

What thinking happens inside Futureworld...?

t the start of a new year, and a new decade, trends analysts, futurists, and even bankers, like to make predictions for the near future. It's fun to see how outrageous some of these are, and how wrong – or how right – they turn out to be.

At Futureworld, we don't believe that you can predict the future, beyond the obvious certainties of planetary orbits and movements of the stars. The only thing we're certain about, is that the future will be different. Different from what we expect, and different from the past. But it helps to look at disruptive forces and get some clues as to what might happen in the next several years.

Here are some possible futures for the Roaring Twenties, sketched as scenarios for business leaders to consider. Some might be considered eminently plausible, while others might be dismissed as too far-fetched, or just plain crazy!

But ask yourself: What if this future does materialize? What are the risks to my business, company or community? Even more important, what are the opportunities? For business, societies, perhaps civilization itself...



ASSET MANAGER FIRED FOR NOT BUYING BITCOIN

ne of the more obvious and immediate trends is the current hype and volatility surrounding cryptocurrencies in general and Bitcoin in particular. With fortunes being made and lost overnight, where does the future lie? As with any emerging tech sector, blockchain and crypto have their evangelists and detractors, and extreme volatility is not for the faint hearted.

What seems clear is that blockchain should mature into a system that enables real-time settlement of contracts and value transfers, without the need for costly intermediaries and verification processes. There will be far reaching consequences for all who engage in complex transactions, as well as enabling 'trustless' smart contracts, particularly across borders and jurisdictions, and between multiple parties. Like international currency transfers, which in 2021 were still ridiculously cumbersome, inefficient, and costly. A payments startup, Strike,

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aims to change all that, and change it will.

Where does that leave cryptocurrencies, and what is Bitcoin, a digital currency, or a store of value? And how does something that has been likened to a giant game of Candy Crush to earn coins, and which consumes more electricity globally than small nations, deliver real value? Crazy as it may seem, Bitcoin is attracting more and more investment from fund managers and now this is the new paradigm: **no-one ever got fired for buying bitcoin, but you might be if you don't include it in your portfolio!**

TESLA BECOMES THE MOST VALUABLE COMPANY



few years ago, Apple had the biggest market cap of any listed company, approaching USD 1 trillion, but not quite getting there. Then Amazon came racing up the rankings and looked like it might beat Apple to the milestone. By 2021, not including Saudi Aramco, there were four tech companies worth over a trillion dollars, and Apple was still the biggest, at USD 2.2 trillion, followed by Amazon, Microsoft and Alphabet.

Now, in the mid-20s, they have been eclipsed by that outside favourite, Tesla, which shot to stardom in 2020, and just never looked back. Key to Tesla's crazy valuation is the fact that it's no longer about the fundamentals - it's all about expectations for a future that doesn't exist yet. That and FOMO by retail investors who missed the first wave, kept Tesla growing as its flamboyant CEO Elon Musk unveiled innovation after innovation that reinvented not only the automobile business, but the very idea of mobility and energy-efficient urban societies. Now smart cities rely on the Tesla ecosystem of app-enabled vehicles, solar power and storage, and Starlink connected infrastructure, to be the most sought-after locations for talented citizens and valuable corporations alike.

Not only that, but Tesla Tech is the world's leading supplier of Gigafactory systems for the fully automated production of solar cells, battery packs, automotive mechanical and electronic components, rocket engines, and more. **Breaking news: Tesla tops \$5 trillion!**

COMPANIES BAIL OUT GOVERMENTS



t sounds bizarre, but it's true. After the 2008 Global Financial Fiasco, banks and corporations faced bankruptcy, and many failed. Some of the biggest were bailed out by governments, and eventually made it back to solvency.

Now the situation is reversed. The panic of the Covid-19 Pandemic saw governments printing money, easing taxes and handing out grants and loans on an unprecedented scale. Not to mention paying whatever it took to develop and deliver vaccines. By the end of the fifth wave of global infections, it was more than society that was exhausted. Corporate giants, on the other hand, buoyed by stimulus cash and zero interest rates, were flush and healthy. It was also inevitable that smaller companies found it tough to survive and were gobbled up in the most widespread industry consolidation in 70 years.

In four critical areas, energy, healthcare, food and globalization, governments are increasingly turning to multinational corporations to provide services and systems, even finance and infrastructure, to keep their countries from becoming failed states. A prime example was Amazon's initiative to distribute hundreds of millions of vaccines throughout the United States in 2021.

Closing borders and adopting 'our citizens first' approaches might have seemed rational during the lockdowns, but now the efficiency and networks of private enterprise are required to keep states operating. It's become a question of solvency over sovereignty, and companies are bailing out governments.

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FROM FARMS (2) TO FOOD (2) FACTORIES (2)

n recent years, digital transformation has disrupted every industry, but one of the most visible is agriculture. Continued advances in microbiology and biotech have made it commercially viable to offer plant-based and lab-grown meat products, removing the need to slaughter animals. This trend is expected to grow exponentially beyond 2030.

In addition, the use of advanced robotics, sensors, big data and AI-powered algorithms have advanced the science of large-scale farming to the point where every square meter can be optimized for yield and sustainability.

Drones and satellites scan the farmland with multi-spectral cameras, detecting soil deficiencies and other requirements. Smart systems assimilate all the data from these and vehicle-based sensors and produce a plan for robotic tractors and planters to execute. But possibly the most innovative trend in food production is the move to indoor farming, where greens and veggies are produced right next door to the restaurants and supermarkets where they are required.

Grown in basements or shipping containers, using both soil and hydroponics, the produce is always farm fresh, right in the city. Sterile growing conditions, optimum lighting and automated nutrient delivery ensure a perfect crop, while also minimizing waste and obviating the need for pollutant producing transport.

The pandemic years highlighted the benefits of healthy outdoor farm life, but also the need to prevent zoonotic transmission of viruses from animals to humans. Indoor farming provides a solution to travel restrictions and quarantine bubbles too. **Now eco-friendly food factories are the modern face of farming.**

THE BIRTH OF THE SECOND ATOMIC AGE

he first atomic age was all about splitting the atom, atomic bombs and nuclear power plants, but we haven't really got to grips with the ability to manipulate matter at the molecular level – true nanotechnology. We've been able to progress fabrication of semiconductors and silicon chips down to the nanometer scale, but we're still relying on advanced lithography rather than assembling circuits and components from molecular building blocks.

We can create carbon nanotubes, graphene, and sophisticated compounds for batteries that are only a few atoms thick, but we're mainly using chemical methods like gas vapour deposition, or organic methods like growing crystals.

Now, thanks to the latest breakthroughs in nanoscience, we are on the brink of being able to use atomic forces to construct molecules from scratch. Using simulations driven by advanced artificial intelligence, we can alter the atomic structure of base molecules to create entirely novel compounds – like CAD for atoms. Think of it as assembling different coloured Lego blocks to create new patterns, with new physical and chemical properties.

Additive Molecular Manufacturing or AMM will disrupt every industry



that relied on traditional manufacturing techniques. From resources and raw materials to process chemicals to electronics and metals manufacturing; once we can repurpose any material by changing its atomic structure and producing new compounds and components, recycling will have a whole new meaning. Logistics, just-in-time supply and even 3D printing will be completely re-invented.

With the ability to build steel structures on the Moon, produce water in the desert, or conjure up solar panels from sand and batteries from mud, AMM will be a truly civilization-altering technology. Food, fuel, robots, houses; whatever we need can be made where it's needed. **Once the Second Atomic Age is in full swing, our world will be unrecognizable. And it's starting now!**



Provocative thinking indeed – but that's what we do at Futureworld.

We challenge and provoke our clients to shatter the business-as-usual mindset, to help them understand the future, so they can design and create new game-changing businesses that will propel their enterprises into that chosen future.

Whether it be a full **Strategy from the Future** program, from concept to commercialization of new businesses, or understanding and implementing **New Ways of Work**, or establishing a **Futurist in Residence** program, or delivering mind-shifting **Keynotes** and workshops, we'll work with you and your executive team to futureproof your business.

But... don't just take our word for it. We've been rewiring executive brains around the world for more than 30 years. See what our clients say at https://www.futureworld.org/what-we-do.

Then we invite you to **contact us** or drop us a line at **info@futureworld.org**. And do **sign up** for **Mindbullets:** News from the Future, delivered to your inbox, for free, every Thursday.





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Synthetic life makes the jump from virtual worlds



Dragon burns down house



Middle Kingdom reigns supreme



Energy glut triggers crash



Long distance lovers hook up in cyberspace



The great Bitcoin heist of 2027



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Computer virus infects humans