Introducing the EcoSapiens:

The World's First Perpetual Carbon-Capturing NFT

Photo: NASA/JPL

The tiny bright speck in the image above—about one pixel in size—is the Earth, in a February 1990 photo from the Voyager 1 space probe, at a distance of 4 billion miles. It's our home, the Pale Blue Dot. In the words of Carl Sagan:

> *Look again at that dot. That's here. That's home. That's us. On it everyone you love, everyone you know, everyone you've ever heard of, every human being who ever was, lived out their lives. The aggregate of our joy and suffering, thousands of confident religions, ideologies, and economic doctrines, every hunter and forager, every hero and coward, every creator and destroyer of civilization, every king and peasant, every young couple in love, every mother and father, hopeful child, inventor and explorer, every teacher of morals, every corrupt politician, every "superstar," every "supreme leader," every saint and sinner in the history of our species lived there—on a mote of dust suspended in a sunbeam.*[1]

This is the only home we've had; the only home we've got. **And it's dying.**

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[1] Carl Sagan, *Pale Blue Dot: A Vision of the Human Future in Space* (New York: Random House, 1994), 8.

Smoky skies alter San Francisco's sky during the 2020 wildfire season.

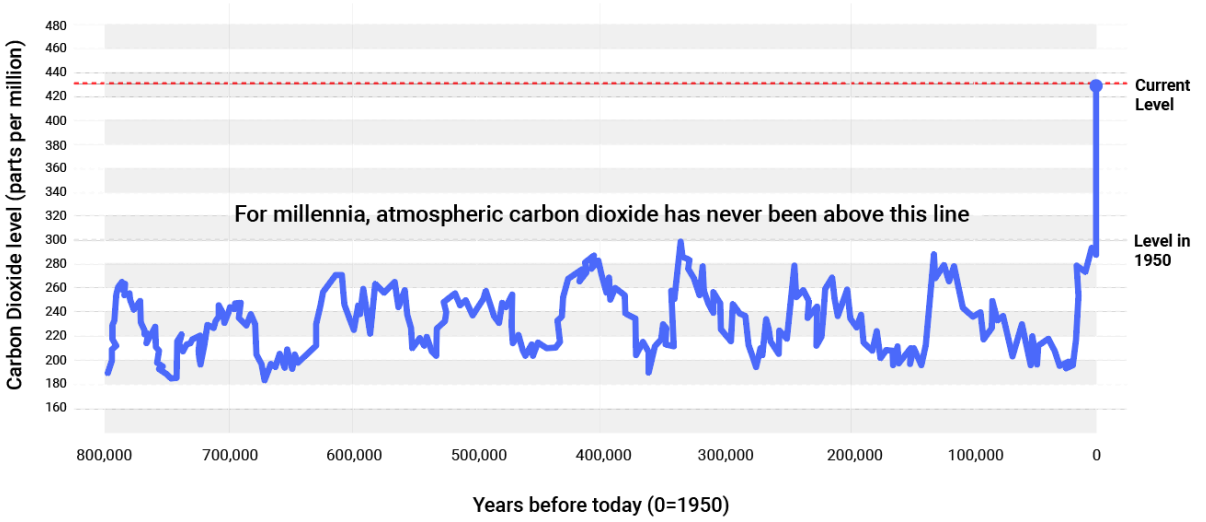
Photo by Thom Milkovic on Unsplash.

We need to decarbonize the air.

For centuries, fossil fuels played an undeniably outsized role in advancing human progress and achievement. The miracles powered by fossil fuels, however, came with a price: the release of greenhouse gasses from human-based activities, most notoriously CO_2, is directly leading to a rapid increase in the global average temperature. The warming of the planet, which currently sits at 1.1°C (2°F) as compared to pre-industrial times,[2] hurts everyone. By the United Nations's current estimates, warming in excess of 1.5°C is likely to produce the worst consequences of climate change, including

- Droughts
- Food shortages
- Species loss and **destruction of entire ecosystems**
- More frequent and intense natural disasters
- Human displacement **(mass climate migration and refugees)**
- Rising sea levels

[2] "Climate Action Fast Facts," United Nations, accessed April 21, 2022,https://www.un.org/climatechange/science/key-findings#temperature-rise.



Carbon dioxide levels over the last 800 millennia.

Graph: NASA.

In order to hedge the temperature increase to no greater than 1.5°C, we need to stop emitting CO_2. Unfortunately, the math reveals that ending all CO_2 emissions today won't be enough to reach that goal: we actually need to *suck carbon out of the atmosphere* through nature-based or engineered sequestration.[3]

The good news is that much of the technology exists (and has descended the cost curve) to shrink and eliminate our carbon output. A sophisticated and efficient global carbon market, however, is key to incentivizing the shift to a zero-carbon economy.

Historical Context and Overview on Carbon

The concept of a carbon market was unveiled in the 1997 Kyoto Protocol as a mechanism to incentivize carbon emissions reduction. By placing a price on carbon, the Protocol presented a unique environmental commodity on an international scale.

A *carbon credit* (in its original design) represents a permit to emit 1 ton of carbon; credits are allocated by a governing agency each year. Companies with an excess of credits (from more-efficient or sustainable operations) can sell their credits to less efficient companies that need to emit more carbon than their allocated credits permit. The greener companies make a profit, thus reducing the cost of their products; the less eco-friendly companies, in turn, have higher prices for their end products.

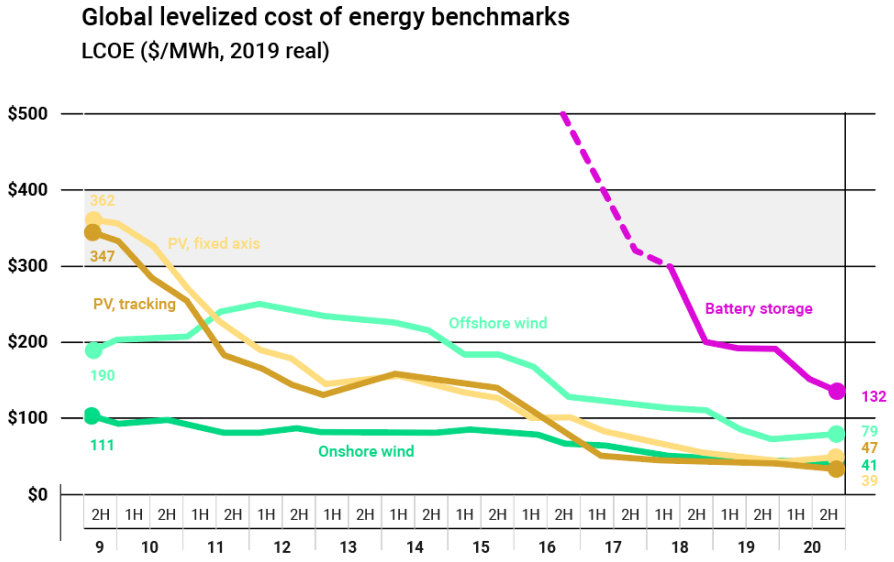
[3] T. Gasser, C. Guivarch, K. Tachiiri, C.D. Jones, & P. Cais, "Negative Emissions Physically Needed to Keep Global Warming Below 2°C," *Nature Communications* 6 (August 3, 2015): Art. 7958, https://doi.org/10.1038/ncomms8958.

The higher the price of a credit, the more incentive a company has to reduce its emissions—either because they can gain additional revenue from selling their unused credits, or because buying credits on the open market leads to reduced profits or higher prices.

These government-run carbon credit schemes, usually referred to as cap-and-trade, exist in the EU, California, and (most recently) China. There's a similar regulatory credit program in California for the production of electric vehicles (EV). Companies earn credits for each EV they produce, and if they fall short of their target, they must buy the necessary credits from a company that has made many EVs and thus generated extra. Tesla earns between $350M and $500M *each quarter* by selling their EV regulatory credits to other car makers.[4]

A few major trends have changed the carbon landscape since the 1997 Kyoto Protocol:

1) **It has become cheaper for companies to go green:** renewable energy, batteries, and sustainable materials have moved down the cost-curve, as Moore's law predicts.



Source: BloombergNEF

2) **Consumer preference has shifted** toward sustainable/eco-friendly companies and research has shown that they are willing to pay a premium.[5]

3) **The price of carbon has gone up dramatically,** making it more painful to not reduce emissions.

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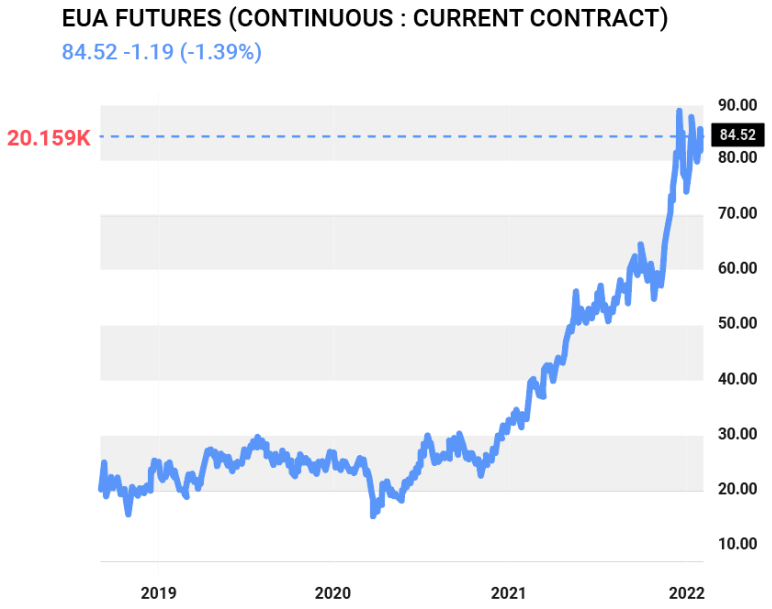
[4] *Q2 2021 Update,* Tesla, 4, accessed April 20, 2022, https://tesla-cdn.thron.com/static/ZBOUYO_TSLA_Q2_2021_Update_DJCVNJ.pdf.

[5] Dawn Papandrea, "55% Would Spend More on Eco-Friendly Products While Willing to Boycott Less-Green Companies," LendingTree, April 20, 2021, https://www.lendingtree.com/credit-cards/study/consumers-would-spend-more-on-eco-friendly-products/.



Source: CarbonCredits.com.

Overall, the lay of the land in 2022 looks like this: eco-friendly companies are seeing their revenues rise, the cost to become green has gone down, and getting into the carbon credits business has grown more attractive.

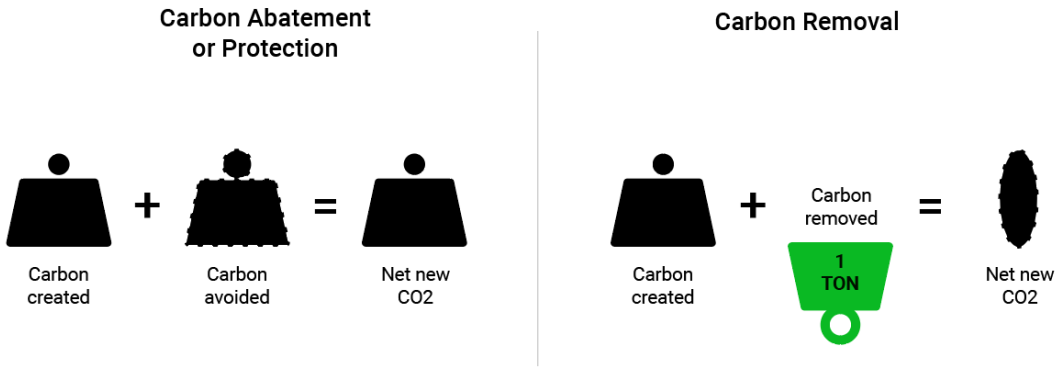
Businesses are in a race to achieve net-zero carbon emissions, driving the demand for carbon offsets.

There are only a few of these large-scale, mandatory carbon marketplaces. However, there is a **voluntary** market for *carbon offset credits* that individuals and companies can engage with to counterbalance their emission-generating activities and reduce their environmental footprint. For example, if Company A's activities result in the generation of *x* tons of carbon, the company can go to one of the carbon offset marketplaces and fund an endeavor, such as reforestation, that removes *x* tons of carbon from the atmosphere and thus offsets the effects of its business activities. The company can then declare that its operations are "carbon neutral" or "net zero."

Not all carbon offset credits are created equal. There are three derivatives of offsets:

- **Carbon abatement:** credits issued for shrinking emissions
- **Carbon protection:** credits issued to avoid the creation of emissions
- **Carbon removal:** credits issued for capturing carbon emissions

While early carbon schemes focused on abatement, removal is by far the most quantifiable way of ensuring that the carbon balance sheet is actually changing.



Many companies across a number of sectors have taken a cue from cap-and-trade schemes and view the goal of reaching net-zero carbon emissions as a net-positive to their bottom line. Over 300 global companies—PepsiCo, Amazon, VMWare, and others—have committed to reach net-zero emissions by 2040 via the Climate Pledge.[6] According to the Taskforce on Scaling Voluntary Carbon Markets, the voluntary market for carbon credits could be worth more than $50 billion by 2030.[7]

Consumer participation in the carbon markets is needed to help direct dollars to carbon removal projects.

The first act of the carbon markets was driven by regulatory demand; Act 2 is corporation-fueled. We believe that **Act 3 must be led by consumers**; they are not only the largest cohort of impact (7B+ individuals), but also the most influential voice in driving policy and corporate emissions targets.

But why is it so hard for consumers to live a lower carbon lifestyle? Misalignment of incentives.

As residents of the Pale Blue Dot, we care about the planet—so why is it difficult for us to design a low-carbon life even in this environmentally conscious moment? The mismatch between intentions and actions is largely due to the fact that eco-friendly goods and services tend to be inaccessible, expensive, or inferior relative to their carbon-creating counterparts. For example, when traveling from Boston to Washington, DC, a round-trip flight that emits a

[6]"Signatories," The Climate Pledge, accessed April 21, 2022, https://www.theclimatepledge.com.

[7] Task Force on Scaling Voluntary Carbon Markets, *Final Report* (January 2021),2, https://www.iif.com/Portals/1/Files/TSVCM_Report.pdf.

large amount of CO_2 per mile is much faster than an electrified, lower-carbon train that will cost just as much (or more). This paradoxical reality is equally true with sustainably farmed food (expensive), sustainable fashion (expensive), and many other consumer spending sectors. Being eco-friendly shouldn't be a luxury item—but in 2022, that's the reality.

Another reality about purchase behavior is the extravagant value consumers place on image, story, and cultural significance. Tesla's success cannot be decoupled from Elon Musk's ability to crack the code of making eco-friendly cars *extremely cool*; in fact, the company's mission statement includes the phrase "compelling mass market electric cars."[8] Consumers want to be part of the Tesla club and that of its larger-than-life leader. Following brand and image, people buy Teslas out of utility—owners save money on gas and maintenance while at the same time getting superior performance. Zero-emissions, however, is not a top reason behind people's Tesla purchase, because the term *zero-emissions*, in and of itself, doesn't create utility for consumers. Tesla's making zero-emissions cool has been the company's way of working around that lack of immediate utility.

What successful climate-forward brands (e.g., Patagonia) do is make environmental exceptionalism culturally significant.[9] When a consumer wears Patagonia or drives a Tesla, what they're secretly—even unconsciously—hoping for is that people perceive them to have a positive character and value system.[10]

We at EcoSapiens believe that it will take a while for the sustainable choice in any sector to become equivalent in quality, cost, and convenience to its current carbon-emitting alternative. Moreover, sustainable brands have to make environmental exceptionalism an attractive and culturally significant part of the consumer purchase-decision matrix.

How can an individual make a difference? Paradoxically, by owning carbon.

A shopper with the means, patience, and desire can move the needle a bit by supporting the local farmers market, driving electric or taking public transport more often, or sticking with eco-friendly brands or those that leverage technology in ways that improve carbon efficiency across the value chain. But we believe that altering behavior at that small magnitude doesn't scale—and if it doesn't scale, true planetary-level impact isn't possible.

Another approach to reducing one's carbon footprint, however, is to purchase carbon offsets. There are many schemes like the last-mile "offset this flight" purchase on United.com, or the ability to offset shipping options on Shopify. The reason these "offset your footprint" point-of-sale solutions haven't taken off is simple: not only is it a *net cost* to the consumer, but it's also not obvious where and how significant the impact will be, nor is there a way to

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[8] Elon Musk, "The Mission of Tesla," November 8, 2013, https://www.tesla.com/blog/mission-tesla.

[9] David Gelles, "The Patagonia C.E.O.'s Mission: 'Save Our Home Planet,'" *New York Times*, December 10, 2021, https://www.nytimes.com/2021/12/10/business/ryan-gellert-patagonia-corner-office.html.

[10] Remi Rosmarin, "Sustainability Sells: Why Consumers and Clothing Brands Alike Are Turning to Sustainability as a Guiding Light," *Insider*, April 22, 2020, https://www.insider.com/guides/style/sustainability-as-a-value-is-changing-how-consumers-shop.

repeatedly “feel good” about that charitable action. While a consumer might select such an option every now and then (or just once as an experiment), it’s likely a niche behavior that will never capture the mass market, and therefore its potential for impact is limited.

To make carbon offsetting attractive to consumers, it needs to solve for three things:

- Purchasing carbon offsets has to align with consumer incentives (time, money, joy).
- The form factor needs to be culturally and or visually attractive.
- The purchasing process must be a frictionless UX.

Let’s raise the bar, though. In order to make offsets widely attractive to consumers, they also need to accrue in value, be easy to access, and function as a clear and public representation of their value system. And, of course, they need to make a difference.

EcoSapiens: The world’s first carbon-backed NFT

Eco: good for the environment
Sapien: of, relating to, or resembling modern humans

The solution to our current carbon crisis lies within a Venn diagram—at the fragile intersection of humanity, nature, and technology. It is from this deep appreciation of interconnection that EcoSapiens are born.

EcoSapiens embody the notion that the reduction of carbon is a universal concern. Carbon reduction does not exclusively save whales, repopulate wild tigers, or plant trees. It saves

the entirety of Earth's biosphere—from the deepest tree-root systems and ocean trenches to the highest cloud forests and mountaintops.

To represent this range of biodiversity in a singular avatar, EcoSapiens are humanoid in shape, but composed of an amalgamation of various flora, fauna, mineral, and technological elements, hybridizing the entire spectrum of Earth's biological kingdoms with human technology. Their bodies subtly breathe and the plants, minerals, and fungi that grow inside and among them gently sway and glisten—the vacillations serving as an homage to the importance of breath and the preservation of our atmosphere.

EcoSapiens capture a dramatic amount of carbon while increasing the NFT's fundamental value. Carbon reduction is intentionally designed as one of the rarity features of the NFT.

Each EcoSapien NFT is backed by 20 metric tons of tokenized CO_2, equivalent to offsetting a year's worth of the average American's carbon output.[11] In this unique way, ownership of an EcoSapien is more than just a symbol and a call for climate progress—it's an actual vehicle for carbon reduction.

To enhance the carbon capture potential of each EcoSapien, the smart contract contains a first-ever "payback-to-offset" feature that auto-triggers the purchase of additional carbon tonnage at the prevailing market rate and adds the carbon back to the NFT through our carbon-to-NFT bridge. This immediate purchase of offsets is paid for by a fixed percentage of the royalty baked into each NFT and is triggered with each trade. So with each resale or net-new purchase of an EcoSapien after mint, the NFT continues to stack carbon onto the NFT (like lego blocks). As a result, the impact of an EcoSapien lasts beyond the initial mint—it sequesters carbon in perpetuity and increases the fundamental value of the NFT itself.

Our carbon model and assumptions explained.

For example, at mint, an EcoSapien to boot will contain 20 tonnes of carbon. Suppose it gets re-sold to a new owner for 1 ETH (assuming a $3000 USD = 1 ETH), at say a 50% carbon payback percentage, $1500 will go towards buying new carbon. At a market rate of $25 a ton, this implies after 1 trade at $2000 post mint, the NFT will contain 20 + 60 = 80 tonnes of carbon. This sequence continues to play out irrespective of whether a resale is higher or lower than the prior price. Each new owner will be able to visualize and contextualize the carbon captured on his or her NFT and its value through our UI (more on this at a later date). We are evaluating several percentage levels of carbon-buy back. In the model above (and it's just a model not actuals) we assumed a 50% buyback, but we are looking at everything from 10% to 90%. We will have an exact figure determined prior to launch. We are also working on a model where an owner should be able to increase their EcoSapien's carbon quantity without needing to resell.

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[11] "Calculate Your Carbon Footprint," The Nature Conservancy, accessed April 21, 2022, https://www.nature.org/en-us/get-involved/how-to-help/carbon-footprint-calculator/.

EcoSapien NFTs level up visually with more carbon added.

Sharing goes beyond caring with an EcoSapien; virality is, in essence, the catalyst behind exponential carbon capture, and in this case serves a greater good. At the same time, all net-new carbon accrues within the metadata of the NFT and we've turned it into a feature of rarity: the EcoSapien character will evolve based on its carbon ranking within the collection: the more carbon your NFT has sequestered, the more unique features are added to distinguish its status—much like earning a bronze, silver, or gold medal. At the same time, as carbon accumulates in the NFT, it increases the unit's fundamental value due to the stacking of carbon credits. The inherent value of the carbon intrinsically prevents the EcoSapien NFT from likely reaching zero dollars.In contrast to many other NFTs, an EcoSapien has a stronghold in value from its carbon.

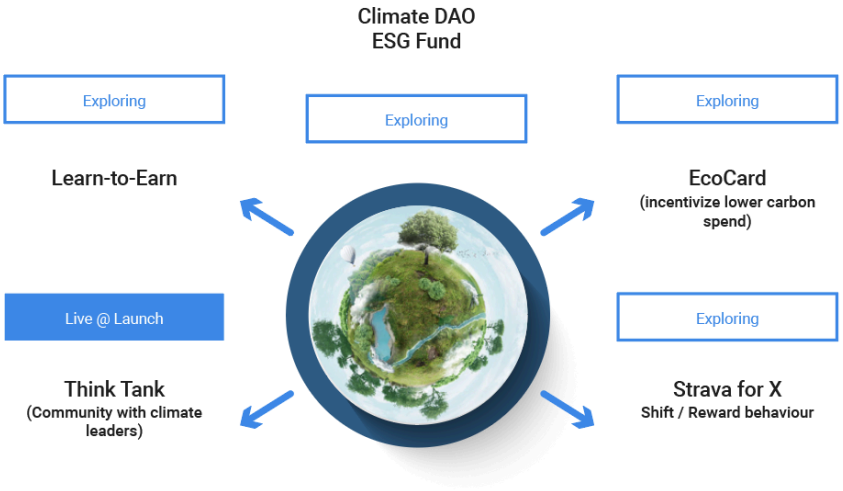
We believe this model correlates three consumer incentives while activating a strong annuity to the EcoSapiens franchise: (a) NFT price, (b) virtue signal, and (c) planetary impact all move in the same direction (up and to the right). Whether someone buys an EcoSapien to satisfy a virtue signal or as a speculation on price, both are fine with us: they will sequester carbon equally. Subsequently, we expect to release a feature that aligns rarity with loyalty and impact by enabling EcoSapien holders to accrue carbon within the NFT without re-selling it. We discuss this evolution in more detail below.

The carbon offsets underpinning each EcoSapien directly finance the highest quality, nature-based carbon removal projects that actively capture and store carbon, such as reforestation, regenerative agriculture, and blue algae production. This approach guarantees consumers that actual removal is happening, unlike some of the more complex (and potentially dubious) approaches.

The EcoSapien NFT is product 1 among our long term vision to build the EcoVerse, a full-stack web3 platform designed to lower the barrier of entry for consumers to fight climate change.

Ownership of the NFT is an invitation into **the EcoVerse**, a digital community that conspires to fix the physical one, where the EcoSapiens congregate to advocate, ideate, and strategize real climate solutions, crusading together as agents for change. The EcoVerse is currently led by an advisory group of leading entrepreneurs, artists, and investors in the climate realm. Together, EcoSapiens exist to fuse ideas, creativity, capital, and execution to make environmental exceptionalism a reality.

The Ecoverse is the gateway to a climate consious community and products



The EcoVerse is a suite of tech/web2/web3 products that will be built around our thesis of aligning consumer incentives (time, money, joy, story) with what's good for the planet. We're not trying to emulate sweatcoin or compete on apparel with Patagonia. Nor do we believe that drastic consumer behavior shifts will work at scale. We are principally excited by opportunities that identify repeatable behaviors in consumer life that can be made sustainable or eco-friendly in a frictionless way using tech. We think this is where big, enterprise-value creating products and meaningful impact intersect. In the simplest way possible, we are building products that let consumers live the life they want to live (à la "1-click experience"), and lower their carbon footprint effortlessly.

From this line of thinking, we're excited by several possibilities for product expansion:

1) **Stake/HODL in Carbon:** We're exploring ways for long-term investors to hold their NFT and increase its carbon capture at the same time in a feature that aligns rarity with loyalty. We're exploring a potential avatar marketplace where all the pieces are backed by carbon; in addition, we're investigating a process where an owner could stake their NFT for carbon. We're in the early days, but we expect to release a feature that rewards loyalty while driving environmental impact.
2) **Learn-to-Earn:** Education about the environment is the foundation that must be laid before change can happen—either in one's personal life or via influencing policy at a national scale. Does recycling really work? How to compost? Let's educate people about the environment and reward them for it by accruing carbon or rewards in NFTs.
3) **EcoCard:** People shop and spend daily; let's provide them with carbon data on each transaction and reward users with carbon points for spending with lower-carbon-emitting partners, products, and services. This can be an elite, black card-like experience that is sure to impress the table when the check arrives.
4) **Enterprise NFTs:** Unique and custom NFTs backed by large quantities of carbon or specific big ticket environmental projects.

5) **ClimateDAO:** We can allocate a pool of capital and let EcoSapien NFT holders deploy it into compelling environmental projects and become real-life watchdogs, all from the comfort of their home. If there's an oil spill off the coast of California, EcoSapiens can congregate to send real dollars toward remediation. Alternately, EcoSapiens can vote to deploy capital toward an exciting investment opportunity in a carbon-capture company.
6) **Many more ++**

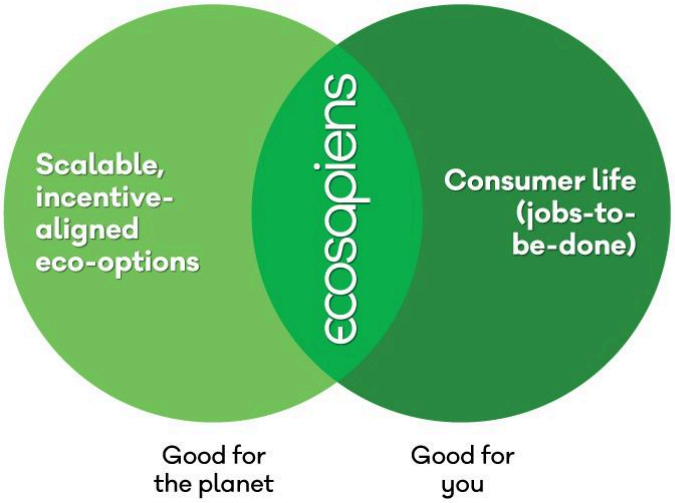
We are on a mission to build a full-stack platform to enable consumers to make a difference in the environment in a 1-click fashion. Every product we explore is designed to align impact and enterprise value.

Our long-term vision:

EcoSapiens are the wedge into a planet-conscious consumer economy.

We're building the consumer-climate tech company that lowers the barrier for anyone to have a positive impact on the planet.

Our guiding framework:



Ultimately, the real asset of the EcoSapien NFT collection is enormous: the citizens of the planet, a collective of climate benefactors, former *homo Sapiens*, and **future EcoSapiens**, fused together to serve the environment. Our mission is to give consumers the tools to fight for and protect our Pale Blue Dot—the only home we've ever known—for generations to come.

Are you ready to start your evolution?

About the creators

Nihar Neelakanti

Nihar is a storyteller and film nerd at his core who has spent 6 years in venture capital reading the scripts of great founders. He was previously on the team at Menlo Ventures, where he spent time studying consumer and fintech, and co-developed the firm's ESG thesis that led him to fall in love with climate tech. He has been ripping the hair out of his head over the past year trying to answer the following question: "Why is it so fucking hard to align consumer interests with what is good for the planet?" The answer, he believes, is simple—but hard to execute against. Consumers pick better/faster/cheaper goods and services for existing consumer Jobs-to-be-Done, and there haven't been viable, sustainable

instruments that do those jobs at scale (most Americans can't afford Everlane or EVs!). The idea for NFT-izing carbon addresses sustainability and scalability by being an instrument that drives financing toward carbon capture while also addressing the need for a feel-good/look-good social product that scales. The idea had been gestating for six months too long until he teamed up with Garret (below) to make it a reality. Prior to Menlo and the "aha," he was at Kauffman Fellows and Correlation Ventures. Nihar graduated from USC.

Garret Kane

Garret is a sculptor, animator, and writer based in Brooklyn, New York. His work explores the confluence of art, nature, and technology and its effects on humankind and the world. Inspired early on by science fiction, his work invokes issues of our times, such as climate change, and he donates 10% of artwork sales profits to environmental charities. Kane, who graduated from SUNY Albany, first began a career in advertising, studying and learning traditional and 3D sculpting techniques while working as a Creative Director for over a decade.. Currently, he is writing a science fiction novel featuring characters based on his sculptures. Ultimately, he hopes it will be adapted into a series of interactive videos that are shot with a mix of in-camera sculpture and 3D animation.

ARTIST STATEMENT:

Garret Kane is a sculptor, animator, and writer based in Brooklyn, New York. His practice utilizes biological matter, traditional and 3D printed materials, animation, film, and writing, combining them to create hybrid works that fuse nature and technology.

This process and unification of disparate mediums suggests how we are all connected and part of a continuum. His different series touch on themes of overconsumption, climate change, and the advancement or decline of humanity.

Inspired early on by sci fi and anime, his figurative works are androgynous and faceless, seamlessly joining the biological with the mechanical, reminiscent of sci-fi creatures and god-like entities. One series of works uses found plastic objects such as headphones and abandoned lamps that are embedded into root systems, examining how technology transforms nature and the body. Does nature reclaim the synthetic detritus? Is it nature vs. humanity, or are we combining and transmuting? Do we worship technology, and has it replaced religion? Ultimately, the work explores the confluence of art, nature, and technology and its effects on humankind and the world with the goal of calling attention to humanity's own global self-destruction and annihilation.

He's held 3 solo exhibitions in NYC's Flatiron Building Prow Artspace; Chashama's Gala at One World Trade; shown at Untitled art fair during Art Basel in South Beach, Miami; been in multiple solo and group shows such as Gowanus Open Studios among private galleries; and held residencies in Mexico City and Sao Paulo.

Disclaimer: like all living organisms, this white paper, vision, and roadmap will continue to evolve. What is documented here in this white paper is not a guarantee of what will ensue at the time of drop. Ownership of the NFT does not intend to guarantee access to future products or services. All opinions

discussed in this whitepaper are subject to change without notice. You must make an independent decision as to whether or not our thesis and vision are attractive to you. Terms and conditions subject to change.