

ACC NEWS



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YOUR WEEKLY UPDATES

Week 2 of 2021



Healthcare



Ports



Shipping



Rail



Supply Chain



Beverages



Retail



C-Stores



Road



Handling



In this week's update

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Top Tech Trends of 2021

During the year ahead, technology will help us emerge from the pandemic in ways big and small, obvious and surprising. The following quotes were edited for length and organized by subject matter.

- i. "Innovation people will most embrace next year—particularly the back half of the year when it is hopefully safe to be out in public again without fear—will be technologies that bring people together" **GGV Capital**;
- ii. "We've formed habits and have gotten a lot more comfortable with doing things virtually. This opens up an entirely new way of life for a lot of people" *Eero*;
- "We expect many will continue to work from home or shift to a hybrid working arrangement, accelerating the need for in-home technology to be smarter, adapt better to people's changing needs, and ultimately become a better partner to people" *iRobot*;
- iv. "Even in a timeline where the COVID-19 pandemic is expected to be temporary, the changes it has brought will only accelerate as well" **StartX**;
- v. "More flexibility for working parents, because there is no longer the expectation of a 9-to-5 day bookended by a long commute" *Future Forum*;
- vi. "As the workforce continues to relocate across the country and out of large cities, organizations will need to invest heavily in tech that enables the future of remote work" *Venture Noire;*
- vii. "The patchwork quilt of video conferencing services and web-based team tools that we have all been using intensely for months will rapidly evolve into more sophisticated and powerful interfaces and networks that will allow us to collaborate and deliver services at high speed, at much less cost, and with wider scale" *Magic Leap*;
- viii. "The first opportunity to rethink office space. Gone are the days of cramming into open plan offices, as will be the notion of sitting in traffic five days a week to put in face time at a common physical location" *OpenAI*;
- ix. "The CFO who has eliminated eight hours per week of commute; he has reinvested that time directly back into his Peloton and having dinner with his three kids every night" *Harbinger Ventures;*
- x. "Hardware, software and physical meeting rooms designed to bridge physical and digital worlds, and experiences that make it possible for all people and all voices to be heard–regardless of physical presence–will be the crux to fostering innovation and creativity in the weeks and months ahead" *Microsoft365*FATIGMPANY





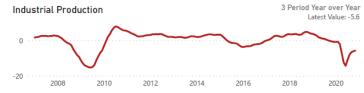
Economic Update Industry Indicators

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

Last Refresh: 01-04-2021

Category	Indicator	Relationship	Next Update	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	
Business Investment	Average Weekly Hours - Retail	Procyclic	01-05-2021	0.32%	0.65%	1.09%			NOTES
	Small Business Sentiment	Procyclic	01-11-2021	-2.13%	0.29%	0.16%			Values represent the percentage
	Weekly Economic Index	Procyclic	01-08-2021	-5.22%	-3.82%	-2.73%	-2.12%		change from the previous year.
	Weekly Jobless Claims	Countercyclic	01-08-2021	316.38%	273.44%	244.23%	269.07%		change nom the previous year.
Transportation and Tourism	Google Search "Travel Cancellation"	Countercyclic	01-05-2021	-7.41%	-19.23%	-8.33%			In January, 1 out of 4 indicators are signaling economic improvement f
	ISM Services Index	Procyclic	01-05-2021	6.21%	4.64%	5.65%			
	Restaurant and Bar Sales	Procyclic	01-29-2021	-16.39%	-14.64%	-15.17%			the previous year.
	Sentiment: Vacation Travel Next 6 Months	Procyclic	01-20-2021	-40.80%	-42.84%	-42.69%	-43.43%		
Consumer Big Ticket Purchases	Auto Sales	Procyclic	01-28-2021	-22.65%	-18.42%	-15.17%			In December, 2 out of 10 indicators a signaling economic improvement from
	Consumer Sentiment - Discretionary Spend	Procyclic	01-20-2021	-11.68%	-11.32%	-12.31%	-14.07%		the previous year.
	Global Luxury Index	Procyclic	01-28-2021	17.59%		22,38%	26.21%		are previous years
	Home Building Permits Issued	Procyclic	01-28-2021	5.38%	3.49%	6.16%			Look to subsequent pages for mon
									trend analysis.
Logistics and Manufacturing	Economic Policy Uncertainty	Countercyclic	01-05-2021	113.91%	171.74%	213.04%	84.49%	95.22%	
	Industrial Production	Procyclic	01-28-2021	-6.47%	-5.94%	-5.60%			
	Overtime for Hourly Mfg Workers	Procyclic	01-05-2021	-11.11%	-8.80%	-5.65%			
	Purchasing Managers Index - Mfg	Procyclic	01-05-2021	11.82%	17.56%	19.42%			
Financial	Financial Stress Index	Countercyclic	01-08-2021	-41.01%	81.86%	88.21%	40.11%		
	S&P 500	Procyclic	01-05-2021	13.19%	15.02%	14.63%	16.02%	14.05%	
	US High Yield Index Option - Adjusted Spread	Countercyclic	01-05-2021	32.37%	23.63%	12.40%	10.00%	10.06%	
	VIX Volatility Index	Countercyclic	01-05-2021	78.65%	81.56%	99.24%	63.31%	71.08%	Upward pressure on economy
				Source: U.S. Bureau of Labor Statistics				Downward pressure on economy Data as of 11-2020	
Source: U.S. Bureau of Labor Statistics		Data as of 11-2020 Raw Latest Value: -1.3			Industrial Production				3 Period Year over Year Latest Value: -5.6
Weekly Economic Index									





Measures Mfg, Mining, Utilities. A directional signal of future GDP.

Source: Board of Governors of the Federal Reserve System

Data as of 11-2020



2021 Predictions















Olive Leaves Have Higher Levels of Phenols in the Summer, Research Shows **Olive Oil Times**

- Scientists have shown that the chemical composition of olive leaves may depend on the time of year in which they are harvested. Researchers in Brazil focused their study on three well-known cultivars in a single orchard, measuring their content of polyphenols and other characteristics.
- Their findings show that some olive varieties might offer a significantly higher antioxidant and phenolic profile than others, and that summer harvesting might provide the best results for the growing number of farmers and companies investing in olive leaf-derived products.
- "We investigated Arbequina, Manzanilla and Picual olive trees," Alexandre Lorini and Deborah Murowaniecki Otero, two of the authors of the study, told Olive Oil Times. "We spent approximately one year collecting the samples from the trees, and one more year carrying out the analysis, both in the laboratory and with statistical analysis."

How to navigate two big eGrocery shifts impacting competition in 2021 brick meets click.



As we look ahead, two significant pandemic driven shifts are reshaping how supermarkets will compete in 2021 and beyond. One is keeping up with the demands of online grocery shoppers, and the other is the challenge of changing the shopping habits of satisfied customers.

- Keeping up with the demands of online grocery shoppers The pandemic drove a tremendous increase in online grocery shopping. The latest Brick Meets Click/Mercatus grocery shopping survey, fielded in mid-November 2020, found that the total online spending for groceries surpassed \$8 billion per month – compared with \$2 billion per month just 17 months prior in August 2019. That is impressive growth. To win in this environment, grocers must find ways to clearly stand out from the competition. Different customer segments have different online needs so a one platform approach will not serve the total market.
- **Changing the shopping habits of satisfied online customers** Easy to miss in all of these positive sales stats is that today's online grocery shoppers have never been more satisfied with the specific eCommerce platform that they last used: More than 4 out of 5 shoppers intend to use that same service in the next month.

Where to focus in 2021 - Continued sales growth combined with high satisfaction ratings underscore the importance of focusing on: (i) profitability, (ii) satisfaction and (iii) customer acquisition





Aldi to spend an additional GBP3.5bn a year with British suppliers by 2025 EDGE

- Aldi has announced plans to increase the amount of food and drink it buys from British suppliers by GBP3.5 billion a year within the next five years as it continues its UK expansion. The retailer is also investing GBP500 million in new and upgraded stores, distribution centers and its supply chain in 2021 while extending its immediate payment terms to smaller suppliers for a further 12 months.
- Aldi's focus on the UK now sees it source the 'vast majority' of its grocery products from British suppliers.
 Underpinned by this supply chain, Aldi's competitiveness is also being driven by scale as it grows a network from 900 stores to a target of 1,200 within five years. At the same time, it has been following the lead of its US counterpart, rapidly expanding its fulfillment services and click and collect options to offer a more significant online grocery presence.

Morrisons sales rise 8.1% as online accelerates EDGE

Britain's fourth-largest grocer Morrisons has reported an 8.1% increase in the group's like-for-like sales in the 22 weeks to 3 January 2021, with the retailer benefitting from heightened demand during a period of pandemic restrictions in the run-up to Christmas. Morrisons noted that its online and wholesale channels have seen strong growth, as the group develops as a multichannel business.

Jack Ma Out Of Spotlight As Chinese Regulators Pounce PYMTS.com

- eCommerce billionaire Jack Ma has been in the eye of the storm as China's regulators have flexed their muscles and taken on FinTech companies. However, Alibaba Group Founder Ma has retreated from the public eye.
- The high-profile business owner was last seen at an October event in Shanghai, where he denounced China's regulatory system. The next month, Chinese regulators debuted a set of proposed regulations that derailed Ma's plans to have his Ant Group hold an initial public offering. The IPO had been ready to raise an estimated \$37 billion, with the stock set for listings by the Shanghai and Hong Kong stock exchanges in China.
- On top of Ant's woes, Chinese regulators have started an antitrust probe into Alibaba.
- Alibaba owns about a one-third stake and the controlling interest in Ant Group.







- The unprecedented social and economic disruptions that affected all areas of life in the US in 2020 also skewed many of our pre-pandemic forecasts. Valuable insights can be gleaned by examining the difference between what we thought would happen as of February 2020 versus what we now project for this year and the coming years.
- Due to widespread commercial lockdowns and guarantine-related personal restrictions, US consumers overwhelmingly reduced spending on services and entertainment this year (restaurants, bars, salons, travel, events, education, etc.). This in turn led to an unexpectedly strong outcome for spending on certain retail goods, as households used the suddenly available cash to splurge on consumer electronics, home furnishings, groceries, and a range of other products. Much of this spending took place online.
- Perhaps the most consequential digital story of 2020, the widespread Changed? embrace of ecommerce during the pandemic unexpectedly accelerated the channel's progress by almost two years. In January, we forecast total ecommerce sales would be \$674.88 billion in 2020; now we have that figure well over \$100 billion higher, at \$794.50 billion. On the flipside, in-person shopping took a massive hit.

The Booms:

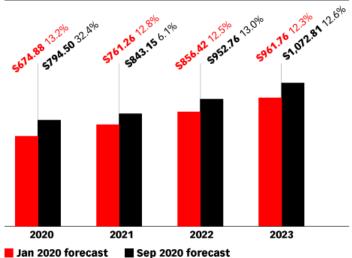
- Consumer Electronics Ecommerce Sales.
- Furniture and Home Furnishings Ecommerce Sales.
- Health, Personal Care, and Beauty Ecommerce Sales.
- Food and Beverage Ecommerce Sales.
- Click-and-Collect Sales.

The Busts:

- Brick-and-Mortar Retail Sales.
- Digital Travel Sales.
- Apparel Retail Sales.

How Has Our Forecast for US Retail Ecommerce Sales

billions and % change, 2020-2023



Note: includes products or services ordered using the internet, regardless of the method of payment or fulfillment; excludes travel and event tickets, payments (such as bill pay, taxes, or money transfers), food services and drinking place sales, gambling, and other vice goods sales Source: eMarketer, Sep 2020

www.eMarketer.com





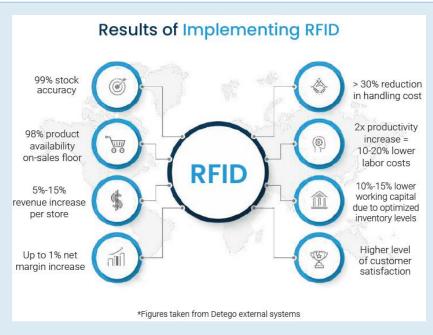
What's the Future of Retail Stores? **CBRE**

Retail stores will take on more functions in the future, thanks to the pandemic and other trends, according to a new report from CBRE. "Brick-and-mortar stores will remain vital for retailers for branding purposes and essential customer interaction, but the store's purpose will shift to supporting the rise of the multichannel consumer — a consumer who uses physical stores, e-commerce, mobile commerce, and social media for shopping and purchasing," said John Morris, CBRE's Retail and Industrial & Logistics leader. "This will be key for cost control, as shipping for online orders can eat away profits if retailer supply chains are not efficient. To improve this, stores will now include a big portion of their overall footprint for inventory control, product sorting and shipping/receiving," he added.

- With appealing to multichannel consumers as the goal, the new "front of house" retail format will include:
 - More space set aside for curbside pickup.
 - Digital wayfinding signs for shoppers, and in-store features for the retailer's mobile app.
 - Designated click-and-collect desks to separate traditional and omnichannel shoppers.
 - High-tech fitting rooms with smart mirrors, allowing shoppers to try on apparel and accessories virtually.
 - A multi-purpose media lounge to allow customers to take a break from shopping.
- The new hybrid store will also handle multiple forms of fulfillment and inventory control, as well as returns. Referred to as "back-of-the-house," the industrial footprint will include:
 - A racking system separating online orders, buy-online-pick-up-in-store orders, and in-store replenishment.
 - Delivery access for shipping and receiving of online orders.
 - o Inventory optimization technology similar to that of a distribution center to ensure continuous replenishment.
 - Reverse logistics support for online returns to determine if a product should be re-shelved or shipped back to the regional fulfillment center.
- "To make the hybrid store format successful, both retailers and landlords will need to approach real estate differently. For some retailers, it will mean fewer, larger stores in key locations and for others, smaller stores in more locations for greater market penetration," said Melina Cordero, managing director for CBRE's Retail Capital Markets. "Lease rates will adapt to blend more expensive rates for retail space with less costly rates for logistics space."







Delivered by RFID:

- Item-level visibility across the entire supply chain
- Trace items against individual shipments
- 100% inbound and outbound shipping accuracy
- Reduction of customer chargebacks for accuracy-related charges
- Increased inventory accuracy at DC's and stores leading to top-line growth and reduce stock outages
- Track shipments for delivery
- Fraud Identification on eCommerce and consumer claims

Delivered by RFID:

- Reduces out-of-stock
- Store associates have more time for their customers
- Convenient omnichannel services.
- A connected experience between online and offline
- Al-powered chatbots delivering assistance and product information via mobile.
- Smart fitting rooms boost consumer engagement and basket size.
- RFID-enabled PoS including self-checkout services

Delivered by RFID:

- Aclear view of store stock with the distinction between backroom and salesfloor informs staff when replenishment of each individual item is required
- RFID system suggests optimal replenishment times and quantities and can also provide real-time replenishment alerts.
- Retailers can monitor availability and modify stock levels if needed
- Higher product availability (average of 98%) increases both sales and brand loyalty.

Delivered by RFID:

- Hundreds of items can be read in seconds
- Items can be read at a distance of several feet
- Items can be counted without direct line of sight e.g. through boxes and containers
- Stock takes can occur far more often
- Intelligent software guides store associates through the entire process

Delivered by RFID:

- Real-time data for agile decision making
- Eliminates reliance on historical data
- KPI's for stock accuracy and product availability
- Data for item dwell times either on shop floors, back rooms or in DC's, to optimise processes and inventories
- New KPIs for fitting room conversion rates and article age in the store.
- Supply chain data to hold partners and suppliers accountable for mistakes and inefficiencies

Delivered by RFID:

- Each item has a unique identity can only be read once
- Ease and speed of stock takes means they take place far more regularly
- RFID labels don't require a line of sight to be read, makes items difficult to miss & can be read without opening boxes
- Digitising stock counts makes comparing against the target stock list simple, can be compared in real-time - displaying current stock accuracy to staff.





Debenhams closes online business in Ireland as 50 major UK retailers face EU tariffs the

- Debenhams has been forced to close its online business in Ireland to avoid the cost of tariffs which are now required under the trade deal agreed between the UK and the EU. The Debenhams ie website was taken offline on Christmas Eve as the Trade and Cooperation Agreement was published.
- Customers were informed that it is no longer possible for Debenhams to deliver orders to the Republic of Ireland "due to uncertainty around post-Brexit trade rules".
- Debenhams is not alone. At least 50 major UK retailers, including Marks and Spencer and Tesco, are in the process of going through their products lines, to establish how many of them will be now subject to tariffs from the EU.
- River Island and H&M have both confirmed to ITV News they expect to pay penalty tariffs on some clothing sent between their UK and EU businesses.
- John Lewis decided to stop delivering to EU customers, including the Republic of Ireland, last month. It also temporarily suspended deliveries to Northern Ireland after the trade deal was published.

6 Key Economic Projections For 2021 BENZINGA

- 1. 4.5% U.S. GDP growth. The U.S. economy contracted by 3.5% in 2020 thanks to the pandemic.
- **2. 5.4% global economic growth**. The global economy shrank by 3.7% in 2020. But economists are expecting an even stronger economic recovery outside the U.S. in 2021.
- **1.9% U.S. inflation**. The unprecedented federal government stimulus measures in 2020 have many investors concerned about a spike in inflation levels. However, economists are anticipating just 1.9% inflation in 2021, still slightly below the Federal Reserve's target rate of 2%.
- 4. 4% rise in U.S. home prices. The housing market boomed in 2020 thanks to plummeting mortgage rates.
- 5. 5.1% U.S. unemployment rate. U.S. unemployment peaked at 14.7% in April 2020 but had fallen to just 6.7% as of November. Economists are expecting it to continue to fall in 2021 as the economy recovers.
- 6. 3,800 price target for the S&P 500. The S&P 500 has a surprisingly good year in 2020 despite all the pandemic turmoil.





Retailer mistakes fuel accelerated returns voxware

Accelerating e-commerce activity during the Covid-19 pandemic is expected to drive an equally accelerated returns process post-holiday season, and retailer errors are adding fuel to the fire, according to data from supply chain technology firm Voxware, released this week. Survey findings include:

- 1. 26% of consumers said they returned items because they were delivered later than promised at the time of purchase, up from only 10% reporting returning late items in 2018.
- 2. 51% of respondents said they returned an incorrect item only to have a wrong item sent the second time around.
- 3. 56% of consumers said they prefer the option to return items via pre-paid postage, up from 47% in 2018. In-store returns saw a decrease in preference, dropping from 41% in 2018 to 34% this year.
- 4. 97% of consumers said they agree or strongly agree that the way retailers handle returns influences whether or not they will purchase from that retailer in the future, a statistic that continues to grow, the research found. Today, if a mistake is made, nearly 40% of consumers say they expect to receive the correct item within one to two days of informing the retailer of the mistake.

Walgreens Boots Alliance to sell wholesale pharmacy operation **EDGE**^

- Walgreens Boots Alliance is selling the majority of its wholesale pharmacy division, as it focuses on growing its core
 pharmacy and healthcare business. Walgreens will sell the division, Alliance Healthcare, to AmerisourceBergen in a
 USD6.5B cash and stock deal. The agreement will also expand Walgreens' near 30% stake in AmerisourceBergen,
 making it the largest stakeholder in the company.
- The sale of the wholesale pharmacy division is aimed at freeing up resources to invest in Walgreens main priorities, including the transformation and restructure of its retail offering, the creation of neighborhood health destinations and accelerating digitization. With Walgreens.com sales rising 39% in Q4 2020 versus last year and digitally initiated sales up 7%, accelerating digital is gaining increasing focus. Walgreens has already made efforts in this area including a partnership with Microsoft to support digital innovations and personalization in healthcare.
- The steps being taken by Walgreens Boots Alliance around digital and healthcare recognize that the change in shopping habits currently seen will have a lasting impact after the current crisis abates.





Walmart Expanding Self-Driving Vehicle Pilot Convenience Sure

Building on the autonomous-vehicle pilot that it launched last year with Palo Alto, California-based Gatik to move customer orders on a 2-mile route between a dark store and a Neighborhood Market in its hometown of Bentonville, Arkansas, Walmart revealed that Gatik's multi-temperature Autonomous Box Trucks will go fully driverless on this route, after traveling more than 70,000 operational miles in autonomous mode with a safety driver, as well as expand to neighboring Louisiana.

Outlook 2021: Capacity constraints, higher rates spur demand for alternative parcel solutions Joc.com

Parcel volume growth driven by e-commerce is expected to continue accelerating in 2021, but with carriers focusing on the most profitable shipments, shippers are turning to regional carriers and "gig" delivery platforms.

Capacity challenges will continue in 2021 SUPPLYCHAIN

Logistics companies urge planning and a focus on relationships as complexity continues across the supply chain. Many industry watchers say volatility is likely to continue as pandemic-related issues shape consumer buying habits and the global economy.

- This year's hyper-accelerated holiday shipping volume will have lingering effects in 2021 and force shippers to focus
 on strategic planning and relationship-building as a way to manage the crunch for transportation and warehouse
 space, according to some year-end predictions from logistics-industry leaders.
- "With fewer trucks, warehousing space, pallets, and containers available to transport goods, rates are rising and shippers are forced to compete not only for customers' attention online, but also the means to make good on those orders once they have been placed," Glenn Koepke, a senior vice president at supply chain visibility solutions provider FourKites wrote earlier this month in a report detailing the booming holiday shipping activity and its effects on the supply chain. "Amidst this complicated landscape, the companies that come out ahead will be those agile enough to adjust to changing dynamics both quickly and efficiently."
- A reverse logistics boom and efforts to roll out Covid-19 vaccines will further complicate the landscape. But overall, the complexity supply chain companies are experiencing will also lead to innovation, some industry-watchers say.





Logistics 2030 – Navigating a Disruptive Decade (Year 2 Report)

- Over the next 10 years, supply chain professionals will encounter many challenges and rapid change. The attached report conducts interviews, surveys, and focus groups to assess the strategies, requirements, and tools that will shape supply chains and drive success over the next decade.
- To say that 2020 has been a transformative year for distribution centers and warehousing would be an understatement at best.
 Shippers and carriers alike are scrambling to sustain supply chains in the face of a global pandemic and coupled with ongoing changes to logistics networks is reflected in the study.
- The year 2030 is not a long way off. Over the next 10 years, supply chains will encounter many challenges and rapid change.
- With the sponsorship support of JLL and CenterPoint, a team of experts from Auburn University's Center for Supply Chain Innovation, the Council of Supply Chain Management Professionals (CSCMP), the National Shippers Strategic Transportation Council (NASSTRAC), and AGILE Business Media (publisher of DC Velocity & CSCMP's Supply Chain Quarterly), has undertaken a multi-year study of these future issues. Over the next few years, the L-2030 study will address key elements of the emerging supply chain.

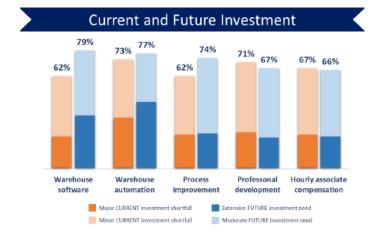
LOGISTICS 2030

NAVIGATING A DISRUPTIVE DECADE

Year 2-Warehousing and Distribution

Warehousing Priorities









Predicting 2021: Industry experts optimistic, but driver shortage may cloud outlook

If 2020 proved anything it's that forecasting the future is far from an exact science. After all, who predicted a worldwide pandemic and the resulting economic recession? Still, business planners need some idea of what's coming. Three industry experts offered their thoughts.

- **FTR Intelligence's** Vice President of Trucking Avery Vise is cautiously optimistic. "The next year, by and large, looks to be pretty good, but there are some risks," he said.
- **U.S. Xpress** CEO and President Eric Fuller thinks the industry will continue progress made since the recession. "The economy seems fairly robust. I don't see that changing in the near term," he said.
- **Britton Transport** President Jim Stokeland agreed. "I believe it will continue to be strong through mid-year and maybe longer," he stated.
- Capacity was a big issue to start 2020. Freight rates were expected to be stagnant or possibly deteriorate because of excess capacity caused by near-record truck sales in 2019. Indeed, sales of new Class 8 trucks in the first quarter were 24.3% behind the same period of the prior year. As the effects of the pandemic hit, second quarter sales fell 51.2% behind last year's pace.
- Another factor is a dramatic surge in the number of new carriers. While monthly registrations have only reached 4,000 a few times this century, they have been over 5,000 for five consecutive months, exceeding 7,500 in one month. Vise thinks that owner-operators who lost contracts or miles responded by obtaining their own authority and taking advantage of record-high spot rates.
- **Provided that drivers can be found**, contract rates are expected to continue rising. "I still think we'll see a 10%-15% increase in contract rates," he added. "There has been about two years of flat while we've had cost increases."
- A new administration could impact the trucking industry in several ways. "There probably are a few issues on the radar, but the first might be the insurance minimum. It hasn't gone up since the '70s. It will hurt a lot of the smaller carriers," Fuller said.
- **Infrastructure** could be an issue, too. "Under a Biden administration, we're more likely to get a larger, more expensive infrastructure bill," said Fuller. That could be more bad news for capacity.





China's growth projected to pick up to 7.9% **CHINADAILY** COM. CN

- China will continue to lead the world's economic recovery in 2021, fueled by the sustained expansion of industrial production and exports, economists said on Wednesday.
- The comments came after the World Bank updated its projection for China's 2021 economic growth, which is set to accelerate to 7.9 percent, up 1 percentage point from its forecast in June.
- China's faster recovery was based on the release of pent-up demand and a quicker-than-expected resumption of production and exports, the bank said in its January 2021 Global Economic Prospects published on Tuesday.
- Stronger economic performance in China was "an exception" amid the global slowdown, it said, while disruptions due to the COVID-19 pandemic in most other emerging-market and developing countries were more severe than it had previously envisioned. The global economy as a whole is projected to grow by 4 percent this year, after a 4.3 percent decline in 2020, assuming an initial COVID-19 vaccine rollout becomes widespread throughout the year.

Supply Chain & Fulfillment initiatives in household and pet care EDGE

Walmart (US) -Nov 2020
Doubles number of personal shoppers



JD.com (China) - Nov 2020 Launches smart supply chain platform



BY ASCENTIAL Walmart (US) – Nov 2020
Enhances online capabilities with JoyRun



Sainsbury's (UK) – December 2020 Creates 12,000 seasonal roles



PetSmart (US) - September 2020 Offers same-day delivery through DoorDash





SberMarket (Russia) – Nov 2020
To deliver from pet care specialist stores



Aldi (UK) – Nov 2020 Extends Deliveroo partnership



Kroger and Ocado (US) - Nov 2020 Expand partnership to store picking



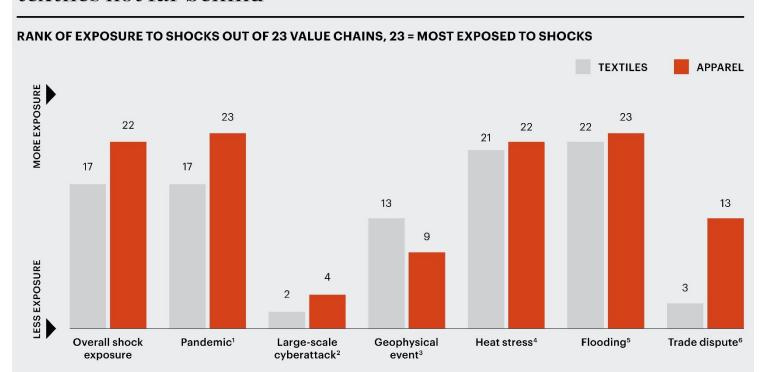
Amazon (US) - Nov 2020 Launches in-garage delivery







Apparel is one of the value chains most exposed to shocks, with textiles not far behind



¹ Based on geographic footprint in areas with high incidence of epidemics and high people inflows. Also considers labour intensity and demand impact. Sources: INFORM; UN Comtrade; UN World Tourism Organization; US BEA; World Input-Output Database (WIOD).

NOTE: OVERALL EXPOSURE AVERAGES THE SIX ASSESSED SHOCKS, UNWEIGHTED BY RELATIVE SEVERITY. CHART CONSIDERS EXPOSURE BUT NOT MITIGATION ACTIONS. DEMAND EFFECTS INCLUDED ONLY FOR PANDEMICS.

SOURCE: "RISK, RESILIENCE AND REBALANCING IN GLOBAL VALUE CHAINS", MCKINSEY GLOBAL INSTITUTE, AUGUST 2020



² Based on knowledge intensity, capital intensity, degree of digitisation, and presence in geographies with high cross-border data flows. Sources: MGI Digitization Index; MGI LaborCube; Telegeography; US BLS.

³ Based on capital intensity and footprint in geographies prone to natural disasters. Sources: INFORM; UN Comtrade; WIOD.

⁴ Based on footprint in geographies prone to heat and humidity, labour intensity, and relative share of outdoor work. Sources: MGI Workability Index; O*Net; UN Comtrade; US BLS.

⁵ Based on footprint in geographies vulnerable to flooding. Sources: UN Comtrade; World Resources Institute.

⁶ Based on trade intensity (exports as a share of gross output) and product complexity, a proxy for substitutability and national security relevance. Sources: Observatory of Economic Complexity; UN Comtrade.



Working Capital In the 2021 Supply Chain Enterprise Entrepreneur

- Even before COVID-19, growth in the global economy had slowed. The crushing impact of the pandemic just accelerated that trend. The aftereffect of this global shock wave and its impact on working capital availability can turn out to be truly cataclysmic for certain industries. Through their global insolvency index, Insurer Euler Hermes estimates record high insolvencies of more than 35 per cent cumulated over a two-year period. Unlike in 2007-2009, all regions and countries are expected to post double-digit increases.
- A VUCA is what one needs to be thinking of for 2021 and onwards, unless we see some sort of normalcy across trade and supply chain lines. Additionally, payments and rising inventories have been highlighted among large corporates, working capital requirements (WCR) will increase by five days-plus to 74 days in or \$8 trillion of additional financing needs worldwide. Suppliers will inadvertently continue to play the role of a financier to many of their clients, in such volatile times although the innovative world of supply chain finance continues to grow and bridge the gap. Supply chain experts are predicting changes to the payables landscape in the short to mid term.
- Since the outbreak of COVID-19, we have witnessed unprecedented steps from regulators to take swift actions to encourage (and sometimes push) banks to provide much-needed fiscal relief or a liquidity lifeline to the private sector. Banks have been steadily beefing up the provisions in the light of the pandemic and the subsequent rise in defaults. Debt servicing becomes the next big question for corporations of all sizes.
- Traditional underwriting methods will not enable the scale expected in 2021 coupled with keeping the industry well oiled, any strain or lack lubrication could throw the system off gear. The supply chain industry continues to evolve at an increased pace to support client needs with the systematic use of credit solutions in the finance industry.
- Innovative models of extending working capital needs are going to be the need of the hour, both to keep it well-oiled and also to ensure that financial institutions don't suffer an income compression by the very reason of them not lending enough and that too judiciously.
- Ultimately, it's vital that business looks to leverage every tool available to convert sales into cash as swiftly as possible or face a growing potential for default.
- The longer that cash is uncollected, it is effectively funding another business rather than the creditors.





Amazon buys first aircraft for fast-growing cargo fleet American Shipper

- Online retail and logistics giant Amazon this week publicly confirmed its first-ever purchase of aircraft for its inhouse cargo airline after previously building a fleet based on leased aircraft and outsourced freight transportation.
 Owning aircraft gives Amazon Air an additional level of control over its network, designed to meet service commitments for ultra-fast package delivery.
- Amazon said it has purchased 11 Boeing 767-300 aircraft seven from Delta Air Lines and four from Canadian carrier WestJet. The planes will be operated by third-party carriers.
- Amazon is taking advantage of the glut in relatively new used aircraft caused by airlines shrinking their operations to compensate for huge drops in travel business and financial losses due to the coronavirus pandemic. Last summer, Delta retired seven Boeing 767-300s and in its October earnings report announced plans to accelerate the retirement of its remaining 49 B767s, part of a larger strategy to simplify and modernize its fleet.
- WestJet removed its four 767 aircraft from service last year. The planes were used to set up the airline's widebody service to Europe, which has since transitioned to Boeing 787 aircraft, spokeswoman Morgan Bell said.
- Amazon said the four midsize jets from WestJet are undergoing conversion to freighter configuration and will join Amazon Air's network this year. The ex-Delta aircraft will enter service with Amazon in 2022.
- Amazon is scheduled to open a large West Coast hub in San Bernardino, California, early this year and its \$1.5 billion national hub at Cincinnati/Northern Kentucky International Airport this summer.
- Amazon doesn't have an extensive ground network like FedEx and UPS, so it uses its aircraft to connect city pairs the same way a trucking company would and operates a limited hub-and-spoke air network. But the company's logistics strategy is constantly evolving and could emulate that of FedEx and UPS over time.

Amazon, American Airlines execs to advise FAA on drone regulation American Shipper

The U.S. DOT on Tuesday named a dozen new members to its Drone Advisory Committee, including officials from Amazon and American Airlines. The private-sector panel meets regularly to advise the Federal Aviation Administration on how to safely integrate unmanned aircraft systems (UAS) into the national airspace alongside with traditional aircraft.





Supply chain trends In food & beverage Ryder

- Through these macro and micro trends, the world is moving from global-sourcing to near-sourcing, delayed to instantaneous, and manual to automated. This faster pace of commerce and the disruptions force companies to rethink how we do business.
- Consumers across the globe are driving micro trends like digitalization, acceleration of delivery, and the adoption of new software. Moreover, consumers are more savvy, less patient, and have near infinite options available to them. Keeping up with their changing preferences has become a struggle for companies as they try to meet the age-old mantra: The customer is king. Same-day delivery of goods is setting a new standard as well as raising the level of consumer expectation. Consumers want more individualization and customization of products, through personalization with engraving and monograming, driving strong growth and constant changes of SKU portfolios.
 - 1. Sourcing Closer to You and Your Customers Supply chains recognize the fragility of a single global region and can create resiliency in their operation now, and for the future. Ultimately, companies want flexibility to react to different demands of the end consumer, and nearshoring is one strategy that lets them.
 - 2. Omni-channel Capabilities As COVID-19 forced many businesses to close, operations not having an e-commerce solution could not take advantage of consumers making the majority of purchases online. Right now, the imperative for e-commerce fulfillment capabilities has never been stronger, an essential strategy to keep sales moving as consumers remain apprehensive about shopping in brick-and-mortar stores.
 - 3. Digital Innovation Smart devices such as smartphones, tablets, watches, personal assistants, and smart appliances have changed how consumers shop. These devices include applications that provide data that enables companies to understand how to better serve consumers, which products are in demand, where inventory needs to be sourced, and uncover innovative product ideas. Furthermore, this digital innovation has led to the advent of the digital supply chain.
 - 4. Building Solutions for Today, Tomorrow, and the Future Having all these pieces in place near-sourcing, an omni-channel fulfillment strategy, technology, data, analytics, automation, and infrastructure your supply chain can overcome disruption, and be adaptive and responsive to the demands of consumers.





New Year's Eve Storm Breaks North Pacific Record

A Pacific storm of record proportions swept a remote stretch of Alaska's Aleutian Islands chain on New Year's Eve, battering a region used heavily by commercial shipping with hurricane-force winds and seas five stories high.

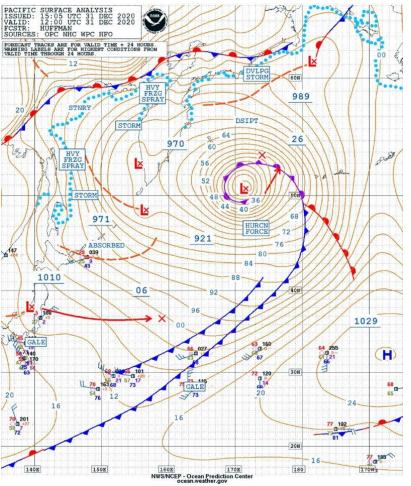
"It's the most intense storm ever recorded in the North Pacific, excluding typhoons," said the National Weather

Service.

The center of what forecasters refer to as "bomb cyclone" was measured at a record-low barometric pressure of 921 millibars, equivalent to the eye of a Category 4 hurricane and the lowest documented over the Aleutians as far back as the 1950s.

The storm unleashed seas as high as 54 feet (16.5 meters) and winds topping 80 miles per hour (120 kph) – a force of Category 1 on the Saffir-Simpson hurricane wind scale – in the western Aleutians, the weather service said.









ZIM Plans IPO on New York Stock Exchange



- Israeli shipping company ZIM Integrated Shipping Services has notified the U.S. Securities and Exchange Commission of its intention for an initial public offering of its ordinary shares on the New York Stock Exchange amid the red hot liner shipping market.
- As of September 30, 2020, ZIM operated a fleet of 70 vessels, more than 98% of which were chartered in. The company operated a global network of 66 weekly lines, calling at 310 ports in more than 80 countries. It also participates in a strategic collaboration with the 2M Alliance comprised of Maersk and MSC Mediterranean Shipping Company. During the same period, ZIM reported net income of \$158 million on \$2.6 billion in revenues.



Vessel space in Asia is so tight that US importers are booking shipments three and four weeks out in order to get their containers on board.



With the massive surge in US imports from Asia in the second half of 2020 projected to continue well into 2021, yearover-year growth is likely to accelerate thanks to comparisons with a weaker first half of 2020.

CMA CGM's new Asia service to give Oakland long-sought first call



CMA CGM will launch a Yantian-to-Oakland premium service, which will be the only first-call inbound service from Asia to date for the Northern California port.

Outlook 2021: US Gulf Coast ports moving forward with major capacity expansions Joc.com



Expecting a return to volume growth, the ports of Houston and New Orleans are dredging and enhancing terminals to allow calls from larger vessels, while Tampa Bay will add capacity through new truck gates and additional gantry cranes, among other projects.





Evergreen Ship Loses 36 Containers Off Japan The Maritime Executive

• The Taiwanese ocean carrier Evergreen Marine announced Saturday that the boxship Ever Liberal lost 36 containers over the side in rough conditions off Japan.

- A photo provided to United News Service by readers appeared to show that one container stack collapsed aft of the deckhouse, with one container still hanging over the side.
- The UK-flagged Ever Liberal departed the port of Busan on December 30, bound for Los Angeles. According to Evergreen, she encountered strong winds and heavy seas in the East China Sea at a position about 20 nm to the southwest of Kyushu, the southernmost of Japan's large islands.



No Happy New Year for Shippers as Rates Stay Sky High

- The final Shanghai Containerized Freight Index (SCFI) for 2020, published on 31 December, recorded a staggering 190% gain on the year. The biggest spot rate increase on its major tradelanes was recorded between Asia and North Europe, which saw the SCFI component leap by almost 300% to finish the year at \$4,091 per teu.
- Asia to Mediterranean rates also saw a big spike, 266%, to take the SCFI element to \$4,286 per teu.
- However, shippers have told The Loadstar that Asia-North Europe carriers are now asking for up to \$16,000 per 40ft to guarantee shipment in the second half of January.
- Meanwhile, container spot rates on the transpacific closed the year down on the previous week, possibly suggesting rates on the route may have peaked. For Asia to the US west coast, the SCFI recorded a fall of \$61, to \$4,018 per 40ft, and for the east coast a decline of \$148 per 40ft, to \$4,729.
- Nevertheless, these rates represent a respective 180% and 86% increase in the SCFI over the 12 months pf 2020.
- Despite the transpacific spot rate falls in the final week of the year, several carriers announced \$1,000 per 40ft GRI's for 1 January, with others increasing their rates from mid-month. Moreover, due to the severe delays to berthing for vessels at Los Angeles and Long Beach reportedly more than 30 ships were awaiting berths in the San Pedro Bay area over Christmas carriers will also be ramping up their congestion surcharges.





Navis Identifies Top Predictions in the Ocean Shipping Industry for 2021 SUPPLYCHAIN

In an unprecedented year for nearly every market, the ocean shipping industry was no exception. The new landscape accelerated by the pandemic, has brought the ocean shipping industry new opportunities for growth in 2021 and has made stakeholders reevaluate current strategies they have had in place for years. It has identified its top predictions and trends that will drive the industry in 2021 and the technology that will be most impactful for meaningful operations in the coming year. Navis' predictions for the cargo supply chain include:

- 1. More investment in cloud-based technologies: According to Navis' customer survey, titled "Understanding Your Terminal Strategy with Cloud-based Technologies," market interest in cloud-based solutions are on the rise in fact, per the survey, interest in these solutions had risen nearly 40% compared to last year (54% in 2019 vs. 93% in 2020), with 79% of respondents having an existing timeline to move or considering moving to the cloud.
- 2. Rise of smart technology for inland and marine logistics: This year has demonstrated the value of enhanced visibility and predictability in operations, and the importance of technology that can collect and analyze data to help stakeholders make better business decisions.
- 3. Automation adoption at terminals will accelerate: Automation has been on the rise in the industry for several years, however terminals are now more rapidly turning to the technology to up-level productivity and keep up with the changing industry landscape in an effort to remain competitive. According to the Navis "Automation 2020: Perceptions, challenges and opportunities for Container Terminal Automation" customer survey, 94% believe it will be important for terminals to automate operations in the next 3-5 years. Additionally, 70% of terminals believe automation could increase productivity by 15% or more, with increased operational safety (82%) and lower overall terminal operation costs (73%) as its biggest benefits, proving the importance of incorporating it in the overall business plan.
- 4. Increase focus on sustainable operations: With the bigger focus on the supply chain, companies have been forced to reevaluate logistics strategies to ensure assets are used to deliver value for the business and the environment. In the first half of 2020, decreased traffic at congested ports and terminals around the world had a positive impact on the air quality and environment, reinforcing the longer-term sustainability trend we were already seeing.





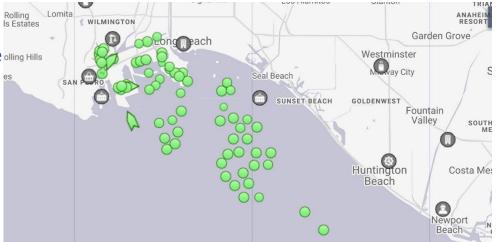
South Korea's exports post sharpest expansion in 26 months MARKET MARKET

- South Korea's exports expanded at their fastest pace in 26 months in December, on robust chip demand and improved global demand, providing additional signals that the recovery is on track despite resurgences in the novel coronavirus.
- Exports in the final month of 2020 grew 12.6% year-on-year, the sharpest growth since October 2018 when it grew 22.5%, government data showed on Friday.
- The rate of growth was sharply higher than forecast as analysts had expected a 5.6% jump from a year earlier and was much faster than a 4.1% growth in November.
- "Semiconductor exports were exceptionally strong, with 11 of 15 major export items posting growth ... sales of IT products boosted the overall growth," a trade ministry official told Reuters.
- South Korea's monthly trade data, the first to be released among major exporting economies, is considered a bellwether for global trade.

Container network already maxed out American Shipper

• "All the ships that can sail are out at sea and all the containers that can hold cargo are in use," said Vincent Clerc, head of ocean transport at Maersk, at a briefing on Rolling Sestates Wilmington Wilmington Garden Grove

- "We hadn't foreseen just how COVID would change consumer patterns," Clerc said, explaining the surprise container boom. "People use a much, much higher portion of their wages on goods [versus services]," Clerc added.
- A map of ships in San Pedro Bay reveals the extent of the logjam caused by the import surge. Over 30 container ships were at anchorage Thursday, awaiting berths in the ports of LA/LB.

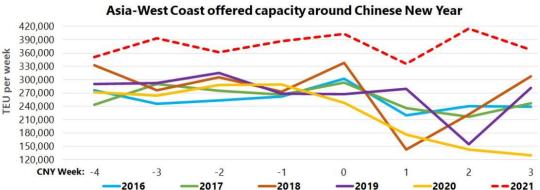






Liners highly unlikely to slash service for Chinese New Year American Shipper

Every year, the global supply chain grapples with a major disruptive event: Chinese New Year. Volumes at sea plunge as Chinese factories shut down. Carriers temporarily "blank" (cancel) sailings due to lack of outbound boxes. Importers pull cargoes forward before the holiday to ensure they have enough inventory.



- CNY falls on a different date every year. Its

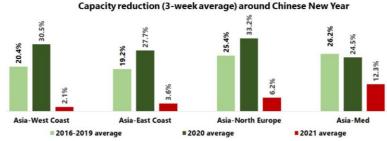
 —2016 —2017 —2018 —2019 —2020

 impacts on world trade are so substantial that analysts often plot year-on-year comparisons in relation to CNY timing, not the calendar. For the second year in a row, the CNY pattern looks like it will break the mold.
- The Wuhan outbreak extended the normal CNY period of blank sailings in 2020 by several weeks. The Chinese COVID outbreak essentially lengthened the traditional vacation break. This doubled the usual CNY holiday effect.
- The mirror-opposite scenario is taking shape in 2021. Chinese factory workers will still take their vacations, but carriers appear almost certain to blank drastically fewer sailings than usual.
- China is holding its CNY celebrations from Feb. 12-26 this year. As of last Friday, carriers had announced just five blank sailings on the trans-Pacific and seven on the Asia-Europe route for the CNY period.
- Last year, there were 73 CNY blank sailings on those routes (excluding blanking due to the COVID outbreak). In

2019, there were 67.

 Carriers can still blank more sailings, but they would need to do so quickly. For relative capacity reductions of previous years [to] be reached, carriers would need to blank 37-41 sailings on Asia-West Coast and 12-15 sailings on Asia-East Coast.

• It is clear carriers are scheduled to blank far less than prior years.







Beverages, CBD & C-Stores

COVID's Foodservice Impact Convenience Sure

The convenience store industry has spent much of 2020 playing defense against the coronavirus pandemic, rapidly changing in-store protocols to meet consumers' heightened safety and cleanliness expectations, and rolling out new services like delivery, curbside pickup and mobile/online ordering to fulfill the demand for contactless shopping options.







Healthcare Update

UK virus strain in 3 states; South Africa variant deemed 'even more of a problem': 5 things to know HOSPITAL REVIEW The fast-spreading COVID-19 variant originating in the U.K. has been detected in 33 countries, while South Africa has reported a new, potentially more concerning variant, reports The New York Times and WNBC. Five things to know:

- The U.K. strain has been discovered in Colorado, California and Florida, all in patients who haven't reported any travel history, reports the NYT. The COVID-19 variant B.1.1.7 was first detected in the U.S. at the end of December in a Colorado man.
- Experts believe the U.K. variant is spread more easily, but don't think the strain is more deadly, according to WNBC.
- South Africa is reporting a surge of coronavirus infections and deaths, fueled by a new variant. Officials announced plans Jan. 3 to target 67 percent of the nation with vaccines to achieve broad immunity, though some have criticized the government, claiming it only has enough vaccines to cover 10 percent of the population.
- The coronavirus variant identified in South Africa is "even more of a problem than the U.K. new variant," Matt Hancock, Britain's health secretary, told the BBC, according to WNBC. The U.K. has banned visitors from SA.
- Several experts have said they believe vaccines will be effective against the new strains, but Dr. John Bell, Regius Professor of Medicine at Oxford University in the U.K., voiced concerns regarding the variant in South Africa. "They're not a single mutation," he told Times Radio Jan. 3. "The mutations associated with the South African form are really pretty substantial changes in the structure of the [virus's spike] protein."

In Los Angeles and Beyond, Oxygen Is the Latest Covid Bottleneck KHN



Oxygen, which makes up 21% of the Earth's air, isn't running short. But covid damages the lungs, and the crush of patients in hot spots such as Los Angeles, the Navajo Nation, El Paso, Texas, and in New York last spring have needed high concentrations of it. That has stressed the infrastructure for delivering the gas to hospitals and their patients.





Healthcare Update

High-Profile Healthcare Venture Haven Shuts Down; Could Signal Shift For JPMorgan, Amazon PYMTS.com

- In the end, there was no haven for Haven. As reported on Monday (Jan. 4), the healthcare startup created in 2018 through joint efforts between Amazon, J.P. Morgan Chase and Berkshire Hathaway will be shuttered and dissolved next month.
- The three firms said they would collaborate "informally" on healthcare efforts. Haven's mission had been to leverage technology to help stakeholders spanning insurance and pharmacy firms, as well as providers steer individuals to affordable, high-quality healthcare, a topic obviously top of mind in the midst of a pandemic and with economic headwinds firmly in place.
- It's been common knowledge that all of the companies had been, and still are, pursuing their own healthcare-focused efforts, done organically and via acquisition and where testing grounds have been tied to their own employees and operations. In other words, this was an effort by large-scale employers to make healthcare a bit less daunting for workforces and, if it had been successful, it would be logical to expect that the findings and pilots would have been adopted by a broad swath of other companies.
- As for the deal-making: J.P. Morgan, for example, bought payments firm InstaMed in 2019, in a half-billion-dollar deal to help tackle the inefficiencies inherent in a multi-trillion-dollar industry that still relies on paper checks, paper statements and no shortage of coding and middlemen in the mix. Separately, Amazon said last month that its own digital pharmacy "storefront" would give users significant discounts on prescriptions bought at tens of thousands of participating drugstores an initiative that comes after the eCommerce juggernaut bought PillPack.
- Thus far, details on just why Haven is disbanding, where pain points proved insurmountable, or where there might have been disagreements (if any) are scarce. In this case, at least, the takeaway may simply be that the whole was not more than the sum of its parts.
- For Amazon, in particular, the bid to gain an expanding footprint in healthcare may be especially urgent, in light of recent steps rivals have been taking in the space. Walmart has been building retail-focused healthcare supercenters to offer walk-in medical care across primary care and urgent care settings, with relatively lower prices than would be seen in more traditional healthcare settings.





Healthcare Update

MIT Technology Review: Covid-19 Immunity Likely Lasts For Years | MII | Iechnology Review Review | Review | Iechnology | I



Covid-19 patients who recovered from the disease still have robust immunity from the coronavirus eight months after infection, according to a new study. The result is an encouraging sign that the authors interpret to mean immunity to the virus probably lasts for many years, and it should alleviate fears that the covid-19 vaccine would require repeated booster shots to protect against the disease and finally get the pandemic under control. "There was a lot of concern originally that this virus might not induce much memory," says Shane Crotty, a researcher at the La Jolla Institute for Immunology in California and a coauthor of the new paper. "Instead, the immune memory looks quite good."

Israel's Covid Vaccine Rollout Is The Fastest In The World KHN



While the U.S., U.K. and Europe attempt to ramp up their own Covid vaccination drives, one country is outpacing them all: Israel. ... It has raced ahead of other countries that have also started their vaccination rollouts. To date, and with a new lockdown in place amid a surge in coronavirus cases, around 1.59 million people in Israel (of a population of 8.6 million) have received their first vaccine shot, according to Our World in Data

Cancer cells hibernate like "bears in winter" to survive chemotherapy **NEW ATLAS**

- Even after the most successful cancer treatment, doctors are reticent to use the word "cured". Different types of cancers have different rates of recurrence and many cancers can sit quietly, dormant for years, before reappearing and causing a relapse.
- A compelling new study, published in the journal Cell, is suggesting all cancer cells may have the capacity to enter states of dormancy as a survival mechanism to avoid destruction from chemotherapy. And the mechanism these cancer cells deploy notably resembles a process utilized by hibernating animals.
- A key characteristic of embryonic diapause is a cellular process called autophagy. The new research discovered cancer cells utilize this same autophagy mechanism to enter a dormant state and evade destruction from chemotherapy. When autophagy was inhibited, the researchers found the cancer cells were unable to enter hibernation and were effectively killed by chemotherapy.
- The study calls these hibernating cancer cells "drug-tolerant persisters" (DTPs).





Cybersecurity Update

Top 3 ways to identify a vulnerable vendor SecureLink

To protect against cyberthreats and data breaches, IT organizations deploy a range of protocols and security solutions for their internal users. But given that 61% of data breaches in the U.S. are attributed to a vendor or third party, it's clear that IT departments need to focus their security on vendor remote access. Even if you don't have visibility into third-party networks, here are some red flags to help you determine if a vendor may be vulnerable or compromised.

- Have they been hacked before? The best indicator of a future breach could be a past breach. Companies who have had a breach before are more likely to experience a breach again. Red flags to look for include:
 - i. They either deny or get defensive if a past hack is brought up.
 - ii. They're unable to provide documentation on how they fixed the issue that led to the first breach.
 - iii. They don't have a plan to prevent similar attacks from happening in the future.
- O Do you see unusual vendor activity on your network? Audit your vendor's activity. Keep granular logs to flag irregular behavior that might indicate a hacker attempting to launch ransomware or another attack. Look for:
 - i. Unusual login hours for vendors
 - ii. Odd source of IP addresses or domains
 - iii. Unusual or unapproved server access
 - iv. Large file transfers
- O Do you have general concerns about the vendor's security practices (or lack thereof)? Some of the top indicators that your vendor could be compromised now or in the future are:
 - i. The vendor's security practices are more relaxed than your internal policies.
 - ii. The number of users and/or sessions is higher than in previous days/weeks/months.
 - iii. Your vendor asks for a shared credential and cannot demonstrate good privileged access management practices for handling the credentials, such as vaulting and obfuscation.
 - iv. The vendor demands you use a remote access tool you don't feel comfortable with and doesn't align with.
 - v. They use other service providers who might be insecure and cannot provide documentation like Business Associate Agreements (BAAs) or Data Processing Agreements (DPAs).





Alternative Energy Update

BNSF, Wabtec begin testing battery-electric locomotive Progressive

- BNSF and Wabtec Corp yesterday announced they've begun testing a battery-electric locomotive in revenue service between Barstow and Stockton, California.
- The test is part of the companies' efforts to explore the future of battery-electric locomotives. As BNSF seeks ways to further reduce its environmental impact, the advancement of battery technology offers some possible solutions, BNSF officials said in a press release.

Forget the Concorde Luxurylaunches®

- This Hypersonic spaceplane powered by the revolutionary SABRE engine will take you from London to New York in just 60 minutes
- Ever since the Concorde retired in 2004, the aviation industry and enthusiasts have been eagerly awaiting the return of supersonic commercial jets. Several companies are working hard to make this happen, which include Virgin Galactic. It revealed the first set of design renderings of a commercial jet that could fly up to speeds over Mach 3 (about 2300mph). However, the next generation of planes might make the quantum leap towards hypersonic flight that will be substantially faster than supersonic jets and flies at the edge of space. While the Concorde took less than three hours to travel from London to New York, the hypersonic planes will be able to complete this journey in 60 minutes or less. A British aerospace company named Reaction Engines is developing a special engine that will turn hypersonic aviation





Alternative Energy Update

Innovative e-bike designs that are sure to shape the future of the automotive industry! Y Electronic bikes have taken the automobile industry by storm! Living a more sustainable and conscious life has become imperative, especially with COVID-19 turning the world as we know it topsy-turvy. Curbing fuel consumption, and reducing automotive emissions has become critical, and e-bikes are an environment-friendly option, encouraging these practices. With the e-bike craze gaining momentum, designers have been coming up with innovative and super cool e-bike designs, and we've collected a few for you!









The Jobs of Tomorrow

The World Economic Forum's **Future of Jobs Report 2020** comes at a crucial juncture for the world of work. The report, now in its third edition, maps the jobs and skills of the future, tracking the pace of change based on surveys of business leaders and human resource strategists from around the world. Here are the five things you need to know from our findings.

- 1. The workforce is automating faster than expected, displacing 85 million jobs in the next 5 years and in tandem with the COVID-19 recession, is creating a "double-disruption" scenario for workers. Companies' adoption of technology will transform tasks, jobs, and skills by 2025. Some 43% of businesses surveyed indicate that they are set to reduce their workforce because of technology integration, 41% plan to expand their use of contractors for task-specialized work, and 34% plan to expand their workforce as a result of technology integration.
- 2. The robot revolution will create 97 million new jobs. As the economy and job markets evolve, new roles will emerge across the care economy in technology fields (such as artificial intelligence—AI) and in content creation careers (such as social media management and content writing).
- 3. In 2025, analytical thinking, creativity, and flexibility will be among the most sought-after skills. Employers see critical thinking, analysis, and problem solving as growing in importance in the coming years, although these have consistently been cited in previous editions of the survey.
- 4. The most competitive businesses will focus on upgrading their workers' skills. For workers set to remain in their roles over the next five years, nearly half will need retraining for their core skills. The survey also found that the public sector needs to provide stronger support for reskilling and upskilling of at-risk or displaced workers. Currently, only 21% of businesses report being able to make use of public funds to support their employees through retraining initiatives.
- 5. Remote work is here to stay. Some 84% of employers are set to rapidly digitalize work processes, including a significant expansion of remote working. Employers say there is the potential to move 44% of their workforce to operate remotely. However, 78% of business leaders expect some negative impact on worker productivity, and many businesses are taking steps to help their employees adapt.





How COVID-19 Impacted Economies

The COVID-19 pandemic has disrupted business activities worldwide. However, it has affected developed and emerging economies differently.

Here are the top five positive and negative impacts on economies, according to a World Economic Forum survey of business leaders.

FOR BETTER OR WORSE AND HOW COVID-19 IMPACTED ECONOMIES

