



FUTURE CLIMATES

BUSINESS
AS USUAL

WORKLIFE
LIFEWORK

PRODUCING
CONSUMING



Play&Co(nversations)
Insight Report
Issue 01 | 2022 Q3

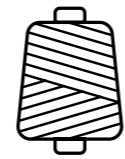
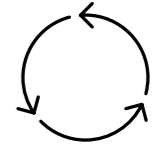
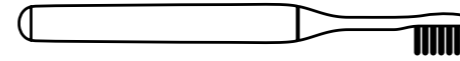
Hello. We are Play&Co.

We are a strategic industrial design agency that delivers world-class design services for start-ups through to global organizations. Founded in 2015 with offices based in Portland, Oregon and Melbourne, Australia, our products have won iF, Red Dot, Good Design, and Edison Awards. Our work has been featured in Fast Company, Core77, and other related media channels. Clients include Blokable, Philips, HP and Thyssenkrupp.

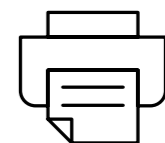
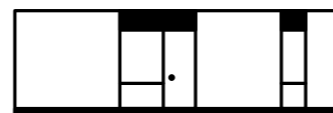
We launched Play&Co(nversations) because we care. If design is to have a future, it must solve critical issues in an inspiring way.

Put simply, 'We Take Play Seriously'.

Learn more at www.playandco.com



**We design award-winning
meaningful experiences
for visionary brands.**





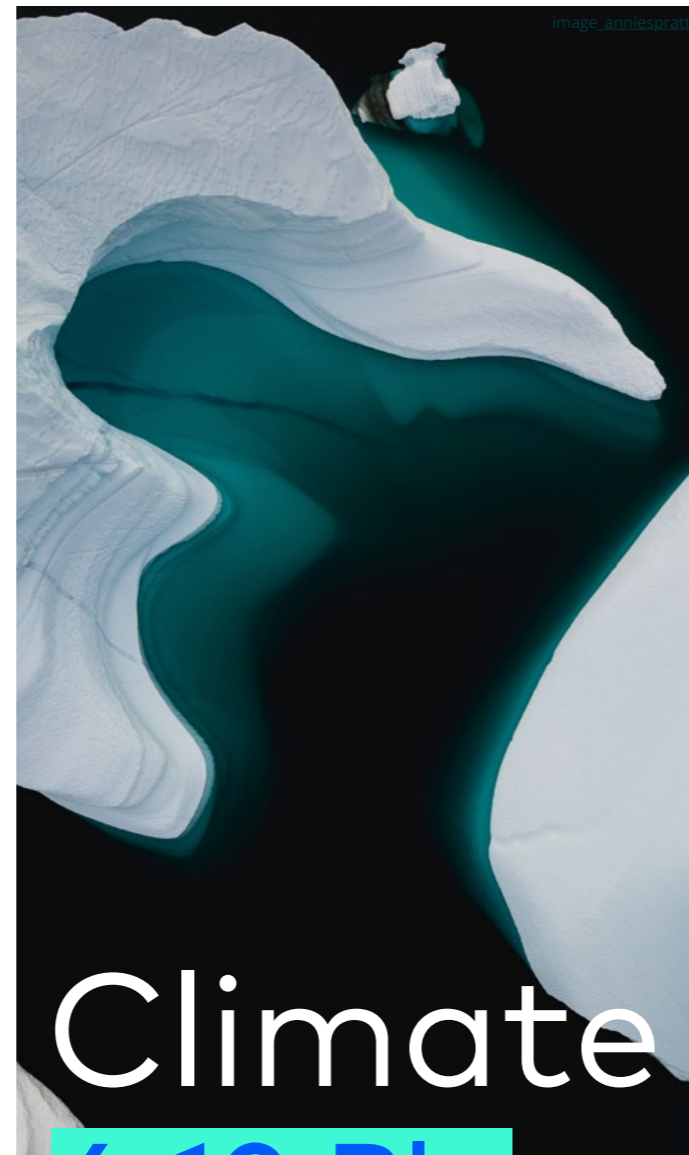
The effects of climate change are undeniable. The global pandemic is influencing new models of life, work, and mobility. Geopolitical tensions are at an all-time high, driving energy prices to near record levels.

One might be forgiven for thinking we're all doomed, but as Gandhi once quipped, "Adversity is the mother of progress."

Innovation won't happen in a vacuum; meaningful partnerships will drive effectiveness. Leaders, creators, and problem solvers beyond the political spectrum will shape the future. Design can inspire new consumer sentiments and behaviors to help us solve our biggest challenges.



What are the critical domains presenting opportunities for innovation to address climate change? Here are the elephants in the room:



Climate
6-10 Bln

The estimated amount of carbon (tons) must be removed from the atmosphere annually by 2050.



Energy
>50%

Of all Climate Tech venture capital goes to EV companies. Infrastructure urgently needs to accommodate.



Health
70%

Of Global food production is expected to increase in the next 30 years. Shifting food consumption habits, rituals and preferences will benefit personal and planetary health.



PREDICT PROACT REACT



Rising
Sea Levels

Urban
Expansion

Livable
Air Quality

Extreme
Weather Patterns

Deforestation
& Degradation

“ Capital investment in climate technologies could attract \$1.5 - \$2 trillion annually by 2025.* Future economic landscapes have been informed by the 'Predictors'. 'Proactors' will define and develop innovative new business models. 'Reactors' will adapt to and participate in this new context.

*McKinsey & Company, "Innovating to net zero: An executive's guide to climate technology", October 28, 2021





Climateers - the New Face of Leadership

Motivation to act is driven by anxiety and frustration. 32% of Gen Zers and 28% of Millennials are active and confident in their ability to help reduce the effects of climate change. For brands to remain relevant, they must address the concerns of this influential audience.

Meanwhile, proactive organizations are identifying, designing, prototyping, and implementing new tech solutions that address some of the world's most pressing issues.

The diverse group of pioneers is increasingly connected, allowing them to align, partner, and engage in previously unimaginable ways. These proactors and climateers will help society reach critical mass.



FROM CHAOS TO CLARITY

"Innovative climate technologies are critical for our response to the climate crisis and climate technology needs to be an integral part of national climate plans."

- Patricia Espinosa
UN Climate Change Executive Secretary

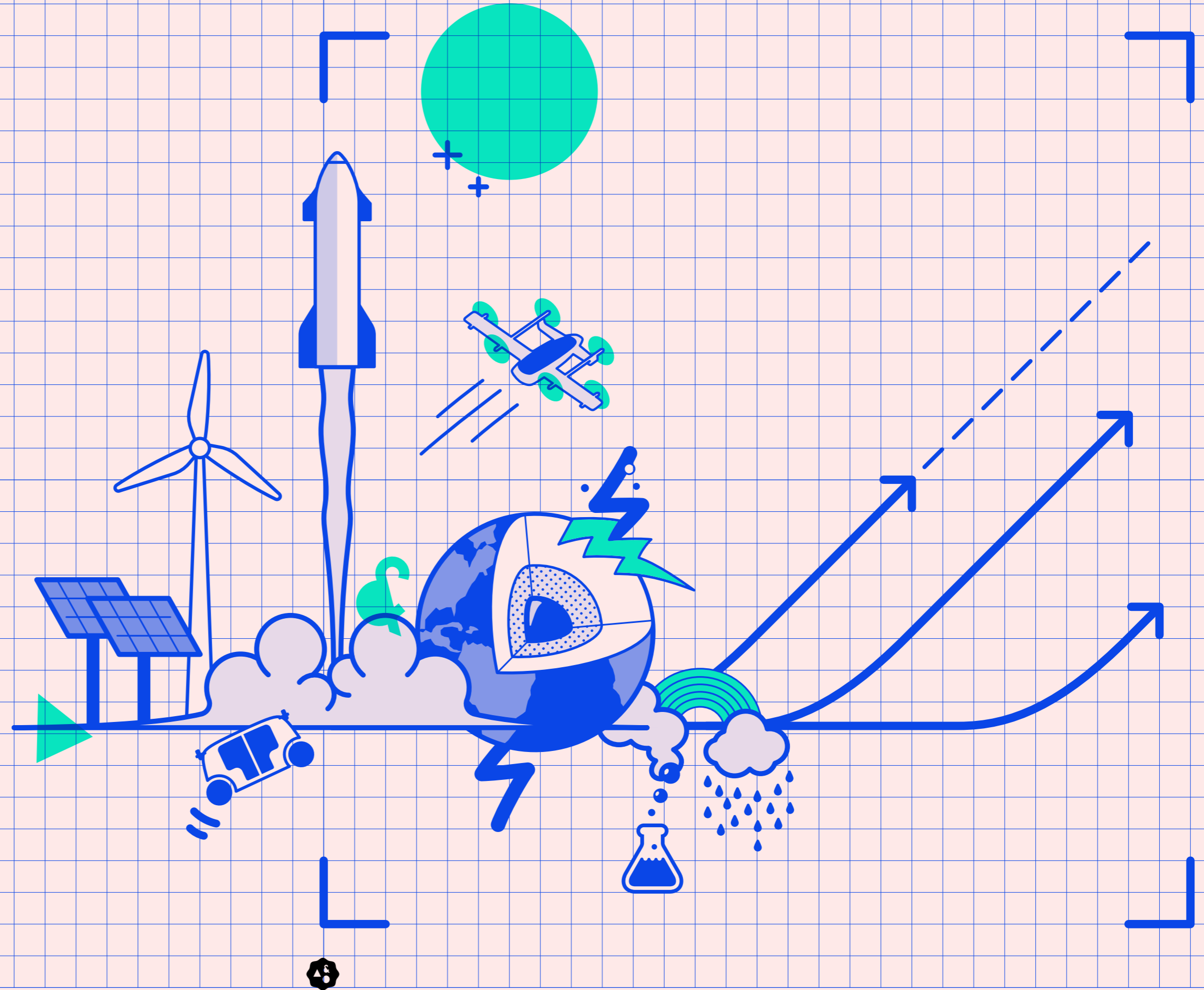
The design of a sustainable future lacks consensus. Instead, we're seeing a constellation of seemingly disparate theories and concepts that can be polarizing, sporadic, lacking cohesion... even chaotic.

Although media streams deliver insights around the clock, the overabundance of such information is causing confusion and anxiety about how to respond.

To emerge from the chaos, deliver true innovation and maximize influence, disciplined organizations will need to embrace:

1. Creative problem-solving frameworks.
2. Strategic partnerships and social engagement.
3. Geographic flexibility & scalability.
4. Transparent and inspiring communications strategies.

Design thinking can help align user needs – the rules are yet to be written, but the frameworks are already in place.



01
Curbing Global Warming
Planetary Health



03
Planet + People Health
Human Health & Wellness



02
Electrifying Transport
Energy & Infrastructure

The Opportunity

3 Interconnected Areas



CURBING GLOBAL WARMING

Eco-anxiety is on the rise. People feel the urgency to live more sustainably but are addicted to cheap commodities such as energy and food. In addition, deteriorating environmental conditions are compounding our reliance on stable commodities.

To accelerate industry and infrastructure transformation, companies and brands are partnering with governments and organizations to make sustainability a strategic imperative.

There are opportunities for new consumer experiences to be created as a result of this movement, enabling them to contribute to curbing climate change actively.

The Opportunity:

Help people make sense of the transition to a sustainable new world by design. Focus on inspiring communications and product stories. Dominant players have already harnessed transparency, authenticity, and optimism - creating clear proof points for consumers. Innovation can cross-pollinate between sectors at a rapid pace.



Lay of Land Air & Water

For the world to limit temperature rise to 1.5 degrees celsius above pre-industrial levels, significant innovation is required to curb emissions output and extract carbon from the atmosphere. Here are some key areas that present rapid innovation opportunities:

01

Clearing the Air

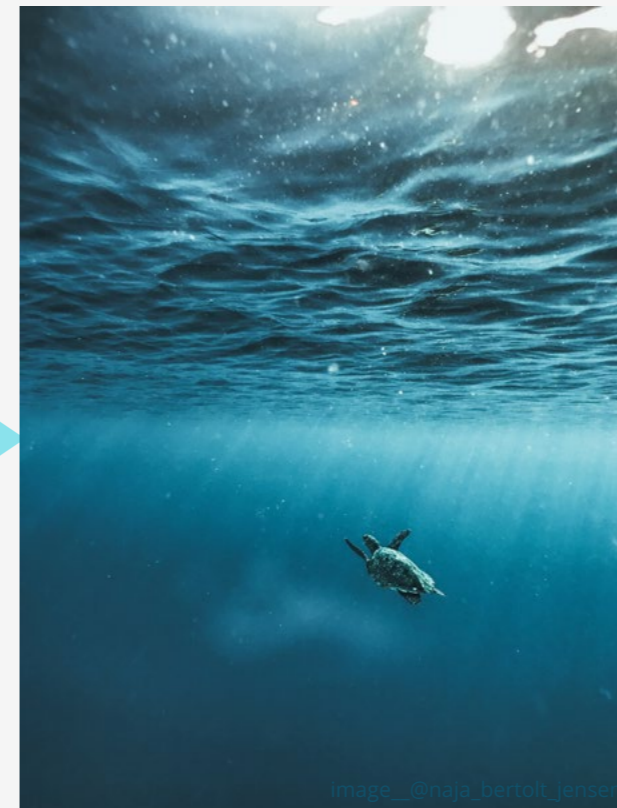
By 2050, it is estimated that we will need to remove 6 to 10 billion tons of carbon from the atmosphere each year. How we do this, and what we do with the by-product, is up to us.



03

Ocean Health

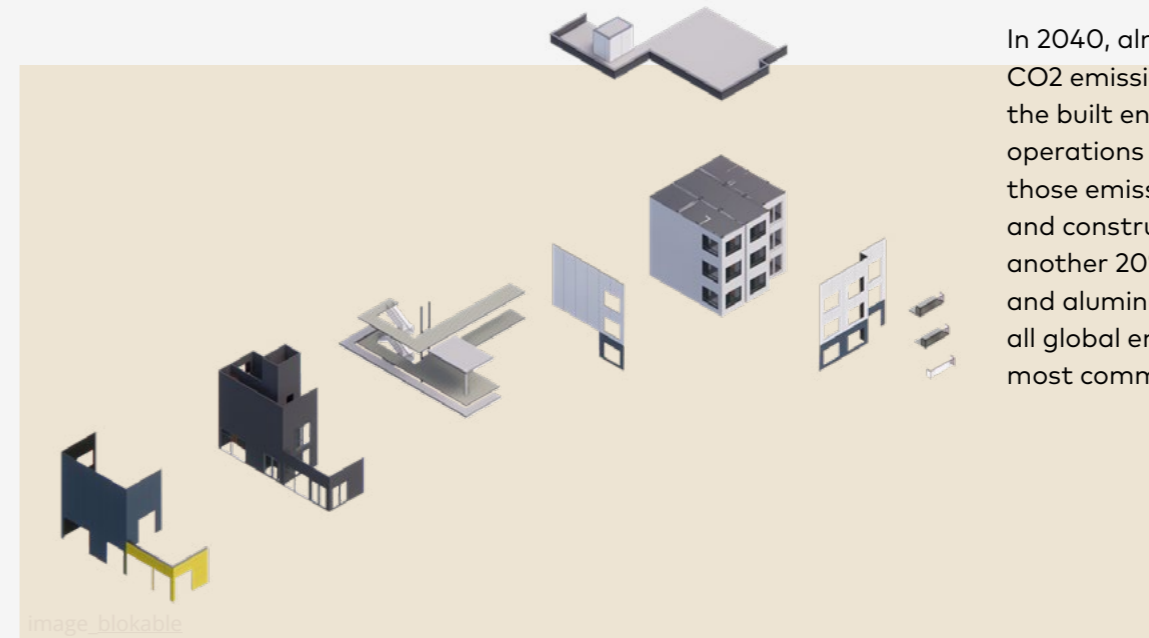
Scientists estimate that 50-80% of our oxygen comes from the ocean. According to a recent study by NASA, 90% of global warming is occurring in the ocean. This has widely been attributed to rising greenhouse gas emissions, industrial pollution and overfishing.



02

The (Built) Environment

In 2040, almost half of the global CO2 emissions will come from the built environment. Building operations account for 27% of those emissions, while materials and construction account for another 20%. Concrete, steel, and aluminum contribute 23% of all global emissions among the most common building materials.



04

Evolving Agriculture

Extreme weather conditions such as floods, fires, and droughts are making it increasingly difficult for farmers to yield consistent crop quantities and quality. Furthermore, it is estimated that global food production will need to increase by up to 70% in the next 30 years.





“Cross-pollinate innovation for maximum impact and scale

A new wave of climate focused organizations is emerging with the power to influence the public mindset. On one level, through tangible examples and clear communications strategies, they are building reputations as pioneers of planet-centric behavioral custodianship. On another level, they're offering a call to arms for "disruptive thinkers, passionate doers, and inspiring leaders ready to take on the world's greatest challenge".*

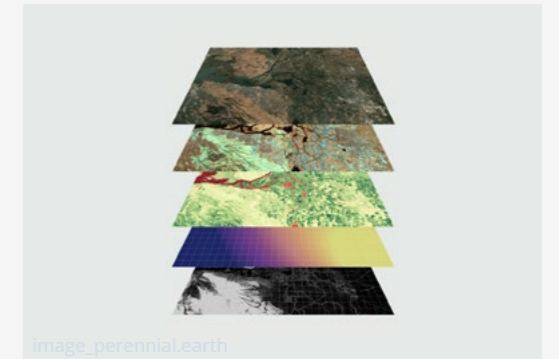
*Extracted from the job description of a climate tech start-up that extracts CO2 from the atmosphere.



Exiting the Fossil Fuel Era

Cleaning Up the Mess

Improving Established Practices



01

**RETHINKING THE GRID
MANATEE BATTERY ENERGY STORAGE**

The world's largest solar-powered battery will eliminate over 1 million tons of carbon dioxide emissions and save customers over \$100M when operational.

Take-away: Centralization of large-scale batteries enables wider energy impact for municipalities and might reduce the need for personal (at home) batteries in the future.

02

**ELECTRIFYING TRANSPORT
CORPORATE COMMITMENTS**

The economics of electric transportation and energy systems are now aligned with sustainability goals and have reached new domains: heavy duty trucking, municipal and school buses, and now aviation. The Inflation Reduction Act provides massive funding for the infrastructure to support this massive shift.

Take-away: New business models like Trucks as a Service (WattEV), Vehicle-to-Grid technology, and electric vertical take-off and landing (eVTOL) vehicles will further accelerate the shift to electric transportation and a cleaner grid.

03

**THE OCEAN CLEANUP
RIDDING OUR OCEANS OF PLASTIC**

By using innovative ocean harvesting and river interception strategies, [The Ocean Cleanup](#) aims to clean up 90% of floating plastic pollution in the ocean. To use harvested plastics and impose tighter regulations on plastic usage, the Ocean Cleanup partners with governments, design teams, and corporations worldwide.

Take-away: Repurposing harvested plastics for various applications or redesigning material values by creating deeper connections with consumers.

04

**CLIMeworks
DIRECT AIR CAPTURE**

A record \$650 million equity round was closed by [Climeworks](#) in 2022 for groundbreaking of Mammoth, their newest and largest (36,000 tons per year) direct air capture facility. They have attracted partnerships with Microsoft, Coca Cola and others. [Twelve](#) takes carbon capture one step further by transforming this 'waste' into valuable CO2Made® products for Pangaia, Tide, Mercedes & Alaska Airlines.

Take-away: Partner with specialists to innovate at scale.

05

**PREFABRICATING THE BUILT ENVIRONMENT
BLOKABLE**

NREL research finds that [Blokable](#) can cut 60% of GHG emissions from multi-family housing development by 2030. Prefabricated building manufacturers are adopting vehicle and product manufacturing techniques to deliver housing fast, affordably and sustainably.

Take-away: Leverage and apply innovations from parallel industries to design systems-level efficiencies.

06

**AGRICULTURE MEETS TECH
REGROW | PERENNIAL | DJI**

Technology is becoming a catalyst for farming performance. [Regrow](#) and [Perennial](#) offer satellite-based precision agriculture software to increase yield and track crop quality. Smart tractors and drones decrease manual labor; helping farmers automate seed and fertilizer deployment, minimizing waste while maximizing yield.

Take-away: Adversity is forcing resourceful innovation in agriculture. Leading players are embracing technology and data to tangibly improve productivity despite external factors like changing climate and labor shortages.



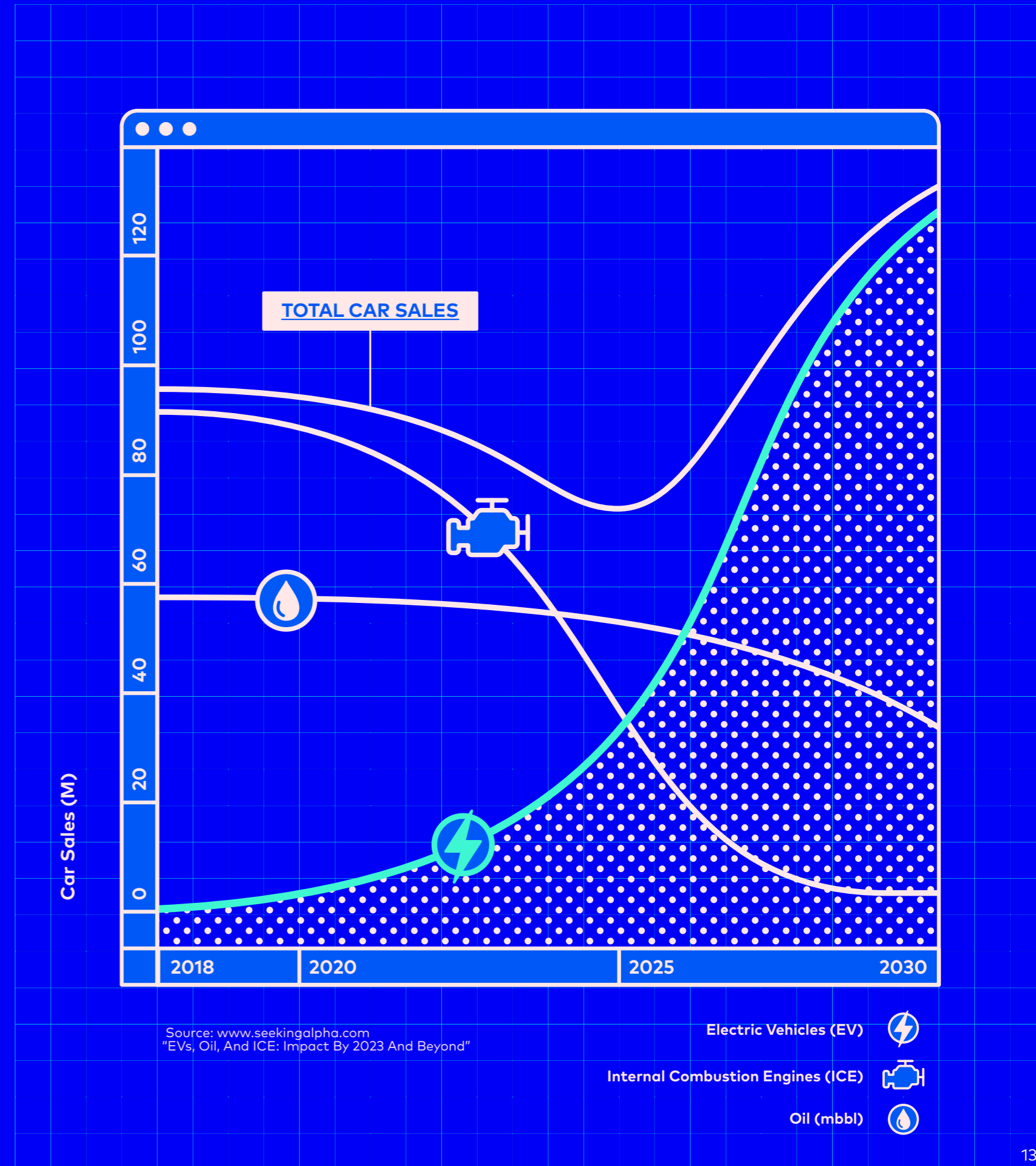
ELECTRIFYING TRANSPORT

Climate Tech Venture Capital funding accounted for over half of EV companies between 2015 and 2020. Although 67% of Americans believe electric vehicles are better for the environment than gas-powered vehicles, 66% feel that electric vehicles are more expensive, suggesting a barrier to adoption.

Leading electric vehicle manufacturers have disrupted traditional business models by providing more accessible and enjoyable purchasing and ownership experiences. Across all consumer touch-points, innovation has occurred from online configurators and pre-order channels to self-owned showrooms and highly-efficient maintenance and charging infrastructures. The market needs to be defined in many aspects as it continues developing.

The Opportunity:

Make it easy for consumers to understand the benefits of your products and services over traditional offerings. By developing core product platforms, you will be able to address specific markets and use cases through minimizing development costs, maximizing value, and strengthening brand identity. Additionally, you can boost consumer confidence and encourage peer recommendations by leveraging the power of 'Digital Concierges' – software-enhanced user experiences.



02

Industry 4.0 and the Rise of Gigafactories

Mass electrification requires more batteries and their raw materials. Demand is projected to increase over 500% by 2030. Tesla pioneered the concept of 'Giga Factories' for battery production, embracing Industry 4.0 by implementing autonomous robots for assembly, digital twins, and artificial intelligence. According to Elon Musk, the world needs at least 100 Giga factories to satisfy the growing demand for electric vehicle power.



01

Expansion of Charging Infrastructure

Powered by the public and private sectors, the U.S. electric vehicle charging infrastructure market was valued at USD 2.85 billion in 2021 and is expected to grow by 36.9% between 2022 and 2030. Access, performance, payment, and power will present significant challenges for development.



03

Optimizing a New Smart Grid

With Vehicle-to-Grid (V2G) technology, electricity generated from intermittent renewable sources like solar and wind can be stored in EV batteries during non-peak periods and fed back to the grid when required, which increases grid stability and reduces peak electricity costs. 'Prosumers' — like homeowners with solar power — can contribute to the grid, making it more resilient, reliable, flexible, secure, sustainable, and affordable.

04

Electrifying Flight

Regional air mobility is on the cusp of a new era. United Airlines recently ordered \$1 billion worth of aircraft from Archer Aviation. The company followed up with orders for aircraft from Eve Urban Air Mobility, an order for Beta Technologies from UPS, and conditional pre-orders from Vertical Aerospace for 1,350 aircraft.



Rethink the Grid

"Transport is currently responsible for nearly a quarter of global energy-related greenhouse gas emissions."

- UN Secretary-General Ban Ki-moon

The transition to fossil fuel free transportation is not without its challenges. An infrastructure-first approach and new market design is key to decarbonizing the grid and powering communities sustainably.

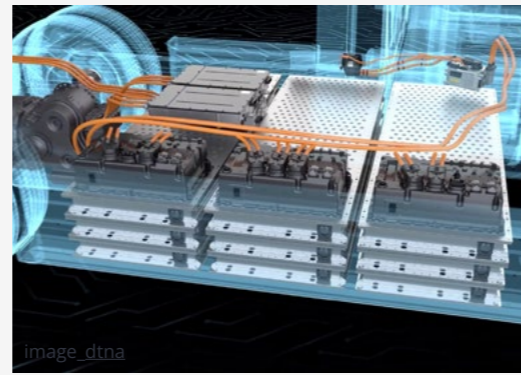
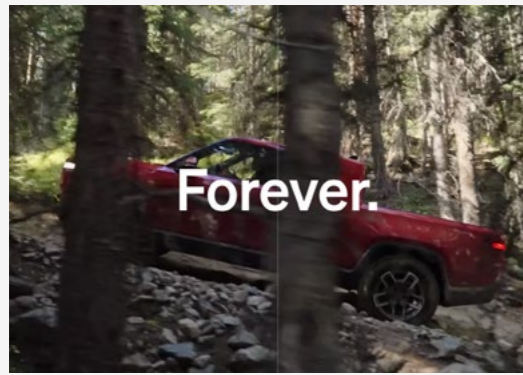


From multimodal commutes to intermodal experiences

With the advent of electric vehicle platforms, there is a great opportunity to revitalize regional and remote communities, allowing greater flexibility for people to live and work wherever they want.

[Learn More](#)





01

REDEFINING AMERICAN ASPIRATION RIVIAN

In partnership with Under Canvas, Rivian is bringing charging stations to some of the most beautiful campgrounds in the country, redefining the American spirit of exploration.

Take-away: Position your product or service as an experience enabler. Build inspiring stories around it that appeal to peoples' most visceral emotions. Give your customers something to believe in.

02

NEW ICONICITY CAKE ELECTRIC MOTORCYCLES

Cake has quickly gained market share by making design a strategic business pillar. As well as creating iconic products, Cake is working towards a net zero operation, identifying and reducing carbon footprints from material sourcing, production, and shipping to ownership and afterlife.

Take-away: Iconic product design should be driven by sustainable materials, methods, and operations. Create high visual value through clever design and repeatable visual elements.

03

TRUCKS AS A SERVICE (TaaS) FREIGHTLINER eCASCADIA | WATteV

Electrification will enable TaaS companies to offer complete vehicle ecosystems from Class 8 trucks to charging infrastructure to driver-focused apps; allowing real-time monitoring and management of entire fleet operations.

Take-away: New infrastructure concepts that support electrification of heavy-duty vehicles are enabling sustainable new business models. As this technology cross-pollinates into other industries, re-defining the support system can enhance your product's business value.

04

DESIGNED PLATFORMIZATION ARRIVAL

As a ride-share, urban logistics, and municipal public transportation company, Arrival disrupts several sectors with three customizable vehicle platforms. Their end-to-end sustainability is being redefined by producing localized micro-factories and intelligent operations software.

Take-away: Design 'digital concierges' for products and services based on part commonality and configurability.

05

FLIGHT TAKES ON A NEW FORM eVTOL & eSTOL

While the industry is still in its infancy, start-up eVTOL (Electric Vertical Take-Off & Landing) and eSTOL (Electric Short Take-Off & Landing) aircraft manufacturers are already introducing exciting new possibilities for passenger commutes, medical, freight, and luxury transportation.

Take-away: Design for flexibility and enable branded environments and experiences on and off the ground. Focus on connectivity with ground transport to connect marginal communities and revitalize them.

06

WHAT'S NEXT? EVOLUTION & AUTOMATION

Candela electric hydrofoil boats fly above the waves in absolute silence. Consuming just a fraction of conventional boats' energy, their C-8 model is the first true long-range electric cruiser.

Take-away: The race to electrify transportation and drones will be won by using technology to optimize product, operational, and customer business performance and automate operations.

Opportunity Space 03

P L A N E T + P E O P L E H E A L T H

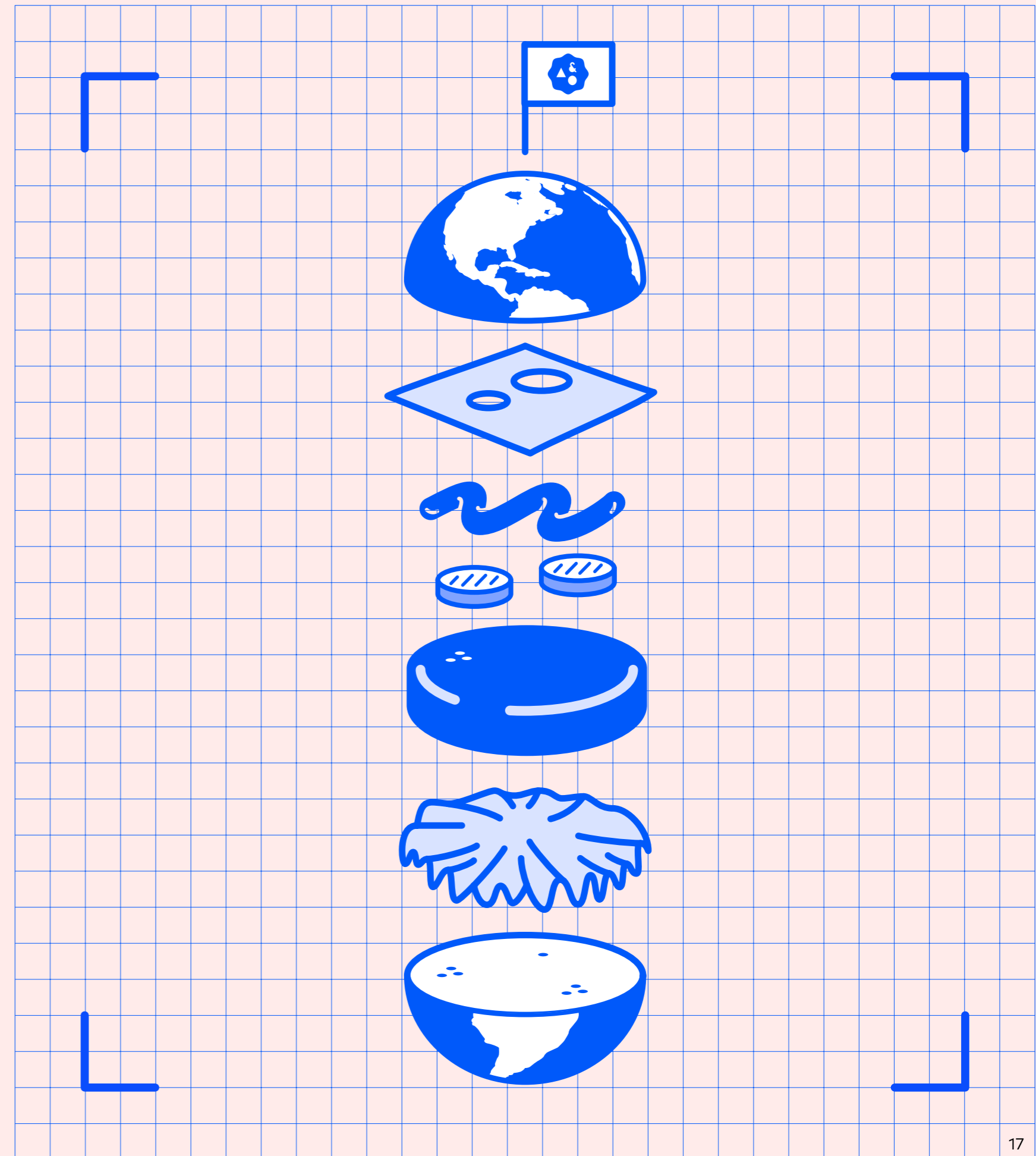
Choosing the right food affects not only our health but also the health of the planet. The food industry is responsible for 26% of global emissions, and 58% of food emissions arise from animal products. Switching to a plant-based diet can help fight climate change, UN experts have said.

Despite 42% being obese, 75% of Americans say they eat healthily. Obesity increases the risk of heart disease, stroke, type 2 diabetes, and certain types of cancer, which are among the leading causes of preventable, premature death.

The food industry is undergoing innovation on all levels. Companies are enhancing traditional agricultural practices by embracing data & diagnostics, 'bringing the farm to me', pioneering revolutionary food offerings and leveraging mindfulness. Can it be done quickly enough?

Opportunity:

There's never been a better time to adopt a plant-based diet. The increasing ubiquity of delicious produce is making it easier for consumers to make healthier choices. Over the coming decade, brands that create authentic sustainable narratives will define and own the space. The kitchen of tomorrow will facilitate mindful cooking in easy and enjoyable ways. The leaders will deliver connected products and services that help consumers adopt enduring healthy habits and enjoyable rituals.



State of Food Supply & Lifestyle

Global food production will need to increase by up to 70% over the next 30 years to feed a global population that is expected to reach 9.7 billion in 2050. The most pressing food-related health challenges are scaling agriculture, educating consumers, and creating meaningful products and services that effectively promote sustainable lifestyles.

01

Strains on Food Supply

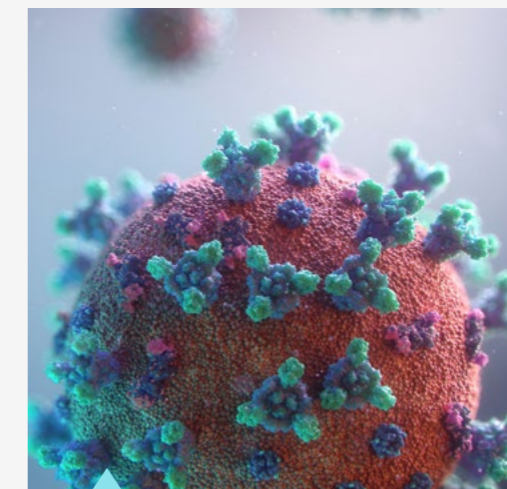
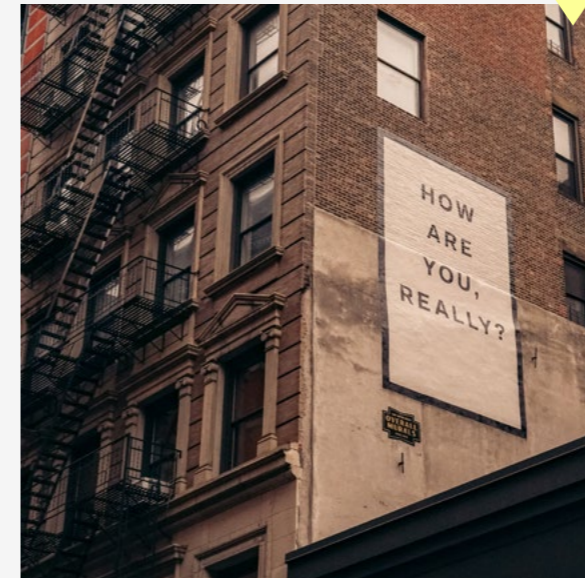
Agricultural water consumption accounts for 70% - 80% of global freshwater withdrawals. With over 2 billion people affected by water stress, agriculture must reduce its water consumption. Additionally, the global fishing fleet is 2.5x larger than what the oceans can sustainably support. Natural fish reproduction can simply not keep up with the demand.



02

Mental Health

Ipsos found that 44% of Americans flourished during the pandemic, but 21% were languishing with regard to mental health. Baby boomers were likelier than millennials to flourish, while millennials were the opposite.



03

Infectious Diseases

Increasing global temperatures will lead to an increase in infectious diseases. Mosquitoes will spread beyond their current habitats, shifting disease burdens like malaria, dengue fever, chikungunya and West Nile virus.

04

Obesity

There are more than 93.3 million Americans who are overweight or obese. Obesity is linked to many health problems, including heart disease, stroke, and type 2 diabetes.

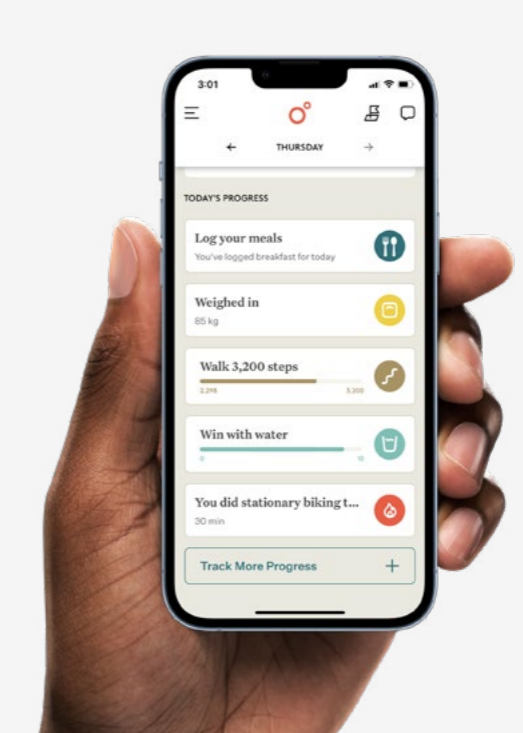




From Consumers to Custodians

“Food is not only the single most critical factor in human health; the current food system has also severely damaged the climate and our ecosystems. How we eat, cook, and shop needs to be transformed to sustain our planet.”





01

THE RISE OF INDOOR & MICRO-FARMING PHILIPS | SQUARE ROOTS | BABYLON

The indoor farming technology market was valued at \$23.75 billion in 2016 and is expected to reach \$40.25 billion by 2022. Square Roots' 340 sq ft indoor farms produce as much food per year as three-acre farms. Artificial intelligence (AI) monitors and regulates ideal conditions for the growing environment.

Take-away: 'Platformization' of food production will lead to new business models and service offerings. Who will invest and/or control this commodity when it takes this form?

02

EVOLVING CONSUMER PERCEPTIONS GOOD MEAT CO | WILDTYPE | JUST EGG CO

What if we could eat real meat without tearing down a forest or taking a life? The Good Meat Co. grows real meat in labs. Wildtype pioneers cellular agriculture to grow seafood - no fishing or farming. One chicken egg requires 53 gallons of water to make. Since Just Egg is made directly from plants, they use 98% less water.

Take-away: Design enticing offerings that are on par with, if not better than existing offerings to evolve consumer mindsets. The brands that rise to future food challenges will control the conversation and the market.

03

CLOSED LOOP DINING SUSTAINABLE RESTAURANTS

Conscious consumption is slowly replacing conspicuous consumption: we want to know where our food came from, how it was made - and what happens after we've left the dining table. 'Outstanding in the Field' connects diners to the origins of their food while celebrating the chefs, farmers, fisherpeople, cheesemakers, vintners, brewers and more.

Take-away: Climate change will increasingly challenge business-as-usual norms, unique eco-luxury experiences will increase in popularity.

04

REDUCING WASTE, FIGHTING HUNGER FEEDING AMERICA | FOODBANK

In 2020, Feeding America's network rescued 4 billion pounds of food that would otherwise have been thrown away. Similarly, Foodbank Australia leads the fight against hunger while tackling Australia's \$36.6 billion food waste problem and helping the environment. Their food and grocery rescue operations last year saved 92.7 million kilograms of CO2 emissions.

Take-away: Foodbanks are innovating, becoming centrally-orchestrated 'digital-first' enterprises. Embrace processes and partnerships that minimize waste, or better yet - turn waste into value.

05

TRANSFORMING FOOD RELATIONSHIPS NOOM | HELLOFRESH | HOME FITNESS

Noom acts as your personal coach, mentor and peer group - harnessing mindfulness for sustained and healthy eating habits. 64% of users lose 5% or more of body weight, greatly reducing their risk of diabetes and other conditions. HelloFresh offers easy to order meal kits that are healthy, convenient, cost effective and minimal in waste.

Take-away: Foster brand champions by enabling enjoyable rituals and healthy habits via designed self-help platforms. Deliver conscientiously designed experiences that promote memorability and reinforce habits from start to finish.

06

CONCEPTS INFORMING HOME COOKING ELECTROLUX | HOME GARDENS | SAMSUNG

The global smart kitchen appliances market size was \$3.5 billion in 2021 and is forecast to grow to \$15.13 billion by 2030. Electrolux's Gro concept kitchen is designed to help people eat more sustainably. Home gardening habits have grown significantly since Covid started in 2020.

Take-away: Concept projects enable brands to envision ideal future products and services without typical project constraints. They can spawn unique IP, ideas and insights to guide your product roadmap; as well as being valuable PR & brand image carriers.

Curbing Global Warming

Cross-pollinate innovation to create impact now.

Electrifying Transport

Design flexibility and platformization to enable journeys.

Planet + People Health

Design for influence. Turn consumers into custodians.

Proactive consumers are looking to adopt more sustainable lifestyles. They will go out of their way to buy products and services from companies that prioritize sustainability and give them a mission to support.

How will you refine your product offering to inspire consumers to adopt more sustainable lifestyles?

The race is on to address some of humanity's biggest challenges. Over the coming decade, leading 'climateering' brands will foster growth by developing strategic frameworks for revolutionary products and services, build consumer custodianship through inspiring stories, and access completely new markets for growth through partnerships and social engagement.

HOW WILL YOU CREATE CLARITY FROM CHAOS?



FUTURE CLIMATES



REPORT 01
2022Q3

◁ NEXT UP

BUSINESS AS USUAL

REPORT 02
2022Q4

WORKLIFE LIFEWOR

REPORT 03
2023Q1

PRODUCING CONSUMING

REPORT 04
2023Q2



Insight Report Calendar

If you found this report insightful, subscribe to our mailing list for future reports and other topics.

Subscribe

Play&Co mixes trends analysis with extensive industry-specific knowledge to help our clients create clarity from the chaos. We pull from our creative toolkit and apply Design Thinking to cross-pollinate insights from seemingly unrelated domains to add value and unlock opportunities for our clients' success.

Put simply, 'We Take Play Seriously'

Ways to action on this:

1. Innovation Workshop
2. Experience Design
3. Design Research & Strategy

Business Enquiries
hello@playandco.com
www.playandco.com



∞ Meta

blokable

audible 

PHILIPS



← EMBRAER



DAIMLER

TESLA



SAMSUNG



Thank You

Subscribe now to Play&Co(nversations).

Learn more at playandco.com/insights

