



## YOUR WEEKLY UPDATES

**Week 42 of 2020**

See section on Alternative Energy

## Still So Much To Learn



- Slide 3 – The 5G Arms Race: Will the Technology Live Up to Its Potential?
- Slide 4 – The Quantum Internet Will Blow Your Mind
- Slide 5 – The Logistics of the Covid-19 Vaccine
- Slide 6 – Retail Update
- Slide 13 – Supply Chain Update
- Slide 21 – Shipping Update
- Slide 27 – Beverages, CBD & C-Stores
- Slide 29 – Healthcare Update
- Slide 32 – Alternative Energy Update
- Slide 34 – WA Is thriving despite Australian Woes
- Slide 35 – A 5G World
- Slide 36 – What Happens Every Minute on the Internet in 2020
- Slide 37 – DJIA – Companies Since 1928

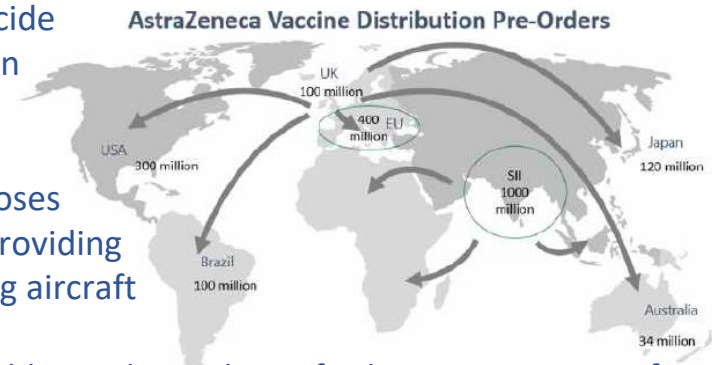
- 5G technology is here for some users, and just around the corner for many more. But 5G connectivity promises to have a far greater impact on a wide range of industries than just increased bandwidth.
- There are five major players responsible for 95% market share, and there's tremendous demand in the sector. In the last eight months COVID-19 disrupted manufacturers and their component supply chains. There's also a more aggressive stance toward Chinese manufacturers, who represent about 50% of the global market. There is also a general shift in supply chains. U.S. and European manufacturers have been asking traditional providers like Nokia and Ericsson to move some of their supply chains closer to where they deploy. In North America, that might be Mexico. Those companies, non-China options, already have a fair amount of flux in their supply chains. Taking all those factors together, there is a growing storm of supply-chain uncertainty for the 5G manufacturers, as well as for companies needing to buy 5G.
- Samsung is a company that's a winner in some of the turmoil. There aren't the concerns about the Chinese manufacturers with Samsung. It's smaller than Nokia and Ericsson in terms of deployed footprint but can gain market share. It also has the advantage of being more vertically integrated than some of its competitors, whether it's chip sets or other componentry that's going into 5G gear.
- Reliance Communications, one of the largest telecoms in India, has announced its intent to get into the market for manufacturing 5G gear and the associated software to do deployments.
- The challenge with 5G gear is it's not like a laptop computer, buying Dells one day, switching over to Lenovo's the next. These are different technologies, so it's not a mix and match situation. Individual 5G Systems are integrated and work together. There are different technologies and standards, so it's not mix and match.
- A lot of the 5G promise is in broader use cases. Going from 3G to 4G was a wireless carrier phenomenon.
- With the bandwidth and reduced latency of 5G, you have possible use cases for healthcare providers, autonomous vehicles, and infrastructure companies managing their own asset. Those are all being discussed as this technology becomes available. They'll be delayed because the carriers will get first bite, but if we can't deliver in the 5G supply chain for those additional cases, beyond just increased bandwidth for telecom consumption, they'll be pushed out a couple of years. And that would be a shame, because that's the most exciting aspect of 5G. **SUPPLYCHAINBRAIN**

- The next generation of the Internet will rely on revolutionary new tech — allowing for unhackable networks and information that travels faster than the speed of light.
- Only a few hundred or so physicists in the U.S., Europe and China really comprehend how to exploit some of the weirdest, most far-out aspects of quantum physics. In this strange arena, objects can exist in two or more states at the same time, called superpositions; they can interact with each other instantly over long distances; they can flash in and out of existence. Scientists say they will be ironclad for sending secure messages, impervious to hacking.
- U.S. efforts have lately been given a boost by the U.S. Department of Energy's announcement in January that it would spend as much as \$625 million to fund two to five quantum research centers.
- Quantum labs freeze their stay-at-home photons to near-absolute zero as a way of tapping the brakes. Eden Figueroa and researchers at Stony Brook University have developed a system that, by contrast, works at room temperature: an inch-long glass tube containing a fog of trillions of rubidium atoms.
- The proposed solution, Figueroa explains, is something called "entanglement swapping." And quantum engineers around the world are competing to apply the concept to a working prototype.
- "The idea has by now been around for 20 years," says Mikhail Lukin, a leading quantum theoretician at Harvard University. "Up to now, no one has succeeded in building one capable of being used in a practical application. That's what [Figueroa]'s group is trying to do."
- "At the moment, we are just trying to create technology that works. The really far reaches of what is possible are still to be discovered."
- Read the entire article at <https://www.discovermagazine.com/technology/the-quantum-internet-will-blow-your-mind-heres-what-it-will-look-like>



- Not only will vaccines be required, but the peripheries which are used every time a dose is administered. This will involve needles, syringes and swabs not to mention the vials and the containers in which the vaccine is held. They will be distributed through different, but existing, supply chains although the volumes required will be enormous.
- Whichever vaccine passes the approval stage, production will be concentrated on a small number of locations. It is likely that the vaccines will be produced in the same countries in which they were developed although with some exceptions. AstraZeneca has already entered into a licensing agreement with the Serum Institute of India for production of its vaccine.
- Given existing pre-orders, the largest producers of vaccine are: • UK • USA • China • France • Germany • Russia
- In terms of air cargo, this means significant volumes will flow through: • London Heathrow (DHL, British Airways and multiple airlines), East Midlands Airport (UPS hub), Stansted (FedEx) • Louisville (UPS), Memphis (FedEx), Philadelphia (American Airlines), Newark (United and FedEx) • Shanghai and SAR Hong Kong (China hubs); Singapore (Asian air hub) • Paris (Air France and FedEx hub) • Frankfurt (Lufthansa)
- In Europe, most of the vaccines would be moved by road and so it would seem the English Channel crossing may become very important. Given that the release of the vaccine may coincide with Brexit, there is a considerable risk that shipments may be held up in queues unless an agreement is reached between UK and the EU. If this is not the case, then air charter may be the only option.
- As the map indicates, roughly about half of the 1 billion pre-orders of doses placed with AstraZeneca will require air freighting. According to IATA, providing a single dose to 7.8 billion will fill about 8,000 747 cargo aircraft. Existing aircraft availability is still  $\frac{1}{3}$  behind last year
- According to IATA, there are a number of issues which will need to be addressed in order to facilitate movement of shipments of vaccine; • fast-track procedures for overflight and landing permits • exempting flight crew from quarantine • temporary traffic rights for carrying COVID-19 vaccines • removing operating hour curfews for flights carrying the vaccine • priority on arrival • tariff relief to facilitate the movement of the vaccine.

*See report attached*





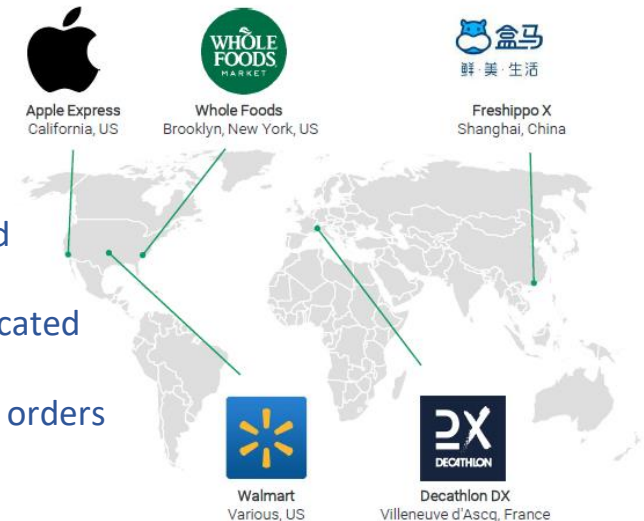
## True Religion Apparel to exit bankruptcy **CSA**

- True Religion has gotten the green light for a reorganization plan that keeps more than half of its stores open.
- The denim and apparel company has received approval for its reorganization plan from a bankruptcy court in Delaware and said it expects to exit bankruptcy in about ten days. The plan keeps more than 50 of True Religion approximate 87 stores open.
- True Religion, which was represented by Cole Schotz, filed for Chapter 11 bankruptcy protection in April. It was one of the first retailers to cite the COVID-19 pandemic in its filing.

## Stores of the Month **EDGE<sup>^</sup>** BY ASCENTIAL

1. *Decathlon DX* – a member-only experience store with time limited curations and technology enabled solutions.
2. *Freshippo X* – Alibaba's first membership-only warehouse club format to rival Sam's Club and Costco.
3. *Walmart* – a new look and feel store design supporting a digitally enabled 'seamless omni-shopping experience'.
4. *Whole Foods* – the first "permanent online only" Whole Foods store dedicated to fulfilling online grocery orders.
5. *Apple Express* – a trial store simplified to focus on quick pickups of online orders through a new over-the-counter experience.

**Report attached**



## Walmart to redesign nearly 1,000 stores **CSA**

Walmart has unveiled an airport-inspired, digitally-enabled store design that it plans to start rolling out this year. The redesign has a sleek, modern look and incorporates use of the Walmart app. It also features self-checkout kiosks as well as contactless payment solutions, including Walmart Pay. Select locations will also have Scan & Go, which lets customers manage their checkout directly using their mobile phones.



## Ecommerce sites of the Month **EDGE**<sup>^</sup> BY ASCENTIAL

- Our Ecommerce Sites of the Month report highlights the latest ecommerce site experience innovations globally, and the assortment, content, and promotion decisions required to keep up with these changing platforms across four key characteristics.
- In this edition of 'Sites of the Month' we acknowledge online retailers' operational adaptations to facilitate the accelerated shift of shopper habits from physical stores to online.
- Retailers continue to innovate, developing online services to meet the needs of consumers spending more time at home.
- From September 2020, we highlight Amazon launching its 'Climate Pledge Friendly' program, Kroger integrating its online ordering system with Dinner Daily, John Lewis launching a virtual Christmas store, Google updating its search to highlight curbside & in-store pickup offerings and the Walmart+ membership scheme going live.

**Report attached**

Retailers are prioritizing these four characteristics to build their ecommerce sites and apps



Amazon launches 'Climate Pledge Friendly' program



Kroger integrates online ordering system with Dinner Daily



John Lewis launches virtual Christmas store



Google updates search to highlight curbside, in-store pickup offerings



Walmart+ membership scheme goes live

Key Ecommerce Characteristics			
Experiential	Social	Curated	Frictionless
		✓	
			✓
✓			
			✓
			✓

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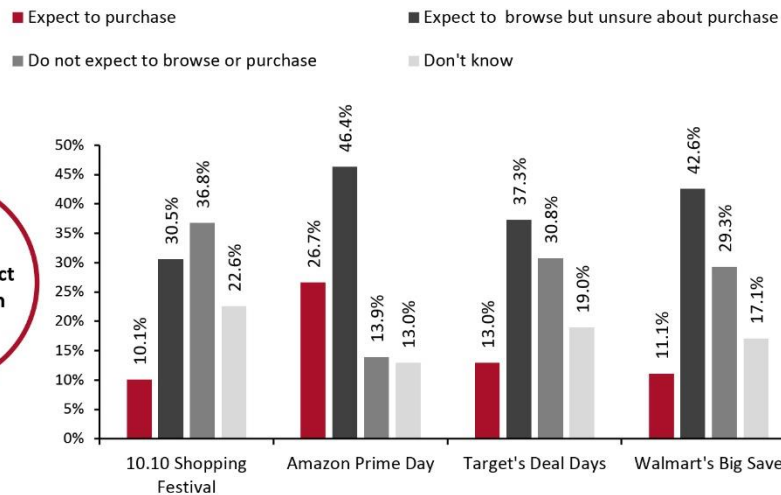
## Aldi scales up Deliveroo offer in Ireland **EDGE**<sup>^</sup> BY ASCENTIAL

Aldi continues to scale up its home fulfillment partnership with Deliveroo in the UK and Republic of Ireland, doubling its on-demand assortment in Ireland to more than 330 products. The service, which was launched in Ireland in June has now been extended to 9 stores, with orders picked and packed by Aldi staff and delivered by Deliveroo's network of riders within 30 minutes. This comes shortly after discount rival Lidl extended its own fulfillment relationship with Buymie.

## Holiday 2020 **EDGE**<sup>^</sup> BY ASCENTIAL

In the US, retailers are catching on to the power of festivals. Amazon has expanded the length of its Prime Day since the launch of the event. Last year, the shopping extravaganza lasted 48 hours—the longest ever Prime Day festival—which helped to lift transaction volumes. Prime Day in 2019 saw over 175 million items sold and sales by small- and medium-sized businesses grew to over \$2 billion.

**Figure 1. US Consumers: Whether They Expect To Make Purchases or Browse Retailers' Promotions During Fall Holiday Shopping Promotions (Whether Online or In-Store; % of Respondents)**



Four in 10 US consumers expect to participate in 10.10





## Dollar General launches new, more upscale store concept **CSA**

- Dollar General is launching a new retail concept aimed at a more upscale shopper than its namesake stores but just as appreciative of a bargain.
- The discounter's new format, called Popshelf, will features a non-consumable merchandise mix that includes seasonal and home décor, health and beauty essentials, cleaning supplies, party goods, crafts and more. (A "highly curated" assortment of some of Dollar General's private labels will be featured.). Nearly all – 95% on the items are priced at \$5 or less. Stores will average about 9,000 sq. ft.
- The retailer said the target demographic for popshelf is women in households earning between \$50,000 and \$125,000 annually. The core customer group in Dollar General stores are women from homes with annual incomes of \$40,000.
- Dollar General reported an 18.8 percent increase in same-store sales in the second quarter as management increased focus on not only non-consumables but also its DG Fresh and DG Pickup initiatives.



## Staples stores will take online returns – even from other retailers

Staples is launching Express Returns, a new program that will enable **RetailWire** to accept product returns for other retailers, similar to the Kohl's/Amazon.com deal, at more than 1,000 stores across the country. "A lot of our customers use us to drop off their packages," said Craig Grayson, Staples U.S. vice president/GMM, print & marketing services. "In this remote working environment we've got that convenient opportunity. So because we already play in that space within the local communities our stores operate in, this program is really just a natural extension of that."

## Brexit could add £1,800 to the price of a new car **The News**

Some of Britain's bestselling cars could get up to £1,500 more expensive if the UK fails to reach a trade deal with the EU before the end of the year.



## Coronavirus Will Be 'Final Catalyst' To Weed Out Excess U.S. Malls: Study **Forbes**

- Even as the coronavirus has been blamed for the record number of U.S. stores closings and the bankruptcies of notable retailers from J.C. Penney to Lord & Taylor, the pandemic may actually be doing something that's long overdue in the retail industry: cleaning out the excess retail capacity.
- Some 15% to 17% of U.S. malls may no longer be "viable as shopping centers" and need to be redeveloped for other uses, according to a 46-page report titled "The Long-Awaited Reckoning for Retail," by investment bank Barclays Capital. While that figure may seem staggering, it pales in comparison with data that shows one-third of loans in the space are currently in default, Barclays said. "The Covid-19 pandemic has likely accelerated a long-expected rationalization of retail capacity in the U.S.," the report said. It's "the final catalyst."
- The U.S. remains overstored compared with other countries. Per-capita retail sales square footage for American consumers averages 23.5, about 40% more than that of No. 2 Canada, double that of No. 3 Australia and five times that of No. 4 U.K., the study said, citing a combination of other research.
- While a mall operator like Simon, with so-called A malls in coveted locations, should survive the pandemic damage, the underperforming malls may not be so lucky. The bottom 60% of the about 1,000 malls in the U.S. held just 10% of the industry value, the Barclays report found, citing other research.
- "The Covid-19 pandemic has likely accelerated a long-expected rationalization of retail capacity in the U.S.," the report said. It's "the final catalyst."

## Overview global mango market

With the season coming to an end in Mexico, Brazil and Spain are currently the main mango suppliers. Exports from Egypt, which mainly serves the Eurasian market, and Ecuador, which supplies the North American west coast, will soon follow. The volumes from Spain and other Mediterranean countries, such as Israel, are lower than expected, resulting in high market prices. Many countries are therefore finishing their seasons earlier than usual. In China, the production is growing in the southern province of Hainan, although here the fruit has to compete against imports from Southeast Asia. It is still early for South African mangoes, but growers paint an optimistic picture for the new harvest, especially after the recent rains in the country, which are "excellent" for the further development of the fruit on the trees.



## Washington state expecting a smaller apple crop

Washington state, the nation's leading producer of apples, is expecting a smaller crop yield this year. Washington produces 65% of the fresh apples grown in the U.S., and as growers are reaching the midway point of harvest, they are observing an approximately 10% lighter crop load on the trees than the original estimate released in August.

## Teamsters Prepare To Strike Against Some SoCal Grocers THE SHELBY REPORT

Your Source for Grocery News and Supermarket Insights

More than 4,000 Teamster warehouse workers and truck drivers that deliver food and supplies to Southern California grocery stores are facing the possibility of a work shutdown. Grocery supply chain workers and their employers – Albertsons (includes Vons and Pavilions) and Kroger (includes Ralphs and Food4Less) – have been in contract negotiations since early August. The workers' contract expired on Sept. 20 and both parties agreed to an extension.

## Fed, Central Banks Frame Criteria For Digital Currency

- The Federal Reserve is collaborating with seven central banks and the Bank for International Settlements (BIS) to hammer out a framework for digital currency.
- The worldwide COVID-19 pandemic has accelerated cashless payments and highlighted the impact of technology on how money is exchanged, Jon Cunliffe, deputy governor at the Bank of England (BoE) and chair of a BIS committee on payments, said in a Reuters report on Friday.

## Tesco UK online growth boosts H1 sales

- Tesco's first-half profits increased by 29%, with UK & Ireland sales up 8.6% following a surge in demand for food and online services. Its online services saw the most significant growth with sales up 69% with the rate of growth reaching 90% during the second quarter. Tesco more than doubled its online delivery capacity to reach 1.5 million slots a week with its online grocery sales now accounting for over 16% of UK sales, up from 9% at the start of the year.
- Tesco continues to simplify ranges and reduce promotional participation to ensure a simpler proposition that can compete effectively with the growing discount channel. However, brands must prepare for the sustained boost to online grocery sales, by focusing on digital shelf presence and ensuring supply chains can.



## Brazilian packaging company offers extended shelf-life and reduced transportation costs



- To meet the demanding European market, Brazilian mango exporters are prioritizing quality over quantity. Mangos exported by air cargo are being shipped to Europe in FarmFresh conservers. Choosing the right packaging is extremely important for thermal maintenance through the process and guarantees a quality product at POS.
- “Conservers” differentiated design adds value visually at points-of-sale as well as logistical ease when handling and stacking, in addition to being lighter, which guarantees reduced freight cost, especially in air transport. Considering the logistics chain as a whole it's a differentiated and innovative solution for this fresh market.
- Developing EPS conserver solutions under the FarmFresh brand for the international market, Termotécnica has been working with partner producers and traders to contribute toward expanding the market share for Brazilian fruits in foreign markets.
- The benefits regarding logistics costs of the FarmFresh EPS conservers in relation to other materials are proven. Depending on the fruit type, when compared to corrugated board packaging, for example, EPS conservers are up to 60% lighter, which also accounts for about 6% savings in air freight.



## Analysis: Consumers Change Buying Habits For Meat Amid Pandemic



THE SHELBY REPORT  
Your Source for Grocery News and Supermarket Insights

- “Meat department sales almost doubled in the first week of the pandemic, compared to the same week in 2019. “The Midyear Power of Meat has again proven the value of meat and poultry to retailers, but most importantly, to consumers,” said the Meat Institute. “The survey affirms that meat and poultry remain the foods consumers want when times are good and when faced with a crisis. Consumers want the comfort and nutrition that meat provides.” The survey found that as a result of the pandemic, 75% made changes in their meat purchasing behavior with 58% buying different brands, 51% cuts or 50% types of meat. Additionally, during the pandemic, consumers are now cooking more meals and need more variety (50%), cooking new recipes (37%) and experimenting with different cuts/kinds of meat (34%). For more details about consumer trends and behaviors during the pandemic, see the Midyear Power of Meat 2020 Top Ten.

## Thailand to increase budget for high-speed project



- THE Thai cabinet has authorized the Ministry of Transport to increase the budget for the 252.2km Bangkok – Nakhon Ratchasima high-speed project by Baht 12bn (\$US 380m).
- The additional funds will be allocated as follows:
  - Baht 7bn for a depot, a track welding facility and a long-rail and track storage base
  - Baht 2bn to lay ballastless rather than ballasted track to reduce long-term maintenance costs on the line, and
  - Baht 2.5bn to purchase a fleet of Fuxing high-speed trains from CRRC.
- Construction on the project started in 2018 and is expected to be completed in 2023, around two years later than originally envisaged.

## Kroger, Ocado To Locate High-Tech CFC In Romulus, Michigan



THE SHELBY REPORT  
Your Source for Grocery News and Supermarket Insights

The location confirms a previous announcement stating Kroger and Ocado would construct a Customer Fulfillment Center (CFC) in the Great Lakes Region. The CFC model – an automated warehouse facility with digital and robotic capabilities – will be used to serve customers across the region. Kroger is designing a flexible distribution network, combining disaggregated demand and the proximity of its stores and facilities that vary in design and size.

## Trucking Approaches Holiday Shipping Season ‘Unlike Any Seen Before’

Transport Topics

- An exceptionally busy holiday shipping season appears to be on the horizon, and with it comes concerns about capacity.
- Ware2Go released a survey Sept. 24 showing market shifts brought on by the coronavirus are signaling unprecedented demand. This comes less than a month after FedEx Corp. made the same prediction. Now some experts are warning the industry to prepare.
- Ware2Go’s survey found 74% of merchants expect to see a holiday demand spike this year, with 56% believing that spike will be at or above peak 2019 volumes.
- DHL eCommerce Solutions expects to see 30% to 50% more volume this holiday season compared with last year. DHL Express anticipates receiving around 50% more inbound volume into the U.S. than previous peak season.

***Still So Much To Learn***

**ACC**

## Network Rail to deploy machine learning on 40 rail projects



- BRTAIN's infrastructure manager Network Rail (NR) has teamed up with nPlan to roll out machine leaning on 40 rail projects initially and all projects by mid-2021.
- This follows the successful completion of a trial with the technology start-up where NR tested nPlan's risk analysis and assurance solution on two of its largest rail projects – the Great Western Main Line and Salisbury – Exeter resignaling programs, which are costing more than £3bn.

## Luxury Q-Starling aircraft is designed in UK, but may be built overseas



- UK-headquartered start-up Samad Aerospace has unveiled its latest hybrid-electric aircraft development – a two-person vertical take-off and landing (VTOL) personal jet for the luxury market that is targeted for service entry in 2023.
- Called the Q-Starling, the all-composite aircraft will be powered by two modified turboshaft engines that double as both turbogenerators and turbojets. These are currently sourced from Czech Republic-based PBS.
- Lift for take-offs and landings is provided by a single electric-powered ducted fan in the centre of the fuselage, while stability and control come from four smaller fans located in the wing-tips and horizontal stabilizers. The turbogenerators providing the electrical power become regular turbojets in conventional flight.
- Q-Starling is aimed at ultra-high-net-worth individuals and believes the company can ultimately deliver 500 of the \$2 million aircraft each year.



## Mexican rail blockade continues to affect freight flows



A railway blockade carried out by teachers and students in Mexico continues to strain commercial cargo movement from the Port of Lázaro Cárdenas, one of the country's key seaports, according to an official with Maersk. Port Lázaro Cárdenas is located along the Pacific Ocean in the central Mexican state of Michoacán. The port is the second largest in Mexico behind the Port of Manzanillo.

## Amazon's electric delivery vehicle rollout begins **TechCrunch**

- Amazon has taken delivery on its first Rivian electric delivery van. Amazon is an investor in the electric vehicle startup and had ordered 100,000 of its then-in-development delivery vans. The completed electric vehicle has 360° driver views via digital displays, Alexa voice integrations, a large interior cabin space, and sensor-based driving systems.
- Amazon plans to ramp deployment of its all-electric fleet from here, starting with 10,000 custom vans on roads globally within the next two years, and then expanding to a total fleet size of that full 100,000 order by 2030, the company says. Rivian, meanwhile, says it has begun a pilot production line run of its Illinois factory, and plans to begin delivery of its SUV starting in June 2021, with shipments of its SUV starting next August.



## Consumer demand pushes up small LTL shipment volumes, TL spot rates **TRANSPORT DIVE**

- Smaller shipments of goods via LTL and parcel trucks "have increased significantly" in the last few months, according to FourKites. September's LTL shipments were up 42% compared to March.
- Shipment counts declined in March and April, but then climbed in May, with a month-over-month growth rate of 2% in May, 20% in June, 8% in July and 1% in August. August was the peak month in the trend, with a 3% decline in September. The growth was not evenly spread through industries, as food, consumer packaged goods and retail companies accounted for about 80% of the growth, according to FourKites.
- The TL spot market is also affected by stronger consumer demands, according to DAT, with the average rate hitting a record high of \$2.46 per mile for the week ending Sunday. Flatbed rates were \$2.41 per mile, up 11% from July's average rate. Reefer rates were \$2.57 per mile, also up 11% from July's average rate.
- The surge in rates is occurring even though volumes in August were 3% lower than August 2019, according to DAT's September market report. DAT analysts, writing about the paradox, said the reason is different sectors experienced "dramatically different situations." Retail and consumer goods had 10% overall volume increases, while industrial and some other sectors saw 10% decreases, DAT analysts wrote.

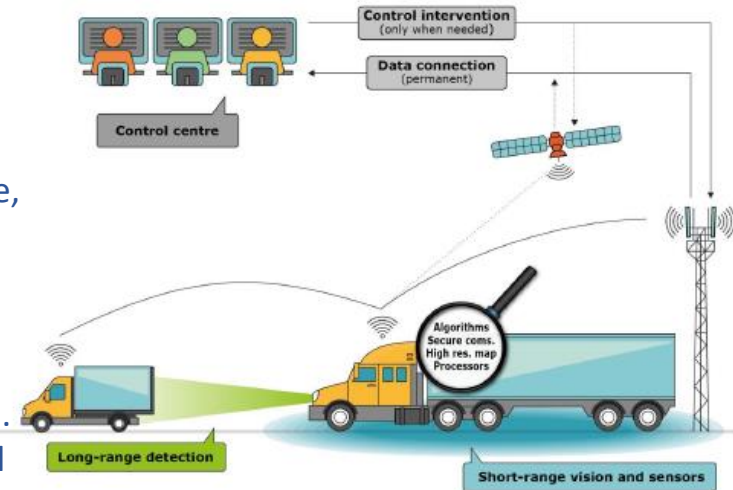


## BOPIS: What Does It Mean for Shippers?

- Shipping used to be a linear exercise. A manufacturer shipped products to a distribution center. From there, the products were delivered to stores. The shipper, not the consumer, was in charge of the transaction.
- Linearity is on the way out. So is the shipper's control of the supply chain. E-commerce has spawned the "omni-channel fulfillment" model where orders, distribution and deliveries occur from anywhere, anyone, and at any time. The traditional supply-push scenario with shippers calling the shots is giving way to a demand-pull approach with consumers in control of the transaction.
- The "Buy Online, Pick Up In Store" (BOPIS) concept has become a key part of the asymmetrical, demand-pull world we live and work in. Who ever imagined a consumer ordering an item on an electronic device, having a retailer immediately pick and pack the product at one of multiple locations, and having it ready for the consumer's arrival at a pre-arranged time, typically within a few hours and sometimes under an hour?
- The COVID-19 pandemic is driving BOPIS toward mainstream adoption. Contactless interactions remain the order of the day - especially during the holiday season as health-conscious consumers continue to minimize time spent shopping in confined spaces. But BOPIS and other alternate fulfillment practices will outlast the pandemic. They will become permanent additions to the logistics landscape.
- To execute an effective BOPIS strategy, shippers must understand retailers' two overarching objectives:
  - Ensure a seamless customer experience regardless of the order touchpoint.
  - Maintain adequate in-store inventory while expanding digital buying opportunities.
- It is essential for retailers to have the right goods always available, and at the right place at the right time for the consumer. The "right time" could involve shipping to a residence or to another physical location. It could mean an in-person brick-and-mortar sale. It could mean BOPIS, or its first cousin, "Buy Online Pick Up at Curbside" (BOPAC). It could be a drop-shipping model where the shipper delivers directly to the store, thus minimizing the need to hold inventory in a space-constrained facility.
- Striking the correct balance between in-store and digital inventory is just as critical. In-store customers are typically more loyal and buy more per visit than online customers. Retailers are loath to broaden their digital channels if doing so threatens to siphon off in-store activity.

## The driverless truck operating environment **SupplyChain247**

- There is no consensus yet on the configuration of hardware and software that will underpin fully automated driverless truck operation. This will ultimately be determined by the interplay of supply, demand and policy factors. Based on the current state of the technology, the graphic presents a simplified potential end state for the operating environment of driverless trucks. This operating environment considers a hybrid operating model where the trucks do not have hands-on or fallback drivers within the cabin, but instead the fleet is connected to a pool of experienced remote drivers in a control centre who are able to intervene and remotely control a given vehicle in case of emergency. These remote drivers could be in place as a necessity (level 3 conditional automation) or as risk mitigation for higher levels of automation (level 4 or 5).
- The three main components of a fully automated truck's potential operating environment are its on-board systems, supporting infrastructure and the (remote) control centre. As noted above, fully autonomous vehicles would require less supporting ICT infrastructure, but that puts much stronger emphasis on the on-board systems.
- For fully autonomous vehicles, context is everything. Systems are already available and legally operating in relatively undemanding domains: from controlled and carefully-mapped mine sites to low-speed airport personal transit pods running on closed guideways.
- The ITF Corporate Partnership Board suggests that there are 5 critical dimensions that collectively define the context in which driverless operations may be achieved: Geographic areas, (ii) Roadway types, (iii) Traffic conditions, (iv) Weather conditions and (v) Incidents.
- Driverless trucks could be a regular presence on many roads within the next ten years. Self-driving trucks already operate in controlled environments like ports or mines, and trials on public roads are under way in many regions including the United States and the European Union. *Report can be downloaded at [www.itf-oecd.org](http://www.itf-oecd.org)*



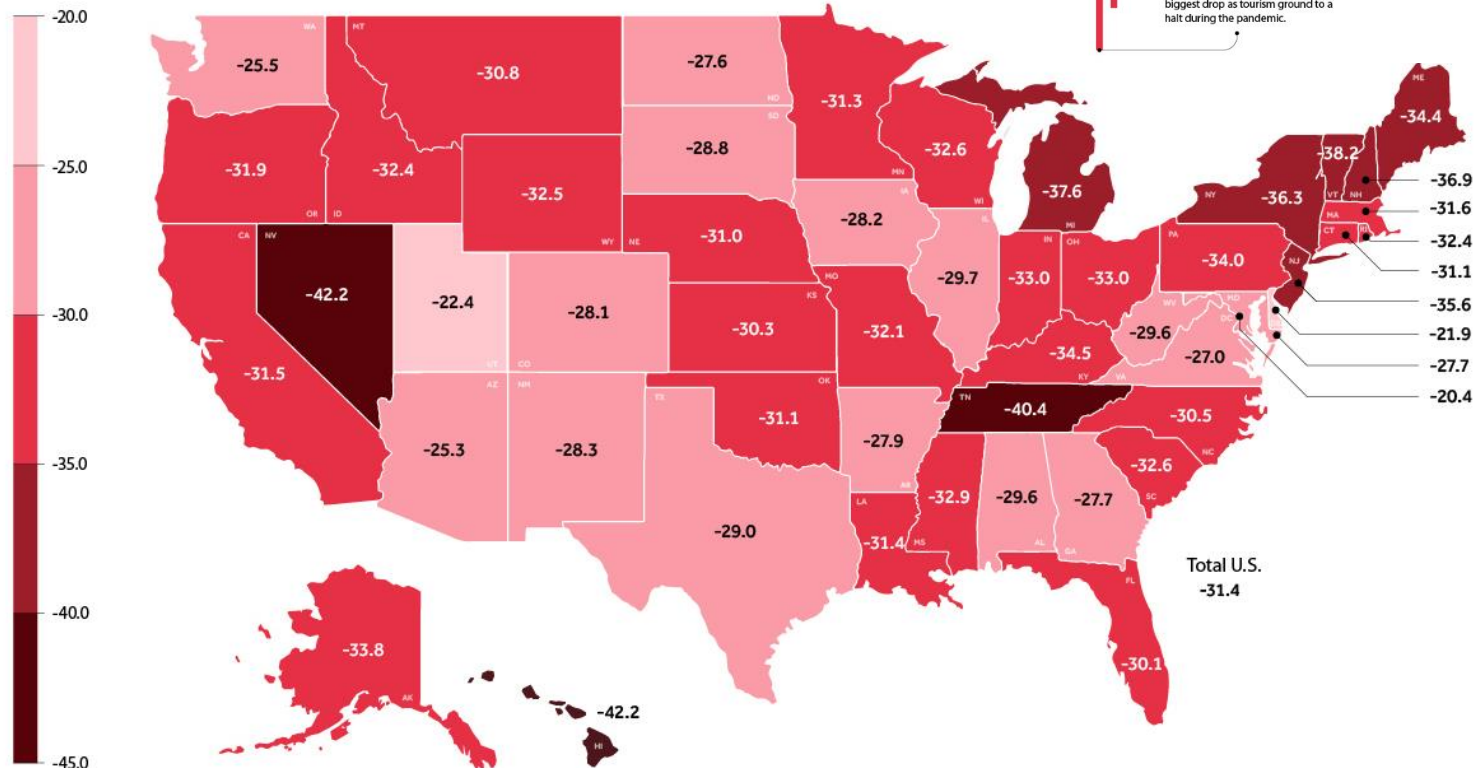
## AMERICA'S ★★ Economic Drop ★★

Amid continued COVID-19 uncertainty, total U.S. GDP (annualized) contracted by over \$2 trillion in Q2.

Q1 2020  
**\$21.6T**

Q2 2020  
**\$19.5T**

Here's a look at how each state contributed to this decline, and which industries were hit the hardest.



Still So Much To Learn

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## Flipkart, BigBasket, Amazon are hiring more female delivery agents



- Several Flipkart's fulfilment centres such as Farrukhnagar in Haryana and delivery hubs in areas like Wadi, Nagpur, and hubs in Howrah, Kolkata, have women 'wishmasters,' which is what field staff are called. Others like BigBasket, Swiggy and Amazon are also hiring more women delivery agents. Amazon set up an all-women delivery station in Gujarat last month.
- TeamLease Services cofounder Rituparna Chakraborty said that large ecommerce and logistics players are actively committed to improving the gender diversity ratio. "From about 7-10% of the overall delivery agent workforce about a quarter ago, now most companies are looking at improving it to 25% in the medium to long term with an eye on improving productivity, reducing turnover as well as increasing the talent pool," she said.
- Additionally, men and women who have either been rendered jobless or had their earning potential significantly reduced because of the pandemic are looking at picking up delivery agent roles, Chakraborty said. "It has become an effective stopgap solution," she said.

## Shippers rethinking annual trucking procurement cycles JOC.com

Shippers are modifying their approach to truckload contracting, using more short-term “mini-bids” than ever before and turning to technology to improve a process that often breaks down when market prices swing quickly.

## A weighty accelerant for electric trucking JOC.com

The shift to electric trucking has been hindered by the weight of the batteries electric trucks run on. But what if zero-emission vehicles were allowed a higher gross weight on the highway than fossil-fueled units? A disability would be turned into an asset, and the power of economics would facilitate this much-needed change.

## Expect delays on peak season parcel deliveries

The recently published 2020 Annual Consumer Survey, by Convey, a provider of delivery experience management software, found that 42% of 1,600 consumers surveyed were concerned that their packages would arrive late, while 74% expressed willingness to allow retailers between one and four extra days to deliver their orders.



## Texas trucking company closes its doors, sources say FREIGHTWAVES

- Texas-based trucking company Trinity Logistics Group is ceasing operations due to “lack of work” in an abrupt closure that left some drivers blindsided, sources close to the company told FreightWaves.
- Drivers were told of the closure in a Sept. 28 conference call, sources told FreightWaves on Saturday. Dallas-based Trinity Logistics Group is a wholly-owned subsidiary of Trinity Industries.
- All of the equipment had been slated to be returned to the company’s headquarters on Friday. Trinity Logistics Group had 102 drivers and 150 power units, according to the Federal Motor Carrier Safety Administration SAFER website. The carrier offered flatbed, oversize and heavy haul services, including hauling wind tower components.

## Long-haul freight boom leads to pre-peak capacity crunch

- The average length of haul for requested load tenders has increased 6% or roughly 20 miles since the same period last year. This may not seem like a big deal at first, but with accepted volumes being over 20% higher than this time last year, those miles have a multiplier on them — putting a deeper strain on capacity than the tender volumes alone suggest.
- The average length of haul for loads tendered in 2019 was 591 miles through September. Year-to-date in 2020, loads have averaged over 600 miles. Making the 2020 number a little deceiving is the fact it includes the pandemic-inspired shipping spree that saw a boom of short-haul loads in March when the average load moved 568 miles. If we remove March, the average mileage moves closer to 607. So why has the length of haul jumped so much this year?
- Freight originating in Southern California has accounted for nearly 8% of the total outbound freight volume in the U.S. over the past two months — currently the first- and fourth-largest outbound markets in the country.
- Shippers have been pulling record amounts of freight into the ports of Los Angeles (+18% YoY in August) and Long Beach (+13% YoY in August) over the past few months. A good portion of the imported freight, which ships in international 20-foot and 40-foot containers, gets placed directly onto the rails.
- The unexpected surging container volumes have led to the implementation of peak season surcharges for any noncontracted freight that are extremely cost-prohibitive, pushing a lot of the excess volume to trucking. This move exaggerates the already tight truckload market by keeping a lid on overall domestic surface capacity.



## U.K.'s First Free Port Since 2012 to Open Next Year SUPPLYCHAINBRAIN

- U.K. Chancellor of the Exchequer Rishi Sunak said Britain will open its first free port since 2012 next year.
- Sea, air and rail ports across England are invited to bid for free port status before the end of this year, he said on Wednesday in a statement. They will benefit from simplified customs procedures and duty suspensions on goods, as well as streamlined planning processes and a package of tax reliefs to help drive jobs and growth.

## HMM's New Mega Ships Each Sailed Fully Loaded on Maiden Voyages MARITIME LOGISTICS PROFESSIONAL

- South Korean shipping company HMM said all 12 of its new 24,000 TEU containerships—the world's largest—have each made their maiden voyages fully laden with containers.
- On September 31, HMM St. Petersburg, the last of the 24K-class series, departed for Europe from the Port of Yantian, China with 19,529 TEUs loaded on board.
- Consequently, all 24,000 TEU ships delivered to HMM have been entirely filled with cargoes on their first voyages, starting with HMM Algeciras which carried a total of 19,621 TEUs on its maiden voyage in May.
- Considering the safety of vessel operations and cargo weight, the maximum loadable capacity of each 24,000 TEU ship stands at around 19,300 TEUs on average.

## Kongsberg Maritime to deliver integrated propulsion and maneuvering systems for two 230m RoPax vessels gCaptain

- Kongsberg Maritime revealed that it has signed a contract with China Merchants Jinling Shipyard (Weihai) to deliver a propulsion and maneuvering system for two 230m roll-on, roll-off passenger (RoPax) vessels for Finnlines.
- Worth in excess of €12m, the contract will see the system fitted to Finnlines' flagship Superstar RoPax vessels. The ships will be built to the highest Swedish/Finnish ice class (1A Super), with a twin shaft line propulsion system powered by four main engines. Kongsberg Maritime have proposed a system whereby the ships will be able to run two efficiency/speed profiles: 16 knots with two engines running, or 19 knots with four engines running. This capability is enabled via an innovative two-speed gearbox solution, delivering a propulsion efficiency increase of about 3% compared with a single-speed gearbox.
- Efficiency is further boosted through the use of KONGSBERG's Controllable Pitch Propellers (CPPs).



## Port of Virginia Cycling In New Chassis Fleet



- The Port of Virginia's continual investment in new equipment is helping to build one of the youngest chassis fleets in the U.S., with the average age of chassis in the port's pool being 3.5 years old.
- Experts in the field estimate the average age of an intermodal chassis to be 15-years to 20-plus-years-old. But with a continual cycle of adding new units and retiring old ones, the port is ensuring a young, safe, road-worthy chassis fleet for the motor carriers servicing the port.
- In fiscal year 2020 Hampton Roads Chassis Pool II, the port's wholly-owned chassis management and empty container yard management entity, added 3,600 new chassis to its fleet. In fiscal year 2021, 5,000 more new units will be put into service and 760 new units are scheduled for delivery in 2022. Moreover, 60 percent of the chassis in the fleet have been acquired since 2015.

## CMA CGM Ural breaks TEU exchange record in Victoria



- The ANL operated 10,622-TEU CMA CGM Ural has broken another record at the Port of Melbourne with the highest TEU exchange in one call. On 22 September, the CMA CGM Ural berthed at Victoria International Container Terminal (VICT) and completed an exchange of 8094 TEU surpassing the previous record by 268 TEU.



## Get ready for blowout Q3 results in container shipping



- Matson's disclosures offer the first signals of how solid Q3 2020 earnings will be for container lines across the board. Container-line profits exceeded expectations in Q2 2020, a period when volumes were weak. In the third quarter, volumes and rates surged — and not just in the trans-Pacific trade.
- “The stars are aligning for container shipping: historic consolidation, rational capacity management and now a fast bounce-back in demand post-lockdown,” wrote Jefferies analyst David Kerstens in report published this week.
- “We knew it was going to be good, but dadgum ...,” exclaimed Stifel analyst Ben Nolan upon seeing the preliminary third-quarter 2020 results from Matson



## Havyard extends closure as 75 people test positive for COVID-19



- A total of 75 people associated with Norway's shipbuilder New Havyard Ship Technology AS, part of Havyard Group, have tested positive for the coronavirus, further extending the closure of the yard.
- The Leirvik-based shipyard temporarily halted activities on September 30, after four infection cases were confirmed. Last week the outbreak hit 17 people associated with the yard.
- After the closure, the yard has worked closely with local health authorities to clarify the extent of the spreading of the virus, where 495 people have been tested.

## SC Ports has best month since COVID-19 outbreak



- In a statement, SC Ports said the traffic showed a continued recovery and strength in containers, vehicles and inland port moves. In addition to being its best performance since the outbreak, the figures also represent its best ever traffic for the month of September; in total it handled 580,912 TEUs in the first quarter of fiscal year 2021.
- Vehicles remain a strong business segment for the Port of Charleston with 21,702 vehicles handled at Columbus Street Terminal in September, down less than 2% year-over-year. Fiscal-year-to-date, vehicle volumes are up 25% with 73,044 vehicles handled since July.
- SC Ports' Inland Port Greer and Inland Port Dillon had a busy September as cargo activity increased. Cargo owners needing access to the Port of Charleston benefit from the flexibility and predictability provided by these rail-served inland ports.



## Maersk feels optimistic despite redundancies



In line with much sentiment in the container shipping industry, Maersk articulated a sense of optimism about profit growth in the near future even as it described weaker volumes in the third quarter and announced substantial redundancies.



## 'Volatile' box trade has shifted 'from a demand crisis to an operational crisis'



- The era of low-cost ocean freight could be over as volatility and exception handling become the new battleground for forwarders and carriers.
- According to Kuehne + Nagel, this year's supply chain shocks and volatility mean container shipping is moving away from being largely cost-focused. Many customers were expecting a 50%-60% drop in volumes in April and May, but demand came back much faster than expected, with the resulting uncertainty having a huge impact on supply chains.
- Maersk's CEO agreed that a lot of companies were "scrambling to cope" with the uptick in demand as lockdowns had quickly shifted consumer spending from travel and experiences to buying physical goods.
- The conversation with many customers during the second quarter was 'how can you slow down my goods? I don't need them right now'. But today it's 'how can you speed them up? and how can I get more allocation?'.
- Alan Murphy, CEO and founder of Sea-Intelligence, said that as the industry shifted from a demand crisis to an operational crisis, the battleground for carriers and forwarders would be over who can better manage the increased volatility, while also providing visibility and efficient exception handling to customers.
- "I think the era of below-cost freight rates is gone, because carriers can much more tactically adjust capacity to the available demand and sustain rates," he added.

## Maersk's first block train from China arrives in Georgia



Maersk's intercontinental rail product portfolio expands, with the recent introduction of a block train solution connecting China and Georgia, the first such product developed specifically for the needs of Georgian imports. On Sunday, October 4, 2020, the first train from Xi'an (Shaanxi province), China arrived in Tbilisi, inaugurating the new rail connection, which complements Maersk's current coverage of the Caucasian republics (Georgia, Azerbaijan and Armenia), based on Ocean shipping products. In addition to providing another connection between Asia and Europe, Maersk claims further expansion of the product will also strengthen Georgia's role in the New Silk Road development. Xi'an has traditionally been the starting point of the Silk Road, the land routes connecting East and West for over a thousand years.



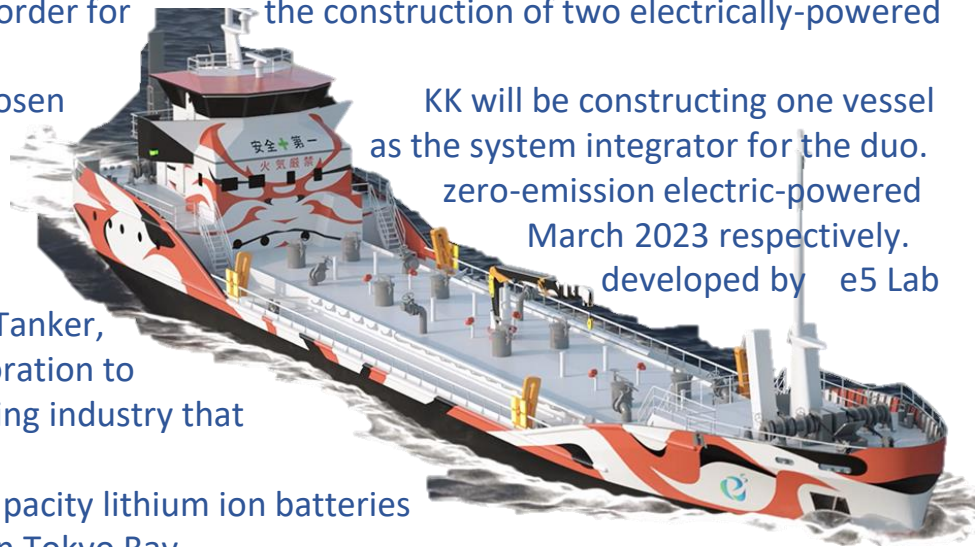
## FMC examines ocean carrier billing practices

- The U.S. Federal Maritime Commission (FMC) said it is seeking information from the container-shipping public on alleged attempts by ocean carriers to hold companies financially responsible for transportation services that they did not contract for and may not legally be required to pay.
- The FMC said it received comments for its earlier Docket No. 19-05, Interpretative Rule on Detention and Demurrage under the Shipping Act, from industry groups such as the Agriculture Transportation Coalition and National Customs Brokers and Forwarders Association of America that raised concerns about these billing practices and initiated the notice of inquiry.
- Specifically, allegations point to ocean carriers defining “merchant” in their bills of lading to include persons or entities with no beneficial interest in the cargo and that have not consented to be bound by the terms in the bill of lading.

## Asahi Tanker orders world's 1st zero-emission tankers



- Japanese shipping firm Asahi Tanker has placed an order for the construction of two electrically-powered tankers.
- Japanese shipbuilders Koa Sangyou Co and Imura Zosen each, while Kawasaki Heavy Industries will serve
- The two ships, described as the world's first tankers, are slated for delivery in March 2022 and
- The two tankers will adopt the “e5 tanker” design Inc, a company set up by Mitsui O.S.K. Lines, Asahi Tanker, Exeno Yamamizu Corporation and Mitsubishi Corporation to build up infrastructure services in the marine shipping industry that focus on electrically powered vessels.
- The tankers will be powered completely by large-capacity lithium ion batteries and are slated to go into service as bunker vessels in Tokyo Bay.



KK will be constructing one vessel as the system integrator for the duo. zero-emission electric-powered March 2023 respectively. developed by e5 Lab



## U.S. Coast Guard to Test Autonomous Response Boat gCaptain

The U.S. Coast Guard has selected Louisiana-based shipbuilder Metal Shark and Sea Machines, the autonomous shipping tech company out of Boston, to supply an autonomous test vessel to the USCG Research and Development Center. The vessel will be a 29-foot welded-aluminum “Defiant” craft, which already serves as the platform for the U.S. Coast Guard’s Response Boat – Small (RBS-II), but with Sea Machines’ SM300 autonomous-command and remote-helm technology offering a full range of capabilities including transit autonomy, collaborative autonomy, active ride control and collision avoidance, and remote control vessel monitoring.

## First new terminal for over a decade to boost US trade

- South Carolina Ports has confirmed that the Hugh K. Leatherman Terminal will be operational by March 2021 and will substantially increase capacity and improve the regional and national supply chain. The terminal will be the first to open in the US since the TransPacific Container Service Corporation terminal opened at the Port of Jacksonville in 2009.
- It will add 700,000 TEU annually to SC Ports’ throughput in the first phase. A critical component is already complete, the construction of a 1,400ft wharf designed to receive vessels of 19,000 TEU capacity or more.
- SC Ports is in the final year of a \$2 billion six-year capital improvement plan to improve maritime and supply chain infrastructure. The \$1 billion Phase One of the Leatherman Terminal complements efforts to modernize Wando Welch Terminal and deepen Charleston Harbor to 52ft.



## Melbourne to increase terminal and rail capacity

The Port of Melbourne will look to upgrade its rail capacity and upgrade its container handling equipment in a bid to improve throughput and its abilities as a national and international trade gateway, according to its 30-year 2050 Port Development Strategy (2050 PDS).



## Coca-Cola to discontinue coconut water brand Zico, with Coke Life under review

- Coca-Cola is discontinuing its coconut water brand Zico, seven years after it was acquired. The beverage maker is also reviewing several other drink brands in its portfolio, including Coke Life, as part of this offloading process.

## Coors Seltzer enters increasingly crowded field of spiked seltzers

- The never-ending deluge of new spiked seltzers has another entrant: Coors Seltzer.
- Molson Coors announced the drink this week, using a similar strategy that Anheuser-Busch used when it launched Bud Light Seltzer earlier this year. Like Bud Light Seltzer, Coors hopes drinkers recognize its brand and wins over drinkers craving the low-calorie and low-sugar drink.
- However, in an increasingly crowded field, Coors Seltzer is marketing itself as a sustainable alternative with a "mission to help save America's rivers." Every 12-pack sold will restore 500 gallons of fresh water to the country's rivers through a partnership with the environmental group Change the Course.



## C-store Trips Bounce Back Post-Labor Day Holiday

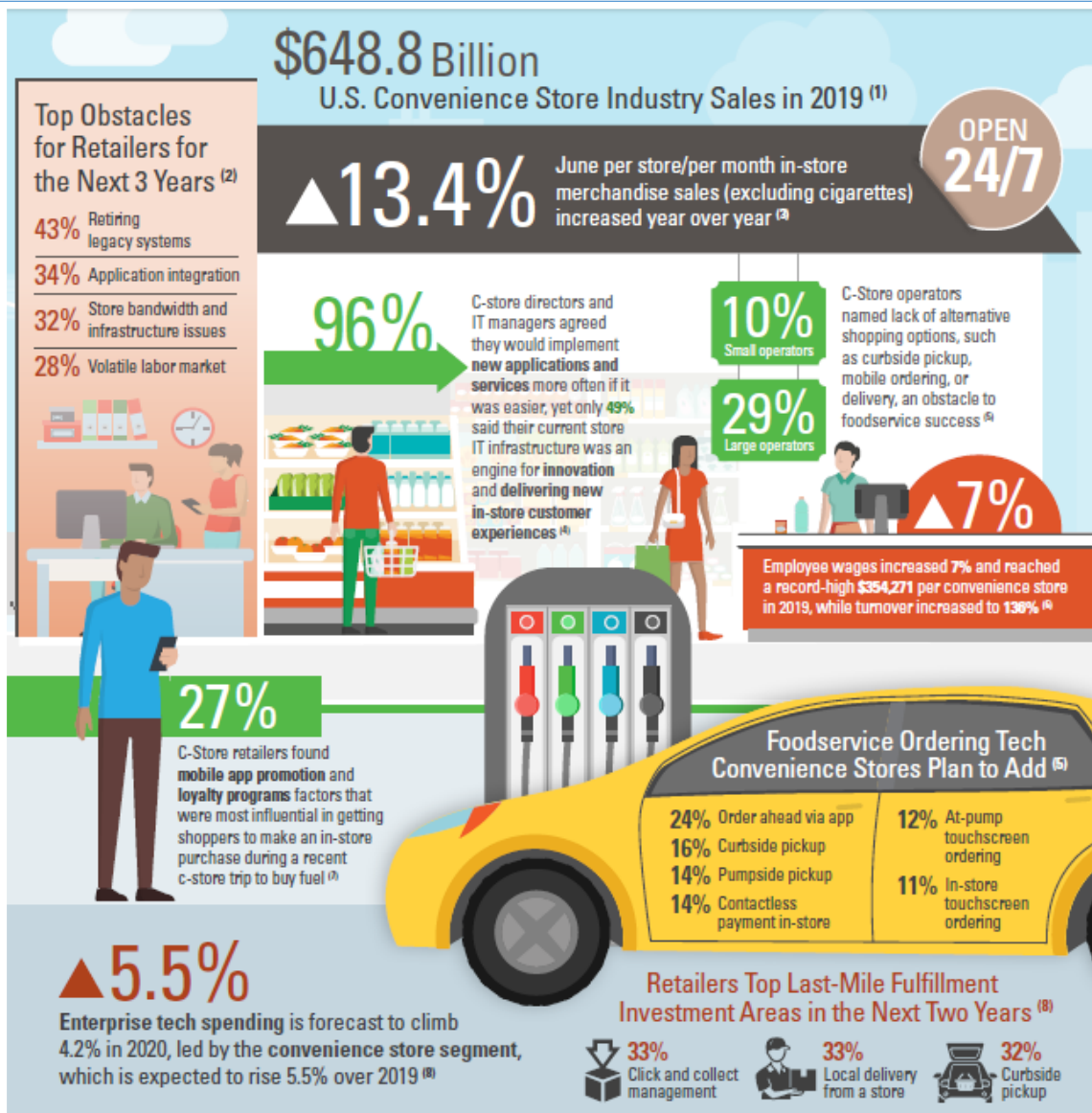
- One month past the official end of summer, convenience store trips are starting to tick back up.
- According to the latest biweekly report from PDI and NACS on how COVID-19 is impacting consumer behavior, morning rush and basket spend are holding relatively stable at about 85% of prior year's trips and up 20% in basket spend compared with the same time period last year.
- Convenience stores saw a boost in dollar sales, up 4.8% year over year, during the two-week period ended Sept. 27, slightly below levels seen at the end of July and the end of August.
- Looking at in-store categories, beer and packaged beverages drove sales growth for the week ended Sept. 27. Beer trips have remained in positive territory, and the packaged beverages category, which fell into the red ahead of Labor Day, is still in the red but improved in the latest two-week period.
- Specifically, dollar sales were up 13.7% year over year in the beer category and up 5.9% in the packaged beverages category for the latest one-week period.



# Beverages, CBD & C-Stores

28

- 83% of customers say convenience while shopping is more important now than it was five years ago. And, during the pandemic, we've seen rapid changes in consumer buying habits due to social distancing — such as curbside collection, full-service fueling, click & collect, home delivery and more.
- The key challenge is that legacy infrastructure is holding convenience retailers back from making these changes. Indeed, 63% of IT decision makers in the convenience and fuel retail sector admit that legacy infrastructure kept them from making changes, responding that an inflexible infrastructure delayed the speed at which they would have liked to adapt their store operations.
- The majority of retail store technology is device-based, meaning there's a software application and operating system (OS) installed on every individual terminal or touchpoint throughout the store.



Still So Much To Learn

ACC



## Walmart to launch consumer health insurance initiative in November CSA

- Walmart is entering the health insurance business – just in time for Medicare Open Enrollment.
- The retail giant announced the launch of Walmart Insurance Services, a licensed insurance brokerage, which will help people with enrolling in insurance plans. The initiative will begin selling Medicare insurance plans to consumers during this year's annual enrollment period, Oct. 15 through Dec. 7.
- “We are licensed in all 50 states, plus Washington, D.C., and we have built a team of licensed insurance agents who can help people find the right insurance plan for them,” said Walmart U.S. Health & Wellness.

## Vaccine Makers Told to Boost Production Plans, FDA to Demand Two Months of Safety Data SUPPLYCHAINBRAIN

- The U.S. Food and Drug Administration plans to have an expert panel review any COVID-19 vaccine application for emergency use, along with at least two months of safety data, according to Bloomberg.
- The requirements will almost certainly add to the time it will take to review any vaccine, potentially past President Trump's goal of having one by Election Day next month. While the FDA has said it plans to work as quickly as possible, it's also said it won't cut scientific corners or bend to political pressure to rush a vaccine.

## Hospitalizations Surge Anew As COVID Cases Rise In 39 States BECKER'S HOSPITAL REVIEW

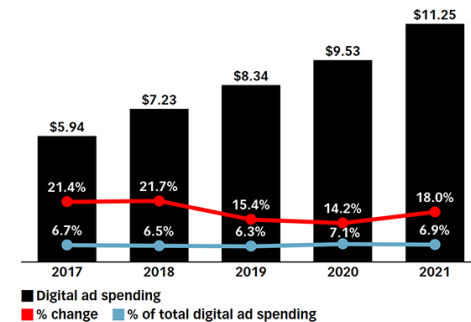
- With signs already pointing to the forecasted fall and winter wave of new infections, Dr. Anthony Fauci warns that the current U.S. death toll of over 210,000 could nearly double if states and citizens do not act.
- U.S. coronavirus cases surpassed 7.5 million on Wednesday with most states seeing a rise in cases – nine months into the pandemic – and a startling nine states setting ominous, seven-day records for infections. A USA TODAY analysis of Johns Hopkins data through late Tuesday shows Alaska, Indiana, Kansas, Kentucky, Minnesota, Montana, North Dakota, Utah and Wyoming all set state records in the seven-day period. In all, 39 states reported more coronavirus cases in the last week than they had in the week before.
- Anthony Fauci, the nation's leading infectious diseases expert, said Tuesday that as many as 400,000 Americans could die from COVID-19 if action isn't taken in the fall and winter. Fauci told attendees of a virtual event held by American University that between 300,000 and 400,000 could die from coronavirus in the country.



## US Healthcare and Pharma Is Among the Fastest-Growing Digital Ad Spenders eMarketer

- The healthcare and pharma industry has been slower to embrace digital marketing compared with other US verticals tracked. Heavy regulation makes ad targeting more difficult, which has kept traditional media buys and in-person marketing popular.
- However, the coronavirus pandemic restricted many of these in-person touchpoints, which caused both the B2B and business-to-consumer (B2C) aspects of the healthcare and pharma industry to further embrace digital advertising.
- It is expected US healthcare and pharma industry will spend \$9.53B on digital advertising this year, up 14.2% from 2019.

Healthcare & Pharma Industry Digital Ad Spending in the US, 2017-2021  
billions, % change and % of total digital ad spending



## HCA to return \$6B in federal COVID-19 aid BECKER'S **HOSPITAL REVIEW**

- Nashville, Tenn.-based HCA Healthcare released a preview of its third-quarter financial results on Oct. 8 and said it is returning \$6 billion in federal grants and loans meant to offset financial strain tied to the COVID-19 pandemic.
- Earlier this year, the 186-hospital system received about \$6 billion made available under the Coronavirus Aid, Relief and Economic Security Act. It received \$1.6 billion in provider relief grants and \$4.4 billion in Medicare accelerated payments. The grants do not have to be repaid, and the accelerated payments are loans that the company would have to start repaying one year from when they were issued.

## Healthcare labor unions sue US over alleged failure to provide PPE to essential workers **Nation of Change**

- Labor unions representing healthcare workers as well as teachers, transit operators and other front-line workers have filed a lawsuit against the federal government over their alleged failure to provide adequate protective gear and other medical supplies to essential workers.
- The lawsuit, filed Oct. 8 in the U.S. District Court in Washington, D.C., calls on HHS Secretary Alex Azar and Chad Wolf, the secretary of the U.S. Department of Homeland Security, to immediately use the full powers of the Defense Production Act to ensure adequate supply of personal protective equipment for front-line workers.
- "The secretaries have failed to fully utilize their authority, leading to a shortage of PPE," the lawsuit says.



## North Carolina hospital receives 7 takeover bids BECKER'S **HOSPITAL REVIEW**

- Randolph Health, a single-hospital system based in Asheboro, N.C., sold for \$18.5 million after receiving seven takeover bids during a bankruptcy auction, according to the Courier-Tribune.
- Randolph Health CEO Angie Orth said the hospital, which filed for Chapter 11 bankruptcy in March, sold to Roanoke, Va.-based American Healthcare Systems, according to the report.
- Objections to the deal will be accepted by the bankruptcy court until Oct. 16. If there are no objections, the judge is expected to issue an order Oct. 22 to allow the transaction to proceed.

## Using telehealth to manage chronic diseases amwell

- COVID-19 provided a much-needed catalyst for widespread integration of telemedicine. Now it's time to use it against our biggest long-term health challenges.
- Telemedicine is not a new idea; in fact, its roots can be traced back to the 1920s, when radio transmissions were used to send medical advice to ships at sea. Recent years have brought technological advances that allow us to weave telehealth into the fabric of everyday life. Yet, despite those advances, lack of reimbursement models and overall lack of comfort with telemedicine have hindered its adoption.
- COVID-19 changed everything, though. Social distancing has become woven into our everyday lives and accelerated the use of video for everything from work meetings to gym classes and happy hours. In the healthcare space, the trend is no different. Hospitals and health systems have found new ways to use video to connect patients with families when they cannot visit, conduct virtual health screenings, treat acute illness, and more. Telehealth has become more widely accepted by both providers and patients.
- Chronic diseases such as heart disease, cancer, chronic obstructive pulmonary disease (COPD), stroke, Alzheimer's, diabetes, and kidney disease account for roughly three-quarters of all physician visits, as well as 80% of hospital admissions and 81% of readmissions in the U.S. Nine in 10 prescriptions are related to the treatment or management of chronic illnesses.
- Estimates suggest that about 45% of Americans suffer from at least one chronic condition, and unfortunately where there is one, others commonly follow.



## **Boris Johnson's Offshore Wind Plan Will Require \$58 Billion from Industry** *Captain*

- Boris Johnson's plan to quadruple the size of the U.K. offshore wind industry will require \$58 billion of investment and careful management of what's a tricky building process in some of the world's roughest waters.
- The prime minister is targeting turbines with the capacity to produce 40 gigawatts of electricity by 2030, up from more than 10 gigawatts now. That would speed the nation's shift away from fossil fuels and help it meet a goal of zeroing out carbon pollution by the middle of the century.
- The difficulty is managing so many large infrastructure projects at once. Turbines these days are massive, with blades as big as a jumbo jet's wingspan



## **Electric cars are closer to a breakthrough than you might think** *ITS FOR HOME* intelligent technology solutions

- Beyond the issue of price, people still see EVs as glorified golf carts that will strand them and take forever to charge. Ample torque and silent performance are two delight factors that don't seem to register with a person until they get behind the wheel. Carmakers haven't helped with their laser focus on range, charge time and price.

## **Wind Turbine Makes 1,000 Liters of Clean Water a Day in the Desert** *Treehugger.com*

A cool new concept being tested in the Abu Dhabi desert uses a wind turbine to condense water from the air and pump it into storage tanks for filtration and purification. The technology was created by Eole Water after its founder, Marc Parent, was inspired by the water he could collect from his air conditioner unit while living in the Caribbean. The 30-kW wind turbine houses and powers the whole system. Air is taken in through vents in the nose cone of the turbine and then heated by a generator to make steam. The steam goes through a cooling compressor that creates moisture which is then condensed and collected. The water produced is sent through pipes down to stainless steel storage tanks where it's filtered and purified.





## David Attenborough and Prince William join forces **Forbes**

British naturalist Sir David Attenborough has joined forces with Prince William to launch the Earthshot Prize, a global environment award to help tackle some of the world's biggest environmental challenges. To see Attenborough at work, his latest documentary is streaming on Netflix, to critical acclaim.

## Einride Unveils New Driverless Vehicles for Autonomous Freight Hauling **SupplyChain247**

- Einride, the Swedish autonomous trucking startup, unveiled a new vehicle type that the company hopes to have on the road delivering freight starting in 2021. Freight mobility leader Einride launched the next generation of its groundbreaking Pod, with new functionality and pricing, making it commercially available on a global scale for the first time.
- Einride has been in the business of releasing interesting, eye-catching prototype vehicles since it was founded in 2016.
- There was the cab-less T-Pod, released in 2017, four of which are operating on public roads hauling freight for Oatly, the Swedish food producer.
- A year later, the company unveiled the T-Log, built to be more powerful than its predecessor for the job of hauling tons of giant tree logs. Now it has a next-generation vehicle that it hopes it can put into production.
- Einride's also been engaged with the less glamorous part of the job, which is testing, validating, and seeking regulatory approval for its vehicles, all of which are electric and can be controlled remotely by a human operator, in addition to operating autonomously without human intervention. The company has yet to reveal its plans for production and manufacturing.
- The replacement of drivers will be one of the most dramatic, visible battlegrounds between automation and the human worker.
- Trucks that drive themselves are already rolling out around the world. Self-driving trucks successfully made deliveries in Nevada and Colorado in 2017. Rio Tinto has 73 autonomous mining trucks hauling iron ore 24 hours a day in Australia. Europe saw its first convoys of self-driving trucks cross the continent in 2016.





- The state that's booming with iron ore and promises to drive a budget surplus for four more years as **MailOnline** Australia plummets into recession amid the coronavirus pandemic is set to deliver a string of Budget surpluses even as the rest of Australia battles the deepest recession since the 1930s Great Depression.
- Western Australia is defying the coronavirus downturn thanks to China's insatiable demand for iron ore, the commodity used to make steel. While the federal government in Canberra has unveiled the biggest Budget deficit since World War II, the story is dramatically different on the other side of the country.
- WA Labor Treasurer Ben Wyatt cancelled his political retirement plans and on Thursday announced a budget surplus of \$1.2B for 2020-21 - the third in a row.
- A \$1.7billion or 25.9 per cent increase in state government royalties in 2019-20, from surprisingly higher iron ore prices, was expected to offset an expected \$1.7billion fall in general government revenue from 2019-20 to 2022-23.
- Despite the COVID-19 outbreak starting in the Chinese city of Wuhan, the Treasury papers praised China, which buys more than half of WA's exports.
- While Australia is battling its first recession in almost three decades, as a result of the coronavirus shutdowns, WA's economy is expected to keep growing, with state final demand expected to grow by 0.5 per cent in 2020-21 and by a whopping 3.75 per cent in 2021-22. In contrast, the national economy is expected to shrink by 1.5 per cent this financial year.
- 'The COVID-19 pandemic has had an unprecedented impact on the global, national and state economies,' WA Treasury said.
- 'However, despite initial sharp falls in activity, Western Australia's economy is recovering at a faster rate than other states and the national economy.'
- Western Australia was also spared the effects of the summer bushfires, putting its economy in a stronger position leading into the coronavirus pandemic.
- 'Also, the bushfires that occurred across the east coast constrained output compared with the west,' Mr James said.
- Intriguingly, Treasury has forecast WA keeping its border closed to the rest of Australia until June 2021.



## A 5G WORLD

Nearly 400 operators worldwide are currently actively investing in 5G networks, as commercial launches pick up and mobile subscriptions begin to rise. But which countries and regions are leading the way, and which are set to see network speeds surge?

**397** operators in 128 countries/territories were investing in 5G mobile or 5G FWA/home broadband networks as of August 2020

**118** operators in 59 countries/territories have announced the deployment of 5G within their networks

**96** operators in 43 countries/territories have announced 2021 5G service launches

### GLOBAL 5G DEPLOYMENT BY STATUS

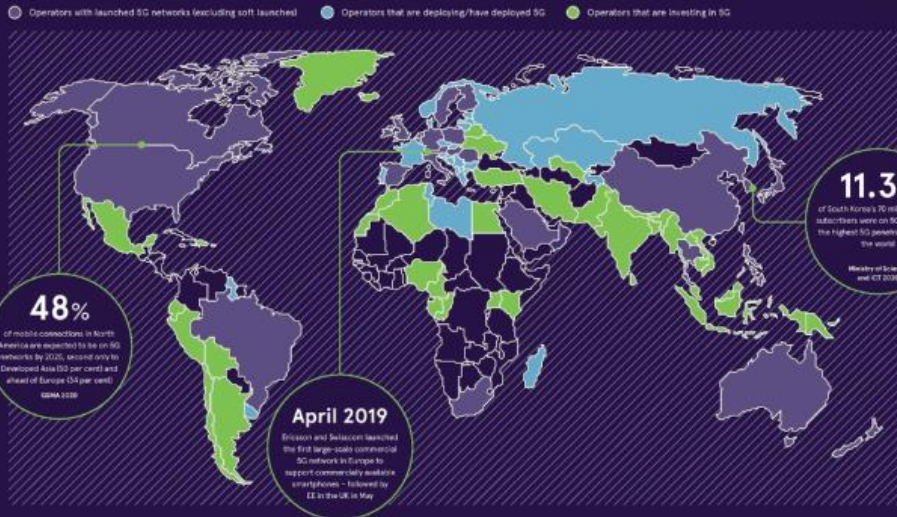
Operators' status, irrespective of whether commercial services are launched; out of the 397 operators that were investing in 5G mobile or 5G FWA/home broadband networks as of August 2020



### 5G COMMERCIAL LAUNCHES

Global operator investments in 5G, including soft launches, as of August 2020

GSA 2020



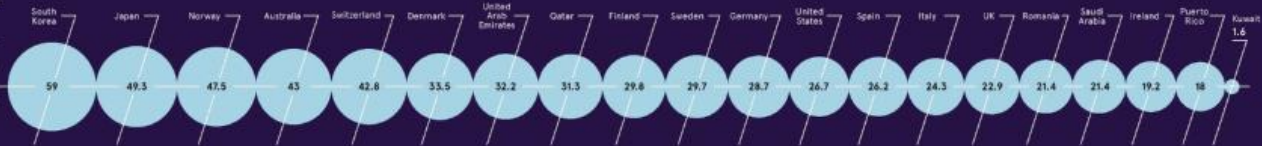
### MOBILE CONNECTIONS BY REGION

Share of total mobile connections by network type in 2023



### DOWNLOAD SPEEDS IN 5G COUNTRIES

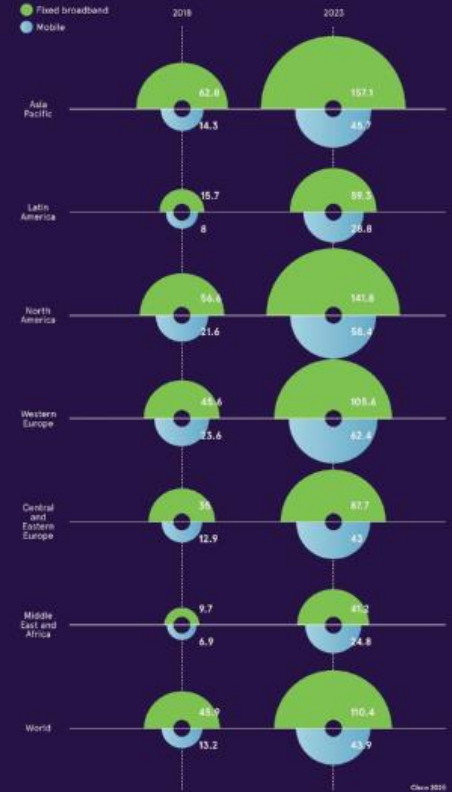
Download speeds in Mbps in the top 30 leading countries that have commercially launched 5G; these are average speeds inclusive of other networks so very greatly due to the level of mobile subscribers on 5G contracts in each region\*



RACONTEUR

### 5G TO BOOST BROADBAND AND MOBILE SPEEDS

Comparing fixed broadband and mobile speeds in 2018 and 2023 (Mbps)





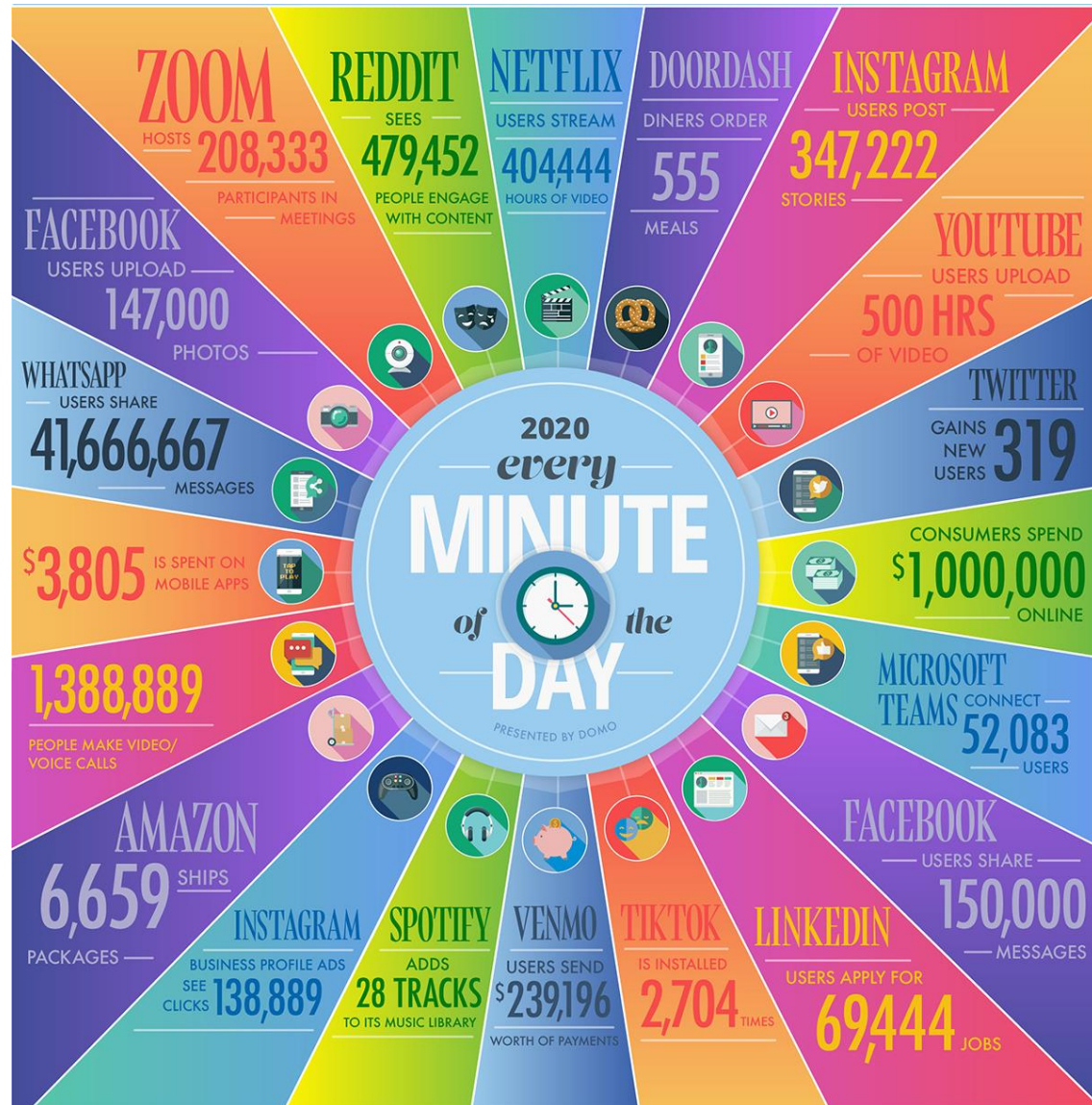
# What Happens Every Minute on the Internet in 2020

36

The world's internet population is growing significantly year over year. As of April 2020, the internet reaches 59% of the world's population and now represents 4.57 billion people — a 6% increase from January 2019.



GLOBAL INTERNET POPULATION GROWTH 2014-2020  
(IN BILLIONS)



*Still So Much To Learn*

**ACC**

