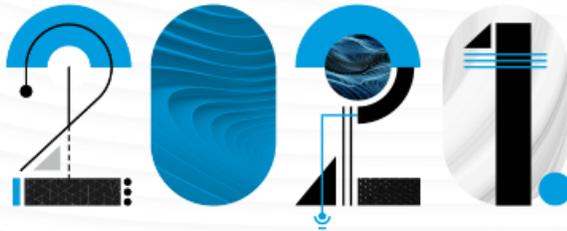


[Subscribe](#)[Past Issues](#)[Translate](#) ▼

Newsletter • Issue 155



Annual FTI Letter: 2020 In Review

NOTE: This message will definitely get truncated by your email application.

[View this email in your browser.](#)

In 2009, I began creating an end-of-year inventory of signals, outliers and trends. It was my way of methodically reflecting and getting myself organized for the coming year. It is a practice I've refined and honed. Far from being a nostalgic look back at what was or might have been, or a list of predictions that might not be any more accurate than the local weather forecast, my annual inventory is something entirely different: a way to think about the evolution of technology, science and humanity as part of a long continuum.

This isn't a typical year, because the collision of several major events suddenly reset humanity's course for the future. Covid-19 accelerated forces of disruption and continues to ripple through every facet of society, from our boardrooms to our bedrooms. We were forced to reckon with data and cybersecurity

challenges unlike any before in modern history. The [GMAFIA](#) tech companies faced legal action at home, in Europe, Australia and the U.K., while Beijing cracked down on China's tech giants, who now wield tremendous economic power.

Tracking these and other signals is important, because they shape the world to come. Now is not the time to throw up your hands, say it's all too overwhelming, and wait for a "new normal" to arrive. Our new normal is already here: it's continued disruption. You should not sit passively and allow change to happen *at you*, without any of your direct involvement.

Failing to plan is planning to fail. It's time to sort out the signals and create your organization's vision, make strategic decisions, prioritize your technology investments and create the tactical actions that will carry you forward.

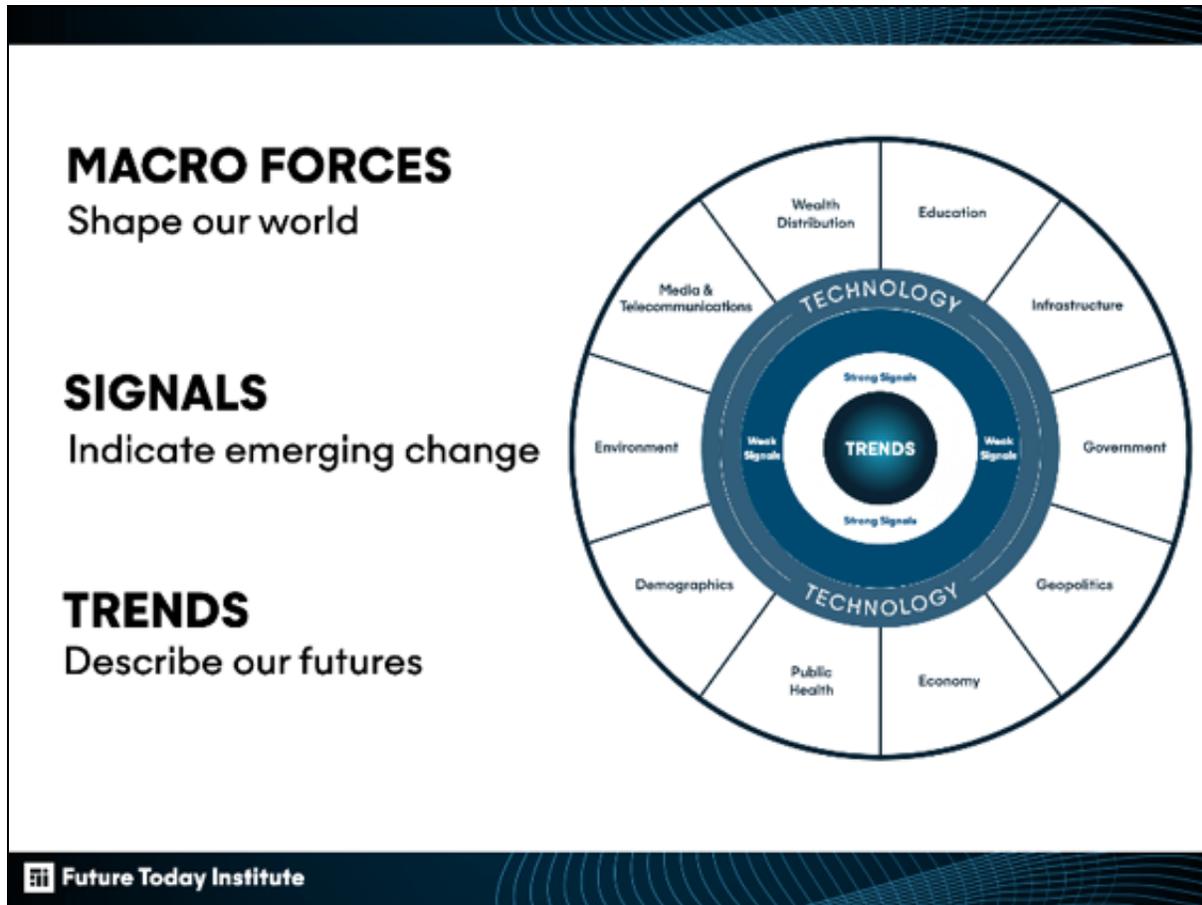
What follows is a big end-of-year inventory of tech, science and tech/science-adjacent signals from 2020. We are sharing them with you, as we do every year, to help catalyze your own thinking for 2021. A warning in advance: *this is a very long email*. We intend for it to be a reference to guide your decision making. Here's a top-level table of contents:

1. Explainer: What Macro Forces, Signals and Trends are and how to use them
2. Tech + Science Contradictions
3. Tech + Science Signals
4. Tech + Science-Adjacent Signals
5. Turning Signals Into Strategy (2 frameworks plus explanation)
6. 2021 Tech Trends: Preview
7. FTI: Company Recap for 2020 and Overview for 2021
8. Thanks and Acknowledgements

Keep our annual letter in your inbox or bookmark and [access it online](#) throughout the year. And as always, there is a note of gratitude and thanks at the very end.

– Amy Webb, on behalf of everyone at the Future Today Institute

Explainer: Macro Forces, Signals and Trends



For nearly two decades, the [Future Today Institute](#) has tracked emerging technologies and scientific breakthroughs to model their impact on business strategy and on government. We use a simple but powerful framework to measure macro forces of change, identify weak and strong signals early, and track long-term trends.

Many decisions were made in 2020 — some which were entirely or partially within our control and others that were made on our behalf, or in secret, or areas of the world unknown to us. We cannot know the outcomes immediately, but we do know that every decision made influences the future. It's important to track these decisions and ask: what impact could this decision have on our business strategy? Our strategic investments? How does this signal our vision

of the future? What are the next-order risks and opportunities that might unfold?

2020: Tech + Science Contradictions

Biotech + Regulation: Vaccines were developed at a record-breaking pace by Pfizer, Moderna and others. This created a new timetable for dealing with infectious diseases, and it proved that biotechnologies can be used to bring new drugs to market. Emergency approvals also showed that the regulatory process can be effective — and faster.

Economy: The stock market soared. So did residential real estate in lots of markets around the U.S. Yet tens of millions of Americans are unemployed, and millions more are dealing with food and housing insecurity.

WFH: Tech and professional services companies worked from home – but didn't have data governance or security policies in place before the pandemic began. Companies have been hiring CISOs, but apparently not listening to them. 2020 was a year of record breaches.

Surveillance: We spent much of 2017 - 2019 bemoaning the big tech companies and their roles in widespread digital surveillance. But in 2020, we submitted to pervasive, and sometimes insecure data tracking systems. Companies, universities, k-12 schools and government agencies all instituted surveillance programs in the wake of the pandemic. National digital registries are next.

Digital Transformation: Typically, a company's digital transformation efforts can take 3-5 years. Microsoft CEO Satya Nadella noted that in 2020, Microsoft had seen two years of digital transformation in two months.

2020: Tech + Science Signals

Artificial Intelligence

- The DeepMind team (parent company is Google) [solved](#) a complex problem in biology. Its system, AlphaFold, solved the infamous "[protein folding problem](#)," a breakthrough that will help other researchers understand disease, develop new medicines and create new biotech tools.
- DeepMind's [Agent57](#), a deep reinforcement learning agent, outperformed the human Atari benchmark.
- DeepMind also made interesting advancements in [modeling glassy materials](#). Here's why this is important: the methods used will help researchers make better predictions in what's known as "many-body" interactions, like crowds, traffic and the cosmos. Here's the [open source model on Git](#).
- Researchers from Politecnico di Milano, in Italy, and Carnegie Mellon University, [used concepts from game theory to create an algorithm](#) that acts as an automated mediator in an economic system with multiple self-interested agents, suggesting actions for each to take that will bring the entire system into the best equilibrium. A system like this could be used to manage gig economy workers.
- [CovidScholar](#), a search engine powered by an NLP algorithm of all COVID-19 studies, helped researchers and healthcare workers to sift through information faster.
- [GPT-3 and GPT-as-a-service](#) launched. This new language generation model is the closest yet to representative human language.
- [Directed acyclic graphs](#) (DAGs) could be used to derive causal relationships in data. Understanding causality is essential for many real world uses of A.I., particularly in contexts like medicine and finance. Yet [one of the biggest problems](#) with neural network-based deep learning is that such systems are very good at discovering correlations, but often useless for figuring out causation.
- Well-respected A.I. ethics researcher and computer scientist [Timnit](#)

[Gebru](#) was fired from Google for raising concerns about diversity, inclusion, and some of Google's core search functionalities. Google CEO Sundar Pichai later promised to investigate what happened.

- Semiconductor giant [Nvidia](#) revealed a new way to reduce [the amount of data needed to train a generative adversarial network](#).

If you're tracking AI signals, we recommend following [Khari Johnson](#) at VentureBeat and [Karen Hao](#) at MIT Tech Review.

Amazon Healthcare - In 2020, Amazon...

- [Expanded Amazon Care](#), its telemedicine unit, to a broad range of employees and started pitching the service to outside employers, which could start to upend the current provider/ insurer market.
- Launched a pharmacy unit, [Amazon Pharmacy](#), to offer online prescription fulfillment and home delivery of medications via the Amazon website or mobile app. Prime members get free two-day delivery, of course. There are now 118 million Prime members in the U.S. — if even 10% move their prescriptions away from a traditional drug store retailer (like a CVS, Walgreens, Rite Aid or a local pharmacy), it could cause serious disruption to the \$312 billion pharmacy and drug store retailer market.
- AWS launched [HealthLake](#), a healthcare analytics platform which is both HIPAA-eligible and standardizes unstructured clinical data for the cloud (solving a major pain point for providers). HealthLake will make it easier for Amazon to partner with more healthcare providers and build its health ecosystem.
- Expanded its transcription system, [Amazon Transcribe Medical](#).
- Launched [Care Hub](#), a tool to assist caregivers in senior home centers. One feature: if a senior says "Alexa, call for help" it will automatically ping the caregiver.
- Launched [Halo](#), its [invasive, data-hungry](#) health monitoring fitness tracker. One of the largest electronic medical record companies, [Cerner Corporation](#), said that users of the Halo device will have the option to upload information collected by the device to their physicians' Cerner health record, beginning with the Sharp Health System in San Diego.

Automotive

- Waymo (parent company is Google) [started](#) fully automated driving trials in Phoenix.
- China is [testing](#) self-driving cars, too.
- In fact, [the CCP wants 50% of all cars to be driverless by 2025](#).
- Uber couldn't make its own self-driving business work. So it invested \$400 million in Aurora and [handed the division over to it](#), and will license whatever technology Aurora is able to make.
- Tesla [joined](#) the S&P 500.

Biotech + Synthetic Biology + Health

- Jennifer Doudna and Emmanuelle Charpentier [won the 2020 Nobel Prize in Chemistry](#) for their development of the CRISPR-Cas9 genetic engineering technology, which has revolutionized biomedicine.
- Merck [deployed](#) an FDA-approved Ebola vaccine in Congo.
- Pivot Bio has created the first [biological fertilizer for corn](#).
- In 2019, Calyso oil became the [first product from a genome-edited plant](#) to enter the United States food supply. Genome editing has revolutionized biotechnology, and many products are set to enter the market over the next decade, especially in farming and medicine. [Livestock, poultry, and fish are also being genome edited](#) with 67 examples that include hornless cattle, sheep with longer wool, goats that make milk with human whey protein, virus-resistant pigs, and chickens that lay allergen-free eggs.
- Palaeontologists identified the near-complete skull of a bird in March as the oldest known modern bird fossil. The extinct bird, the "[wonderchicken](#)," is thought to be between 66.8 and 66.7 million years old.
- U.S. hospitals were forced to allow telehealth to serve patients during Covid, which will have lasting effects on their business models.
- Physicians, government officials, and healthcare stakeholders will need to figure out how to sustain telehealth going forward.

Brain-Machine Interfaces

- Neuralink [demonstrated](#) a prototype of its BMI that works in pigs. Ex-employees [worry](#) the timelines are rushed.
- Facebook [revealed new research](#) showing how to detect speech directly from brain activity.

China

- It looks like Huawei and Megvii (one of the best computer vision companies in the world) [built a facial recognition system for the purpose of tracking Uighurs](#), China's ethnic Muslim minority that lives in the far western regions. The companies reportedly built a "Uighur alarm" that would sound if someone from the targeted ethnic group stepped out of a boundary. This is significant: Megvii has built best-in-class recognition and deep learning technologies.
- The Trump administration [designated](#) Huawei and ZTE as national security threats. The administration also targeted TikTok, WeChat, Hikivision and others for their connections to the CCP.
- In November, [Trump signed an EO](#) preventing Americans (individuals, institutions, funds) from investing in 31 Chinese companies and more than 100 subsidiaries, saying those companies aid in China's military operations.
- The CCP, concerned that China's tech giants are gaining too much independent power, has started taking a hard line, even [launching](#) anti-monopoly investigations against Alibaba. (The irony!)
- The UK [banned](#) Huawei from providing 5G network equipment and is forcing UK mobile providers to strip out any mobile components by 2027.
- E-commerce is growing exponentially because of Covid lockdowns. Alibaba had another [record-breaking Singles Day](#) — \$115 billion in sales in just 24 hours.
- China is [building](#) a nationwide 5G network and expects it to be completed by 2025. It has installed 700,000 5G base stations and connected >180 million devices. It will need to build more than 10 million

5G base stations to provide complete coverage.

- Tencent reportedly [surveilled](#) foreign users of WeChat to help censorship at home.
- A city-scale AI platform is launching in China. Like an internet of things, except it's [an entire city full of interconnected, interoperable things](#).
- [China could overtake the U.S.](#) as the world's biggest economy by 2028.
- Pro-democratic forces and CCP-backed authoritarianism clashed in 2020, resulting in an [effective end](#) to democracy in Hong Kong. This has drastic implications for social media, tech companies and foreign tech companies operating out of HK, not to mention human rights.
- China's massive Belt and Road Initiative is [moving steadily into Africa](#), influencing the future of telecommunications there.

China - TikTok

- TikTok, owned by Chinese company ByteDance, [had](#) 850 million MAUs in 2020. It should reach >1 billion MAUs sometime next year.
- TikTok is [now #2](#) for global user spend (as of Q3 2020).
- The U.S. military [banned](#) TikTok, the Senate called it a national security threat, and both Dems and Republicans [issued warnings](#) to staffers admonishing them not to use the app.
- Teens mobilized on TikTok to pull an epic [prank](#) on the Trump campaign during the presidential race, which resulted in a lot of K-pop videos and and not a lot of rally attendees.

Chipsets

- Nvidia [announced](#) its plan to acquire British chipmaker Arm for \$40 billion, shocking the semiconductor industry. Arm had been a staunchly neutral provider of chip designs. The deal is facing scrutiny already and may not go through.

Covid - Digital Trackers

- Several companies and technology groups have begun developing

smartphone apps or systems for individuals to upload details of their Covid-19 tests and vaccinations, creating digital credentials that could be shown in order to enter concert venues, stadiums, movie theaters, offices, or even countries.

- Apple and Google [developed](#) a Bluetooth-based contact tracing system.
- IBM launched its own Digital Health Pass, allowing companies to track employees (temperature checks, vaccination records, travel).
- A [Covid-19 Credentials Initiative](#) has been established to create a Covid Passport — which could be required to travel in the future.

Climate

- The Arctic's ozone hole [closed](#).
- The Western U.S. endured a [megadrought](#). From Oregon down to Southern California and east to New Mexico, it was the worst drought to hit the region in an estimated 1,200 years.
- Atmospheric [CO2 hit a record in 2020](#) — the highest level in 15 million years.
- Raging wildfires broke records in the Amazon, big areas of Australia and in the Western U.S. The [August Complex fire](#) in California left more than 1 million acres barren. Massive blazes pump more greenhouse gases into the atmosphere, which means more energy, and [more warming](#).
- The Atlantic hurricane season [seemed to have no end](#). There were hurricanes late in November — there were a record 30 named storms in the past year.
- [New data](#) revealed that the world could hit a worrying climate change milestone by 2024 — The average global temperature in 2020 is set to be about 1.2 °C above the pre-industrial (1850-1900) level. There is at least a one in five chance of it temporarily exceeding 1.5 °C by 2024.
- There were [two critical dam failures in Michigan](#) due to unprecedented extreme rain several days in a row. This led to terrible flooding, the evacuation of towns, and compromised local critical infrastructure.

Cybersecurity

- The SolarWinds [breach](#) was a massive blow to companies and government agencies. It represented a long-undetected intrusion into computer systems, which many think was orchestrated by Russian government hackers.
- The attack was sophisticated and hard to undo, and it [compromised](#) our critical infrastructure, among other things. U.S. agencies impacted include: Treasury, Department of Commerce, National Institutes of Health, Cybersecurity and Infrastructure Agency, Department of Homeland Security, State. Outside groups include NGOs, think tanks, businesses, and IT companies from the U.S., Canada, Mexico, Belgium, Spain, the U.K., U.A.E., Israel and elsewhere.
- The attackers compromised a server used to build updates for the SolarWinds Orion Platform — they [used](#) that server to insert backdoor malware into products used by Microsoft and another company called FireEye.
- [Microsoft did an impressive job](#) of quickly and decisively [dealing](#) with the attack, mobilizing to remove digital certificates, removing the domains used by the malware for command and control, updating the anti-malware capabilities built into Windows, and automatically quarantining systems with malware detected.
- FireEye, which was also [hacked](#) by what appears to be a country rather than individual actors, saw its offensive toolkit breached.
- There were [many, many](#) Covid-related data breaches and ransomware attacks in 2020. Hospitals, schools, city halls and businesses had security gaps, which led to easy access for hackers. Confidential information, passwords, addresses, records and more were stolen. In other cases, hospital records, city websites, and school email systems were penetrated and held for ransom.

Cryptocurrencies

- Companies like Microsoft, AT&T, Overstock.com and Twitch have adopted bitcoin as a form of payment. [PayPal](#) announced in October that it had launched a new service for users to buy, hold and sell cryptocurrency on the platform.

- [Bitcoin hit \\$21,000](#) on Dec. 16, a nearly 200% increase year-over-year. Bitcoin previously hit a high value of \$19,873 in 2017.

Gaming

- [Nintendo](#) had another record year, while Google's [Stadia](#) was mostly meh. It now has 100+ titles in its library, support for Chromecast Ultras and supposedly iOS functionality on the way. But it hasn't improved since launch.

IPO Market Insanity

- [65 tech companies went public in 2020](#). Which made a lot of people who lived through the dot-com boom nervous.
- DoorDash, Snowflake and Airbnb each [raised more than \\$3 billion](#) and have market caps between \$55 billion - \$100 billion. Before going public, the companies' valuations grew thanks to investments from private equity firms, sovereign wealth funds, strategic investors and fund managers.
- Startups amassed \$36.5 billion in funding in Q3 alone, up roughly 30% year over year. (CB Insights)
- There have been 223 mega-rounds of \$100 million or more in 2020 alone. (Pitchbook)
- Low interest rates are pushing investors to seek riskier assets.

5G + Space Internet

- In the U.S., Verizon said that it provides 5G to 230 million customers in more than 2,700 cities. T-mobile's low-band 5G service reached 270 million people and 1.4 million square miles. AT&T said that it provides 5G service to 225 million Americans in more than 1,400 cities.
- The iPhone 12 supports 5G.
- SpaceX is [launching](#) a satellite internet service, with global service promised by 2021.
- [OneWeb](#) said that it will put 650 satellites into orbit to create a global

broadband internet by 2022.

- SpaceMobile and Vodafone said they will [provide](#) internet for 1.6 billion people living in equatorial regions by 2023.
- Nokia is [installing](#) a 4G network on the moon.

Quantum

- In August, the Department of Energy awarded \$115 million over five years to the [Quantum Systems Accelerator \(QSA\)](#), a new research center led by Berkeley Lab that brings together dozens of scientists from 15 institutions.

Platforms

- RIP [Quiby](#), which announced it was shutting down just six months after launching.
- Quibi's Turnstyle, which allowed viewers to watch content in video and portrait mode seamlessly, was [pretty neat](#) though.

Section 230 + Antitrust Suits Against Big Tech

- Republican lawmakers actively worked to revise [Section 230, part of a 1996 law](#) that grants sweeping protections to online platforms. If third party users publish content, say on Facebook, the platforms cannot be held liable, even if that content is false, intentionally misleading or incites harm or violence.
- Facebook, Instagram (parent company is FB) and Twitter [faced criticism](#) in 2020 as they navigated misinformation regarding BLM, Covid-19 and the presidential election.
- Marc Zuckerberg and Jack Dorsey want to see Section 230 revised, rather than removed.
- Attorneys general from nearly all 50 states and the District of Columbia filed [antitrust lawsuits](#) against Facebook and/or Google.
- Texas Attorney General Ken Paxton and eight other attorneys general

[filed](#) an antitrust complaint against the company, claiming Google violated the Sherman Act when the company allegedly "monopolized or attempted to monopolize products and services used by advertisers and publishers in online-display advertising."

- New York Attorney General Letitia James, in collaboration with 48 other attorneys general and the Federal Trade Commission [filed](#) a lawsuit against Facebook over antitrust allegations regarding its 2012 and 2014 purchases of Instagram and WhatsApp which the Federal Trade Commission (FTC) vetted at the time.
- A bipartisan coalition of attorneys general from 38 states, led by Colorado Attorney General Phil Weiser [filed](#) a new civil antitrust lawsuit against Google. The lawsuit builds upon a complaint that the Justice Department filed against the tech giant on Oct. 20.

Social

- Facebook created [new rules](#) to label misleading posts from politicians.
- Facebook launched its [oversight board](#).
- Facebook also [promised to make changes to its algorithmic prioritization schema](#) to address conspiracy theories, militia groups and hate speech on the platform. The overhaul, which is known as the WoW Project and is in its early stages, involves re-engineering Facebook's automated moderation systems to get better at detecting and automatically deleting hateful language that is considered "the worst of the worst."

Space

- SpaceX successfully [brought astronauts to the ISS](#).
- Scientists know dark matter must make up about 85% of the total mass of the universe, but they don't yet know what it's made of. Overlooked dark matter signals could be produced, instead, by a process called absorption – and data for these types of interactions could be hiding in previously collected particle detector data, and could also be searched for using existing experiments. [More here](#).

Surveillance

- Some countries are [using surveillance technologies](#) (smart cameras, drones) to enforce home quarantine.
- Bluetooth proximity tracking was used to track people during protests and for contact tracking. But those apps could be over-inclusive. Bluetooth proximity doesn't take into consideration physical walls — two people near each other may actually be physically separated in two rooms.
- National digital identification registries [are being talked about in many countries](#). National digital IDs could collect and store personal information, our physical locations, and our health data.

Tech M&A

- NVIDIA acquired Arm - \$40B and Mellanox for \$6.9B
- AMD acquired Xilinx - \$35B
- Salesforce acquired Slack - \$27.7B
- Uber acquired Postmates - \$2.7B
- Intuit acquired Credit Karma - \$7.1B
- Twilio acquired Segment - \$3.2B

WFH

- Zoom [had a heck of a year! But so did Microsoft](#), whose Teams product became ubiquitous. But not ubiquitously loved.
- Japanese IT giant Fujitsu [announced](#) plans to allow its global employee base to work more flexibly from now on — from home or the office — representing a sea change for one of Japan's biggest and most important companies.

2020: Tech + Science-Adjacent Signals

BLM: In March, Breonna Taylor was shot dead by police in her own home, an event that helped ignite the Black Lives Matter movement. In May, a Minneapolis police officer knelt on the back of George Floyd's neck for several minutes, ultimately killing him. In August, police repeatedly shot Jacob Blake, a 29-year-old young Black man. His children were sitting in the back of his car and watched the whole thing — they had been celebrating a birthday. Citizen media played a vital role, as people shared videos, audio, photos and personal accounts.

Iran: Ukraine International Airlines flight PS752 was shot down by Iranian military forces in January, killing all 176 passengers and crew members on board. It came during escalating tensions between the U.S. and Iran.

Brexit: The U.K. officially Brexited on January 31, 2020, though trade negotiations are ongoing.

Beirut Explosion: An explosion in Beirut killed more than 200 people. 2,750 tons of ammonium nitrate had been stored in a warehouse without proper safety measures for six years.

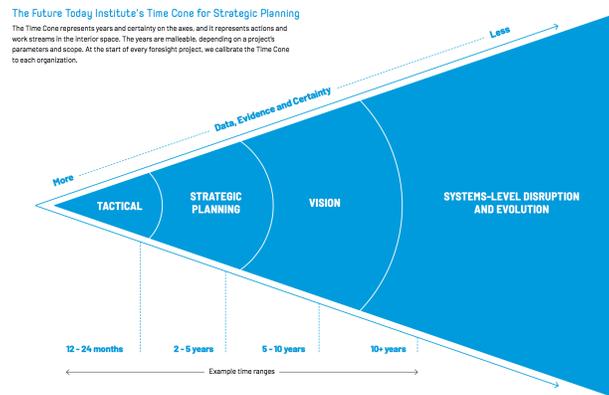
RBG + SCOTUS: Ruth Bader Ginsburg died on September 18, creating a third vacancy on the Supreme Court for the Trump administration. Contrary to her wishes and what has been customary, lawmakers worked swiftly to install a replacement in the weeks just before the presidential election. The new justices could be deciding on cases related to antitrust and big tech in the coming years.

UFOs: The Pentagon declassified videos showing U.S. Navy pilots encountering mysterious flying objects in order to "clear up any misconceptions by the public on whether or not the footage that has been circulating was real or whether or not there is more to the videos." We're not sure what's more mysterious, the possibility of UFOs caught on tape, or the strange way in which these tapes were released.

Turn Signals Into Strategy

We recommend using two of FTI's tools along with our inventory of signals to make strategic decisions and to guide your thinking in 2021.

- The first is called the [Axes of Uncertainty](#), which you can learn more about and [download here](#) [PDF]. You can use the Axes to generate hundreds of micro-scenarios that describe next-order outcomes impacting your business.
- The second framework is FTI's Time Cone, which you can use to map these signals to your strategic positioning. [Read more about it in the Harvard Business Review](#).



2021 Tech Trends: Preview

Our 14th annual Emerging Tech Trends Report [launches at SXSW in March 2021](#), and as of now, we're tracking 400 tech and science trends across 30 different industry sectors.

To make it more digestible, we're publishing our 2021 report as 12 individual volumes arranged by topic. It'll be much easier to read and use. We're also building out new features and capabilities for our searchable trends database.

As a newsletter subscriber, you'll receive a link to download a copy of the reports — *all 12 of them!* — during launch weekend.

FTI: Company Updates + 2021 Preview

- **We launched our NextGEN expert network**, which includes foresight specialists and subject experts in a wide array of fields, including biotech, quantum computing, blockchain, fintech, communications, ITC and network infrastructure, medicine, supply chain automation, new realities (AR, VR, DR, MR), gaming, cybersecurity, and more.
- We welcomed **Senior Foresight Associate and award-winning futurist Leah Zaidi** to our team.
- We started a **collaboration with visual futurists and speculative designers** for a number of upcoming projects.
- We worked with clients in **9 countries** and **51 cities**.
- We **expanded our administrative team** to include a new Human Resources Director, project managers, and a Finance Officer.
- We created a **Speculative Travel Calendar for 2021**, to explore science and tech trends — and scenarios describing their next-order outcomes — visually. [Download a free copy or individual country posters here.](#)

New Foresight Game: We are launching a new foresight game, designed by

Leah Zaidi, Marc Palatucci and Emily Caufield — look for an announcement in February.

An expanded Future Today Institute team: We will be making an announcement in Q1 with more details.

14th Annual Emerging Tech Trends Report Launch: The report launches officially at the SXSW Online Festival in March 2021. We hope you'll join us live! [Tickets for SXSW are now on sale.](#)

Interactive Foresight Platform: We've been working on an interactive foresight platform that houses many of our tools, and we look forward to launching it in the new year!

Trends Database v3: Look for our trends database to come out of beta with a new design and enhanced features in 2021.

Many, many thanks...

At the end of every year, we also like to take a personal inventory of the people and organizations who support and elevate our work at FTI. First and foremost, we are grateful to [Stern Strategy Group](#), and especially Danny Stern and Mel Blake, who are wonderful business partners and have been the primary drivers of FTI's growth these past few years. We are grateful for their strategic guidance, their support, and the wealth of experience and knowledge they share with us.

We are grateful to our Monday Signals Seminar participants, who afford us the ability to think strategically and across a wide array of disciplines. Alexandra Levit, Alexandra Whittington, Brian Alapatt, Cathy Hackl, Ian Forrester, Jake Sotiriadis, Jennifer Garbos, Joana Lenkova, Julia Mossbridge, Leslie Shannon, Lori Melichar, Matt Carmichael, Pam Sydelko, Paul Blacklock, Paul Tarini and Sara Kaufman, it's been an honor to stretch our signals mapping skills with you.

To all of them, and to you our readers, we would like to offer our deepest appreciation. Here's to a joyful present a well-remembered past, and better futures.



You are receiving this message because you downloaded our Emerging Tech Trends Report, because you are a Future Today Institute Client, or because you attended a Future Today Institute event.

Our mailing address is:

The Future Today Institute
120 E. 23rd Street
New York City, NY 10010

[Add us to your address book](#)

Want to change how you receive these emails?

You can [update your preferences](#) or [unsubscribe from this list](#).

This email was sent to <<Email Address>>

[why did I get this?](#) [unsubscribe from this list](#) [update subscription preferences](#)

The Future Today Institute · 120 E. 23rd Street · New York City, NY 10010 · USA