Provocative Scenarios 2024









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Introduction

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It's become accepted practice for consultants, analysts, and tech commentators to make predictions each year, about how they see trends developing in the future. Some of these predictions are quite obvious, while others strive to be controversial or even totally outrageous.

Futureworld helps clients understand, design, and create their future through the commercialization of gamechanging new businesses that are future-relevant and have the potential to deliver significant shareholder value. We know you can't predict the future – but you can identify signals and develop scenarios that might play out over the years and decades to come. These scenarios serve to highlight potential pitfalls and challenges for your business of today, as well as identify possible opportunities for your business of tomorrow – which is what we're really interested in!

As you read these 'Provocative Scenarios' think of the potential new opportunities for your business as the future unfolds. Where could you create entirely new businesses that will ensure not only your future success but also create long-term shareholder and stakeholder value?

Without new ideas, we inevitably fall back on established ways of doing things. The only way to escape the trap of old thinking is to develop new thinking – which is why we have tried to create scenarios that will provoke thought, debate, and challenge norms.

We hope you enjoy this edition of Futureworld's Provocative Scenarios compiled by our global network of futurists, advisors, and insights leaders. We're confident you will discover new perspectives on the future, and what might be possible.

Are you ready for a new future – a good future, created through positive intent rather than by pure chance?





Resurrecting Argentina

The Milei Revolution and the battle for the future

In 2023, Argentina found itself at a crossroads. Decades of economic mismanagement had left the nation grappling with soaring inflation, rampant unemployment, and widespread disillusionment. Enter Javier Milei, the libertarian firebrand who promised radical change, vowing to reverse Argentina's fortunes with an audacious economic reform agenda grounded in the core tenets of libertarianism: drastic deregulation, privatization of state-owned enterprises, and the establishment of a laissez-faire market economy.

Fast forward to today, a shade over a decade later and Milei is just over halfway through his 3rd term as president, an achievement itself which required a change to the constitution earlier in his presidency. But testament to the radical leader's popularity, this was an amendment met with widespread support from across the country. And the country today, resembles a beacon of hope on the continent.

Amid the tango of economic theories and political ideologies, Argentina did the unthinkable: it danced its way

out of the shadow of stagnation. His tenure, now fondly referred to as "The Decade of Daring," has seen Argentina moving from the brink of economic despair to a phase of prosperity and economic revival.

Principles, sought to dismantle the pervasive grip of collectivism and state intervention that had stifled economic growth and innovation. The philosophy was simple yet profound: trust in the market's ability to self-regulate and in the individual's capacity to innovate. By reducing the bureaucratic red tape that had long entangled businesses, slashing taxes to stimulate entrepreneurship, and privatizing state-owned entities, the government ignited a spark of economic dynamism.

The impact of these reforms was nothing short of remarkable. Inflation, the perennial scourge of Argentina's economy, was brought under control, dipping below 10% for the first time in decades. Unemployment followed suit, as new ventures flourished and foreign investments flowed in, attracted by the more predictable and business-friendly





environment. The revitalized economy spurred job creation in sectors ranging from agriculture to tech startups that flourished in the newly competitive market environment.

Ironically, many of the industries which were so heavily subsidized by Milei's predecessors, have seen the largest increases in real innovation across the AgriTech, energy, and broader technology landscapes. Where bare shelves greeted customers a decade ago, a vibrant e-commerce ecosystem now brings those goods in abundance direct to their homes, at an affordable price.

Yet, Milei's radical reforms did not come without their adversaries. The entrenched political elite and sectors that had long thrived under protectionist policies saw their influence wane. Rumours of a coup began to swirl, a desperate bid to reclaim the status quo. The nation was on edge, as the tension of political instability threatened to undo the progress of his first two terms. Yet, the spirit of the Argentine people, emboldened by a taste of prosperity and freedom, proved to be the ultimate guardian against the forces of regression. The tangible success of Milei's policies gradually quelled dissent, showcasing the power of results over the earlier rhetoric, for which Milei himself was famed.

Countries around the world, observing the stunning turnaround from economic despair to prosperity, have now begun to reevaluate their own policies. The Argentine example has sparked a renaissance of interest in libertarian principles, challenging the prevailing dogma that has favoured heavy state intervention. Nations that had dabbled with various forms of socialism and were disillusioned with the outcomes are starting to look to libertarianism as a viable path to economic vitality and social well-being.

As countries grappling with economic stagnation look to Argentina, the message is clear—sometimes, the boldest reforms offer the most promising path forward. In the end, Argentina's narrative under Milei is not merely about economic indicators and policy shifts but about a country that dared to dance differently. And as the world tunes into this new rhythm, the question isn't who will follow in these footsteps, but who can afford not to?

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So, why does this matter?

In a year where almost half of the world's population will head to the polls, we are acutely aware of the geo-political tensions within and between our homelands.

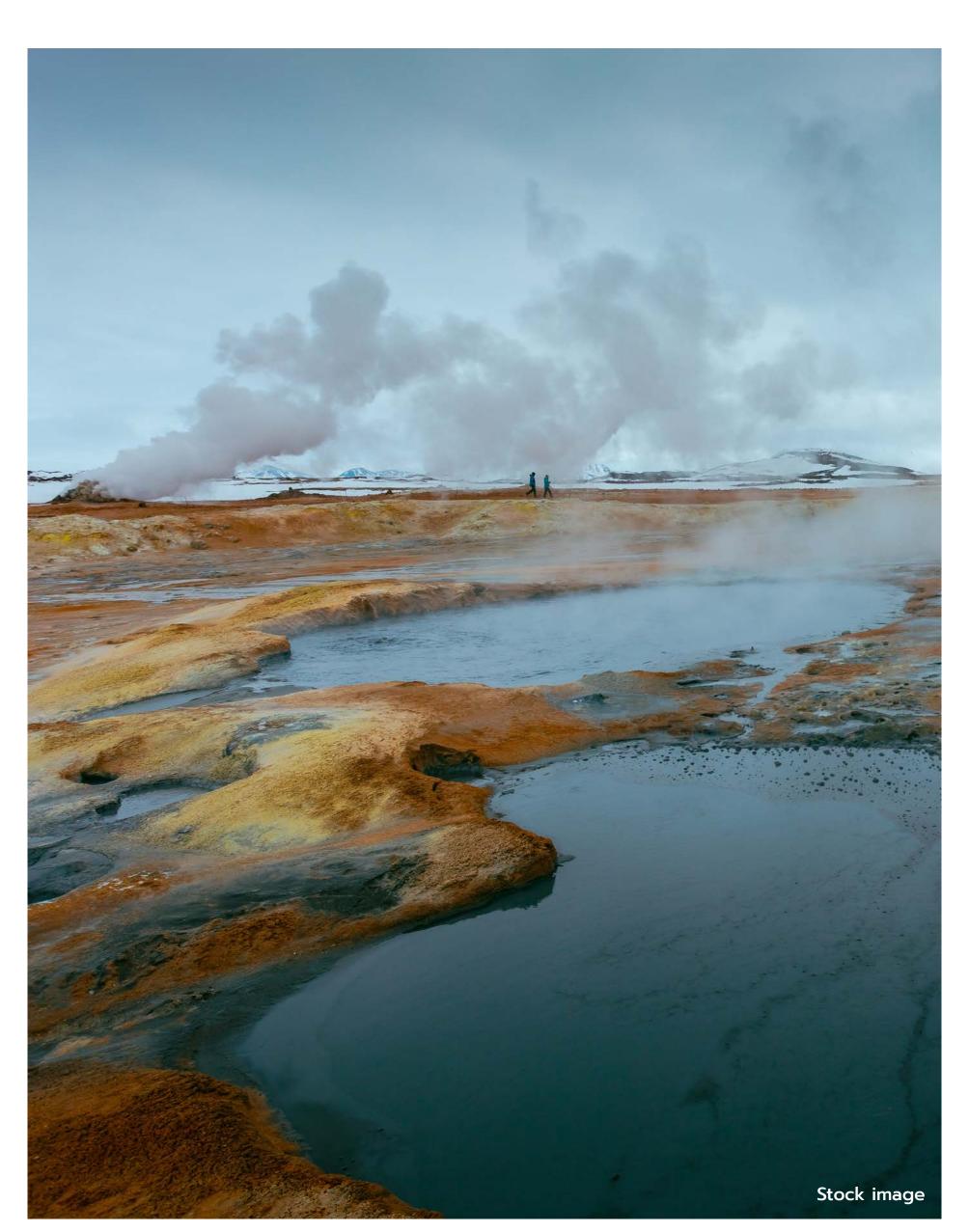
As business leaders, how proactive are we in continuously assessing our political environment and analysing how these macro impacts will shape our organisations and industries? Do you have solid horizon scanning processes?

Do you feel more or less confident in your government's ability to create a nurturing environment for your business to thrive, or would you be better off if they merely stepped out of the way?

Is your business configured to move with speed, driven by a culture of solving for the unexpected, with creativity and an openness to driving new revenue streams that emerge faster than old ones die out?







Unleashing the ultimate source of infinite energy

Heat wells unlock the power beneath our feet

There's a new form of green energy that's unlimited and always on tap, no matter the weather or time of day. There's no need for fuel, like coal or oil, and it doesn't matter if the wind's not blowing, or the sun isn't shining.

The same power that causes earthquakes and volcanoes, and drives the continents apart, is now available to generate baseload electricity, almost anywhere. For hundreds of years, we have been digging wells and drilling boreholes to access water, oil, and gas. Now we drill for heat; endless heat from the earth.

Geothermal energy has long been exploited in Iceland and other places where volcanic activity is close enough to the surface to produce hot springs, geysers, and superheated steam. But not where it was needed most, near big cities and power plants. We couldn't drill deep enough.

Ironically, it was technology developed for the oil industry that solved that particular problem. Hydraulic fracturing and deep-sea oil wells developed ever greater capability to probe the deep levels of rock where

heat was always present. Then came a breakthrough: Plasma drills that can burn their way down for many kilometers.

At a depth of 7-12 km it's hot enough to turn water into high-pressure steam, which drives a conventional turbine generator to produce electricity.

And because we can do this almost anywhere, it's the ideal way to convert old coal-fired power plants to clean, constant energy. Worked-out oil fields are a great location too, especially if they have an existing connection to the grid.

Since startup AltaRock Energy
perfected their high-temperature
drilling technology and developed
special materials for the super-hot
infrastructure, heat wells have taken
off in a big way, first in the United
States and Canada, and now globally.

Demand for coal has crashed, and oil and gas are only needed for transport and industry. When it comes to electric power, heat wells dominate utility baseload, and rooftop solar takes care of the rest. Energy has never been so abundant, so green, and so cheap! Author:
Doug Vining
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So, why does this matter?

The energy transition is all about displacing fossil fuels with solar, wind, and in select cases nuclear. Should we not be broadening this discussion and investigating innovative alternatives?

Heat wells are the ultimate sustainable baseload energy source.

They will supplant coal, oil, and gas power plants, but make use of existing turbines and grid connections.

This lowers the cost of transitioning to clean energy and electric everything.

Avoids ALL the problems associated with renewables and nuclear power.

Tech and economic spinoffs will be immense, but very disruptive.

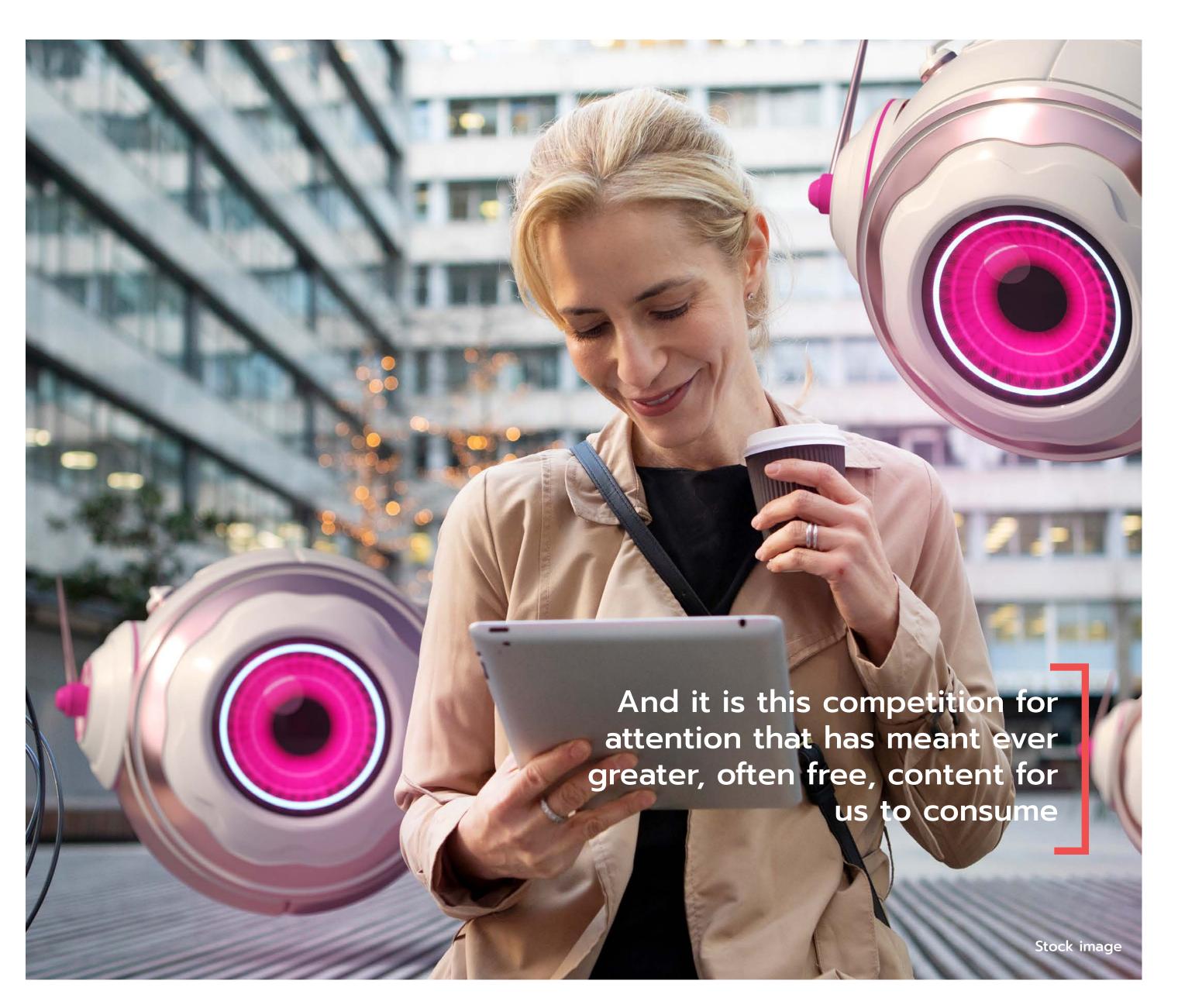
Ad dodging: Gen Alpha's quiet revolution against capitalism

Millennials may have axed industries, but watch Gen Alpha reshape society

Every generation, from the Boomers to the Millennials, and from Gen X to Gen Y, there's been an unspoken acceptance that adverts are part of life. Death, taxes, and the latest Coca Cola Christmas advert. Enter Gen Alpha. The generation brought up on the importance of consent is no longer standing for these unwelcome digital invasions. As advertising tactics have morphed from mere annoyances that could easily be ignored into un-skippable mid-video incursions, this generation is the first to flip the script on simply accepting advertising as necessary. But advertising has been a cornerstone of our capitalist society and pushing back against something so intrinsic to our day-to-day life is not without consequences.

As long as humans have been selling, they have been advertising. From

the suggestively carved curbstones guiding customers to the brothels of **Pompeii**, to always-on home voice assistants **harvesting your conversations** to serve you targeted ads. But for adverts to increase sales, they first need to capture our attention. And it is this competition for attention that has meant ever greater, often free, content for us to consume. Effective journalism, radio, and television were all made possible through advertising revenues. Broadcast rights and branding facilitated the step-up from amateur sports to the professional era allowing your favorite athlete to skip their day job to rather spend 12 hours a day at the gym to dazzle you for 80 minutes on the field. Adverts are also the silent patrons of our digital utopia. They foot the bill for the seemingly 'free' platforms we can't live without— Google Maps, Instagram, Facebook,







Snapchat, the list goes on. While this symbiotic relationship held, it worked. In exchange for a share of our attention, consumers got to consume content.

And our attention is worth big money. Budweiser spent \$75m on the 2022 football world cup in Qatar a country notorious for its strict laws against alcohol – while savvy advertisers forked out \$7m for 30 seconds of 2024 NFL Superbowl airtime. Both of which pale compared to the advertising giant, Google, which earned \$237b (b for billion) ad revenue in 2023. Advertising works. And it is lucrative. Our attention is in high demand and any open real-estate is free game. Enjoy star-gazing? Now brought to you by your favourite beverage as satellites become **space billboards**. Sunsets? Only briefly interrupted by sponsorship logos attached to a passing cargo ship. Dreams? Advertisers have for years already been working on tapping into your sleep state; Neuralink will be the subscription model for this access. And don't be fooled by the low price of the latest VR and AR headsets, advertisers are subsidizing these products so that they can use internal cameras and eye-tracking to make sure adverts are paused whenever your attention wavers.

If it's free, you are the product. And Gen Alpha has had enough. With a resounding "nope" to ads that aren't consented to and even those that simply overstay their welcome, they're turning back the clock—think retro TVs and dumb phones but also embracing high-tech glasses with adblockers installed, to automatically filter unwanted billboards. The fallout? A sports world scrambling as the once-lucrative broadcasting deals dry up, search engines moving to subscription models, and a shift in social media content creation as traditional advertising models face their twilight. But at what cost? Non-professional athletes, Olympic records forever frozen in time, quality journalism hidden behind paywalls, and all those free services we all mindlessly consumed, now explicitly charging you the value of your advertising attention.

So, as we stand at this crossroads, one thing's for sure: the days of passive consumerism are numbered, and the future? Well, it's looking adfree but perhaps no less expensive – although at least now we will know the cost. And maybe, just maybe, companies turn those marketing budgets towards making better quality products.

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So, why does this matter?

How reliant is your business on advertising? Would consumers continue to purchase your products if your advertising spend went to zero?

Is advertising just an arms race among your competitors? Or does your advertising spend have a net positive impact on your consumers?

If consumers decided to rebel against advertising, would your products still have a market? If your advertising budget was spent instead on product development, what would be the outcome?

Advertising can be used to create demand, but is your product something consumers will still need in 5, 10, or 15 years?

And our attention is worth big money



The luxury evolution

From tangible opulence to immersive indulgence

In an age where everything is increasingly available real time, and provides instantaneous satisfaction, the demand for luxury goods developed in a bespoke, curated manner – from the finest hand painted scarves, to tailored suits to mechanical timepieces adorned with precious jewels - skyrocketed in the early 21st century. At the same time societal shifts combined with technological advancements saw the traditional concept of luxury, characterized by tangible assets and opulence, undergo a seismic shift toward immersive luxury experiences.

The experience economy, kicked off by millennials, and tipped into overdrive in the aftermath of the pandemic at the start of the twenties, saw demand for experiences initially grow at 15% annually. At first it was attributed to pent up demand following lock downs, but the real growth resulted from greater affordability of virtual and augmented reality technologies, opening the door to immersive virtual luxury experiences. VR headsets produced by the likes of Microsoft, Meta and Apple found niches in being able to transport users to new and

undiscovered environments.

The true transformation of the experience economy came as a result of brain-computer interfaces developed by the likes of Neuralink, Synchron and Paradromics. Initially motivated by and developed to address challenges faced by those with disabilities, once proven these technologies quickly found other uses, not just enhancing realities; but creating new ones, allowing users to immerse themselves in environments that were once only conceivable in imagination.

This transformation marked a significant departure from conventional luxury goods' physical possession towards intangible, highly personalized experiences. It quickly became clear that the future of luxury lies in bespoke, immersive environments where every sense is catered to without the individual stepping outside their home. From walking the serene gardens of a French chateau to experiencing the adrenaline rush of skydiving over the Swiss Alps, these virtual experiences promise not only unparalleled

became clear that the future of luxury lies in bespoke, immersive environments



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exclusivity but thanks to technological advancement, also revolutionary accessibility.

The immersive experience economy represents the next frontier for luxury brands and services. As digital landscapes become increasingly sophisticated, the line between the real and virtual continues to blur, offering new realms for luxury to conquer. The experiences provided by technologies like augmented reality offerings or brain-computer interfaces redefined the parameters of what was considered luxurious by offering unprecedented levels of access, personalization, and immersion.

In this new era, luxury is defined not by the scarcity of physical goods but by the uniqueness of personal experiences. The bespoke nature of these virtual adventures allows individuals to transcend physical and geographical limitations, offering a new form of escapism that is both surreal and sensory. These experiences, catered to by cuttingedge technologies, offer a new palette for luxury brands to express exclusivity and prestige.

While the promise of virtual luxury experiences opens new avenues for innovation, it also presents unique challenges. The authenticity of luxury experiences, traditionally anchored





So, why does this matter?

How are companies across various sectors thinking about the future of the consumer experience and how their preferences may change in the coming years?

The future of luxury lies in the ability to offer not just products but authentic experiences that are immersive, personalized, and boundary-pushing.

As we venture into this new era, the luxury sector must navigate the delicate balance between innovation and tradition, digitalization, and emotional connection.

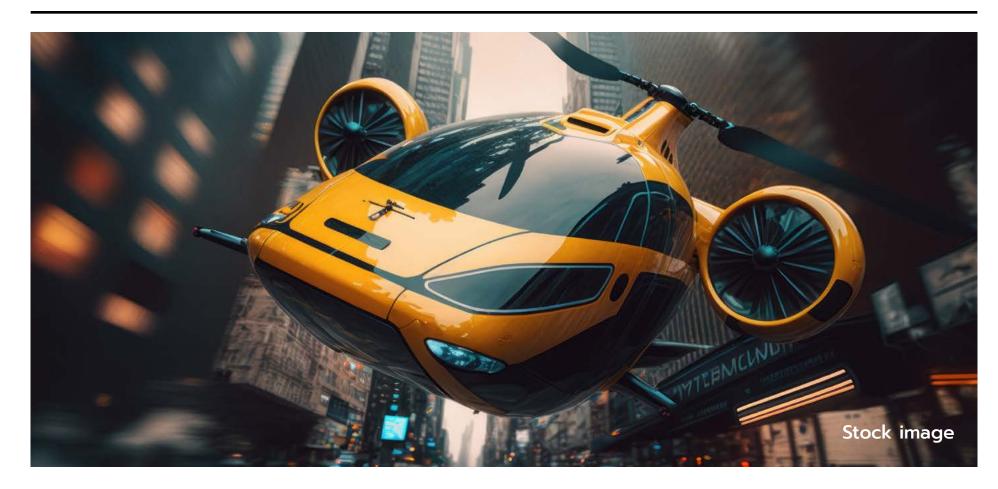
The leaders of this new luxury landscape will be those who embrace the potential of technology, not just to replicate reality but to transcend it, offering new experiences that are as extraordinary as they are exclusive.





Flying taxis go mainstream

Who will win the electric air taxi race?



Leadership of the urban mobility market is up in the air – literally. Since megacities like New York accepted the fact that there are better alternatives to limos and helicopters for ondemand urban travel, it's been a race to establish a dominant position in this high-flying industry.

The top contenders are new to aviation, compared to the established aircraft manufacturers like Boeing and Airbus. Just like Tesla reinvented the automobile without any legacy auto baggage, Archer Aviation started with zero aircraft experience, and designed their air taxi from first principles. The result was a sleek four-passenger

craft that flies purely on battery power, called 'Midnight'.

Likewise, Joby Aviation was spawned from a startup that designed innovative consumer products. Their air taxi, though different to Archer's, also has capacity for four passengers and a pilot, and made the <u>first electric</u> <u>flight</u> in New York City in 2023. Since then, both companies have entered production and achieved FAA certification. They're also both listed on the New York Stock Exchange.

Now the race is on, and both Joby and Archer are tying up deals with cities, airlines, and base operators – suppliers of terminal facilities for private jets and small operators. And just like electric cars, high-powered charging stations are key to making electric air taxis a commercial success.

Let's spare a thought for those who haven't succeeded in getting their passenger drones to take off in a big way. From almost a hundred concepts, startups, and prototypes, only a handful remain. First casualties were the so-called 'transformer' flying cars, that were designed to both ride on the roads and fly in the sky. That was unworkable, as robust, roadworthy hardware is just too heavy and clumsy to make a safe, reliable airplane. A few exotic examples exist, but they are billionaires' toys, not everyday products.

Others that struggled to get traction were designed like drones, with only rotors for lift, drastically limiting their payload and range, as vertical take-off, hover, and landing uses the most power, and quickly drains the batteries. And if you're going to use jet turbines instead of batteries, you lose the advantage of quiet flight, that makes air taxis so much better than helicopters.

Better battery tech has helped Archer as well as Joby to achieve viable operations in terms of payload, range, and turn-around, without

compromising safety. But the inclusion of an aerodynamic wing, and tilting rotors to switch from vertical to forward flight, make all the difference for high-speed cruising at moderate altitudes. Lift provided by the wing not only saves the batteries' energy, it also adds another safety factor in the form of glide capabilities, if power is lost.

Why, you may ask, are electric air taxis streets ahead of helicopters for urban mobility? Besides being far less noisy and disruptive, air taxis are less polluting, have multiple redundant systems, and can be flown electronically. By contrast, helicopters are complex mechanical machines requiring constant costly maintenance, and are notoriously difficult to fly.

In the final analysis, air taxis are so much cheaper to operate that ordinary people will soon be able to take them across town or to the airport, just like you would with an Uber – only quicker.

Now the limiting factors to universal adoption of air taxis are city bylaws and the availability of incity infrastructure for landing and charging. With New York, Tokyo, Los Angeles and Dubai leading the way, you'll soon be able to hail an air taxi in your city. Chances are, you won't care if it's Archer or Joby, so long as it's available, affordable, and convenient!

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So, why does this matter?

When we think of industry disruption, do we look naturally to the biggest incumbent players in the market currently, or more nimble challengers, unburdened by their legacy?

By casting the net wide for innovative start-ups and scale-ups, often from adjacent industries, we see the most impactful use cases emerging for real disruption.

Urban mobility in big cities is a major cost factor, especially for businesspeople, e.g. getting from the airport to downtown, and wasting time in traffic.

Helicopters are expensive, noisy, unsafe, and require substantial infrastructure. Air taxis are quiet, cheap, and easily integrated into on-demand shuttle services.

Cities that support air taxis will attract companies and talent, boosting economic growth.

Robots win the race to the Moon

Lunar mining industry: OPEN for business.

Since the dawn of space exploration in the 1950s, humans have been determined to have a greater presence in the cosmos. The 'space race' ensued during the Cold War and it was a battle between the US and the Soviet Union to claim technological superiority and dominance. After several space deployments featuring satellites, rockets, and lunar landings, the 'space race' ended with a joint mission between the two superpowers in 1975.

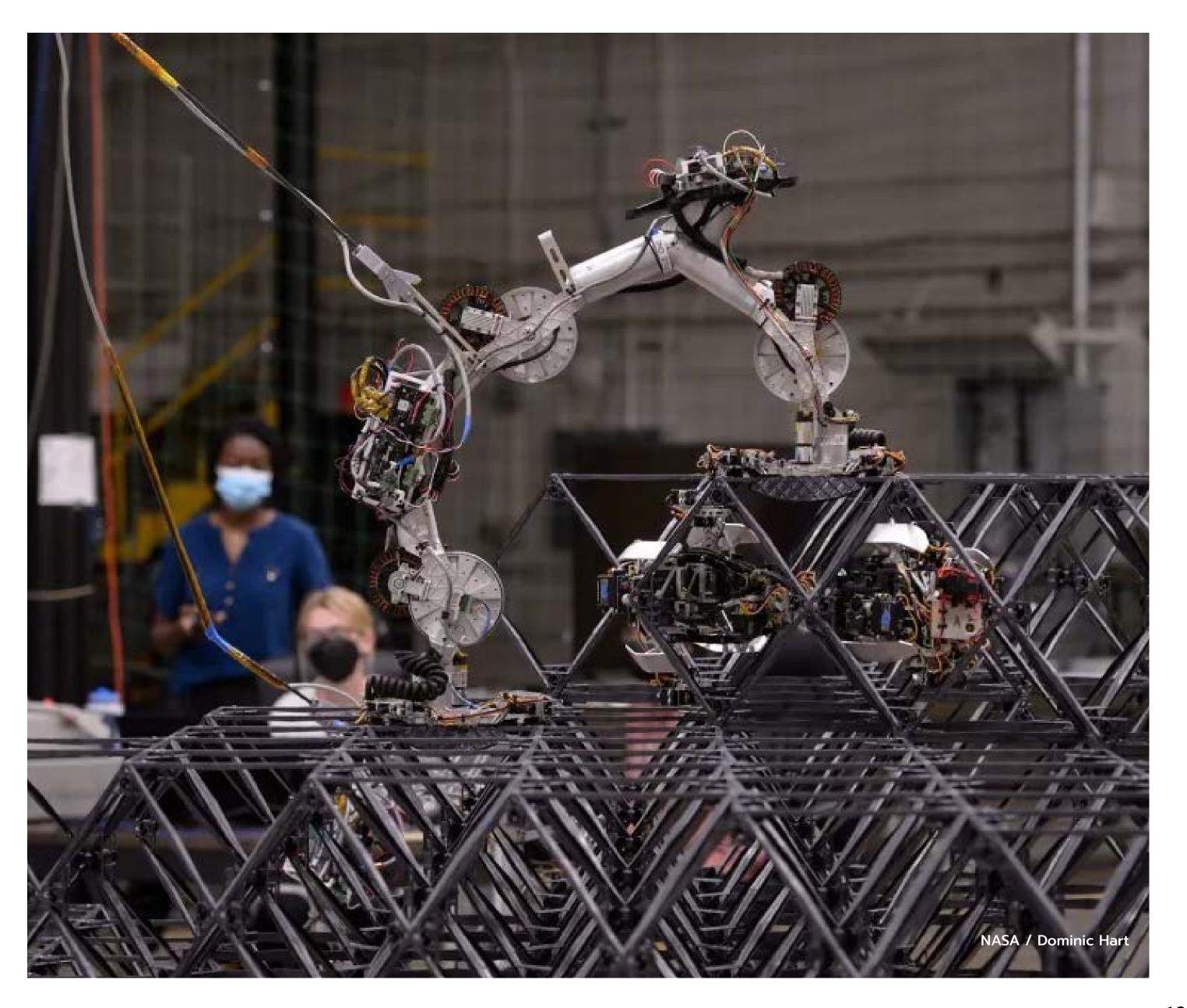
A few decades later, a new era of the 'space race' began, and although prestige, dominance and military tactics were still a factor, more important motives were at stake.

The US, China, India, and Russia were all interested in the economic value of mining the Moon for valuable resources such as Helium-3, frozen water and rare earth metals. This sparked a new global wave of space exploration interest, with aspirations of a burgeoning lunar mining industry being a driver of the 'space economy'.

NASA had this vision for years

in line with their Artemis project, which aimed to set up a permanent presence on and around the Moon. They had quietly been developing space robots to build infrastructure on the Moon needed to facilitate this anticipated new space revolution. Prototypes of NASA's **ARMADAS** (Automated Reconfigurable Mission Adaptive Digital Assembly Systems) robots were demonstrated in early 2024, showing how structures can be autonomously constructed from basic building blocks using software algorithms and artificial intelligence (AI).

Private space exploration companies such as Space X, Astrobotics and Intuitive Machines, had already begun to forge relationships with NASA to capitalise on these initiatives, however it was Interlune that became the most famous NASA partner as we know today. Interlune's revolutionary harvester-robot technology, in development since 2020, will be used to extract Helium-3 from the Moon's surface. The potential of using





Helium-3 in creating breakthrough nuclear energy can be a gamechanger for our energy crisis faced on Earth.

Now, after years of scoping the Moon's surface and testing the robots, the NASA-Interlune partnership is ready to make its maiden voyage, with its robots set to become the Moon's first settlers. These ARMADAS robots have been tasked to build basic infrastructure for storage of the extracted Helium-3 and other equipment and supplies. A group of humans will also join their robot colleagues to assist on this mission.

This exciting news has reinvigorated space programs worldwide, with many governments diverting budgets to space funding, including bidding for Moon plots and infrastructure for future mining plans. This will be a very interesting and precarious time in history, as a new political order will come into play - what are the rules for lunar mining and occupation? NASA has already attempted to regulate this back in 2020, after unveiling a legal framework (the **Artemis Accords**) to govern exploration and mining behaviour on the lunar surface.

But it remains to be seen how regulations and laws are further developed and controlled, and by whom, once lunar mining becomes



mainstream - How does 'Moon Government Elections: 2035' sound? With current geopolitical conflict ramping up on Earth and a turbulent past of the big 'space nations', will we see the start of a new Cold War brewing?

Politics aside, private venture capital firms have too made sizeable pledges into space investment to make the most of this 'space economy'. Even traditional mining companies have shifted their sights to the moon, as 'terra' mining faces a limited future.

The Moon does not only hold answers for solving the global energy crisis, but the technological developments that come with mining and exploring its surface can make deep space exploration more accessible. So, it's about time that we are directing our efforts to space. Our resources on Earth are finite, nature is wreaking havoc upon the world and there's also a very real possibility of an asteroid tearing towards Earth from beyond the depths of what our technology can see - the Moon may be our only saving grace then. Today it's the Moon, soon it will be Mars, and then... Proxima Centauri b?

NASA-Interlune partnership is ready to make its maiden voyage

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So, why does this matter?

Mining: The lunar surface is known to contain Helium-3, frozen water and rare earth metals.

Mining companies can potentially explore these opportunities in future as an additional revenue source.

Energy: If lunar extraction of Helium-3 takes off, this material will potentially revolutionize the energy industry through its use in providing clean and non-radioactive nuclear energy. This could eventually become the energy source of choice globally, with large economic implications in this industry.

Space exploration: Developments on the moon could eventually allow it to become a base for more frequent Mars missions or deeper space exploration. Frozen water found on the moon, which contains oxygen and hydrogen, can be used to power spacecraft on missions.

The Cold War: Reloaded

Capitalism beat Communism 45 years ago, and still we can't get along!

When the Berlin wall fell in 1989, over 45 years ago, it signaled the fall of communism and the end of the Cold War. The world erupted in a collective mood of openness, collaboration, and (relative) peacefulness. Alas, humans are humans, and within 30 years, the Cold War reemerged.

Now the battle wasn't between Capitalism and Communism, but between Democracy and Autocracy. Even though it was a fight between different concepts than before, the old geographical divide held true again: The West, led by USA and Europe, promoted Democracy while the Global South, supported by Russia and China, favored Autocracy.

In 2024, over 70 countries, affecting almost 50% of the world population, went to the polls hoping for a better future while the Democratic Index was at its lowest... well, so they thought. It has sunk even further since, and the second Cold War is now a fact.

The same artefacts as during the first have been visible since the late 2010s; proxy wars in the developing world, the West **building a trade route** from

India to Europe via the Gulf States to compete with China's Belt and Road Initiative, Russia and China leaving the International Space Station to build their own space exploration platforms, cyber war targeting the other bloc with mass misinformation campaigns; these were just a few of the early signals.

Blunter and more visible were the Africa Corps' (Russia's ruthless mercenary army) activities in western and central Africa, propping up failed democracies and authoritarian leaders while securing natural resources for Russia.

BRICS became a vehicle for the Global South to protest against the West and its colonial past, and new BRICS members were predominantly also authoritarian, looking up to strong leaders such as Presidents Putin, Xi, Erdogan, and Kim.

These political maneuvers eventually led to the solidifying of the two sides; The West vs the Global South, Democracy versus Autocracy and the capital flows soon followed suit. Western FDI went to democracy

friendly countries while China and Russia poured money into the autocratic Global South. Businesses from both sides were reallocated to 'safer havens' and some critical technology and know-how were moved to countries further away from imagined frontlines.

Case in point, Taiwan's semiconductor company TSMC, opened new factories across the USA, a strategic move supported by government programs that funded new chip factories and upgrades to old ones. In the new Cold War, Al supremacy is the new superweapon.

Proxy wars erupted in border countries

under the guise of protecting this or the other, while it in essence was about access to raw materials and to show the other side who was boss.

The business leaders of the 2020s had to re-think and retrain their skills to move away from a world without borders, to a world where borders mattered a lot, and where a misstep could result in worldwide boycotts of services and products.

So far, the Cold War: Reloaded has been just that, a cold war, and we hope that, as with the first one, a new generation of world leaders will emerge that once again value openness and collaboration.



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So, why does this matter?

Is your business deemed aligned with one side or the other of the political spectrum, and how will that impact your future strategy?

Where are your suppliers based? Are they replaceable?

Can your business survive if one side boycotts your products?

And more importantly: Where do you as an individual and your business stand in this debate?

What role should business play in avoiding the apparent polarisation?

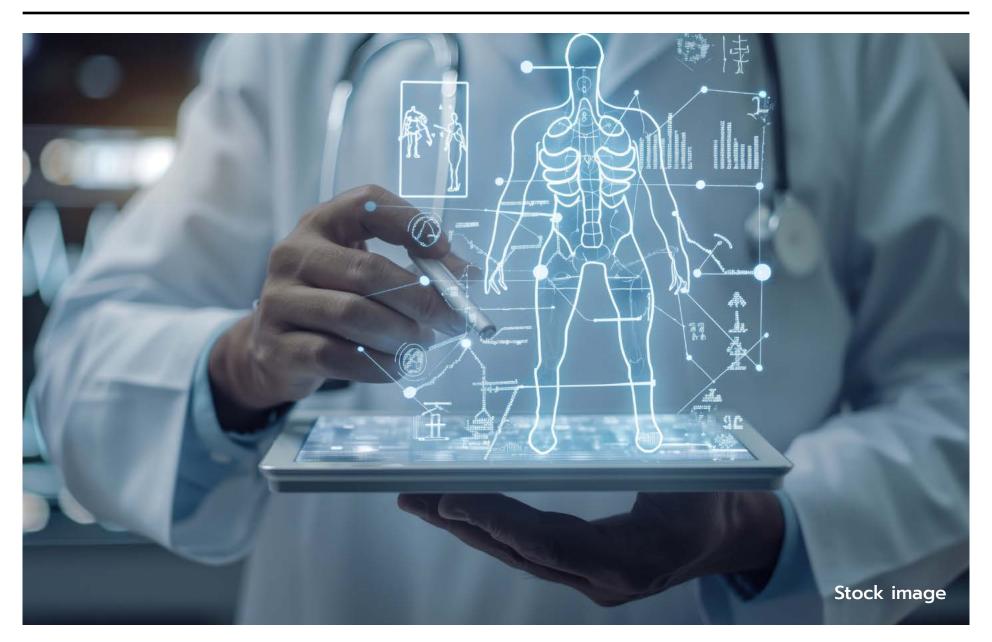
How does your business embrace apparent ambiguities and paradoxes?

the old geographical divide held true again



"Take a seat in my digital chair..."

The brave new world of mental health care... or is it an unrealistic diagnosis?



Picture this: a world where your therapist is a sleek, shiny Al, not some bespectacled human jotting notes as you ramble on about your childhood traumas. We're talking about a future where your emotional baggage gets unpacked and analyzed by algorithms instead of empathetic nods.

In an era where robots are snatching

"unemployment," it's no surprise that even your shrink might be replaced by a hunk of metal and wires. But, who needs a human therapist when you can spill the beans to a chatbot over a virtual cup of coffee? Especially in the light of today's generations where their best friend comes in the form of a shiny rectangle with a black screen.

In a world where Al-powered robots are replacing assembly line workers, chatbots are handling customer service inquiries, and self-driving cars are poised to transform transportation, the future of healthcare is next in line when it comes to digital revolution.

Experts foresee a future where wonder drugs are conceived in digital spaces, personalized medical care is the norm, and Al systems guide discourse into productive conversations.

However, perhaps one of the most transformative changes lies in the space of mental healthcare.

Statistics from the World Health Organization reveal a concerning trend: a 13% increase in reported mental health disorders over the past decade. In an effort to improve this figure, strides are being made towards utilizing AI to assist mental health care providers. Augmented therapists, equipped with AI tools, are already enhancing the effectiveness of traditional therapy by analyzing patient data, suggesting conversation prompts, and flagging potential risks.

Moreover, Al-powered applications offering self-care and basic symptom assessment are proliferating on various online platforms, providing support for individuals with mild mental health concerns. As humanity increasingly embraces digital systems,

the question arises: could a digital AI therapist be the future of mental healthcare?

Let's face it: we're already living in a reality where the FBI can tell if you're lying just by analyzing your facial expressions and body language. How unimaginable is a world where one can apply similar techniques to an online AI therapist to analyze responses and provide objective prompts when dealing with a patient, especially in a world where technology is deeply intertwined with daily life, and to some extent, preferred by the upcoming generations.

The emergence of 'Mika,' the world's first AI CEO, further blurs the lines between human and machine interaction. With advanced AI and machine learning algorithms, Mika swiftly and accurately makes datadriven decisions for her company. If this is our current reality, where technology platforms serve as the new 'comfort and safe space,' it's conceivable that future generations may prefer the safety and convenience of an AI therapist over traditional inperson therapy. But here's the kicker: in a world where technology is our new security blanket, are we heading towards a future where we'd rather spill our guts to Siri than sit on a therapist's couch?

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So, why does this matter?

Imagine a world where individuals seek guidance and support from AI therapists, who offer objective insights free from personal biases or emotional attachments.

Would this world be limited to mental health therapists, or could it extend to all other domains where "advice" is needed? Be scared, bankers!

Could this be the start of a new era of mental healthcare, where technology provides a bridge to accessible, efficient, and stigma-free support? Or will this be an opportunity for tech companies to capitalize on our inner secrets and at what costs?

As we navigate into the unknown world where AI plays a big role, the integration of AI into mental healthcare prompts us to reconsider the very nature of human connection and the cost thereof.

How will your company respond if Al becomes the cornerstone of your business? What will the overall impact be? Will you embrace the change or kick against it?

How have you defined your own "Al values and principles"?





Keeping up with the Khans

The two-robot household becomes the latest status symbol

Back in the late 20th century, the Baby Boomers created the twocar household as a benchmark of suburban success for the middle class. It started as a necessity to allow two working parents but soon became an image race. As one neighbor parked a new car on the driveway, the rest of the street soon followed suit, rushing to not be caught looking poor or out of touch. And the Boomers kept driving change; the type of cars developed lined up with their need (from station wagons, the minivan, the SUV, and the retired gentleman's convertible), the highway systems, the air travel, hotels, cruise ships... all adjusted to the demands of the massive Boomer generation.

These Boomers, this Silver Tsunami, are still going strong, driving change wherever they are and to ensure their own lifestyle demands. Last decade they drove the development of driverless cars, and now, as their final act to ensure a rich and pampered last couple of years, they have created a new standard of middle-class

success: The Two-Robot Household!

The shrinking working age population, the increased life expectancy, and the escalating cost of healthcare left only one solution for the Boomers: get robots to do the chores they can't do themselves or the health services can't afford to provide. And we aren't talking about the minute machines whizzing around cleaning your floors or cutting your grass, we are talking about full-fledged bi-pedal human like robots who walk and talk like us, who can sit and listen to our stories, share our grief, and offer comfort and empathy when the grandchildren no longer care to visit.

In a funny twist of fate, it was the next generations' great minds that cashed in on the new demand. Companies founded and run by Gen Xers and Millennials drove the bi-pedal robot industry, using tech savvy engineers that pushed the boundaries of what was possible. The industry kicked off in the early 20s with the likes of Boston Dynamics, **Tesla**, and **Figure Al** all

vying to become the first with a viable, reliable, and affordable multipurpose robot who could take over the jobs that we humans didn't want, deemed too risky, or just didn't have the resources to do.

The humanoid robot business grew from research lab experiments to a trillion-dollar industry over the span of a decade, and it is now estimated that the number of robots will double and reach over one billion in the next five years. To put this into perspective, in the mid-2020s, roughly 140 years after the invention of the automobile, there were **only 1.5 billion cars** around.

Humanoid multipurpose robots have become the new definition of wealth. They serve pastries at tea parties, they join you on the golf course when you are a player short in your 4-ball, they

operate the coffee maker as expertly as you yourself, they keep your suburban dream home and large lawn in immaculate condition while you are at work, they take care of the kids and help them with homework, and they'll happily watch your favorite movie with you night after night.

As with the Boomers and cars in the 1970s and 1980s, the Gen Xers and Millennials can't help themselves, especially not when Mr. Sunhik walks past with the latest model of Tesla's Butler Jeeves Mk 4 Cryo, which sports a holo-iridium interface in addition to the basic neural bridge command module. Even Mrs. Sunhik's poodle Piffy loves to be walked by it through the Everglades Golf & Country Estate's manicured gardens. The two-robot household is here to stay, and the early investors are cashing in big time.



So, why does this matter?

How will your life change by having 2 household robots? What chores can you get rid of and how much time would that save you?

If your mother was cared for by a humanoid robot, would you feel that was a good or a bad idea?

Are your (retirement) investments exposed to companies exploring Al and robotics?

What is your company doing to get into the robotics industry?

In your business, which tasks would you rather have a robot do than a human?

How do you monetise real human virtues to create unique customer experiences?

How do you need to develop your humans to ensure enduring economic relevance?

they keep your suburban dream home clean





SpaceX opens Starports in Tokyo, Shanghai, LA and New York

Elon Musk promises one-hour cargo flights around the world

Now that the SpaceX Starship launch system is a proven rapidly reusable vehicle for launching 150 metric tons into orbit and beyond, it's time to make it useful for earthly transport too. After SpaceX successfully launched Starship into orbit in 2024, they quickly perfected its ability to land intact, ready to be refueled and launched again.

Soon Starship was dominating the heavy lift launch market, not only because, being fully reusable, launch costs to low Earth and geostationary orbit are a fraction of its competitors', but also because Starship's sheer size and carrying capacity made it a nobrainer for any oversize payload like large satellites, space telescopes and space station modules. Even small satellites enjoyed economies of scale on ride-share launches, together with tens or hundreds of others.

And that's where the next phase of

Starship's complete takeover kicked in. Even when still under development, SpaceX constructed a gigantic 'Starfactory' at its home base in Texas, capable of churning out Boosters and Starships faster than Boeing can make just the fuselage of a jetliner. With fully automated welding and an all-stainless-steel construction, SpaceX is adding to its fleet weekly, with a production target of 180 ships per year.

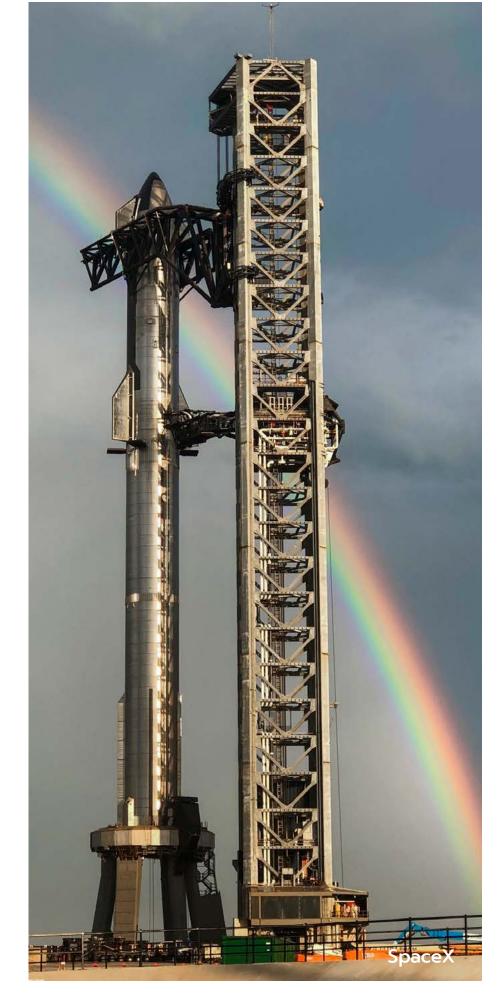
Now it's time to be able to land – and launch – at other places, not just Kennedy Space Center in Florida, or Boca Chica in Texas. Originally considering converted oil rigs, SpaceX has opted instead for custom offshore platforms at New York, Los Angeles, Tokyo and Shanghai. Each 'Starport' has two giant towers to handle the launch and landing of a fully stacked Booster and Starship combo, and the propellant holding tanks and

supporting infrastructure are neatly hidden 'below decks'.

"Having the launch pad and landing zone moored in deep water is ideal," says Elon Musk, still chief engineer at SpaceX. "We can get fuel and heavy equipment deliveries directly from ships, and you just hop on an air taxi for a ride to the city. And if something does go wrong, at least we're away from the buildings and people."

These are important considerations, as each launch uses up to 4,000 tons of liquid methane and liquid oxygen, which when mixed together are a pretty explosive combination. In fact, getting permission from the FAA and environmental agencies has been the biggest hurdle to overcome, despite SpaceX's flight-proven track record of safe operation. It's for this reason too that London and Paris are not yet on the radar as Starship destinations.

"We'll test the Texas to Shanghai route first," says Musk, "as Tesla has gigafactories in both places. LA – Tokyo will come next, and then New York." Musk didn't give any timelines, but rumour has it that demo flights will begin in weeks. The first offering will be designed for high value and time sensitive cargo, as Starship can take a minimum of 100 tonnes point to point in under one hour. Waiting days for computer chips or weeks for EV



batteries will be a thing of the past.

"Just think," says Musk with a big grin,
"one of these days you'll be able to
have lunch in Tokyo, and then go out
to dinner in LA – on the previous night!
Isn't that wild?"

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So, why does this matter?

Starship will be the cheapest cost to orbit by several orders of magnitude.

For the first time ever, reusable rockets will be able to fly from continent to continent – and back again.

When economies of scale are reached, trans-Pacific and trans-Atlantic airfreight could disappear.

Supply chains become even shorter; globalization more strategic.

If your business is based on traditional global logistics, you need to reinvent it.

What opportunities could this new paradigm spawn?

Starship can take a minimum of 100 tonnes point to point in under one hour

Provocative thinking indeed!

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