IMPACT REPORT

FOOTPRINT COALITION

CONTENTS

OUR MISSION & VISION

Robert Downey Jr., Susan Downey, Steve Levin, Rachel Kropa, and Jonathan Schulhof founded FootPrint Coalition to accelerate the adoption of technologies that will aid in climate mitigation, human adaptation, and planetary restoration.

We designed our work employing three levers to modernize existing industries and create entirely new ones: media advocacy, venture capital investment, and nonprofit initiatives funding basic science and environmental justice. Our collective goal is to create and promote new solutions to propel humanity forward, while reducing our impact on the planet we call home.

MEDIA ADVOCACY

VENTURE CAPITAL INVESTMENT

NONPROFIT INITIATIVES

Scaling requires the creation of new industry leaders focused on sustainability. More venture capital must flow into the goods and services that will reshape the places where we live and work; the foods we eat and how we grow them; the ways in which we move through the world; and the energy and materials we use to power and craft everything we do.

Behind the early stage venture capital funding, trillions of dollars in capital investment will ultimately be necessary for a global shift away from harmful natural resource dependency to a future built on sustainable abundance. This can only come from sustained collective goodwill. Great storytelling and media outreach are essential in this effort to ensure these innovations are embraced by citizens, governments and markets.

Funding also needs to move into basic and applied research, into new technology standards and regulation, and into measuring and mitigating climate impacts to and fenceline communities most affected by climate change. These are best accelerated through catalytic philanthropy and government led initiatives.

We are undaunted by the magnitude of obstacles we face in building a sustainable future. We seek industry transformations of epic proportions, and call on consumers and businesses globally to become Earth's mightiest heroes in this collective effort.

We hope you will join us.

Robert Downey Jr. Rachel Kropa Jonathan Schulhof Steve Levin

HOW WE THINK ABOUT IMPACT

We are fundamental optimists. We believe in a technology-enabled future that is brighter and more abundant than what we can imagine today.

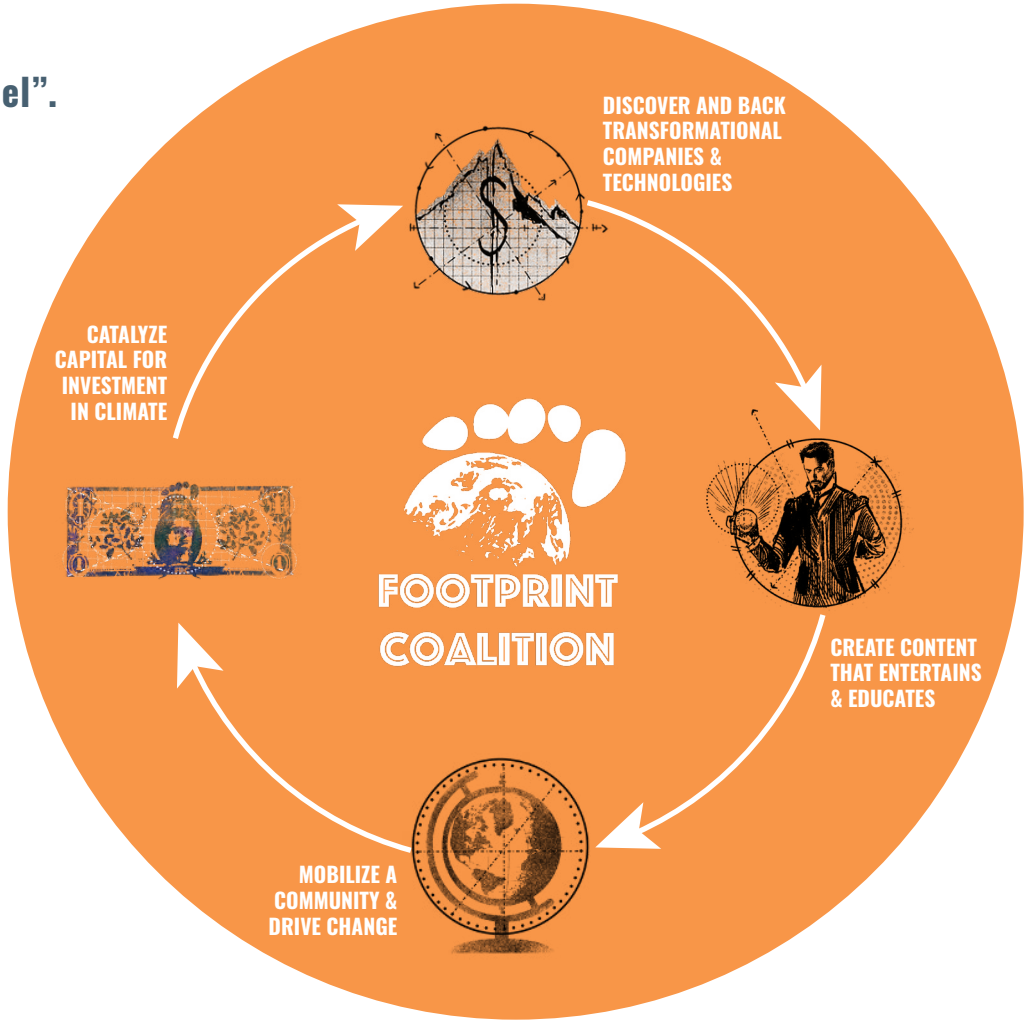
Because climate change is the largest collective challenge the world has ever faced, it also holds the greatest promise to propel humanity forward. By aligning government, corporate, and citizen interests around resource and energy efficient technology solutions, every industry can uncover best in class products that move us towards a cleaner and brighter future.

Success requires that we overcome vested political and corporate interests seeking to prolong the status quo by demonizing new technologies. We aim to speak directly to a global audience of consumers, voters, policymakers and business leaders about leading technology solutions that deserve consideration.

At FootPrint Coalition, we create and distribute optimistic, commonsense content featuring new technology solutions that can advance our economies and restore our planet. Through our publishing, investment and non-profit work, we get exposed to the latest policy, business and technology trends and also help boost their trajectories. We aim to uncover exceptional entrepreneurs and researchers advancing climate positive technology solutions. We offer them capital through market-rate investment or philanthropic grants. We feature them in our storytelling with media and publishing, and expose their work to a massive audience. And we inspire our

community to join us by trying sustainable products and services, supporting research with crowd-funded grants, or fast-growing companies with investment in our venture capital funds and investment syndicates.

We call this the "FootPrint Flywheel".



Amplifying Impact Through Storytelling

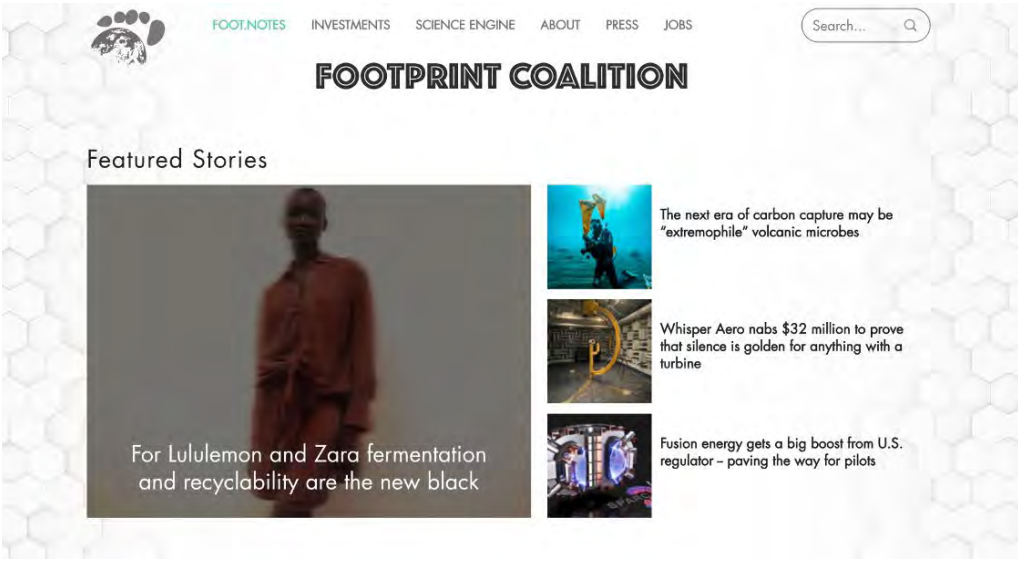
Over the last decade, even as the effects of climate change have increased the severity and pace of natural disasters, another issue has emerged – a need to dramatically change the narrative around humanity's response.

FootPrint Coalition has designed its media work to focus on that response.

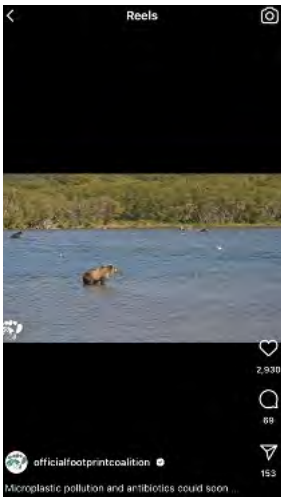
Through our storytelling across digital publishing and (soon) streaming and linear television platforms, we're emphasizing the solutions that are coming to market and creating a community that can actively embrace them.

We're developing a media engine that celebrates and advocates for the emerging climate tech ecosystem writ large.

Most of the news about amazing innovations coming from startups and large corporations ends up inaccessible to audiences – either behind corporate media paywalls or picked up piecemeal as a smaller item often buried amid other stories of the day. We believe that the response to climate change is the major story of our age, and it deserves a dedicated platform where the successes the world is achieving can be celebrated.



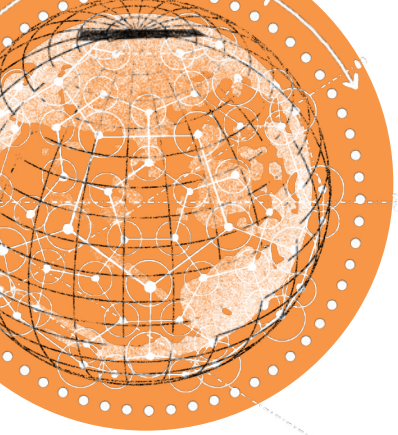
Moreover, we believe that a community aware of these solutions is one empowered to use them. Already hundreds of thousands of people from around the world follow us on social media channels, and millions of people have seen our videos highlighting our portfolio companies like WildType, Zero Acre Farms, and Crusoe Energy.



Our work with government entities like the Department of Energy has yielded more than just a handful of new friends in Washington. When we collaborated with the Department of Energy on an awareness campaign for the Clean Energy Corps, our short animated video featuring Robert and Secretary Granholm hit the targeted audience; the number of applications to the Corps doubled overnight.

Downey Dream Cars, a television show produced by Team Downey in collaboration with Footprint Coalition, will be launching June 2023, on Discovery/HBO. The show is a modern-day riff on car restoration classics like *Pimp My Ride*. In our take on the genre, Robert hands over his fleet of classic cars to an automotive restoration team in an attempt to bring them to modern, eco-friendly standards. Electric motors, bio-diesel engines, modern hybrids, mushroom-based leather...the mechanics on Long Island go to great lengths to incorporate modern and efficient technology in vintage cars. The show casts a spotlight on Footprint's portfolio companies and several others that our venture team had been tracking for potential investment.

From corporate decision makers and policymakers to everyday consumers, we aim to engage millions of people with stories about the technologies that are transforming every aspect of our lives: to make real the world of radical abundance that futurists have envisioned since Star Trek first premiered on network television.



Investment Impact Focus

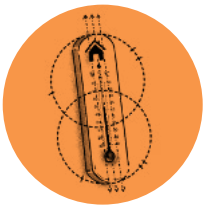
We think about the impact of our climate companies along three categories for creating a more abundant, resilient and sustainable world: mitigation, carbon removal, and adaptation.

MITIGATION

Climate change mitigation deals with the reduction of emissions of heat-trapping greenhouse gasses in the atmosphere. Mitigation will mainly be achieved by transitioning our global economy and lifestyle from a fossil fuel-based to renewably powered one, but also includes reducing emissions from agriculture, industrial processes and waste.

CARBON REMOVAL

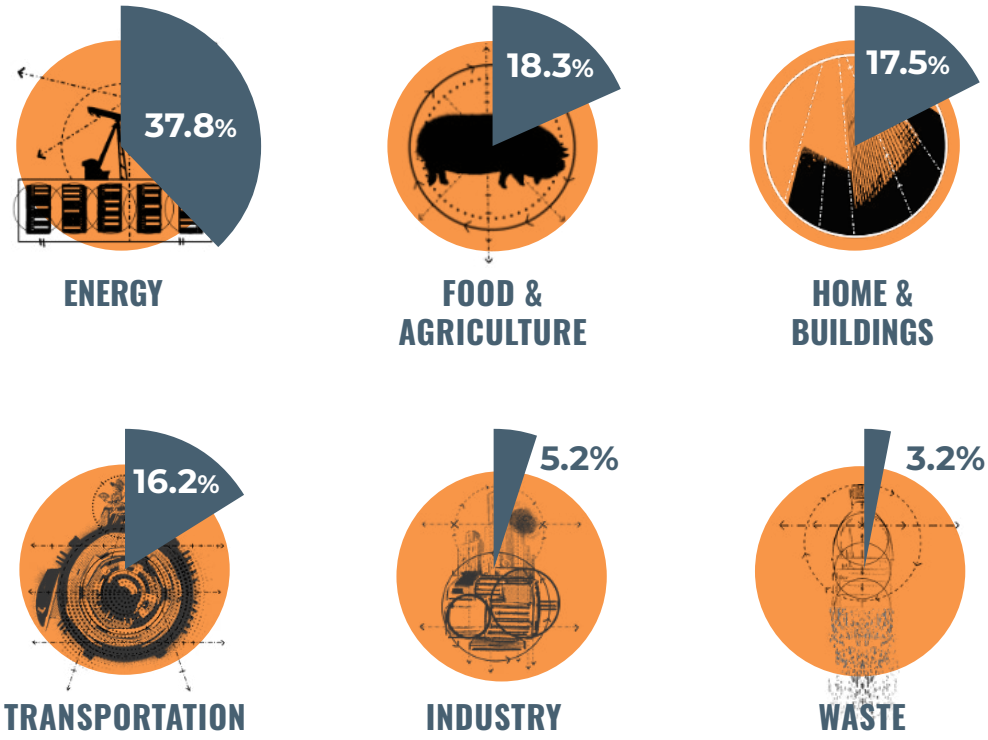
While strategies to reduce emissions are probably the most important piece of the puzzle, they will not be enough. Globally, scientists predict that up to 10 GtCO2 will need to be removed annually from the atmosphere by 2050 to reach net zero goals.



ADAPTATION

Whether we like it or not, our global climate is already changing. Extreme weather events like fires, floods or hurricanes are becoming more common and endangering both people's livelihoods, property and economic activities. Climate adaptation helps us deal with the effects of climate change we can feel today or that will be unavoidable over the coming decades.

The majority of our investment work focuses on companies in the climate change mitigation category, but we have made a few investments in the carbon removal and climate change adaptation space. Within mitigation, we track the impact of our investments by the sector of greenhouse gas emissions they are addressing.



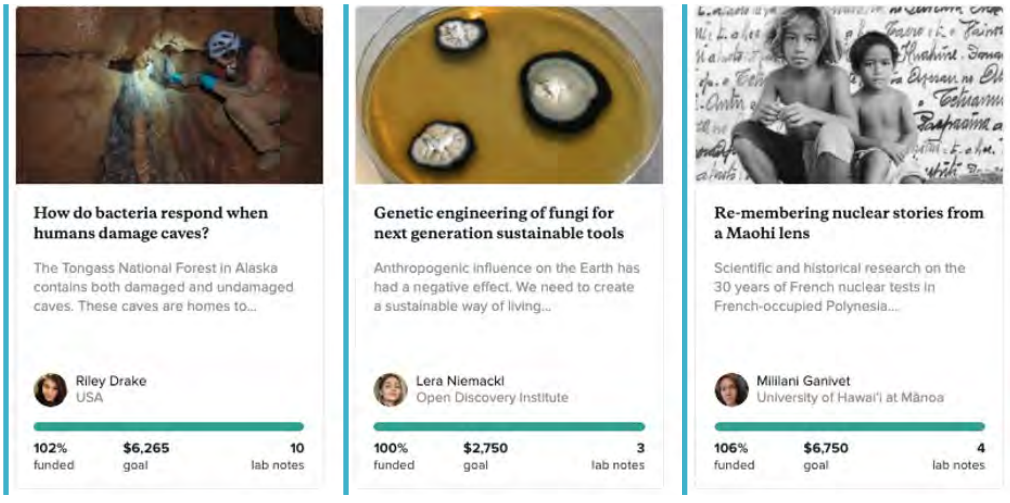
GHG emissions by sector

Source: The World Resources Institute, 2020

Nonprofit Impact Focus – The Science Engine

The Fast Grants response to COVID-19 showed the world that science funding can move excitingly fast when humanity is facing a crisis. The FootPrint Coalition Science Engine was founded to extend that model - at an initially small scale - to fund researchers and scientists looking to address different crises of similar scale: biodiversity loss and climate change.

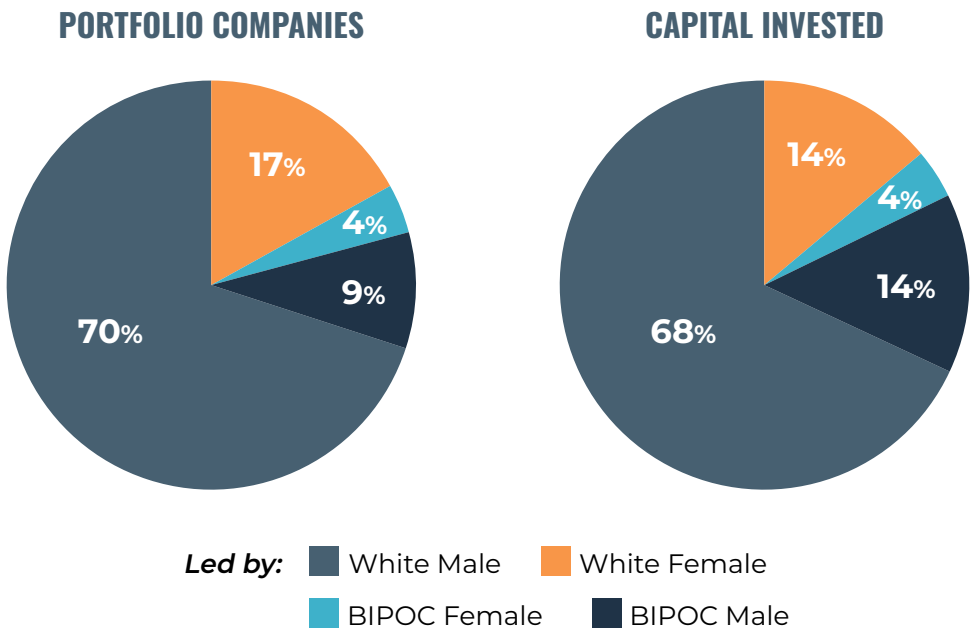
In December, 2021 we launched in partnership with Experiment.com, using the platform's open proposal process to allow scientists from anywhere to apply. Our Science leads, who specialize in FootPrint Coalition's chosen fields (seven and counting), are able to make quick decisions about how and where to allocate the seed funding for their category.



Diversity, Equity & Inclusion

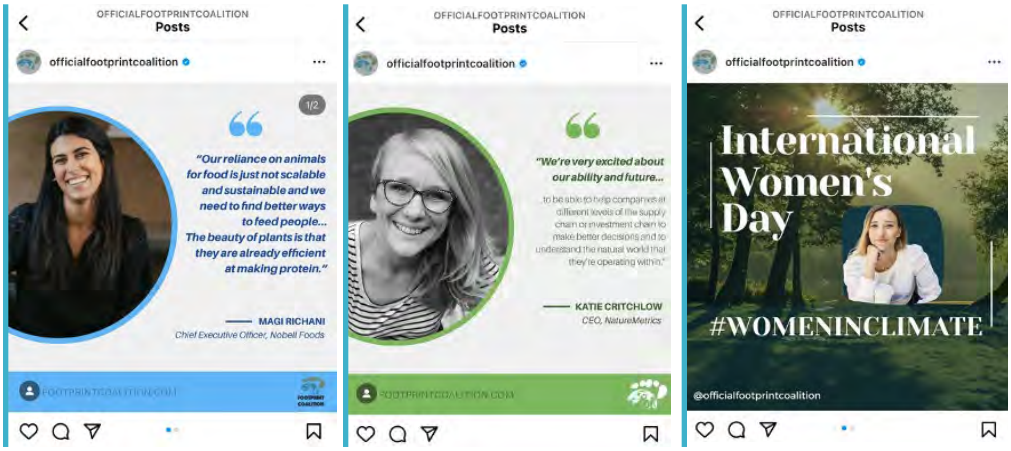
There is no adequate response to the climate crisis that does not also ensure that the sustainable transition happens in a fair and equitable manner. We track diversity statistics across our portfolio and benchmark to industry standards where possible. We have also launched a number of initiatives to spotlight and support diverse founders and researchers and increase our own dealflow.

Among our portfolio companies, 21% are led by women (17% white women, 4% BIPOC women) with 18% of our capital invested in these companies (14% and 4% respectively). The industry standard of founding teams that include a female founder according to Pitchbook[1] was 20% and 16% respectively in 2022, so while we are slightly above the benchmark, we still have a long way to go. 9% of our portfolio companies are led by BIPOC men with 14% of our capital deployed in these companies.

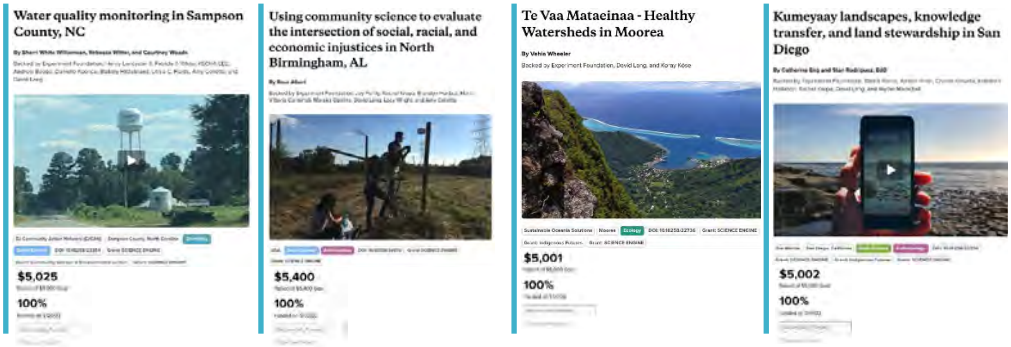


[1] *Pitchbook US VC female founders dashboard, 20230*

Our efforts to increase visibility for female leaders in climate include our Women In Climate Series that we launched in our newsletter and on socials in 2021. We have featured a wide range of CEOs (portfolio and non-portfolio), investors and other leaders across the industry. Social media engagement on these posts is one of the highest across our different series.



Within our Science Engine, two of our seven categories explore the impact of climate change on - and possible solutions for - underrepresented communities. Our **Community Science & Environmental Justice** category focuses mainly on low-wealth Black, Indigenous, and People of Color (BIPOC) populations and communities and how they are affected by climate change. Our **Indigenous Futures** category looks to draw on knowledge honed over generations living in symbiotic relation to the natural world and to fuse Indigenous wisdom with cutting-edge technologies to empower a new kind of future literacy. 25% of our funded projects have been in these two categories alone.



GROWING THE CLIMATE COMMUNITY

We firmly believe that climate change is a challenge that humanity will have to face as a collective. Only by working together will we be able to harness the powers of new technologies that can help us create a new world of clean and radical abundance.

Building community and driving change through collective action was one of the founding principles of FootPrint Coalition and spans everything we do. Through our content and publishing, we build, engage and educate a broad audience, introducing them to better, more sustainable solutions at the small and large scale. We invite our community to invest alongside us because we believe that young companies with a broader base of supporters have a better shot at success. And we invite our audience to fund breakthrough climate research through our Science Engine's fast grants program.

Our Media Audience

We take a two-pronged approach in bringing our message to the masses. On the one hand, we aim to set an authoritative voice in addressing a core tech audience. On the other hand, we want to reach a broader audience with content that is designed to inform and engage.

600+
ARTICLES

200K+
FOLLOWERS

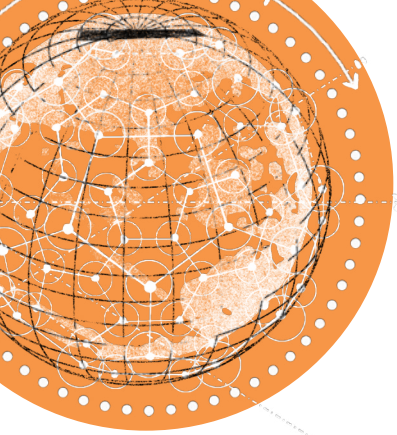
100M
REACH

1B+
IMPRESSIONS

We have written over 600 articles to date, publishing them in our newsletter and across Footprint's social media platforms. Our weekly digest of climate news articles is delivered to a core audience of ~30k newsletter subscribers among the ~70k active accounts on our email list. We track open rates and click-through on our newsletters and continue to tune our content and distribution strategy; we consistently see open rates > 25% on our newsletter emails.

We continue to distribute our stories across social media channels, and Footprint's subscriber base exceeds 200,000 across all platforms. We consistently reach 15-25k uniques on our social media posts, and this reach is magnified when we want to pour gasoline on the fire. When we point Robert's audience at particular pieces of content, we reach up to 10 million uniques per post.

Our first television show will launch in June of 2023. *Downey Dream Cars* will launch on Discovery and will be a cornerstone of their new streaming app. The run-up to the show will be broadly covered by all manners of press. We typically see press initiatives like this exceed 1B+ impressions across a wide variety of outlets.



Our Investor Community

In our first two years of investing in breakthrough climate tech companies, we have built a broad base of LPs and co-investors. Over 500 individuals have invested with us across our portfolio – through our early and late stage funds or limited syndication opportunities.

500+

LPs

Our Nonprofit Partners

In addition to providing seed funding through FootPrint Coalition's nonprofit arm, we mobilize our massive audience and community to engage with these researchers, giving them an opportunity to support them through Experiment.com's crowdfunding platform. Over 500 climate citizens have supported over 40 Science Engine projects.

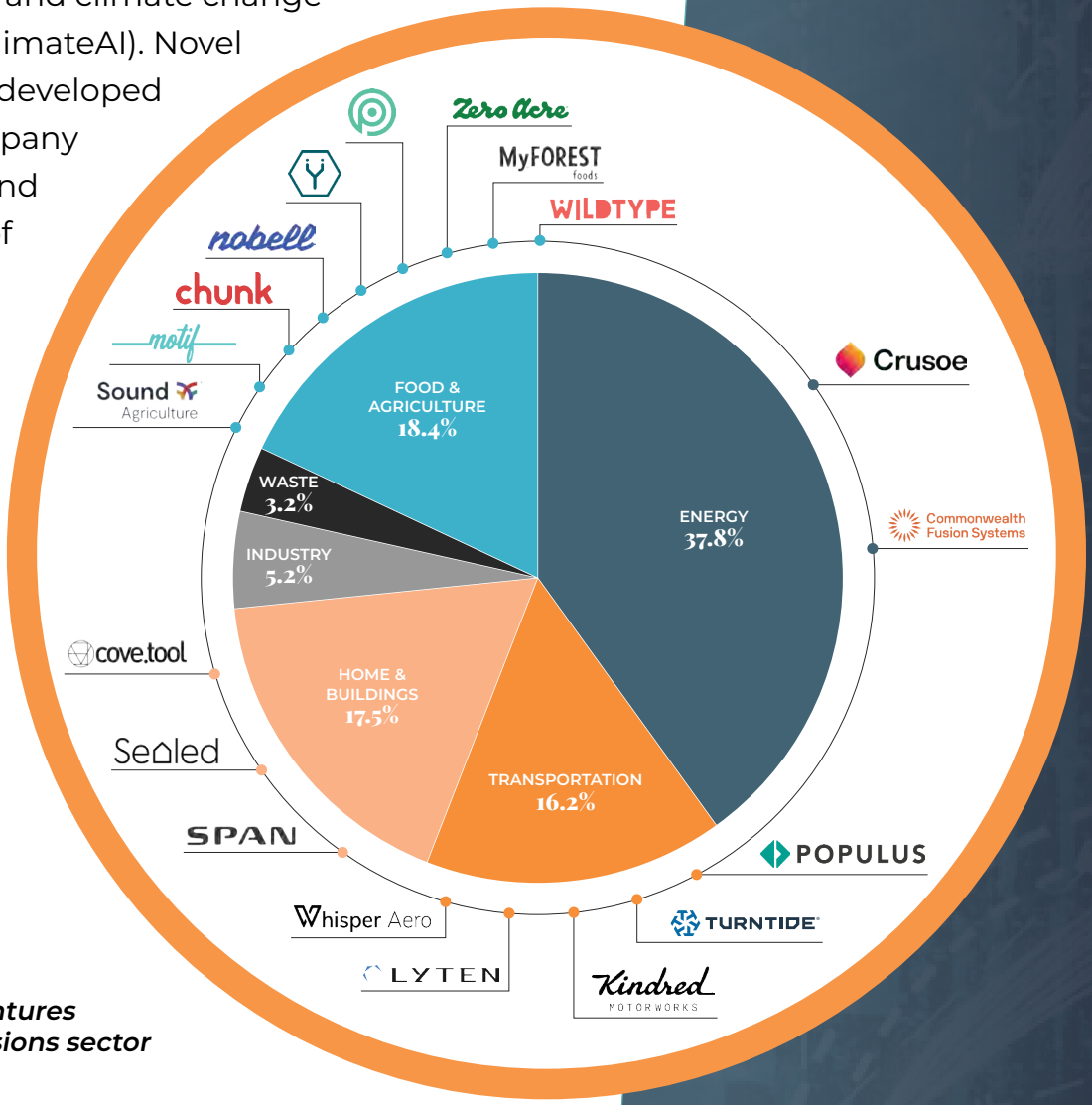
500+

CLIMATE CITIZENS SUPPORTED A SCIENCE ENGINE PROJECT

FOOTPRINT COALITION VENTURES

Our funds have invested in 23 companies to date with one investment still unannounced. Most of our investments have been made in climate mitigation across the following emissions categories: food & agriculture, energy, transportation, home & buildings, industry, and waste (see graphic below).

We have also made a few investments in the carbon removal (Aspiration) and climate change adaptation space (ClimateAI). Novel satellite technology developed by our portfolio company Albedo will enable and improve a number of activities across all three categories.



FootPrint Coalition Ventures portfolio by GHG emissions sector

MYFOREST FOODS

Company description:

MyForest Foods (formerly Atlast) produces whole cut meat alternatives from mushroom roots, specifically mycelium. The company's first product is a delicious bacon that sizzles and tastes like traditional pork bacon. At scale, the company will be able to compete with regular pork bacon on par regarding price. MyForest Foods was spun out of Ecovative and is building on its parent company's 14-year expertise and deep IP in mycelium fermentation.

Whole cut meats have long been declared the holy grail in alternative proteins - they represent the majority of meat purchases and account for $60B in annual sales in the US alone. We love MyForest's positioning in the market of plant-based or alternative proteins. Because the bacon is produced in whole cut form, it does not require binders, fillers or preservatives, resulting in a clean label and healthier product than animal and plant-based alternatives.

Impact:

Livestock (including poultry) production is estimated to contribute between 15 and 20% of anthropogenic greenhouse gas emissions. Why start with bacon? Partly because it is a high margin product, but importantly, it is also the vegetarian's kryptonite when it comes to going meat-free - it's hard to give up America's breakfast favorite.

Overall emissions from pork production are in the range of 7-12 kg CO2-eq per kilogram of meat. Unlike cows and sheep, pigs are not ruminants, which means they produce a lot less methane, but thanks to intensive farming operations, pork has the third-highest environmental impact among meats (behind lamb and beef).

Mycelium provides a cruelty-free way to create meatlike structures with a much smaller environmental footprint than traditional livestock, reducing greenhouse gas emissions, the use of food crops for feed and land use conversion. All these benefits come with significantly reduced environmental cost: a 33% reduction in CO2eq emissions, a 98% reduction in land use and a 99% reduction in water required.

MyFOREST foods

Impact Focus:

MITIGATION

Sector:

FOOD & AGRICULTURE

COVE.TOOL

Company description:

Cove.tool is a software development company that provides an integrated suite of tools to create the most energy efficient building design possible. The company's goal is to automate the design decisions that ensure the most sustainable structure possible given the parameters defined by clients, architects, developers, and engineers involved in the pre-construction process.

While there are point solutions in the market that handle assessments of daylight, energy use, carbon emissions, embodied carbon, heating ventilation and cooling, water use, and real estate analysis for architects, developers, and engineers, the Cove.tool platform provides an integrated environment for automated collaboration between and among these stakeholders, giving them the ability to see in real-time how different design decisions affect cost and performance without the otherwise needed clunky handovers along the building design process – all the way from design, to material selection to load modeling.

Impact:

Reducing greenhouse gas emissions associated with the building sector is critically important to climate change mitigation. Buildings generate nearly 40% of annual global carbon dioxide emissions. About 28% of those emissions come from building operations while another 11% stem from the building materials and construction. At the time of our investment, projects built by architects using Cove's software had offset 28 million tons of carbon emissions (with 22.3 million metric tons coming from projects designed in 2021).

Cove.tools product suite is geared towards helping architects, developers and engineers reduce energy intensity and carbon footprint of buildings including by providing visibility on a buildings carbon profile.

cove.tool

Impact Focus:

MITIGATION

Sector:

HOME & BUILDINGS

ZERO ACRE FARMS

Company description:

Zero Acre Farms has developed a technology to produce a healthier, more stable vegetable oil alternative through fermentation. Vegetable oils are the third most consumed food globally - a $200B market. Environmental concerns around rainforest lodging for palm oil and soybean oil production coupled with health concerns around trans fats and saturated fats will likely continue to put pressure on the industry.

Zero Acre's product is not only far more environmentally sustainable, but also a significantly healthier alternative: unlike most vegetable oils, it is extremely low in saturated fats and made primarily of heart-healthy monounsaturated fat. The company can already produce oil at or below cost parity with more premium oils in the market and is continuously moving further down the cost curve. The breadth of Zero Acre's technology platform will enable a variety of outputs and product lines over time - from cooking oil to frying oil to solid fats to butter.

Impact:

There are only five major food crops that emit more than 3 kg CO_2-equivalents per kg of food product, and four of them are vegetable oils.

Additionally, various vegetable oils like soybean oil and palm oil are among the main contributors to rainforest deforestation around the globe. Of all major food crops in the world, vegetable oils make up three of the top five most inefficient crops, requiring 3-50 times more land per kg than most other crops.

Zero Acre's oil will have a much smaller environmental footprint than traditional vegetable oil alternatives. Compared to soybean oil, Cultured Oil will emit 87% less greenhouse gas, consume 87% less water and require 90% less land.

Impact Focus:

MITIGATION

Sector:

FOOD & AGRICULTURE

SPAN

Company description:

SPAN has turned the old electric panel into a smart device sitting at the center of home electrification and giving homeowners unprecedented insight into and control over every electric circuit in their home. Homeowners who are interested in electrified upgrades (e.g., heat pump installations, Level 2 EV charging, solar installations) are often hamstrung by the presence of an old, undersized, “dumb” electrical panel. Homeowners are also typically held back by the electrical feed that their utility delivers to the house. For homeowners with a 125 amp service, homeowners need to not only replace their panel, but also need their utility to upgrade them to a 200 amp service. The wait times for the service upgrade can be over a year and upgrades are prohibitively expensive.

SPAN’s suite of projects enable the homeowner to add a heat pump, Level 2 charger or other electrical improvements without requiring upgraded service from the utility. The smart panel monitors energy consumption in the home and dynamically adjusts energy delivery in real time. For example, the panel will deliver full Level 2 EV charging, but if the homeowner starts a load of laundry, runs the dishwasher, turns on the toaster, the SPAN panel will feather down the EV charging without tripping off the entire home. SPAN panels also provide improved functionality for homeowners with battery backup units (e.g., Tesla Powerwalls). In the event of an outage, homeowners can toggle in real time which circuits should be powered by a home generator or battery. This software layer eliminates the need to integrate a “critical loads panel.”

Impact:

Reducing greenhouse gas emissions associated with the building sector is critically important to climate change mitigation. Buildings generate nearly 40% of annual global carbon dioxide emissions. About 28% of those emissions come from building operations while another 11% stem from the building materials and construction.

The electrification of individual homes alongside installation of solar and storage as well as the rapid adoption of electric vehicles can not only drive a significant reduction in emissions from building operations, but also play a key role in balancing electric grids in the future - another role Span will be able to play extremely well by sitting at the center of home energy.

SPAN

Impact Focus:

MITIGATION

Sector:

HOME & BUILDINGS

CRUSOE ENERGY

Company description:

Crusoe Energy leverages what it calls “broken links in energy supply and demand” by using wasted energy from gas flaring and - in the future - excess electricity produced on wind farms to power server centers, initially for crypto mining and to offer cloud computing services. >5Tcf of gas was flared globally in 2020, the equivalent of $82B of stranded energy and enough to power the BTC network 8 times. Crusoe’s data centers are ideally suited for mining bitcoin, which is an energy intensive process but one that is compatible with the intermittent nature of the power source. Crusoe’s data centers are also well suited for other batch oriented processing (e.g., film and television productions who render graphics overnight).

Crusoe has established itself as the clear leader in leveraging flared gas for server centers. Crusoe’s scale provides a strong competitive advantage for the company: Since the sites and data centers have to be visited every day, having multiple installations in the same area leads to both cost and up time advantages.

Impact:

In 2020, gas flaring produced a total of 8Mt of methane and 265Mt of CO2 emissions. Crusoe’s technology reduces methane emissions by 98% and CO2 emissions by 63%. This assumes the electricity generated by Crusoe is not being used at all. Assuming it displaces the equivalent amount of grid electricity otherwise used for crypto mining or cloud computing, the reduction in CO2 emissions is 95%.

In terms of bitcoin mining, Crusoe’s DFM units are by far the most climate-efficient solution: tons of of CO2e emissions per bitcoin mined in the US are 134t with grid electricity, 14t with solar electricity and -130t using Crusoe’s technology.

The final big question from an environmental perspective is whether Crusoe will enable otherwise unprofitable oil wells to stay in business. The revenue provided by Crusoe makes up about 0.1% of total oil well revenues. Oil well operators care much more about Crusoe’s operational capabilities and uptime (and with it avoided emissions) than the potential revenue.

Crusoe

Impact Focus:

MITIGATION

Sector:

ENERGY

ALBEDO

Company description:

Albedo is on track to be the first company to deploy a network of satellites in very low earth orbit (VLEO). Just as when one is trying to take a high resolution photo with a regular camera, proximity to the object matters in Earth Observation. By operating in VLEO, Albedo will enable 10x better image resolution (at 10cm RGB imagery) than the highest resolution commercial satellite images available. Albedo's design and VLEO deployment strategy means the company can provide that imagery at 100x lower cost than competitors estimate.

Earth Observation is a rapidly emerging market with a historically significant and still growing defense market and a rapidly developing commercial market. The market today is estimated to be around $5B and projected to grow to $50B by 2030 (with some reports projecting a much higher potential). Higher resolution will help unlock additional and larger markets (and higher willingness to pay) that are currently limited to cost prohibitive non-satellite (e.g. drone) options or simply inaccessible markets. Examples include insurance, where the resolution required for most insurance use cases is around 8-12 cm, energy and infrastructure (e.g. vegetation management around power lines), agriculture, ESG modeling (e.g. climate change monitoring and carbon offset markets) and a range of government applications.

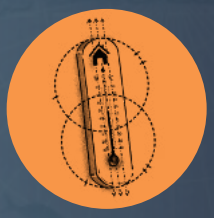
Impact:

A number of Albedo's target market segments have a major impact on GHG emissions including precision agriculture, forestry and wildfires, energy infrastructure management and maintenance, vegetation management near power lines, ESG data, and location tech for autonomous EVs. Small improvements in several of these fields each offer opportunities for significant emissions or carbon capture improvements.

Impact Focus:

MITIGATION

CARBON REMOVAL



ADAPTATION

SOUND AGRICULTURE

Company description:

Sound Agriculture is an agriculture biotech company with two product families. The first is a line of nutrient use efficiency (NUE) products under the trade name SOURCE, which increase nutrient uptake by crops leading either to a yield increase or fertilizer savings. The second is an On Demand Breeding (ODB) genetics toolkit that dramatically speeds up the creation of new plant traits 10 to 100X faster than state of the art breeding techniques and CRISPR. The NUE business has been commercialized and is now scaling.

We see significant tailwinds favoring biological alternatives to nitrogen fertilizer including: significantly elevated nitrogen fertilizer prices due to inflation, supply bottlenecks, and elevated energy prices; growing sustainability concerns around fertilizer overapplication and consequential soil nutrient depletion; and shareholder pressure for industrial agriculture companies to meet ESG goals such as decarbonization and mitigation of biodiversity loss.

Impact:

There have been rising environmental concerns around fertilizer application. Application of fertilizer is an inefficient process with a large share lost to denitrification, volatilization and leaching into the soil.

It is estimated that the application of synthetic nitrogen fertilizer alone contributes 2-5% of global greenhouse gas emissions. Project Drawdown estimates upward of 11.5Gt CO2e of emissions could be avoided by 2050 by reducing fertilizer overuse. The UNEP Colombo Declaration seeks to halve nitrogen waste by 2030. Nitrogen runoff from overapplication of fertilizer has often been criticized for leading to pollution of groundwater, waterways and coastal areas. 65% of coastal waterways and estuaries in the U.S. have been moderately or severely degraded by excess nutrients. However, in spite of these pressures, less than ⅓ of growers planned to reduce nitrogen fertilizer use in 2022 - largely due to fear of yield loss, which Sound's product can address.

A 50 lb reduction in nitrogen - a number Sound has already shown success replacing in 3rd party trials - across 50% of U.S. corn acres alone represents >20 Mt CO2e in avoided emissions and $1.8 billion in savings for farmers.

Sound

Impact Focus:

MITIGATION

Sector:

FOOD & AGRICULTURE

FOOTPRINT COALITION SCIENCE ENGINE

2022 was a fantastic, inaugural year for the FootPrint Coalition Science Engine.

We launched 7 categories in cutting-edge environmental tech: Cellular Agriculture, Conservation Biotech, Environmental Justice, Indigenous Futures, Metascience, Mycological Innovations, and Negative Emissions Technologies; we funded 40 projects in those areas (the current number of projects has risen to 44); and we won Breakthrough of the Year in Science and Innovation Management at Falling Walls.

7 CATEGORIES LAUNCHED

44 PROJECTS FUNDED

Science Engine Categories

BIOTECH FOR CONSERVATION // 12 PROJECTS FUNDED

Conservation is increasingly turning to new biotechnologies to understand, monitor, and sometimes intervene in ecosystems around the world. Whether using eDNA to monitor marine environments or increasing the genetic diversity of endangered species, these new tools are becoming important and ubiquitous.

COMMUNITY SCIENCE & ENVIRONMENTAL JUSTICE // 2 PROJECTS FUNDED

Low-wealth Black, Indigenous, and People of Color (BIPOC) populations and communities are differentially burdened by environmental hazards, locally unwanted land uses (LULUs), and air, water, and soil pollution due to inequities in zoning, planning, and development, and implementation and enforcement of environmental rules and regulations. These groups experience environmental racism which is a major driver of environmental health inequities. INPOWERment science is needed to put science and scientific tools into the hands of populations and communities with environmental justice and health issues. Community science approaches including community-based participatory research (CBPR) provide models and tools for communities to take science and research into their own hands and seek action and justice.

INDIGENOUS FUTURES // 9 PROJECTS FUNDED

While Indigenous Peoples comprise around 6% of the global population, it is estimated that their ancestral lands encompass more than one-quarter of Earth's surface and 80% of its biodiversity. Having stewarded this biodiversity for millennia, Indigenous Peoples around the world have cultivated sophisticated knowledge systems spanning agriculture, aquaculture, forestry, medicine, celestial navigation, and much more. Indigenous knowledges are as diverse and heterogeneous as the communities who generate them, and they live not only in the written word but in embodied forms like speech, storytelling, songs, and rituals. Sustained over many generations, these knowledge systems draw on embodied, experiential knowledge honed in symbiotic relation to the natural world and through nature-based, situated technologies. By fusing Indigenous wisdom with cutting-edge technologies like artificial intelligence, big data, genome technologies, material science engineering and remote sensing, we can empower a new kind of future literacy.

CULTIVATED PROTEIN // 6 PROJECTS FUNDED

Cultivated protein is the production of agricultural products such as meat, milk, and eggs from cell cultures rather than whole animals. Using several biotechnologies – such as synthetic biology, tissue engineering, and industrial fermentation - the concept has gained traction in recent years as a means for us to continue culinary traditions while escaping the many negative impacts of animal agriculture. Over the past decade, cultivated protein has grown from science fiction to over $1B invested in over 100 companies around the world dedicated to growing meat, milk, and eggs from cell cultures.

Despite private sector enthusiasm, public research remains severely underfunded. Public research is not just important for advancing cultivated protein technology – it is key to understanding its impact on the environment, public health, policy, and society.

MYCOLOGICAL INNOVATIONS // 9 PROJECTS FUNDED

The Fungal Kingdom is known to host some of the oldest friends and foes of humanity. When properly used in many modern and traditional processes, fungi are fundamental in the production of bread, beer, cheese, sauces, pigments, antibiotics, industrial enzymes, vitamins, and many other essentials across human civilizations. Speaking about their significant importance, one should consider that more than 95% of the known plants rely on symbiotic relationships with fungi in order to thrive, which directly conditions agricultural yields worldwide. Not only industries, plants and planetary ecosystems depend on healthy fungal networks, fungi live as well in our own guts, skin and hair, contributing to our health and moods. The most conservative estimations sum up a total of approx. 3.8 millions existing species of fungi on Earth, from which few more than 120.000 have been identified, which leaves scientists with a gigantic pool of new and unknown interactions, bio-tools and compounds waiting to be discovered.

AUGMENTED DISCOVERY & MISCELLANY // 3 PROJECTS FUNDED

Probably the most nascent field gaining momentum in the Science Engine is one that builds on and amplifies the strength of our existing institutions by using the methods of science and augmented discovery to improve how we do scientific research. Using artificial intelligence could help us find the next big environmental breakthrough or 'hidden gem' technology faster. Algorithms can pinpoint the most innovative and impactful projects to uncover brilliant researchers, regardless of the institution they are affiliated with or how connected they are.

NEGATIVE EMISSIONS TECHNOLOGIES // 3 PROJECTS FUNDED

The nascent fields of Negative Emissions Technologies (NET), like Direct Air Capture (DAC) and enhanced weathering, have emerged to accelerate the reduction of atmospheric CO2. Scientists, engineers, and entrepreneurs are racing to the challenge. New investment funds and advanced market commitments are helping to grow the field.