to handle big ships and growing cargo volumes safely, swiftly and sustainably for decades to come."



## Surging Asia–Europe spot rates show no sign of slowdown JOC.com

The Asia–Europe trade is currently in the middle of what should be a traditional period of slow demand, but an extended peak season is keeping ships full and rates elevated.

## Port of Tyne sets up clean energy park

- The Port of Tyne has launched a new green energy park which will be used as a strategic base for UK North East's renewable energy sector.
- The Tyne Clean Energy Park will provide infrastructure catering for all renewable energy production needs, with a total of 200ha of land soon to become available within its perimeters, Tyne port said.
- According to the port, the catalyst for setting up the park was Equinor choosing the Port of Tyne as the O&M base for the Dogger Bank offshore wind farm.
- By choosing the Tyne Clean Energy Park as a commercial base, renewables businesses joining Equinor will be able to co-locate every aspect of their supply chains.



## Many key milestones reached for Contrecoeur container terminal project Canadian Sailings Transportation & Trade Logistics

The Port of Montreal has reached many key milestones for the biggest strategic infrastructure project in its modern era: Contrecoeur container terminal. The Montreal Port Authority (MPA), backed by the Canada Infrastructure Bank (CIB) and private partners, is developing the new leading-edge container terminal on land that it owns in Contrecoeur, located about 40 kilometers downstream from Montreal.

## U.S.-based shippers should expect higher ocean contract rates in 2021, says Drewry Drewry

- As we move closer to the end of the year, Drewry reaffirms its view that manufacturers and retailers should expect ocean contract freight rates on most routes to increase – not fall – in 2021, following major market changes since the COVID-19 outbreak.
- It is too early in the Q4 bid season to reach exact conclusions about 2021 rate changes. However, industry analysts say the signs are obvious in the spot market for ocean transportation that carriers have gained pricing power and are managing ship capacity to their advantage.
- Based on the Drewry Container Freight Rate Insight, a service that tracks and provides average spot container freight rates on 700+ lanes globally and analyses market trends, analysts say they can clearly see that 2020 spot rates have exceeded 2019 spot rates by a large margin since March. The Global Freight Rate Index, a weighted average of all-in spot rates on East-West, North-South and intra-regional international routes, reached \$2,540/40ft container in September, a 43% increase from September 2019.

## Inland South Carolina ports set record American Shipper

The South Carolina Ports Authority's said Monday its two inland ports had a record October with a combined total of 16,404 rail moves. Inland Port Greer reported 12,935 rail moves, up 9.2% year-over-year, and Inland Port Dillon had 3,469 rail moves, up nearly 40% from October 2019. The ports authority handled 216,196 TEUs Vehicle volumes are up more than 18% this fiscal year, with 93,681 vehicles handled from July through October, the SCPA said.





## Resilience360 special report

### *Executive summary*

- The COVID-19 pandemic has upended the food and beverage industry, reducing its operational capacity in production, processing, packaging, and distribution. It has caused a shift toward a greater need for efficiency in production amidst the long-term realities of staff capacity shortages and an unpredictable regulatory environment.
- Consumer behavior has transitioned from demanding prepared food purchases consumed on-the-go, outside of the home, to individually packaged food products consumed at home. This has created a window of opportunity for plastics manufacturers but has reversed course on ridding the environment of single-use plastics.
- The uncertainties of virus transmission have led many countries to adopt food protectionist policies, which has disrupted end-to-end supply chain continuity. It has increased the global price of food and beverage products and has made the global food supply more inaccessible.
- Reductions in passenger air travel have impacted air freight considerably, the method by which most perishable products are transported. Air freight capacity has declined over 80 percent on routes between Europe and Latin America.
- In the short term, organizations operating in the industry must continue to adhere to local health measures, even at the cost of maximum efficiency, and work with risk monitoring tools to understand the impact of the outbreak on their supply chains.
- The pandemic has exposed the vulnerabilities of an industry historically reliant on manual labor. In the long-term, companies can introduce more automation and robotics technology in their supply chain to address labor shortages to mitigate the impact of future crises.
- Food protectionism has been an increasing trend in the F&B sector pre-pandemic, brought on by a shift toward wellness and ethical consumption in many parts of the developed world. With the onset of the pandemic, many consumers demand increased transparency about which regions their F&B products were sourced from, processed, and packaged.



## Overworked Seafarers Face ‘Systematic Failures’ in Work-Rest Compliance –Report **Captain**

- Seafarers face “systemic failures” in the implementation of the regulations related to hours of work and rest, undermining the credibility of the very regulations meant to protect their rights, according to new report published by World Maritime University (WMU).
- The report confirms previous research that suggested recording malpractices are widespread in maritime industry, which seriously questions the capacity of the current regulatory framework to prevent fatigue and mitigate its effects, according to the report’s authors, Dr. Raphael Baumler, Ms. Yvette de Klerk, Dr. Michael Ekow Manuel and Dr. Laura Carballo Piñeiro.
- This is particularly concerning amid the on-going crew change crisis, where many seafarers are serving well beyond their contractual terms and having to take on additional tasks to combat the COVID-19 pandemic, according to the WMU.

## US retailers anticipate softening in import demand at turn of year **JOC.com**

Retailers say the record peak season of 2020 will be followed by lower year-over-year import growth in the next few months, with the strength of the US economic recovery next year dependent on progress controlling coronavirus disease 2019.

## ONE forecasts huge leap in annual earnings **JOC.com**

Ocean Network Express’ forecast for a highly profitable financial year is an example of the incredible pricing power being exerted by the carriers right now.

## North Sea major files for CO2 storage license as part of UK’s net-zero journey

- North Sea oil and gas independent Chrysaor has submitted a license application for the purpose of storing CO2 in a depleted reservoir in the North Sea off the UK.
- Chrysaor said on Tuesday it will, in parallel, seek agreement for a storage lease with The Crown Estate for the storage of CO2 in a depleted Southern North Sea gas reservoir.



## Proman Stena Bulk JV orders 3rd methanol-powered tanker



- Switzerland-based Proman Stena Bulk Ltd has finalized an agreement to build an additional vessel under its joint venture partnership.
- As informed, the methanol-powered Stena Prosperous will join the Stena ProPatria and the Stena ProMare in the Proman Stena fleet in the second half of 2022.
- According to the JV, each vessel will use 12,500 tons per annum of methanol as a marine fuel, significantly reducing emissions in their normal commercial operations compared to conventional marine fuels.



## COVID-19 vaccine could cause boom in cold chain



- The cold chain could be about to see a boom after MECOTEC Group launched a complete one-stop solution for the deep-freeze, transport, storage and distribution of COVID-19 vaccines, with its first Mobile Hybrid Container.
- The news follows Pfizer's announcement that it had made a major breakthrough in the search for a vaccine.
- In a statement, MECOTEC said one container could carry up to 1 million vaccination doses in one standard size container at temperatures down to -80 C/-112 F.
- It went on to say that vaccines can be frozen directly at the manufacturer's facility and the container can be set up anywhere, including as close as possible where the vaccine is produced.
- Furthermore, active deep cooling technology ensures safe and controlled transport and storage without the risk of dry ice.
- Jan Hüneburg, Managing Director at COOLANT, the industrial division of MECOTEC, said: "The project knowledge that we have gained with the development of the prototype as well as our many years of experience in the field of cooling technology made it possible within a very short time to adapt this deep-freeze facility into a transport, storage and distribution container".





## Canadian MJ firm Hexo claims win in California CBD trademark dispute Hemp Industry **Daily**

- Canadian marijuana producer Hexo Corp. says it has settled a trademark-infringement lawsuit against a California CBD maker.
- Hexo sued Assi Project Management for unfair competition and trademark infringement in the U.S. District Court for the Southern District of California after discovering the company had been selling CBD products in the U.S. under the name “HEXOCBD,” according to a news release issued Thursday.

## Casey’s in \$580 million, 94-store acquisition **CSA**

- Casey’s General Stores is expanding its presence in the Midwest.
- The convenience store chain has agreed to acquire Buchanan Energy, owner of Bucky’s Convenience Stores, in an all-cash transaction for \$580 million. The purchase price includes tax benefits valued at \$80 million for a net after-tax purchase price of \$500 million.
- The family-owned and operated Buchanan Energy operates 94 stores, including 56 locations in Illinois and 26 in Nebraska.

## CBD for seniors: Best practices for winning over an emerging market Hemp Industry **Daily**

- As the U.S. population ages, businesses in the health and wellness industry are starting to recognize older consumers as a new and emerging market. Census data has indicated that the number of Boomers (ages 55 to 73) and seniors (age 74 and over) in the United States stood at approximately 95 million last year, and many of the chronic ailments they face – joint pain, muscle aches, trouble sleeping – are ailments that the CBD industry aims to tackle.
- What should be the top-of-mind considerations for CBD brands that are keen to reach the 55+ population with their products? Hemp Industry Daily took a hard look at recent data and spoke with the industry’s top marketing experts to distill five best practices in marketing CBD to seniors. (i) Focus on education and customer support to win over potential customers and keep current customers loyal, (ii) Seek brand advocates in physicians and friends and family, (iii) Don’t succumb to senior stereotypes, (iv) Design packaging with clear language on testing, indications, dosage and ingredients and (v) Don’t dismiss new product formats.



## Private equity pushes into healthcare: 5 latest deals BECKER'S **HOSPITAL REVIEW**

1. H.I.G. Capital agreed to buy St. Croix Hospice, an Oakdale, Minn.-based provider of end-of-life care.
2. Ridgemont Equity Partners acquired Anne Arundel Dermatology Management, a provider of medical, surgical and cosmetic dermatological services with clinics in Maryland, Virginia, Tennessee, North Carolina and Pennsylvania.
3. Abry Partners invested in Benefit Recovery Group, a TN-based provider of healthcare subrogation services.
4. RLDatix, a provider of patient safety software backed by Five Arrows and TA Associates, acquired Verge Health, a Mount Pleasant, S.C.-based provider of credentialing software.
5. Morgan Stanley Capital Partners invested in US HealthConnect, a provider of pharma-sponsored continuing medical education and promotional education to healthcare providers.

## Covid-19 test makers dealt \$38 billion blow by Pfizer's vaccine **mint**

- Promising results from a study of Pfizer Inc. and BioNTech SE's vaccine for Covid-19 sent companies that have developed and sold tests to diagnose the condition spiraling, wiping out about \$38 billion in market value across more than a dozen stocks.
- Concerns about the sustainability of profits for the testing-kit market erased about a third of Quidel Corp.'s value. High-flying stocks including Hologic Inc. and Qiagen tumbled 8% or more, while competitors like Thermo Fisher Scientific Inc., Abbott Laboratories, and Danaher Corp. shed billions in value as their stocks faded.
- Some industry watchers had been optimistic for the group's resilience despite advancements for vaccines and therapies to combat the coronavirus. Investors and analysts had argued that even with the development and rollout of a successful shot -- or shots -- there would still be demand for tests into 2022.





## States ranked by primary care provider shortages BECKER'S **HOSPITAL REVIEW**

- California has the highest number of Health Professional Shortage Areas in the primary medical care category, according to Kaiser Family Foundation's new report.
- HPSA designations were determined by the number of health professionals proportionate to the area's population with consideration of high need. An area must have a population-to-provider ratio of at least 3,500 to 1 to be considered as having a shortage. Rankings are based on a 1/4 ly summary of HPSA statistics from the U.S. Bureau of Health Workforce, the Health Resources and Services Administration and HHS in a 1/4 ly summary updated as of Sept. 30.
- There are a total of 7,203 areas in the U.S. with an HPSA designation.

1. California — 626
2. Texas — 411
3. Missouri — 324
4. Alaska — 301
5. Florida — 279
6. Michigan — 261
7. Illinois — 245
8. Georgia — 234
9. Arizona — 217
10. Washington — 200
11. North Carolina — 189
12. Kansas — 188
13. Kentucky — 175
14. Oklahoma — 173
15. New York — 168
16. Minnesota — 158
17. Louisiana — 154

18. Ohio — 150
19. Mississippi — 148
20. Oregon — 144
21. Pennsylvania — 139
22. Montana — 138
23. Tennessee — 136
24. Iowa — 132
25. Colorado — 119
26. Indiana — 117
27. Virginia — 113
28. West Virginia — 105
28. Wisconsin — 105
30. Alabama — 102
31. Idaho — 98
32. New Mexico — 97
32. South Dakota — 97
34. South Carolina — 95

35. Arkansas — 88
35. North Dakota — 88
37. Nebraska — 76
38. Nevada — 72
39. Maine — 69
40. Utah — 64
41. Massachusetts — 62
42. Wyoming — 47
43. Maryland — 45
44. Connecticut — 41
45. Puerto Rico — 39
46. New Jersey — 36
47. Hawaii — 31
48. New Hampshire — 27
49. District of Columbia — 15
49. Vermont — 15
51. Rhode Island — 14
52. Delaware — 13



## Pfizer's COVID-19 vaccine: 6 things to know FASTCOMPANY

There's some massive news out about COVID-19—and it's good for a change. Pfizer and BioNTech's vaccine is reportedly successful in preventing over 90% of infections according to early data from its Phase 3 study, says STAT News. Needless to say, if the data holds as the study continues, this vaccine could be the thing that turns the tide of the COVID-19 pandemic in humanity's favor. However, it's also important to stress that the results are preliminary and a successful vaccine isn't a given yet. Here are six things to understand about Pfizer and BioNTech's COVID-19 vaccine so far:



1. ***The vaccine appears to work in more than 90% of cases:*** This is huge. Early results show the vaccine has a greater than 90% efficacy rate.
2. ***The vaccine requires two doses:*** If this vaccine ends up being successful, a person will require at least two doses of it at least three weeks apart.
3. ***We don't know if the vaccine works on severe COVID-19 cases or how long it will be effective:*** A big unknown is how long and for whom the vaccine is 90% effective. Pfizer says it's not yet evident whether the vaccine works on those who make up the worst COVID-19 cases—people who require hospitalization for the disease.
4. ***We don't know if vaccinated people can still carry the disease:*** Another big unknown is whether vaccinated people can still be carriers of SARS-CoV-2, the virus that causes COVID-19.
5. ***The results have not been peer-reviewed:*** It's also important to note that Pfizer and BioNTech's findings have not been peer-reviewed. That doesn't mean their findings are incorrect. However, it does mean they need to still pass the scientific method's most rigorous process.
6. ***If approved, most people will be waiting a while to get the vaccine:*** The vaccine could receive FDA emergency use authorization (EUA) before the end of the year. It all depends on how the ongoing Phase 3 study progresses. The third week of November is the next milestone, which is when Pfizer will have two months of data on volunteers who have had their second dose of the vaccine. If there are no worrying side-effects, the vaccine could get EUA approval by the end of the year.



## California is trying to jump start the hydrogen economy *The New York Times*

- Since President George W. Bush fueled a minivan with hydrogen 15 years ago, the promise of cars and trucks powered by the fuel has come up mostly empty. That hydrogen pump, in Washington, closed long ago.
- But in California, the beginnings of a hydrogen economy may finally be dawning after many fits and starts.
- Dozens of hydrogen buses are lumbering down city streets, while more and larger fueling stations are appearing from San Diego to San Francisco, financed by the state and federal governments. With the costs of producing and shipping hydrogen coming down, California is setting ambitious goals to phase out vehicles that run on fossil fuels in favor of batteries and hydrogen. Large auto and energy companies like Toyota Motor and Royal Dutch Shell have committed to supplying more cars and fueling stations.
- Some energy executives said they expected investment in hydrogen to accelerate under President-elect Joseph R. Biden Jr., who made climate change a big part of his campaign and proposed a \$2 trillion plan to tackle the problem.
- A recent McKinsey & Company study estimated that the hydrogen economy could generate \$140 billion in annual revenue by 2030 and support 700,000 jobs. The study projected that hydrogen could meet 14 percent of total American energy demand by 2050.
- Hydrogen-powered vehicles are similar to electric cars. But unlike electric cars, which have large batteries, these cars have hydrogen tanks and fuel cells that turn the gas into electricity. The cars refuel and accelerate quickly, and they can go for several hundred miles on a full tank. They emit only water vapor, which makes them appealing to CA cities trying to reduce pollution and greenhouse gas emissions. Ms. Harelson, 66, a retired professor at Golden West College. Said “It’s the best car I’ve ever had. The problem is, there’s just not enough stations around.”
- That’s a common complaint. Because of the paucity of hydrogen pumps, car owners often wait in line. But unlike battery-powered electric cars, which can require 45 minutes to several hours to fully charge, hydrogen cars, like gasoline ones, fill up in less than 10 minutes and are good for 300 miles or more on a full tank.





## SINOT AQUA Full Hydrogen Powered Yacht Concept [SIA Magazin](#)

- Powered by a hydrogen/fuel cell system, Sinot's Aqua concept offers superyacht luxury. Its system uses liquified hydrogen, which is converted into electricity via PEM fuel cells with water as the only by-product.
- The hydrogen propulsion package is based on the use of liquified hydrogen, which is stored at -253C degrees in two 28-ton vacuum isolated tanks.
- Hydrogen is converted into electrical energy by proton exchange membrane fuel cells, with the generated energy powering the propulsion, auxiliary systems and hotel services. The electric propulsion system makes the vessel very quiet while allowing a range of 3750 nautical miles at a speed of 17 knots.



## Dawn of a new extreme sport: The world's first electric wingsuit [NEW ATLAS](#)

The wingsuit is designed to incorporate air inlets for the propulsion system. There's an on/off switch, throttle and a kind of steering facility, as well as a cutoff switch for emergencies. Otherwise, more of a physical thing to fly than a regular wingsuit; you need plenty of core and strength to fight the wind and control your motion in the air. The props put out a modest combined 15 kW (20 hp) for around five minutes, but the results are pretty regular wingsuit's most horizontal glide ratio drops around a meter for every traveled horizontally, and speed tops out around 100 km/h (62 mph), but when electric boost, they can hit speeds over 300 km/h (186 mph), and actually gain upwards instead of constantly dropping.



a two-finger she's even limb relatively epic; a three meters the flyer hits the altitude to fly



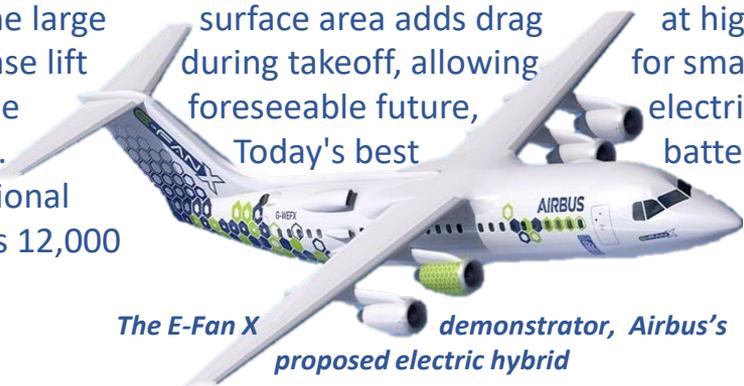
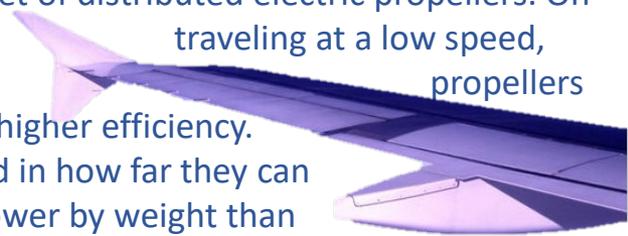
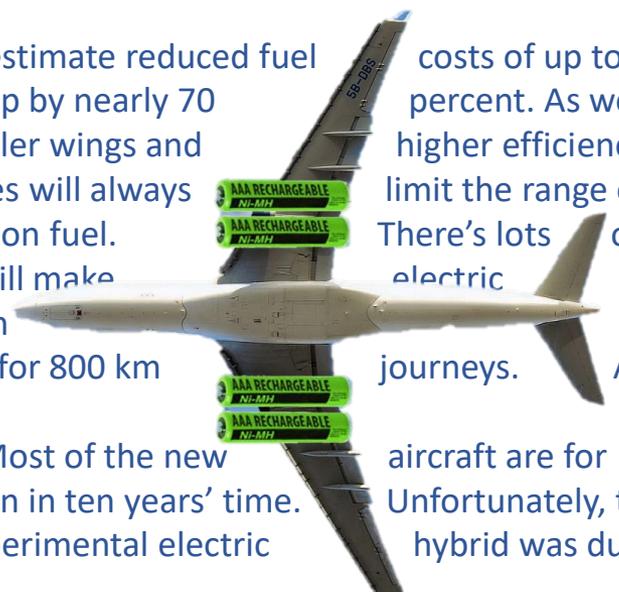
## Anheuser-Busch Turning To Alt-Fuel Trucks Tank Transport Trader

- Among its commitments are an order for 800 hydrogen fuel cell-powered trucks from Nikola Motors, 40 electric Class 8 trucks from Tesla Motor, and participation in California’s electric truck demonstration project with 21 BYD battery-electric beer delivery trucks.
- Now comes news that the brewer is transitioning more than 180 trucks — about 30 percent of its dedicated fleet — to renewable natural gas (RNG), also known as biomethane.
- The move comes five years after Anheuser-Busch converted 160 diesel-fueled trucks in Houston, Texas, and St. Louis, Mo., to fleets powered by compressed natural gas (CNG) engines. The brewer will expand those fleets while investing in new technology to transition to cleaner-burning RNG.
- The beer conglomerate’s new vehicles come as RNG is at once gaining traction among fleets as a clean “drop-in” fuel (fully interchangeable with diesel and CNG) and getting second-tier treatment by clean truck regulators — so natural gas advocates assert.
- According to a report released last month, between 2015 and 2018, natural gas vehicle fleet consumption of RNG in the U.S. increased by 475 percent.
- The Houston and St. Louis fleets are expected to travel more than 8.5 million miles each year. The RNG will be provided by American Natural Gas and U.S. Gain, and the brewer expects the vehicles will reduce its emissions by more than 70 percent compared to conventional diesel.
- Simultaneously, Anheuser-Busch placed an order from Agility Fuel Solutions to expand its existing CNG fleet by equipping over 180 new class 8 trucks with Agility’s new fuel systems.
- The brewer has set a goal of reducing carbon emissions across the company by 25 percent by 2025.



## Arriving soon: Electric aviation for passengers

- Not only do electric engines reduce carbon emissions, but the authors estimate reduced fuel costs of up to 90 percent, reduced maintenance by up to 50 percent, and noise could drop by nearly 70 percent. As well, they say electric propellers increase lift during takeoff, allowing for smaller wings and higher efficiency.
- Drone fliers already know about the elephant in the cargo hold. Batteries will always limit the range of electric aircraft. They are far heavier and take up more space than aviation fuel. There's lots of battery hype out there and Tesla's Elon Musk suggests breakthroughs will make electric journeys. And commercial flight possible in three to four years. The Scientific American authors think by 2025, batteries may be good enough to power aircraft for 800 km. And about half of all global flights are less than that.
- DroneDJ estimates about 170 electric airplane projects are underway. Most of the new aircraft are for private and corporate travel. Airbus hoped to fly a 100-passenger version in ten years' time. Unfortunately, the company canceled its E-Fan X program this spring, a year before the experimental electric hybrid was due for take-off. Blame COVID-19.
- Forward-propulsion engines are not the only ones going electric. NASA's X-57 Maxwell electric plane, under development, replaces conventional wings with shorter ones that feature a set of distributed electric propellers. On aircraft traveling at a low speed, but the large surface area adds drag at higher speeds. Electric propellers increase lift during takeoff, allowing for smaller wings and overall higher efficiency.
- For the foreseeable future, electric planes will be limited in how far they can travel. Today's best batteries put out far less power by weight than traditional fuels: an energy density of 250 watt-hours per kilogram versus 12,000 watt-hours per kilogram for jet fuel.

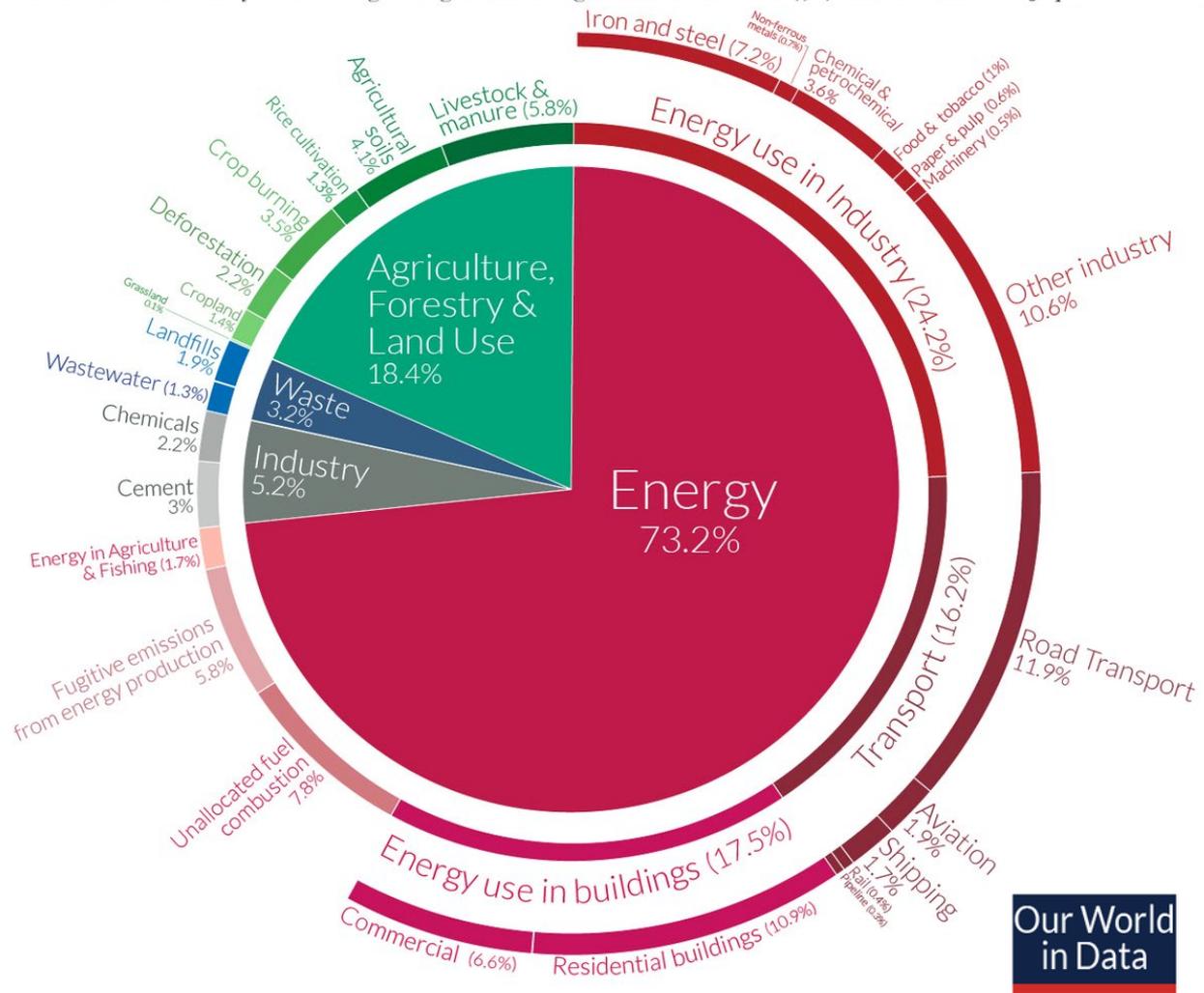


*The E-Fan X demonstrator, Airbus's proposed electric hybrid*



# Global Greenhouse Gas Emissions by Sector

This is shown for the year 2016 – global greenhouse gas emissions were 49.4 billion tonnes CO<sub>2</sub>eq.



OurWorldinData.org – Research and data to make progress against the world’s largest problems. Source: Climate Watch, the World Resources Institute (2020). Licensed under CC-BY by the author Hannah Ritchie (2020).

## Still So Much To Learn





# How Big Is Private Equity?

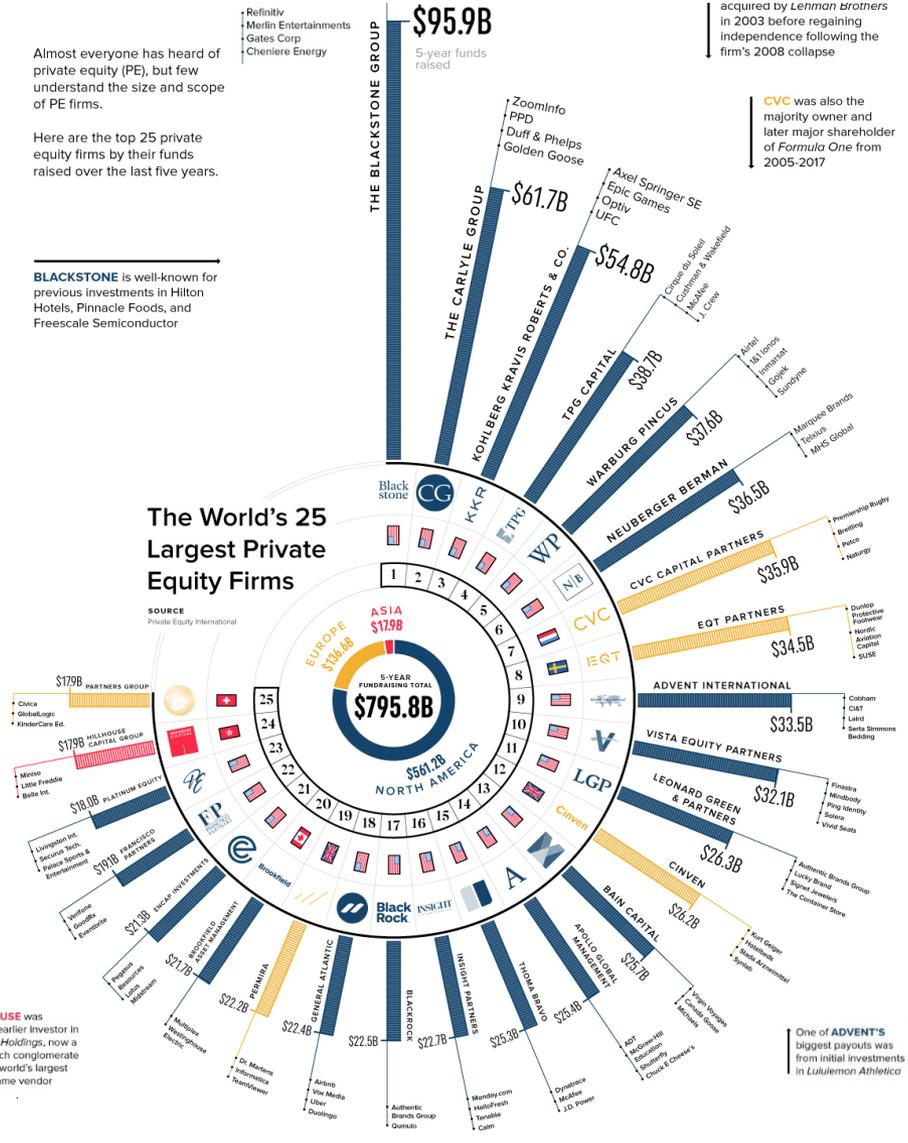
Almost everyone has heard of private equity (PE), but few understand the size and scope of PE firms.

Here are the top 25 private equity firms by their funds raised over the last five years.

**BLACKSTONE** is well-known for previous investments in Hilton Hotels, Pinnacle Foods, and Freescale Semiconductor

## The World's 25 Largest Private Equity Firms

SOURCE: Private Equity International



acquired by *Lehman Brothers* in 2003 before regaining independence following the firm's 2008 collapse

CVC was also the majority owner and later major shareholder of *Formula One* from 2005-2017

One of **ADVENT'S** biggest payouts was from initial investments in *Lululemon Athletica*

**HILLHOUSE** was also an earlier investor in *Tencent Holdings*, now a major tech conglomerate and the world's largest video game vendor



**BLACKROCK'S** PE branch is relatively young, but the company as a whole is the world's largest asset manager with \$7.4 trillion in AUM as of Q4 2019

**BAIN CAPITAL** was co-founded by American politician *Mitt Romney*

**APOLLO** was the sole bidder and savior of the *Hostess Brands* snack cakes division when the company went bankrupt in 2012

Toronto-based **BROOKFIELD** is the only North American PE firm on the Top 25 not headquartered in the U.S.



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COLLABORATORS: RESEARCH • WRITING: Chris Walsh; DESIGN • ART-DIRECTION: Harrison Schulz

## Still So Much To Learn



